

2024 ANNUAL GROUNDWATER QUALITY REPORT

FOR THE

FLOYD-MITCHELL-CHICKASAW COUNTIES SANITARY LANDFILL

**66-SDP-1-73P
ELMA, IOWA**

by:

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January, 2025



6028-23A.320

Table of Contents

Certification

Section 1.0 Background Information

Monitoring Well Maintenance Performance Reevaluation

Section 2.0 Reporting Period Activities

Section 3.0 Data Evaluation and Summary

Quality Assurance/Quality Control

Background data Validation

Site Specific GWPS

Statistically Significant Increases/Exceedances of Prediction Limits

Assessment Monitoring

Statistically Significant Levels

Delineation & Assessment of Corrective Measures

Section 4.0 Leachate Collection System Performance Reevaluation

Section 5.0 Gas Monitoring Evaluation

Section 6.0 Recommendations

Figures

Figure 1 – Entire Site Plan

Figure 2 – Site Plan & Gas Monitoring Locations

Figure 3 – Water Table Contour Map

Figure 4 – Methane Monitoring Points Map

Tables in IDNR Format

Table 1 – Monitoring Program Summary

Table 2 – Monitoring Program Implementation Schedule

Table 2A – Summary of Monitoring to Date

Table 3 – Monitoring Well Maintenance Performance Reevaluation Schedule

Table 4 – Monitoring Well Maintenance Performance Reevaluation Summary

Table 4A – Historic Water Elevation Monitoring Summary

Table 5 – Background and GWPS Summary

Table 6 – Summary of Detections

Table 7 – Summary of Ongoing and Newly Identified SSI

Table 8 - Summary of Ongoing and Newly Identified SSL - *Not Required*

Table 9 – Analytical Data Summary

Table 10 – Historic SSI and SSL - *Not Required*

Table 11 – Corrective Action Trend Analysis - *Not Required*

Table 12 – Leachate Thickness Summary

Table 13 – Gas Monitoring Summary

Appendices

Appendix A - Field Sampling Forms

Appendix B - Statistical Reports

Appendix C - Laboratory Reports for Report Period


Appendix D – Turbidity

Appendix E – Prediction Limit Exceedances

Appendix F - Assessment Monitoring Results

Appendix G – Leachate Collection System

Certification

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Section 1.0 Background Information

1.1 Report Format

Table 1 through Table 13 are attached to this report and satisfy the IDNR requirement to provide the tables to meet the IDNR format requirements included in Special Provision 4.j. of the Revised Permit #2, dated July 6, 2023 (Doc #107141).

1.2 Report Priority

No requests are included herein for deadline extensions. Continued semi-annual detection and assessment monitoring in accordance with IAC 567, Chapter 113.10(5) and (6) is recommended for this facility.

1.3 Period of Report Coverage

Water quality data evaluation is based on a running compilation of data beginning in April, 2008. Statistical evaluations herein are based on the 2024 water quality data collected April 11, 2024 and October 17, 2024.

1.4 Current Site Map

Figure 1 and Figure 2 are attached illustrating the current site features, monitoring well locations, and subsurface gas probe locations.

1.5 Site Status and Applicable Rules

Site Location

The Floyd-Mitchell-Chickasaw (FMC) Sanitary Landfill is located in the N $\frac{1}{2}$ of the NE $\frac{1}{4}$ and the NE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 12, T97N, R15W, Mitchell County, Iowa. The site encompasses approximately 115 acres. The facility operates under the Iowa Department of Natural Resources (IDNR) Permit Number 66-SDP-1-73P.

Landfill Layout

The site is situated in gently rolling terrain and adjacent properties are cultivated farm ground. Drainage from the site is predominantly to the southeast along the natural topographic surface.

The facility includes a closed landfill and RCRA Subtitle D Expansion Areas designated Phase 1, Phase 2, and Phase 3. Phases 1, 2, and 3 are actively receiving waste from the planning area.

Applicable Rules

Iowa Administrative Code (IAC) 567-113 is applicable to the site. The closed landfill detection monitoring is also regulated under 2007 (IAC) 567-113 in accordance with the approved variance dated August 28, 2013.

1.6 Summary of Hydrologic Monitoring System Plan (HMSP)

The HMSP includes twelve (12) monitoring wells. MW-4, MW-5, MW-9, and MW-14 are the designated background/upgradient wells for the facility. The Site Plan and the approved monitoring network are illustrated on Figure 2. The current HMSP is summarized in Table 1. The HMSP Implementation Schedule for 2025 is itemized in Table 2.

MONITORING WELL MAINTENANCE PERFORMANCE REEVALUATION

Monitoring Well Performance Reevaluation for wells in both the active site and the closed site will be performed in accordance with IAC-567 113.10(2)f rather than as required under previous rule (applicable to the Closed Landfill). Table 3 outlines the status of well performance and maintenance activities performed as required by IAC 567-113.10(2) f.

High & Low Water Levels

Current year water elevation data is included on Table 4. Historic water elevation data is included in the Table 4A. The maximum depth to water and the minimum depth to water are included in the tables. Many large variations (5.0 to 10.0 feet) are recorded within wells across the site. A Water Table Contour Map (Figure 3) dated October, 2024 is included with this report. The Water Table Contour Map illustrates the water table surface and the effects of the topography and groundwater diversion in Phases 1, 2, and 3.

Well Depth & Sedimentation

Well depth measurements were made October 17, 2024. Review of the well depth data included on Table 4 indicate that well sedimentation is estimated to be less than one (1) foot at all site monitoring wells.

Well Recharge Rates & Chemistry

The measured horizontal hydraulic conductivity testing results (2013) for each site monitoring well is included on Table 4. Horizontal hydraulic conductivities ranged between 10^{-4} cm/sec and 10^{-5} cm/sec.

Field recovery data recorded on April 11, 2024 (Table 4) indicate that water levels within each well recover to approximately 90+% in 8 hours, except at MW-9, MW-11, MW-15, and MW-16. Full recovery appears to require greater than 24 hours following purging at MW-9, MW-11, MW-15, and MW-16.

Well recovery information indicates that recharge to the individual wells remained sufficient to promote collection of representative water quality samples and the wells were functioning as intended. Monitoring well recharge reevaluation is due biennially according to 113.10(2)"f", and should be evaluated again in 2026.

Based on the apparent static condition of the water surfaces across the site, it appears that the semi-annual water elevation data is sufficient to adequately monitor the hydrologic condition of the site. Further, the wells are interpreted to be appropriately located to detect any impact, should it occur. No changes or modifications to the existing site monitoring wells are recommended.

Section 2.0 Reporting Period Monitoring Activities

A summary of the proposed 2025 sample collection events at each well is included on Table 2. A summary of the Appendix II sample collection events at each well is included on Table 2. A comprehensive summary of all sampling episodes to date are included in the Table 2A.

Field sampling information for April 11, 2024 and October 17, 2024 sampling episodes is included on the field forms (IDNR Form 542-1322) in Appendix A.

A comprehensive summary of Analytical Data for the episodes between April 16, 2008 and October 17, 2024 is included on Table 9.

2.1 Current Detection Monitoring Activities

Background wells are MW-4, MW-5, MW-9 and MW-14. Downgradient monitoring wells for the RCRA Subtitle D Expansion Area (Phase 1, 2, and 3) are MW-11, MW-12, MW-15, and MW-16. Downgradient monitoring wells for the Closed Landfill are MW-2, MW-3, MW-6, and MW-7. There are no wells that currently remain in the detection monitoring program.

2.2 Current Assessment Monitoring Activities

Site monitoring points that are currently in Assessment Monitoring include MW-2, MW-3, MW-6, MW-7, MW-11, MW-12, MW-15, and MW-16.

Special Provision 4.g. of the Revised Permit #2, dated July 6, 2023 (Doc #107141) approves an alternate five (5) year frequency for full Appendix II sampling at assessment monitoring wells that have two (2) rounds of full Appendix II monitoring completed. The on-going supplemental sampling includes Appendix I plus all detected Appendix II compounds per 113.10(6)b.2. Bis (2-ethylhexyl)phthalate is the only compound detected to date beyond the Appendix I list of testing parameters. The upcoming full Appendix II sampling episode (2025) is listed on Table 2.

2.3 Current Corrective Action Activities

There are no Corrective Actions in place in the RCRA Subtitle D Expansion Areas.

The Closed Landfill has been retrofitted with a leachate collection toe drain system on portions of the north, east, and south sides of the fill. Groundwater underdrain SW-1 and SW-2 have been connected to the leachate collection system in accordance with IAC 567, Chapter 113.10(2)"a"(3). The connection of SW-1 was documented in the December 4, 2018 Quality Control and Assurance Report for the Phase 3 Expansion (Doc #93888) and approved in Special Provision 3.h. of the December 10, 2018 Revised Permit (Doc # 93889). The connection of SW-2 was documented in the July 12, 2016 Construction Certification Report and approved in Special Provision 3.g. of the August 29, 2016 Permit (Doc # 87030).

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 FMC Sanitary Landfill, First Semi-Annual Monitoring Event in 2024, dated May, 2024 (both the Closed Area and the Operating Area) are included in Appendix B.1. The Groundwater Statistics Report for the FMC Sanitary Landfill, Second Semi-Annual Monitoring Event in 2024, dated November 2024 for the Closed Area and for the Operating Area are included in Appendix B.2.

The Keystone Analytical Reports for the laboratory testing performed on samples collected April 11, 2024 and October 17, 2024 are included in Appendix C.

QUALITY ASSURANCE/QUALITY CONTROL

A blind duplicate sample was collected at MW-2 during the April 11, 2024 sampling episode. A blind duplicate was collected at MW-14 during the October 17, 2024 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 non-representative in the following conditions:

- a) Both the original and/or 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 (both April 11, 2024 and October 17, 2024) are 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 # 80711). A TSS and Field Turbidity Evaluation Report was prepared and submitted on February 27, 2015 (Doc# 82599) and was approved by IDNR on July 7, 2015 (Doc #83838). A summary table of field measured turbidity is included in Appendix D.

The background data has been pared to include only data collected by “No Purge” methods beginning in October 14, 2014. This conforms to IDNR requirements included in the October 11, 2016 IDNR Letter (Doc #87384).

Upgradient Data, Table 1, Attachment B, to the Fall 2024 Statistical Evaluation Reports (Appendix B.2) includes a summary of the background data. Outliers are removed from the background data. The outliers are identified in Table 6, Attachment B, to the Fall 2024 Statistical Evaluation Reports (Appendix B.2). The site prediction limits established in the Fall 2024 Statistical Evaluation Reports (Appendix B.2) are based on the validated background. The calculated Prediction Limits are summarized on Table 5.

SITE SPECIFIC GWPS

Review of the inorganic Prediction Limits (Table 5) indicates that the prediction limit for cadmium (currently 5.3 ug/L) and cobalt (3.5 ug/L) calculated from the background data exceeds the published IAC 567, Chapter 137 Statewide Standard (5.0 ug/L and 2.1 ug/L, respectively). The Site-Specific GWPS should not be set lower than the Site Prediction Limit calculated from the site background data. For this report, the published IAC 567, Chapter 137 Statewide Standards are used as the GWPS, except for cadmium and cobalt, where the Site Specific GWPS of 5.3 ug/L and 3.5 ug/L, respectively, are utilized. (The Site Specific GWPS for cadmium and cobalt are equivalent to the Site Prediction Limits). *Note that the Statistical Evaluations prepared by Otter Creek Environmental Services for each monitoring episode use a default GWPS value equal to the Statewide Standard and do not utilize Site Specific GWPS as warranted herein.*

STATISTICALLY SIGNIFICANT INCREASES (SSI)

The detected concentration of each compound is compared to the current site prediction limit for each respective compound calculated based on the background data set. A detected concentration for a compound that is in excess of the calculated site prediction limit is recorded as a Statistically Significant Increase (SSI) at detection monitoring wells.

Since the Prediction limit for VOC is set at the laboratory Method Reporting Level (MRL), any VOC detected above the MRL is recorded as an SSI. Table 6 is a summary of all compounds at site monitoring wells that have exceeded a *current* prediction limit in 2024.

The prediction limit exceedances are recorded only at wells that are included in the assessment monitoring system. Table 7 includes an on-going summary of compound detections that exceed the prediction limits (highlighted in light brown).

Exceedances of the Prediction Limit at a well that is in the Assessment Monitoring System or the Corrective Action Monitoring System is not an SSI, instead the exceedance is further evaluated by Confidence Interval Statistics.

Exceedance of the Prediction Limits for the current year is summarized on Table 1. A running summary of recorded Prediction Limit exceedances by year is included in Appendix E.

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 (Table 2).

Compounds detected to date at Assessment monitoring wells beyond the Appendix I list are limited to bis(2-ethylhexyl) phthalate. This additional compound will be included in the on-going semi-annual assessment monitoring at each point as appropriate to detections.

The summary of assessment monitoring detections to date is presented in Appendix F. The full Appendix II sampling episodes are highlighted in green in the table in Appendix F.

STATISTICALLY SIGNIFICANT LEVELS

The compounds with detections that exceed site prediction limits (see summary in Table 2) 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 Action (ACM).

The SSL Evaluation for 2024 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. The 95% LCL evaluation is presented in Table 7. Any 95% LCL value that exceeds a GWPS would be highlighted in yellow in Table 7.

As confirmed in Table 7, there are no SSL recorded. Monitoring wells MW-2, MW-3, MW-6, MW-7, MW-11, MW-12, MW-15, and MW-16 are designated as assessment monitoring wells and should remain in the assessment monitoring system.

DELINEATION & ASSESSMENT OF CORRECTIVE MEASURES (ACM)

Delineation is not required at this facility. Corrective Measures are not required at this facility.

Section 4.0 Leachate Collection System Performance Evaluation

Leachate accumulating in the existing leachate storage facilities on-site is recirculated on the Phase 1, Phase 2, and Phase 3 disposal areas in accordance with the SDP Permit or can be hauled to the 2024 AWQR

City of Osage Publicly Owned Treatment Works (POTW) in accordance with the treatment agreement with Osage (Appendix G.1), or the City of Elma POTW in accordance with the treatment agreement with Elma (Appendix G.2), or the City of Mason City POTW in accordance with the treatment agreement with Mason City (Appendix G.3).

Leachate System Performance

Closed Original Landfill – The original landfill (Closed) is exempt from installing a leachate collection system based on the May, 1995 Risk Assessment.

Through the course of time leachate collection toe drain trenches were constructed to eliminate persistent leachate seeps. Approximately 1,150 feet of east-west trending toe drain exists along the north side of the closed landfill and was installed in 1987. Approximately 725 feet of north-south trending toe drain exists along the east side of the closed landfill and was installed in 2004. Originally, the toe drain systems drained by gravity to a common lift station, where the collected leachate was pumped through a force main to a 10,000 gallon holding tank and load-out station near the facility shop. In 2007 the lift station manhole was modified and leachate collected from the Closed Landfill now drains by gravity to the Phase 1, 2, and 3 leachate collection and storage system and is managed as part of the Phase 1, 2, and 3 system. The toe drain system is illustrated in the figure in Appendix G.4.

Visual observations indicate that the leachate toe drains are performing as designed and no modifications are recommended.

Operating Landfill – The components of the Phase 1, Phase 2, and Phase 3 RCRA Subtitle D landfill include composite FML lined landfill cells, leachate collection and drainage layer, leachate collection system piping, a 1 million gallon FML lined storage lagoon, an Apex Pitboss leachate evaporator that operates on the lagoon surface when conditions allow, a diffused air bottom-mounted aerator system that operates in the lagoon, and leachate recirculation piping. A sprinkler irrigation system is used as the primary method of leachate recirculation. A leachate transport tank (1,500 gallon) for surface application and a 4” diameter recirculation line buried in the waste mass in Phase 1 are also available for use if needed. Leachate is recirculated in the Phase 1, Phase 2, or Phase 3 disposal areas and is not applied to frozen cover.

In 2024, approximately 104,675 gallons of leachate were recirculated using the sprinkler irrigation system and no leachate was recirculated using the transport tank. Daily leachate head measurements required during recirculation by the Leachate Recirculation Operation Plan are included on the Daily Leachate Recirculation Logs in Appendix G.5. Recirculation in 2024 appeared to have no impact on the landfill leachate collection system.

Pressure testing of the leachate recirculation force main, as required by Special Provision X.5.k of the SDP Permit, was completed on August 14, 2024.

Approximately 1,726,279 gallons of leachate were hauled to the Mason City POTW in accordance with the leachate treatment agreement. No leachate was hauled to Osage or Elma in 2024. Results of leachate testing in accordance with the treatment agreements are included in Appendix G.6.

Leachate head measurements in 2024 are summarized on Table 12. Note that leachate head monitoring points are also measured daily during leachate recirculation (see Daily Leachate Recirculation Logs in Appendix G.5.). All readings from the “Phase 1”, “Phase 2”, and “Phase 3” leachate head monitoring points were less than 12” during 2024 with the following exception:

- The LPZ in Phase 3 was recorded at 30” during the July, 2024 measurement event (7/12/24). The leachate collection line in Phase 3 was jetted and the point measured 10” on 7/15/24.

Based on the leachate head data, the leachate recirculation did not affect leachate head on the liner.

Groundwater Separation

Separation of the base of solid waste and the groundwater table is evaluated through observation of groundwater elevation measurements collected from groundwater piezometers located in the Phase 1, Phase 2, and Phase 3 expansions.

Groundwater head measurements are summarized as:

Date/Location	Phase 1	Phase 2	Phase 3
4/11/2024	0”	0”	0”
10/17/2024	0”	0”	NR

The measurement of the groundwater head monitoring point in Phase 3 was inadvertently omitted in October, 2024. Semi-Annual measurements are required and will be performed as required in 2025.

Based on the groundwater head data, separation is being maintained between the base of solid waste and the groundwater surface.

Leachate Line Cleaning

The LCP lines were cleaned in November 6, 2023. Due to an elevated leachate head reading the leachate collection line in Phase 3 was jetted during July, 2024. As per IDNR regulations, the lines should be cleaned every 3 years (next cleaning will be tentatively scheduled for 2026).

Performance Evaluation

No modifications to the leachate collection system are recommended for next year.

Section 5.0 Gas Monitoring

Explosive gas monitoring per 113.9(2) and the approved GMSP was conducted quarterly during 2024. Monitoring points include the five (5) subsurface gas probes, the utility corridor, structures on site, the three (3) groundwater head monitoring points associated with Phase 1 and Phase 2, Phase 3, and the four (4) passive gas vents in the closed landfilling area.

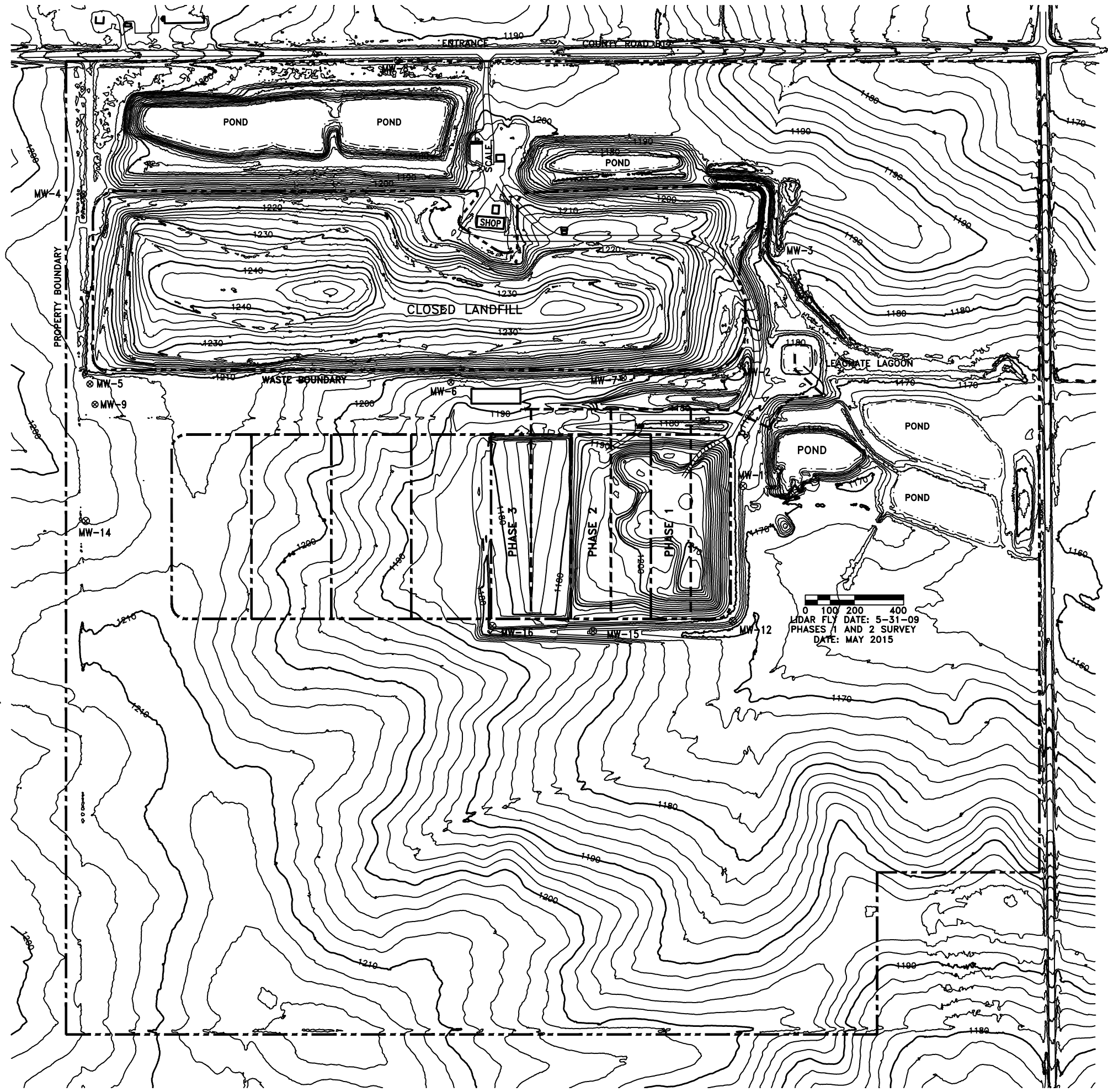
Figure 4 illustrates the locations of gas monitoring points.

Explosive gas concentrations were undetected or below regulatory action levels during the monitoring episodes. Summary tables of gas monitoring are included in Table 13.

Section 6.0 Recommendations/Requests

Continued semi-annual detection and assessment monitoring in accordance with IAC 567, Chapter 113.10(5) and (6) is recommended for this facility.

Figures



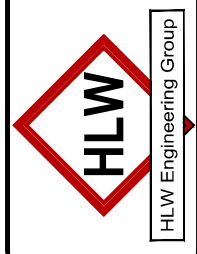
REVISION		NO.	DATE
DRAWN	DRA	PROJECT NO.	DATE
		6028	12-25-24

FIGURE: 1

SITE PLAN - TOTAL PROPERTY

FLOYD-MITCHELL-CHICKASAW SANITARY LANDFILL
 ELMA, IOWA

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 Story City, Iowa 50248
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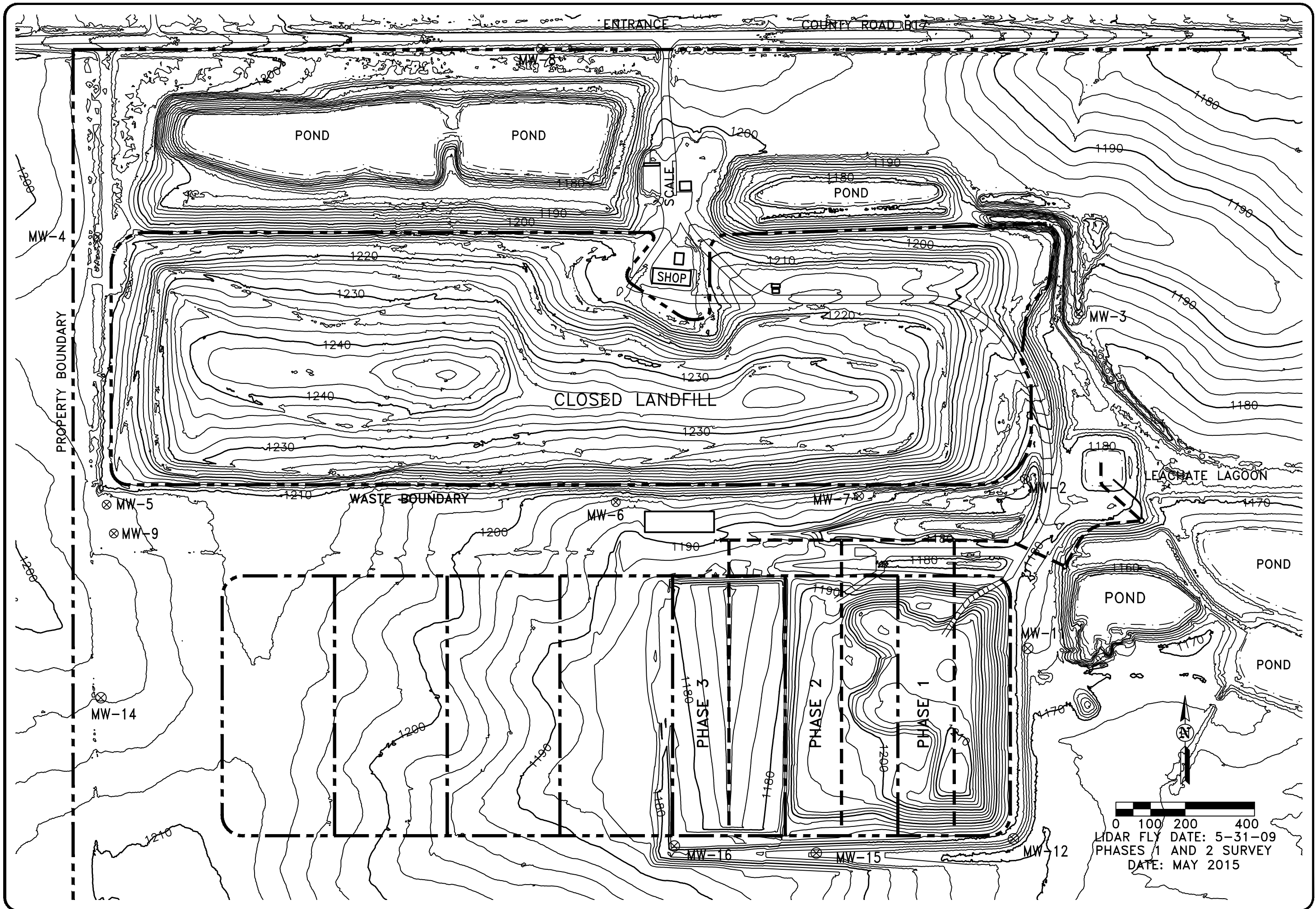
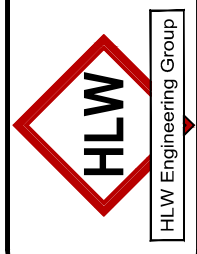


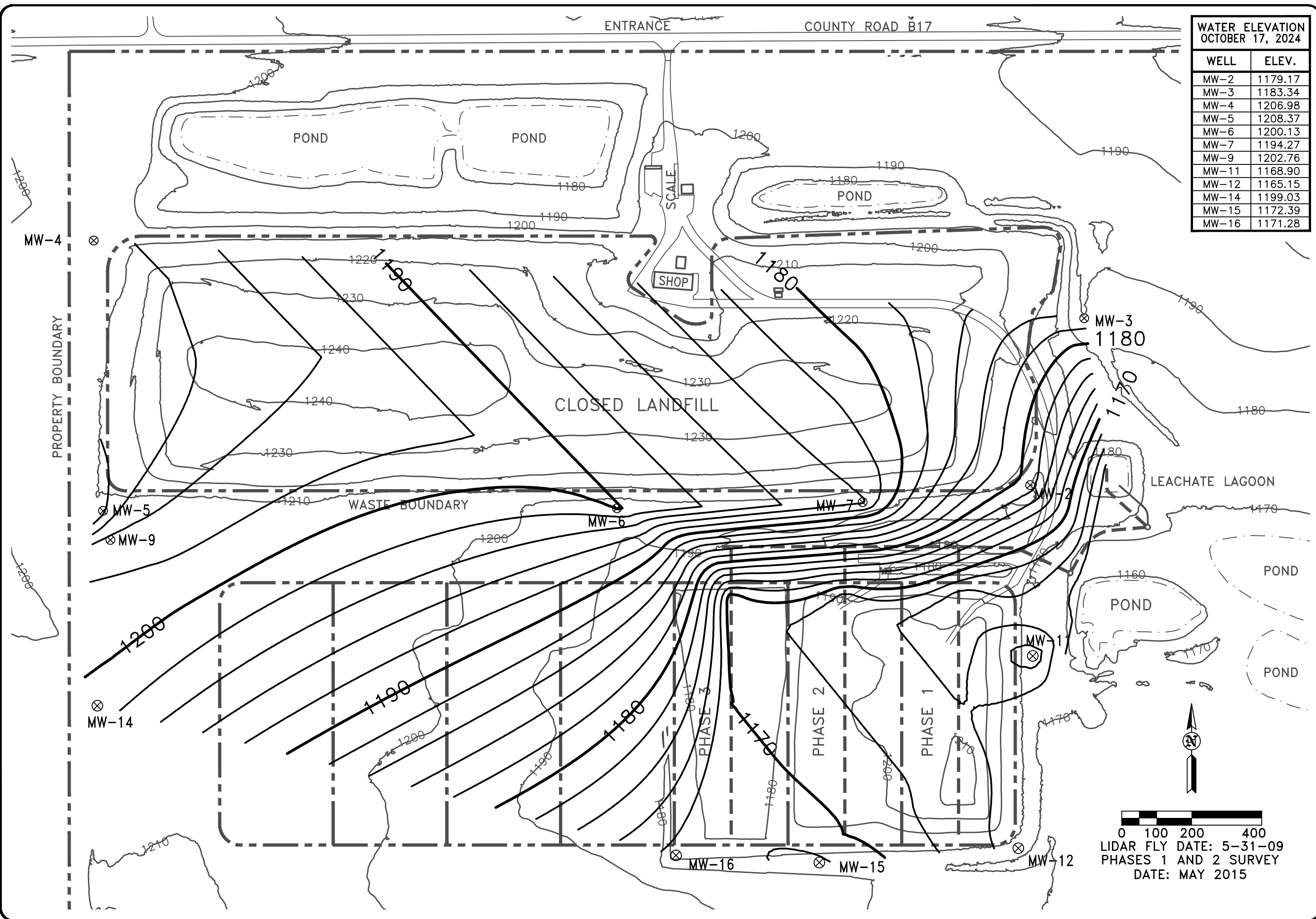
FIGURE: 2

REVISION	NO.	DATE
DRAWN	PROJECT NO.	DATE
DRA	6028	12-25-24

SITE PLAN - LANDFILL AREA
 FLOYD-MITCHELL-CHICKASAW SANITARY LANDFILL
 ELMA, IOWA

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**WATER ELEVATION
OCTOBER 17, 2024**

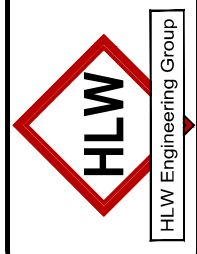
WELL	ELEV.
MW-2	1179.17
MW-3	1183.34
MW-4	1206.98
MW-5	1208.37
MW-6	1200.13
MW-7	1194.27
MW-9	1202.76
MW-11	1168.90
MW-12	1165.15
MW-14	1199.03
MW-15	1172.39
MW-16	1171.28

FIGURE: 3

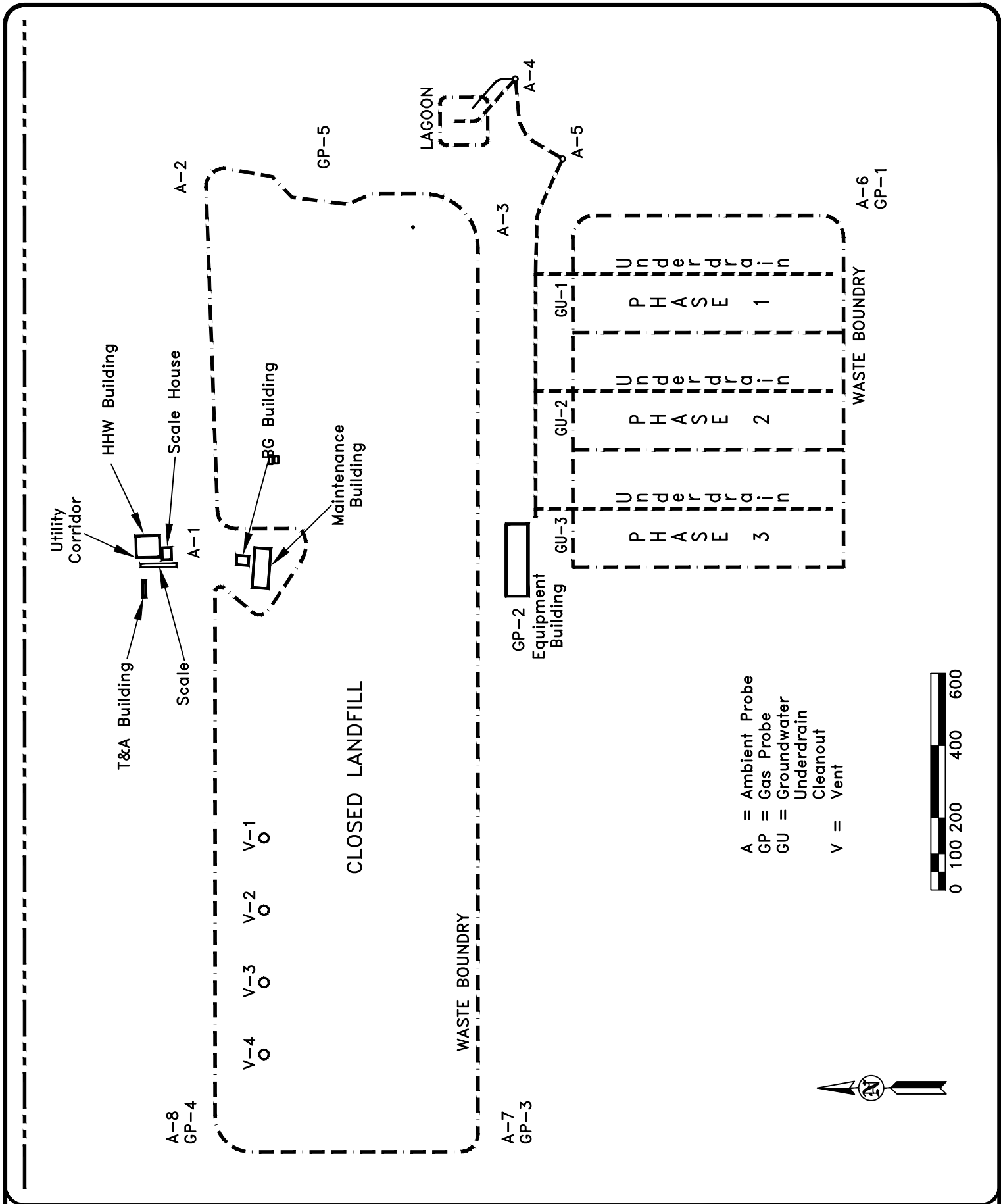
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DRAWN	PROJECT NO. 6028	DATE 12-25-24
DRA		

GROUNDWATER CONTOURS
 FLOYD-MITCHELL-CHICKASAW SANITARY LANDFILL
 ELMA, IOWA

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0 100 200 400
 LIDAR FLY DATE: 5-31-09
 PHASES 1 AND 2 SURVEY
 DATE: MAY 2015



HLW Engineering Group

METHANE MONITORING POINTS
 FLOYD-MITCHELL-CHICKASAW SANITARY LANDFILL
 ELMA, IOWA

FIGURE: 4

REVISION	NO.	DATE
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Tables (in IDNR Format)

Table Index

- Table 1 – Monitoring Program Summary
- Table 2 – Monitoring Program Implementation Schedule
- Table 2A – Summary of Monitoring to Date
- Table 3 – Monitoring Well Maintenance Performance Reevaluation Schedule
- Table 4 – Monitoring Well Maintenance Performance Reevaluation Summary
- Table 4A – Historic Water Elevation Monitoring Summary
- Table 5 – Background and GWPS Summary
- Table 6 – Summary of Detections
- Table 7 – Summary of Ongoing and Newly Identified SSI
- Table 8 - Summary of Ongoing and Newly Identified SSL - *Not Required*
- Table 9 – Analytical Data Summary
- Table 10 – Historic SSI and SSL - *Not Required*
- Table 11 – Corrective Action Trend Analysis - *Not Required*
- Table 12 – Leachate Thickness Summary
- Table 13 – Gas Monitoring Summary

Table 1 – Monitoring Program Summary

Table 1
Monitoring Program Summary
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

Monitoring Well	Formation	Current Monitoring Program	Change for next sampling event	Historic - Constituents w/ SSI	Spring 2024 - Constituents w/ SSI	Fall 2024 - Constituents w/ SSI	Historic - Constituents w/ SSL	Spring 2024 - Constituents w/ SSL	Fall 2024 - Constituents w/ SSL	Total # of Samples in each monitoring program since October 14, 2014		
										Detection	Assessment	Corrective Action
MW-9 (b)	Glacial Till	Background	NC	None	None	None	None	None	None	23	0	0
MW-14 (b)	Glacial Till	Background	NC	None	None	None	None	None	None	23	0	0
MW-4 (b)	Glacial Till	Background	NC	None	None	None	None	None	None	23	0	0
MW-5 (b)	Glacial Till	Background	NC	None	None	None	None	None	None	23	0	0
MW-2	Glacial Till	Assessment	NC	arsenic, cobalt, nickel, zinc, bis (2-ethylhexyl)phthalate	None	None	None	None	None	0	22	0
MW-3	Glacial Till	Assessment	NC	zinc	None	None	None	None	None	0	22	0
MW-6	Glacial Till	Assessment	NC	arsenic, cobalt, zinc, bis (2-ethylhexyl)phthalate	None	arsenic, cobalt	None	None	None	0	22	0
MW-7	Glacial Till	Assessment	NC	nickel, zinc	None	None	None	None	None	0	22	0
MW-11	Glacial Till	Assessment	NC	zinc	None	None	None	None	None	0	22	0
MW-12	Glacial Till	Assessment	NC	zinc, bis (2-ethylhexyl)phthalate	None	None	None	None	None	0	22	0
MW-15	Glacial Till	Assessment	NC	zinc, bis (2-ethylhexyl)phthalate	None	None	None	None	None	0	21	0
MW-16	Glacial Till	Assessment	NC	cobalt, nickel, zinc, bis (2-ethylhexyl)phthalate	None	None	None	None	None	0	11	0

Table 2 – Monitoring Program Implementation Schedule

Table 2
Monitoring Program Implementation Schedule
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

Monitoring Well	Recent Sampling Dates and Constituents	Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
		April, 2025	October, 2025	Previously Collected	Next Event
MW-9 (b)		Appendix I	Appendix I	03/15/09	N/A
MW-14 (b)		Appendix I	Appendix I		N/A
MW-4 (b)		Appendix I	Appendix I	4/20/17; 4/23/18	N/A
MW-5 (b)		Appendix I	Appendix I	4/12/16; 10/11/16	N/A
MW-2		Appendix I	Appendix I	10/11/16; 10/12/17; 10/19/2022	Oct., 2027
MW-3		Appendix I	Appendix I	10/12/18, 10/17/19, 10/17/24	Oct., 2029
MW-6		Appendix I	Appendix I	4/20/17; 4/23/18; 4/6/23	April, 2028
MW-7		Appendix I	Appendix I	4/20/17; 4/23/18; 4/6/23	April, 2028
MW-11	See following pages	Appendix I	Appendix I	4/8/14, 10/14/14, 4/16/19, 4/11/24	April, 2029
MW-12		Appendix II	Appendix I	4/16/2019, 4/9/20	April, 2025
MW-15		Appendix I	Appendix I	10/21/13, 4/8/14, 4/16/19, 4/11/24	April, 2029
MW-16		Appendix I	Appendix I	10/8/2020, 10/28/21	Oct., 2026

(b) background well

(1) = bis(2ethylhexyl) phthalate

Table 2A – Summary of Monitoring to Date

Table 2A -- Itemized Summary of Hydrologic Monitoring (to date)

<u>WELL</u>	<u>4/16/08</u>	<u>6/17/08</u>	<u>8/8/08</u>	<u>10/5/08</u>	<u>12/3/08</u>
MW-9 (b)	---	---	---	---	---
MW-14 (b)	---	---	---	---	---
MW-10 (b)*	---	---	---	---	---
MW-1*	---	---	---	---	---
MW-2	---	---	---	---	---
MW-3	---	---	---	---	---
MW-4	---	---	---	---	---
MW-5	---	---	---	---	---
MW-6	---	---	---	---	---
MW-7	---	---	---	---	---
MW-11	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-12	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-15	---	---	---	---	---
SW-1	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
SW-2	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
<u>WELL</u>	<u>4/15/09</u>	<u>6/17/09</u>	<u>7/24/09</u>	<u>10/19/09</u>	<u>11/2/09</u>
MW-9 (b)	Appendix II	Metals	metals	metals	Metals
MW-14 (b)	---	---	---	---	---
MW-10 (b)*	---	---	---	---	---
MW-1*	---	---	metals	metals	metals
MW-2	Appendix II	metals	metals	metals	metals
MW-3	Appendix II	metals	metals	metals	metals
MW-4	Appendix II	metals	metals	metals	metals
MW-5	Appendix II	metals	metals	metals	metals
MW-6	Appendix II	metals	metals	metals	metals
MW-7	Appendix II	metals	metals	metals	metals
MW-11	Appendix I	---	---	Appendix I	---
MW-12	Appendix I	---	---	Appendix I	---
MW-15	---	---	---	---	---
SW-1	Appendix I	---	---	Appendix I	---
SW-2	Appendix I	---	---	Appendix I	---
<u>WELL</u>	<u>4/19/10</u>	<u>7/16/10</u>	<u>9/22/10</u>	<u>4/13/11</u>	<u>9/28/11</u>
MW-9 (b)	Appendix I	---	Appendix I	Appendix I	Appendix I
MW-14 (b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-10 (b)*	---	---	---	---	---
MW-1*	metals	metals	metals	metals	metals
MW-2	metals	metals	metals	metals	metals
MW-3	metals	metals	metals	metals	metals
MW-4	metals	metals	metals	metals	metals
MW-5	metals	metals	metals	metals	metals
MW-6	metals	metals	metals	metals	metals
MW-7	metals	metals	metals	metals	metals
MW-11	Appendix I	---	Appendix I	Appendix I	Appendix I
MW-12	Appendix I	---	Appendix I	Appendix I	Appendix I
MW-15	---	---	---	---	---
SW-1	Appendix I	---	Appendix I	Appendix I	Appendix I
SW-2	Appendix I	---	Appendix I	Appendix I	Appendix I

<u>WELL</u>	<u>4/23/12</u>	<u>9/24/12</u>	<u>12/4/12</u>	<u>4/24/13</u>	<u>10/21/13</u>
MW-9 (b)	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-14 (b)	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-10 (b)*	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-1*	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-2	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-3	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-4	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-5	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-6	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-7	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-11	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-12	Appendix I	Appendix I	---	Appendix I	Appendix I
MW-15	---	---	Appendix I	Appendix I	Appendix II
SW-1	Appendix I	Appendix I	---	Appendix I	Appendix I
SW-2	Appendix I	Appendix I	---	Appendix I	Appendix I
Duplicate	Yes	Yes		At MW-12	At MW-14

<u>WELL</u>	<u>3/5/14</u>	<u>4/8/14</u>	<u>7/17/14</u>	<u>10/14/14</u>	<u>1/12/15</u>
MW-9 (b)	---	Appendix I	---	Appendix I	Appendix I
MW-14 (b)	---	Appendix I	---	Appendix I	Appendix I
MW-10 (b)*	---	Appendix I	---	Appendix I	Appendix I
MW-1*	As (R)	Appendix II	---	Appendix II	Zn (R)
MW-2	As (R)	Appendix I	---	Appendix I	---
MW-3	---	Appendix I	---	Appendix I	---
MW-4	---	Appendix I	---	Appendix I	Zn (R)
MW-5	---	Appendix I	---	Appendix I	---
MW-6	---	Appendix I	As + Zn (R)	Appendix I	---
MW-7	---	Appendix I	---	Appendix I	---
MW-11	---	Appendix II	---	Appendix II	---
MW-12	---	Appendix I	---	Appendix I	---
MW-15	---	Appendix II	---	Appendix I ⁽²⁾	---
SW-1	---	Appendix I	---	Appendix I	---
SW-2	---	Appendix II	---	Appendix II	---
Duplicate	---	At SW-2	---	At MW-5	---

<u>WELL</u>	<u>4/22/15</u>	<u>7/21/15</u>	<u>9/22/15</u>	<u>11/24/15</u>
MW-9 (b)	Appendix I	Appendix I	Appendix I	---
MW-14 (b)	Appendix I	Appendix I	Appendix I	---
MW-10 (b)*	Appendix I	Appendix I	Appendix I	---
MW-1*	Appendix I	---	Appendix I	---
MW-2	Appendix I	---	Appendix I	---
MW-3	Appendix I	---	Appendix I	---
MW-4	Appendix I	---	Appendix I	---
MW-5	Appendix I	---	Appendix I	Ba (R)
MW-6	Appendix I	---	Appendix I	As (R)
MW-7	Appendix I	---	Appendix I	---
MW-11	Appendix I ^(3,4,5,7)	^(3,4,5,7)	Appendix I ^(3,4,5,7)	---
MW-12	Appendix I	---	Appendix I	---
MW-15	Appendix I ⁽²⁾	---	Appendix I ⁽²⁾	---
SW-1	Appendix I	---	Appendix I	---
SW-2	Appendix I ^(5,6)	---	Dry	Plugged
Duplicate	At MW-12	---	At MW-15	---

<u>WELL</u>	<u>4/12/16</u>	<u>6/14/16</u>	<u>10/11/16</u>	<u>1/17/17</u>
MW-9 (b)	Appendix I	---	Appendix I	---
MW-14 (b)	Appendix I	---	Appendix I	---
MW-2	Appendix I	As (R)	Appendix II	---
MW-3	Appendix I	---	Appendix I	---
MW-4	Appendix I	---	Appendix I	Zn (R)
MW-5	Appendix II	---	Appendix II	---
MW-6	Appendix I	---	Appendix I	Co (R)
MW-7	Appendix I	---	Appendix I	Ni (R)
MW-11	Appendix I^(3,4,5,7)	---	Appendix I^(3,4,5,7)	---
MW-12	Appendix I	---	Appendix I	---
MW-15	Appendix I⁽²⁾	---	Appendix I⁽²⁾	---
SW-1	Appendix I	---	Appendix I	Co + Ni (R)
Duplicate	At MW-5	---	At MW-15	---

(R) = Resample

(b) background well

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

(2) = bis(2ethylhexyl) phthalate

(3) = diethyl phthalate

(4) = methyl parathion

(5) = phorate

(6) = sulfide.

(7) = thionazin

<u>WELL</u>	<u>4/20/17</u>	<u>10/12/17</u>	<u>4/23/18</u>	<u>7/5/18</u>	<u>10/12/18</u>
MW-9 (b)	Appendix I	Appendix I	Appendix I		Appendix I
MW-14 (b)	Appendix I	Appendix I	Appendix I		Appendix I
MW-2	Appendix I ⁽¹⁾	Appendix II	Appendix I ⁽²⁾		Appendix I ⁽²⁾
MW-3	Appendix I	Appendix I	Appendix I	Zn (R)	Appendix II
MW-4	Appendix II	Appendix I	Appendix II	bis(2ethylhexyl) phthalate	Appendix I ⁽²⁾
MW-5	Appendix I ⁽¹⁾	Appendix I ⁽¹⁾	Appendix I		Appendix I
MW-6	Appendix II	Appendix I	Appendix II	bis(2ethylhexyl) phthalate	Appendix I ⁽²⁾
MW-7	Appendix II	Appendix I	Appendix II		Appendix I
MW-11	Appendix I	Appendix I	Appendix I		Appendix I
MW-12	Appendix I	Appendix I	Appendix I		Appendix I
MW-15	Appendix I ⁽²⁾	Appendix I ⁽²⁾	Appendix I ⁽²⁾		Appendix I ⁽²⁾
SW-1	Appendix I	---	---		Appendix I
Duplicate	At MW-5	At MW-2	At MW-14		At MW-9

(R) = Resample

(b) background well

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

(2) = bis(2ethylhexyl) phthalate

<u>WELL</u>	<u>4/16/19</u>	<u>10/17/19</u>	<u>4/9/2020</u>	<u>10/8/2020</u>	<u>12/9/2020</u>
MW-9 (b)	Appendix I	Appendix I	Appendix I	Appendix I	---
MW-14 (b)	Appendix I	Appendix I	Appendix I	Appendix I	---
MW-2	Appendix I (2)	Appendix I (2)	Appendix I (2)	Appendix I (2)	---
MW-3	Appendix I (1)	Appendix II	Appendix I (1)	Appendix I (1)	---
MW-4	Appendix I (2)	Appendix I (2)	Appendix I (2)	Appendix I (2)	---
MW-5	Appendix I (1)	Appendix I (1)	Appendix I (1)	Appendix I (1)	---
MW-6	Appendix I (2)	Appendix I (2)	Appendix I (2)	Appendix I (2)	---
MW-7	Appendix I (1)	Appendix I (1)	Appendix I (1)	Appendix I (1)	---
MW-11	Appendix II	Appendix I (1)	Appendix I (1)	Appendix I (1)	---
MW-12	Appendix II	Appendix I (2)	Appendix II	Appendix I (2)	---
MW-15	Appendix II	Appendix I (2)	Appendix I (2)	Appendix I (2)	---
MW-16	---	Appendix I	Appendix I	Appendix II	(R) bis(2ethylhexyl) phthalate
Duplicate	At MW-14	At MW-4	At MW-9	At MW-6	

(R) = Resample

(b) background well

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

(2) = bis(2ethylhexyl) phthalate

<u>WELL</u>	<u>4/15/2021</u>	<u>10/28/2021</u>	<u>4/13/2022</u>	<u>10/19/2022</u>
MW-9 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-14 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-4 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-5 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-2	Appendix I (1)	Appendix I (1)	Appendix I (1)	Appendix II
MW-3	Appendix I	Appendix I	Appendix I	Appendix I
MW-6	Appendix I (1)	Appendix I (1)	Appendix I (1)	Appendix I
MW-7	Appendix I	Appendix I	Appendix I	Appendix I
MW-11	Appendix I	Appendix I	Appendix I	Appendix I
MW-12	Appendix I (1)	Appendix I (1)	Appendix I (1)	Appendix I
MW-15	Appendix I (1)	Appendix I (1)	Appendix I (1)	Appendix I
MW-16	Appendix I	Appendix II	Appendix I (1)	Appendix I (1)
Duplicate	At MW-4	At MW-3	At MW-6	At MW-9

(1) = bis(2ethylhexyl) phthalate

<u>WELL</u>	<u>4/6/2023</u>	<u>10/10/2023</u>	<u>4/11/2024</u>	<u>10/17/2024</u>
MW-9 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-14 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-4 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-5 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-2	Appendix I	Appendix I	Appendix I	Appendix I
MW-3	Appendix I	Appendix I	Appendix I	Appendix II
MW-6	Appendix II	Appendix I (1)	Appendix I	Appendix I
MW-7	Appendix II	Appendix I	Appendix I	Appendix I
MW-11	Appendix I	Appendix I	Appendix II	Appendix I
MW-12	Appendix I	Appendix I	Appendix I	Appendix I
MW-15	Appendix I	Appendix I	Appendix II	Appendix I
MW-16	Appendix I (1)	Appendix I	Appendix I	Appendix I
Duplicate	At MW-7	At MW-3	At MW-2	At MW-14

(1) = bis(2ethylhexyl) phthalate

Table 3 – Monitoring Well Maintenance Performance Reevaluation Schedule

Table 3
Monitoring Well Maintenance and Performance Reevaluation Schedule
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

Compliance with:	Monitoring Calendar Years									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
567 IAC 113.10(2)"f"(1) high and low water levels (biennial)	X	x	X	X	X	X	X	X	X	X
567 IAC 113.10(2)"f"(2) changes in the hydrologic setting and flow paths (historic = 1 per 5 years; current = biennial)	X	X	X	X	X	X	X	X	X	X
567 IAC 113.10(2)"f"(3) well depths (annual)	X	X	X	X	X	X	X	X	X	X
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry (biennial)	X		X		X	X		X		X
Waste separation from ground water 113.6(2)"l"	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Compliance with:	Monitoring Calendar Years									
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
567 IAC 113.10(2)"f"(1) high and low water levels (biennial)	X	X	P	P	P	P	P	P	P	P
567 IAC 113.10(2)"f"(2) changes in the hydrologic setting and flow paths (historic = 1 per 5 years; current = biennial)		X		P		P		P		P
567 IAC 113.10(2)"f"(3) well depths (annual)	X	X	P	P	P	P	P	P	P	P
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry (biennial)		X		P		P		P		P
Waste separation from ground water 113.6(2)"l"	1X	2X	2P	2P	2P	2P	2P	2P	2P	2P

X = completed
P = Planned
N/A = Not Applicable

Table 4 – Monitoring Well Maintenance Performance Reevaluation Summary

Table 4
Monitoring Well Maintenance and Performance Summary
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

Well	Top of casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth Discrepancy (ft)	Hydraulic Cond. (cm/sec)/date	Most Recent Recharge Rate	
					4/11/2024	10/17/2024			4/11/2024	Change
MW-9 (b)	1207.51	1184.89	32.62	Groundwater Level (ft)	7.51	8.06	0.12	0.000113 2013	Full recovery in >24 hour	None percieved
				Groundwater Elevation (Ft MSL)	1200	1199.45				
				Measured Well Depth (ft)	32.5	32.5				
				Submerged (+) or Exposed screen (-)	15.11	14.56				
MW-14 (b)	1209.87	1196.69	23.18	Groundwater Level (ft)	5.45	10.84	0.28	0.000245 2013	Full recovery in <5 hour	None percieved
				Groundwater Elevation (Ft MSL)	1204.42	1199.03				
				Measured Well Depth (ft)	22.9	22.9				
				Submerged (+) or Exposed screen (-)	7.73	2.34				
MW-2	1180.67	1162.82	32.85	Groundwater Level (ft)	1.6	6.39	0.05	0.0000292 2013	Full recovery in <6 hour	None percieved
				Groundwater Elevation (Ft MSL)	1179.07	1174.28				
				Measured Well Depth (ft)	32.8	32.8				
				Submerged (+) or Exposed screen (-)	16.25	11.46				
MW-3	1189.79	1182.24	22.55	Groundwater Level (ft)	15.28	18.29	-0.05	0.0000332 2013	Full recovery in 8 hour	None percieved
				Groundwater Elevation (Ft MSL)	1174.51	1171.5				
				Measured Well Depth (ft)	22.6	22.6				
				Submerged (+) or Exposed screen (-)	-7.73	-10.74				
MW-4 (b)	1209.46	1192.08	32.38	Groundwater Level (ft)	2.65	9.41	-0.42	0.0000244 2013	Full recovery in 6 hours	None percieved
				Groundwater Elevation (Ft MSL)	1206.81	1200.05				
				Measured Well Depth (ft)	32.8	32.8				
				Submerged (+) or Exposed screen (-)	14.73	7.97				
MW-5 (b)	1209.87	1193.22	31.65	Groundwater Level (ft)	4.95	9.22	-0.05	0.000036 2013	Full recovery in 6 hours	None percieved
				Groundwater Elevation (Ft MSL)	1204.92	1200.65				
				Measured Well Depth (ft)	31.7	31.7				
				Submerged (+) or Exposed screen (-)	11.7	7.43				
MW-6	1201.7	1184	32.7	Groundwater Level (ft)	5.32	8.85	0.1	0.0000183 2013	Full recovery in 5 hour	None percieved
				Groundwater Elevation (Ft MSL)	1196.38	1192.85				
				Measured Well Depth (ft)	32.6	32.6				
				Submerged (+) or Exposed screen (-)	12.38	8.85				
MW-7	1197.57	1189.91	22.66	Groundwater Level (ft)	3.72	8.86	0.26	0.0000294 2013	Full recovery in 4 hour	None percieved
				Groundwater Elevation (Ft MSL)	1193.85	1188.71				
				Measured Well Depth (ft)	22.4	22.4				
				Submerged (+) or Exposed screen (-)	3.94	-1.2				
MW-11	1179.86	1152.72	37.14	Groundwater Level (ft)	13.5	10.96	0.34	0.0000549 2013	Full recovery in >24 hour	None percieved
				Groundwater Elevation (Ft MSL)	1166.36	1168.9				
				Measured Well Depth (ft)	36.8	36.8				
				Submerged (+) or Exposed screen (-)	13.64	16.18				
MW-12	1181.55	1170.04	21.51	Groundwater Level (ft)	12.92	16.4	0.31	0.0000425 2013	Full recovery in 4 hour	None percieved
				Groundwater Elevation (Ft MSL)	1168.63	1165.15				
				Measured Well Depth (ft)	21.2	21.2				
				Submerged (+) or Exposed screen (-)	-1.41	-4.89				
MW-15	1183.46	1163.26	30.2	Groundwater Level (ft)	10.94	11.07	0	0.0000456 2013	Full recovery in >24 hour	None percieved
				Groundwater Elevation (Ft MSL)	1172.52	1172.39				
				Measured Well Depth (ft)	30.2	30.2				
				Submerged (+) or Exposed screen (-)	9.26	9.13				
MW-16	1185.93	1165.93	30.43	Groundwater Level (ft)	18.22	14.65	0.03	0.00000179 2020	Full recovery in >24 hour	None percieved
				Groundwater Elevation (Ft MSL)	1167.71	1171.28				
				Measured Well Depth (ft)	30.4	30.4				
				Submerged (+) or Exposed screen (-)	1.78	5.35				

Table 4A – Historic Water Elevation Monitoring Summary

Table 4 Supplement

Annual Water Quality Report
 FMC Sanitary Landfill
 Permit No. 66-SDP-01-73P

Water-level data, Floyd-Mitchell County Sanitary Landfill. TOC, top of casing.

Monitor Well/ TOC Elev. (ft)	Screened Interval		Water Level	DATE									
	Depth (ft)	Elev. (ft)		6/30/93	12/9/93	4/28/94	9/27/94	5/5/95	9/29/95	4/12/96	9/26/96	3/10/97	9/10/97
MW-1* 1179.69	87.2 92.2	1092.5 1087.5	Depth (ft) Elev. (ft)	32.20 1147.49	35.32 1144.37	35.38 1144.31	35.82 1143.87	34.15 1145.54	36.22 1143.47	36.40 1143.29	37.09 1142.60	36.01 1143.68	36.06 1143.63
MW-2* 1180.67	7.0 32.0?	1172.8? 1147.8?	Depth (ft) Elev. (ft)	5.00 1175.67	7.50 1173.17	5.57 1175.10	7.05 1173.62	5.20 1175.47	6.90 1173.77	4.60 1176.07	8.03 1172.64	3.76 1176.91	6.90 1173.77
MW-3* 1189.79	7.0 22.0	1182.8 1167.8	Depth (ft) Elev. (ft)	8.20 1181.59	12.40 1177.39	10.06 1179.73	12.03 1177.76	9.35 1180.44	12.45 1177.34	10.80 1178.99	12.87 1176.92	10.13 1179.66	12.38 1177.41
MW-4* 1209.46	7.0 32.0?	1200.4? 1175.4?	Depth (ft) Elev. (ft)	5.25 1204.21	8.86 1200.60	6.26 1203.20	7.75 1201.71	6.05 1203.41	7.50 1201.96	5.80 1203.66	10.11 1199.35	3.60 1205.86	8.93 1200.53
MW-5* 1209.87	6.0 31.0?	1201.4? 1176.4?	Depth (ft) Elev. (ft)	6.12 1203.75	8.35 1201.52	7.61 1202.26	8.04 1201.83	7.50 1202.37	7.91 1201.96	7.00 1202.87	9.85 1200.02	4.30 1205.57	8.28 1201.59
MW-6* 1201.70	7.7 32.7?	1191.4? 1166.4?	Depth (ft) Elev. (ft)	7.12 1194.58	10.70 1191.00	8.47 1193.23	10.92 1190.78	8.90 1192.80	10.60 1191.10	9.50 1192.20	10.21 1191.49	4.32 1197.38	8.97 1192.73
MW-7* 1197.57	7.5 22.5	1190.1 1175.1	Depth (ft) Elev. (ft)	4.80 1192.77	9.85 1187.72	5.81 1191.76	6.34 1191.23	4.95 1192.62	10.20 1187.37	4.60 1192.97	9.49 1188.08	--- ---	8.30 1189.27
MW-9* 1207.51	22.5 32.5	1185.0 1175.0	Depth (ft) Elev. (ft)	6.86 1200.65	6.70 1200.81	7.92 1199.59	6.16 1201.35	7.90 1199.61	6.10 1201.41	8.05 1199.46	6.86 1200.65	7.55 1199.96	6.15 1201.36
MW-10* 1207.06 *9/14/07 survey	134.2 144.2	1072.9 1062.9	Depth (ft) Elev. (ft)	59.10 1147.96	61.70 1145.36	62.23 1144.83	63.71 1143.35	62.00 1145.06	64.05 1143.01	64.50 1142.56	--- ---	--- ---	--- ---
				6/30/93	12/9/93	4/28/94	9/27/94	5/5/95	9/29/95	4/12/96	9/26/96	3/10/97	9/10/97

Table 4 Supplement

Annual Water Quality Report
 FMC Sanitary Landfill
 Permit No. 66-SDP-01-73P

Water-level data, Floyd-Mitchell County San

Monitor Well/ TOC Elev. (ft)	Screened Interval		Water Level	DATE									
	Depth (ft)	Elev. (ft)		4/14/98	9/29/98	3/31/00	9/16/00	4/12/00	10/13/00	4/19/01	9/21/01	9/25/02	3/13/02
MW-1* 1179.69	87.2 92.2	1092.5 1087.5	Depth (ft) Elev. (ft)	33.76 1145.93	35.82 1143.87	35.91 1143.78	33.67 1146.02	36.28 1143.41	36.69 1143.00	32.78 1146.91	36.20 1143.49	35.56 1144.13	37.19 1142.50
MW-2* 1180.67	7.0 32.0?	1172.8? 1147.8?	Depth (ft) Elev. (ft)	3.69 1176.98	8.04 1172.63	4.24 1176.43	7.05 1173.62	5.31 1175.36	7.34 1173.33	3.15 1177.52	4.92 1175.75	6.44 1174.23	3.91 1176.76
MW-3* 1189.79	7.0 22.0	1182.8 1167.8	Depth (ft) Elev. (ft)	7.91 1181.88	13.30 1176.49	9.37 1180.42	11.54 1178.25	11.47 1178.32	13.31 1176.48	7.77 1182.02	12.82 1176.97	12.49 1177.30	12.36 1177.43
MW-4* 1209.46	7.0 32.0?	1200.4? 1175.4?	Depth (ft) Elev. (ft)	4.73 1204.73	9.75 1199.71	5.45 1204.01	8.69 1200.77	6.75 1202.71	10.65 1198.81	4.94 1204.52	7.42 1202.04	8.65 1200.81	4.81 1204.65
MW-5* 1209.87	6.0 31.0?	1201.4? 1176.4?	Depth (ft) Elev. (ft)	4.94 1204.93	10.32 1199.55	6.31 1203.56	9.22 1200.65	7.73 1202.14	10.57 1199.30	4.99 1204.88	9.36 1200.51	9.05 1200.82	6.95 1202.92
MW-6* 1201.70	7.7 32.7?	1191.4? 1166.4?	Depth (ft) Elev. (ft)	5.40 1196.30	8.32 1193.38	8.44 1193.26	9.68 1192.02	9.16 1192.54	11.34 1190.36	6.62 1195.08	6.04 1195.66	9.40 1192.30	4.98 1196.72
MW-7* 1197.57	7.5 22.5	1190.1 1175.1	Depth (ft) Elev. (ft)	4.58 1192.99	9.14 1188.43	5.35 1192.22	8.39 1189.18	6.06 1191.51	10.16 1187.41	4.45 1193.12	7.36 1190.21	6.35 1191.22	4.58 1192.99
MW-9* 1207.51	22.5 32.5	1185.0 1175.0	Depth (ft) Elev. (ft)	7.54 1199.97	7.29 1200.22	7.48 1200.03	5.85 1201.66	8.33 1199.18	7.56 1199.95	6.94 1200.57	7.39 1200.12	6.51 1201.00	8.31 1199.20
MW-10* 1207.06	134.2 144.2	1072.9 1062.9	Depth (ft) Elev. (ft)	---	63.31 1143.75	63.65 1143.41	60.88 1146.18	64.33 1142.73	64.44 1142.62	60.48 1146.58	63.80 1143.26	63.25 1143.81	65.39 1141.67
*9/14/07 survey				4/14/98	9/29/98	3/31/00	9/16/00	4/12/00	10/13/00	4/19/01	9/21/01	9/25/02	3/13/02

Table 4 Supplement

Annual Water Quality Report
 FMC Sanitary Landfill
 Permit No. 66-SDP-01-73P

Water-level data, Floyd-Mitchell County San

Monitor Well/ TOC Elev. (ft)	Screened Interval		Water Level	DATE									
	Depth (ft)	Elev. (ft)		3/14/03	9/18/03	4/2/04	9/21/04	4/15/05	9/21/05	4/13/06	10/4/06	4/19/07	10/4/07
MW-1* 1179.69	87.2 92.2	1092.5 1087.5	Depth (ft) Elev. (ft)	37.49 1142.20	37.15 1142.54	37.98 1141.71	35.08 1144.61	35.75 1143.94	35.06 1144.63	34.07 1145.62	36.82 1142.87	33.82 1145.87	33.91 1145.78
MW-2* 1180.67	7.0 32.0?	1172.8? 1147.8?	Depth (ft) Elev. (ft)	3.69 1176.98	7.59 1173.08	3.65 1177.02	5.02 1175.65	3.70 1176.97	5.46 1175.21	3.38 1177.29	6.61 1174.06	3.41 1177.26	3.52 1177.15
MW-3* 1189.79	7.0 22.0	1182.8 1167.8	Depth (ft) Elev. (ft)	11.75 1178.04	13.73 1176.06	12.59 1177.20	11.14 1178.65	10.18 1179.61	11.90 1177.89	8.59 1181.20	12.55 1177.24	7.84 1181.95	11.15 1178.64
MW-4* 1209.46	7.0 32.0?	1200.4? 1175.4?	Depth (ft) Elev. (ft)	5.00 1204.46	10.65 1198.81	5.00 1204.46	5.85 1203.61	4.82 1204.64	5.35 1204.11	4.58 1204.88	7.02 1202.44	5.05 1204.41	5.40 1204.06
MW-5* 1209.87	6.0 31.0?	1201.4? 1176.4?	Depth (ft) Elev. (ft)	6.85 1203.02	10.81 1199.06	5.35 1204.52	6.59 1203.28	5.69 1204.18	6.35 1203.52	5.79 1204.08	8.81 1201.06	5.75 1204.12	6.54 1203.33
MW-6* 1201.70	7.7 32.7?	1191.4? 1166.4?	Depth (ft) Elev. (ft)	5.85 1195.85	9.71 1191.99	6.25 1195.45	8.41 1193.29	6.32 1195.38	8.37 1193.33	6.50 1195.20	8.64 1193.06	7.23 1194.47	8.42 1193.28
MW-7* 1197.57	7.5 22.5	1190.1 1175.1	Depth (ft) Elev. (ft)	4.39 1193.18	9.91 1187.66	4.35 1193.22	5.33 1192.24	4.31 1193.26	6.84 1190.73	4.23 1193.34	9.04 1188.53	4.72 1192.85	7.64 1189.93
MW-9* 1207.51	22.5 32.5	1185.0 1175.0	Depth (ft) Elev. (ft)	8.94 1198.57	7.46 1200.05	8.64 1198.87	5.94 1201.57	8.01 1199.50	5.73 1201.78	7.63 1199.88	6.91 1200.60	7.13 1200.38	5.55 1201.96
MW-10* 1207.06	134.2 144.2	1072.9 1062.9	Depth (ft) Elev. (ft)	65.80 1141.26	64.88 1142.18	66.45 1140.61	62.96 1144.10	64.10 1142.96	62.86 1144.20	61.98 1145.08	64.67 1142.39	61.49 1145.57	61.78 1145.28
*9/14/07 survey				3/14/03	9/18/03	4/2/04	9/21/04	4/15/05	9/21/05	4/13/06	10/4/06	4/19/07	10/4/07

Table 4 Supplement

Annual Water Quality Report
 FMC Sanitary Landfill
 Permit No. 66-SDP-01-73P

Water-level data, Floyd-Mitchell County San

Monitor Well/ TOC Elev. (ft)	Screened Interval		Water Level	DATE									
	Depth (ft)	Elev. (ft)		4/16/08	10/3/08	4/15/09	10/19/09	4/19/10	9/22/10	4/13/11	9/28/11	4/23/12	9/24/12
MW-1* 1179.69	87.2 92.2	1092.5 1087.5	Depth (ft) Elev. (ft)	---	36.02 1143.67	36.49 1143.20	37.04 1142.65	34.10 1145.59	35.54 1144.15	34.31 1145.38	36.69 1143.00	36.75 1142.94	39.40 1140.29
MW-2* 1180.67	7.0 32.0?	1172.8? 1147.8?	Depth (ft) Elev. (ft)	2.78 1177.89	6.64 1174.03	4.48 1176.19	5.43 1175.24	3.34 1177.33	5.65 1175.02	3.24 1177.43	6.40 1174.27	2.95 1177.72	7.82 1172.85
MW-3* 1189.79	7.0 22.0	1182.8 1167.8	Depth (ft) Elev. (ft)	7.59 1182.20	13.40 1176.39	10.18 1179.61	13.47 1176.32	9.16 1180.63	12.35 1177.44	9.20 1180.59	13.53 1176.26	12.69 1177.10	16.85 1172.94
MW-4* 1209.46	7.0 32.0?	1200.4? 1175.4?	Depth (ft) Elev. (ft)	4.83 1204.63	10.55 1198.91	6.25 1203.21	9.45 1200.01	5.18 1204.28	8.93 1200.53	5.32 1204.14	10.75 1198.71	4.82 1204.64	11.95 1197.51
MW-5* 1209.87	6.0 31.0?	1201.4? 1176.4?	Depth (ft) Elev. (ft)	5.15 1204.72	10.34 1199.53	7.15 1202.72	9.61 1200.26	6.12 1203.75	9.61 1200.26	6.68 1203.19	10.72 1199.15	4.55 1205.32	12.03 1197.84
MW-6* 1201.70	7.7 32.7?	1191.4? 1166.4?	Depth (ft) Elev. (ft)	6.40 1195.30	10.10 1191.60	9.15 1192.55	9.74 1191.96	7.38 1194.32	10.47 1191.23	7.24 1194.46	11.70 1190.00	4.65 1197.05	12.72 1188.98
MW-7* 1197.57	7.5 22.5	1190.1 1175.1	Depth (ft) Elev. (ft)	4.18 1193.39	9.51 1188.06	7.63 1189.94	9.70 1187.87	5.47 1192.10	8.49 1189.08	5.68 1191.89	10.35 1187.22	4.11 1193.46	10.88 1186.69
MW-9* 1207.51	22.5 32.5	1185.0 1175.0	Depth (ft) Elev. (ft)	7.46 1200.05	7.35 1200.16	8.16 1199.35	7.31 1200.20	7.52 1199.99	6.14 1201.37	7.88 1199.63	7.44 1200.07	8.44 1199.07	8.74 1198.77
MW-10* 1207.06 *9/14/07 survey	134.2 144.2	1072.9 1062.9	Depth (ft) Elev. (ft)	---	63.49 1143.57	64.58 1142.48	64.91 1142.15	61.79 1145.27	63.11 1143.95	62.22 1144.84	64.45 1142.61	65.38 1141.68	67.54 1139.52
				4/16/08	10/3/08	4/15/09	10/19/09	4/19/10	9/22/10	4/13/11	9/28/11	4/23/12	9/24/12

Table 4 Supplement

Annual Water Quality Report
 FMC Sanitary Landfill
 Permit No. 66-SDP-01-73P

Water-level data, Floyd-Mitchell County San

Monitor Well/ TOC Elev. (ft)	Screened Interval		Water Level	DATE										
	Depth (ft)	Elev. (ft)		4/24/13	10/21/13	4/8/14	10/14/14	4/13/15	9/22/15	4/12/16	10/11/16	4/20/17	10/12/17	4/23/18
MW-1* 1179.69	87.2 92.2	1092.5 1087.5	Depth (ft) Elev. (ft)	35.70 1143.99	35.30 1144.39	35.60 1144.09	36.20 1143.49	36.21 1143.48	37.22 1142.47	33.80 1145.89	32.06 1147.63	31.65 1148.04	35.20 1144.49	33.82 1145.87
MW-2* 1180.67	7.0 32.0?	1172.8? 1147.8?	Depth (ft) Elev. (ft)	2.00 1178.67	4.80 1175.87	2.80 1177.87	2.60 1178.07	2.80 1177.87	5.52 1175.15	3.40 1177.27	3.80 1176.87	1.85 1178.82	2.80 1177.87	1.88 1178.79
MW-3* 1189.79	7.0 22.0	1182.8 1167.8	Depth (ft) Elev. (ft)	7.60 1182.19	12.70 1177.09	8.32 1181.47	12.68 1177.11	9.26 1180.53	12.66 1177.13	9.08 1180.71	10.14 1179.65	6.45 1183.34	13.76 1176.03	8.41 1181.38
MW-4* 1209.46	7.0 32.0?	1200.4? 1175.4?	Depth (ft) Elev. (ft)	2.60 1206.86	6.80 1202.66	4.40 1205.06	5.85 1203.61	4.70 1204.76	9.47 1199.99	5.14 1204.32	6.34 1203.12	4.51 1204.95	7.23 1202.23	2.48 1206.98
MW-5* 1209.87	6.0 31.0?	1201.4? 1176.4?	Depth (ft) Elev. (ft)	1.80 1208.07	6.00 1203.87	3.95 1205.92	7.20 1202.67	4.65 1205.22	9.48 1200.39	5.85 1204.02	7.03 1202.84	1.50 1208.37	7.90 1201.97	1.63 1208.24
MW-6* 1201.70	7.7 32.7?	1191.4? 1166.4?	Depth (ft) Elev. (ft)	4.35 1197.35	8.15 1193.55	4.60 1197.10	8.50 1193.20	4.40 1197.30	10.05 1191.65	6.71 1194.99	8.20 1193.50	3.52 1198.18	4.68 1197.02	2.09 1199.61
MW-7* 1197.57	7.5 22.5	1190.1 1175.1	Depth (ft) Elev. (ft)	3.70 1193.87	8.60 1188.97	4.30 1193.27	5.70 1191.87	4.67 1192.90	8.40 1189.17	4.92 1192.65	6.00 1191.57	3.30 1194.27	6.09 1191.48	3.88 1193.69
MW-9* 1207.51	22.5 32.5	1185.0 1175.0	Depth (ft) Elev. (ft)	6.75 1200.76	5.70 1201.81	6.80 1200.71	5.85 1201.66	7.28 1200.23	6.70 1200.81	6.69 1200.82	4.95 1202.56	6.83 1200.68	7.45 1200.06	6.75 1200.76
MW-10* 1207.06 *9/14/07 survey	134.2 144.2	1072.9 1062.9	Depth (ft) Elev. (ft)	64.30 1142.76	63.10 1143.96	63.70 1143.36	64.15 1142.91	64.71 1142.35	65.45 1141.61	61.47 1145.59	59.25 1147.81	59.31 1147.75	63.30 1143.76	62.41 1144.65
				4/24/13	10/21/13	4/8/14	10/14/14	4/13/15	9/22/15	4/12/16	10/11/16	4/20/17	10/12/17	4/23/18

Table 4 Supplement

Annual Water Quality Report
 FMC Sanitary Landfill
 Permit No. 66-SDP-01-73P

Water-level data, Floyd-Mitchell County San

Monitor Well/ TOC Elev. (ft)	Screened Interval		Water Level												
	Depth (ft)	Elev. (ft)		10/12/18	4/16/19	10/17/19	4/9/20	10/8/20	4/15/21	10/28/21	4/13/22	10/19/22	4/6/23	10/10/23	
MW-1* 1179.69	87.2 92.2	1092.5 1087.5	Depth (ft) Elev. (ft)	31.17 1148.52	33.50 1146.19	33.06 1146.63							36.85 1142.84	35.37 1144.32	
MW-2* 1180.67	7.0 32.0?	1172.8? 1147.8?	Depth (ft) Elev. (ft)	1.60 1179.07	1.87 1178.80	1.87 1178.80	1.50 1179.17	6.03 1174.64	3.30 1177.37	3.99 1176.68	2.27 1178.40	5.06 1175.61	1.69 1178.98	6.12 1174.55	
MW-3* 1189.79	7.0 22.0	1182.8 1167.8	Depth (ft) Elev. (ft)	7.20 1182.59	8.90 1180.89	9.03 1180.76	9.04 1180.75	13.98 1175.81	11.95 1177.84	11.88 1177.91	10.23 1179.56	13.85 1175.94	11.70 1178.09	16.85 1172.94	
MW-4* 1209.46	7.0 32.0?	1200.4? 1175.4?	Depth (ft) Elev. (ft)	2.75 1206.71	2.49 1206.97	2.67 1206.79	4.55 1204.91	8.85 1200.61	5.44 1204.02	8.02 1201.44	4.30 1205.16	7.90 1201.56	2.58 1206.88	11.59 1197.87	
MW-5* 1209.87	6.0 31.0?	1201.4? 1176.4?	Depth (ft) Elev. (ft)	2.00 1207.87	2.36 1207.51	3.00 1206.87	5.40 1204.47	10.70 1199.17	6.32 1203.55	8.61 1201.26	3.88 1205.99	7.47 1202.40	2.53 1207.34	12.19 1197.68	
MW-6* 1201.70	7.7 32.7?	1191.4? 1166.4?	Depth (ft) Elev. (ft)	1.95 1199.75	1.57 1200.13	1.92 1199.78	4.15 1197.55	11.61 1190.09	6.85 1194.85	10.53 1191.17	3.53 1198.17	7.86 1193.84	2.78 1198.92	12.35 1189.35	
MW-7* 1197.57	7.5 22.5	1190.1 1175.1	Depth (ft) Elev. (ft)	3.55 1194.02	4.13 1193.44	4.27 1193.30	4.20 1193.37	10.20 1187.37	4.64 1192.93	8.78 1188.79	3.27 1194.30	9.67 1187.90	3.90 1193.67	10.71 1186.86	
MW-9* 1207.51	22.5 32.5	1185.0 1175.0	Depth (ft) Elev. (ft)	4.75 1202.76	6.95 1200.56	4.85 1202.66	6.96 1200.55	7.25 1200.26	7.58 1199.93	5.89 1201.62	7.84 1199.67	6.65 1200.86	7.28 1200.23	8.31 1199.20	
MW-10* 1207.06 *9/14/07 survey	134.2 144.2	1072.9 1062.9	Depth (ft) Elev. (ft)	58.40 1148.66	61.25 1145.81	60.71 1146.35							66.00 1141.06	63.95 1143.11	
				10/12/18	4/16/19	10/17/19	4/9/20	10/8/20	4/15/21	10/28/21	4/13/22	10/19/22	4/6/23	10/10/23	

Table 4 Supplement

**Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P**

Water-level data, Floyd-Mitchell County San

Monitor Well/ TOC Elev. (ft)	Screened Interval		Water Level				
	Depth (ft)	Elev. (ft)		4/11/24	10/17/24	Maximum	Minimum
MW-1* 1179.69	87.2 92.2	1092.5 1087.5	Depth (ft) Elev. (ft)			39.40 1148.52	31.17 1140.29
MW-2* 1180.67	7.0 32.0?	1172.8? 1147.8?	Depth (ft) Elev. (ft)	1.60 1179.07	6.39 1174.28	8.04 1179.17	1.50 1172.63
MW-3* 1189.79	7.0 22.0	1182.8 1167.8	Depth (ft) Elev. (ft)	15.28 1174.51	18.29 1171.50	16.85 1183.34	6.45 1172.94
MW-4* 1209.46	7.0 32.0?	1200.4? 1175.4?	Depth (ft) Elev. (ft)	2.65 1206.81	9.47 1199.99	11.95 1206.98	2.48 1197.51
MW-5* 1209.87	6.0 31.0?	1201.4? 1176.4?	Depth (ft) Elev. (ft)	4.95 1204.92	9.22 1200.65	12.19 1208.37	1.50 1197.84
MW-6* 1201.70	7.7 32.7?	1191.4? 1166.4?	Depth (ft) Elev. (ft)	5.32 1196.38	8.85 1192.85	12.72 1200.13	1.57 1188.98
MW-7* 1197.57	7.5 22.5	1190.1 1175.1	Depth (ft) Elev. (ft)	3.72 1193.85	8.86 1188.71	10.88 1194.27	3.27 1186.69
MW-9* 1207.51	22.5 32.5	1185.0 1175.0	Depth (ft) Elev. (ft)	7.51 1200.00	8.06 1199.45	8.94 1202.76	4.75 1198.57
MW-10* 1207.06	134.2 144.2	1072.9 1062.9	Depth (ft) Elev. (ft)			67.54 1148.66	58.40 1139.52
*9/14/07 survey				4/11/24	10/17/24	Maximum	Minimum

*9

Table 4 Supplement

**Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P**

Phase 1, 2, and 3 water-level data
TOC, top of casing.

Monitor Well/ TOC Elev. (ft)	Screened Interval		Water Level	DATE						
	Depth (ft)	Elev. (ft)		4/16/08	10/3/08	4/15/09	10/19/09	4/19/10	9/22/10	4/13/11
MW-11	27.1	1152.7	Depth (ft)	12.98	10.84	13.99	11.19	14.79	11.02	13.61
1179.86	37.1	1142.7	Elev. (ft)	1166.88	1169.02	1165.87	1168.67	1165.07	1168.84	1166.25
MW-12	11.5	1170.0	Depth (ft)	13.14	14.75	14.03	14.11	13.34	14.92	13.40
1181.55	21.5	1160.0	Elev. (ft)	1168.41	1166.80	1167.52	1167.44	1168.21	1166.63	1168.15
MW-14	12.0	1197.9	Depth (ft)	---	---	---	---	---	8.67	6.61
1209.87	22.0	1187.9	Elev. (ft)	---	---	---	---	---	1201.20	1203.26
MW-15	18.0	1165.5	Depth (ft)	---	---	---	---	---	---	---
1183.46	28.0	1155.5	Elev. (ft)	---	---	---	---	---	---	---
MW-16	20.4	1165.5	Depth (ft)							
1185.93	30.4	1155.5	Elev. (ft)							

Table 4 Supplement

**Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P**

Phase 1, 2, and 3 water-level data
TOC, top of casing.

Monitor Well/ TOC Elev. (ft)	Screened Interval		Water Level										
	Depth (ft)	Elev. (ft)		10/17/19	4/9/20	10/8/20	4/15/21	10/28/21	4/13/22	10/19/22	4/6/23	10/10/23	
MW-11	27.1	1152.7	Depth (ft)	9.85	9.88	9.93	13.26	10.35	13.65	10.19	12.91	11.30	
1179.86	37.1	1142.7	Elev. (ft)	1170.01	1169.98	1169.93	1166.60	1169.51	1166.21	1169.67	1166.95	1168.56	
MW-12	11.5	1170.0	Depth (ft)	12.10	11.47	15.03	12.02	12.00	11.06	15.24	11.68	15.30	
1181.55	21.5	1160.0	Elev. (ft)	1169.45	1170.08	1166.52	1169.53	1169.55	1170.49	1166.31	1169.87	1166.25	
MW-14	12.0	1197.9	Depth (ft)	5.89	6.23	9.56	6.76	6.93	6.04	8.55	6.09	10.10	
1209.87	22.0	1187.9	Elev. (ft)	1203.98	1203.64	1200.31	1203.11	1202.94	1203.83	1201.32	1203.78	1199.77	
MW-15	18.0	1165.5	Depth (ft)	8.92	11.22	11.74	10.57	8.89	10.72	8.84	9.15	9.81	
1183.46	28.0	1155.5	Elev. (ft)	1174.54	1172.24	1171.72	1172.89	1174.57	1172.74	1174.62	1174.31	1173.65	
MW-16	20.4	1165.5	Depth (ft)	22.03	14.92	8.73	16.85	9.68	16.64	11.58	17.30	12.75	
1185.93	30.4	1155.5	Elev. (ft)	1163.90	1171.01	1177.20	1169.08	1176.25	1169.29	1174.35	1168.63	1173.18	

Table 4 Supplement

**Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P**

Phase 1, 2, and 3 water-level data
TOC, top of casing.

Monitor Well/ TOC Elev. (ft)	Screened Interval		Water Level	4/11/24	10/17/24	Maximum	Minimum
	Depth (ft)	Elev. (ft)					
MW-11 1179.86	27.1 37.1	1152.7 1142.7	Depth (ft) Elev. (ft)	13.50 1166.36	10.96 1168.90	23.49 1170.01	9.85 1156.37
MW-12 1181.55	11.5 21.5	1170.0 1160.0	Depth (ft) Elev. (ft)	12.92 1168.63	16.40 1165.15	16.66 1170.19	11.06 1164.89
MW-14 1209.87	12.0 22.0	1197.9 1187.9	Depth (ft) Elev. (ft)	5.45 1204.42	10.84 1199.03	12.05 1206.50	3.37 1197.82
MW-15 1183.46	18.0 28.0	1165.5 1155.5	Depth (ft) Elev. (ft)	10.94 1172.52	11.07 1172.39	23.49 1175.12	9.85 1154.71
MW-16 1185.93	20.4 30.4	1165.5 1155.5	Depth (ft) Elev. (ft)	18.22 1167.71	14.65 1171.28	22.03 1177.20	8.73 1163.90

Table 5 – Background and GWPS Summary

Table 5
Background and GWPS Summary
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

Interwell Background Well (MW-4, MW-5, MW-9 and MW-14)

Inorganics - Appendix I										
Constituent	Units	Model Type	Samples - N	Detections	Mean	SD	Prediction Limit	Confidence	GWPS	Source
Antimony (Sb)	µg/l	nonparametric	88	1			2.50	0.99	6	SS
Arsenic (As)	µg/l	nonparametric	88	2			4.50	0.99	10	SS
Barium (Ba)	µg/l	normal	87	87	4.8650	0.4536	382.3899		2000	SS
Beryllium (Be)	µg/l	nonparametric	88	0			4.00	0.99	4	SS
Cadmium (Cd)	µg/l	nonparametric	88	5			5.30	0.99	5.3	Site
Chromium (Cr)	µg/l	nonparametric	88	2			9.10	0.99	100	SS
Cobalt (Co)	µg/l	nonparametric	88	11			3.50	0.99	3.5	Site
Copper (Cu)	µg/l	nonparametric	88	7			12.60	0.99	1300	SS
Lead (Pb)	µg/l	nonparametric	88	3			11.90	0.99	15	SS
Nickel (Ni)	µg/l	nonparametric	86	14			9.80	0.99	100	SS
Selenium (Se)	µg/l	nonparametric	88	3			5.50	0.99	50	SS
Silver (Ag)	µg/l	nonparametric	88	0			4.00	0.99	100	SS
Thallium (Tl)	µg/l	nonparametric	88	0			2.00	0.99	2	SS
Vanadium (V)	µg/l	nonparametric	88	0			20.00	0.99	35	SS
Zinc (Zn)	µg/l	nonparametric	87	20			237.00	0.99	2000	SS
VOC - Appendix I										
Constituent	Units	Model Type	Samples - N	Detections	Mean	SD	Prediction Limit	Confidence	GWPS	Source
All	µg/l	DQR	88	0	<1	<1	<1	<1	various	SS

= Prediction limit exceeds the GWPS. A Site-Specific GWPS is warranted

Table 6 – Summary of Detections

Table 6
Summary of Well/Detected Constituent Pairs that Exceed the Prediction Limit
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

Well	Compound	Date	Result (ug/L)	Prediction Limit (ug/L)	Monitoring Program
MW 6	Arsenic	10/17/2024	17.7	4.5	Assessment Monitoring
MW 6	Cobalt	10/17/2024	5.1	3.5	Assessment Monitoring

Table 7 – Summary of Ongoing and Newly Identified SSI

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 2	Arsenic	4/12/2016	12.5	4.00	0.000	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	10/11/2016	<4.0	4.00	0.000	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	4/20/2017	9.4	4.00	2.347	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	10/12/2017	5.0	4.00	2.099	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	4/23/2018	4.7	4.00	1.672	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	10/12/2018	<4.0	4.00	1.672	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	4/16/2019	4.3	4.00	2.396	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	10/17/2019	<4.0	4.00	1.541	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	4/9/2020	<4.0	4.00	1.222	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	10/8/2020	<4.0	4.00	1.222	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	4/15/2021	<4.0	4.00	2.000	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	10/28/2021	<4.0	4.00	2.000	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	4/13/2022	<4.0	4.00	2.000	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	10/19/2022	4.1	4.00	1.290	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	4/6/2023	4.1	4.50	1.624	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	10/10/2023	<4.0	4.50	1.624	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	4/11/2024	4.3	4.50	2.683	10	4/12/2016	NA	10/11/2016
MW 2	Arsenic	10/17/2024	<4.0	4.50	1.998	10	4/12/2016	NA	10/11/2016

Table 7
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Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 2	Cobalt	4/12/2016	1.5	0.80	---	2.8	4/12/2016	NA	10/11/2016
MW 2	Cobalt	10/11/2016	2.6	0.80	0.808	2.8	4/12/2016	NA	10/11/2016
MW 2	Cobalt	4/20/2017	3.9	0.80	1.574	2.8	4/12/2016	NA	10/11/2016
MW 2	Cobalt	10/12/2017	5.5	0.80	1.348	2.8	4/12/2016	NA	10/11/2016
MW 2	Cobalt	4/23/2018	3.3	0.80	2.370	2.8	4/12/2016	NA	10/11/2016
MW 2	Cobalt	10/12/2018	2.4	0.80	2.240	2.8	4/12/2016	NA	10/11/2016
MW 2	Cobalt	4/16/2019	3.0	0.80	1.959	2.1	4/12/2016	NA	10/11/2016
MW 2	Cobalt	10/17/2019	0.8	0.80	1.064	2.1	4/12/2016	NA	10/11/2016
MW 2	Cobalt	4/9/2020	5.8	3.40	0.548	3.4	4/12/2016	NA	10/11/2016
MW 2	Cobalt	10/8/2020	4.2	3.40	0.972	3.4	4/12/2016	NA	10/11/2016
MW 2	Cobalt	4/15/2021	5.1	3.40	1.369	3.4	4/12/2016	NA	10/11/2016
MW 2	Cobalt	10/28/2021	1.7	3.40	2.094	3.4	4/12/2016	NA	10/11/2016
MW 2	Cobalt	4/13/2022	4.4	3.40	2.104	3.4	4/12/2016	NA	10/11/2016
MW 2	Cobalt	10/19/2022	4.0	3.40	2.069	3.4	4/12/2016	NA	10/11/2016
MW 2	Cobalt	4/6/2023	2.8	3.50	1.786	3.5	4/12/2016	NA	10/11/2016
MW 2	Cobalt	10/10/2023	1.8	3.50	1.860	3.5	4/12/2016	NA	10/11/2016
MW 2	Cobalt	4/11/2024	2.3	3.50	1.908	3.5	4/12/2016	NA	10/11/2016
MW 2	Cobalt	10/17/2024	2.3	3.50	1.946	3.5	4/12/2016	NA	10/11/2016

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 2	Nickel	4/12/2016	<4.0	4.00	---	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	10/11/2016	4.4	4.00	1.494	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	4/20/2017	4.7	4.00	2.411	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	10/12/2017	4.2	4.00	2.374	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	4/23/2018	<4.0	4.00	2.374	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	10/12/2018	5.7	4.00	2.311	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	4/16/2019	4.5	4.00	2.285	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	10/17/2019	4.4	4.00	2.326	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	4/9/2020	<4.0	4.00	2.326	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	10/8/2020	<4.0	9.50	1.560	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	4/15/2021	<4.0	9.50	1.561	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	10/28/2021	<4.0	9.50	2.000	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	4/13/2022	<4.0	9.50	2.000	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	10/19/2022	4.6	9.50	1.121	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	4/6/2023	<4.0	9.80	1.121	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	10/10/2023	<4.0	9.80	1.121	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	4/11/2024	<4.0	9.80	1.524	100	10/11/2016	NA	10/11/2016
MW 2	Nickel	10/17/2024	4.9	9.80	1.469	100	10/11/2016	NA	10/11/2016

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 2	Zinc	4/12/2016	<8.0	16.1	3.100	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	10/11/2016	8.3	16.1	3.105	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	4/20/2017	<20.0	16.1	2.546	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	10/12/2017	9.5	16.1	3.073	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	4/23/2018	9.0	16.1	4.741	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	10/12/2018	25.3	16.1	1.081	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	4/16/2019	42.3	16.1	2.959	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	10/17/2019	30.6	29.9	10.532	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	4/9/2020	<20.0	237.0	7.474	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	10/8/2020	<20.0	237.0	0.000	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	4/15/2021	<20.0	237.0	6.230	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	10/28/2021	<20.0	237.0	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	4/13/2022	<20.0	237.0	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	10/19/2022	<20.0	237.0	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	4/6/2023	<20.0	237.0	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	10/10/2023	<20.0	237.0	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	4/11/2024	<20.0	237.0	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW 2	Zinc	10/17/2024	<20.0	237.0	10.000	2,000.00	10/12/2018	NA	10/11/2016

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 2	Bis (2-ethylhexyl)phthalate	4/12/2016	---	6	---	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	10/11/2016	<8	6	---	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	4/20/2017	---	6	---	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	10/12/2017	35.0	6	---	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	4/23/2018	<6	6	0.000	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	10/12/2018	<6	6	0.000	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	4/16/2019	<6	6	0.000	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	10/17/2019	25.0	6	0.000	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	4/9/2020	<6	6	0.000	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	10/8/2020	<6	6	0.000	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	4/15/2021	<6	6	0.000	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	10/28/2021	12.0	6	1.353	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	4/13/2022	11.0	6	1.457	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	10/19/2022	<6	6	1.457	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	4/6/2023	NT	6	1.457	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	10/10/2023	NT	6	1.457	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	4/11/2024	NT	6	1.457	6	10/12/2017	NA	10/11/2016
MW 2	Bis (2-ethylhexyl)phthalate	10/17/2024	NT	6	1.457	6	10/12/2017	NA	10/11/2016

Bold GWPS = A Site Specific GWPS that is equal to the Prediction Limit. All other GWPS are IAC 567-137 Statewide Standards for Protected Groundwater.

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 3	Zinc	4/12/2016	<8.0	16.1	4.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	10/11/2016	<8.0	16.1	4.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	4/20/2017	<20.0	16.1	4.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	10/12/2017	<8.0	16.1	4.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	4/23/2018	22.7	16.1	0.000	2,000.00	4/23/2018	7/5/2018	10/11/2016
MW 3	Zinc	7/5/2018	152	16.1	0.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	10/12/2018	29.8	16.1	0.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	4/16/2019	20.6	16.1	0.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	10/17/2019	26.3	29.9	0.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	4/9/2020	<20.0	237.0	6.729	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	10/8/2020	<20.0	237.0	0.235	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	4/15/2021	<20.0	237.0	7.017	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	10/28/2021	<20.0	237.0	10.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	4/13/2022	<20.0	237.0	10.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	10/19/2022	<20.0	237.0	10.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	4/6/2023	<20.0	237.0	10.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	10/10/2023	<20.0	237.0	10.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	4/11/2024	<20.0	237.0	10.000	2,000.00	4/23/2018	NA	10/11/2016
MW 3	Zinc	10/17/2024	<20.0	237.0	10.000	2,000.00	4/23/2018	NA	10/11/2016

Bold GWPS = A Site Specific GWPS that is equal to the Prediction Limit. All other GWPS are IAC 567-137 Statewide Standards for Protected Groundwater.

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 6	Arsenic	4/12/2016	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	10/11/2016	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	4/20/2017	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	10/12/2017	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	4/23/2018	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	10/12/2018	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	4/16/2019	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	10/17/2019	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	4/9/2020	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	10/8/2020	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	4/15/2021	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	10/28/2021	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	4/13/2022	<4.0	4.0	2.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	10/19/2022	8.1	4.0	0.000	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	4/6/2023	5.3	4.5	0.886	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	10/10/2023	<4.0	4.5	0.886	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	4/11/2024	<4.0	4.5	1.800	10.0	10/19/2022	NA	10/11/2016
MW 6	Arsenic	10/17/2024	17.7	4.5	0.286	10.0	10/19/2022	NA	10/11/2016

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 6	Cobalt	4/12/2016	2.3	0.80	---	2.8	4/12/2016	NA	10/11/2016
MW 6	Cobalt	10/11/2016	1.1	0.80	0.410	2.8	4/12/2016	NA	10/11/2016
MW 6	Cobalt	4/20/2017	2.0	0.80	0.211	2.8	4/12/2016	NA	10/11/2016
MW 6	Cobalt	10/12/2017	<0.8	0.80	0.099	2.8	4/12/2016	NA	10/11/2016
MW 6	Cobalt	4/23/2018	<0.8	0.80	0.546	2.8	4/12/2016	NA	10/11/2016
MW 6	Cobalt	10/12/2018	<0.8	0.80	2.000	2.8	4/12/2016	NA	10/11/2016
MW 6	Cobalt	4/16/2019	0.8	0.80	0.994	2.1	4/12/2016	NA	10/11/2016
MW 6	Cobalt	10/17/2019	<0.8	0.80	0.994	2.1	4/12/2016	NA	10/11/2016
MW 6	Cobalt	4/9/2020	1.9	3.40	0.987	3.4	4/12/2016	NA	10/11/2016
MW 6	Cobalt	10/8/2020	1.0	3.40	0.704	3.4	4/12/2016	NA	10/11/2016
MW 6	Cobalt	4/15/2021	<0.4	3.40	1.154	3.4	4/12/2016	NA	10/11/2016
MW 6	Cobalt	10/28/2021	1.0	3.40	0.828	3.4	4/12/2016	NA	10/11/2016
MW 6	Cobalt	4/13/2022	1.1	3.40	0.704	3.4	4/12/2016	NA	10/11/2016
MW 6	Cobalt	10/19/2022	4.6	3.40	0.201	3.4	4/12/2016	NA	10/11/2016
MW 6	Cobalt	4/6/2023	0.7	3.50	0.000	3.5	4/12/2016	NA	10/11/2016
MW 6	Cobalt	10/10/2023	0.5	3.50	0.000	3.5	4/12/2016	NA	10/11/2016
MW 6	Cobalt	4/11/2024	<0.4	3.50	0.000	3.5	4/12/2016	NA	10/11/2016
MW 6	Cobalt	10/17/2024	5.1	3.50	0.000	3.5	4/12/2016	NA	10/11/2016

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 6	Zinc	4/12/2016	<8.0	16.10	0.000	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	10/11/2016	<8.0	16.10	0.000	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	4/20/2017	<8.0	16.10	4.000	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	10/12/2017	28.8	16.10	0.000	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	4/23/2018	10.1	16.10	0.000	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	10/12/2018	32.0	16.10	2.526	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	4/16/2019	24.8	16.10	12.543	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	10/17/2019	22.0	29.90	11.503	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	4/9/2020	28.0	237.00	21.642	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	10/8/2020	<20.0	237.00	7.055	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	4/15/2021	<20.0	237.00	9.706	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	10/28/2021	<20.0	237.00	6.706	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	4/13/2022	<20.0	237.00	10.000	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	10/19/2022	<20.0	237.00	10.000	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	4/6/2023	<20.0	237.00	10.000	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	10/10/2023	27.4	237.00	6.816	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	4/11/2024	<20.0	237.00	6.816	2,000.00	10/12/2017	NA	10/11/2016
MW 6	Zinc	10/17/2024	25.4	237.00	9.970	2,000.00	10/12/2017	NA	10/11/2016

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 6	Bis (2-ethylhexyl)phthalate	4/12/2016	---	6.00	---	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	10/11/2016	---	6.00	---	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	4/20/2017	<6.0	6.00	---	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	10/12/2017	---	6.00	---	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	4/23/2018	6.0	6.00	---	6.00	4/23/2018	7/5/2018	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	7/5/2018	8.0	6.00	---	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	10/12/2018	<6.0	6.00	2.085	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	4/16/2019	<6.0	6.00	2.085	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	10/17/2019	10.0	6.00	1.814	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	4/9/2020	<6.0	6.00	1.814	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	10/8/2020	<6.0	6.00	1.814	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	4/15/2021	<6.0	6.00	1.814	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	10/28/2021	<6.0	6.00	3.000	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	4/13/2022	<6.0	6.00	3.000	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	10/19/2022	NT	6.00	3.000	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	4/6/2023	7.0	6.00	1.647	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	10/10/2023	<6.0	6.00	1.647	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	4/11/2024	NT	6.00	1.647	6.00	4/23/2018	NA	10/11/2016
MW 6	Bis (2-ethylhexyl)phthalate	10/17/2024	NT	6.00	1.647	6.00	4/23/2018	NA	10/11/2016

Bold GWPS = A Site Specific GWPS that is equal to the Prediction Limit. All other GWPS are IAC 567-137 Statewide Standards for Protected Groundwater.

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 7	Nickel	4/12/2016	<4.0	4.00	---	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	10/11/2016	8.1	4.00	0.898	100	10/11/2016	1/17/2017	10/11/2016
MW 7	Nickel	1/17/2017	12.5	4.00	0.130	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	4/20/2017	<4.0	4.00	0.130	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	10/12/2017	<4.0	4.00	0.130	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	4/23/2018	<4.0	4.00	0.000	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	10/12/2018	<4.0	4.00	2.000	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	4/16/2019	<4.0	4.00	2.000	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	10/17/2019	<4.0	4.00	2.000	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	4/9/2020	<4.0	4.00	2.000	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	10/8/2020	4.0	9.50	1.324	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	4/15/2021	<4.0	9.50	1.324	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	10/28/2021	<4.0	9.50	1.324	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	4/13/2022	4.8	9.50	1.324	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	10/19/2022	10.3	9.50	0.173	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	4/6/2023	<4.0	9.80	0.173	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	10/10/2023	<4.0	9.80	0.173	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	4/11/2024	<4.0	9.80	0.481	100	10/11/2016	NA	10/11/2016
MW 7	Nickel	10/17/2024	4.0	9.80	1.634	100	10/11/2016	NA	10/11/2016

Table 7 KEY: SSI SSL LCL>GWPS
Summary of Ongoing & Newly Identified SSI *Note: The absence of shading indicates that the condition does not exist.*
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 7	Zinc	4/12/2016	<8.0	16.10	4.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	10/11/2016	<8.0	16.10	4.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	4/20/2017	30.7	16.10	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	10/12/2017	<8.0	16.10	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	4/23/2018	<8.0	16.10	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	10/12/2018	41.5	16.10	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	4/16/2019	24.4	16.10	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	10/17/2019	<20.0	29.90	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	4/9/2020	<20.0	237.00	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	10/8/2020	<20.0	237.00	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	4/15/2021	<20.0	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	10/28/2021	<20.0	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	4/13/2022	<20.0	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	10/19/2022	<20.0	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	4/6/2023	<20.0	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	10/10/2023	<20.0	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	4/11/2024	<20.0	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 7	Zinc	10/17/2024	<20.0	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016

Bold GWPS = A Site Specific GWPS that is equal to the Prediction Limit. All other GWPS are IAC 567-137 Statewide Standards for Protected Groundwater.

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-11	Zinc	4/12/2016	<8.0	16.10	4.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	10/11/2016	<8.0	16.10	4.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	4/20/2017	<20.0	16.10	4.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	10/12/2017	<8.0	16.10	4.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	4/23/2018	<8.0	16.10	4.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	10/12/2018	49.1	16.10	0.000	2,000.00	10/12/2018	1/23/2019	10/11/2016
MW-11	Zinc	1/23/2019	99.8	16.10	0.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	4/16/2019	22.5	16.10	0.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	10/17/2019	28.8	29.90	8.815	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	4/9/2020	<20	237.00	0.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	10/8/2020	<20	237.00	6.774	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	4/15/2021	<20	237.00	6.559	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	10/28/2021	<20	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	4/13/2022	<20	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	10/19/2022	<20	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	4/6/2023	<20	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	10/10/2023	<20	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	4/11/2024	<20	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-11	Zinc	10/17/2024	<20	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016

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Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-12	Copper	4/12/2016	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	10/11/2016	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	4/20/2017	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	10/12/2017	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	4/23/2018	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	10/12/2018	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	1/23/2019	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	4/16/2019	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	10/17/2019	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	4/9/2020	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	10/8/2020	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	4/15/2021	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	10/28/2021	<4.0	7.0	2.000	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	4/13/2022	7.7	7.0	0.200	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	10/19/2022	<4.0	7.0	0.200	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	4/6/2023	<4.0	9.6	0.200	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	10/10/2023	<4.0	9.6	0.200	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	4/11/2024	<4.0	12.6	0.200	1300	4/13/2022	NA	10/11/2016
MW-12	Copper	10/17/2024	<4.0	12.6	0.200	1300	4/13/2022	NA	10/11/2016

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-12	Zinc	4/12/2016	<8.0	16.10	4.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	10/11/2016	<8.0	16.10	4.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	4/20/2017	<20.0	16.10	4.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	10/12/2017	<8.0	16.10	4.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	4/23/2018	<8.0	16.10	4.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	10/12/2018	17.8	16.10	0.037	2,000.00	10/12/2018	1/23/2019	10/11/2016
MW-12	Zinc	1/23/2019	26.6	16.10	0.037	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	4/16/2019	<20.0	16.10	0.037	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	10/17/2019	<20.0	29.90	0.037	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	4/9/2020	<20.0	237.00	0.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	10/8/2020	<20.0	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	4/15/2021	<20.0	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	10/28/2021	<20.0	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	4/13/2022	<20.0	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	10/19/2022	<20.0	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	4/6/2023	<20.0	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	10/10/2023	<20.0	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	4/11/2024	<20.0	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016
MW-12	Zinc	10/17/2024	<20.0	237.00	10.000	2,000.00	10/12/2018	NA	10/11/2016

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-12	Bis (2-ethylhexyl)phthalate	4/12/2016	---	6.0	---	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	10/11/2016	---	6.0	---	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	4/20/2017	---	6.0	---	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	10/12/2017	---	6.0	---	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	4/23/2018	---	6.0	---	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	10/12/2018	---	6.0	---	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	4/16/2019	16.0	6.0	---	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	10/17/2019	<6.0	6.0	---	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	4/9/2020	16.0	6.0	---	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	10/8/2020	<6.0	6.0	0.671	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	4/15/2021	<6.0	6.0	0.621	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	10/28/2021	<6.0	6.0	0.621	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	4/13/2022	<6.0	6.0	3.000	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	10/19/2022	NT	6.0	3.000	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	4/6/2023	NT	6.0	3.000	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	10/10/2023	NT	6.0	3.000	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	4/11/2024	NT	6.0	3.000	6.0	4/16/2019	NA	10/8/2020
MW-12	Bis (2-ethylhexyl)phthalate	10/17/2024	NT	6.0	3.000	6.0	4/16/2019	NA	10/8/2020

Bold GWPS = A Site Specific GWPS that is equal to the Prediction Limit. All other GWPS are IAC 567-137 Statewide Standards for Protected Groundwater.

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 15	Zinc	4/12/2016	<8.0	16.10	4.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	10/11/2016	<8.0	16.10	4.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	4/20/2017	30.7	16.10	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	10/12/2017	<8.0	16.10	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	4/23/2018	<8.0	16.10	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	10/12/2018	41.5	16.10	3.552	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	4/16/2019	23.0	16.10	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	10/17/2019	37.5	29.90	5.053	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	4/9/2020	<20	237.00	5.053	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	10/8/2020	<20	237.00	0.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	4/15/2021	<20	237.00	4.967	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	10/28/2021	<20	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	4/13/2022	<20	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	10/19/2022	<20	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	4/6/2023	<20	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	10/10/2023	<20	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	4/11/2024	<20	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016
MW 15	Zinc	10/17/2024	<20	237.00	10.000	2,000.00	4/20/2017	NA	10/11/2016

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW 15	Bis (2-ethylhexyl)phthalate	4/12/2016	<10	6.00	---	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	10/11/2016	19.0	6.00	2.197	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	4/20/2017	<6.0	6.00	2.197	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	10/12/2017	15.0	6.00	2.627	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	4/23/2018	<6.0	6.00	1.456	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	10/12/2018	6.0	6.00	1.072	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	4/16/2019	7.0	6.00	2.318	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	10/17/2019	7.0	6.00	4.336	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	4/9/2020	<6.0	6.00	4.336	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	10/8/2020	<6.0	6.00	2.283	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	4/15/2021	<6.0	6.00	2.268	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	10/28/2021	<6.0	6.00	3.000	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	4/13/2022	<6.0	6.00	3.000	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	10/19/2022	NT	6.00	3.000	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	4/6/2023	NT	6.00	3.000	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	10/10/2023	NT	6.00	3.000	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	4/11/2024	<6.0	6.00	3.000	6.00	10/11/2016	NA	10/11/2016
MW 15	Bis (2-ethylhexyl)phthalate	10/17/2024	NT	6.00	3.000	6.00	10/11/2016	NA	10/11/2016

Bold GWPS = A Site Specific GWPS that is equal to the Prediction Limit. All other GWPS are IAC 567-137 Statewide Standards for Protected Groundwater.

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-16	Cobalt	10/17/2019	4.0	0.80	---	2.10	10/17/2019	N/A	10/28/2021
MW-16	Cobalt	4/9/2020	4.2	0.80	---	3.40	10/17/2019	N/A	10/28/2021
MW-16	Cobalt	10/8/2020	1.2	3.40	---	3.40	10/17/2019	N/A	10/28/2021
MW-16	Cobalt	4/15/2021	<0.4	3.40	0.040	3.40	10/17/2019	N/A	10/28/2021
MW-16	Cobalt	10/28/2021	<0.4	3.40	0.000	3.40	10/17/2019	N/A	10/28/2021
MW-16	Cobalt	4/13/2022	<0.4	3.40	0.000	3.40	10/17/2019	N/A	10/28/2021
MW-16	Cobalt	10/19/2022	<2.0	3.40	0.200	3.40	10/17/2019	N/A	10/28/2021
MW-16	Cobalt	4/6/2023	<0.4	3.50	0.200	3.50	10/17/2019	N/A	10/28/2021
MW-16	Cobalt	10/10/2023	<0.4	3.50	0.200	3.50	10/17/2019	N/A	10/28/2021
MW-16	Cobalt	4/11/2024	<0.4	3.50	0.200	3.50	10/17/2019	N/A	10/28/2021
MW-16	Cobalt	10/17/2024	<0.4	3.50	0.200	3.50	10/17/2019	N/A	10/28/2021

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-16	Copper	10/17/2019	<4.0	7.00	2.000	1,300	10/19/2022	N/A	10/28/2021
MW-16	Copper	4/9/2020	<4.0	7.00	2.000	1,300	10/19/2022	N/A	10/28/2021
MW-16	Copper	10/8/2020	<4.0	7.00	2.000	1,300	10/19/2022	N/A	10/28/2021
MW-16	Copper	4/15/2021	<4.0	7.00	2.000	1,300	10/19/2022	N/A	10/28/2021
MW-16	Copper	10/28/2021	<4.0	7.00	2.000	1,300	10/19/2022	N/A	10/28/2021
MW-16	Copper	4/13/2022	<4.0	7.00	2.000	1,300	10/19/2022	N/A	10/28/2021
MW-16	Copper	10/19/2022	19.1	7.00	0.000	1,300	10/19/2022	N/A	10/28/2021
MW-16	Copper	4/6/2023	<4.0	9.60	0.000	1,300	10/19/2022	N/A	10/28/2021
MW-16	Copper	10/10/2023	<4.0	9.60	0.000	1,300	10/19/2022	N/A	10/28/2021
MW-16	Copper	4/11/2024	<4.0	12.60	0.000	1,300	10/19/2022	N/A	10/28/2021
MW-16	Copper	10/17/2024	4.9	12.60	1.469	1,300	10/19/2022	N/A	10/28/2021

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-16	Nickel	10/17/2019	10.4	4.00	---	100.00	10/17/2019	N/A	10/28/2021
MW-16	Nickel	4/9/2020	6.6	4.00	---	100.00	10/17/2019	N/A	10/28/2021
MW-16	Nickel	10/8/2020	<4.0	9.50	---	100.00	10/17/2019	N/A	10/28/2021
MW-16	Nickel	4/15/2021	<4.0	9.50	1.733	100.00	10/17/2019	N/A	10/28/2021
MW-16	Nickel	10/28/2021	<4.0	9.50	1.158	100.00	10/17/2019	N/A	10/28/2021
MW-16	Nickel	4/13/2022	<4.0	9.50	2.000	100.00	10/17/2019	N/A	10/28/2021
MW-16	Nickel	10/19/2022	<4.0	9.50	2.000	100.00	10/17/2019	N/A	10/28/2021
MW-16	Nickel	4/6/2023	<4.0	9.80	2.000	100.00	10/17/2019	N/A	10/28/2021
MW-16	Nickel	10/10/2023	<4.0	9.80	2.000	100.00	10/17/2019	N/A	10/28/2021
MW-16	Nickel	4/11/2024	<4.0	9.80	2.000	100.00	10/17/2019	N/A	10/28/2021
MW-16	Nickel	10/17/2024	4.6	9.80	1.524	100.00	10/17/2019	N/A	10/28/2021

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-16	Zinc	10/17/2019	42.6	29.90	---	2,000.00	10/17/2019	N/A	10/28/2021
MW-16	Zinc	4/9/2020	<20	237.00	---	2,000.00	10/17/2019	N/A	10/28/2021
MW-16	Zinc	10/8/2020	<20	237.00	---	2,000.00	10/17/2019	N/A	10/28/2021
MW-16	Zinc	4/15/2021	<20	237.00	4.034	2,000.00	10/17/2019	N/A	10/28/2021
MW-16	Zinc	10/28/2021	<20	237.00	10.000	2,000.00	10/17/2019	N/A	10/28/2021
MW-16	Zinc	4/13/2022	<20	237.00	10.000	2,000.00	10/17/2019	N/A	10/28/2021
MW-16	Zinc	10/19/2022	<20	237.00	10.000	2,000.00	10/17/2019	N/A	10/28/2021
MW-16	Zinc	4/6/2023	<20	237.00	10.000	2,000.00	10/17/2019	N/A	10/28/2021
MW-16	Zinc	10/10/2023	<20	237.00	10.000	2,000.00	10/17/2019	N/A	10/28/2021
MW-16	Zinc	4/11/2024	<20	237.00	10.000	2,000.00	10/17/2019	N/A	10/28/2021
MW-16	Zinc	10/17/2024	<20	237.00	10.000	2,000.00	10/17/2019	N/A	10/28/2021

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

KEY:	SSI	SSL LCL>GWPS
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Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-16	Bis (2-ethylhexyl)phthalate	10/17/2019	---	6.00	---	6.00	10/8/2020	N/A	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	4/9/2020	---	6.00	---	6.00	10/8/2020	N/A	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	10/8/2020	8.0	6.00	---	6.00	10/8/2020	N/A	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	12/9/2020	<6	6.00	---	6.00	10/8/2020	12/9/2020	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	4/15/2021	---	6.00	---	6.00	10/8/2020	N/A	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	10/28/2021	8.0	6.00	---	6.00	10/8/2020	N/A	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	4/13/2022	Lab Error	6.00	---	6.00	10/8/2020	N/A	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	10/19/2022	19.0	6.00	0.794	6.00	10/8/2020	N/A	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	4/6/2023	<6	6.00	0.794	6.00	10/8/2020	N/A	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	10/10/2023	NT	6.00	0.794	6.00	10/8/2020	N/A	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	4/11/2024	NT	6.00	0.794	6.00	10/8/2020	N/A	10/19/2022
MW-16	Bis (2-ethylhexyl)phthalate	10/17/2024	NT	6.00	0.794	6.00	10/8/2020	N/A	10/19/2022

Bold GWPS = A Site Specific GWPS that is equal to the Prediction Limit. All other GWPS are IAC 567-137 Statewide Standards for Protected Groundwater.

Table 8 - Summary of Ongoing and Newly Identified SSL - *Not Required*

Table 9 – Analytical Data Summary

Table 9

Analytical Data Summary for

MW-11

Constituents	Units	10/14/2014	4/14/2015	7/21/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017
(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-dichloroethylene	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	<1		<1	<1	<1	<1	<1
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 (mek)	ug/L	<5	<5		<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L	<8							
2-chlorophenol	ug/L	<8							
2-hexanone (mbk)	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 (mibk)	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 9

Analytical Data Summary for MW-11

Constituents	4/23/2018	10/12/2018	1/23/2019	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021
(3 4)-methylphenol				Δδ					
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-dichloroethylene	<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				Δδ					
1,2,4-trichlorobenzene				<1					
1,2-dibromo-3-chloropropane	<1	<1		<1	<1	<5	<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				Δδ					
1,3,5-trinitrobenzene				Δδ					
1,3-dichlorobenzene				<1					
1,3-dichloropropane				<1					
1,3-dinitrobenzene				Δδ					
1,4-dichlorobenzene	<1	<1		<1	<1	<1	<1	<1	<1
1,4-naphthoquinone				Δδ					
1,4-phenylenediamine				Δδ					
1-naphthylamine				Δδ					
2,2-dichloropropane				<1					
2,3,4,6-tetrachlorophenol				Δδ					
2,4,5-t				Δδ					
2,4,5-tp (silvex)				Δδ					
2,4,5-trichlorophenol				Δδ					
2,4,6-trichlorophenol				Δδ					
2,4-d				Δδ					
2,4-dichlorophenol				Δδ					
2,4-dimethylphenol				Δδ					
2,4-dinitrophenol				Δδ					
2,4-dinitrotoluene				Δδ					
2,6-dichlorophenol				Δδ					
2,6-dinitrotoluene				Δδ					
2-acetylaminofluorene				Δδ					
2-butanone (mek)	<5	<5		Δδ	<5	<5	<5	<5	<5
2-chloronaphthalene				Δδ					
2-chlorophenol				Δδ					
2-hexanone (mbk)	<5	<5		Δδ	<5	<5	<5	<5	<5
2-methylnaphthalene				Δδ					
2-methylphenol				Δδ					
2-naphthylamine				Δδ					
2-nitroaniline				Δδ					
2-nitrophenol				Δδ					
3,3'-dichlorobenzidine				Δδ					
3,3'-dimethylbenzidine				Δδ					
3-methylcholanthrene				Δδ					
3-nitroaniline				Δδ					
4,4'-ddd				Δδ					
4,4'-dde				Δδ					
4,4'-ddt				Δδ					
4,6-dinitro-2-methylphenol				Δδ					
4-aminobiphenyl				Δδ					
4-bromophenyl phenyl ether				Δδ					
4-chloro-3-methylphenol				Δδ					
4-chloroaniline				Δδ					
4-chlorophenyl phenyl ether				Δδ					
4-methyl-2-pentanone (mibk)	<5	<5		Δδ	<5	<5	<5	<5	<5
4-nitroaniline				Δδ					
4-nitrophenol				Δδ					
5-nitro-o-toluidine				Δδ					
7,12-dimethylbenz(a)anthracene				Δδ					
Acenaphthene				Δδ					
Acenaphthylene				Δδ					
Acetone	<10	<10		<10	<10	<10	<10	<10	<10
Acetonitrile				<10					
Acetophenone				Δδ					
Acrolein				<10					
Acrylonitrile	<5	<5		<5	<5	<5	<5	<5	<5
Aldrin				Δδ					
Allyl chloride				Δδ					
Alpha-bhc				Δδ					
Anthracene				Δδ					

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

Table 9

Analytical Data Summary for MW-11

Constituents	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
(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-dichloroethylene	<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	<5	<1	<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 (mek)	<10	<10	<10	<10	<5	<10
2-chloronaphthalene					<8	
2-chlorophenol					<8	
2-hexanone (mbk)	<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 (mibk)	<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 9

Analytical Data Summary for MW-11

Constituents	Units	10/14/2014	4/14/2015	7/21/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017
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	15.4	19.0		20.5	12.9	13.9	17.8	12.6
Benzene	ug/L	<1	<1		<1	<1	<1	<1	<1
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	<4		<4	<4	<4	<4	<4
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	<.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	<1		<1	<1	<1	<1	<1
Chlorobenzilate	ug/L	<8							
Chloroethane	ug/L	<1	<1		<1	<1	<1	<1	<1
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	<8		<8	<8	<8	<8	<8
Chrysene	ug/L	<8							
Cis-1,2-dichloroethylene	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	<.8	<.8		<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	<4	<4		<4	<4	<4	<4	<4
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	<30	<30	<30	<30	<30		
Dimethoate	ug/L	<.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							
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							
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 9

Analytical Data Summary for MW-11

Constituents	4/23/2018	10/12/2018	1/23/2019	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021
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	17.4	15.2		19.0	18.9	12.1	12.8	12.0	11.5
Benzene	<1	<1		<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	<4		<4	<4	<4	<4	<4	<4
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	1.2
Carbon disulfide	<1	<1		<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1		<1	<1	<1	<1	<1	<1
Chlordane				<.1					
Chlorobenzene	<1	<1		<1	<1	<1	<1	<1	<1
Chlorobenzilate				<.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					
Chromium, total	<.8	<.8		<.8	<.8	<.8	<.8	<.8	<.8
Chrysene				<.8					
Cis-1,2-dichloroethylene	<1	<1		<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1		<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<.8		<.8	<.8	<.4	<.4	<.4	<.4
Copper, total	<4	<4		<4	<4	<4	<4	<4	<4
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 9

Analytical Data Summary for MW-11

Constituents	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Antimony, total	<2	<2	<2	<2	<2	<2
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	<4
Azobenzene					<8	
Barium, total	12.7	14.2	17.4	13.9	16.0	20.9
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	<4	<4	<4	<4	<4
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
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	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1
Chlordane					<.1	
Chlorobenzene	<1	<1	<1	<1	<1	<1
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	<8
Chrysene					<8	
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1
Cobalt, total	.4	<2.0	.6	<.4	<.4	<.4
Copper, total	<4	<4	<4	<4	<4	<4
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 9

Analytical Data Summary for MW-11

Constituents	Units	10/14/2014	4/14/2015	7/21/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017
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	2.9	<.4	<.4	<.4	<.4	<.4	<.4	<.4
Methylene chloride	ug/L	<5	<5		<5	<5	<5	<5	<5
Naphthalene	ug/L	<8							
Nickel, total	ug/L	4.9	<4.0		<4.0	<4.0	<4.0	<4.0	<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							
O-toluidine	ug/L	<8							
Parathion	ug/L	<.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	.9	<.4	<.4	<.4	<.4	<.4	<.4	<.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	79	3						
Styrene	ug/L	<1	<1		<1	<1	<1	<1	<1
Sulfide, total	mg/L	<.10							
Tetrachloroethylene	ug/L	<1	<1		<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4		<4	<4	<4	<4	<4
Thionazin	ug/L	.5	<.4	<.4	<.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-dichloroethylene	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
Trichloroethylene	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	9.7	<8.0		<20.0	<8.0	<8.0	<20.0	<8.0

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

Table 9

Analytical Data Summary for MW-11

Constituents	4/23/2018	10/12/2018	1/23/2019	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021
Hexachlorobutadiene				<8					
Hexachlorocyclopentadiene				<8					
Hexachloroethane				<8					
Hexachloropropene				<8					
Indeno(1,2,3-cd)pyrene				<8					
Isobutanol				<1					
Isodrin				<8					
Isophorone				<8					
Isosafrole				<8					
Kepona				<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	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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	<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					
Tetrachloroethylene	<1	<1		<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4		<2	<2	<2	<2	<2	<2
Thionazin				<4					
Tin, total				<20					
Toluene	<1	<1		<1	<1	<1	<1	<1	<1
Toxaphene				<2					
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<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	49.1	99.8	22.5	28.8	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-11

Constituents	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Hexachlorobutadiene					<8	
Hexachlorocyclopentadiene					<8	
Hexachloroethane					<8	
Hexachloropropene					<8	
Indeno(1,2,3-cd)pyrene					<8	
Isobutanol					<1	
Isodrin					<8	
Isophorone					<8	
Isosafrole					<8	
Kepona					<8	
Lead, total	<4	<4	<4	<4	<4	<4
Mercury, total					<.5	
Methacrylonitrile					<1	
Methapyrilene					<8	
Methoxychlor					<.05	
Methyl iodide	<1	<1	<1	<1	<2	<1
Methyl methacrylate					<1	
Methyl methanesulfonate					<8	
Methyl parathion					<.4	
Methylene chloride	<5	<5	<5	<5	<5	<5
Naphthalene					<8	
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4
Solids, total suspended						
Styrene	<1	<1	<1	<1	<1	<1
Sulfide, total					<.15	
Tetrachloroethylene	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2
Thionazin					<.4	
Tin, total					<20	
Toluene	<1	<1	<1	<1	<1	<1
Toxaphene					<.2	
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20
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	<20.0

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

Table 9

Analytical Data Summary for MW-12

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017	4/23/2018
(3 4)-methylphenol	ug/L								
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L								
1,2,3-trichloropropane	ug/L	<1	<1	<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	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<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	<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 (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L								
2-chlorophenol	ug/L								
2-hexanone (mbk)	ug/L	<5	<5	<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 (mibk)	ug/L	<5	<5	<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	<10	<10
Acetonitrile	ug/L								
Acetophenone	ug/L								
Acrolein	ug/L								
Acrylonitrile	ug/L	<5	<5	<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 9

Analytical Data Summary for MW-12

Constituents	10/12/2018	1/23/2019	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
(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-dichloroethylene	<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	<5	<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		<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		<7				
2,4,5-tp (silvex)			<5		<7				
2,4,5-trichlorophenol			<8		<8				
2,4,6-trichlorophenol			<8		<8				
2,4-d			<2.0		<2.7				
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 (mek)	<5		<5	<5	<5	<5	<5	<5	<10
2-chloronaphthalene			<8		<8				
2-chlorophenol			<8		<8				
2-hexanone (mbk)	<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		<.06				
4,4'-dde			<.05		<.06				
4,4'-ddt			<.05		<.06				
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 (mibk)	<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		<.06				
Allyl chloride			<1		<1				
Alpha-bhc			<.05		<.06				
Anthracene			<8		<8				

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

Table 9

Analytical Data Summary for MW-12

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
(3,4)-methylphenol					
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-dichloroethylene	<1	<1	<1	<1	<1
1,1-dichloropropene					
1,2,3-trichloropropane	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					
1,2,4-trichlorobenzene					
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<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					
1,3,5-trinitrobenzene					
1,3-dichlorobenzene					
1,3-dichloropropane					
1,3-dinitrobenzene					
1,4-dichlorobenzene	<1	<1	<1	<1	<1
1,4-naphthoquinone					
1,4-phenylenediamine					
1-naphthylamine					
2,2-dichloropropane					
2,3,4,6-tetrachlorophenol					
2,4,5-t					
2,4,5-tp (silvex)					
2,4,5-trichlorophenol					
2,4,6-trichlorophenol					
2,4-d					
2,4-dichlorophenol					
2,4-dimethylphenol					
2,4-dinitrophenol					
2,4-dinitrotoluene					
2,6-dichlorophenol					
2,6-dinitrotoluene					
2-acetylaminofluorene					
2-butanone (mek)	<10	<10	<10	<10	<10
2-chloronaphthalene					
2-chlorophenol					
2-hexanone (mbk)	<5	<5	<5	<5	<5
2-methylnaphthalene					
2-methylphenol					
2-naphthylamine					
2-nitroaniline					
2-nitrophenol					
3,3'-dichlorobenzidine					
3,3'-dimethylbenzidine					
3-methylcholanthrene					
3-nitroaniline					
4,4'-ddd					
4,4'-dde					
4,4'-ddt					
4,6-dinitro-2-methylphenol					
4-aminobiphenyl					
4-bromophenyl phenyl ether					
4-chloro-3-methylphenol					
4-chloroaniline					
4-chlorophenyl phenyl ether					
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5
4-nitroaniline					
4-nitrophenol					
5-nitro-o-toluidine					
7,12-dimethylbenz(a)anthracene					
Acenaphthene					
Acenaphthylene					
Acetone	<10	<10	<10	<10	<10
Acetonitrile					
Acetophenone					
Acrolein					
Acrylonitrile	<5	<5	<5	<5	<5
Aldrin					
Allyl chloride					
Alpha-bhc					
Anthracene					

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

Table 9

Analytical Data Summary for MW-12

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017	4/23/2018
Antimony, total	ug/L	<2	<2	<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	<4	<4
Azobenzene	ug/L								
Barium, total	ug/L	105.0	111.0	93.2	81.1	101.0	107.0	118.0	110.0
Benzene	ug/L	<1	<1	<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	<4	<4	<4	<4	<4	<4	<4
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	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L								
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L								
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L								
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L								
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene	ug/L								
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<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	<1	<1
Dibromomethane	ug/L	<1	<1	<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	<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 9

Analytical Data Summary for MW-12

Constituents	10/12/2018	1/23/2019	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
Antimony, total	<2		<2	<2	<2	<2	<2	<2	<2
Arochlor 1016			<.10		<.13				
Arochlor 1221			<.20		<.26				
Arochlor 1232			<.20		<.26				
Arochlor 1242			<.20		<.26				
Arochlor 1248			<.20		<.26				
Arochlor 1254			<.10		<.13				
Arochlor 1260			<.10		<.13				
Arsenic, total	<4		<4	<4	<4	<4	<4	<4	<4
Azobenzene			<8		<8				
Barium, total	105.0		96.9	123.0	97.0	102.0	98.0	111.0	112.0
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		<4	<4	<4	<4	<4	<4	<4
Beta-bhc			<.05		<.06				
Bis (2-chloroethoxy) methane			<8		<8				
Bis(2-chloroethyl) ether			<8		<8				
Bis(2-chloroisopropyl) ether			<8		<8				
Bis(2-ethylhexyl) phthalate			16	<6	16	<6	<6	<6	<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			<.10		<.13				
Chlorobenzene	<1		<1	<1	<1	<1	<1	<1	<1
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-dichloroethylene	<1		<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1		<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8		<.8	<.8	<.4	<.4	<.4	<.4	<.4
Copper, total	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	7.7
Cyanide, total			<.005		<.005				
Delta-bhc			<.05		<.06				
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		<.06				
Diethyl phthalate			<8		<8				
Dimethoate			<.4		<.5				
Dimethylphthalate			<8		<8				
Di-n-butyl phthalate			<8		<8				
Di-n-octyl phthalate			<8		<8				
Dinoseb			<.5		<.7				
Diphenylamine			<8		<8				
Disulfoton			<.4		<.5				
Endosulfan i			<.05		<.06				
Endosulfan ii			<.05		<.06				
Endosulfan sulfate			<.05		<.06				
Endrin			<.05		<.06				
Endrin aldehyde			<.05		<.06				
Ethyl methacrylate			<10		<10				
Ethyl methanesulfonate			<8		<8				
Ethylbenzene	<1		<1	<1	<1	<1	<1	<1	<1
Famphur			<.4		<.5				
Fluoranthene			<8		<8				
Fluorene			<8		<8				
Gamma-bhc (lindane)			<.05		<.06				
Heptachlor			<.05		<.06				
Heptachlor epoxide			<.05		<.06				
Hexachlorobenzene			<.05		<.06				

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

Table 9

Analytical Data Summary for MW-12

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Antimony, total	<2	<2	<2	<2	<2
Arochlor 1016					
Arochlor 1221					
Arochlor 1232					
Arochlor 1242					
Arochlor 1248					
Arochlor 1254					
Arochlor 1260					
Arsenic, total	<4	<4	<4	<4	<4
Azobenzene					
Barium, total	140.0	123.0	137.0	135.0	140.0
Benzene	<1	<1	<1	<1	<1
Benzo(a)anthracene					
Benzo(a)pyrene					
Benzo(b)fluoranthene					
Benzo(g,h,i)perylene					
Benzo(k)fluoranthene					
Benzyl alcohol					
Beryllium, total	<4	<4	<4	<4	<4
Beta-bhc					
Bis (2-chloroethoxy) methane					
Bis(2-chloroethyl) ether					
Bis(2-chloroisopropyl) ether					
Bis(2-ethylhexyl) phthalate					
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					
Cadmium, total	1.4	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1
Chlordane					
Chlorobenzene	<1	<1	<1	<1	<1
Chlorobenzilate					
Chloroethane	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1
Chloroprene					
Chromium, total	<8	<8	<8	<8	<8
Chrysene					
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	2.2	<.4	<.4	<.4	<.4
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total					
Delta-bhc					
Diallate					
Dibenzo(a,h)anthracene					
Dibenzofuran					
Dibromochloromethane	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1
Dichlorodifluoromethane					
Dieldrin					
Diethyl phthalate					
Dimethoate					
Dimethylphthalate					
Di-n-butyl phthalate					
Di-n-octyl phthalate					
Dinoseb					
Diphenylamine					
Disulfoton					
Endosulfan i					
Endosulfan ii					
Endosulfan sulfate					
Endrin					
Endrin aldehyde					
Ethyl methacrylate					
Ethyl methanesulfonate					
Ethylbenzene	<1	<1	<1	<1	<1
Famphur					
Fluoranthene					
Fluorene					
Gamma-bhc (lindane)					
Heptachlor					
Heptachlor epoxide					
Hexachlorobenzene					

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

Table 9

Analytical Data Summary for MW-12

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017	4/23/2018
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	<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	<1	<1
Methyl methacrylate	ug/L								
Methyl methanesulfonate	ug/L								
Methyl parathion	ug/L								
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L								
Nickel, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	58	4						
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L								
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Thionazin	ug/L								
Tin, total	ug/L								
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L								
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<8.0	11.4	<8.0	<8.0	<8.0	<20.0	<8.0	<8.0

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

Table 9

Analytical Data Summary for MW-12

Constituents	10/12/2018	1/23/2019	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
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				
Methapyrilene			<8		<8				
Methoxychlor			<.05		<.06				
Methyl iodide	<1		<1	<1	<2	<1	<1	<1	<1
Methyl methacrylate			<1		<1				
Methyl methanesulfonate			<8		<8				
Methyl parathion			<.4		<.5				
Methylene chloride	<5		<5	<5	<5	<5	<5	<5	<5
Naphthalene			<8		<8				
Nickel, total	14.8	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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		<.5				
O-toluidine			<8		<8				
Parathion			<.4		<.5				
P-dimethylaminoazobenzene			<8		<8				
Pentachlorobenzene			<8		<8				
Pentachloronitrobenzene (pcnb)			<8		<8				
Pentachlorophenol			<8		<8				
Phenacetin			<8		<8				
Phenanthrene			<8		<8				
Phenol			<8		<8				
Phorate			<.4		<.5				
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				
Tetrachloroethylene	<1		<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4		<2	<2	<2	<2	<2	<2	<2
Thionazin			<.4		<.5				
Tin, total			<20		<20				
Toluene	<1		<1	<1	<1	<1	<1	<1	<1
Toxaphene			<.20		<.26				
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<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	17.8	26.6	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-12

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Hexachlorobutadiene					
Hexachlorocyclopentadiene					
Hexachloroethane					
Hexachloropropene					
Indeno(1,2,3-cd)pyrene					
Isobutanol					
Isodrin					
Isophorone					
Isosafrole					
Kepone					
Lead, total	<4	<4	<4	<4	<4
Mercury, total					
Methacrylonitrile					
Methapyrilene					
Methoxychlor					
Methyl iodide	<1	<1	<1	<1	<1
Methyl methacrylate					
Methyl methanesulfonate					
Methyl parathion					
Methylene chloride	<5	<5	<5	<5	<5
Naphthalene					
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0
Nitrobenzene					
N-nitrosodiethylamine					
N-nitrosodimethylamine					
N-nitrosodi-n-butylamine					
N-nitroso-di-n-propylamine					
N-nitrosodiphenylamine					
N-nitrosomethylethylamine					
N-nitrosopiperidine					
N-nitrosopyrrolidine					
O,o,o-triethyl phosphorothioate					
O-toluidine					
Parathion					
P-dimethylaminoazobenzene					
Pentachlorobenzene					
Pentachloronitrobenzene (pcnb)					
Pentachlorophenol					
Phenacetin					
Phenanthrene					
Phenol					
Phorate					
Pronamide					
Propionitrile					
Pyrene					
Safrole					
Selenium, total	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					
Styrene	<1	<1	<1	<1	<1
Sulfide, total					
Tetrachloroethylene	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2
Thionazin					
Tin, total					
Toluene	<1	<1	<1	<1	<1
Toxaphene					
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20
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	<20.0

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

Table 9

Analytical Data Summary for MW-14

Constituents	Units	10/14/2014	1/12/2015	4/13/2015	7/21/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<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
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	2.5	<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
Barium, total	ug/L	184	169	143	141	185	121	125	140
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Selenium, total	ug/L	<4.0	<4.0	5.1	<4.0	<4.0	<4.0	5.5	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	31		2					
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<8.0	<8.0	<8.0	<8.0	<20.0	<8.0	<8.0	<20.0

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

Table 9

Analytical Data Summary for MW-14

Constituents	10/12/2017	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021
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-dichloroethylene	<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 (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	11.8	<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	<2.0	<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	170	126	128	114	155	117	137	120	102
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	5.3	<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-dichloroethylene	<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	<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	<4	<4	<4	<4	<4	<4	<4	<4
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
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<4	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<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	16.1	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-14

Constituents	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
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-dichloroethylene	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<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
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<10	<10	<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5	<5	<5
Antimony, total	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Arsenic, total	<4	<4	<4	<4	<4	<4
Barium, total	107	133	117	140	114	220
Benzene	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4
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
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1
Cobalt, total	<.4	<2.0	<.4	<.4	<.4	<.4
Copper, total	<4	7	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5
Nickel, total	<4	<4	<4	<4	<4	<4
Selenium, total	<4.0	5.5	<4.0	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4	<4	<4
Solids, total suspended						
Styrene	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20
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	<20.0

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

Table 9

Analytical Data Summary for MW-15

Constituents	Units	10/14/2014	4/14/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017	4/23/2018
(3 4)-methylphenol	ug/L								
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L								
1,2,3-trichloropropane	ug/L	<1	<1	<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	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<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	<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 (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L								
2-chlorophenol	ug/L								
2-hexanone (mbk)	ug/L	<5	<5	<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 (mibk)	ug/L	<5	<5	<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	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	10.8	<10.0
Acetonitrile	ug/L								
Acetophenone	ug/L								
Acrolein	ug/L								
Acrylonitrile	ug/L	<5	<5	<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 9

Analytical Data Summary for MW-15

Constituents	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022	10/19/2022
(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-dichloroethylene	<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	<5	<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
1,2-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	<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 (mek)	<5	<5	<5	<5	<5	<5	<5	<10	<10
2-chloronaphthalene		<8							
2-chlorophenol		<8							
2-hexanone (mbk)	<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 (mibk)	<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	<10.0	<10.0	<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	<5
Aldrin		<.05							
Allyl chloride		<1							
Alpha-bhc		<.05							
Anthracene		<8							

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

Table 9

Analytical Data Summary for MW-15

Constituents	4/6/2023	10/10/2023	4/11/2024	10/17/2024
(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-dichloroethylene	<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	<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 (mek)	<10	<10	<5	<10
2-chloronaphthalene			<8	
2-chlorophenol			<8	
2-hexanone (mbk)	<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 (mibk)	<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
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 9

Analytical Data Summary for MW-15

Constituents	Units	10/14/2014	4/14/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017	4/23/2018
Antimony, total	ug/L	<2	<2	<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	<4	<4
Azobenzene	ug/L								
Barium, total	ug/L	27.9	26.9	22.8	20.2	23.1	24.2	21.2	24.7
Benzene	ug/L	<1	<1	<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	<4	<4	<4	<4	<4	<4	<4
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	<10	11	<10	<10	19	<6	15	<6
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L								
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L								
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L								
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L								
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene	ug/L								
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
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	<1	<1
Dibromomethane	ug/L	<1	<1	<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	<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 9

Analytical Data Summary for MW-15

Constituents	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022	10/19/2022
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	<4	<4	<4	<4	<4	<4	<4	<4
Azobenzene		<8							
Barium, total	22.1	23.9	25.5	17.9	19.8	18.0	17.8	19.5	22.4
Benzene	<1	<1	<1	<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	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc		<.05							
Bis (2-chloroethoxy) methane		<8							
Bis(2-chloroethyl) ether		<8							
Bis(2-chloroisopropyl) ether		<8							
Bis(2-ethylhexyl) phthalate	6	7	7	<6	<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	.9	<.8	<.8	<.8	<.8	<.8	2.0
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	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate		<8							
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
Chloroprene		<1							
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene		<8							
Cis-1,2-dichloroethylene	<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	<.4	<.4	<.4	<.4	<.4	<2.0
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
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 9

Analytical Data Summary for MW-15

Constituents	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Antimony, total	<2	<2	<2	<2
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
Azobenzene			<8	
Barium, total	18.0	21.0	18.1	27.9
Benzene	<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	<4	<4	<4
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
Bromodichloromethane	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Butyl benzyl phthalate			<8	
Cadmium, total	<.8	2.4	<.8	<.8
Carbon disulfide	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1
Chlordane			<1	
Chlorobenzene	<1	<1	<1	<1
Chlorobenzilate			<8	
Chloroethane	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1
Chloroprene			<1	
Chromium, total	<8	<8	<8	<8
Chrysene			<8	
Cis-1,2-dichloroethylene	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1
Cobalt, total	<4	<4	<4	<4
Copper, total	<4	<4	<4	<4
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 9

Analytical Data Summary for MW-15

Constituents	Units	10/14/2014	4/14/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017	4/23/2018
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	<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	<1	<1
Methyl methacrylate	ug/L								
Methyl methanesulfonate	ug/L								
Methyl parathion	ug/L								
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L								
Nickel, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	47	7						
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L								
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Thionazin	ug/L								
Tin, total	ug/L								
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L								
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<20.0	<8.0	<8.0

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

Table 9

Analytical Data Summary for MW-15

Constituents	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022	10/19/2022
Hexachlorobutadiene		<8							
Hexachlorocyclopentadiene		<8							
Hexachloroethane		<8							
Hexachloropropene		<8							
Indeno(1,2,3-cd)pyrene		<8							
Isobutanol		<1							
Isodrin		<8							
Isophorone		<8							
Isosafrole		<8							
Kepona		<8							
Lead, total	<4	<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	<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	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	<4.0	4.5
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	<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							
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<2	<2	<2	<2	<2	<2	<2	<2
Thionazin		<.4							
Tin, total		<20							
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene		<.2							
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<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	51.7	23.0	37.5	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-15

Constituents	4/6/2023	10/10/2023	4/11/2024	10/17/2024
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
Mercury, total			<.5	
Methacrylonitrile			<1	
Methapyrilene			<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	<4.0	9.5	<4.0	<4.0
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
Silver, total	<4	<4	<4	<4
Solids, total suspended				
Styrene	<1	<1	<1	<1
Sulfide, total			<.15	
Tetrachloroethylene	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2
Thionazin			<.4	
Tin, total			<20	
Toluene	<1	<1	<1	<1
Toxaphene			<.2	
Trans-1,2-dichloroethylene	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20
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	<20.0

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

Table 9

Analytical Data Summary for MW-16

Constituents	Units	10/17/2019	4/9/2020	10/8/2020	12/9/2020	4/15/2021	10/28/2021	4/13/2022	10/19/2022
(3 4)-methylphenol	ug/L			<8			<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-dichloroethylene	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1-dichloropropene	ug/L			<1			<1		
1,2,3-trichloropropane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L			<8			<8		
1,2,4-trichlorobenzene	ug/L			<1			<1		
1,2-dibromo-3-chloropropane	ug/L	<1	<5	<1		<5	<1	<5	<5
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			<8		
1,3,5-trinitrobenzene	ug/L			<8			<8		
1,3-dichlorobenzene	ug/L			<1			<1		
1,3-dichloropropane	ug/L			<1			<1		
1,3-dinitrobenzene	ug/L			<8			<8		
1,4-dichlorobenzene	ug/L	<1	<1	<1		<1	<1	<1	<1
1,4-naphthoquinone	ug/L			<8			<8		
1,4-phenylenediamine	ug/L			<8			<8		
1-naphthylamine	ug/L			<8			<8		
2,2-dichloropropane	ug/L			<1			<1		
2,3,4,6-tetrachlorophenol	ug/L			<8			<8		
2,4,5-t	ug/L			<.5			<.5		
2,4,5-tp (silvex)	ug/L			<.5			<.5		
2,4,5-trichlorophenol	ug/L			<8			<8		
2,4,6-trichlorophenol	ug/L			<8			<8		
2,4-d	ug/L			<2			<2		
2,4-dichlorophenol	ug/L			<8			<8		
2,4-dimethylphenol	ug/L			<8			<8		
2,4-dinitrophenol	ug/L			<8			<8		
2,4-dinitrotoluene	ug/L			<8			<8		
2,6-dichlorophenol	ug/L			<8			<8		
2,6-dinitrotoluene	ug/L			<8			<8		
2-acetylaminofluorene	ug/L			<8			<8		
2-butanone (mek)	ug/L	<5	<5	<5		<5	<5	<10	<10
2-chloronaphthalene	ug/L			<8			<8		
2-chlorophenol	ug/L			<8			<8		
2-hexanone (mbk)	ug/L	<5	<5	<5		<5	<5	<5	<5
2-methylnaphthalene	ug/L			<8			<8		
2-methylphenol	ug/L			<8			<8		
2-naphthylamine	ug/L			<8			<8		
2-nitroaniline	ug/L			<8			<8		
2-nitrophenol	ug/L			<8			<8		
3,3'-dichlorobenzidine	ug/L			<8			<8		
3,3'-dimethylbenzidine	ug/L			<8			<8		
3-methylcholanthrene	ug/L			<8			<8		
3-nitroaniline	ug/L			<8			<8		
4,4'-ddd	ug/L			<.05			<.05		
4,4'-dde	ug/L			<.05			<.05		
4,4'-ddt	ug/L			<.05			<.05		
4,6-dinitro-2-methylphenol	ug/L			<8			<8		
4-aminobiphenyl	ug/L			<8			<8		
4-bromophenyl phenyl ether	ug/L			<8			<8		
4-chloro-3-methylphenol	ug/L			<8			<8		
4-chloroaniline	ug/L			<8			<8		
4-chlorophenyl phenyl ether	ug/L			<8			<8		
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5		<5	<5	<5	<5
4-nitroaniline	ug/L			<8			<8		
4-nitrophenol	ug/L			<8			<8		
5-nitro-o-toluidine	ug/L			<8			<8		
7,12-dimethylbenz(a)anthracene	ug/L			<8			<8		
Acenaphthene	ug/L			<8			<8		
Acenaphthylene	ug/L			<8			<8		
Acetone	ug/L	<10	<10	<10		<10	<10	<10	<10
Acetonitrile	ug/L			<10			<10		
Acetophenone	ug/L			<8			<8		
Acrolein	ug/L			<10			<10		
Acrylonitrile	ug/L	<5	<5	<5		<5	<5	<5	<5
Aldrin	ug/L			<.05			<.05		
Allyl chloride	ug/L			<1			<1		
Alpha-bhc	ug/L			<.05			<.05		
Anthracene	ug/L			<8			<8		

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

Table 9

Analytical Data Summary for MW-16

Constituents	4/6/2023	10/10/2023	4/11/2024	10/17/2024
(3 4)-methylphenol				
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-dichloroethylene	<1	<1	<1	<1
1,1-dichloropropene				
1,2,3-trichloropropane	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene				
1,2,4-trichlorobenzene				
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
1,2-dinitrobenzene				
1,3,5-trinitrobenzene				
1,3-dichlorobenzene				
1,3-dichloropropane				
1,3-dinitrobenzene				
1,4-dichlorobenzene	<1	<1	<1	<1
1,4-naphthoquinone				
1,4-phenylenediamine				
1-naphthylamine				
2,2-dichloropropane				
2,3,4,6-tetrachlorophenol				
2,4,5-t				
2,4,5-tp (silvex)				
2,4,5-trichlorophenol				
2,4,6-trichlorophenol				
2,4-d				
2,4-dichlorophenol				
2,4-dimethylphenol				
2,4-dinitrophenol				
2,4-dinitrotoluene				
2,6-dichlorophenol				
2,6-dinitrotoluene				
2-acetylaminofluorene				
2-butanone (mek)	<10	<10	<10	<10
2-chloronaphthalene				
2-chlorophenol				
2-hexanone (mbk)	<5	<5	<5	<5
2-methylnaphthalene				
2-methylphenol				
2-naphthylamine				
2-nitroaniline				
2-nitrophenol				
3,3'-dichlorobenzidine				
3,3'-dimethylbenzidine				
3-methylcholanthrene				
3-nitroaniline				
4,4'-ddd				
4,4'-dde				
4,4'-ddt				
4,6-dinitro-2-methylphenol				
4-aminobiphenyl				
4-bromophenyl phenyl ether				
4-chloro-3-methylphenol				
4-chloroaniline				
4-chlorophenyl phenyl ether				
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5
4-nitroaniline				
4-nitrophenol				
5-nitro-o-toluidine				
7,12-dimethylbenz(a)anthracene				
Acenaphthene				
Acenaphthylene				
Acetone	<10	<10	<10	<10
Acetonitrile				
Acetophenone				
Acrolein				
Acrylonitrile	<5	<5	<5	<5
Aldrin				
Allyl chloride				
Alpha-bhc				
Anthracene				

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

Table 9

Analytical Data Summary for MW-16

Constituents	Units	10/17/2019	4/9/2020	10/8/2020	12/9/2020	4/15/2021	10/28/2021	4/13/2022	10/19/2022
Antimony, total	ug/L	<2	<2	<2		<2	<2	<2	<2
Arochlor 1016	ug/L			<1			<1		
Arochlor 1221	ug/L			<2			<2		
Arochlor 1232	ug/L			<2			<2		
Arochlor 1242	ug/L			<2			<2		
Arochlor 1248	ug/L			<2			<2		
Arochlor 1254	ug/L			<1			<1		
Arochlor 1260	ug/L			<1			<1		
Arsenic, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Azobenzene	ug/L			<8			<8		
Barium, total	ug/L	47.6	45.7	44.2		39.6	42.0	37.6	42.9
Benzene	ug/L	<1	<1	<1		<1	<1	<1	<1
Benzo(a)anthracene	ug/L			<8			<8		
Benzo(a)pyrene	ug/L			<8			<8		
Benzo(b)fluoranthene	ug/L			<8			<8		
Benzo(g,h,i)perylene	ug/L			<8			<8		
Benzo(k)fluoranthene	ug/L			<8			<8		
Benzyl alcohol	ug/L			<8			<8		
Beryllium, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Beta-bhc	ug/L			<.05			<.05		
Bis (2-chloroethoxy) methane	ug/L			<8			<8		
Bis(2-chloroethyl) ether	ug/L			<8			<8		
Bis(2-chloroisopropyl) ether	ug/L			<8			<8		
Bis(2-ethylhexyl) phthalate	ug/L			8	<6		6		19
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			<8		
Cadmium, total	ug/L	<.8	<.8	<.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			<1		
Chlorobenzene	ug/L	<1	<1	<1		<1	<1	<1	<1
Chlorobenzilate	ug/L			<8			<8		
Chloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1		<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Chloroprene	ug/L			<1			<1		
Chromium, total	ug/L	<8	<8	<8		<8	<8	<8	<8
Chrysene	ug/L			<8			<8		
Cis-1,2-dichloroethylene	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	4.2	1.2		<.4	<.4	<.4	<2.0
Copper, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	19.1
Cyanide, total	mg/L			<.005			<.005		
Delta-bhc	ug/L			<.05			<.05		
Diallate	ug/L			<8			<8		
Dibenzo(a,h)anthracene	ug/L			<8			<8		
Dibenzofuran	ug/L			<8			<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			<1		
Dieldrin	ug/L			<.05			<.05		
Diethyl phthalate	ug/L			<8			<8		
Dimethoate	ug/L			<.4			<.4		
Dimethylphthalate	ug/L			<8			<8		
Di-n-butyl phthalate	ug/L			<8			<8		
Di-n-octyl phthalate	ug/L			<8			<8		
Dinoseb	ug/L			<.5			<.5		
Diphenylamine	ug/L			<8			<8		
Disulfoton	ug/L			<.4			<.4		
Endosulfan i	ug/L			<.05			<.05		
Endosulfan ii	ug/L			<.05			<.05		
Endosulfan sulfate	ug/L			<.05			<.05		
Endrin	ug/L			<.05			<.05		
Endrin aldehyde	ug/L			<.05			<.05		
Ethyl methacrylate	ug/L			<10			<10		
Ethyl methanesulfonate	ug/L			<8			<8		
Ethylbenzene	ug/L	<1	<1	<1		<1	<1	<1	<1
Famphur	ug/L			<.4			<.4		
Fluoranthene	ug/L			<8			<8		
Fluorene	ug/L			<8			<8		
Gamma-bhc (lindane)	ug/L			<.05			<.05		
Heptachlor	ug/L			<.05			<.05		
Heptachlor epoxide	ug/L			<.05			<.05		
Hexachlorobenzene	ug/L			<.05			<.05		

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

Table 9

Analytical Data Summary for MW-16

Constituents	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Antimony, total	<2	<2	<2	<2
Arochlor 1016				
Arochlor 1221				
Arochlor 1232				
Arochlor 1242				
Arochlor 1248				
Arochlor 1254				
Arochlor 1260				
Arsenic, total	<4	<4	<4	<4
Azobenzene				
Barium, total	38.0	39.0	39.1	43.2
Benzene	<1	<1	<1	<1
Benzo(a)anthracene				
Benzo(a)pyrene				
Benzo(b)fluoranthene				
Benzo(g,h,i)perylene				
Benzo(k)fluoranthene				
Benzyl alcohol				
Beryllium, total	<4	<4	<4	<4
Beta-bhc				
Bis (2-chloroethoxy) methane				
Bis(2-chloroethyl) ether				
Bis(2-chloroisopropyl) ether				
Bis(2-ethylhexyl) phthalate	<6			
Bromochloromethane	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Butyl benzyl phthalate				
Cadmium, total	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1
Chlordane				
Chlorobenzene	<1	<1	<1	<1
Chlorobenzilate				
Chloroethane	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1
Chloroprene				
Chromium, total	<8	<8	<8	<8
Chrysene				
Cis-1,2-dichloroethylene	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1
Cobalt, total	<.4	<.4	<.4	<.4
Copper, total	<4.0	<4.0	<4.0	4.9
Cyanide, total				
Delta-bhc				
Diallate				
Dibenzo(a,h)anthracene				
Dibenzofuran				
Dibromochloromethane	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1
Dichlorodifluoromethane				
Dieldrin				
Diethyl phthalate				
Dimethoate				
Dimethylphthalate				
Di-n-butyl phthalate				
Di-n-octyl phthalate				
Dinoseb				
Diphenylamine				
Disulfoton				
Endosulfan i				
Endosulfan ii				
Endosulfan sulfate				
Endrin				
Endrin aldehyde				
Ethyl methacrylate				
Ethyl methanesulfonate				
Ethylbenzene	<1	<1	<1	<1
Famphur				
Fluoranthene				
Fluorene				
Gamma-bhc (lindane)				
Heptachlor				
Heptachlor epoxide				
Hexachlorobenzene				

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

Table 9

Analytical Data Summary for MW-16

Constituents	Units	10/17/2019	4/9/2020	10/8/2020	12/9/2020	4/15/2021	10/28/2021	4/13/2022	10/19/2022
Hexachlorobutadiene	ug/L			<8			<8		
Hexachlorocyclopentadiene	ug/L			<8			<8		
Hexachloroethane	ug/L			<8			<8		
Hexachloropropene	ug/L			<8			<8		
Indeno(1,2,3-cd)pyrene	ug/L			<8			<8		
Isobutanol	mg/L			<1			<1		
Isodrin	ug/L			<8			<8		
Isophorone	ug/L			<8			<8		
Isosafrole	ug/L			<8			<8		
Kepone	ug/L			<8			<8		
Lead, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Mercury, total	ug/L			<.5			<.5		
Methacrylonitrile	ug/L			<1			<1		
Methapyrilene	ug/L			<8			<8		
Methoxychlor	ug/L			<.05			<.05		
Methyl iodide	ug/L	<1	<1	<2		<1	<2	<1	<1
Methyl methacrylate	ug/L			<1			<1		
Methyl methanesulfonate	ug/L			<8			<8		
Methyl parathion	ug/L			<.4			<.4		
Methylene chloride	ug/L	<5	<5	<5		<5	<5	<5	<5
Naphthalene	ug/L			<8			<8		
Nickel, total	ug/L	10.4	6.6	<4.0		<4.0	<4.0	<4.0	<4.0
Nitrobenzene	ug/L			<8			<8		
N-nitrosodiethylamine	ug/L			<8			<8		
N-nitrosodimethylamine	ug/L			<8			<8		
N-nitrosodi-n-butylamine	ug/L			<8			<8		
N-nitroso-di-n-propylamine	ug/L			<8			<8		
N-nitrosodiphenylamine	ug/L			<8			<8		
N-nitrosomethylethylamine	ug/L			<8			<8		
N-nitrosopiperidine	ug/L			<8			<8		
N-nitrosopyrrolidine	ug/L			<8			<8		
O,o,o-triethyl phosphorothioate	ug/L			<.4			<.4		
O-toluidine	ug/L			<8			<8		
Parathion	ug/L			<.4			<.4		
P-dimethylaminoazobenzene	ug/L			<8			<8		
Pentachlorobenzene	ug/L			<8			<8		
Pentachloronitrobenzene (pcnb)	ug/L			<8			<8		
Pentachlorophenol	ug/L			<8			<8		
Phenacetin	ug/L			<8			<8		
Phenanthrene	ug/L			<8			<8		
Phenol	ug/L			<8			<8		
Phorate	ug/L			<.4			<.4		
Pronamide	ug/L			<8			<8		
Propionitrile	ug/L			<10			<10		
Pyrene	ug/L			<8			<8		
Safrole	ug/L			<8			<8		
Selenium, total	ug/L	20.6	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Silver, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1		<1	<1	<1	<1
Sulfide, total	mg/L			<.1			<.1		
Tetrachloroethylene	ug/L	<1	<1	<1		<1	<1	<1	<1
Thallium, total	ug/L	<2	<2	<2		<2	<2	<2	<2
Thionazin	ug/L			<.4			<.4		
Tin, total	ug/L			<20			<20		
Toluene	ug/L	<1	<1	<1		<1	<1	<1	<1
Toxaphene	ug/L			<.2			<.2		
Trans-1,2-dichloroethylene	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
Trichloroethylene	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	42.6	<20.0	<20.0		221.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-16

Constituents	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Hexachlorobutadiene				
Hexachlorocyclopentadiene				
Hexachloroethane				
Hexachloropropene				
Indeno(1,2,3-cd)pyrene				
Isobutanol				
Isodrin				
Isophorone				
Isosafrole				
Kepona				
Lead, total	<4	<4	<4	<4
Mercury, total				
Methacrylonitrile				
Methapyrilene				
Methoxychlor				
Methyl iodide	<1	<1	<1	<1
Methyl methacrylate				
Methyl methanesulfonate				
Methyl parathion				
Methylene chloride	<5	<5	<5	<5
Naphthalene				
Nickel, total	<4.0	<4.0	<4.0	4.6
Nitrobenzene				
N-nitrosodiethylamine				
N-nitrosodimethylamine				
N-nitrosodi-n-butylamine				
N-nitroso-di-n-propylamine				
N-nitrosodiphenylamine				
N-nitrosomethylethylamine				
N-nitrosopiperidine				
N-nitrosopyrrolidine				
O,o,o-triethyl phosphorothioate				
O-toluidine				
Parathion				
P-dimethylaminoazobenzene				
Pentachlorobenzene				
Pentachloronitrobenzene (pcnb)				
Pentachlorophenol				
Phenacetin				
Phenanthrene				
Phenol				
Phorate				
Pronamide				
Propionitrile				
Pyrene				
Safrole				
Selenium, total	<4.0	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4
Styrene	<1	<1	<1	<1
Sulfide, total				
Tetrachloroethylene	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2
Thionazin				
Tin, total				
Toluene	<1	<1	<1	<1
Toxaphene				
Trans-1,2-dichloroethylene	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20
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	<20.0

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

Table 9

Analytical Data Summary for MW-2

Constituents	Units	10/14/2014	4/14/2015	9/22/2015	4/12/2016	6/14/2016	10/11/2016	4/20/2017	10/12/2017
(3 4)-methylphenol	ug/L						<8		<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-dichloroethylene	ug/L	<1	<1	<1	<1		<1	<1	<1
1,1-dichloropropene	ug/L						<1		<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1		<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L						<8		<8
1,2,4-trichlorobenzene	ug/L						<1		<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		<8
1,3,5-trinitrobenzene	ug/L						<8		<8
1,3-dichlorobenzene	ug/L						<1		<1
1,3-dichloropropane	ug/L						<1		<1
1,3-dinitrobenzene	ug/L						<8		<8
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1		<1	<1	<1
1,4-naphthoquinone	ug/L						<8		<8
1,4-phenylenediamine	ug/L						<8		<8
1-naphthylamine	ug/L						<8		<8
2,2-dichloropropane	ug/L						<1		<1
2,3,4,6-tetrachlorophenol	ug/L						<8		<8
2,4,5-t	ug/L						<.5		<.5
2,4,5-tp (silvex)	ug/L						<.5		<.5
2,4,5-trichlorophenol	ug/L						<8		<8
2,4,6-trichlorophenol	ug/L						<8		<8
2,4-d	ug/L						<2		<2
2,4-dichlorophenol	ug/L						<8		<8
2,4-dimethylphenol	ug/L						<8		<8
2,4-dinitrophenol	ug/L						<8		<8
2,4-dinitrotoluene	ug/L						<8		<8
2,6-dichlorophenol	ug/L						<8		<8
2,6-dinitrotoluene	ug/L						<8		<8
2-acetylaminofluorene	ug/L						<8		<8
2-butanone (mek)	ug/L	<5	<5	<5	<5		<5	<5	<5
2-chloronaphthalene	ug/L						<8		<8
2-chlorophenol	ug/L						<8		<8
2-hexanone (mbk)	ug/L	<5	<5	<5	<5		<5	<5	<5
2-methylnaphthalene	ug/L						<8		<8
2-methylphenol	ug/L						<8		<8
2-naphthylamine	ug/L						<8		<8
2-nitroaniline	ug/L						<8		<8
2-nitrophenol	ug/L						<8		<8
3,3'-dichlorobenzidine	ug/L						<8		<8
3,3'-dimethylbenzidine	ug/L						<8		<8
3-methylcholanthrene	ug/L						<8		<8
3-nitroaniline	ug/L						<8		<8
4,4'-ddd	ug/L						<.05		<.05
4,4'-dde	ug/L						<.05		<.05
4,4'-ddt	ug/L						<.05		<.05
4,6-dinitro-2-methylphenol	ug/L						<8		<8
4-aminobiphenyl	ug/L						<8		<8
4-bromophenyl phenyl ether	ug/L						<8		<8
4-chloro-3-methylphenol	ug/L						<8		<8
4-chloroaniline	ug/L						<8		<8
4-chlorophenyl phenyl ether	ug/L						<8		<8
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5		<5	<5	<5
4-nitroaniline	ug/L						<8		<8
4-nitrophenol	ug/L						<8		<8
5-nitro-o-toluidine	ug/L						<8		<8
7,12-dimethylbenz(a)anthracene	ug/L						<8		<8
Acenaphthene	ug/L						<8		<8
Acenaphthylene	ug/L						<8		<8
Acetone	ug/L	<10	<10	<10	<10		<10	<10	<10
Acetonitrile	ug/L						<10		<10
Acetophenone	ug/L						<8		<8
Acrolein	ug/L						<10		<10
Acrylonitrile	ug/L	<5	<5	<5	<5		<5	<5	<5
Aldrin	ug/L						<.05		<.05
Allyl chloride	ug/L						<1		<1
Alpha-bhc	ug/L						<.05		<.05
Anthracene	ug/L						<8		<8

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

Table 9

Analytical Data Summary for MW-2

Constituents	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
(3 4)-methylphenol									
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-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene									
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene									
1,2,4-trichlorobenzene									
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
1,2-dinitrobenzene									
1,3,5-trinitrobenzene									
1,3-dichlorobenzene									
1,3-dichloropropane									
1,3-dinitrobenzene									
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone									
1,4-phenylenediamine									
1-naphthylamine									
2,2-dichloropropane									
2,3,4,6-tetrachlorophenol									
2,4,5-t									
2,4,5-tp (silvex)									
2,4,5-trichlorophenol									
2,4,6-trichlorophenol									
2,4-d									
2,4-dichlorophenol									
2,4-dimethylphenol									
2,4-dinitrophenol									
2,4-dinitrotoluene									
2,6-dichlorophenol									
2,6-dinitrotoluene									
2-acetylaminofluorene									
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<10
2-chloronaphthalene									
2-chlorophenol									
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene									
2-methylphenol									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3'-dichlorobenzidine									
3,3'-dimethylbenzidine									
3-methylcholanthrene									
3-nitroaniline									
4,4'-ddd									
4,4'-dde									
4,4'-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz(a)anthracene									
Acenaphthene									
Acenaphthylene									
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin									
Allyl chloride									
Alpha-bhc									
Anthracene									

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

Table 9

Analytical Data Summary for MW-2

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
(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-dichloroethylene	<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	<1	<5	<5	<5	<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	<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 (mek)	<5	<10	<10	<10	<10
2-chloronaphthalene	<8				
2-chlorophenol	<8				
2-hexanone (mbk)	<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 (mibk)	<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
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 9

Analytical Data Summary for MW-2

Constituents	Units	10/14/2014	4/14/2015	9/22/2015	4/12/2016	6/14/2016	10/11/2016	4/20/2017	10/12/2017
Antimony, total	ug/L	<2	<2	<2	<2		<2	<2	<2
Arochlor 1016	ug/L						<.1		<.1
Arochlor 1221	ug/L						<.2		<.2
Arochlor 1232	ug/L						<.2		<.2
Arochlor 1242	ug/L						<.2		<.2
Arochlor 1248	ug/L						<.2		<.2
Arochlor 1254	ug/L						<.1		<.1
Arochlor 1260	ug/L						<.1		<.1
Arsenic, total	ug/L	<4.0	<4.0	<4.0	12.5	6.5	<4.0	9.4	5.0
Azobenzene	ug/L						<.8		<.8
Barium, total	ug/L	35.4	40.5	45.3	35.2		69.5	60.2	53.2
Benzene	ug/L	<.1	<.1	<.1	<.1		<.1	<.1	<.1
Benzo(a)anthracene	ug/L						<.8		<.8
Benzo(a)pyrene	ug/L						<.8		<.8
Benzo(b)fluoranthene	ug/L						<.8		<.8
Benzo(g,h,i)perylene	ug/L						<.8		<.8
Benzo(k)fluoranthene	ug/L						<.8		<.8
Benzyl alcohol	ug/L						<.8		<.8
Beryllium, total	ug/L	<.4	<.4	<.4	<.4		<.4	<.4	<.4
Beta-bhc	ug/L						<.05		<.05
Bis (2-chloroethoxy) methane	ug/L						<.8		<.8
Bis(2-chloroethyl) ether	ug/L						<.8		<.8
Bis(2-chloroisopropyl) ether	ug/L						<.8		<.8
Bis(2-ethylhexyl) phthalate	ug/L						<.8		35
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		<.8
Cadmium, total	ug/L	<.8	<.8	<.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		<.1
Chlorobenzene	ug/L	<.1	<.1	<.1	<.1		<.1	<.1	<.1
Chlorobenzilate	ug/L						<.8		<.8
Chloroethane	ug/L	<.1	<.1	<.1	<.1		<.1	<.1	<.1
Chloroform	ug/L	<.1	<.1	<.1	<.1		<.1	<.1	<.1
Chloromethane	ug/L	<.1	<.1	<.1	<.1		<.1	<.1	<.1
Chloroprene	ug/L						<.1		<.1
Chromium, total	ug/L	<.8	<.8	<.8	<.8		<.8	<.8	<.8
Chrysene	ug/L						<.8		<.8
Cis-1,2-dichloroethylene	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	<.8	1.3	4.3	1.5		2.6	3.9	5.5
Copper, total	ug/L	<.4	<.4	<.4	<.4		<.4	<.4	<.4
Cyanide, total	mg/L						<.005		<.005
Delta-bhc	ug/L						<.05		<.05
Diallate	ug/L						<.8		<.8
Dibenzo(a,h)anthracene	ug/L						<.8		<.8
Dibenzofuran	ug/L						<.8		<.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		<.1
Dieldrin	ug/L						<.05		<.05
Diethyl phthalate	ug/L						<.8		<.8
Dimethoate	ug/L						<.4		<.4
Dimethylphthalate	ug/L						<.8		<.8
Di-n-butyl phthalate	ug/L						<.8		<.8
Di-n-octyl phthalate	ug/L						<.8		<.8
Dinoseb	ug/L						<.5		<.5
Diphenylamine	ug/L						<.8		<.8
Disulfoton	ug/L						<.4		<.4
Endosulfan i	ug/L						<.05		<.05
Endosulfan ii	ug/L						<.05		<.05
Endosulfan sulfate	ug/L						<.05		<.05
Endrin	ug/L						<.05		<.05
Endrin aldehyde	ug/L						<.05		<.05
Ethyl methacrylate	ug/L						<10		<10
Ethyl methanesulfonate	ug/L						<.8		<.8
Ethylbenzene	ug/L	<.1	<.1	<.1	<.1		<.1	<.1	<.1
Famphur	ug/L						<.4		<.4
Fluoranthene	ug/L						<.8		<.8
Fluorene	ug/L						<.8		<.8
Gamma-bhc (lindane)	ug/L						<.05		<.05
Heptachlor	ug/L						<.05		<.05
Heptachlor epoxide	ug/L						<.05		<.05
Hexachlorobenzene	ug/L						<.05		<.05

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

Table 9

Analytical Data Summary for MW-2

Constituents	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016									
Arochlor 1221									
Arochlor 1232									
Arochlor 1242									
Arochlor 1248									
Arochlor 1254									
Arochlor 1260									
Arsenic, total	4.7	<4.0	4.3	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene									
Barium, total	43.7	42.6	60.9	51.2	37.9	43.5	37.1	34.4	31.1
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Benzyl alcohol									
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc									
Bis (2-chloroethoxy) methane									
Bis(2-chloroethyl) ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl) phthalate	<6	<6	<6	25	<6	<6	<6	12	11
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									
Cadmium, total	<.8	<.8	2.7	<.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									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate									
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
Chloroprene									
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene									
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	3.3	2.4	3.0	.8	5.8	4.2	5.1	1.7	4.4
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cyanide, total									
Delta-bhc									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethylphthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur									
Fluoranthene									
Fluorene									
Gamma-bhc (lindane)									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									

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

Table 9

Analytical Data Summary for MW-2

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Antimony, total	<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	4.1	4.1	<4.0	4.3	<4.0
Azobenzene	<8				
Barium, total	45.0	33.2	36.7	33.9	45.1
Benzene	<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	<4	<4	<4	<4
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
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	<.8
Carbon disulfide	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1
Chlordane	<.1				
Chlorobenzene	<1	<1	<1	<1	<1
Chlorobenzilate	<8				
Chloroethane	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1
Chloroprene	<1				
Chromium, total	<8	<8	<8	<8	<8
Chrysene	<8				
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	4.0	2.8	1.8	2.3	2.3
Copper, total	<4	<4	<4	<4	<4
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 9

Analytical Data Summary for MW-2

Constituents	Units	10/14/2014	4/14/2015	9/22/2015	4/12/2016	6/14/2016	10/11/2016	4/20/2017	10/12/2017
Hexachlorobutadiene	ug/L						<8		<8
Hexachlorocyclopentadiene	ug/L						<8		<8
Hexachloroethane	ug/L						<8		<8
Hexachloropropene	ug/L						<8		<8
Indeno(1,2,3-cd)pyrene	ug/L						<8		<8
Isobutanol	mg/L						<1		<1
Isodrin	ug/L						<8		<8
Isophorone	ug/L						<8		<8
Isosafrole	ug/L						<8		<8
Kepone	ug/L						<8		<8
Lead, total	ug/L	<4	<4	<4	<4		<4	<4	<4
Mercury, total	ug/L						<.5		<.5
Methacrylonitrile	ug/L						<1		<1
Methapyrilene	ug/L						<8		<8
Methoxychlor	ug/L						<.05		<.05
Methyl iodide	ug/L	<1	<1	<1	<1		<1	<1	<1
Methyl methacrylate	ug/L						<1		<1
Methyl methanesulfonate	ug/L						<8		<8
Methyl parathion	ug/L						<.4		<.4
Methylene chloride	ug/L	<5	<5	<5	<5		<5	<5	<5
Naphthalene	ug/L						<8		<8
Nickel, total	ug/L	<4.0	<4.0	5.0	<4.0		4.4	4.7	4.2
Nitrobenzene	ug/L						<8		<8
N-nitrosodiethylamine	ug/L						<8		<8
N-nitrosodimethylamine	ug/L						<8		<8
N-nitrosodi-n-butylamine	ug/L						<8		<8
N-nitroso-di-n-propylamine	ug/L						<8		<8
N-nitrosodiphenylamine	ug/L						<8		<8
N-nitrosomethylethylamine	ug/L						<8		<8
N-nitrosopiperidine	ug/L						<8		<8
N-nitrosopyrrolidine	ug/L						<8		<8
O,o,o-triethyl phosphorothioate	ug/L						<.4		<.4
O-toluidine	ug/L						<8		<8
Parathion	ug/L						<.4		<.4
P-dimethylaminoazobenzene	ug/L						<8		<8
Pentachlorobenzene	ug/L						<8		<8
Pentachloronitrobenzene (pcnb)	ug/L						<8		<8
Pentachlorophenol	ug/L						<8		<8
Phenacetin	ug/L						<8		<8
Phenanthrene	ug/L						<8		<8
Phenol	ug/L						<8		<8
Phorate	ug/L						<.4		<.4
Pronamide	ug/L						<8		<8
Propionitrile	ug/L						<10		<10
Pyrene	ug/L						<8		<8
Safrole	ug/L						<8		<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	194	17						
Styrene	ug/L	<1	<1	<1	<1		<1	<1	<1
Sulfide, total	mg/L						<.1		<.1
Tetrachloroethylene	ug/L	<1	<1	<1	<1		<1	<1	<1
Thallium, total	ug/L	<4	<4	<4	<4		<4	<4	<4
Thionazin	ug/L						<.4		<.4
Tin, total	ug/L						<20		<20
Toluene	ug/L	<1	<1	<1	<1		<1	<1	<1
Toxaphene	ug/L						<.2		<.2
Trans-1,2-dichloroethylene	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
Trichloroethylene	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	8.5	9.3	<8.0	<8.0		8.3	<20.0	9.5

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

Table 9

Analytical Data Summary for MW-2

Constituents	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepona									
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene									
Nickel, total	<4.0	5.7	4.5	4.4	<4.0	<4.0	<4.0	<4.0	<4.0
Nitrobenzene									
N-nitrosodiethylamine									
N-nitrosodimethylamine									
N-nitrosodi-n-butylamine									
N-nitroso-di-n-propylamine									
N-nitrosodiphenylamine									
N-nitrosomethylethylamine									
N-nitrosopiperidine									
N-nitrosopyrrolidine									
O,o,o-triethyl phosphorothioate									
O-toluidine									
Parathion									
P-dimethylaminoazobenzene									
Pentachlorobenzene									
Pentachloronitrobenzene (pcnb)									
Pentachlorophenol									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
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									
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<2	<2	<2	<2	<2	<2	<2
Thionazin									
Tin, total									
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene									
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<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	9.0	25.3	42.3	30.6	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-2

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
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
Mercury, total	<.5				
Methacrylonitrile	<1				
Methapyrilene	<8				
Methoxychlor	<.05				
Methyl iodide	<2	<1	<1	<1	<1
Methyl methacrylate	<1				
Methyl methanesulfonate	<8				
Methyl parathion	<.4				
Methylene chloride	<5	<5	<5	<5	<5
Naphthalene	<8				
Nickel, total	4.6	<4.0	<4.0	<4.0	4.9
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				
Pronamide	<8				
Propionitrile	<10				
Pyrene	<8				
Safrole	<8				
Selenium, total	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					
Styrene	<1	<1	<1	<1	<1
Sulfide, total	<.1				
Tetrachloroethylene	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2
Thionazin	<.4				
Tin, total	<20				
Toluene	<1	<1	<1	<1	<1
Toxaphene	<.2				
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20
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	<20.0

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

Table 9

Analytical Data Summary for MW-3

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017	4/23/2018
(3 4)-methylphenol	ug/L								
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L								
1,2,3-trichloropropane	ug/L	<1	<1	<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	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<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	<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 (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L								
2-chlorophenol	ug/L								
2-hexanone (mbk)	ug/L	<5	<5	<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 (mibk)	ug/L	<5	<5	<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	<10	<10
Acetonitrile	ug/L								
Acetophenone	ug/L								
Acrolein	ug/L								
Acrylonitrile	ug/L	<5	<5	<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 9

Analytical Data Summary for MW-3

Constituents	7/5/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
(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-dichloroethylene		<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene		<1	<1	<1	<1	<1	<1	<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	<5	<5	<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		<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 (mek)		<5	<5	<5	<5	<5	<5	<5	<10
2-chloronaphthalene		<8		<8					
2-chlorophenol		<8		<8					
2-hexanone (mbk)		<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 (mibk)		<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 9

Analytical Data Summary for MW-3

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
(3 4)-methylphenol					<δ
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-dichloroethylene	<1	<1	<1	<1	<1
1,1-dichloropropene					<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					<δ
1,2,4-trichlorobenzene					<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<1
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					<δ
1,3,5-trinitrobenzene					<δ
1,3-dichlorobenzene					<1
1,3-dichloropropane					<1
1,3-dinitrobenzene					<δ
1,4-dichlorobenzene	<1	<1	<1	<1	<1
1,4-naphthoquinone					<δ
1,4-phenylenediamine					<δ
1-naphthylamine					<δ
2,2-dichloropropane					<1
2,3,4,6-tetrachlorophenol					<δ
2,4,5-t					<δ
2,4,5-tp (silvex)					<δ
2,4,5-trichlorophenol					<δ
2,4,6-trichlorophenol					<δ
2,4-d					<δ
2,4-dichlorophenol					<δ
2,4-dimethylphenol					<δ
2,4-dinitrophenol					<δ
2,4-dinitrotoluene					<δ
2,6-dichlorophenol					<δ
2,6-dinitrotoluene					<δ
2-acetylaminofluorene					<δ
2-butanone (mek)	<10	<10	<10	<10	<δ
2-chloronaphthalene					<δ
2-chlorophenol					<δ
2-hexanone (mbk)	<5	<5	<5	<5	<δ
2-methylnaphthalene					<δ
2-methylphenol					<δ
2-naphthylamine					<δ
2-nitroaniline					<δ
2-nitrophenol					<δ
3,3'-dichlorobenzidine					<δ
3,3'-dimethylbenzidine					<δ
3-methylcholanthrene					<δ
3-nitroaniline					<δ
4,4'-ddd					<δ
4,4'-dde					<δ
4,4'-ddt					<δ
4,6-dinitro-2-methylphenol					<δ
4-aminobiphenyl					<δ
4-bromophenyl phenyl ether					<δ
4-chloro-3-methylphenol					<δ
4-chloroaniline					<δ
4-chlorophenyl phenyl ether					<δ
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<δ
4-nitroaniline					<δ
4-nitrophenol					<δ
5-nitro-o-toluidine					<δ
7,12-dimethylbenz(a)anthracene					<δ
Acenaphthene					<δ
Acenaphthylene					<δ
Acetone	<10	<10	<10	<10	<10
Acetonitrile					<10
Acetophenone					<δ
Acrolein					<10
Acrylonitrile	<5	<5	<5	<5	<δ
Aldrin					<δ
Allyl chloride					<δ
Alpha-bhc					<δ
Anthracene					<δ

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

Table 9

Analytical Data Summary for MW-3

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017	4/23/2018
Antimony, total	ug/L	<2	<2	<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	<4	<4
Azobenzene	ug/L								
Barium, total	ug/L	94.1	90.2	92.3	37.9	80.9	39.6	94.8	55.7
Benzene	ug/L	<1	<1	<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	<4	<4	<4	<4	<4	<4	<4
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	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L								
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L								
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L								
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L								
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene	ug/L								
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
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	<1	<1
Dibromomethane	ug/L	<1	<1	<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	<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 9

Analytical Data Summary for MW-3

Constituents	7/5/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
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		76.9	68.4	93.3	53.2	99.8	82.1	88.6	69.5
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	<4	<4	<4	<4	<4	<4	<4
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		<6		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	<.1	<.1	<.1	<.1	<.1	<.1	<.1
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-dichloroethylene		<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1
Cis-1,3-dichloropropene		<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1
Cobalt, total		<.8	<.8	<.8	<.4	<.4	<.4	<.4	<.4
Copper, total		<4	<4	<4	<4	<4	<4	<4	<4
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 9

Analytical Data Summary for MW-3

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Antimony, total	<2	<2	<2	<2	<2
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
Azobenzene					<.8
Barium, total	110.0	84.3	104.0	96.4	113.0
Benzene	<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	<4	<4	<4	<.4
Beta-bhc					<.05
Bis (2-chloroethoxy) methane					<.8
Bis(2-chloroethyl) ether					<.8
Bis(2-chloroisopropyl) ether					<.8
Bis(2-ethylhexyl) phthalate					<.8
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	<.8
Carbon disulfide	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1
Chlordane					<.1
Chlorobenzene	<1	<1	<1	<1	<1
Chlorobenzilate					<.8
Chloroethane	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1
Chloroprene					<1
Chromium, total	<8	<8	<8	<8	<.8
Chrysene					<.8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	<2.0	<.4	<.4	<.4	<.4
Copper, total	<4	<4	<4	<4	<.4
Cyanide, total					<.010
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
Diendrin					<.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 9

Analytical Data Summary for MW-3

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017	4/23/2018
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	<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	<1	<1
Methyl methacrylate	ug/L								
Methyl methanesulfonate	ug/L								
Methyl parathion	ug/L								
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L								
Nickel, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	36	5						
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L								
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Thionazin	ug/L								
Tin, total	ug/L								
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L								
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<8.0	14.0	<8.0	<8.0	<8.0	<20.0	<8.0	22.7

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

Table 9

Analytical Data Summary for MW-3

Constituents	7/5/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
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					
Kepona		<8		<8					
Lead, total		<4	<4	<4	<4	<4	<4	<4	<4
Mercury, total		<5		<5					
Methacrylonitrile		<1		<1					
Methapyrilene		<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		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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		<.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					
Tetrachloroethylene		<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total		<4	<2	<2	<2	<2	<2	<2	<2
Thionazin		<.4		<.4					
Tin, total		<20		<20					
Toluene		<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene		<.2		<.2					
Trans-1,2-dichloroethylene		<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
Trichloroethylene		<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	152.0	29.8	20.6	26.3	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-3

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Hexachlorobutadiene					<8
Hexachlorocyclopentadiene					<8
Hexachloroethane					<8
Hexachloropropene					<8
Indeno(1,2,3-cd)pyrene					<8
Isobutanol					<1
Isodrin					<8
Isophorone					<8
Isosafrole					<8
Kepon					<8
Lead, total	<4	<4	<4	<4	<4
Mercury, total					<5
Methacrylonitrile					<1
Methapyrilene					<8
Methoxychlor					<05
Methyl iodide	<1	<1	<1	<1	<2
Methyl methacrylate					<1
Methyl methanesulfonate					<8
Methyl parathion					<4
Methylene chloride	<5	<5	<5	<5	<5
Naphthalene					<8
Nickel, total	<4.0	<4.0	<4.0	<4.0	4.4
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	<4	<4
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					<4
Styrene	<1	<1	<1	<1	<1
Sulfide, total					<1
Tetrachloroethylene	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2
Thionazin					<4
Tin, total					<20
Toluene	<1	<1	<1	<1	<1
Toxaphene					<2
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20
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	<20.0

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

Table 9

Analytical Data Summary for MW-4

Constituents	Units	10/14/2014	1/12/2015	4/13/2015	9/23/2015	4/12/2016	10/11/2016	1/17/2017	4/20/2017
(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-dichloroethylene	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		<1	<1	<1	<1	<1	<1
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 (mek)	ug/L	<5		<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L								<8
2-chlorophenol	ug/L								<8
2-hexanone (mbk)	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 (mibk)	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 9

Analytical Data Summary for MW-4

Constituents	10/12/2017	4/23/2018	7/5/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021
(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-dichloroethylene	<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	<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 (mek)	<5	<5		<5	<5	<5	<5	<5	<5
2-chloronaphthalene		<8							
2-chlorophenol		<8							
2-hexanone (mbk)	<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 (mibk)	<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
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 9

Analytical Data Summary for MW-4

Constituents	10/28/2021	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
(3 4)-methylphenol							
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene							
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene							
1,2,4-trichlorobenzene							
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene							
1,3,5-trinitrobenzene							
1,3-dichlorobenzene							
1,3-dichloropropane							
1,3-dinitrobenzene							
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone							
1,4-phenylenediamine							
1-naphthylamine							
2,2-dichloropropane							
2,3,4,6-tetrachlorophenol							
2,4,5-t							
2,4,5-tp (silvex)							
2,4,5-trichlorophenol							
2,4,6-trichlorophenol							
2,4-d							
2,4-dichlorophenol							
2,4-dimethylphenol							
2,4-dinitrophenol							
2,4-dinitrotoluene							
2,6-dichlorophenol							
2,6-dinitrotoluene							
2-acetylaminofluorene							
2-butanone (mek)	<5	<10	<10	<10	<10	<10	<10
2-chloronaphthalene							
2-chlorophenol							
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene							
2-methylphenol							
2-naphthylamine							
2-nitroaniline							
2-nitrophenol							
3,3'-dichlorobenzidine							
3,3'-dimethylbenzidine							
3-methylcholanthrene							
3-nitroaniline							
4,4'-ddd							
4,4'-dde							
4,4'-ddt							
4,6-dinitro-2-methylphenol							
4-aminobiphenyl							
4-bromophenyl phenyl ether							
4-chloro-3-methylphenol							
4-chloroaniline							
4-chlorophenyl phenyl ether							
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline							
4-nitrophenol							
5-nitro-o-toluidine							
7,12-dimethylbenz(a)anthracene							
Acenaphthene							
Acenaphthylene							
Acetone	<10	<10	<10	<10	<10	<10	<10
Acetonitrile							
Acetophenone							
Acrolein							
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5
Aldrin							
Allyl chloride							
Alpha-bhc							
Anthracene							

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

Table 9

Analytical Data Summary for MW-4

Constituents	Units	10/14/2014	1/12/2015	4/13/2015	9/23/2015	4/12/2016	10/11/2016	1/17/2017	4/20/2017
Antimony, total	ug/L	<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
Azobenzene	ug/L								<.8
Barium, total	ug/L	141.0		103.0	92.5	66.2	77.7		128.0
Benzene	ug/L	<1		<1	<1	<1	<1		<1
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		<4	<4	<4	<4		<4
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								<.6
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								<.8
Cadmium, total	ug/L	<.8		<.8	<.8	<.8	<.8		<.8
Carbon disulfide	ug/L	<1		<1	<1	<1	<1		<1
Carbon tetrachloride	ug/L	<1		<1	<1	<1	<1		<1
Chlordane	ug/L								<.1
Chlorobenzene	ug/L	<1		<1	<1	<1	<1		<1
Chlorobenzilate	ug/L								<.8
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								<1
Chromium, total	ug/L	<8.0		<8.0	<8.0	<8.0	<8.0		9.1
Chrysene	ug/L								<.8
Cis-1,2-dichloroethylene	ug/L	<1		<1	<1	<1	<1		<1
Cis-1,3-dichloropropene	ug/L	<1		<1	<1	<1	<1		<1
Cobalt, total	ug/L	2.1		<.8	<.8	<.8	<.8		3.3
Copper, total	ug/L	6.1		<4.0	<4.0	<4.0	<4.0		5.5
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
Dibromomethane	ug/L	<1		<1	<1	<1	<1		<1
Dichlorodifluoromethane	ug/L								<1
Dieldrin	ug/L								<.05
Diethyl phthalate	ug/L								<.8
Dimethoate	ug/L								<.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
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
Famphur	ug/L								<.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 9

Analytical Data Summary for MW-4

Constituents	10/12/2017	4/23/2018	7/5/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021
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	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene		<8							
Barium, total	83.8	116.0		111.0	71.2	137.0	65.3	75.2	49.6
Benzene	<1	<1		<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	<4		<4	<4	<4	<4	<4	<4
Beta-bhc		<.05							
Bis (2-chloroethoxy) methane		<8							
Bis(2-chloroethyl) ether		<8							
Bis(2-chloroisopropyl) ether		<8							
Bis(2-ethylhexyl) phthalate		11	<6	<6	<6	<6	<6	<6	<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	<1		<1	<1	<1	<1	<1	<1
Chlorobenzilate		<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							
Chromium, total	<8.0	<8.0		<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene		<8							
Cis-1,2-dichloroethylene	<1	<1		<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1		<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	2.8	1.4	<.8	2.0	<.4	<.4	<.4	<.4
Copper, total	<4.0	<4.0		<4.0	<4.0	4.3	<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 9

Analytical Data Summary for MW-4

Constituents	10/28/2021	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Antimony, total	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016							
Arochlor 1221							
Arochlor 1232							
Arochlor 1242							
Arochlor 1248							
Arochlor 1254							
Arochlor 1260							
Arsenic, total	<4.0	<4.0	<4.0	4.5	<4.0	<4.0	<4.0
Azobenzene							
Barium, total	73.2	63.6	81.8	162.0	67.4	33.4	76.7
Benzene	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene							
Benzo(a)pyrene							
Benzo(b)fluoranthene							
Benzo(g,h,i)perylene							
Benzo(k)fluoranthene							
Benzyl alcohol							
Beryllium, total	<4	<4	<4	<4	<4	<4	<4
Beta-bhc							
Bis (2-chloroethoxy) methane							
Bis(2-chloroethyl) ether							
Bis(2-chloroisopropyl) ether							
Bis(2-ethylhexyl) phthalate							
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate							
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1
Chlordane							
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate							
Chloroethane	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1
Chloroprene							
Chromium, total	<8.0	<8.0	<8.0	8.3	<8.0	<8.0	<8.0
Chrysene							
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.4	<.4	<2.0	3.5	<.4	<.4	<.4
Copper, total	<4.0	<4.0	<4.0	9.1	<4.0	<4.0	<4.0
Cyanide, total							
Delta-bhc							
Diallate							
Dibenzo(a,h)anthracene							
Dibenzofuran							
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane							
Diadrin							
Diethyl phthalate							
Dimethoate							
Dimethylphthalate							
Di-n-butyl phthalate							
Di-n-octyl phthalate							
Dinoseb							
Diphenylamine							
Disulfoton							
Endosulfan i							
Endosulfan ii							
Endosulfan sulfate							
Endrin							
Endrin aldehyde							
Ethyl methacrylate							
Ethyl methanesulfonate							
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1
Famphur							
Fluoranthene							
Fluorene							
Gamma-bhc (lindane)							
Heptachlor							
Heptachlor epoxide							
Hexachlorobenzene							

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

Table 9

Analytical Data Summary for MW-4

Constituents	Units	10/14/2014	1/12/2015	4/13/2015	9/23/2015	4/12/2016	10/11/2016	1/17/2017	4/20/2017
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
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
Methyl methacrylate	ug/L								<.1
Methyl methanesulfonate	ug/L								<.8
Methyl parathion	ug/L								<.4
Methylene chloride	ug/L	<5		<5	<5	<5	<5		<.5
Naphthalene	ug/L								<.8
Nickel, total	ug/L	6.2		<4.0	<4.0	<4.0	<4.0		9.5
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
O-toluidine	ug/L								<.8
Parathion	ug/L								<.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								<.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
Silver, total	ug/L	<4		<4	<4	<4	<4		<4
Solids, total suspended	mg/L	69		2					
Styrene	ug/L	<1		<1	<1	<1	<1		<.1
Sulfide, total	mg/L								<.1
Tetrachloroethylene	ug/L	<1		<1	<1	<1	<1		<.1
Thallium, total	ug/L	<4		<4	<4	<4	<4		<4
Thionazin	ug/L								<.4
Tin, total	ug/L								<20
Toluene	ug/L	<1		<1	<1	<1	<1		<.1
Toxaphene	ug/L								<.2
Trans-1,2-dichloroethylene	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
Trichloroethylene	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	40.0	<8.0	12.4	10.3	<8.0	11.9	58.9	57.6

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

Table 9

Analytical Data Summary for MW-4

Constituents	10/12/2017	4/23/2018	7/5/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021
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	<4.0	4.5		4.7	<4.0	6.0	<4.0	<4.0	<4.0
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	<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							
Tetrachloroethylene	<1	<1		<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4		<4	<2	<2	<2	<2	<2
Thionazin		<.4							
Tin, total		<20							
Toluene	<1	<1		<1	<1	<1	<1	<1	<1
Toxaphene		<.2							
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<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	159.0		237.0	<20.0	130.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-4

Constituents	10/28/2021	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Hexachlorobutadiene							
Hexachlorocyclopentadiene							
Hexachloroethane							
Hexachloropropene							
Indeno(1,2,3-cd)pyrene							
Isobutanol							
Isodrin							
Isophorone							
Isosafrole							
Kepona							
Lead, total	<4.0	<4.0	<4.0	7.6	<4.0	<4.0	<4.0
Mercury, total							
Methacrylonitrile							
Methapyrilene							
Methoxychlor							
Methyl iodide	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate							
Methyl methanesulfonate							
Methyl parathion							
Methylene chloride	<5	<5	<5	<5	<5	<5	<5
Naphthalene							
Nickel, total	<4.0	<4.0	<4.0	9.8	<4.0	<4.0	<4.0
Nitrobenzene							
N-nitrosodiethylamine							
N-nitrosodimethylamine							
N-nitrosodi-n-butylamine							
N-nitroso-di-n-propylamine							
N-nitrosodiphenylamine							
N-nitrosomethylethylamine							
N-nitrosopiperidine							
N-nitrosopyrrolidine							
O,o,o-triethyl phosphorothioate							
O-toluidine							
Parathion							
P-dimethylaminoazobenzene							
Pentachlorobenzene							
Pentachloronitrobenzene (pcnb)							
Pentachlorophenol							
Phenacetin							
Phenanthrene							
Phenol							
Phorate							
Pronamide							
Propionitrile							
Pyrene							
Safrole							
Selenium, total	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended							
Styrene	<1	<1	<1	<1	<1	<1	<1
Sulfide, total							
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2	<2
Thionazin							
Tin, total							
Toluene	<1	<1	<1	<1	<1	<1	<1
Toxaphene							
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<20.0	<20.0	216.0	627.0	<20.0	<20.0	70.9

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

Table 9

Analytical Data Summary for MW-5

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	11/24/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017
(3 4)-methylphenol	ug/L					<8	<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-dichloroethylene	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1-dichloropropene	ug/L					<1	<1		
1,2,3-trichloropropane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L					<8	<8		
1,2,4-trichlorobenzene	ug/L					<1	<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	<8		
1,3,5-trinitrobenzene	ug/L					<8	<8		
1,3-dichlorobenzene	ug/L					<1	<1		
1,3-dichloropropane	ug/L					<1	<1		
1,3-dinitrobenzene	ug/L					<8	<8		
1,4-dichlorobenzene	ug/L	<1	<1	<1		<1	<1	<1	<1
1,4-naphthoquinone	ug/L					<8	<8		
1,4-phenylenediamine	ug/L					<8	<8		
1-naphthylamine	ug/L					<8	<8		
2,2-dichloropropane	ug/L					<1	<1		
2,3,4,6-tetrachlorophenol	ug/L					<8	<8		
2,4,5-t	ug/L					<5	<5		
2,4,5-tp (silvex)	ug/L					<5	<5		
2,4,5-trichlorophenol	ug/L					<8	<8		
2,4,6-trichlorophenol	ug/L					<8	<8		
2,4-d	ug/L					<2	<2		
2,4-dichlorophenol	ug/L					<8	<8		
2,4-dimethylphenol	ug/L					<8	<8		
2,4-dinitrophenol	ug/L					<8	<8		
2,4-dinitrotoluene	ug/L					<8	<8		
2,6-dichlorophenol	ug/L					<8	<8		
2,6-dinitrotoluene	ug/L					<8	<8		
2-acetylaminofluorene	ug/L					<8	<8		
2-butanone (mek)	ug/L	<5	<5	<5		<5	<5	<5	<5
2-chloronaphthalene	ug/L					<8	<8		
2-chlorophenol	ug/L					<8	<8		
2-hexanone (mbk)	ug/L	<5	<5	<5		<5	<5	<5	<5
2-methylnaphthalene	ug/L					<8	<8		
2-methylphenol	ug/L					<8	<8		
2-naphthylamine	ug/L					<8	<8		
2-nitroaniline	ug/L					<8	<8		
2-nitrophenol	ug/L					<8	<8		
3,3'-dichlorobenzidine	ug/L					<8	<8		
3,3'-dimethylbenzidine	ug/L					<8	<8		
3-methylcholanthrene	ug/L					<8	<8		
3-nitroaniline	ug/L					<8	<8		
4,4'-ddd	ug/L					<.05	<.05		
4,4'-dde	ug/L					<.05	<.05		
4,4'-ddt	ug/L					<.05	<.05		
4,6-dinitro-2-methylphenol	ug/L					<8	<8		
4-aminobiphenyl	ug/L					<8	<8		
4-bromophenyl phenyl ether	ug/L					<8	<8		
4-chloro-3-methylphenol	ug/L					<8	<8		
4-chloroaniline	ug/L					<8	<8		
4-chlorophenyl phenyl ether	ug/L					<8	<8		
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5		<5	<5	<5	<5
4-nitroaniline	ug/L					<8	<8		
4-nitrophenol	ug/L					<8	<8		
5-nitro-o-toluidine	ug/L					<8	<8		
7,12-dimethylbenz(a)anthracene	ug/L					<8	<8		
Acenaphthene	ug/L					<8	<8		
Acenaphthylene	ug/L					<8	<8		
Acetone	ug/L	<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	12.2
Acetonitrile	ug/L					<10	<10		
Acetophenone	ug/L					<8	<8		
Acrolein	ug/L					<10	<10		
Acrylonitrile	ug/L	<5	<5	<5		<5	<5	<5	<5
Aldrin	ug/L					<.05	<.05		
Allyl chloride	ug/L					<1	<1		
Alpha-bhc	ug/L					<.05	<.05		
Anthracene	ug/L					<8	<8		

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

Table 9

Analytical Data Summary for MW-5

Constituents	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
(3 4)-methylphenol									
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-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene									
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene									
1,2,4-trichlorobenzene									
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
1,2-dinitrobenzene									
1,3,5-trinitrobenzene									
1,3-dichlorobenzene									
1,3-dichloropropane									
1,3-dinitrobenzene									
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone									
1,4-phenylenediamine									
1-naphthylamine									
2,2-dichloropropane									
2,3,4,6-tetrachlorophenol									
2,4,5-t									
2,4,5-tp (silvex)									
2,4,5-trichlorophenol									
2,4,6-trichlorophenol									
2,4-d									
2,4-dichlorophenol									
2,4-dimethylphenol									
2,4-dinitrophenol									
2,4-dinitrotoluene									
2,6-dichlorophenol									
2,6-dinitrotoluene									
2-acetylaminofluorene									
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<10
2-chloronaphthalene									
2-chlorophenol									
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene									
2-methylphenol									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3'-dichlorobenzidine									
3,3'-dimethylbenzidine									
3-methylcholanthrene									
3-nitroaniline									
4,4'-ddd									
4,4'-dde									
4,4'-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz(a)anthracene									
Acenaphthene									
Acenaphthylene									
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin									
Allyl chloride									
Alpha-bhc									
Anthracene									

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

Table 9

Analytical Data Summary for MW-5

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
(3 4)-methylphenol					
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-dichloroethylene	<1	<1	<1	<1	<1
1,1-dichloropropene					
1,2,3-trichloropropane	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					
1,2,4-trichlorobenzene					
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<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					
1,3,5-trinitrobenzene					
1,3-dichlorobenzene					
1,3-dichloropropane					
1,3-dinitrobenzene					
1,4-dichlorobenzene	<1	<1	<1	<1	<1
1,4-naphthoquinone					
1,4-phenylenediamine					
1-naphthylamine					
2,2-dichloropropane					
2,3,4,6-tetrachlorophenol					
2,4,5-t					
2,4,5-tp (silvex)					
2,4,5-trichlorophenol					
2,4,6-trichlorophenol					
2,4-d					
2,4-dichlorophenol					
2,4-dimethylphenol					
2,4-dinitrophenol					
2,4-dinitrotoluene					
2,6-dichlorophenol					
2,6-dinitrotoluene					
2-acetylaminofluorene					
2-butanone (mek)	<10	<10	<10	<10	<10
2-chloronaphthalene					
2-chlorophenol					
2-hexanone (mbk)	<5	<5	<5	<5	<5
2-methylnaphthalene					
2-methylphenol					
2-naphthylamine					
2-nitroaniline					
2-nitrophenol					
3,3'-dichlorobenzidine					
3,3'-dimethylbenzidine					
3-methylcholanthrene					
3-nitroaniline					
4,4'-ddd					
4,4'-dde					
4,4'-ddt					
4,6-dinitro-2-methylphenol					
4-aminobiphenyl					
4-bromophenyl phenyl ether					
4-chloro-3-methylphenol					
4-chloroaniline					
4-chlorophenyl phenyl ether					
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5
4-nitroaniline					
4-nitrophenol					
5-nitro-o-toluidine					
7,12-dimethylbenz(a)anthracene					
Acenaphthene					
Acenaphthylene					
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile					
Acetophenone					
Acrolein					
Acrylonitrile	<5	<5	<5	<5	<5
Aldrin					
Allyl chloride					
Alpha-bhc					
Anthracene					

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

Table 9

Analytical Data Summary for MW-5

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	11/24/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017
Antimony, total	ug/L	<2	<2	<2		<2	<2	<2	<2
Arochlor 1016	ug/L					<.1	<.1		
Arochlor 1221	ug/L					<.2	<.2		
Arochlor 1232	ug/L					<.2	<.2		
Arochlor 1242	ug/L					<.2	<.2		
Arochlor 1248	ug/L					<.2	<.2		
Arochlor 1254	ug/L					<.1	<.1		
Arochlor 1260	ug/L					<.1	<.1		
Arsenic, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Azobenzene	ug/L					<8	<8		
Barium, total	ug/L	251.0	272.0	330.0	328.0	167.0	262.0	338.0	276.0
Benzene	ug/L	<1	<1	<1		<1	<1	<1	<1
Benzo(a)anthracene	ug/L					<8	<8		
Benzo(a)pyrene	ug/L					<8	<8		
Benzo(b)fluoranthene	ug/L					<8	<8		
Benzo(g,h,i)perylene	ug/L					<8	<8		
Benzo(k)fluoranthene	ug/L					<8	<8		
Benzyl alcohol	ug/L					<8	<8		
Beryllium, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Beta-bhc	ug/L					<.05	<.05		
Bis (2-chloroethoxy) methane	ug/L					<8	<8		
Bis(2-chloroethyl) ether	ug/L					<8	<8		
Bis(2-chloroisopropyl) ether	ug/L					<8	<8		
Bis(2-ethylhexyl) phthalate	ug/L					<8	<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	<8		
Cadmium, total	ug/L	<.8	<.8	<.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	<.1		
Chlorobenzene	ug/L	<1	<1	<1		<1	<1	<1	<1
Chlorobenzilate	ug/L					<8	<8		
Chloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1		<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Chloroprene	ug/L					<1	<1		
Chromium, total	ug/L	<8	<8	<8		<8	<8	<8	<8
Chrysene	ug/L					<8	<8		
Cis-1,2-dichloroethylene	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	<.8	<.8	<.8		<.8	<.8	<.8	<.8
Copper, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Cyanide, total	mg/L					<.005	<.005		
Delta-bhc	ug/L					<.05	<.05		
Diallate	ug/L					<8	<8		
Dibenzo(a,h)anthracene	ug/L					<8	<8		
Dibenzofuran	ug/L					<8	<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	<1		
Dieldrin	ug/L					<.05	<.05		
Diethyl phthalate	ug/L					<8	<8		
Dimethoate	ug/L					<.4	<.4		
Dimethylphthalate	ug/L					<8	<8		
Di-n-butyl phthalate	ug/L					<8	<8		
Di-n-octyl phthalate	ug/L					<8	<8		
Dinoseb	ug/L					<.5	<.5		
Diphenylamine	ug/L					<8	<8		
Disulfoton	ug/L					<.4	<.4		
Endosulfan i	ug/L					<.05	<.05		
Endosulfan ii	ug/L					<.05	<.05		
Endosulfan sulfate	ug/L					<.05	<.05		
Endrin	ug/L					<.05	<.05		
Endrin aldehyde	ug/L					<.05	<.05		
Ethyl methacrylate	ug/L					<10	<10		
Ethyl methanesulfonate	ug/L					<8	<8		
Ethylbenzene	ug/L	<1	<1	<1		<1	<1	<1	<1
Famphur	ug/L					<.4	<.4		
Fluoranthene	ug/L					<8	<8		
Fluorene	ug/L					<8	<8		
Gamma-bhc (lindane)	ug/L					<.05	<.05		
Heptachlor	ug/L					<.05	<.05		
Heptachlor epoxide	ug/L					<.05	<.05		
Hexachlorobenzene	ug/L					<.05	<.05		

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

Table 9

Analytical Data Summary for MW-5

Constituents	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016									
Arochlor 1221									
Arochlor 1232									
Arochlor 1242									
Arochlor 1248									
Arochlor 1254									
Arochlor 1260									
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Azobenzene									
Barium, total	206.0	212.0	193.0	296.0	268.0	268.0	71.8	175.0	180.0
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Benzyl alcohol									
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc									
Bis (2-chloroethoxy) methane									
Bis(2-chloroethyl) ether									
Bis(2-chloroisopropyl) ether									
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
Butyl benzyl phthalate									
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									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate									
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
Chloroprene									
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene									
Cis-1,2-dichloroethylene	<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	3.4	.6	<.4	<.4	.4
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total									
Delta-bhc									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethylphthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur									
Fluoranthene									
Fluorene									
Gamma-bhc (lindane)									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									

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

Table 9

Analytical Data Summary for MW-5

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Antimony, total	<2	<2	<2	<2	<2
Arochlor 1016					
Arochlor 1221					
Arochlor 1232					
Arochlor 1242					
Arochlor 1248					
Arochlor 1254					
Arochlor 1260					
Arsenic, total	<4	<4	<4	<4	4
Azobenzene					
Barium, total	250.0	206.0	202.0	71.7	287.0
Benzene	<1	<1	<1	<1	<1
Benzo(a)anthracene					
Benzo(a)pyrene					
Benzo(b)fluoranthene					
Benzo(g,h,i)perylene					
Benzo(k)fluoranthene					
Benzyl alcohol					
Beryllium, total	<4	<4	<4	<4	<4
Beta-bhc					
Bis (2-chloroethoxy) methane					
Bis(2-chloroethyl) ether					
Bis(2-chloroisopropyl) ether					
Bis(2-ethylhexyl) phthalate					
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					
Cadmium, total	<.8	1.1	<.8	<.8	1.1
Carbon disulfide	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1
Chlordane					
Chlorobenzene	<1	<1	<1	<1	<1
Chlorobenzilate					
Chloroethane	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1
Chloroprene					
Chromium, total	<8	<8	<8	<8	<8
Chrysene					
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	<2.0	2.7	<.4	<.4	3.5
Copper, total	<4.0	9.6	<4.0	<4.0	12.6
Cyanide, total					
Delta-bhc					
Diallate					
Dibenzo(a,h)anthracene					
Dibenzofuran					
Dibromochloromethane	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1
Dichlorodifluoromethane					
Dieldrin					
Diethyl phthalate					
Dimethoate					
Dimethylphthalate					
Di-n-butyl phthalate					
Di-n-octyl phthalate					
Dinoseb					
Diphenylamine					
Disulfoton					
Endosulfan i					
Endosulfan ii					
Endosulfan sulfate					
Endrin					
Endrin aldehyde					
Ethyl methacrylate					
Ethyl methanesulfonate					
Ethylbenzene	<1	<1	<1	<1	<1
Famphur					
Fluoranthene					
Fluorene					
Gamma-bhc (lindane)					
Heptachlor					
Heptachlor epoxide					
Hexachlorobenzene					

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

Table 9

Analytical Data Summary for MW-5

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	11/24/2015	4/12/2016	10/11/2016	4/20/2017	10/12/2017
Hexachlorobutadiene	ug/L					<8	<8		
Hexachlorocyclopentadiene	ug/L					<8	<8		
Hexachloroethane	ug/L					<8	<8		
Hexachloropropene	ug/L					<8	<8		
Indeno(1,2,3-cd)pyrene	ug/L					<8	<8		
Isobutanol	mg/L					<1	<1		
Isodrin	ug/L					<8	<8		
Isophorone	ug/L					<8	<8		
Isosafrole	ug/L					<8	<8		
Kepone	ug/L					<8	<8		
Lead, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Mercury, total	ug/L					<5	<5		
Methacrylonitrile	ug/L					<1	<1		
Methapyrilene	ug/L					<8	<8		
Methoxychlor	ug/L					<.05	<.05		
Methyl iodide	ug/L	<1	<1	<1		<1	<1	<1	<1
Methyl methacrylate	ug/L					<1	<1		
Methyl methanesulfonate	ug/L					<8	<8		
Methyl parathion	ug/L					<4	<4		
Methylene chloride	ug/L	<5	<5	<5		<5	<5	<5	<5
Naphthalene	ug/L					<8	<8		
Nickel, total	ug/L	5.9	6.3	5.7		<4.0	<4.0	<4.0	<4.0
Nitrobenzene	ug/L					<8	<8		
N-nitrosodiethylamine	ug/L					<8	<8		
N-nitrosodimethylamine	ug/L					<8	<8		
N-nitrosodi-n-butylamine	ug/L					<8	<8		
N-nitroso-di-n-propylamine	ug/L					<8	<8		
N-nitrosodiphenylamine	ug/L					<8	<8		
N-nitrosomethylethylamine	ug/L					<8	<8		
N-nitrosopiperidine	ug/L					<8	<8		
N-nitrosopyrrolidine	ug/L					<8	<8		
O,o,o-triethyl phosphorothioate	ug/L					<4	<4		
O-toluidine	ug/L					<8	<8		
Parathion	ug/L					<4	<4		
P-dimethylaminoazobenzene	ug/L					<8	<8		
Pentachlorobenzene	ug/L					<8	<8		
Pentachloronitrobenzene (pcnb)	ug/L					<8	<8		
Pentachlorophenol	ug/L					<8	<8		
Phenacetin	ug/L					<8	<8		
Phenanthrene	ug/L					<8	<8		
Phenol	ug/L					<8	<8		
Phorate	ug/L					<4	<4		
Pronamide	ug/L					<8	<8		
Propionitrile	ug/L					<40	<10		
Pyrene	ug/L					<8	<8		
Safrole	ug/L					<8	<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	5	2						
Styrene	ug/L	<1	<1	<1		<1	<1	<1	<1
Sulfide, total	mg/L					<1	<1		
Tetrachloroethylene	ug/L	<1	<1	<1		<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Thionazin	ug/L					<4	<4		
Tin, total	ug/L					<20	<20		
Toluene	ug/L	<1	<1	<1		<1	<1	<1	<1
Toxaphene	ug/L					<2	<2		
Trans-1,2-dichloroethylene	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
Trichloroethylene	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	24.7	<8.0	<8.0		<8.0	<8.0	16.5	<8.0

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

Table 9

Analytical Data Summary for MW-5

Constituents	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene									
Nickel, total	<4.0	<4.0	<4.0	<4.0	6.8	6.6	<4.0	<4.0	<4.0
Nitrobenzene									
N-nitrosodiethylamine									
N-nitrosodimethylamine									
N-nitrosodi-n-butylamine									
N-nitroso-di-n-propylamine									
N-nitrosodiphenylamine									
N-nitrosomethylethylamine									
N-nitrosopiperidine									
N-nitrosopyrrolidine									
O,o,o-triethyl phosphorothioate									
O-toluidine									
Parathion									
P-dimethylaminoazobenzene									
Pentachlorobenzene									
Pentachloronitrobenzene (pcnb)									
Pentachlorophenol									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
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									
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<2	<2	<2	<2	<2	<2	<2
Thionazin									
Tin, total									
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene									
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<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	15.2	20.3	<20.0	83.1	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-5

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Hexachlorobutadiene					
Hexachlorocyclopentadiene					
Hexachloroethane					
Hexachloropropene					
Indeno(1,2,3-cd)pyrene					
Isobutanol					
Isodrin					
Isophorone					
Isosafrole					
Kepone					
Lead, total	<4.0	6.2	<4.0	<4.0	11.9
Mercury, total					
Methacrylonitrile					
Methapyrilene					
Methoxychlor					
Methyl iodide	<1	<1	<1	<1	<1
Methyl methacrylate					
Methyl methanesulfonate					
Methyl parathion					
Methylene chloride	<5	<5	<5	<5	<5
Naphthalene					
Nickel, total	5.4	13.1	<4.0	<4.0	16.3
Nitrobenzene					
N-nitrosodiethylamine					
N-nitrosodimethylamine					
N-nitrosodi-n-butylamine					
N-nitroso-di-n-propylamine					
N-nitrosodiphenylamine					
N-nitrosomethylethylamine					
N-nitrosopiperidine					
N-nitrosopyrrolidine					
O,o,o-triethyl phosphorothioate					
O-toluidine					
Parathion					
P-dimethylaminoazobenzene					
Pentachlorobenzene					
Pentachloronitrobenzene (pcnb)					
Pentachlorophenol					
Phenacetin					
Phenanthrene					
Phenol					
Phorate					
Pronamide					
Propionitrile					
Pyrene					
Safrole					
Selenium, total	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					
Styrene	<1	<1	<1	<1	<1
Sulfide, total					
Tetrachloroethylene	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2
Thionazin					
Tin, total					
Toluene	<1	<1	<1	<1	<1
Toxaphene					
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20
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	411.0	<20.0	<20.0	1080.0

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

Table 9

Analytical Data Summary for MW-6

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	11/24/2015	4/12/2016	10/11/2016	1/17/2017	4/20/2017
(3 4)-methylphenol	ug/L								<8
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-dichloroethylene	ug/L	<1	<1	<1		<1	<1		<1
1,1-dichloropropene	ug/L								<1
1,2,3-trichloropropane	ug/L	<1	<1	<1		<1	<1		<1
1,2,4,5-tetrachlorobenzene	ug/L								<8
1,2,4-trichlorobenzene	ug/L								<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1		<1	<1		<1
1,2-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								<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	<1	<1		<1	<1		<1
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 (mek)	ug/L	<5	<5	<5		<5	<5		<5
2-chloronaphthalene	ug/L								<8
2-chlorophenol	ug/L								<8
2-hexanone (mbk)	ug/L	<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 (mibk)	ug/L	<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
Acetonitrile	ug/L								<10
Acetophenone	ug/L								<8
Acrolein	ug/L								<10
Acrylonitrile	ug/L	<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 9

Analytical Data Summary for MW-6

Constituents	10/12/2017	4/23/2018	7/5/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021
(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-dichloroethylene	<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	<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 (mek)	<5	<5		<5	<5	<5	<5	<5	<5
2-chloronaphthalene		<8							
2-chlorophenol		<8							
2-hexanone (mbk)	<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 (mibk)	<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
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 9

Analytical Data Summary for MW-6

Constituents	10/28/2021	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
(3 4)-methylphenol				<δ			
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene				<1			
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene				<δ			
1,2,4-trichlorobenzene				<1			
1,2-dibromo-3-chloropropane	<5	<5	<5	<1	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene				<δ			
1,3,5-trinitrobenzene				<δ			
1,3-dichlorobenzene				<1			
1,3-dichloropropane				<1			
1,3-dinitrobenzene				<δ			
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone				<δ			
1,4-phenylenediamine				<δ			
1-naphthylamine				<δ			
2,2-dichloropropane				<1			
2,3,4,6-tetrachlorophenol				<δ			
2,4,5-t				<5			
2,4,5-tp (silvex)				<5			
2,4,5-trichlorophenol				<δ			
2,4,6-trichlorophenol				<δ			
2,4-d				<1			
2,4-dichlorophenol				<δ			
2,4-dimethylphenol				<δ			
2,4-dinitrophenol				<δ			
2,4-dinitrotoluene				<δ			
2,6-dichlorophenol				<δ			
2,6-dinitrotoluene				<δ			
2-acetylaminofluorene				<δ			
2-butanone (mek)	<5	<10	<10	<δ	<10	<10	<10
2-chloronaphthalene				<δ			
2-chlorophenol				<δ			
2-hexanone (mbk)	<5	<5	<5	<δ	<5	<5	<5
2-methylnaphthalene				<δ			
2-methylphenol				<δ			
2-naphthylamine				<δ			
2-nitroaniline				<δ			
2-nitrophenol				<δ			
3,3'-dichlorobenzidine				<δ			
3,3'-dimethylbenzidine				<δ			
3-methylcholanthrene				<δ			
3-nitroaniline				<δ			
4,4'-ddd				<5			
4,4'-dde				<5			
4,4'-ddt				<5			
4,6-dinitro-2-methylphenol				<δ			
4-aminobiphenyl				<δ			
4-bromophenyl phenyl ether				<δ			
4-chloro-3-methylphenol				<δ			
4-chloroaniline				<δ			
4-chlorophenyl phenyl ether				<δ			
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline				<δ			
4-nitrophenol				<δ			
5-nitro-o-toluidine				<δ			
7,12-dimethylbenz(a)anthracene				<δ			
Acenaphthene				<δ			
Acenaphthylene				<δ			
Acetone	<10	<10	<10	<10	<10	<10	<10
Acetonitrile				<10			
Acetophenone				<δ			
Acrolein				<10			
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5
Aldrin				<5			
Allyl chloride				<1			
Alpha-bhc				<5			
Anthracene				<δ			

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

Table 9

Analytical Data Summary for MW-6

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	11/24/2015	4/12/2016	10/11/2016	1/17/2017	4/20/2017
Antimony, total	ug/L	<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	4.2	<4.0	<4.0	<4.0		<4.0
Azobenzene	ug/L								<.8
Barium, total	ug/L	35.7	37.2	25.7		24.5	28.8		36.5
Benzene	ug/L	<1	<1	<1		<1	<1		<1
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	<4	<4		<4	<4		<4
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								<.6
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								<.8
Cadmium, total	ug/L	<.8	<.8	<.8		<.8	<.8		<.8
Carbon disulfide	ug/L	<1	<1	<1		<1	<1		<1
Carbon tetrachloride	ug/L	<1	<1	<1		<1	<1		<1
Chlordane	ug/L								<.1
Chlorobenzene	ug/L	<1	<1	<1		<1	<1		<1
Chlorobenzilate	ug/L								<.8
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								<1
Chromium, total	ug/L	<.8	<.8	<.8		<.8	<.8		<.8
Chrysene	ug/L								<.8
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1		<1	<1		<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1		<1	<1		<1
Cobalt, total	ug/L	1.1	.8	.8		2.3	1.1	6.3	2.0
Copper, total	ug/L	<4	<4	<4		<4	<4		<4
Cyanide, total	mg/L								.009
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
Dibromomethane	ug/L	<1	<1	<1		<1	<1		<1
Dichlorodifluoromethane	ug/L								<1
Dieldrin	ug/L								<.05
Diethyl phthalate	ug/L								<.8
Dimethoate	ug/L								<.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
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
Famphur	ug/L								<.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 9

Analytical Data Summary for MW-6

Constituents	10/12/2017	4/23/2018	7/5/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021
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	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene		<8							
Barium, total	22.5	23.9		25.2	43.2	28.1	22.8	28.3	18.2
Benzene	<1	<1		<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	<4		<4	<4	<4	<4	<4	<4
Beta-bhc		<.05							
Bis (2-chloroethoxy) methane		<8							
Bis(2-chloroethyl) ether		<8							
Bis(2-chloroisopropyl) ether		<8							
Bis(2-ethylhexyl) phthalate		6	8	<6	<6	10	<6	<6	<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	<1		<1	<1	<1	<1	<1	<1
Chlorobenzilate		<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							
Chromium, total	<8	<8		<8	<8	<8	<8	<8	<8
Chrysene		<8							
Cis-1,2-dichloroethylene	<1	<1		<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1		<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<.8		<.8	.8	<.8	1.9	1.0	<.4
Copper, total	<4	<4		<4	<4	<4	<4	<4	<4
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 9

Analytical Data Summary for MW-6

Constituents	10/28/2021	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Antimony, total	<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	8.1	5.3	<4.0	<4.0	17.7
Azobenzene				<.8			
Barium, total	23.8	20.7	50.9	24.5	23.0	21.8	74.4
Benzene	<1	<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	<4	<4	<.4	<4	<4	<4
Beta-bhc				<.05			
Bis (2-chloroethoxy) methane				<.8			
Bis(2-chloroethyl) ether				<.8			
Bis(2-chloroisopropyl) ether				<.8			
Bis(2-ethylhexyl) phthalate	<6	<6		.7	<6		
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate				<.8			
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1
Chlordane				<.1			
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate				<.8			
Chloroethane	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1
Chloroprene				<1			
Chromium, total	<8	<8	<8	<.8	<8	<8	<8
Chrysene				<.8			
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	1.0	1.1	4.6	.7	.5	<.4	5.1
Copper, total	<4	<4	<4	<.4	<4	<4	<4
Cyanide, total				<.005			
Delta-bhc				<.05			
Diallate				<.8			
Dibenzo(a,h)anthracene				<.8			
Dibenzofuran				<.8			
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<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
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 9

Analytical Data Summary for MW-6

Constituents	Units	10/14/2014	4/13/2015	9/23/2015	11/24/2015	4/12/2016	10/11/2016	1/17/2017	4/20/2017
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
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
Methyl methacrylate	ug/L								<1
Methyl methanesulfonate	ug/L								<8
Methyl parathion	ug/L								<.4
Methylene chloride	ug/L	<5	<5	<5		<5	<5		<5
Naphthalene	ug/L								<8
Nickel, total	ug/L	7.1	<4.0	<4.0		<4.0	<4.0		<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
O-toluidine	ug/L								<8
Parathion	ug/L								<.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								<.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
Silver, total	ug/L	<4	<4	<4		<4	<4		<4
Solids, total suspended	mg/L	17	46						
Styrene	ug/L	<1	<1	<1		<1	<1		<1
Sulfide, total	mg/L								<.1
Tetrachloroethylene	ug/L	<1	<1	<1		<1	<1		<1
Thallium, total	ug/L	<4	<4	<4		<4	<4		<4
Thionazin	ug/L								<.4
Tin, total	ug/L								<20
Toluene	ug/L	<1	<1	<1		<1	<1		<1
Toxaphene	ug/L								<.2
Trans-1,2-dichloroethylene	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
Trichloroethylene	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	9.4	31.0	<8.0		<8.0	<8.0		<8.0

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

Table 9

Analytical Data Summary for MW-6

Constituents	10/12/2017	4/23/2018	7/5/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021
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	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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	<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							
Tetrachloroethylene	<1	<1		<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4		<4	<2	<2	<2	<2	<2
Thionazin		<.4							
Tin, total		<20							
Toluene	<1	<1		<1	<1	<1	<1	<1	<1
Toxaphene		<.2							
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<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	28.8	10.1		32.0	24.8	22.0	28.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-6

Constituents	10/28/2021	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Hexachlorobutadiene				<8			
Hexachlorocyclopentadiene				<8			
Hexachloroethane				<8			
Hexachloropropene				<8			
Indeno(1,2,3-cd)pyrene				<8			
Isobutanol				<1			
Isodrin				<8			
Isophorone				<8			
Isosafrole				<8			
Kepona				<8			
Lead, total	<4	<4	<4	<4	<4	<4	<4
Mercury, total				<5			
Methacrylonitrile				<1			
Methapyrilene				<8			
Methoxychlor				<05			
Methyl iodide	<1	<1	<1	<2	<1	<1	<1
Methyl methacrylate				<1			
Methyl methanesulfonate				<8			
Methyl parathion				<4			
Methylene chloride	<5	<5	<5	<5	<5	<5	<5
Naphthalene				<8			
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	5.0
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	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended							
Styrene	<1	<1	<1	<1	<1	<1	<1
Sulfide, total				<3			
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2	<2
Thionazin				<4			
Tin, total				<20			
Toluene	<1	<1	<1	<1	<1	<1	<1
Toxaphene				<2			
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0	<20.0	27.4	<20.0	25.4

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

Table 9

Analytical Data Summary for MW-7

Constituents	Units	10/14/2014	4/14/2015	9/23/2015	4/12/2016	10/11/2016	1/17/2017	4/20/2017	10/12/2017
(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-dichloroethylene	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	<1	<1	<1	<1		<1	<1
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 (mek)	ug/L	<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene	ug/L							<8	
2-chlorophenol	ug/L							<8	
2-hexanone (mbk)	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 (mibk)	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 9

Analytical Data Summary for MW-7

Constituents	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
(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-dichloroethylene	<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	<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
1,2-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	<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 (mek)	<.5	<5	<5	<5	<5	<5	<5	<5	<10
2-chloronaphthalene	<.8								
2-chlorophenol	<.8								
2-hexanone (mbk)	<.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 (mibk)	<.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 9

Analytical Data Summary for MW-7

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
(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-dichloroethylene	<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	<1	<5	<5	<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	<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 (mek)	<10	<5	<10	<10	<10
2-chloronaphthalene		<8			
2-chlorophenol		<8			
2-hexanone (mbk)	<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 (mibk)	<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
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 9

Analytical Data Summary for MW-7

Constituents	Units	10/14/2014	4/14/2015	9/23/2015	4/12/2016	10/11/2016	1/17/2017	4/20/2017	10/12/2017
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	53.8	35.2	34.7	22.8	43.9		29.2	26.4
Benzene	ug/L	<1	<1	<1	<1	<1		<1	<1
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	<4	<4	<4	<4		<4	<4
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							<.6	
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		<.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	<1	<1	<1	<1		<1	<1
Chlorobenzilate	ug/L							<.8	
Chloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
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	<.8	<.8	<.8	<.8		<.8	<.8
Chrysene	ug/L							<.8	
Cis-1,2-dichloroethylene	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	1.2	<.8	2.7	<.8	<.8		<.8	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4		<4	<4
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	
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	
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	
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 9

Analytical Data Summary for MW-7

Constituents	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
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	<4	<4	<4	<4	<4	<4	<4	<4
Azobenzene	<8								
Barium, total	17.4	31.3	26.0	34.8	14.5	22.1	19.8	25.0	25.8
Benzene	<1	<1	<1	<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	<4	<4	<4	<4	<4	<4	<4	<4
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	<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	.9	<.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	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	<8								
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
Chloroprene	<1								
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene	<8								
Cis-1,2-dichloroethylene	<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	.5
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
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 9

Analytical Data Summary for MW-7

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Antimony, total	<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
Azobenzene		<8			
Barium, total	31.4	31.3	108.0	19.8	26.0
Benzene	<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	<4	<4	<4	<4
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
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	<.8
Carbon disulfide	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1
Chlordane		<.1			
Chlorobenzene	<1	<1	<1	<1	<1
Chlorobenzilate		<8			
Chloroethane	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1
Chloroprene		<1			
Chromium, total	<8	<8	<8	<8	<8
Chrysene		<8			
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	2.1	<.4	<.4	<.4	<.4
Copper, total	<4	<4	<4	<4	<4
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 9

Analytical Data Summary for MW-7

Constituents	Units	10/14/2014	4/14/2015	9/23/2015	4/12/2016	10/11/2016	1/17/2017	4/20/2017	10/12/2017
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	
Methylene chloride	ug/L	<5	<5	<5	<5	<5		<5	<5
Naphthalene	ug/L							<8	
Nickel, total	ug/L	8.5	<4.0	8.2	<4.0	8.1	12.5	<4.0	<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	
O-toluidine	ug/L							<8	
Parathion	ug/L							<.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							<.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	6	10						
Styrene	ug/L	<1	<1	<1	<1	<1		<1	<1
Sulfide, total	mg/L							<.1	
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Thionazin	ug/L							<.4	
Tin, total	ug/L							<20	
Toluene	ug/L	<1	<1	<1	<1	<1		<1	<1
Toxaphene	ug/L							<.2	
Trans-1,2-dichloroethylene	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
Trichloroethylene	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	<8.0		30.7	<8.0

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

Table 9

Analytical Data Summary for MW-7

Constituents	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021	10/28/2021	4/13/2022
Hexachlorobutadiene	<.8								
Hexachlorocyclopentadiene	<.8								
Hexachloroethane	<.8								
Hexachloropropene	<.8								
Indeno(1,2,3-cd)pyrene	<.8								
Isobutanol	<.1								
Isodrin	<.8								
Isophorone	<.8								
Isosafrole	<.8								
Kepona	<.8								
Lead, total	<.4	<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	<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	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	<4.0	<4.0	4.8
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	<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	<.1								
Tetrachloroethylene	<.1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<.4	<4	<2	<2	<2	<2	<2	<2	<2
Thionazin	<.4								
Tin, total	<20								
Toluene	<.1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	<.2								
Trans-1,2-dichloroethylene	<.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
Trichloroethylene	<.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	41.5	24.4	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-7

Constituents	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
Hexachlorobutadiene		<8			
Hexachlorocyclopentadiene		<8			
Hexachloroethane		<8			
Hexachloropropene		<8			
Indeno(1,2,3-cd)pyrene		<8			
Isobutanol		<1			
Isodrin		<8			
Isophorone		<8			
Isosafrole		<8			
Kepona		<8			
Lead, total	<4	<4	<4	<4	<4
Mercury, total		<.5			
Methacrylonitrile		<1			
Methapyrilene		<8			
Methoxychlor		<.05			
Methyl iodide	<1	<2	<1	<1	<1
Methyl methacrylate		<1			
Methyl methanesulfonate		<8			
Methyl parathion		<.4			
Methylene chloride	<5	<5	<5	<5	<5
Naphthalene		<8			
Nickel, total	10.3	<4.0	<4.0	<4.0	4.0
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	<4
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					
Styrene	<1	<1	<1	<1	<1
Sulfide, total		<.1			
Tetrachloroethylene	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2
Thionazin		<.4			
Tin, total		<20			
Toluene	<1	<1	<1	<1	<1
Toxaphene		<.2			
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20
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	<20.0

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

Table 9

Analytical Data Summary for MW-9

Constituents	Units	10/14/2014	1/12/2015	4/14/2015	7/21/2015	9/22/2015	9/23/2015	4/12/2016	10/11/2016
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-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1		<1	<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
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5		<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5		<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5		<5	<5
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0	<10.0
Acrylonitrile	ug/L	<5	<5	<5	<5	<5		<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2		<2	<2
Arsenic, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Barium, total	ug/L	114.0	115.0	138.0	111.0	114.0		99.2	106.0
Benzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
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
Cadmium, total	ug/L	<.8	<.8	<.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
Chlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8		<8	<8
Cis-1,2-dichloroethylene	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	<.8	<.8	<.8	<.8	<.8		<.8	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1		<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5		<5	<5
Nickel, total	ug/L	<4.0	4.0	<4.0	<4.0	<4.0		<4.0	<4.0
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	7		2					
Styrene	ug/L	<1	<1	<1	<1	<1		<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Toluene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trans-1,2-dichloroethylene	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
Trichloroethylene	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		<20.0	<8.0	<8.0

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

Table 9

Analytical Data Summary for MW-9

Constituents	4/20/2017	10/12/2017	4/23/2018	10/12/2018	4/16/2019	10/17/2019	4/9/2020	10/8/2020	4/15/2021
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-dichloroethylene	<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	<1	<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 (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10.0	11.2	<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	116.0	105.0	110.0	106.0	106.0	113.0	93.9	98.7	93.2
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	1.2	<.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-dichloroethylene	<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	<.8	<.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	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<4	<4	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<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
Trichloroethylene	<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	<20.0	<8.0	<8.0	9.0	<20.0	29.9	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-9

Constituents	10/28/2021	4/13/2022	10/19/2022	4/6/2023	10/10/2023	4/11/2024	10/17/2024
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<10	<10	<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4	<4	<4
Barium, total	91.9	105.0	102.0	96.1	89.8	95.5	137.0
Benzene	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	1.3	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.4	<.4	<2.0	<.4	<.4	<.4	<.4
Copper, total	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5
Nickel, total	4.2	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Selenium, total	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended							
Styrene	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0	21.3	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for SW-1

Constituents	Units	10/14/2014	4/14/2015	9/23/2015	4/12/2016	10/11/2016	1/17/2017	4/20/2017	10/12/2018
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-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1		<1	<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
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
2-butanone (mek)	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0		<5.0	7.7
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5		<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5		<5	<5
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0		15.7	27.2
Acrylonitrile	ug/L	<5	<5	<5	<5	<5		<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2		<2	<2
Arsenic, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	5.5
Barium, total	ug/L	35.5	49.5	32.5	23.9	47.1		43.3	145.0
Benzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
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
Cadmium, total	ug/L	<8	<8	<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
Chlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8		<8	10
Cis-1,2-dichloroethylene	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	<8	<8	<8	<8	3.2	5.5	10.9	16.1
Copper, total	ug/L	<4	<4	<4	<4	<4		<4	5
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1		<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5		<5	<5
Nickel, total	ug/L	4.0	<4.0	<4.0	<4.0	15.2	19.1	13.4	39.5
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	<2	<2	<2	<2	<2		<2	<2
Styrene	ug/L	<1	<1	<1	<1	<1		<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Toluene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trans-1,2-dichloroethylene	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
Trichloroethylene	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	14.1	<8.0	<8.0	<8.0		<20.0	31.2

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

Table 9

Analytical Data Summary for SW-2

Constituents	Units	10/14/2014	4/14/2015
(3,4)-methylphenol	ug/L	<8	
1,1,1,2-tetrachloroethane	ug/L	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1
1,1-dichloroethane	ug/L	<1	<1
1,1-dichloroethylene	ug/L	<1	<1
1,1-dichloropropene	ug/L	<1	
1,2,3-trichloropropane	ug/L	<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
1,2-dibromoethane	ug/L	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1
1,2-dichloroethane	ug/L	<1	<1
1,2-dichloropropane	ug/L	<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	<1
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	<.7	
2,4,5-tp (silvex)	ug/L	<.7	
2,4,5-trichlorophenol	ug/L	<8	
2,4,6-trichlorophenol	ug/L	<8	
2,4-d	ug/L	<2.9	
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 (mek)	ug/L	<5	<5
2-chloronaphthalene	ug/L	<8	
2-chlorophenol	ug/L	<8	
2-hexanone (mbk)	ug/L	<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 (mibk)	ug/L	<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
Acetonitrile	ug/L	<10	
Acetophenone	ug/L	<8	
Acrolein	ug/L	<10	
Acrylonitrile	ug/L	<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 9

Analytical Data Summary for SW-2

Constituents	Units	10/14/2014	4/14/2015
Antimony, total	ug/L	<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
Azobenzene	ug/L	<8	
Barium, total	ug/L	39.8	38.9
Benzene	ug/L	<.1	<.1
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	<.4
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
Bromodichloromethane	ug/L	<.1	<.1
Bromoform	ug/L	<.1	<.1
Bromomethane	ug/L	<.1	<.1
Butyl benzyl phthalate	ug/L	<8	
Cadmium, total	ug/L	<.8	<.8
Carbon disulfide	ug/L	<.1	<.1
Carbon tetrachloride	ug/L	<.1	<.1
Chlordane	ug/L	<.1	<.1
Chlorobenzene	ug/L	<.1	<.1
Chlorobenzilate	ug/L	<8	
Chloroethane	ug/L	<.1	<.1
Chloroform	ug/L	<.1	<.1
Chloromethane	ug/L	<.1	<.1
Chloroprene	ug/L	<.1	
Chromium, total	ug/L	<8	<8
Chrysene	ug/L	<8	
Cis-1,2-dichloroethylene	ug/L	<.1	<.1
Cis-1,3-dichloropropene	ug/L	<.1	<.1
Cobalt, total	ug/L	8.1	3.1
Copper, total	ug/L	<.4	<.4
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
Dibromomethane	ug/L	<.1	<.1
Dichlorodifluoromethane	ug/L	<.1	
Dieldrin	ug/L	<.05	
Diethyl phthalate	ug/L	<8	
Dimethoate	ug/L	<.4	
Dimethylphthalate	ug/L	<8	
Di-n-butyl phthalate	ug/L	<8	
Di-n-octyl phthalate	ug/L	<8	
Dinoseb	ug/L	<.7	
Diphenylamine	ug/L	<8	
Disulfoton	ug/L	<.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
Famphur	ug/L	<.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 9

Analytical Data Summary for SW-2

Constituents	Units	10/14/2014	4/14/2015
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
Mercury, total	ug/L	<.5	
Methacrylonitrile	ug/L	<1	
Methapyrilene	ug/L	<8	
Methoxychlor	ug/L	<.05	
Methyl iodide	ug/L	<1	<1
Methyl methacrylate	ug/L	<1	
Methyl methanesulfonate	ug/L	<8	
Methyl parathion	ug/L	<.4	
Methylene chloride	ug/L	<5	<5
Naphthalene	ug/L	<8	
Nickel, total	ug/L	51.0	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	
O-toluidine	ug/L	<8	
Parathion	ug/L	<.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	.4	<.4
Pronamide	ug/L	<8	
Propionitrile	ug/L	<10	
Pyrene	ug/L	<8	
Safrole	ug/L	<8	
Selenium, total	ug/L	<4	<4
Silver, total	ug/L	<4	<4
Solids, total suspended	mg/L	2	2
Styrene	ug/L	<1	<1
Sulfide, total	mg/L	<.1	<.1
Tetrachloroethylene	ug/L	<1	<1
Thallium, total	ug/L	<4	<4
Thionazin	ug/L	<.4	
Tin, total	ug/L	<20	
Toluene	ug/L	<1	<1
Toxaphene	ug/L	<.2	
Trans-1,2-dichloroethylene	ug/L	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5
Trichloroethylene	ug/L	<1	<1
Trichlorofluoromethane	ug/L	<1	<1
Vanadium, total	ug/L	<20	<20
Vinyl acetate	ug/L	<5	<5
Vinyl chloride	ug/L	<1	<1
Xylenes, total	ug/L	<2	<2
Zinc, total	ug/L	<8	<8

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

Table 10 – Historic SSI and SSL - *Not Required*

Table 11 – Corrective Action Trend Analysis- *Not Required*

Table 12 – Leachate Thickness Summary

Table 12
Leachate Evaluation Report
FMC Sanitary Landfill
Permit No. 66-SDP-01-73P

Leachate head measurements in 2024 are summarized as:

Date/Location	Phase 1	Phase 2	Phase 3
January	< 12"	< 12"	< 12"
February	< 12"	< 12"	< 12"
March	< 12"	< 12"	< 12"
April	< 12"	< 12"	< 12"
May	< 12"	< 12"	< 12"
June	< 12"	< 12"	< 12"
July	< 12"	< 12"	30" ⁽¹⁾
	NR	NR	10" ⁽²⁾
August	< 12"	< 12"	< 12"
September	< 12"	< 12"	< 12"
October	< 12"	< 12"	< 12"
November	< 12"	< 12"	< 12"
December	< 12"	< 12"	< 12"

NR = No Reading

(1) - Measured 7/12/24

(2) - Measured 7/15/24 after leachate collection line in Phase 3 was jetted

Table 13 – Gas Monitoring Summary

Table 13
Explosive Gas Monitoring
Annual Water Quality Report
Floyd Mitchell Chickasaw Counties Sanitary Landfill
Permit No. 66-SDP-01-73P

Reference Location	Jan 2024	4/11/2024	June, 24	10/17/2024
	LEL %	LEL %	LEL %	LEL %
Subsurface Monitoring Points & Regulated Structures				
GP-1 (MW-12)	0	0	0	0
GP-2	0	0	0	0
GP-3	0	0	0	0
GP-4	0	0	0	0
GP-5 (MW-3)	0	0	0	0
Utility conduits/ E Side Scalehouse	0	0	0	0
Scalehouse	0	0	0	0
Scale Pit	0	0	0	0
T&A Building	0	0	0	0
HHW Building	0	0	0	0
BG Building	0	0	0	0
Maintenance Bldg	0	0	0	0
Equipment Building	0	0	0	0
Excluded Structures Pursuant 113.9(2)"a"(1)				
Vent 1 (east)	0	0	0	0
Vent 2	0	0	0	0
Vent 3	0	0	0	0
Vent 4 (west)	0	0	0	28.8
Groundwater Underdrain Monitoring Point - Phase 1	OL	44.6	0	76.1
Groundwater Underdrain Monitoring Point - Phase 2	0	0	0	0
Groundwater Underdrain Monitoring Point - Phase 3	0	61.1	39.6	60.5

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

OL - Over Limit

Appendix A

Field Sampling Forms

**Floyd-Mitchell-Chickasaw Counties Sanitary Landfill
PERMIT # 66-SDP-01-73P**

4/11/2024

Sampled by: Todd Whipple

Weather conditions: Windy, overcast,45-60 degrees

IDNR Form 542-1322

Monitoring Well: MW-2 (dg)

Primary Sampling Method:

No-Purge for Appendix I

Secondary Sampling Method:

Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1180.67
Well Depth	32.85
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	1180.67
Well Depth	32.85
Top Screen	1162.82
Bottom Screen	1147.82
Bottom Well	1147.82
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	27.00
Top sample	1153.67
Bottom sample	1149.67
Turbidity(NTU)	14.18

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	8:53	1.6	1179.07	

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		14.18
Appendix I Metals	150	150		14.18
Appendix I VOC	240	240		14.18
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental Bis	1-Qt			
Supplemental				
Total		400	0	

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

TOC	Well Depth	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
1180.67	32.85	Before purging	4/11/2024	8:53	1.6	1179.07	10	0.5	No
		After purging				1180.67			
		Top of Screen after construction				1162.82			
						17.85			feet above (+) or below (-) top screen
		Bottom of Well after construction				1147.82			
		Bottom of Well	4/11/2024		32.80	1147.87			
						0.05			feet sedimentation
		Before Sample				1180.67			
		Recovery	4/11/2024	9:06	10.30	1170.37			
		Recovery	4/11/2024	15:05	2.44	1178.23			
		Recovery				1180.67			
		Recovery				1180.67			

IDNR Form 542-1322

Monitoring Well: MW-3 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1189.79
Well Depth	22.55
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	1189.79
Well Depth	22.55
Top Screen	1182.24
Bottom Screen	1167.24
Bottom Well	1167.24
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.50
Top sample	1173.29
Bottom sample	1169.29
Turbidity(NTU)	1.86

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	13:21	15.28	1174.51	

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		1.86
Appendix I Metals	150	150		1.86
Appendix I VOC	240	240		1.86
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental	1-Qt			
Supplemental				
Total		400	0	

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

TOC	1189.79	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	22.55	Before purging	4/11/2024	13:21	15.28	1174.51	3	2.5	No
		After purging				1189.79			
		Top of Screen after construction				1182.24			
						7.55			feet above (+) or below (-) top screen
		Bottom of Well after construction				1167.24			
		Bottom of Well	4/11/2024		22.60	1167.19			
						-0.05			feet sedimentation
		Before Sample				1189.79			
		Recovery	4/11/2024	13:31	17.38	1172.41			
		Recovery	4/11/2024	15:47	17.17	1172.62			
		Recovery				1189.79			
		Recovery				1189.79			

IDNR Form 542-1322

Monitoring Well: MW-4 (b)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1209.46
Well Depth	32.38
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	1209.46
Well Depth	32.38
Top Screen	1192.08
Bottom Screen	1177.08
Bottom Well	1177.08
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	27.00
Top sample	1182.46
Bottom sample	1178.46
Turbidity(NTU)	3.08

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	9:40	2.65	1206.81	

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		3.08
Appendix I Metals	150	150		3.08
Appendix I VOC	240	240		3.08
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental BIS	1-Qt			
Supplemental				
Total		400	0	

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

TOC	1209.46	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.38	Before purging	4/11/2024	9:40	2.65	1206.81	5	0.3	No
		After purging				1209.46			
		Top of Screen after construction				1192.08			
						17.38			feet above (+) or below (-) top screen
		Bottom of Well after construction				1177.08			
		Bottom of Well	4/11/2024		32.80	1176.66			
						-0.42			feet sedimentation
		Before Sample				1209.46			
		Recovery	4/11/2024	9:51	5.6	1203.86			
		Recovery	4/11/2024	15:37	2.60	1206.86			
		Recovery				1209.46			
		Recovery				1209.46			

IDNR Form 542-1322

Monitoring Well: MW-5 (b)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1209.87
Well Depth	31.65
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	1209.87
Well Depth	31.65
Top Screen	1193.22
Bottom Screen	1178.22
Bottom Well	1178.22
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	26.00
Top sample	1183.87
Bottom sample	1179.87
Turbidity(NTU)	2.91

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	10:47	4.95	1204.92	

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	2.91
Appendix I	Metals	150	150	2.91
Appendix I	VOC	240	240	2.91
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental		1-Qt		
Supplemental				
Total		400	0	

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

TOC	1209.87	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	31.65	Before purging	4/11/2024	10:47	4.95	1204.92	6	1.4	No
		After purging				1209.87			
		Top of Screen after construction				1193.22			
						16.65			feet above (+) or below (-) top screen
		Bottom of Well after construction				1178.22			
		Bottom of Well	4/11/2024		31.70	1178.17			
						-0.05			feet sedimentation
		Before Sample				1209.87			
		Recovery	4/11/2024	10:56	7.75	1202.12			
		Recovery	4/11/2024	15:24	4.90	1204.97			
		Recovery				1209.87			
		Recovery				1209.87			

IDNR Form 542-1322

Monitoring Well: MW-6 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1201.7
Well Depth	32.70
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	1201.7
Well Depth	32.70
Top Screen	1184.00
Bottom Screen	1169.00
Bottom Well	1169.00
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	27.00
Top sample	1174.70
Bottom sample	1170.70
Turbidity(NTU)	19.17

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	12:05	5.32	1196.38	

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		19.17
Appendix I Metals	150	150		19.17
Appendix I VOC	240	240		19.17
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental BIS	1-Qt	945		
Supplemental				
Total		1345	0	

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

TOC	1201.7	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.70	Before purging	4/11/2024	12:05	5.32	1196.38	6	0.3	No
		After purging				1201.70			
		Top of Screen after construction				1184.00			
						17.70			feet above (+) or below (-) top screen
		Bottom of Well after construction				1169.00			
		Bottom of Well	4/11/2024		32.60	1169.10			
						0.10			feet sedimentation
		Before Sample				1201.70			
		Recovery	4/11/2024	12:17	9.55	1192.15			
		Recovery	4/11/2024	15:18	5.72	1195.98			
		Recovery				1201.70			
		Recovery				1201.70			

IDNR Form 542-1322

Monitoring Well: MW-7 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1197.57
Well Depth	22.66
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	1197.57
Well Depth	22.66
Top Screen	1189.91
Bottom Screen	1174.91
Bottom Well	1174.91
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.50
Top sample	1181.07
Bottom sample	1177.07
Turbidity(NTU)	4.33

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	12:25	3.72	1193.85	

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		4.33
Appendix I Metals	150	150		4.33
Appendix I VOC	240	240		4.33
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental	1-Qt			
Supplemental				
Total		400	0	

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

TOC	1197.57	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	22.66	Before purging	4/11/2024	12:25	3.72	1193.85	4	1.3	No
		After purging				1197.57			
		Top of Screen after construction				1189.91			
						7.66			feet above (+) or below (-) top screen
		Bottom of Well after construction				1174.91			
		Bottom of Well	4/11/2024		22.40	1175.17			
						0.26			feet sedimentation
		Before Sample				1197.57			
		Recovery	4/11/2024	12:35	9.78	1187.79			
		Recovery	4/11/2024	15:03	3.81	1193.76			
		Recovery				1197.57			
		Recovery				1197.57			

IDNR Form 542-1322

Monitoring Well: MW-9 (b)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1207.51
Well Depth	32.62
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	1207.51
Well Depth	32.62
Top Screen	1184.89
Bottom Screen	1174.89
Bottom Well	1174.89
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	27.00
Top sample	1180.51
Bottom sample	1176.51
Turbidity(NTU)	4.09

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	11:29	7.51	1200	

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		4.09
Appendix I Metals	150	150		4.09
Appendix I VOC	240	240		4.09
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental	1-Qt			
Supplemental				
Total		400	0	

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

TOC	1207.51	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.62	Before purging	4/11/2024	11:29	7.51	1200.00	3	0.7	no
		After purging				1207.51			
		Top of Screen after construction				1184.89			
						22.62			feet above (+) or below (-) top screen
		Bottom of Well after construction				1174.89			
		Bottom of Well	4/11/2024		32.50	1175.01			
						0.12			feet sedimentation
		Before Sample				1207.51			
		Recovery	4/11/2024	11:39	19.30	1188.21			
		Recovery	4/11/2024	15:25	18.24	1189.27			
		Recovery				1207.51			
		Recovery				1207.51			

IDNR Form 542-1322

Monitoring Well: MW-11 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1179.86
Well Depth	37.14
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	1179.86
Well Depth	37.14
Top Screen	1152.72
Bottom Screen	1142.72
Bottom Well	1142.72
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	31.00
Top sample	1148.86
Bottom sample	1144.86
Turbidity(NTU)	1.62

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	13:51	13.5	1166.36	

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		1.62
Appendix I Metals	150	150		1.62
Appendix I VOC	240	240		1.62
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental	1-Qt			
Supplemental				
Total		400	0	

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

TOC	1179.86	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	37.14	Before purging	4/11/2024	13:51	13.50	1166.36	4.5	1.2	yes
		After purging				1179.86			
		Top of Screen after construction				1152.72			
						27.14			feet above (+) or below (-) top screen
		Bottom of Well after construction				1142.72			
		Bottom of Well	4/11/2024		36.80	1143.06			
						0.34			feet sedimentation
		Before Sample				1179.86			
		Recovery	4/11/2024	14:07	35.35	1144.51			
		Recovery	4/11/2024	15:55	31.50	1148.36			
		Recovery				1179.86			
		Recovery				1179.86			

IDNR Form 542-1322

Monitoring Well: MW-12 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1181.55
Well Depth	21.51
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	1181.55
Well Depth	21.51
Top Screen	1170.04
Bottom Screen	1160.04
Bottom Well	1160.04
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	15.50
Top sample	1166.05
Bottom sample	1162.05
Turbidity(NTU)	2.38

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	13:01	12.92	1168.63	

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	2.38
Appendix I	Metals	150	150	2.38
Appendix I	VOC	240	240	2.38
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental	BIS	1-Qt		
Supplemental				
Total		400	0	

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

TOC	1181.55	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	21.51	Before purging	4/11/2024	13:01	12.92	1168.63	3	2.1	no
		After purging				1181.55			
		Top of Screen after construction				1170.04			
						11.51			feet above (+) or below (-) top screen
		Bottom of Well after construction				1160.04			
		Bottom of Well	4/11/2024		21.20	1160.35			
						0.31			feet sedimentation
		Before Sample				1181.55			
		Recovery	4/11/2024	13:10	19.75	1161.80			
		Recovery	4/11/2024	15:52	13.12	1168.43			
		Recovery				1181.55			
		Recovery				1181.55			

IDNR Form 542-1322

Monitoring Well: MW-14 (b)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1209.87
Well Depth	23.18
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	1209.87
Well Depth	23.18
Top Screen	1196.69
Bottom Screen	1186.69
Bottom Well	1186.69
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	17.00
Top sample	1192.87
Bottom sample	1188.87
Turbidity(NTU)	2.08

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	11:45	5.45	1204.42	

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	2.08
Appendix I	Metals	150	150	2.08
Appendix I	VOC	240	240	2.08
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental		1-Qt		
Supplemental				
Total		400	0	

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

TOC	1209.87	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	23.18	Before purging	4/11/2024	11:45	5.45	1204.42	3	1.0	No
		After purging				1209.87			
		Top of Screen after construction				1196.69			
						13.18			feet above (+) or below (-) top screen
		Bottom of Well after construction				1186.69			
		Bottom of Well	4/11/2024		22.90	1186.97			
						0.28			feet sedimentation
		Before Sample				1209.87			
		Recovery	4/11/2024	11:57	13.70	1196.17			
		Recovery	4/11/2024	15:27	5.48	1204.39			
		Recovery				1209.87			
		Recovery				1209.87			

IDNR Form 542-1322

Monitoring Well: MW-15 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1183.46
Well Depth	30.20
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	1183.46
Well Depth	30.20
Top Screen	1163.26
Bottom Screen	1153.26
Bottom Well	1153.26
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	25.00
Top sample	1158.46
Bottom sample	1154.46
Turbidity(NTU)	1.92

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	14:21	10.94	1172.52	

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	1.92
Appendix I	Metals	150	150	1.92
Appendix I	VOC	240	240	1.92
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental	Bis	1-Qt		
Supplemental				
Total		400	0	

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

TOC	1183.46	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	30.20	Before purging	4/11/2024	14:21	10.94	1172.52	5	1.6	no
		After purging				1183.46			
		Top of Screen after construction				1163.26			
						20.20			feet above (+) or below (-) top screen
		Bottom of Well after construction				1153.26			
		Bottom of Well	4/11/2024		30.20	1153.26			
						0.00			feet sedimentation
		Before Sample				1183.46			
		Recovery	4/11/2024	14:40	26.76	1156.70			
		Recovery	4/11/2024	15:48	19.56	1163.90			
		Recovery				1183.46			
		Recovery				1183.46			

IDNR Form 542-1322

Monitoring Well: MW-16 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1185.93
Well Depth	30.43
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	1185.93
Well Depth	30.43
Top Screen	1165.50
Bottom Screen	1155.50
Bottom Well	1155.50
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	25.00
Top sample	1160.93
Bottom sample	1156.93
Turbidity(NTU)	2.43

Date	Time	Water Level	Water Elevation	Notes
4/11/2024	12:43	18.22	1167.71	

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	2.43
Appendix I	Metals	150	150	2.43
Appendix I	VOC	240	240	2.43
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental	Bis	1-Qt		
Supplemental				
Total		400	0	

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

TOC	1185.93	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	30.43	Before purging	4/11/2024	12:43	18.22	1167.71	3	1.5	No
		After purging				1185.93			
		Top of Screen after construction				1165.50			
						20.43			feet above (+) or below (-) top screen
		Bottom of Well after construction				1155.50			
		Bottom of Well	4/11/2024		30.40	1155.53			
						0.03			feet sedimentation
		Before Sample				1185.93			
		Recovery	4/11/2024	12:53	25.77	1160.16			
		Recovery	4/11/2024	15:46	21.71	1164.22			
		Recovery				1185.93			
		Recovery				1185.93			

**Floyd-Mitchell-Chickasaw Counties Sanitary Landfill
PERMIT # 66-SDP-01-73P**

10/17/2024

Sampled by: Todd Whipple

Weather conditions: Sunny,40-69 degrees

IDNR Form 542-1322

Monitoring Well: MW-2 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1180.67
Well Depth	32.85
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	1180.67
Well Depth	32.85
Top Screen	1162.82
Bottom Screen	1147.82
Bottom Well	1147.82
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	26.00
Top sample	1154.67
Bottom sample	1150.67
Turbidity(NTU)	6.25

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	10:38	6.39	1174.28	

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	6.25
Appendix I	Metals	150	150	6.25
Appendix I	VOC	240	240	6.25
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental	Bis	1-Qt		
Supplemental				
Total		400	0	

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

TOC	1180.67	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.85	Before purging	10/17/2024	10:38	6.39	1174.28		0.0	
		After purging				1180.67			
		Top of Screen after construction				1162.82			
						17.85			feet above (+) or below (-) top screen
		Bottom of Well after construction				1147.82			
		Bottom of Well	10/17/2024		32.80	1147.87			
						0.05			feet sedimentation
		Before Sample				1180.67			
		Recovery				1180.67			
		Recovery				1180.67			
		Recovery				1180.67			
		Recovery				1180.67			

IDNR Form 542-1322

Monitoring Well: MW-3 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1189.79
Well Depth	22.55
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	1189.79
Well Depth	22.55
Top Screen	1182.24
Bottom Screen	1167.24
Bottom Well	1167.24
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	18.00
Top sample	1171.79
Bottom sample	1167.79
Turbidity(NTU)	3.22

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	10:16	18.29	1171.5	

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	3.22
Appendix I	Metals	150	150	3.22
Appendix I	VOC	240	240	3.22
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental		1-Qt		
Supplemental				
Total		400	0	

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

TOC	1189.79	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	22.55	Before purging	10/17/2024	10:16	18.29	1171.50		0.0	
		After purging				1189.79			
		Top of Screen after construction				1182.24			
						7.55			feet above (+) or below (-) top screen
		Bottom of Well after construction				1167.24			
		Bottom of Well	10/17/2024		22.60	1167.19			
						-0.05			feet sedimentation
		Before Sample				1189.79			
		Recovery				1189.79			
		Recovery				1189.79			
		Recovery				1189.79			
		Recovery				1189.79			

IDNR Form 542-1322

Monitoring Well: MW-4 (b)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1209.46
Well Depth	32.38
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	1209.46
Well Depth	32.38
Top Screen	1192.08
Bottom Screen	1177.08
Bottom Well	1177.08
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	26.00
Top sample	1183.46
Bottom sample	1179.46
Turbidity(NTU)	5.70

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	9:30	9.47	1199.99	

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	5.70
Appendix I	Metals	150	150	5.70
Appendix I	VOC	240	240	5.70
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental	BIS	1-Qt		
Supplemental				
Total		400	0	

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

TOC	1209.46	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.38	Before purging	10/17/2024	9:30	9.47	1199.99		0.0	
		After purging				1209.46			
		Top of Screen after construction				1192.08			
						17.38			feet above (+) or below (-) top screen
		Bottom of Well after construction				1177.08			
		Bottom of Well	10/17/2024		32.80	1176.66			
						-0.42			feet sedimentation
		Before Sample				1209.46			
		Recovery				1209.46			
		Recovery				1209.46			
		Recovery				1209.46			
		Recovery				1209.46			

IDNR Form 542-1322

Monitoring Well: MW-5 (b)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1209.87
Well Depth	31.65
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	1209.87
Well Depth	31.65
Top Screen	1193.22
Bottom Screen	1178.22
Bottom Well	1178.22
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	25.00
Top sample	1184.87
Bottom sample	1180.87
Turbidity(NTU)	16.80

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	9:16	9.22	1200.65	

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		16.80
Appendix I Metals	150	150		16.80
Appendix I VOC	240	240		16.80
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental	1-Qt			
Supplemental				
Total		400	0	

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

TOC	1209.87	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	31.65	Before purging	10/17/2024	9:16	9.22	1200.65		0.0	
		After purging				1209.87			
		Top of Screen after construction				1193.22			
						16.65			feet above (+) or below (-) top screen
		Bottom of Well after construction				1178.22			
		Bottom of Well	10/17/2024		31.70	1178.17			
						-0.05			feet sedimentation
		Before Sample				1209.87			
		Recovery				1209.87			
		Recovery				1209.87			
		Recovery				1209.87			
		Recovery				1209.87			

IDNR Form 542-1322

Monitoring Well: MW-6 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1201.7
Well Depth	32.70
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	1201.7
Well Depth	32.70
Top Screen	1184.00
Bottom Screen	1169.00
Bottom Well	1169.00
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	26.00
Top sample	1175.70
Bottom sample	1171.70
Turbidity(NTU)	138.00

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	11:58	8.85	1192.85	

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	138.00
Appendix I	Metals	150	150	138.00
Appendix I	VOC	240	240	138.00
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental	BIS	1-Qt	945	
Supplemental				
Total		1345	0	

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

TOC	1201.7	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.70	Before purging	10/17/2024	11:58	8.85	1192.85		0.0	
		After purging				1201.70			
		Top of Screen after construction				1184.00			
						17.70			feet above (+) or below (-) top screen
		Bottom of Well after construction				1169.00			
		Bottom of Well	10/17/2024		32.60	1169.10			
						0.10			feet sedimentation
		Before Sample				1201.70			
		Recovery				1201.70			
		Recovery				1201.70			
		Recovery				1201.70			
		Recovery				1201.70			

IDNR Form 542-1322

Monitoring Well: MW-7 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1197.57
Well Depth	22.66
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	1197.57
Well Depth	22.66
Top Screen	1189.91
Bottom Screen	1174.91
Bottom Well	1174.91
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.00
Top sample	1181.57
Bottom sample	1177.57
Turbidity(NTU)	0.89

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	12:13	8.86	1188.71	

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	0.89
Appendix I	Metals	150	150	0.89
Appendix I	VOC	240	240	0.89
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental		1-Qt		
Supplemental				
Total		400	0	

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

TOC	1197.57	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	22.66	Before purging	10/17/2024	12:13	8.86	1188.71		0.0	
		After purging				1197.57			
		Top of Screen after construction				1189.91			
						7.66			feet above (+) or below (-) top screen
		Bottom of Well after construction				1174.91			
		Bottom of Well	10/17/2024		22.40	1175.17			
						0.26			feet sedimentation
		Before Sample				1197.57			
		Recovery				1197.57			
		Recovery				1197.57			
		Recovery				1197.57			
		Recovery				1197.57			

IDNR Form 542-1322

Monitoring Well: MW-9 (b)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1207.51
Well Depth	32.62
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	1207.51
Well Depth	32.62
Top Screen	1184.89
Bottom Screen	1174.89
Bottom Well	1174.89
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	26.00
Top sample	1181.51
Bottom sample	1177.51
Turbidity(NTU)	1.57

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	9:04	8.06	1199.45	

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		1.57
Appendix I Metals	150	150		1.57
Appendix I VOC	240	240		1.57
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental	1-Qt			
Supplemental				
Total		400	0	

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

TOC	1207.51	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.62	Before purging	10/17/2024	9:04	8.06	1199.45		0.0	
		After purging				1207.51			
		Top of Screen after construction				1184.89			
						22.62			feet above (+) or below (-) top screen
		Bottom of Well after construction				1174.89			
		Bottom of Well	10/17/2024		32.50	1175.01			
						0.12			feet sedimentation
		Before Sample				1207.51			
		Recovery				1207.51			
		Recovery				1207.51			
		Recovery				1207.51			
		Recovery				1207.51			

IDNR Form 542-1322

Monitoring Well: MW-11 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1179.86
Well Depth	37.14
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	1179.86
Well Depth	37.14
Top Screen	1152.72
Bottom Screen	1142.72
Bottom Well	1142.72
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	31.00
Top sample	1148.86
Bottom sample	1144.86
Turbidity(NTU)	1.56

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	10:52	10.96	1168.9	

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		1.56
Appendix I Metals	150	150		1.56
Appendix I VOC	240	240		1.56
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental	1-Qt			
Supplemental				
Total		400	0	

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

TOC	1179.86	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	37.14	Before purging	10/17/2024	10:52	10.96	1168.90		0.0	
		After purging				1179.86			
		Top of Screen after construction				1152.72			
						27.14			feet above (+) or below (-) top screen
		Bottom of Well after construction				1142.72			
		Bottom of Well	10/17/2024		36.80	1143.06			
						0.34			feet sedimentation
		Before Sample				1179.86			
		Recovery				1179.86			
		Recovery				1179.86			
		Recovery				1179.86			
		Recovery				1179.86			

IDNR Form 542-1322

Monitoring Well: MW-12 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1181.55
Well Depth	21.51
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	1181.55
Well Depth	21.51
Top Screen	1170.04
Bottom Screen	1160.04
Bottom Well	1160.04
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.00
Top sample	1165.55
Bottom sample	1161.55
Turbidity(NTU)	4.81

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	11:05	16.40	1165.15	

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	4.81
Appendix I	Metals	150	150	4.81
Appendix I	VOC	240	240	4.81
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental	BIS	1-Qt		
Supplemental				
Total		400	0	

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

TOC	1181.55	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	21.51	Before purging	10/17/2024	11:05	16.40	1165.15		0.0	
		After purging				1181.55			
		Top of Screen after construction				1170.04			
						11.51			feet above (+) or below (-) top screen
		Bottom of Well after construction				1160.04			
		Bottom of Well	10/17/2024		21.20	1160.35			
						0.31			feet sedimentation
		Before Sample				1181.55			
		Recovery				1181.55			
		Recovery				1181.55			
		Recovery				1181.55			
		Recovery				1181.55			

IDNR Form 542-1322

Monitoring Well: MW-14 (b)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1209.87
Well Depth	23.18
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	1209.87
Well Depth	23.18
Top Screen	1196.69
Bottom Screen	1186.69
Bottom Well	1186.69
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.00
Top sample	1193.87
Bottom sample	1189.87
Turbidity(NTU)	2.37

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	8:50	10.48	1199.39	

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		2.37
Appendix I Metals	150	150		2.37
Appendix I VOC	240	240		2.37
Full Appendix II 10 more containers	5620			
TSS TSS	1000			
Supplemental	1-Qt			
Supplemental				
Total		400	0	

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

TOC	1209.87	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	23.18	Before purging	10/17/2024	8:50	10.48	1199.39		0.0	
		After purging				1209.87			
		Top of Screen after construction				1196.69			
						13.18			feet above (+) or below (-) top screen
		Bottom of Well after construction				1186.69			
		Bottom of Well	10/17/2024		22.90	1186.97			
						0.28			feet sedimentation
		Before Sample				1209.87			
		Recovery				1209.87			
		Recovery				1209.87			
		Recovery				1209.87			
		Recovery				1209.87			

IDNR Form 542-1322

Monitoring Well: MW-15 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1183.46
Well Depth	30.20
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	1183.46
Well Depth	30.20
Top Screen	1163.26
Bottom Screen	1153.26
Bottom Well	1153.26
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	24.00
Top sample	1159.46
Bottom sample	1155.46
Turbidity(NTU)	1.95

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	11:19	11.07	1172.39	

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	1.95
Appendix I	Metals	150	150	1.95
Appendix I	VOC	240	240	1.95
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental	Bis	1-Qt		
Supplemental				
Total		400	0	

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

TOC	1183.46	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	30.20	Before purging	10/17/2024	11:19	11.07	1172.39		0.0	
		After purging				1183.46			
		Top of Screen after construction				1163.26			
						20.20			feet above (+) or below (-) top screen
		Bottom of Well after construction				1153.26			
		Bottom of Well	10/17/2024		30.20	1153.26			
						0.00			feet sedimentation
		Before Sample				1183.46			
		Recovery				1183.46			
		Recovery				1183.46			
		Recovery				1183.46			
		Recovery				1183.46			

IDNR Form 542-1322

Monitoring Well: MW-16 (dg)

Primary Sampling Method:
Secondary Sampling Method:

No-Purge for Appendix I
Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1185.93
Well Depth	30.43
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	1185.93
Well Depth	30.43
Top Screen	1165.50
Bottom Screen	1155.50
Bottom Well	1155.50
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	25.00
Top sample	1160.93
Bottom sample	1156.93
Turbidity(NTU)	1.36

Date	Time	Water Level	Water Elevation	Notes
10/17/2024	11:41	14.65	1171.28	

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	1.36
Appendix I	Metals	150	150	1.36
Appendix I	VOC	240	240	1.36
Full Appendix II	10 more containers	5620		
TSS	TSS	1000		
Supplemental	Bis	1-Qt		
Supplemental				
Total		400	0	

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

TOC	1185.93	4" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	30.43	Before purging	10/17/2024	11:41	14.65	1171.28		0.0	
		After purging				1185.93			
		Top of Screen after construction				1165.50			
						20.43			feet above (+) or below (-) top screen
		Bottom of Well after construction				1155.50			
		Bottom of Well	10/17/2024		30.40	1155.53			
						0.03			feet sedimentation
		Before Sample				1185.93			
		Recovery				1185.93			
		Recovery				1185.93			
		Recovery				1185.93			
		Recovery				1185.93			

Appendix B
Statistical Reports

Appendix B.1 – Spring Statistical Evaluation Report

GROUND WATER STATISTICS

FOR THE

FLOYD-MITCHELL-CHICKASAW COUNTIES

SANITARY LANDFILL

First Semi-Annual Monitoring Event in 2024

Prepared for:
Floyd-Mitchell-Chickasaw Counties Solid Waste Management Agency
3354 330th Street
Mitchell County, IA

Prepared by:
Jeffrey A. Holmgren
Otter Creek Environmental Services, LLC
40W565 Foxwick Court
Elgin, IL 60124
(847) 464-1355

May 2024



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048 - FMC

HLW Engineering

Project Name: 6028

Todd Whipple
PO Box 314
Story City, IA 50248

Project / PO Number: N/A
Received: 04/12/2024
Reported: 05/23/2024

Case Narrative

Amended Report, May 23, 2024: The 1,1-Dichloropropene and Trichloroethene detectable results originally reported for samples 1HD1048-05 and 07 were not correct due to an analyst error. The corrected results of Non-Detect for both analytes in both samples are included in this report.

James Eggers
Quality Assurance Officer

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>
MW-9 (up)	1HD1048-01	Aqueous	GRAB		04/11/24 11:29	04/12/24 12:02
MW-14 (up)	1HD1048-02	Aqueous	GRAB		04/11/24 11:45	04/12/24 12:02
MW-4 (up)	1HD1048-03	Aqueous	GRAB		04/11/24 09:40	04/12/24 12:02
MW-5 (up)	1HD1048-04	Aqueous	GRAB		04/11/24 10:47	04/12/24 12:02
MW-11	1HD1048-05	Aqueous	GRAB		04/11/24 13:51	04/12/24 12:02
MW-12	1HD1048-06	Aqueous	GRAB		04/11/24 13:01	04/12/24 12:02
MW-15	1HD1048-07	Aqueous	GRAB		04/11/24 14:21	04/12/24 12:02
MW-16	1HD1048-08	Aqueous	GRAB		04/11/24 12:43	04/12/24 12:02
MW-2	1HD1048-09	Aqueous	GRAB		04/11/24 08:53	04/12/24 12:02
MW-3	1HD1048-10	Aqueous	GRAB		04/11/24 13:21	04/12/24 12:02
MW-6	1HD1048-11	Aqueous	GRAB		04/11/24 12:05	04/12/24 12:02
MW-7	1HD1048-12	Aqueous	GRAB		04/11/24 12:25	04/12/24 12:02
Duplicate	1HD1048-13	Aqueous	GRAB		04/11/24 00:00	04/12/24 12:02

INTRODUCTION

This report summarizes the results of the statistical analysis used to evaluate the ground water quality data obtained during the first semi-annual monitoring event in 2024 at the Floyd-Mitchell-Chickasaw Counties Sanitary Landfill near Elma, in Mitchell County, 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. Interwell statistics were used for comparisons of current data to background data at Floyd-Mitchell-Chickasaw Counties Sanitary Landfill. The statistical plan conforms with IAC 567, Chapter 113.10 and the USEPA statistical guidance document (“*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance*”, March 2009).

Ground Water Monitoring Program

The groundwater monitoring network for Floyd-Mitchell-Chickasaw Counties Sanitary Landfill includes downgradient detection sample points MW-11, MW-12, MW-15, MW-16, SW-1, and SW-2. Upgradient sample points along the western border of the Expansion Area include MW-9 and MW-14. Monitoring wells MW-4 and MW-5 were approved by the IDNR as additional background wells in the revised permit (August 2020). Each of the groundwater monitoring wells is to be sampled at least semiannually 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 first semi-annual monitoring event in 2024 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. Both of these methods were previously applied to the Floyd-Mitchell-Chickasaw Counties Landfill data using the DUMPStat[®] statistical program. The Expansion Area upgradient wells have not been monitored regularly so there was insufficient background data available to do upgradient versus downgradient comparisons previously. 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-4, MW-5, MW-9, and MW-14 during the period from October 2014 through the current data. A summary of the background data from monitoring wells MW-4, MW-5, MW-9, and MW-14, 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 sample points MW-11, MW-12, MW-15, and MW-16 compared to the site prediction limits. Prediction

limit exceedances are flagged with asterisks. For the first semi-annual 2024 monitoring data, there were no site prediction limit exceedances detected.

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. Barium was detected at a frequency of 50% or greater in the upgradient wells so barium was tested for normality. The remainder of the metals are rarely detected (less than 50%) in the upgradient wells so nonparametric prediction limits were used in those cases.

Table 4 summarizes the results of the Shapiro-Wilk test. The background barium data has a normal distribution so barium uses a normal site prediction limit. 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 1% and the test becomes sensitive to 3 standard deviation unit increases over background.

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 Floyd-Mitchell-Chickasaw Counties Landfill during the first semi-annual monitoring event in 2024 are summarized in the table below. Historical detections are summarized in Attachment C.

VOCs detected during the first semi-annual monitoring event in 2024 *— ALL NON-DETECT*

Well	VOC Detected	Result, µg/L	Reporting Limit, µg/L	Verified/ Awaiting verification
MW-11	1,1-Dichloropropene	3.5	1	Awaiting verification
	Trichloroethene	3.3	1	Awaiting verification
MW-15	1,1-Dichloropropene	3.5	1	Awaiting verification
	Trichloroethene	3.3	1	Awaiting verification

Corrections to report based on amended laboratory report dated 5/23/24.

Attachment A

Summary of the Data obtained during the First Semi-Annual Monitoring Event in 2024

Table 1
Analytical Data Summary for 4/11/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
(3,4)-methylphenol	ug/L	<8			<8								
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<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	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<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	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L	<1	<1	<1	<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	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L	<8			<8								
1,2,4-trichlorobenzene	ug/L	<1			<1								
1,2-dibromo-3-chloropropane	ug/L	<1	<5	<5	<1	<5	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L	<8			<8								
1,3,5-trinitrobenzene	ug/L	<8			<8								
1,3-dichlorobenzene	ug/L	<1			<1								
1,3-dichloropropane	ug/L	<1			<1								
1,3-dinitrobenzene	ug/L	<8			<8								
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L	<8			<8								
1,4-phenylenediamine	ug/L	<8			<8								
1-naphthylamine	ug/L	<8			<8								
2,2-dichloropropane	ug/L	<1			<1								
2,3,4,6-tetrachlorophenol	ug/L	<8			<8								
2,4,5-t	ug/L	<5			<5								
2,4,5-tp (silvex)	ug/L	<5			<5								
2,4,5-trichlorophenol	ug/L	<8			<8								
2,4,6-trichlorophenol	ug/L	<8			<8								
2,4-d	ug/L	<2			<2								
2,4-dichlorophenol	ug/L	<8			<8								
2,4-dimethylphenol	ug/L	<8			<8								
2,4-dinitrophenol	ug/L	<8			<8								
2,4-dinitrotoluene	ug/L	<8			<8								
2,6-dichlorophenol	ug/L	<8			<8								
2,6-dinitrotoluene	ug/L	<8			<8								
2-acetylaminofluorene	ug/L	<8			<8								
2-butanone (mek)	ug/L	<5	<10	<10	<5	<10	<10	<10	<10	<10	<10	<10	<10
2-chloronaphthalene	ug/L	<8			<8								
2-chlorophenol	ug/L	<8			<8								
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L	<8			<8								
2-methylphenol	ug/L	<8			<8								
2-naphthylamine	ug/L	<8			<8								
2-nitroaniline	ug/L	<8			<8								
2-nitrophenol	ug/L	<8			<8								
3,3'-dichlorobenzidine	ug/L	<8			<8								
3,3'-dimethylbenzidine	ug/L	<8			<8								
3-methylcholanthrene	ug/L	<8			<8								
3-nitroaniline	ug/L	<8			<8								
4,4'-ddd	ug/L	<.05			<.05								
4,4'-dde	ug/L	<.05			<.05								
4,4'-ddt	ug/L	<.05			<.05								
4,6-dinitro-2-methylphenol	ug/L	<8			<8								
4-aminobiphenyl	ug/L	<8			<8								
4-bromophenyl phenyl ether	ug/L	<8			<8								
4-chloro-3-methylphenol	ug/L	<8			<8								
4-chloroaniline	ug/L	<8			<8								
4-chlorophenyl phenyl ether	ug/L	<8			<8								
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L	<8			<8								
4-nitrophenol	ug/L	<8			<8								
5-nitro-o-toluidine	ug/L	<8			<8								
7,12-dimethylbenz(a)anthracene	ug/L	<8			<8								
Acenaphthene	ug/L	<8			<8								
Acenaphthylene	ug/L	<8			<8								
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile	ug/L	<10			<10								
Acetophenone	ug/L	<8			<8								
Acrolein	ug/L	<10			<10								
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin	ug/L	<.05			<.05								
Allyl chloride	ug/L	<1			<1								
Alpha-bhc	ug/L	<.05			<.05								
Anthracene	ug/L	<8			<8								

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

Table 1

Analytical Data Summary for 4/11/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L	<2			<2								
Arochlor 1221	ug/L	<2			<2								
Arochlor 1232	ug/L	<2			<2								
Arochlor 1242	ug/L	<2			<2								
Arochlor 1248	ug/L	<2			<2								
Arochlor 1254	ug/L	<2			<2								
Arochlor 1260	ug/L	<2			<2								
Arsenic, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	4.3	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene	ug/L	<8			<8								
Barium, total	ug/L	16.0	135.0	114.0	18.1	39.1	33.9	96.4	33.4	71.7	21.8	19.8	95.5
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	<8			<8								
Benzo(a)pyrene	ug/L	<8			<8								
Benzo(b)fluoranthene	ug/L	<8			<8								
Benzo(g,h,i)perylene	ug/L	<8			<8								
Benzo(k)fluoranthene	ug/L	<8			<8								
Benzyl alcohol	ug/L	<8			<8								
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc	ug/L	<.05			<.05								
Bis (2-chloroethoxy) methane	ug/L	<8			<8								
Bis(2-chloroethyl) ether	ug/L	<8			<8								
Bis(2-chloroisopropyl) ether	ug/L	<8			<8								
Bis(2-ethylhexyl) phthalate	ug/L	<6			<6								
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L	<8			<8								
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L	<.1			<.1								
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L	<8			<8								
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L	<1			<1								
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene	ug/L	<8			<8								
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.4	<.4	<.4	<.4	<.4	2.3	<.4	<.4	<.4	<.4	<.4	<.4
Copper, total	ug/L	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4
Cyanide, total	mg/L	<.005			<.005								
Delta-bhc	ug/L	<.05			<.05								
Diallate	ug/L	<8			<8								
Dibenzo(a,h)anthracene	ug/L	<8			<8								
Dibenzofuran	ug/L	<8			<8								
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1			<1								
Dieldrin	ug/L	<.05			<.05								
Diethyl phthalate	ug/L	<8			<8								
Dimethoate	ug/L	<.4			<.4								
Dimethylphthalate	ug/L	<8			<8								
Di-n-butyl phthalate	ug/L	<8			<8								
Di-n-octyl phthalate	ug/L	<8			<8								
Dinoseb	ug/L	<.5			<.5								
Diphenylamine	ug/L	<8			<8								
Disulfoton	ug/L	<.4			<.4								
Endosulfan i	ug/L	<.05			<.05								
Endosulfan ii	ug/L	<.05			<.05								
Endosulfan sulfate	ug/L	<.05			<.05								
Endrin	ug/L	<.05			<.05								
Endrin aldehyde	ug/L	<.05			<.05								
Ethyl methacrylate	ug/L	<10			<10								
Ethyl methanesulfonate	ug/L	<8			<8								
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur	ug/L	<.4			<.4								
Fluoranthene	ug/L	<8			<8								
Fluorene	ug/L	<8			<8								
Gamma-bhc (lindane)	ug/L	<.05			<.05								
Heptachlor	ug/L	<.05			<.05								
Heptachlor epoxide	ug/L	<.05			<.05								
Hexachlorobenzene	ug/L	<.05			<.05								

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

Table 1
Analytical Data Summary for 4/11/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
Hexachlorobutadiene	ug/L	<8			<8								
Hexachlorocyclopentadiene	ug/L	<8			<8								
Hexachloroethane	ug/L	<8			<8								
Hexachloropropene	ug/L	<8			<8								
Indeno(1,2,3-cd)pyrene	ug/L	<8			<8								
Isobutanol	mg/L	<1			<1								
Isodrin	ug/L	<8			<8								
Isophorone	ug/L	<8			<8								
Isosafrole	ug/L	<8			<8								
Kepone	ug/L	<8			<8								
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, total	ug/L	<5			<5								
Methacrylonitrile	ug/L	<1			<1								
Methapyrilene	ug/L	<8			<8								
Methoxychlor	ug/L	<.05			<.05								
Methyl iodide	ug/L	<2	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate	ug/L	<1			<1								
Methyl methanesulfonate	ug/L	<8			<8								
Methyl parathion	ug/L	<.4			<.4								
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L	<8			<8								
Nickel, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Nitrobenzene	ug/L	<8			<8								
N-nitrosodiethylamine	ug/L	<8			<8								
N-nitrosodimethylamine	ug/L	<8			<8								
N-nitrosodi-n-butylamine	ug/L	<8			<8								
N-nitroso-di-n-propylamine	ug/L	<8			<8								
N-nitrosodiphenylamine	ug/L	<8			<8								
N-nitrosomethylethylamine	ug/L	<8			<8								
N-nitrosopiperidine	ug/L	<8			<8								
N-nitrosopyrrolidine	ug/L	<8			<8								
O,o,o-triethyl phosphorothioate	ug/L	<.4			<.4								
O-toluidine	ug/L	<8			<8								
Parathion	ug/L	<.4			<.4								
P-dimethylaminoazobenzene	ug/L	<8			<8								
Pentachlorobenzene	ug/L	<8			<8								
Pentachloronitrobenzene (pcnb)	ug/L	<8			<8								
Pentachlorophenol	ug/L	<8			<8								
Phenacetin	ug/L	<8			<8								
Phenanthrene	ug/L	<8			<8								
Phenol	ug/L	<8			<8								
Phorate	ug/L	<.4			<.4								
Pronamide	ug/L	<8			<8								
Propionitrile	ug/L	<10			<10								
Pyrene	ug/L	<8			<8								
Safrole	ug/L	<8			<8								
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L	<.15			<.15								
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Thionazin	ug/L	<.4			<.4								
Tin, total	ug/L	<20			<20								
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L	<2			<2								
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<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	<5	<5	<5
Trichloroethylene	ug/L	<1.33	<1.0	<1.0	<1.33	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20

* - 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-14	10/14/2014		2.5000		
Antimony, total	ug/L	MW-14	01/12/2015	ND	2.0000		
Antimony, total	ug/L	MW-14	04/13/2015	ND	2.0000		
Antimony, total	ug/L	MW-14	07/21/2015	ND	2.0000		
Antimony, total	ug/L	MW-14	09/23/2015	ND	2.0000		
Antimony, total	ug/L	MW-14	04/12/2016	ND	2.0000		
Antimony, total	ug/L	MW-14	10/11/2016	ND	2.0000		
Antimony, total	ug/L	MW-14	04/20/2017	ND	2.0000		
Antimony, total	ug/L	MW-14	10/12/2017	ND	2.0000		
Antimony, total	ug/L	MW-14	04/23/2018	ND	2.0000		
Antimony, total	ug/L	MW-14	10/12/2018	ND	2.0000		
Antimony, total	ug/L	MW-14	04/16/2019	ND	2.0000		
Antimony, total	ug/L	MW-14	10/17/2019	ND	2.0000		
Antimony, total	ug/L	MW-14	04/09/2020	ND	2.0000		
Antimony, total	ug/L	MW-14	10/08/2020	ND	2.0000		
Antimony, total	ug/L	MW-14	04/15/2021	ND	2.0000		
Antimony, total	ug/L	MW-14	10/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-14	04/13/2022	ND	2.0000		
Antimony, total	ug/L	MW-14	10/19/2022	ND	2.0000		
Antimony, total	ug/L	MW-14	04/06/2023	ND	2.0000		
Antimony, total	ug/L	MW-14	10/10/2023	ND	2.0000		
Antimony, total	ug/L	MW-14	04/11/2024	ND	2.0000		
Antimony, total	ug/L	MW-4	10/14/2014	ND	2.0000		
Antimony, total	ug/L	MW-4	04/13/2015	ND	2.0000		
Antimony, total	ug/L	MW-4	09/23/2015	ND	2.0000		
Antimony, total	ug/L	MW-4	04/12/2016	ND	2.0000		
Antimony, total	ug/L	MW-4	10/11/2016	ND	2.0000		
Antimony, total	ug/L	MW-4	04/20/2017	ND	2.0000		
Antimony, total	ug/L	MW-4	10/12/2017	ND	2.0000		
Antimony, total	ug/L	MW-4	04/23/2018	ND	2.0000		
Antimony, total	ug/L	MW-4	10/12/2018	ND	2.0000		
Antimony, total	ug/L	MW-4	04/16/2019	ND	2.0000		
Antimony, total	ug/L	MW-4	10/17/2019	ND	2.0000		
Antimony, total	ug/L	MW-4	04/09/2020	ND	2.0000		
Antimony, total	ug/L	MW-4	10/08/2020	ND	2.0000		
Antimony, total	ug/L	MW-4	04/15/2021	ND	2.0000		
Antimony, total	ug/L	MW-4	10/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-4	04/13/2022	ND	2.0000		
Antimony, total	ug/L	MW-4	10/19/2022	ND	2.0000		
Antimony, total	ug/L	MW-4	04/06/2023	ND	2.0000		
Antimony, total	ug/L	MW-4	10/10/2023	ND	2.0000		
Antimony, total	ug/L	MW-4	04/11/2024	ND	2.0000		
Antimony, total	ug/L	MW-5	10/14/2014	ND	2.0000		
Antimony, total	ug/L	MW-5	04/13/2015	ND	2.0000		
Antimony, total	ug/L	MW-5	09/23/2015	ND	2.0000		
Antimony, total	ug/L	MW-5	04/12/2016	ND	2.0000		
Antimony, total	ug/L	MW-5	10/11/2016	ND	2.0000		
Antimony, total	ug/L	MW-5	04/20/2017	ND	2.0000		
Antimony, total	ug/L	MW-5	10/12/2017	ND	2.0000		
Antimony, total	ug/L	MW-5	04/23/2018	ND	2.0000		
Antimony, total	ug/L	MW-5	10/12/2018	ND	2.0000		
Antimony, total	ug/L	MW-5	04/16/2019	ND	2.0000		
Antimony, total	ug/L	MW-5	10/17/2019	ND	2.0000		
Antimony, total	ug/L	MW-5	04/09/2020	ND	2.0000		
Antimony, total	ug/L	MW-5	10/08/2020	ND	2.0000		
Antimony, total	ug/L	MW-5	04/15/2021	ND	2.0000		
Antimony, total	ug/L	MW-5	10/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-5	04/13/2022	ND	2.0000		
Antimony, total	ug/L	MW-5	10/19/2022	ND	2.0000		
Antimony, total	ug/L	MW-5	04/06/2023	ND	2.0000		
Antimony, total	ug/L	MW-5	10/10/2023	ND	2.0000		
Antimony, total	ug/L	MW-5	04/11/2024	ND	2.0000		
Antimony, total	ug/L	MW-9	10/14/2014	ND	2.0000		
Antimony, total	ug/L	MW-9	01/12/2015	ND	2.0000		
Antimony, total	ug/L	MW-9	04/14/2015	ND	2.0000		
Antimony, total	ug/L	MW-9	07/21/2015	ND	2.0000		
Antimony, total	ug/L	MW-9	09/22/2015	ND	2.0000		
Antimony, total	ug/L	MW-9	04/12/2016	ND	2.0000		
Antimony, total	ug/L	MW-9	10/11/2016	ND	2.0000		
Antimony, total	ug/L	MW-9	04/20/2017	ND	2.0000		
Antimony, total	ug/L	MW-9	10/12/2017	ND	2.0000		
Antimony, total	ug/L	MW-9	04/23/2018	ND	2.0000		
Antimony, total	ug/L	MW-9	10/12/2018	ND	2.0000		
Antimony, total	ug/L	MW-9	04/16/2019	ND	2.0000		

* - 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	
Antimony, total	ug/L	MW-9	10/17/2019	ND	2.0000		
Antimony, total	ug/L	MW-9	04/09/2020	ND	2.0000		
Antimony, total	ug/L	MW-9	10/08/2020	ND	2.0000		
Antimony, total	ug/L	MW-9	04/15/2021	ND	2.0000		
Antimony, total	ug/L	MW-9	10/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-9	04/13/2022	ND	2.0000		
Antimony, total	ug/L	MW-9	10/19/2022	ND	2.0000		
Antimony, total	ug/L	MW-9	04/06/2023	ND	2.0000		
Antimony, total	ug/L	MW-9	10/10/2023	ND	2.0000		
Antimony, total	ug/L	MW-9	04/11/2024	ND	2.0000		
Arsenic, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Arsenic, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/13/2015	ND	4.0000		
Arsenic, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Arsenic, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/11/2016	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/19/2022	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/14/2014	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Arsenic, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/20/2017	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/23/2018	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/12/2018	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/16/2019	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/17/2019	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/08/2020	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/15/2021	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/13/2022	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/06/2023	ND	4.5000		
Arsenic, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/14/2014	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Arsenic, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/11/2016	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/20/2017	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/12/2017	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/23/2018	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/12/2018	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/16/2019	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/17/2019	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/08/2020	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/15/2021	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/13/2022	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/19/2022	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/06/2023	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/10/2023	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/11/2024	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/14/2014	ND	4.0000		
Arsenic, total	ug/L	MW-9	01/12/2015	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	
Arsenic, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Arsenic, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/22/2015	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/12/2016	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/11/2016	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/20/2017	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/12/2017	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/23/2018	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/12/2018	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/16/2019	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/17/2019	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/08/2020	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/15/2021	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Barium, total	ug/L	MW-14	10/14/2014		184.0000		
Barium, total	ug/L	MW-14	01/12/2015		169.0000		
Barium, total	ug/L	MW-14	04/13/2015		143.0000		
Barium, total	ug/L	MW-14	07/21/2015		141.0000		
Barium, total	ug/L	MW-14	09/23/2015		185.0000		
Barium, total	ug/L	MW-14	04/12/2016		121.0000		
Barium, total	ug/L	MW-14	10/11/2016		125.0000		
Barium, total	ug/L	MW-14	04/20/2017		140.0000		
Barium, total	ug/L	MW-14	10/12/2017		170.0000		
Barium, total	ug/L	MW-14	04/23/2018		126.0000		
Barium, total	ug/L	MW-14	10/12/2018		128.0000		
Barium, total	ug/L	MW-14	04/16/2019		114.0000		
Barium, total	ug/L	MW-14	10/17/2019		155.0000		
Barium, total	ug/L	MW-14	04/09/2020		117.0000		
Barium, total	ug/L	MW-14	10/08/2020		137.0000		
Barium, total	ug/L	MW-14	04/15/2021		120.0000		
Barium, total	ug/L	MW-14	10/28/2021		102.0000		
Barium, total	ug/L	MW-14	04/13/2022		107.0000		
Barium, total	ug/L	MW-14	10/19/2022		133.0000		
Barium, total	ug/L	MW-14	04/06/2023		117.0000		
Barium, total	ug/L	MW-14	10/10/2023		140.0000		
Barium, total	ug/L	MW-14	04/11/2024		114.0000		
Barium, total	ug/L	MW-4	10/14/2014		141.0000		
Barium, total	ug/L	MW-4	04/13/2015		103.0000		
Barium, total	ug/L	MW-4	09/23/2015		92.5000		
Barium, total	ug/L	MW-4	04/12/2016		66.2000		
Barium, total	ug/L	MW-4	10/11/2016		77.7000		
Barium, total	ug/L	MW-4	04/20/2017		128.0000		
Barium, total	ug/L	MW-4	10/12/2017		83.8000		
Barium, total	ug/L	MW-4	04/23/2018		116.0000		
Barium, total	ug/L	MW-4	10/12/2018		111.0000		
Barium, total	ug/L	MW-4	04/16/2019		71.2000		
Barium, total	ug/L	MW-4	10/17/2019		137.0000		
Barium, total	ug/L	MW-4	04/09/2020		65.3000		
Barium, total	ug/L	MW-4	10/08/2020		75.2000		
Barium, total	ug/L	MW-4	04/15/2021		49.6000		
Barium, total	ug/L	MW-4	10/28/2021		73.2000		
Barium, total	ug/L	MW-4	04/13/2022		63.6000		
Barium, total	ug/L	MW-4	10/19/2022		81.8000		
Barium, total	ug/L	MW-4	04/06/2023		162.0000		
Barium, total	ug/L	MW-4	10/10/2023		67.4000		
Barium, total	ug/L	MW-4	04/11/2024		33.4000		
Barium, total	ug/L	MW-5	10/14/2014		251.0000		
Barium, total	ug/L	MW-5	04/13/2015		272.0000		
Barium, total	ug/L	MW-5	09/23/2015		330.0000		
Barium, total	ug/L	MW-5	11/24/2015		328.0000		
Barium, total	ug/L	MW-5	04/12/2016		167.0000		
Barium, total	ug/L	MW-5	10/11/2016		262.0000		
Barium, total	ug/L	MW-5	04/20/2017		338.0000		
Barium, total	ug/L	MW-5	10/12/2017		276.0000		
Barium, total	ug/L	MW-5	04/23/2018		206.0000		
Barium, total	ug/L	MW-5	10/12/2018		212.0000		
Barium, total	ug/L	MW-5	04/16/2019		193.0000		
Barium, total	ug/L	MW-5	10/17/2019		296.0000		

* - 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	
Barium, total	ug/L	MW-5	04/09/2020		268.0000		
Barium, total	ug/L	MW-5	10/08/2020		268.0000		
Barium, total	ug/L	MW-5	04/15/2021		71.8000		*
Barium, total	ug/L	MW-5	10/28/2021		175.0000		
Barium, total	ug/L	MW-5	04/13/2022		180.0000		
Barium, total	ug/L	MW-5	10/19/2022		250.0000		
Barium, total	ug/L	MW-5	04/06/2023		206.0000		
Barium, total	ug/L	MW-5	10/10/2023		202.0000		
Barium, total	ug/L	MW-5	04/11/2024		71.7000		*
Barium, total	ug/L	MW-9	10/14/2014		114.0000		
Barium, total	ug/L	MW-9	01/12/2015		115.0000		
Barium, total	ug/L	MW-9	04/14/2015		138.0000		
Barium, total	ug/L	MW-9	07/21/2015		111.0000		
Barium, total	ug/L	MW-9	09/22/2015		114.0000		
Barium, total	ug/L	MW-9	04/12/2016		99.2000		
Barium, total	ug/L	MW-9	10/11/2016		106.0000		
Barium, total	ug/L	MW-9	04/20/2017		116.0000		
Barium, total	ug/L	MW-9	10/12/2017		105.0000		
Barium, total	ug/L	MW-9	04/23/2018		110.0000		
Barium, total	ug/L	MW-9	10/12/2018		106.0000		
Barium, total	ug/L	MW-9	04/16/2019		106.0000		
Barium, total	ug/L	MW-9	10/17/2019		113.0000		
Barium, total	ug/L	MW-9	04/09/2020		93.9000		
Barium, total	ug/L	MW-9	10/08/2020		98.7000		
Barium, total	ug/L	MW-9	04/15/2021		93.2000		
Barium, total	ug/L	MW-9	10/28/2021		91.9000		
Barium, total	ug/L	MW-9	04/13/2022		105.0000		
Barium, total	ug/L	MW-9	10/19/2022		102.0000		
Barium, total	ug/L	MW-9	04/06/2023		96.1000		
Barium, total	ug/L	MW-9	10/10/2023		89.8000		
Barium, total	ug/L	MW-9	04/11/2024		95.5000		
Beryllium, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Beryllium, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/13/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/11/2016	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/19/2022	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/14/2014	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Beryllium, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/20/2017	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/23/2018	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/12/2018	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/16/2019	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/17/2019	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/08/2020	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/15/2021	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/13/2022	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/06/2023	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Beryllium, total	ug/L	MW-5	10/14/2014	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	
Beryllium, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Beryllium, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Beryllium, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Beryllium, total	ug/L	MW-5	10/11/2016	ND	4.0000		
Beryllium, total	ug/L	MW-5	04/20/2017	ND	4.0000		
Beryllium, total	ug/L	MW-5	10/12/2017	ND	4.0000		
Beryllium, total	ug/L	MW-5	04/23/2018	ND	4.0000		
Beryllium, total	ug/L	MW-5	10/12/2018	ND	4.0000		
Beryllium, total	ug/L	MW-5	04/16/2019	ND	4.0000		
Beryllium, total	ug/L	MW-5	10/17/2019	ND	4.0000		
Beryllium, total	ug/L	MW-5	04/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW-5	10/08/2020	ND	4.0000		
Beryllium, total	ug/L	MW-5	04/15/2021	ND	4.0000		
Beryllium, total	ug/L	MW-5	10/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-5	04/13/2022	ND	4.0000		
Beryllium, total	ug/L	MW-5	10/19/2022	ND	4.0000		
Beryllium, total	ug/L	MW-5	04/06/2023	ND	4.0000		
Beryllium, total	ug/L	MW-5	10/10/2023	ND	4.0000		
Beryllium, total	ug/L	MW-5	04/11/2024	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/14/2014	ND	4.0000		
Beryllium, total	ug/L	MW-9	01/12/2015	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Beryllium, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/22/2015	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/12/2016	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/11/2016	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/20/2017	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/12/2017	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/23/2018	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/12/2018	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/16/2019	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/17/2019	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/08/2020	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/15/2021	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Cadmium, total	ug/L	MW-14	10/14/2014	ND	0.8000		
Cadmium, total	ug/L	MW-14	01/12/2015	ND	0.8000		
Cadmium, total	ug/L	MW-14	04/13/2015	ND	0.8000		
Cadmium, total	ug/L	MW-14	07/21/2015	ND	0.8000		
Cadmium, total	ug/L	MW-14	09/23/2015	ND	0.8000		
Cadmium, total	ug/L	MW-14	04/12/2016	ND	0.8000		
Cadmium, total	ug/L	MW-14	10/11/2016	ND	0.8000		
Cadmium, total	ug/L	MW-14	04/20/2017	ND	0.8000		
Cadmium, total	ug/L	MW-14	10/12/2017	ND	0.8000		
Cadmium, total	ug/L	MW-14	04/23/2018		5.3000		
Cadmium, total	ug/L	MW-14	10/12/2018	ND	0.8000		
Cadmium, total	ug/L	MW-14	04/16/2019	ND	0.8000		
Cadmium, total	ug/L	MW-14	10/17/2019	ND	0.8000		
Cadmium, total	ug/L	MW-14	04/09/2020	ND	0.8000		
Cadmium, total	ug/L	MW-14	10/08/2020	ND	0.8000		
Cadmium, total	ug/L	MW-14	04/15/2021	ND	0.8000		
Cadmium, total	ug/L	MW-14	10/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-14	04/13/2022	ND	0.8000		
Cadmium, total	ug/L	MW-14	10/19/2022	ND	0.8000		
Cadmium, total	ug/L	MW-14	04/06/2023	ND	0.8000		
Cadmium, total	ug/L	MW-14	10/10/2023	ND	0.8000		
Cadmium, total	ug/L	MW-14	04/11/2024	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/14/2014	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/13/2015	ND	0.8000		
Cadmium, total	ug/L	MW-4	09/23/2015	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/12/2016	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/11/2016	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/20/2017	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/12/2017	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/23/2018	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/12/2018	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/16/2019	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/17/2019	ND	0.8000		

* - 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	
Cadmium, total	ug/L	MW-4	04/09/2020	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/08/2020	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/15/2021	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/13/2022	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/19/2022	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/06/2023	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/10/2023	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/11/2024	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/14/2014	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/13/2015	ND	0.8000		
Cadmium, total	ug/L	MW-5	09/23/2015	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/12/2016	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/11/2016	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/20/2017	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/12/2017	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/23/2018	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/12/2018	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/16/2019	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/17/2019	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/09/2020	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/08/2020	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/15/2021	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/13/2022	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/19/2022	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/06/2023	ND	1.1000		
Cadmium, total	ug/L	MW-5	10/10/2023	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/11/2024	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/14/2014	ND	0.8000		
Cadmium, total	ug/L	MW-9	01/12/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/14/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	07/21/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/22/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/12/2016	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/11/2016	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/20/2017	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/12/2017	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/23/2018	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/12/2018	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/16/2019	ND	1.2000		
Cadmium, total	ug/L	MW-9	10/17/2019	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/09/2020	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/08/2020	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/15/2021	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/13/2022	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/19/2022	ND	1.3000		
Cadmium, total	ug/L	MW-9	04/06/2023	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/10/2023	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/11/2024	ND	0.8000		
Chromium, total	ug/L	MW-14	10/14/2014	ND	8.0000		
Chromium, total	ug/L	MW-14	01/12/2015	ND	8.0000		
Chromium, total	ug/L	MW-14	04/13/2015	ND	8.0000		
Chromium, total	ug/L	MW-14	07/21/2015	ND	8.0000		
Chromium, total	ug/L	MW-14	09/23/2015	ND	8.0000		
Chromium, total	ug/L	MW-14	04/12/2016	ND	8.0000		
Chromium, total	ug/L	MW-14	10/11/2016	ND	8.0000		
Chromium, total	ug/L	MW-14	04/20/2017	ND	8.0000		
Chromium, total	ug/L	MW-14	10/12/2017	ND	8.0000		
Chromium, total	ug/L	MW-14	04/23/2018	ND	8.0000		
Chromium, total	ug/L	MW-14	10/12/2018	ND	8.0000		
Chromium, total	ug/L	MW-14	04/16/2019	ND	8.0000		
Chromium, total	ug/L	MW-14	10/17/2019	ND	8.0000		
Chromium, total	ug/L	MW-14	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-14	10/08/2020	ND	8.0000		
Chromium, total	ug/L	MW-14	04/15/2021	ND	8.0000		
Chromium, total	ug/L	MW-14	10/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-14	04/13/2022	ND	8.0000		
Chromium, total	ug/L	MW-14	10/19/2022	ND	8.0000		
Chromium, total	ug/L	MW-14	04/06/2023	ND	8.0000		
Chromium, total	ug/L	MW-14	10/10/2023	ND	8.0000		
Chromium, total	ug/L	MW-14	04/11/2024	ND	8.0000		
Chromium, total	ug/L	MW-4	10/14/2014	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	
Chromium, total	ug/L	MW-4	04/13/2015	ND	8.0000		
Chromium, total	ug/L	MW-4	09/23/2015	ND	8.0000		
Chromium, total	ug/L	MW-4	04/12/2016	ND	8.0000		
Chromium, total	ug/L	MW-4	10/11/2016	ND	8.0000		
Chromium, total	ug/L	MW-4	04/20/2017		9.1000		
Chromium, total	ug/L	MW-4	10/12/2017	ND	8.0000		
Chromium, total	ug/L	MW-4	04/23/2018	ND	8.0000		
Chromium, total	ug/L	MW-4	10/12/2018	ND	8.0000		
Chromium, total	ug/L	MW-4	04/16/2019	ND	8.0000		
Chromium, total	ug/L	MW-4	10/17/2019	ND	8.0000		
Chromium, total	ug/L	MW-4	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-4	10/08/2020	ND	8.0000		
Chromium, total	ug/L	MW-4	04/15/2021	ND	8.0000		
Chromium, total	ug/L	MW-4	10/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-4	04/13/2022	ND	8.0000		
Chromium, total	ug/L	MW-4	10/19/2022	ND	8.0000		
Chromium, total	ug/L	MW-4	04/06/2023		8.3000		
Chromium, total	ug/L	MW-4	10/10/2023	ND	8.0000		
Chromium, total	ug/L	MW-4	04/11/2024	ND	8.0000		
Chromium, total	ug/L	MW-5	10/14/2014	ND	8.0000		
Chromium, total	ug/L	MW-5	04/13/2015	ND	8.0000		
Chromium, total	ug/L	MW-5	09/23/2015	ND	8.0000		
Chromium, total	ug/L	MW-5	04/12/2016	ND	8.0000		
Chromium, total	ug/L	MW-5	10/11/2016	ND	8.0000		
Chromium, total	ug/L	MW-5	04/20/2017	ND	8.0000		
Chromium, total	ug/L	MW-5	10/12/2017	ND	8.0000		
Chromium, total	ug/L	MW-5	04/23/2018	ND	8.0000		
Chromium, total	ug/L	MW-5	10/12/2018	ND	8.0000		
Chromium, total	ug/L	MW-5	04/16/2019	ND	8.0000		
Chromium, total	ug/L	MW-5	10/17/2019	ND	8.0000		
Chromium, total	ug/L	MW-5	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-5	10/08/2020	ND	8.0000		
Chromium, total	ug/L	MW-5	04/15/2021	ND	8.0000		
Chromium, total	ug/L	MW-5	10/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-5	04/13/2022	ND	8.0000		
Chromium, total	ug/L	MW-5	10/19/2022	ND	8.0000		
Chromium, total	ug/L	MW-5	04/06/2023	ND	8.0000		
Chromium, total	ug/L	MW-5	10/10/2023	ND	8.0000		
Chromium, total	ug/L	MW-5	04/11/2024	ND	8.0000		
Chromium, total	ug/L	MW-9	10/14/2014	ND	8.0000		
Chromium, total	ug/L	MW-9	01/12/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	04/14/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	07/21/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	09/22/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	04/12/2016	ND	8.0000		
Chromium, total	ug/L	MW-9	10/11/2016	ND	8.0000		
Chromium, total	ug/L	MW-9	04/20/2017	ND	8.0000		
Chromium, total	ug/L	MW-9	10/12/2017	ND	8.0000		
Chromium, total	ug/L	MW-9	04/23/2018	ND	8.0000		
Chromium, total	ug/L	MW-9	10/12/2018	ND	8.0000		
Chromium, total	ug/L	MW-9	04/16/2019	ND	8.0000		
Chromium, total	ug/L	MW-9	10/17/2019	ND	8.0000		
Chromium, total	ug/L	MW-9	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	10/08/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	04/15/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	10/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	04/13/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	10/19/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	04/06/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	10/10/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	04/11/2024	ND	8.0000		
Cobalt, total	ug/L	MW-14	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-14	01/12/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	07/21/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/17/2019	ND	0.8000		

* - 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	
Cobalt, total	ug/L	MW-14	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-14	04/06/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/14/2014		2.1000		
Cobalt, total	ug/L	MW-4	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-4	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-4	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/20/2017		3.3000		
Cobalt, total	ug/L	MW-4	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/23/2018		2.8000		
Cobalt, total	ug/L	MW-4	10/12/2018		1.4000		
Cobalt, total	ug/L	MW-4	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-4	10/17/2019		2.0000		
Cobalt, total	ug/L	MW-4	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-4	04/06/2023		3.5000		
Cobalt, total	ug/L	MW-4	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-5	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/17/2019	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/09/2020		3.4000		
Cobalt, total	ug/L	MW-5	10/08/2020		0.6000		
Cobalt, total	ug/L	MW-5	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	04/13/2022		0.4000		
Cobalt, total	ug/L	MW-5	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-5	04/06/2023		2.7000		
Cobalt, total	ug/L	MW-5	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-9	01/12/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/14/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	07/21/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	09/22/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/17/2019	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-9	04/06/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/11/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Copper, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Copper, total	ug/L	MW-14	04/13/2015	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
Copper, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Copper, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Copper, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Copper, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Copper, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Copper, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Copper, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Copper, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Copper, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Copper, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Copper, total	ug/L	MW-14	10/19/2022	ND	7.0000	
Copper, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Copper, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Copper, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Copper, total	ug/L	MW-4	10/14/2014		6.1000	
Copper, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Copper, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Copper, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Copper, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Copper, total	ug/L	MW-4	04/20/2017		5.5000	
Copper, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-4	10/17/2019		4.3000	
Copper, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Copper, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Copper, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Copper, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Copper, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Copper, total	ug/L	MW-4	04/06/2023		9.1000	
Copper, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Copper, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Copper, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Copper, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Copper, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Copper, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Copper, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Copper, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Copper, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Copper, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Copper, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Copper, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Copper, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Copper, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Copper, total	ug/L	MW-5	04/06/2023		9.6000	
Copper, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Copper, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Copper, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Copper, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Copper, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Copper, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Copper, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Copper, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Copper, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Copper, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Copper, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Copper, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-9	10/08/2020	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-9	04/15/2021	ND	4.0000		
Copper, total	ug/L	MW-9	10/28/2021	ND	4.0000		
Copper, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Copper, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Copper, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Copper, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Copper, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Lead, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Lead, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Lead, total	ug/L	MW-14	04/13/2015	ND	4.0000		
Lead, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Lead, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Lead, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Lead, total	ug/L	MW-14	10/11/2016	ND	4.0000		
Lead, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Lead, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Lead, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Lead, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Lead, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Lead, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Lead, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Lead, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Lead, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Lead, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Lead, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Lead, total	ug/L	MW-14	10/19/2022	ND	4.0000		
Lead, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Lead, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Lead, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Lead, total	ug/L	MW-4	10/14/2014	ND	4.0000		
Lead, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Lead, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Lead, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Lead, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Lead, total	ug/L	MW-4	04/20/2017	ND	4.0000		
Lead, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Lead, total	ug/L	MW-4	04/23/2018	ND	4.0000		
Lead, total	ug/L	MW-4	10/12/2018	ND	4.0000		
Lead, total	ug/L	MW-4	04/16/2019	ND	4.0000		
Lead, total	ug/L	MW-4	10/17/2019	ND	4.0000		
Lead, total	ug/L	MW-4	04/09/2020	ND	4.0000		
Lead, total	ug/L	MW-4	10/08/2020	ND	4.0000		
Lead, total	ug/L	MW-4	04/15/2021	ND	4.0000		
Lead, total	ug/L	MW-4	10/28/2021	ND	4.0000		
Lead, total	ug/L	MW-4	04/13/2022	ND	4.0000		
Lead, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Lead, total	ug/L	MW-4	04/06/2023	ND	7.6000		
Lead, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Lead, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Lead, total	ug/L	MW-5	10/14/2014	ND	4.0000		
Lead, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Lead, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Lead, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Lead, total	ug/L	MW-5	10/11/2016	ND	4.0000		
Lead, total	ug/L	MW-5	04/20/2017	ND	4.0000		
Lead, total	ug/L	MW-5	10/12/2017	ND	4.0000		
Lead, total	ug/L	MW-5	04/23/2018	ND	4.0000		
Lead, total	ug/L	MW-5	10/12/2018	ND	4.0000		
Lead, total	ug/L	MW-5	04/16/2019	ND	4.0000		
Lead, total	ug/L	MW-5	10/17/2019	ND	4.0000		
Lead, total	ug/L	MW-5	04/09/2020	ND	4.0000		
Lead, total	ug/L	MW-5	10/08/2020	ND	4.0000		
Lead, total	ug/L	MW-5	04/15/2021	ND	4.0000		
Lead, total	ug/L	MW-5	10/28/2021	ND	4.0000		
Lead, total	ug/L	MW-5	04/13/2022	ND	4.0000		
Lead, total	ug/L	MW-5	10/19/2022	ND	4.0000		
Lead, total	ug/L	MW-5	04/06/2023	ND	6.2000		
Lead, total	ug/L	MW-5	10/10/2023	ND	4.0000		
Lead, total	ug/L	MW-5	04/11/2024	ND	4.0000		
Lead, total	ug/L	MW-9	10/14/2014	ND	4.0000		
Lead, total	ug/L	MW-9	01/12/2015	ND	4.0000		
Lead, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Lead, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Lead, total	ug/L	MW-9	09/22/2015	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
Lead, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Lead, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Lead, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Lead, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Lead, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Lead, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Lead, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Lead, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Lead, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Lead, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Lead, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Lead, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Lead, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Lead, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Lead, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Lead, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Lead, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Nickel, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Nickel, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Nickel, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Nickel, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Nickel, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Nickel, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Nickel, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Nickel, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Nickel, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Nickel, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-4	10/14/2014		6.2000	
Nickel, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Nickel, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Nickel, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-4	04/20/2017		9.5000	
Nickel, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-4	04/23/2018		4.5000	
Nickel, total	ug/L	MW-4	10/12/2018		4.7000	
Nickel, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-4	10/17/2019		6.0000	
Nickel, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Nickel, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Nickel, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Nickel, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Nickel, total	ug/L	MW-4	04/06/2023		9.8000	
Nickel, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-5	10/14/2014		5.9000	
Nickel, total	ug/L	MW-5	04/13/2015		6.3000	
Nickel, total	ug/L	MW-5	09/23/2015		5.7000	
Nickel, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Nickel, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Nickel, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Nickel, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Nickel, total	ug/L	MW-5	04/09/2020		6.8000	
Nickel, total	ug/L	MW-5	10/08/2020		6.6000	
Nickel, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-5	10/28/2021	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	
Nickel, total	ug/L	MW-5	04/13/2022	ND	4.0000		
Nickel, total	ug/L	MW-5	10/19/2022		5.4000		
Nickel, total	ug/L	MW-5	04/06/2023		13.1000		*
Nickel, total	ug/L	MW-5	10/10/2023	ND	4.0000		
Nickel, total	ug/L	MW-5	04/11/2024	ND	4.0000		
Nickel, total	ug/L	MW-9	10/14/2014	ND	4.0000		
Nickel, total	ug/L	MW-9	01/12/2015		4.0000		
Nickel, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Nickel, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Nickel, total	ug/L	MW-9	09/22/2015	ND	4.0000		
Nickel, total	ug/L	MW-9	04/12/2016	ND	4.0000		
Nickel, total	ug/L	MW-9	10/11/2016	ND	4.0000		
Nickel, total	ug/L	MW-9	04/20/2017	ND	4.0000		
Nickel, total	ug/L	MW-9	10/12/2017	ND	4.0000		
Nickel, total	ug/L	MW-9	04/23/2018	ND	4.0000		
Nickel, total	ug/L	MW-9	10/12/2018	ND	4.0000		
Nickel, total	ug/L	MW-9	04/16/2019	ND	4.0000		
Nickel, total	ug/L	MW-9	10/17/2019	ND	4.0000		
Nickel, total	ug/L	MW-9	04/09/2020	ND	4.0000		
Nickel, total	ug/L	MW-9	10/08/2020	ND	4.0000		
Nickel, total	ug/L	MW-9	04/15/2021	ND	4.0000		
Nickel, total	ug/L	MW-9	10/28/2021		4.2000		
Nickel, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Nickel, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Nickel, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Nickel, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Nickel, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Selenium, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Selenium, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Selenium, total	ug/L	MW-14	04/13/2015		5.1000		
Selenium, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Selenium, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Selenium, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Selenium, total	ug/L	MW-14	10/11/2016		5.5000		
Selenium, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Selenium, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Selenium, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Selenium, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Selenium, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Selenium, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Selenium, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Selenium, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Selenium, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Selenium, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Selenium, total	ug/L	MW-14	10/19/2022		5.5000		
Selenium, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Selenium, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Selenium, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Selenium, total	ug/L	MW-4	10/14/2014	ND	4.0000		
Selenium, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Selenium, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Selenium, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Selenium, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Selenium, total	ug/L	MW-4	04/20/2017	ND	4.0000		
Selenium, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Selenium, total	ug/L	MW-4	04/23/2018	ND	4.0000		
Selenium, total	ug/L	MW-4	10/12/2018	ND	4.0000		
Selenium, total	ug/L	MW-4	04/16/2019	ND	4.0000		
Selenium, total	ug/L	MW-4	10/17/2019	ND	4.0000		
Selenium, total	ug/L	MW-4	04/09/2020	ND	4.0000		
Selenium, total	ug/L	MW-4	10/08/2020	ND	4.0000		
Selenium, total	ug/L	MW-4	04/15/2021	ND	4.0000		
Selenium, total	ug/L	MW-4	10/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-4	04/13/2022	ND	4.0000		
Selenium, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Selenium, total	ug/L	MW-4	04/06/2023	ND	4.0000		
Selenium, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Selenium, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Selenium, total	ug/L	MW-5	10/14/2014	ND	4.0000		
Selenium, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Selenium, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Selenium, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Selenium, total	ug/L	MW-5	10/11/2016	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-5	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Selenium, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Selenium, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Selenium, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Selenium, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Selenium, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Selenium, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Selenium, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Selenium, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Silver, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Silver, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Silver, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Silver, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Silver, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Silver, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Silver, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Silver, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Silver, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Silver, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Silver, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Silver, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Silver, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Silver, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Silver, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Silver, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Silver, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Silver, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Silver, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Silver, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Silver, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Silver, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Silver, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Silver, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Silver, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Silver, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Silver, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Silver, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Silver, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Silver, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Silver, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Silver, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Silver, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Silver, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Silver, total	ug/L	MW-4	10/28/2021	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-4	04/13/2022	ND	4.0000		
Silver, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Silver, total	ug/L	MW-4	04/06/2023	ND	4.0000		
Silver, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Silver, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Silver, total	ug/L	MW-5	10/14/2014	ND	4.0000		
Silver, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Silver, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Silver, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Silver, total	ug/L	MW-5	10/11/2016	ND	4.0000		
Silver, total	ug/L	MW-5	04/20/2017	ND	4.0000		
Silver, total	ug/L	MW-5	10/12/2017	ND	4.0000		
Silver, total	ug/L	MW-5	04/23/2018	ND	4.0000		
Silver, total	ug/L	MW-5	10/12/2018	ND	4.0000		
Silver, total	ug/L	MW-5	04/16/2019	ND	4.0000		
Silver, total	ug/L	MW-5	10/17/2019	ND	4.0000		
Silver, total	ug/L	MW-5	04/09/2020	ND	4.0000		
Silver, total	ug/L	MW-5	10/08/2020	ND	4.0000		
Silver, total	ug/L	MW-5	04/15/2021	ND	4.0000		
Silver, total	ug/L	MW-5	10/28/2021	ND	4.0000		
Silver, total	ug/L	MW-5	04/13/2022	ND	4.0000		
Silver, total	ug/L	MW-5	10/19/2022	ND	4.0000		
Silver, total	ug/L	MW-5	04/06/2023	ND	4.0000		
Silver, total	ug/L	MW-5	10/10/2023	ND	4.0000		
Silver, total	ug/L	MW-5	04/11/2024	ND	4.0000		
Silver, total	ug/L	MW-9	10/14/2014	ND	4.0000		
Silver, total	ug/L	MW-9	01/12/2015	ND	4.0000		
Silver, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Silver, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Silver, total	ug/L	MW-9	09/22/2015	ND	4.0000		
Silver, total	ug/L	MW-9	04/12/2016	ND	4.0000		
Silver, total	ug/L	MW-9	10/11/2016	ND	4.0000		
Silver, total	ug/L	MW-9	04/20/2017	ND	4.0000		
Silver, total	ug/L	MW-9	10/12/2017	ND	4.0000		
Silver, total	ug/L	MW-9	04/23/2018	ND	4.0000		
Silver, total	ug/L	MW-9	10/12/2018	ND	4.0000		
Silver, total	ug/L	MW-9	04/16/2019	ND	4.0000		
Silver, total	ug/L	MW-9	10/17/2019	ND	4.0000		
Silver, total	ug/L	MW-9	04/09/2020	ND	4.0000		
Silver, total	ug/L	MW-9	10/08/2020	ND	4.0000		
Silver, total	ug/L	MW-9	04/15/2021	ND	4.0000		
Silver, total	ug/L	MW-9	10/28/2021	ND	4.0000		
Silver, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Silver, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Silver, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Silver, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Silver, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Thallium, total	ug/L	MW-14	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	01/12/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	07/21/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/16/2019	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/17/2019	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/09/2020	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/08/2020	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/15/2021	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/28/2021	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/13/2022	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/19/2022	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/06/2023	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/10/2023	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/11/2024	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/11/2016	ND	4.0000	2.0000	**

* - 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	
Thallium, total	ug/L	MW-4	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-4	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-4	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-4	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-4	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-4	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-4	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-4	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-4	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-4	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-4	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-5	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-5	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-5	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-5	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-5	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-5	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-5	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-5	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-5	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-5	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-5	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-9	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	01/12/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/14/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	07/21/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	09/22/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-9	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-9	04/11/2024	ND	2.0000		
Vanadium, total	ug/L	MW-14	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-14	01/12/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	07/21/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/28/2021	ND	20.0000		

* - 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	
Vanadium, total	ug/L	MW-14	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-4	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-5	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-9	01/12/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/14/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	07/21/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/22/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-14	10/14/2014	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	01/12/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	04/13/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	07/21/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	09/23/2015	ND	20.0000		
Zinc, total	ug/L	MW-14	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	10/11/2016	ND	8.0000	20.0000	**

* - 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-14	04/20/2017	ND	20.0000		
Zinc, total	ug/L	MW-14	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	04/23/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	10/12/2018		16.1000		
Zinc, total	ug/L	MW-14	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-14	10/17/2019	ND	20.0000		
Zinc, total	ug/L	MW-14	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-14	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-14	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-14	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-14	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-14	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-14	04/06/2023	ND	20.0000		
Zinc, total	ug/L	MW-14	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-14	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-4	10/14/2014		40.0000		
Zinc, total	ug/L	MW-4	01/12/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-4	04/13/2015		12.4000		
Zinc, total	ug/L	MW-4	09/23/2015		10.3000		
Zinc, total	ug/L	MW-4	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-4	10/11/2016		11.9000		
Zinc, total	ug/L	MW-4	01/17/2017		58.9000		
Zinc, total	ug/L	MW-4	04/20/2017		57.6000		
Zinc, total	ug/L	MW-4	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-4	04/23/2018		159.0000		
Zinc, total	ug/L	MW-4	10/12/2018		237.0000		
Zinc, total	ug/L	MW-4	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-4	10/17/2019		130.0000		
Zinc, total	ug/L	MW-4	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-4	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-4	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-4	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-4	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-4	10/19/2022		216.0000		
Zinc, total	ug/L	MW-4	04/06/2023		627.0000		*
Zinc, total	ug/L	MW-4	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-4	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-5	10/14/2014		24.7000		
Zinc, total	ug/L	MW-5	04/13/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	09/23/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	10/11/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/20/2017		16.5000		
Zinc, total	ug/L	MW-5	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/23/2018		15.2000		
Zinc, total	ug/L	MW-5	10/12/2018		20.3000		
Zinc, total	ug/L	MW-5	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-5	10/17/2019		83.1000		*
Zinc, total	ug/L	MW-5	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-5	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-5	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-5	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-5	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-5	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-5	04/06/2023		411.0000		*
Zinc, total	ug/L	MW-5	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-5	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-9	10/14/2014	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	01/12/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/14/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	07/21/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	09/23/2015	ND	20.0000		
Zinc, total	ug/L	MW-9	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/11/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/20/2017	ND	20.0000		
Zinc, total	ug/L	MW-9	10/12/2017	ND	8.0000		
Zinc, total	ug/L	MW-9	04/23/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/12/2018		9.0000		
Zinc, total	ug/L	MW-9	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-9	10/17/2019		29.9000		
Zinc, total	ug/L	MW-9	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-9	10/28/2021	ND	20.0000		

* - 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-9	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	04/06/2023		21.3000		
Zinc, total	ug/L	MW-9	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-9	04/11/2024	ND	20.0000		

* - 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	04/11/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-12	04/11/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-15	04/11/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-16	04/11/2024	ND	2.0000	2.5000
Arsenic, total	ug/L	MW-11	04/11/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-12	04/11/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-15	04/11/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-16	04/11/2024	ND	4.0000	4.5000
Barium, total	ug/L	MW-11	04/11/2024		16.0000	304.2772
Barium, total	ug/L	MW-12	04/11/2024		135.0000	304.2772
Barium, total	ug/L	MW-15	04/11/2024		18.1000	304.2772
Barium, total	ug/L	MW-16	04/11/2024		39.1000	304.2772
Beryllium, total	ug/L	MW-11	04/11/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-12	04/11/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-15	04/11/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-16	04/11/2024	ND	4.0000	4.0000
Cadmium, total	ug/L	MW-11	04/11/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-12	04/11/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-15	04/11/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-16	04/11/2024	ND	0.8000	5.3000
Chromium, total	ug/L	MW-11	04/11/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-12	04/11/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-15	04/11/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-16	04/11/2024	ND	8.0000	9.1000
Cobalt, total	ug/L	MW-11	04/11/2024	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-12	04/11/2024	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-15	04/11/2024	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-16	04/11/2024	ND	0.4000	3.5000
Copper, total	ug/L	MW-11	04/11/2024	ND	4.0000	9.6000
Copper, total	ug/L	MW-12	04/11/2024	ND	4.0000	9.6000
Copper, total	ug/L	MW-15	04/11/2024	ND	4.0000	9.6000
Copper, total	ug/L	MW-16	04/11/2024	ND	4.0000	9.6000
Lead, total	ug/L	MW-11	04/11/2024	ND	4.0000	7.6000
Lead, total	ug/L	MW-12	04/11/2024	ND	4.0000	7.6000
Lead, total	ug/L	MW-15	04/11/2024	ND	4.0000	7.6000
Lead, total	ug/L	MW-16	04/11/2024	ND	4.0000	7.6000
Nickel, total	ug/L	MW-11	04/11/2024	ND	4.0000	9.8000
Nickel, total	ug/L	MW-12	04/11/2024	ND	4.0000	9.8000
Nickel, total	ug/L	MW-15	04/11/2024	ND	4.0000	9.8000
Nickel, total	ug/L	MW-16	04/11/2024	ND	4.0000	9.8000
Selenium, total	ug/L	MW-11	04/11/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-12	04/11/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-15	04/11/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-16	04/11/2024	ND	4.0000	5.5000
Silver, total	ug/L	MW-11	04/11/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-12	04/11/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-15	04/11/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-16	04/11/2024	ND	4.0000	4.0000
Thallium, total	ug/L	MW-11	04/11/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-12	04/11/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-15	04/11/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-16	04/11/2024	ND	2.0000	2.0000
Vanadium, total	ug/L	MW-11	04/11/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-12	04/11/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-15	04/11/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-16	04/11/2024	ND	20.0000	20.0000
Zinc, total	ug/L	MW-11	04/11/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-12	04/11/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-15	04/11/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-16	04/11/2024	ND	20.0000	237.0000

* - 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	Upgradient			Downgradient		
	Detect	N	Proportion	Detect	N	Proportion
Antimony, total	1	84	0.012	2	106	0.019
Arsenic, total	1	84	0.012	7	107	0.065
Barium, total	83	83	1.000	106	106	1.000
Beryllium, total	0	84	0.000	0	106	0.000
Cadmium, total	4	84	0.048	11	107	0.103
Chromium, total	2	84	0.024	12	106	0.113
Cobalt, total	10	84	0.119	22	106	0.208
Copper, total	6	84	0.071	32	107	0.299
Lead, total	2	84	0.024	19	106	0.179
Nickel, total	14	83	0.169	43	109	0.394
Selenium, total	3	84	0.036	4	106	0.038
Silver, total	0	84	0.000	0	106	0.000
Thallium, total	0	84	0.000	3	106	0.028
Vanadium, total	0	84	0.000	7	106	0.066
Zinc, total	18	83	0.217	41	108	0.380

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	1	84	0.012									nonpar
Arsenic, total	1	84	0.012									nonpar
Barium, total	83	83	1.000	2.065	0.756					2.326	normal	normal
Beryllium, total	0	84	0.000									nonpar
Cadmium, total	4	84	0.048									nonpar
Chromium, total	2	84	0.024									nonpar
Cobalt, total	10	84	0.119	0.132	0.200					2.326	normal	nonpar
Copper, total	6	84	0.071	0.105	0.895					2.326	normal	nonpar
Lead, total	2	84	0.024									nonpar
Nickel, total	14	83	0.169	0.124	0.164					2.326	normal	nonpar
Selenium, total	3	84	0.036	0.495	0.495					2.326	normal	nonpar
Silver, total	0	84	0.000									nonpar
Thallium, total	0	84	0.000									nonpar
Vanadium, total	0	84	0.000									nonpar
Zinc, total	18	83	0.217	0.132	0.220					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	1	84					2.5000	nonpar	0.99
Arsenic, total	ug/L	1	84					4.5000	nonpar	0.99
Barium, total	ug/L	83	83	142.0024	67.9848	0.0100	2.3869	304.2772	normal	
Beryllium, total	ug/L	0	84					4.0000	nonpar	*** 0.99
Cadmium, total	ug/L	4	84					5.3000	nonpar	0.99
Chromium, total	ug/L	2	84					9.1000	nonpar	0.99
Cobalt, total	ug/L	10	84					3.5000	nonpar	0.99
Copper, total	ug/L	6	84					9.6000	nonpar	0.99
Lead, total	ug/L	2	84					7.6000	nonpar	0.99
Nickel, total	ug/L	14	83					9.8000	nonpar	0.99
Selenium, total	ug/L	3	84					5.5000	nonpar	0.99
Silver, total	ug/L	0	84					4.0000	nonpar	*** 0.99
Thallium, total	ug/L	0	84					2.0000	nonpar	*** 0.99
Vanadium, total	ug/L	0	84					20.0000	nonpar	*** 0.99
Zinc, total	ug/L	18	83					237.0000	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**

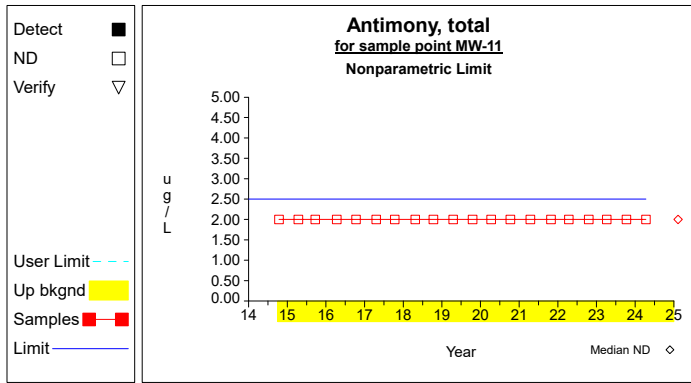
Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Barium, total	ug/L	MW-5	04/15/2021	71.8000		10/14/2014-04/11/2024	21	0.5381
Barium, total	ug/L	MW-5	04/11/2024	71.7000		10/14/2014-04/11/2024	21	0.5381
Nickel, total	ug/L	MW-5	04/06/2023	13.1000		10/14/2014-04/11/2024	20	0.5381
Zinc, total	ug/L	MW-5	10/17/2019	83.1000		10/14/2014-04/11/2024	20	0.5503
Zinc, total	ug/L	MW-5	04/06/2023	411.0000		10/14/2014-04/11/2024	20	0.5503

N = Total number of independent measurements in background at each well.

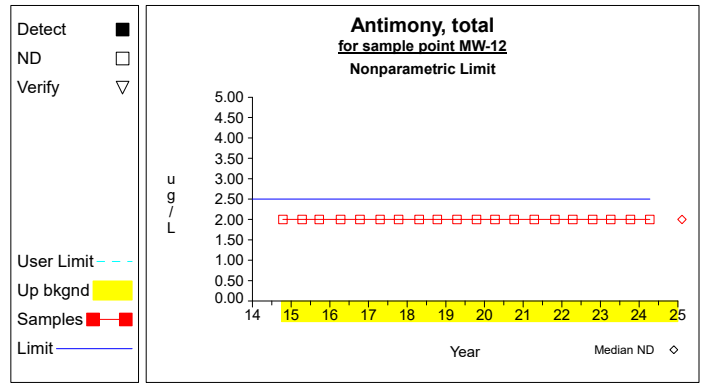
Date Range = Dates of the first and last measurements included in background at each well.

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.

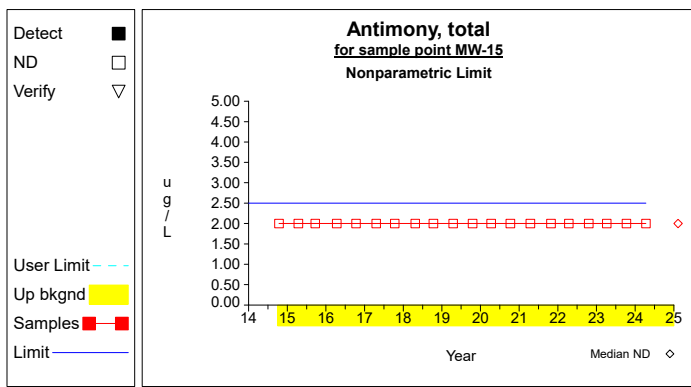
Up vs. Down Prediction Limits



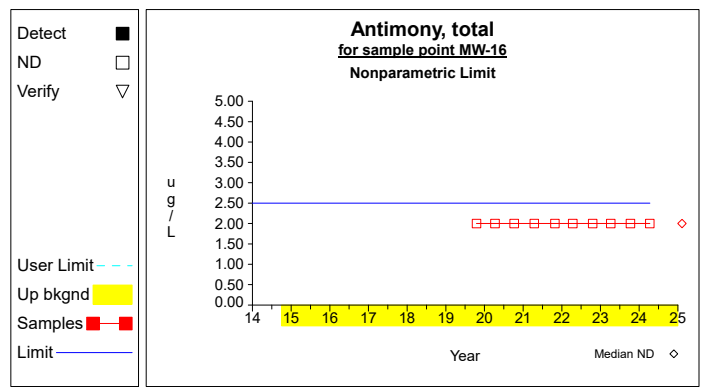
Graph 1



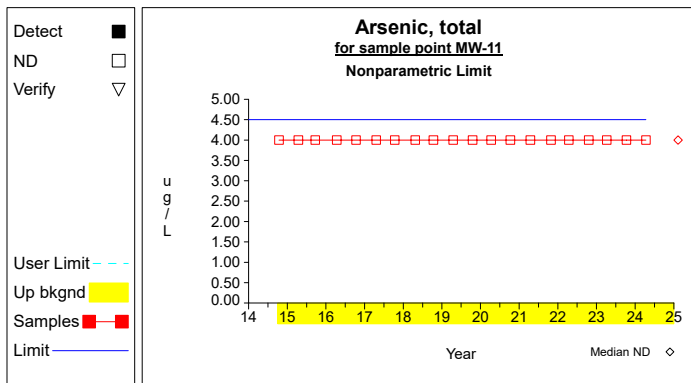
Graph 2



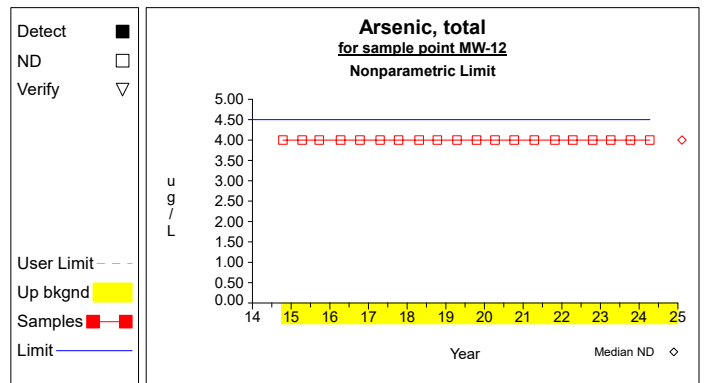
Graph 3



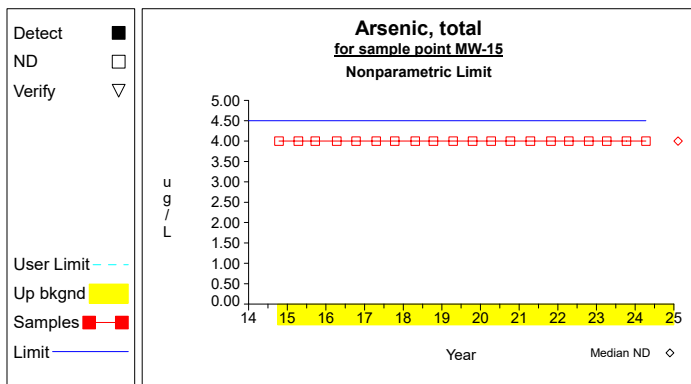
Graph 4



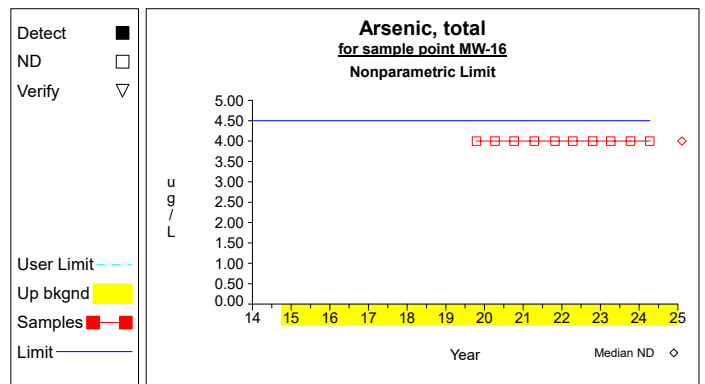
Graph 5



Graph 6

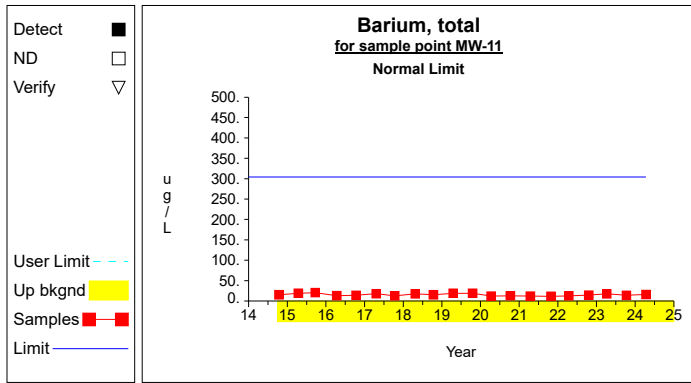


Graph 7

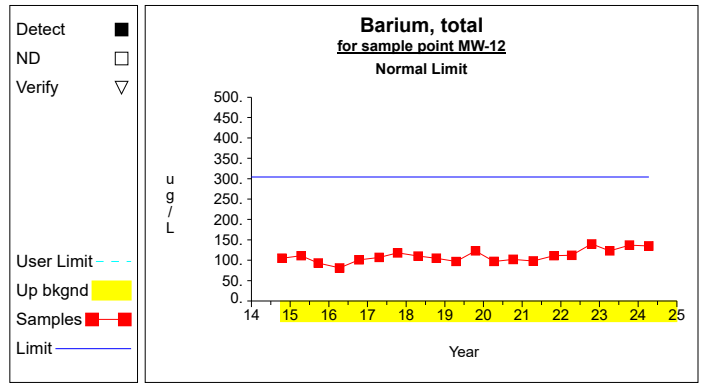


Graph 8

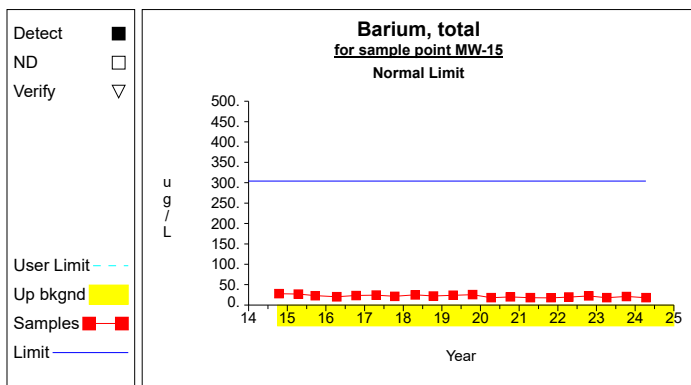
Up vs. Down Prediction Limits



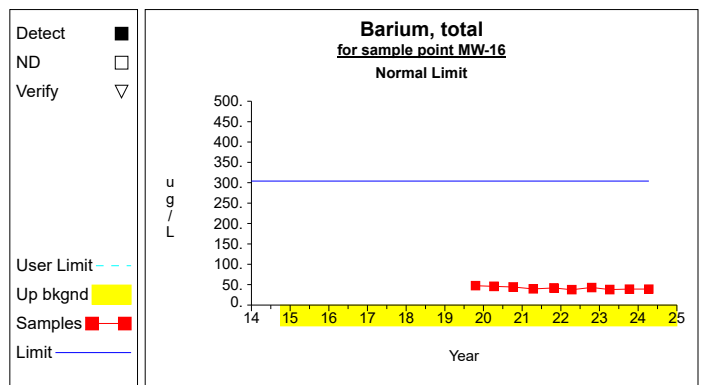
Graph 9



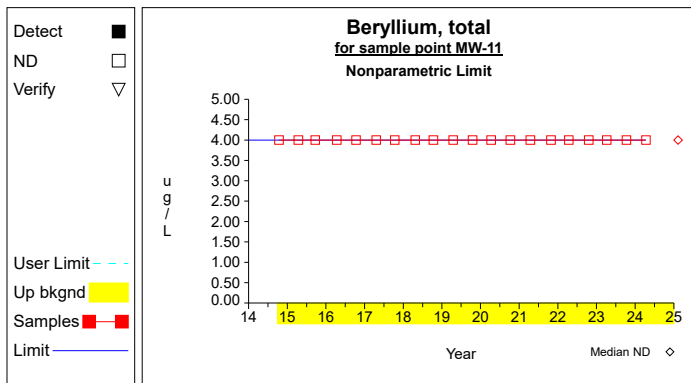
Graph 10



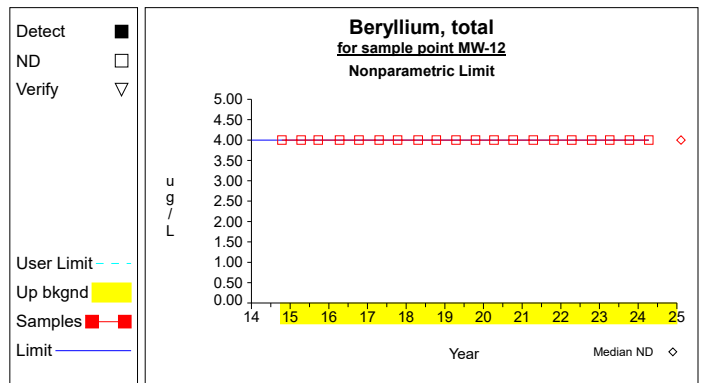
Graph 11



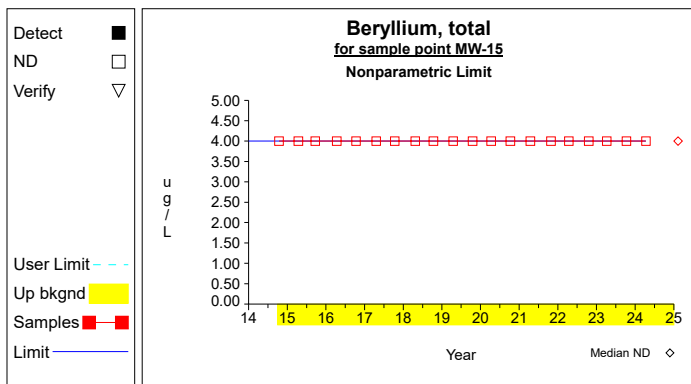
Graph 12



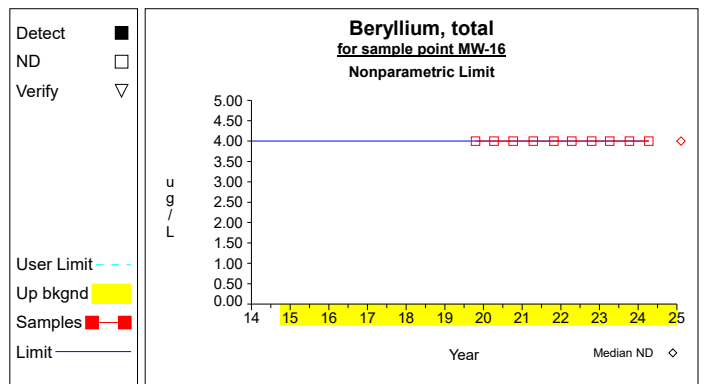
Graph 13



Graph 14

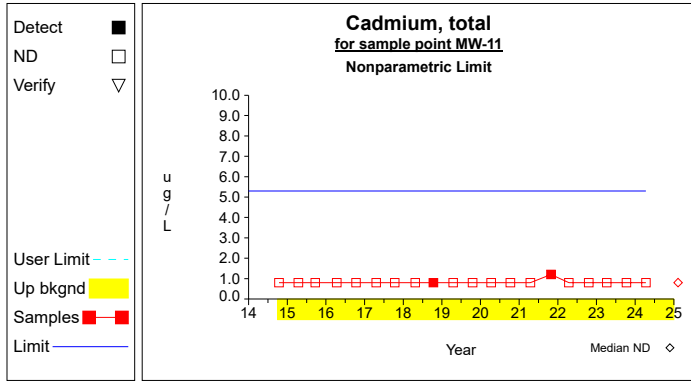


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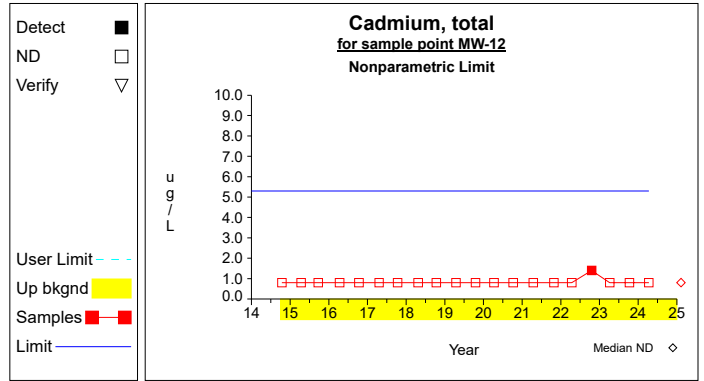


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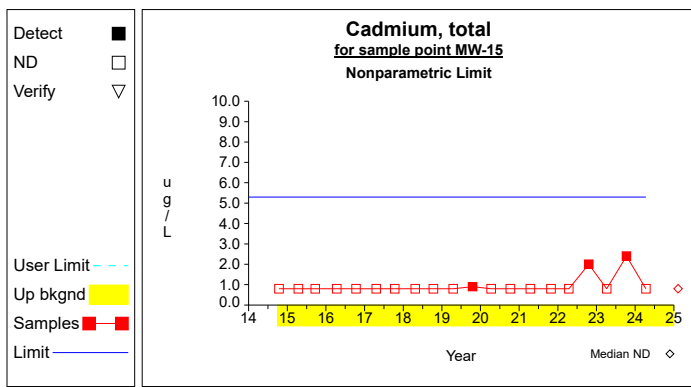
Up vs. Down Prediction Limits



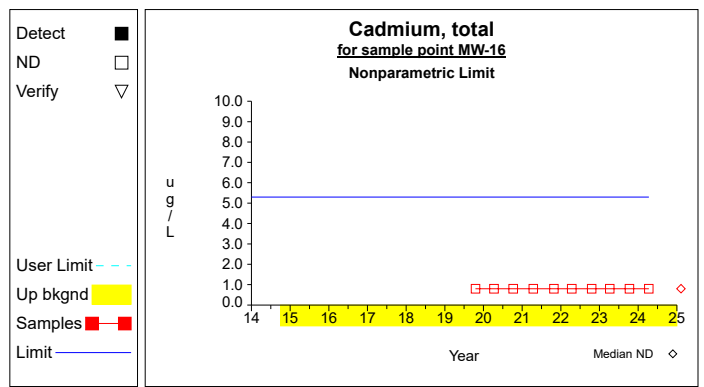
Graph 17



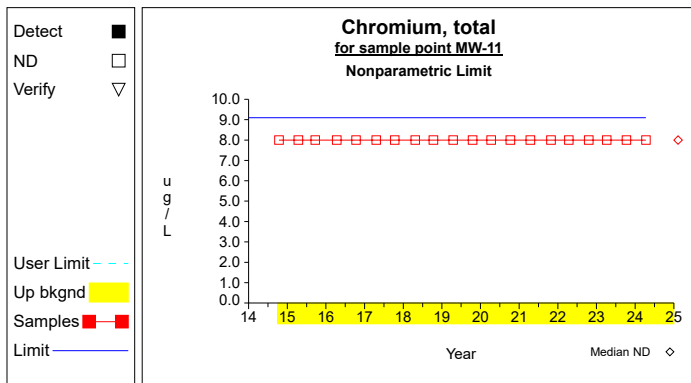
Graph 18



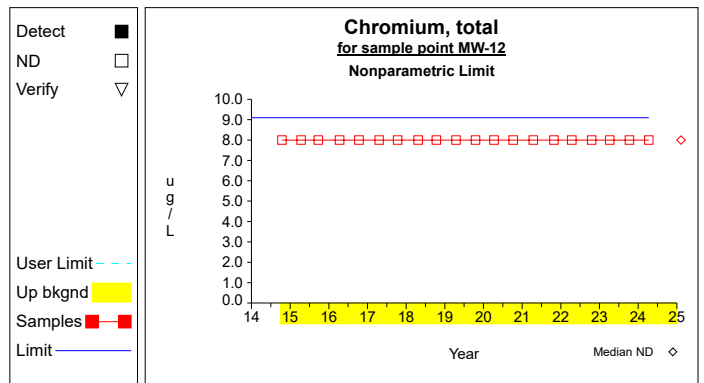
Graph 19



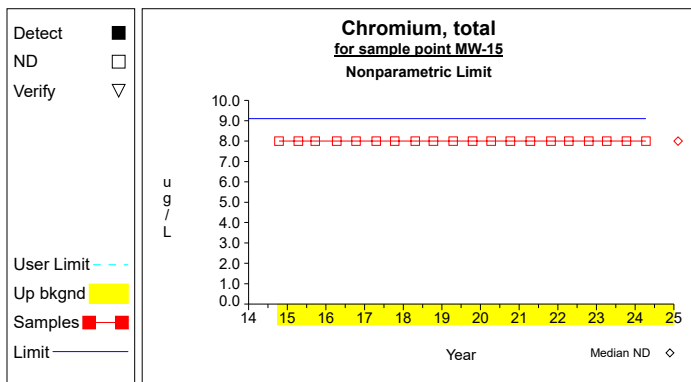
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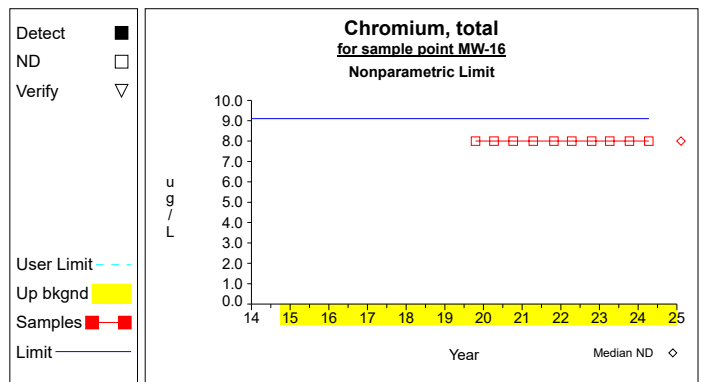
Graph 21



Graph 22

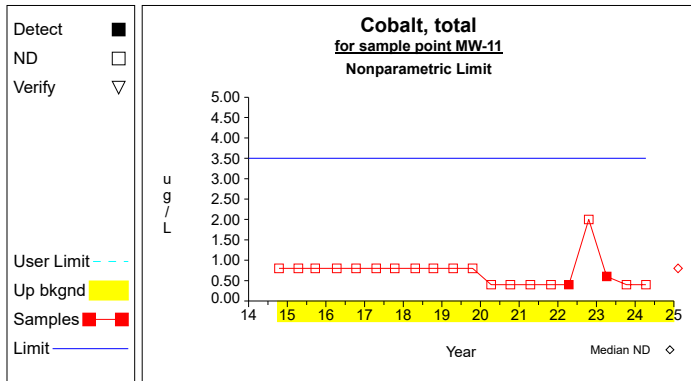


Graph 23

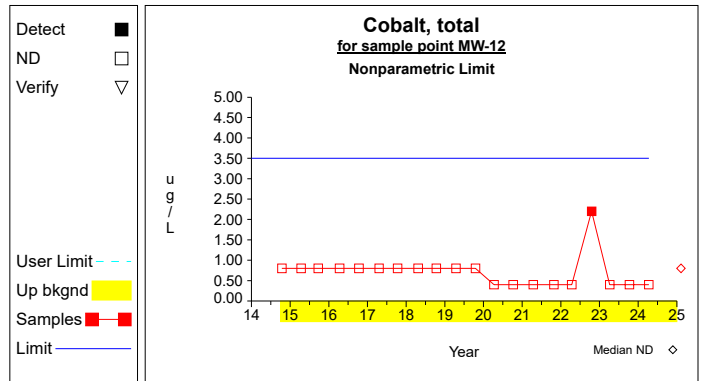


Graph 24

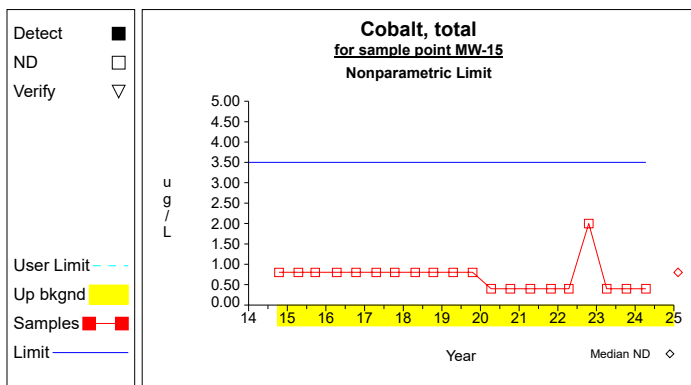
Up vs. Down Prediction Limits



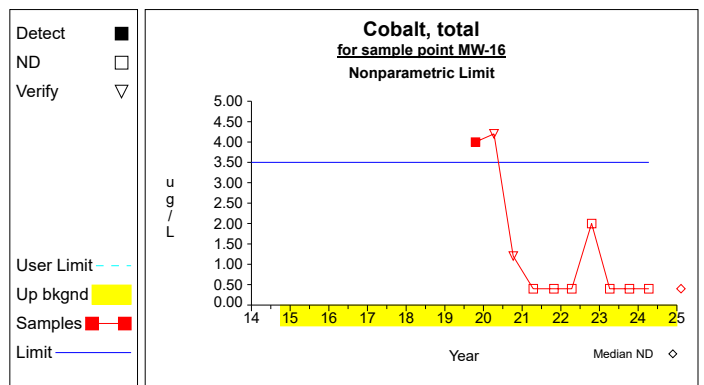
Graph 25



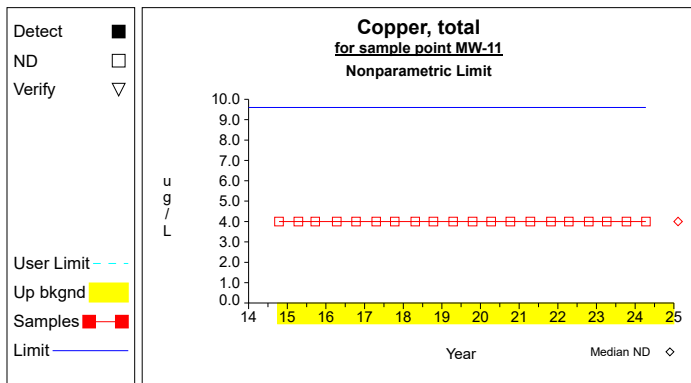
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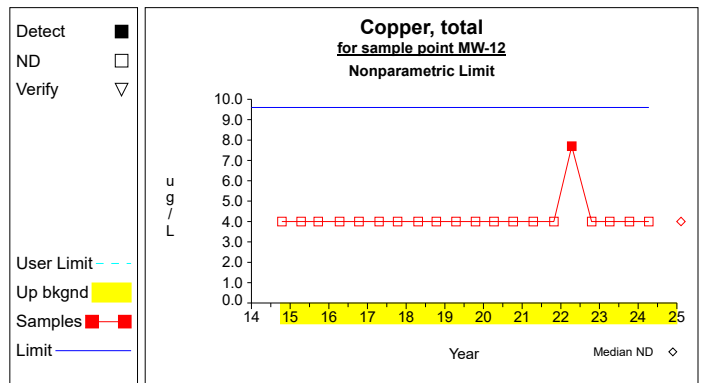
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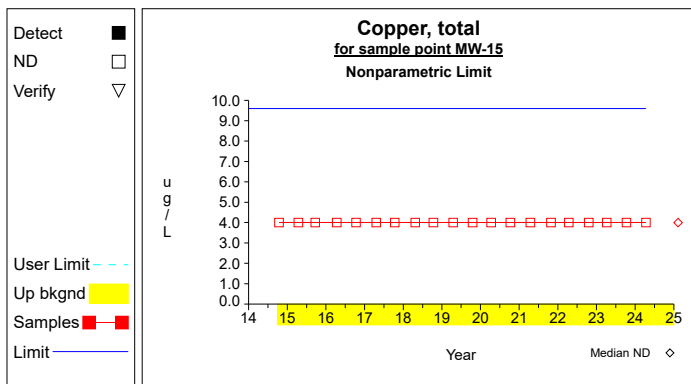
Graph 28



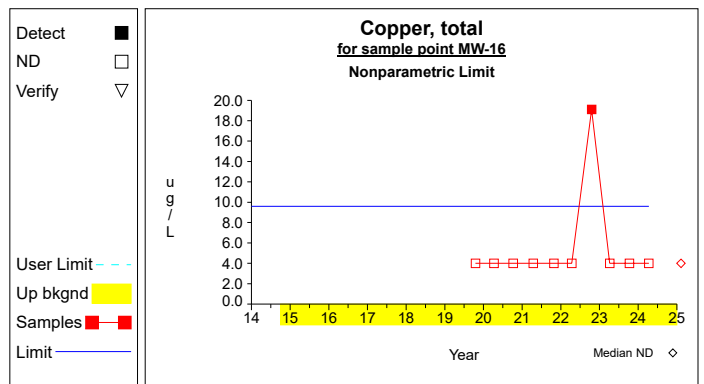
Graph 29



Graph 30

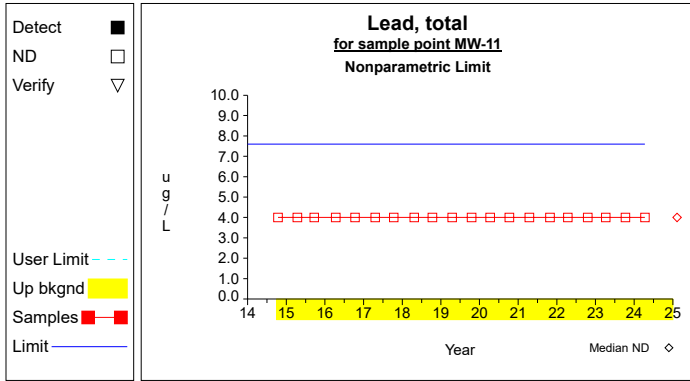


Graph 31

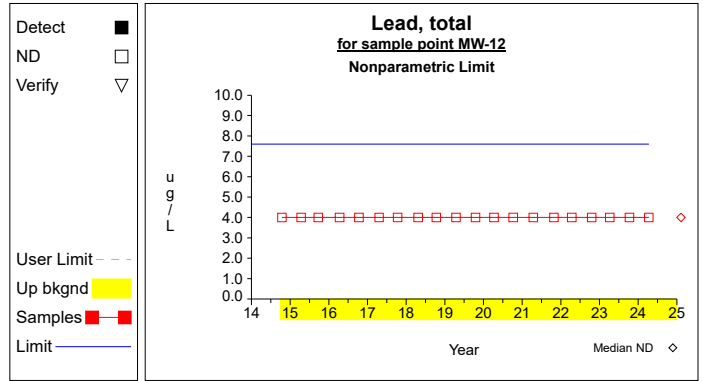


Graph 32

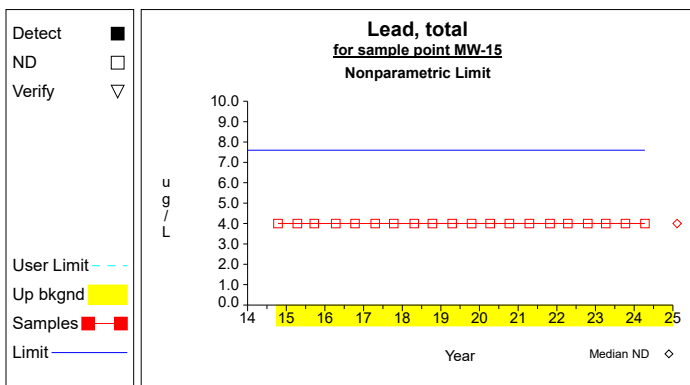
Up vs. Down Prediction Limits



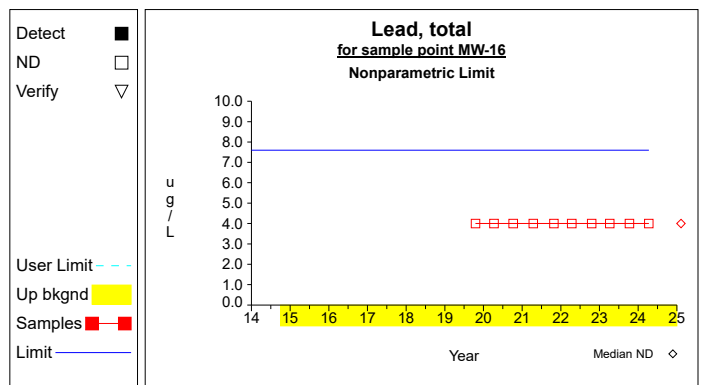
Graph 33



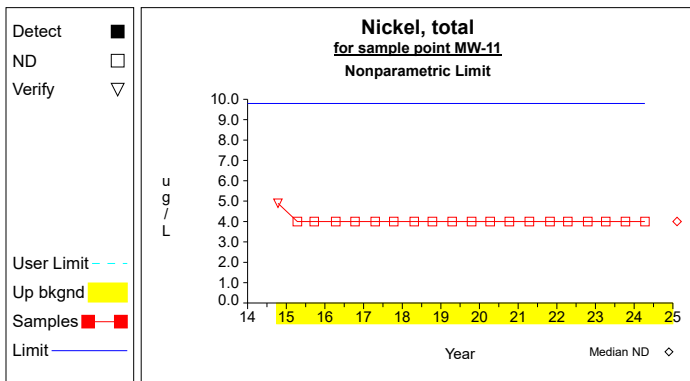
Graph 34



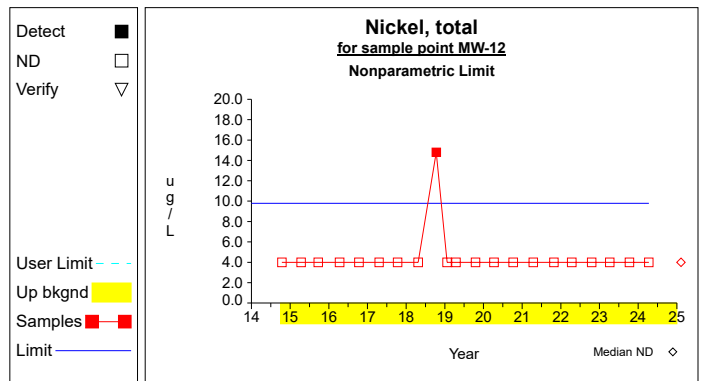
Graph 35



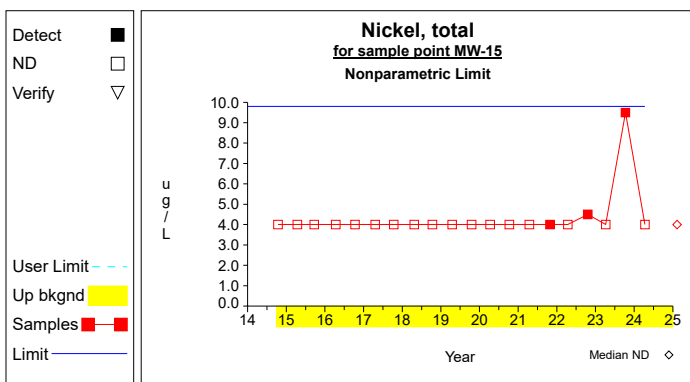
Graph 36



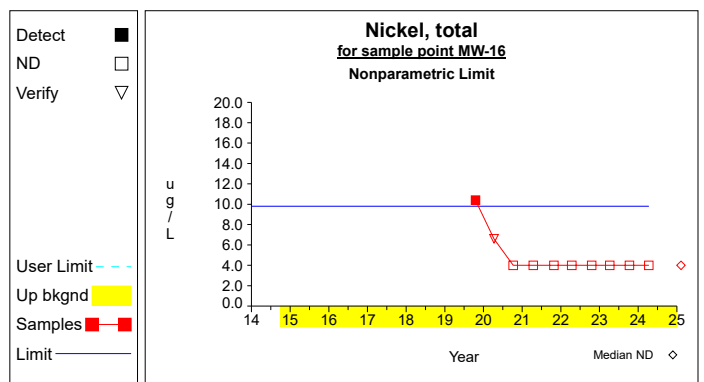
Graph 37



Graph 38

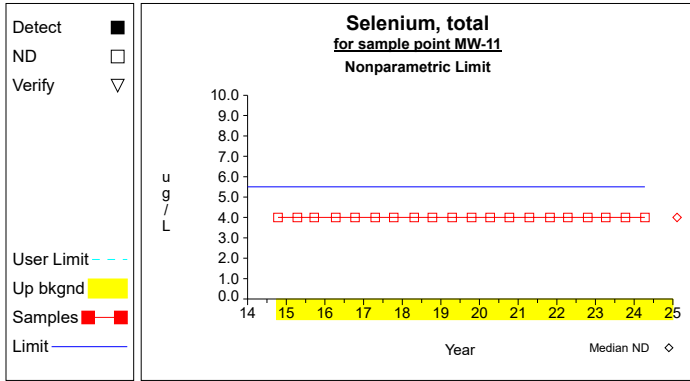


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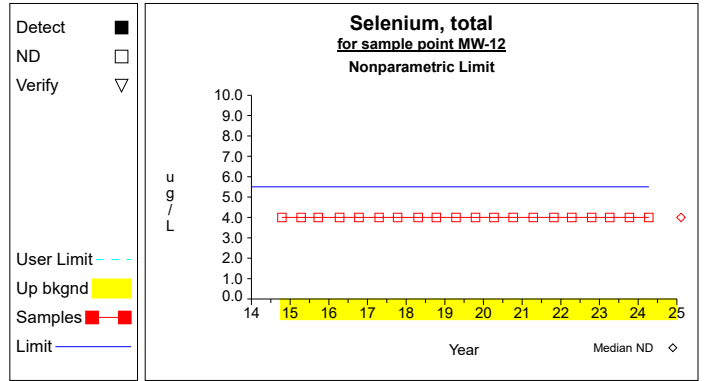


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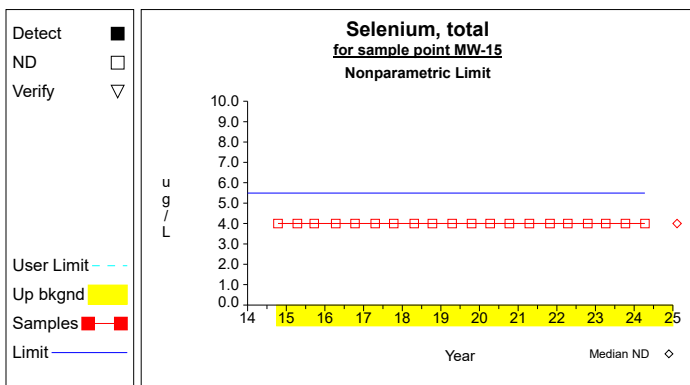
Up vs. Down Prediction Limits



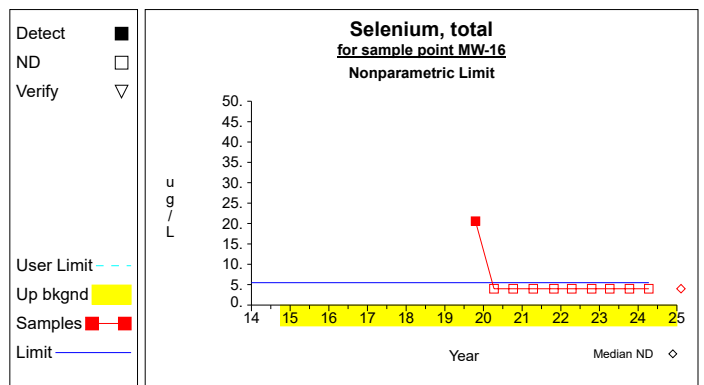
Graph 41



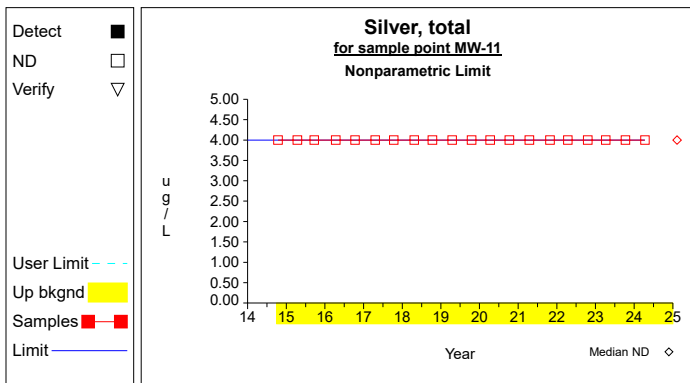
Graph 42



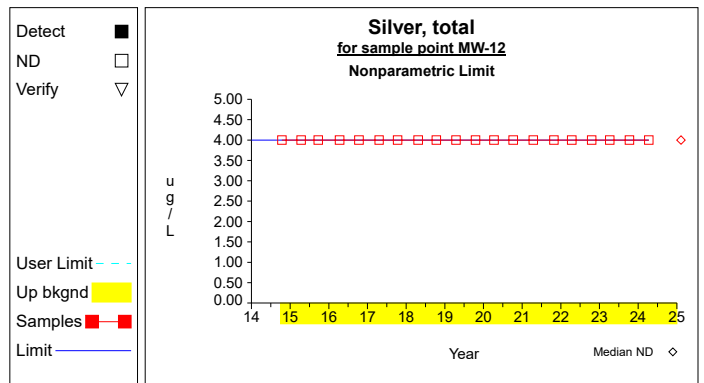
Graph 43



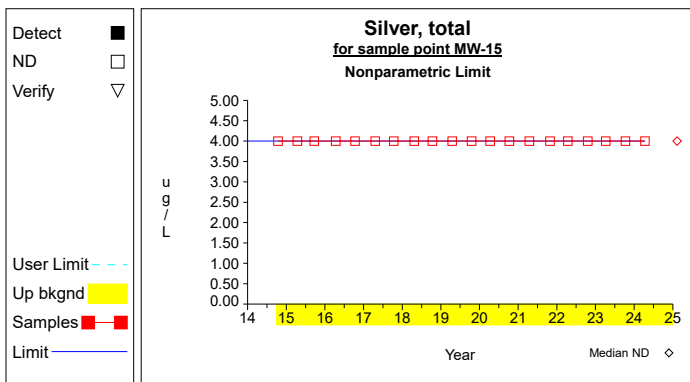
Graph 44



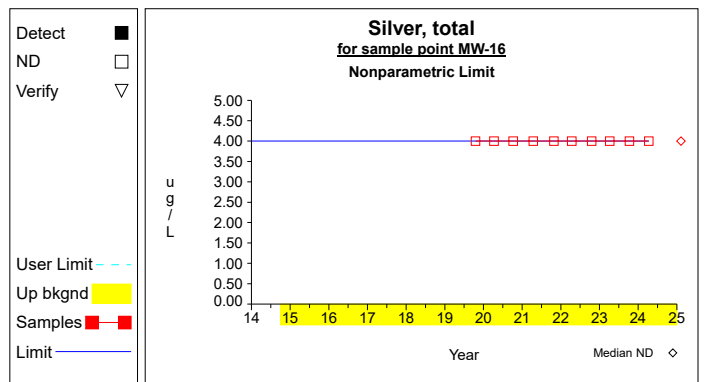
Graph 45



Graph 46

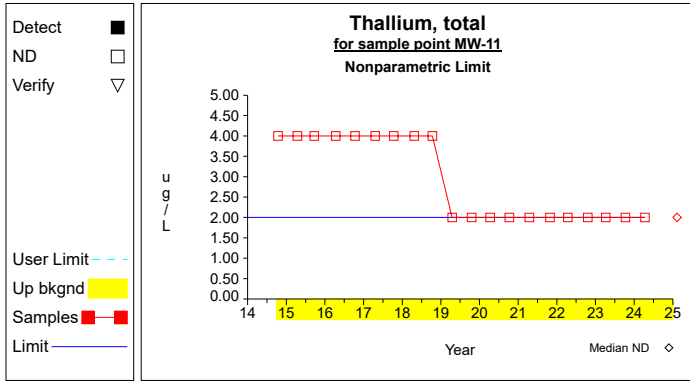


Graph 47

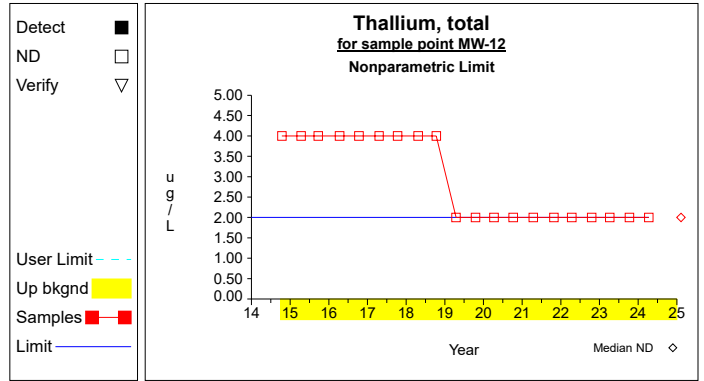


Graph 48

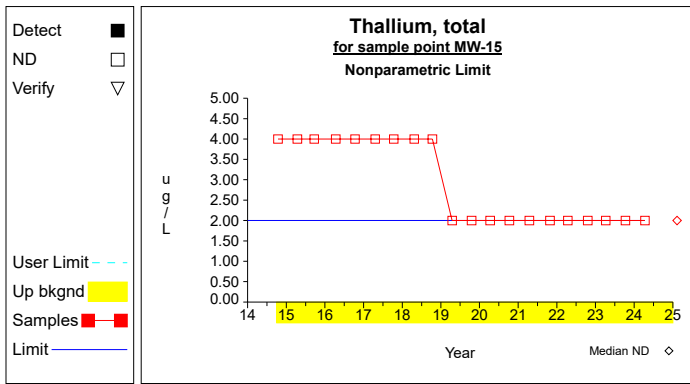
Up vs. Down Prediction Limits



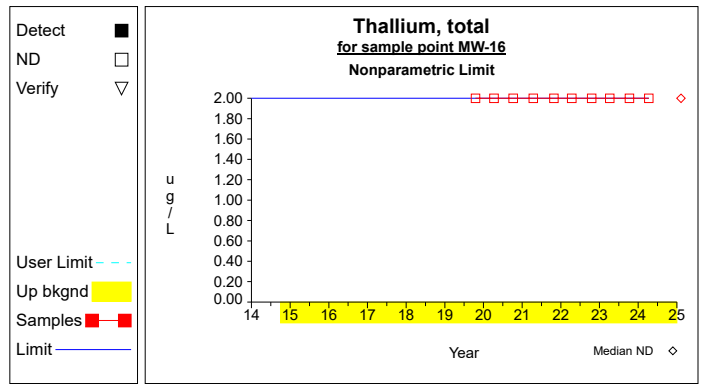
Graph 49



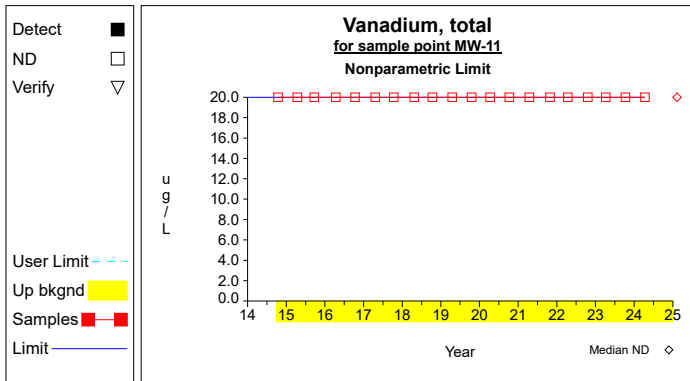
Graph 50



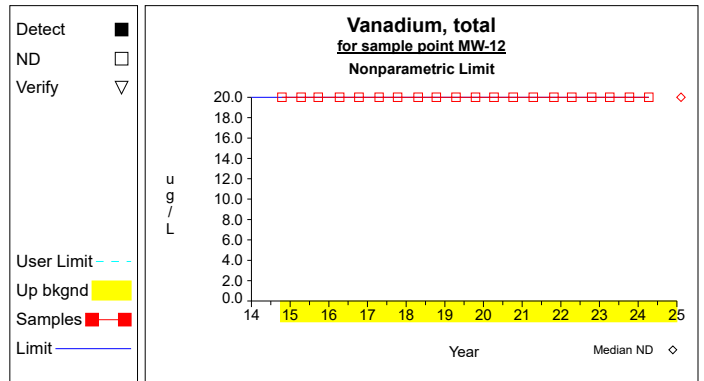
Graph 51



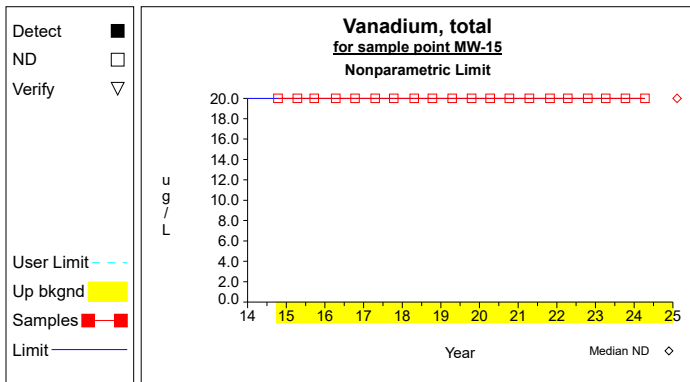
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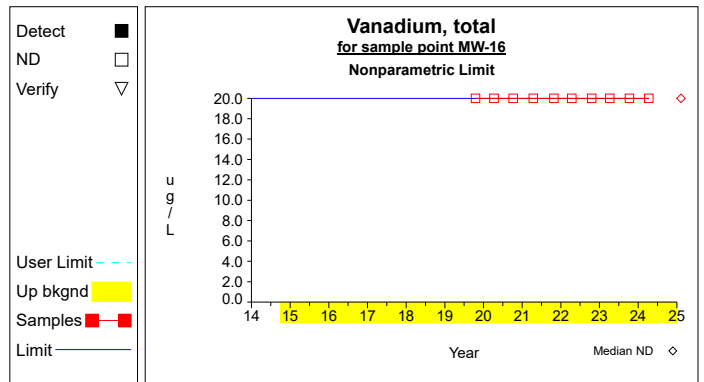
Graph 53



Graph 54

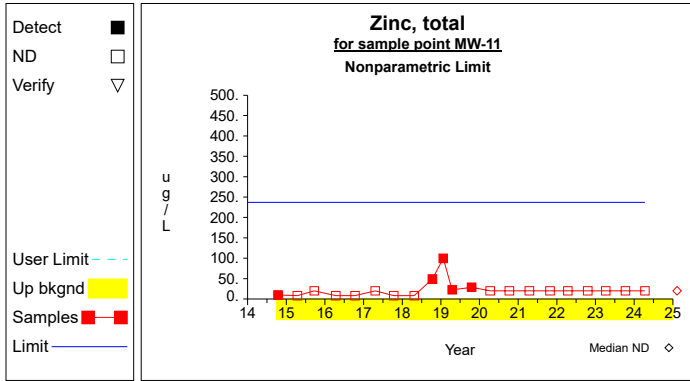


Graph 55

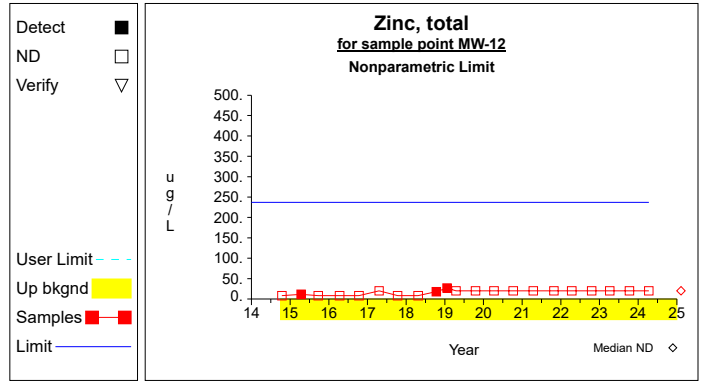


Graph 56

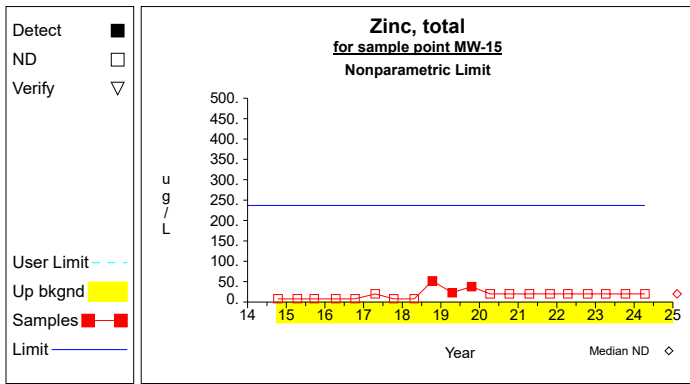
Up vs. Down Prediction Limits



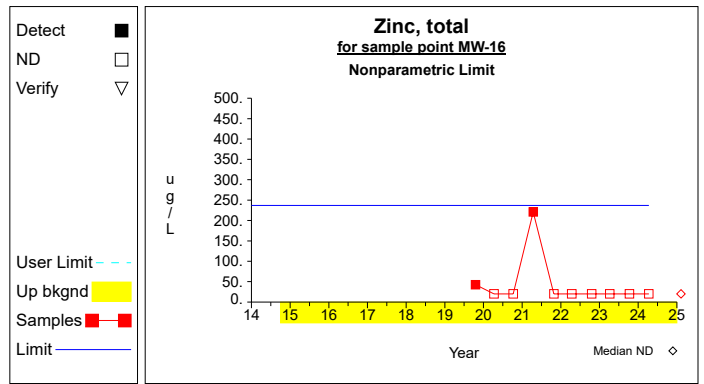
Graph 57



Graph 58

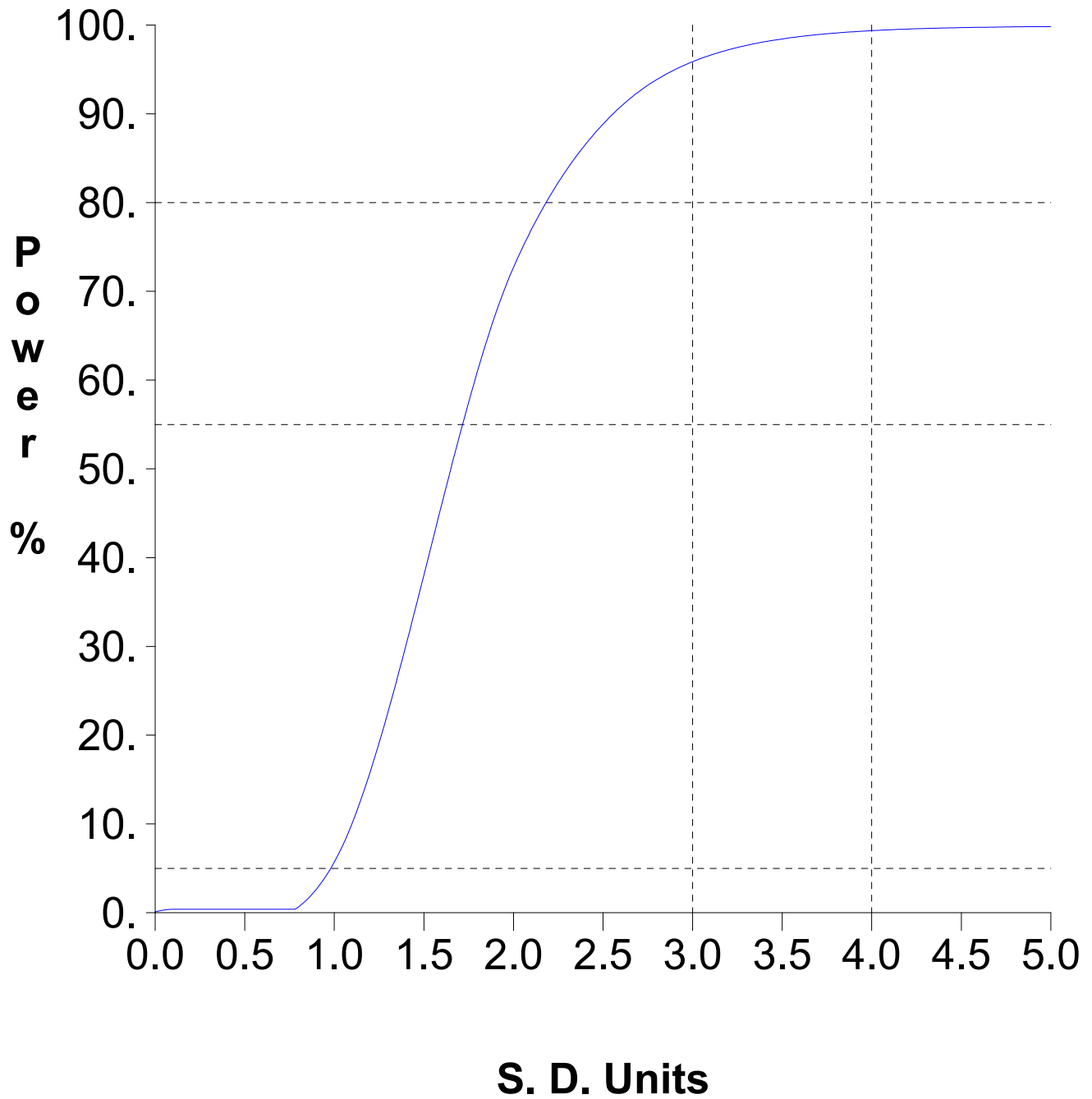


Graph 59



Graph 60

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



Attachment C

Historical Organic Compound Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
1,1-dichloropropene	MW-11	4/11/2024		3.5	1.0	ug/L
Diethyl phthalate	MW-11	4/08/2014		8	8	ug/L
Diethyl phthalate	MW-11	4/08/2014		8	8	ug/L
Methyl parathion	MW-11	10/14/2014		2.9	4	ug/L
Phorate	MW-11	10/14/2014		9	4	ug/L
Thionazin	MW-11	10/14/2014		5	4	ug/L
Trichloroethylene	MW-11	4/11/2024		3.3	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	4/16/2019		16	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	4/09/2020		16	6	ug/L
Acetone	MW-14	5/24/2010		44.9	10.0	ug/L
Acetone	MW-14	10/12/2017		11.8	10.0	ug/L
Toluene	MW-14	5/24/2010		3.2	1.0	ug/L
Xylenes, total	MW-14	5/24/2010		4.9	2.0	ug/L
1,1-dichloropropene	MW-15	4/11/2024		3.5	1.0	ug/L
Acetone	MW-15	10/12/2017		10.8	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/21/2013		50	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	4/14/2015		11	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/11/2016		19	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/12/2017		15	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/12/2018		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	4/16/2019		7	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/17/2019		7	6	ug/L
Trichloroethylene	MW-15	4/11/2024		3.3	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/08/2020		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/28/2021		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/19/2022		19	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/12/2017		35	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/17/2019		25	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/28/2021		12	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	4/13/2022		11	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-3	10/17/2019		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-4	4/23/2018		11	6	ug/L
Acetone	MW-5	10/12/2017		12.2	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	4/23/2018		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	7/05/2018		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	10/17/2019		10	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	4/06/2023		7	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-7	4/15/2009		10	8	ug/L
Acetone	MW-9	5/24/2010		45.1	10.0	ug/L
Acetone	MW-9	10/12/2017		11.2	10.0	ug/L
Toluene	MW-9	5/24/2010		3.6	1.0	ug/L
Xylenes, total	MW-9	5/24/2010		5.6	2.0	ug/L
2-butanone (mek)	SW-1	10/12/2018		7.7	5.0	ug/L
Acetone	SW-1	4/20/2017		15.7	10.0	ug/L
Acetone	SW-1	10/12/2018		27.2	10.0	ug/L
Phorate	SW-2	10/14/2014		4	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

GROUND WATER STATISTICS

FOR THE

FLOYD-MITCHELL-CHICKASAW COUNTIES

CLOSED SANITARY LANDFILL

First Semi-Annual Monitoring Event in 2024

Prepared for:
Floyd-Mitchell-Chickasaw Counties Solid Waste Management Agency
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May 2024

INTRODUCTION

This report summarizes the results of the statistical analysis used to evaluate the ground water quality data obtained during the first semi-annual monitoring event in 2024 at the Floyd-Mitchell-Chickasaw Counties Closed Sanitary Landfill near Elma, in Mitchell County, 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. Interwell statistics were used for comparisons of current data to background data at Floyd-Mitchell-Chickasaw Counties Closed Sanitary Landfill. The statistical plan conforms with IAC 567, Chapter 113.10 and the USEPA statistical guidance document (“*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance*”, March 2009).

Ground Water Monitoring Program

The groundwater monitoring network for Floyd-Mitchell-Chickasaw Counties Closed Sanitary Landfill includes detection sample points MW-2, MW-3, MW-6, and MW-7. Upgradient sample points along the western border of the Expansion Area include MW-9 and MW-14. Monitoring wells MW-4 and MW-5 were approved by the IDNR as additional background wells in the revised permit (August 2020). Each of the groundwater monitoring wells is to be sampled at least semiannually 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 first semi-annual monitoring event in 2024 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. Both of these methods were previously applied to the Floyd-Mitchell-Chickasaw Counties Closed Landfill data using the DUMPStat[®] statistical program. The Expansion Area upgradient wells have not been monitored regularly so there was insufficient background data available to do upgradient versus downgradient comparisons previously. 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-4, MW-5, MW-9, and MW-14 during the period from October 2014 through the current data. A summary of the background data from monitoring wells MW-4, MW-5, MW-9, and MW-14, 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 sample points MW-2, MW-3, MW-6, and MW-7 compared to the site prediction limits. Prediction limit

exceedances are flagged with asterisks. For the first semi-annual 2024 monitoring data, there were no site prediction limit exceedances detected.

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. Barium is detected at a frequency of 50% or greater in the upgradient wells so barium was tested for normality. The remainder of the metals are rarely detected (less than 50%) in the upgradient wells so nonparametric prediction limits were used in those cases.

Table 4 summarizes the results of the Shapiro-Wilk test. The background barium data has a normal distribution so barium uses a normal site prediction limit. 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 1% and the test becomes sensitive to 3 standard deviation unit increases over background.

Volatil Organic Compounds

Volatil 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.

There were no VOCs detected in the ground water at Floyd-Mitchell-Chickasaw Counties Landfill during the first semi-annual monitoring event in 2024. Historical VOC detections are summarized in Attachment C.

Attachment A

Summary of the Data obtained during the First Semi-Annual Monitoring Event in 2024

Table 1

Analytical Data Summary for 4/11/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
(3,4)-methylphenol	ug/L	<8			<8								
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<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	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<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	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L	3.5			3.5								
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L	<8			<8								
1,2,4-trichlorobenzene	ug/L	<1			<1								
1,2-dibromo-3-chloropropane	ug/L	<1	<5	<5	<1	<5	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L	<8			<8								
1,3,5-trinitrobenzene	ug/L	<8			<8								
1,3-dichlorobenzene	ug/L	<1			<1								
1,3-dichloropropane	ug/L	<1			<1								
1,3-dinitrobenzene	ug/L	<8			<8								
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L	<8			<8								
1,4-phenylenediamine	ug/L	<8			<8								
1-naphthylamine	ug/L	<8			<8								
2,2-dichloropropane	ug/L	<1			<1								
2,3,4,6-tetrachlorophenol	ug/L	<8			<8								
2,4,5-t	ug/L	<.5			<.5								
2,4,5-tp (silvex)	ug/L	<.5			<.5								
2,4,5-trichlorophenol	ug/L	<8			<8								
2,4,6-trichlorophenol	ug/L	<8			<8								
2,4-d	ug/L	<2			<2								
2,4-dichlorophenol	ug/L	<8			<8								
2,4-dimethylphenol	ug/L	<8			<8								
2,4-dinitrophenol	ug/L	<8			<8								
2,4-dinitrotoluene	ug/L	<8			<8								
2,6-dichlorophenol	ug/L	<8			<8								
2,6-dinitrotoluene	ug/L	<8			<8								
2-acetylaminofluorene	ug/L	<8			<8								
2-butanone (mek)	ug/L	<5	<10	<10	<5	<10	<10	<10	<10	<10	<10	<10	<10
2-chloronaphthalene	ug/L	<8			<8								
2-chlorophenol	ug/L	<8			<8								
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L	<8			<8								
2-methylphenol	ug/L	<8			<8								
2-naphthylamine	ug/L	<8			<8								
2-nitroaniline	ug/L	<8			<8								
2-nitrophenol	ug/L	<8			<8								
3,3'-dichlorobenzidine	ug/L	<8			<8								
3,3'-dimethylbenzidine	ug/L	<8			<8								
3-methylcholanthrene	ug/L	<8			<8								
3-nitroaniline	ug/L	<8			<8								
4,4'-ddd	ug/L	<.05			<.05								
4,4'-dde	ug/L	<.05			<.05								
4,4'-ddt	ug/L	<.05			<.05								
4,6-dinitro-2-methylphenol	ug/L	<8			<8								
4-aminobiphenyl	ug/L	<8			<8								
4-bromophenyl phenyl ether	ug/L	<8			<8								
4-chloro-3-methylphenol	ug/L	<8			<8								
4-chloroaniline	ug/L	<8			<8								
4-chlorophenyl phenyl ether	ug/L	<8			<8								
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L	<8			<8								
4-nitrophenol	ug/L	<8			<8								
5-nitro-o-toluidine	ug/L	<8			<8								
7,12-dimethylbenz(a)anthracene	ug/L	<8			<8								
Acenaphthene	ug/L	<8			<8								
Acenaphthylene	ug/L	<8			<8								
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile	ug/L	<10			<10								
Acetophenone	ug/L	<8			<8								
Acrolein	ug/L	<10			<10								
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin	ug/L	<.05			<.05								
Allyl chloride	ug/L	<1			<1								
Alpha-bhc	ug/L	<.05			<.05								
Anthracene	ug/L	<8			<8								

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

Table 1

Analytical Data Summary for 4/11/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L	<2			<2								
Arochlor 1221	ug/L	<2			<2								
Arochlor 1232	ug/L	<2			<2								
Arochlor 1242	ug/L	<2			<2								
Arochlor 1248	ug/L	<2			<2								
Arochlor 1254	ug/L	<2			<2								
Arochlor 1260	ug/L	<2			<2								
Arsenic, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	4.3	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene	ug/L	<8			<8								
Barium, total	ug/L	16.0	135.0	114.0	18.1	39.1	33.9	96.4	33.4	71.7	21.8	19.8	95.5
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	<8			<8								
Benzo(a)pyrene	ug/L	<8			<8								
Benzo(b)fluoranthene	ug/L	<8			<8								
Benzo(g,h,i)perylene	ug/L	<8			<8								
Benzo(k)fluoranthene	ug/L	<8			<8								
Benzyl alcohol	ug/L	<8			<8								
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc	ug/L	<.05			<.05								
Bis (2-chloroethoxy) methane	ug/L	<8			<8								
Bis(2-chloroethyl) ether	ug/L	<8			<8								
Bis(2-chloroisopropyl) ether	ug/L	<8			<8								
Bis(2-ethylhexyl) phthalate	ug/L	<6			<6								
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L	<8			<8								
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L	<.1			<.1								
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L	<8			<8								
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L	<1			<1								
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene	ug/L	<8			<8								
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.4	<.4	<.4	<.4	<.4	2.3	<.4	<.4	<.4	<.4	<.4	<.4
Copper, total	ug/L	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4
Cyanide, total	mg/L	<.005			<.005								
Delta-bhc	ug/L	<.05			<.05								
Diallate	ug/L	<8			<8								
Dibenzo(a,h)anthracene	ug/L	<8			<8								
Dibenzofuran	ug/L	<8			<8								
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1			<1								
Dieldrin	ug/L	<.05			<.05								
Diethyl phthalate	ug/L	<8			<8								
Dimethoate	ug/L	<.4			<.4								
Dimethylphthalate	ug/L	<8			<8								
Di-n-butyl phthalate	ug/L	<8			<8								
Di-n-octyl phthalate	ug/L	<8			<8								
Dinoseb	ug/L	<.5			<.5								
Diphenylamine	ug/L	<8			<8								
Disulfoton	ug/L	<.4			<.4								
Endosulfan i	ug/L	<.05			<.05								
Endosulfan ii	ug/L	<.05			<.05								
Endosulfan sulfate	ug/L	<.05			<.05								
Endrin	ug/L	<.05			<.05								
Endrin aldehyde	ug/L	<.05			<.05								
Ethyl methacrylate	ug/L	<10			<10								
Ethyl methanesulfonate	ug/L	<8			<8								
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur	ug/L	<.4			<.4								
Fluoranthene	ug/L	<8			<8								
Fluorene	ug/L	<8			<8								
Gamma-bhc (lindane)	ug/L	<.05			<.05								
Heptachlor	ug/L	<.05			<.05								
Heptachlor epoxide	ug/L	<.05			<.05								
Hexachlorobenzene	ug/L	<.05			<.05								

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

Table 1

Analytical Data Summary for 4/11/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
Hexachlorobutadiene	ug/L	<8			<8								
Hexachlorocyclopentadiene	ug/L	<8			<8								
Hexachloroethane	ug/L	<8			<8								
Hexachloropropene	ug/L	<8			<8								
Indeno(1,2,3-cd)pyrene	ug/L	<8			<8								
Isobutanol	mg/L	<1			<1								
Isodrin	ug/L	<8			<8								
Isophorone	ug/L	<8			<8								
Isosafrole	ug/L	<8			<8								
Kepone	ug/L	<8			<8								
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, total	ug/L	<.5			<.5								
Methacrylonitrile	ug/L	<1			<1								
Methapyrilene	ug/L	<8			<8								
Methoxychlor	ug/L	<.05			<.05								
Methyl iodide	ug/L	<2	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate	ug/L	<1			<1								
Methyl methanesulfonate	ug/L	<8			<8								
Methyl parathion	ug/L	<.4			<.4								
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L	<8			<8								
Nickel, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Nitrobenzene	ug/L	<8			<8								
N-nitrosodiethylamine	ug/L	<8			<8								
N-nitrosodimethylamine	ug/L	<8			<8								
N-nitrosodi-n-butylamine	ug/L	<8			<8								
N-nitroso-di-n-propylamine	ug/L	<8			<8								
N-nitrosodiphenylamine	ug/L	<8			<8								
N-nitrosomethylethylamine	ug/L	<8			<8								
N-nitrosopiperidine	ug/L	<8			<8								
N-nitrosopyrrolidine	ug/L	<8			<8								
O,o,o-triethyl phosphorothioate	ug/L	<.4			<.4								
O-toluidine	ug/L	<8			<8								
Parathion	ug/L	<.4			<.4								
P-dimethylaminoazobenzene	ug/L	<8			<8								
Pentachlorobenzene	ug/L	<8			<8								
Pentachloronitrobenzene (pcnb)	ug/L	<8			<8								
Pentachlorophenol	ug/L	<8			<8								
Phenacetin	ug/L	<8			<8								
Phenanthrene	ug/L	<8			<8								
Phenol	ug/L	<8			<8								
Phorate	ug/L	<.4			<.4								
Pronamide	ug/L	<8			<8								
Propionitrile	ug/L	<10			<10								
Pyrene	ug/L	<8			<8								
Safrole	ug/L	<8			<8								
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L	<.15			<.15								
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Thionazin	ug/L	<.4			<.4								
Tin, total	ug/L	<20			<20								
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L	<.2			<.2								
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<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	<5	<5	<5
Trichloroethylene	ug/L	3.3	<1.0	<1.0	3.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20

* - 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-14	10/14/2014		2.5000	
Antimony, total	ug/L	MW-14	01/12/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	04/13/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	07/21/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	09/23/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-14	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-14	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-14	10/12/2017	ND	2.0000	
Antimony, total	ug/L	MW-14	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-14	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-14	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-14	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-14	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-14	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-14	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-14	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-14	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-14	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-14	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-14	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-14	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-4	10/14/2014	ND	2.0000	
Antimony, total	ug/L	MW-4	04/13/2015	ND	2.0000	
Antimony, total	ug/L	MW-4	09/23/2015	ND	2.0000	
Antimony, total	ug/L	MW-4	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-4	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-4	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-4	10/12/2017	ND	2.0000	
Antimony, total	ug/L	MW-4	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-4	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-4	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-4	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-4	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-4	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-4	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-4	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-4	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-4	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-4	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-4	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-4	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-5	10/14/2014	ND	2.0000	
Antimony, total	ug/L	MW-5	04/13/2015	ND	2.0000	
Antimony, total	ug/L	MW-5	09/23/2015	ND	2.0000	
Antimony, total	ug/L	MW-5	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-5	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-5	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-5	10/12/2017	ND	2.0000	
Antimony, total	ug/L	MW-5	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-5	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-5	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-5	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-5	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-5	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-5	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-5	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-5	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-5	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-5	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-5	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-5	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-9	10/14/2014	ND	2.0000	
Antimony, total	ug/L	MW-9	01/12/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	04/14/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	07/21/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	09/22/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-9	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-9	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-9	10/12/2017	ND	2.0000	
Antimony, total	ug/L	MW-9	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-9	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-9	04/16/2019	ND	2.0000	

* - 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	
Antimony, total	ug/L	MW-9	10/17/2019	ND	2.0000		
Antimony, total	ug/L	MW-9	04/09/2020	ND	2.0000		
Antimony, total	ug/L	MW-9	10/08/2020	ND	2.0000		
Antimony, total	ug/L	MW-9	04/15/2021	ND	2.0000		
Antimony, total	ug/L	MW-9	10/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-9	04/13/2022	ND	2.0000		
Antimony, total	ug/L	MW-9	10/19/2022	ND	2.0000		
Antimony, total	ug/L	MW-9	04/06/2023	ND	2.0000		
Antimony, total	ug/L	MW-9	10/10/2023	ND	2.0000		
Antimony, total	ug/L	MW-9	04/11/2024	ND	2.0000		
Arsenic, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Arsenic, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/13/2015	ND	4.0000		
Arsenic, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Arsenic, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/11/2016	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/19/2022	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Arsenic, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Arsenic, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/14/2014	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Arsenic, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/20/2017	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/23/2018	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/12/2018	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/16/2019	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/17/2019	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/08/2020	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/15/2021	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/13/2022	ND	4.0000		
Arsenic, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/06/2023	ND	4.5000		
Arsenic, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Arsenic, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/14/2014	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Arsenic, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/11/2016	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/20/2017	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/12/2017	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/23/2018	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/12/2018	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/16/2019	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/17/2019	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/08/2020	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/15/2021	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/13/2022	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/19/2022	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/06/2023	ND	4.0000		
Arsenic, total	ug/L	MW-5	10/10/2023	ND	4.0000		
Arsenic, total	ug/L	MW-5	04/11/2024	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/14/2014	ND	4.0000		
Arsenic, total	ug/L	MW-9	01/12/2015	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	
Arsenic, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Arsenic, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/22/2015	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/12/2016	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/11/2016	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/20/2017	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/12/2017	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/23/2018	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/12/2018	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/16/2019	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/17/2019	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/08/2020	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/15/2021	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Barium, total	ug/L	MW-14	10/14/2014		184.0000		
Barium, total	ug/L	MW-14	01/12/2015		169.0000		
Barium, total	ug/L	MW-14	04/13/2015		143.0000		
Barium, total	ug/L	MW-14	07/21/2015		141.0000		
Barium, total	ug/L	MW-14	09/23/2015		185.0000		
Barium, total	ug/L	MW-14	04/12/2016		121.0000		
Barium, total	ug/L	MW-14	10/11/2016		125.0000		
Barium, total	ug/L	MW-14	04/20/2017		140.0000		
Barium, total	ug/L	MW-14	10/12/2017		170.0000		
Barium, total	ug/L	MW-14	04/23/2018		126.0000		
Barium, total	ug/L	MW-14	10/12/2018		128.0000		
Barium, total	ug/L	MW-14	04/16/2019		114.0000		
Barium, total	ug/L	MW-14	10/17/2019		155.0000		
Barium, total	ug/L	MW-14	04/09/2020		117.0000		
Barium, total	ug/L	MW-14	10/08/2020		137.0000		
Barium, total	ug/L	MW-14	04/15/2021		120.0000		
Barium, total	ug/L	MW-14	10/28/2021		102.0000		
Barium, total	ug/L	MW-14	04/13/2022		107.0000		
Barium, total	ug/L	MW-14	10/19/2022		133.0000		
Barium, total	ug/L	MW-14	04/06/2023		117.0000		
Barium, total	ug/L	MW-14	10/10/2023		140.0000		
Barium, total	ug/L	MW-14	04/11/2024		114.0000		
Barium, total	ug/L	MW-4	10/14/2014		141.0000		
Barium, total	ug/L	MW-4	04/13/2015		103.0000		
Barium, total	ug/L	MW-4	09/23/2015		92.5000		
Barium, total	ug/L	MW-4	04/12/2016		66.2000		
Barium, total	ug/L	MW-4	10/11/2016		77.7000		
Barium, total	ug/L	MW-4	04/20/2017		128.0000		
Barium, total	ug/L	MW-4	10/12/2017		83.8000		
Barium, total	ug/L	MW-4	04/23/2018		116.0000		
Barium, total	ug/L	MW-4	10/12/2018		111.0000		
Barium, total	ug/L	MW-4	04/16/2019		71.2000		
Barium, total	ug/L	MW-4	10/17/2019		137.0000		
Barium, total	ug/L	MW-4	04/09/2020		65.3000		
Barium, total	ug/L	MW-4	10/08/2020		75.2000		
Barium, total	ug/L	MW-4	04/15/2021		49.6000		
Barium, total	ug/L	MW-4	10/28/2021		73.2000		
Barium, total	ug/L	MW-4	04/13/2022		63.6000		
Barium, total	ug/L	MW-4	10/19/2022		81.8000		
Barium, total	ug/L	MW-4	04/06/2023		162.0000		
Barium, total	ug/L	MW-4	10/10/2023		67.4000		
Barium, total	ug/L	MW-4	04/11/2024		33.4000		
Barium, total	ug/L	MW-5	10/14/2014		251.0000		
Barium, total	ug/L	MW-5	04/13/2015		272.0000		
Barium, total	ug/L	MW-5	09/23/2015		330.0000		
Barium, total	ug/L	MW-5	11/24/2015		328.0000		
Barium, total	ug/L	MW-5	04/12/2016		167.0000		
Barium, total	ug/L	MW-5	10/11/2016		262.0000		
Barium, total	ug/L	MW-5	04/20/2017		338.0000		
Barium, total	ug/L	MW-5	10/12/2017		276.0000		
Barium, total	ug/L	MW-5	04/23/2018		206.0000		
Barium, total	ug/L	MW-5	10/12/2018		212.0000		
Barium, total	ug/L	MW-5	04/16/2019		193.0000		
Barium, total	ug/L	MW-5	10/17/2019		296.0000		

* - 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	
Barium, total	ug/L	MW-5	04/09/2020		268.0000		
Barium, total	ug/L	MW-5	10/08/2020		268.0000		
Barium, total	ug/L	MW-5	04/15/2021		71.8000		*
Barium, total	ug/L	MW-5	10/28/2021		175.0000		
Barium, total	ug/L	MW-5	04/13/2022		180.0000		
Barium, total	ug/L	MW-5	10/19/2022		250.0000		
Barium, total	ug/L	MW-5	04/06/2023		206.0000		
Barium, total	ug/L	MW-5	10/10/2023		202.0000		
Barium, total	ug/L	MW-5	04/11/2024		71.7000		*
Barium, total	ug/L	MW-9	10/14/2014		114.0000		
Barium, total	ug/L	MW-9	01/12/2015		115.0000		
Barium, total	ug/L	MW-9	04/14/2015		138.0000		
Barium, total	ug/L	MW-9	07/21/2015		111.0000		
Barium, total	ug/L	MW-9	09/22/2015		114.0000		
Barium, total	ug/L	MW-9	04/12/2016		99.2000		
Barium, total	ug/L	MW-9	10/11/2016		106.0000		
Barium, total	ug/L	MW-9	04/20/2017		116.0000		
Barium, total	ug/L	MW-9	10/12/2017		105.0000		
Barium, total	ug/L	MW-9	04/23/2018		110.0000		
Barium, total	ug/L	MW-9	10/12/2018		106.0000		
Barium, total	ug/L	MW-9	04/16/2019		106.0000		
Barium, total	ug/L	MW-9	10/17/2019		113.0000		
Barium, total	ug/L	MW-9	04/09/2020		93.9000		
Barium, total	ug/L	MW-9	10/08/2020		98.7000		
Barium, total	ug/L	MW-9	04/15/2021		93.2000		
Barium, total	ug/L	MW-9	10/28/2021		91.9000		
Barium, total	ug/L	MW-9	04/13/2022		105.0000		
Barium, total	ug/L	MW-9	10/19/2022		102.0000		
Barium, total	ug/L	MW-9	04/06/2023		96.1000		
Barium, total	ug/L	MW-9	10/10/2023		89.8000		
Barium, total	ug/L	MW-9	04/11/2024		95.5000		
Beryllium, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Beryllium, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/13/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/11/2016	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/19/2022	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/14/2014	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Beryllium, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/20/2017	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/23/2018	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/12/2018	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/16/2019	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/17/2019	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/08/2020	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/15/2021	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/13/2022	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/06/2023	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Beryllium, total	ug/L	MW-5	10/14/2014	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
Beryllium, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Beryllium, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Beryllium, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Cadmium, total	ug/L	MW-14	10/14/2014	ND	0.8000	
Cadmium, total	ug/L	MW-14	01/12/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/13/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	07/21/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	09/23/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/12/2016	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/11/2016	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/20/2017	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/12/2017	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/23/2018	ND	5.3000	
Cadmium, total	ug/L	MW-14	10/12/2018	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/16/2019	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/17/2019	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/09/2020	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/08/2020	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/15/2021	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/28/2021	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/13/2022	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/19/2022	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/06/2023	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/10/2023	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/11/2024	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/14/2014	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/13/2015	ND	0.8000	
Cadmium, total	ug/L	MW-4	09/23/2015	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/12/2016	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/11/2016	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/20/2017	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/12/2017	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/23/2018	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/12/2018	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/16/2019	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/17/2019	ND	0.8000	

* - 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	
Cadmium, total	ug/L	MW-4	04/09/2020	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/08/2020	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/15/2021	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/13/2022	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/19/2022	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/06/2023	ND	0.8000		
Cadmium, total	ug/L	MW-4	10/10/2023	ND	0.8000		
Cadmium, total	ug/L	MW-4	04/11/2024	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/14/2014	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/13/2015	ND	0.8000		
Cadmium, total	ug/L	MW-5	09/23/2015	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/12/2016	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/11/2016	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/20/2017	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/12/2017	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/23/2018	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/12/2018	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/16/2019	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/17/2019	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/09/2020	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/08/2020	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/15/2021	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/13/2022	ND	0.8000		
Cadmium, total	ug/L	MW-5	10/19/2022	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/06/2023	ND	1.1000		
Cadmium, total	ug/L	MW-5	10/10/2023	ND	0.8000		
Cadmium, total	ug/L	MW-5	04/11/2024	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/14/2014	ND	0.8000		
Cadmium, total	ug/L	MW-9	01/12/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/14/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	07/21/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/22/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/12/2016	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/11/2016	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/20/2017	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/12/2017	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/23/2018	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/12/2018	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/16/2019	ND	1.2000		
Cadmium, total	ug/L	MW-9	10/17/2019	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/09/2020	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/08/2020	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/15/2021	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/13/2022	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/19/2022	ND	1.3000		
Cadmium, total	ug/L	MW-9	04/06/2023	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/10/2023	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/11/2024	ND	0.8000		
Chromium, total	ug/L	MW-14	10/14/2014	ND	8.0000		
Chromium, total	ug/L	MW-14	01/12/2015	ND	8.0000		
Chromium, total	ug/L	MW-14	04/13/2015	ND	8.0000		
Chromium, total	ug/L	MW-14	07/21/2015	ND	8.0000		
Chromium, total	ug/L	MW-14	09/23/2015	ND	8.0000		
Chromium, total	ug/L	MW-14	04/12/2016	ND	8.0000		
Chromium, total	ug/L	MW-14	10/11/2016	ND	8.0000		
Chromium, total	ug/L	MW-14	04/20/2017	ND	8.0000		
Chromium, total	ug/L	MW-14	10/12/2017	ND	8.0000		
Chromium, total	ug/L	MW-14	04/23/2018	ND	8.0000		
Chromium, total	ug/L	MW-14	10/12/2018	ND	8.0000		
Chromium, total	ug/L	MW-14	04/16/2019	ND	8.0000		
Chromium, total	ug/L	MW-14	10/17/2019	ND	8.0000		
Chromium, total	ug/L	MW-14	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-14	10/08/2020	ND	8.0000		
Chromium, total	ug/L	MW-14	04/15/2021	ND	8.0000		
Chromium, total	ug/L	MW-14	10/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-14	04/13/2022	ND	8.0000		
Chromium, total	ug/L	MW-14	10/19/2022	ND	8.0000		
Chromium, total	ug/L	MW-14	04/06/2023	ND	8.0000		
Chromium, total	ug/L	MW-14	10/10/2023	ND	8.0000		
Chromium, total	ug/L	MW-14	04/11/2024	ND	8.0000		
Chromium, total	ug/L	MW-4	10/14/2014	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	
Chromium, total	ug/L	MW-4	04/13/2015	ND	8.0000		
Chromium, total	ug/L	MW-4	09/23/2015	ND	8.0000		
Chromium, total	ug/L	MW-4	04/12/2016	ND	8.0000		
Chromium, total	ug/L	MW-4	10/11/2016	ND	8.0000		
Chromium, total	ug/L	MW-4	04/20/2017		9.1000		
Chromium, total	ug/L	MW-4	10/12/2017	ND	8.0000		
Chromium, total	ug/L	MW-4	04/23/2018	ND	8.0000		
Chromium, total	ug/L	MW-4	10/12/2018	ND	8.0000		
Chromium, total	ug/L	MW-4	04/16/2019	ND	8.0000		
Chromium, total	ug/L	MW-4	10/17/2019	ND	8.0000		
Chromium, total	ug/L	MW-4	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-4	10/08/2020	ND	8.0000		
Chromium, total	ug/L	MW-4	04/15/2021	ND	8.0000		
Chromium, total	ug/L	MW-4	10/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-4	04/13/2022	ND	8.0000		
Chromium, total	ug/L	MW-4	10/19/2022	ND	8.0000		
Chromium, total	ug/L	MW-4	04/06/2023		8.3000		
Chromium, total	ug/L	MW-4	10/10/2023	ND	8.0000		
Chromium, total	ug/L	MW-4	04/11/2024	ND	8.0000		
Chromium, total	ug/L	MW-5	10/14/2014	ND	8.0000		
Chromium, total	ug/L	MW-5	04/13/2015	ND	8.0000		
Chromium, total	ug/L	MW-5	09/23/2015	ND	8.0000		
Chromium, total	ug/L	MW-5	04/12/2016	ND	8.0000		
Chromium, total	ug/L	MW-5	10/11/2016	ND	8.0000		
Chromium, total	ug/L	MW-5	04/20/2017	ND	8.0000		
Chromium, total	ug/L	MW-5	10/12/2017	ND	8.0000		
Chromium, total	ug/L	MW-5	04/23/2018	ND	8.0000		
Chromium, total	ug/L	MW-5	10/12/2018	ND	8.0000		
Chromium, total	ug/L	MW-5	04/16/2019	ND	8.0000		
Chromium, total	ug/L	MW-5	10/17/2019	ND	8.0000		
Chromium, total	ug/L	MW-5	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-5	10/08/2020	ND	8.0000		
Chromium, total	ug/L	MW-5	04/15/2021	ND	8.0000		
Chromium, total	ug/L	MW-5	10/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-5	04/13/2022	ND	8.0000		
Chromium, total	ug/L	MW-5	10/19/2022	ND	8.0000		
Chromium, total	ug/L	MW-5	04/06/2023	ND	8.0000		
Chromium, total	ug/L	MW-5	10/10/2023	ND	8.0000		
Chromium, total	ug/L	MW-5	04/11/2024	ND	8.0000		
Chromium, total	ug/L	MW-9	10/14/2014	ND	8.0000		
Chromium, total	ug/L	MW-9	01/12/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	04/14/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	07/21/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	09/22/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	04/12/2016	ND	8.0000		
Chromium, total	ug/L	MW-9	10/11/2016	ND	8.0000		
Chromium, total	ug/L	MW-9	04/20/2017	ND	8.0000		
Chromium, total	ug/L	MW-9	10/12/2017	ND	8.0000		
Chromium, total	ug/L	MW-9	04/23/2018	ND	8.0000		
Chromium, total	ug/L	MW-9	10/12/2018	ND	8.0000		
Chromium, total	ug/L	MW-9	04/16/2019	ND	8.0000		
Chromium, total	ug/L	MW-9	10/17/2019	ND	8.0000		
Chromium, total	ug/L	MW-9	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	10/08/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	04/15/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	10/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	04/13/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	10/19/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	04/06/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	10/10/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	04/11/2024	ND	8.0000		
Cobalt, total	ug/L	MW-14	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-14	01/12/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	07/21/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/17/2019	ND	0.8000		

* - 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	
Cobalt, total	ug/L	MW-14	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-14	04/06/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/14/2014		2.1000		
Cobalt, total	ug/L	MW-4	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-4	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-4	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/20/2017		3.3000		
Cobalt, total	ug/L	MW-4	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/23/2018		2.8000		
Cobalt, total	ug/L	MW-4	10/12/2018		1.4000		
Cobalt, total	ug/L	MW-4	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-4	10/17/2019		2.0000		
Cobalt, total	ug/L	MW-4	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-4	04/06/2023		3.5000		
Cobalt, total	ug/L	MW-4	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-5	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/17/2019	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/09/2020		3.4000		
Cobalt, total	ug/L	MW-5	10/08/2020		0.6000		
Cobalt, total	ug/L	MW-5	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	04/13/2022		0.4000		
Cobalt, total	ug/L	MW-5	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-5	04/06/2023		2.7000		
Cobalt, total	ug/L	MW-5	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-9	01/12/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/14/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	07/21/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	09/22/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/17/2019	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-9	04/06/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/11/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Copper, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Copper, total	ug/L	MW-14	04/13/2015	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
Copper, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Copper, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Copper, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Copper, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Copper, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Copper, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Copper, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Copper, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Copper, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Copper, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Copper, total	ug/L	MW-14	10/19/2022		7.0000	
Copper, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Copper, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Copper, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Copper, total	ug/L	MW-4	10/14/2014		6.1000	
Copper, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Copper, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Copper, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Copper, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Copper, total	ug/L	MW-4	04/20/2017		5.5000	
Copper, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-4	10/17/2019		4.3000	
Copper, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Copper, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Copper, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Copper, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Copper, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Copper, total	ug/L	MW-4	04/06/2023		9.1000	
Copper, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Copper, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Copper, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Copper, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Copper, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Copper, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Copper, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Copper, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Copper, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Copper, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Copper, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Copper, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Copper, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Copper, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Copper, total	ug/L	MW-5	04/06/2023		9.6000	
Copper, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Copper, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Copper, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Copper, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Copper, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Copper, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Copper, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Copper, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Copper, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Copper, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Copper, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Copper, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-9	10/08/2020	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-9	04/15/2021	ND	4.0000		
Copper, total	ug/L	MW-9	10/28/2021	ND	4.0000		
Copper, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Copper, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Copper, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Copper, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Copper, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Lead, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Lead, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Lead, total	ug/L	MW-14	04/13/2015	ND	4.0000		
Lead, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Lead, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Lead, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Lead, total	ug/L	MW-14	10/11/2016	ND	4.0000		
Lead, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Lead, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Lead, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Lead, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Lead, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Lead, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Lead, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Lead, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Lead, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Lead, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Lead, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Lead, total	ug/L	MW-14	10/19/2022	ND	4.0000		
Lead, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Lead, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Lead, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Lead, total	ug/L	MW-4	10/14/2014	ND	4.0000		
Lead, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Lead, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Lead, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Lead, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Lead, total	ug/L	MW-4	04/20/2017	ND	4.0000		
Lead, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Lead, total	ug/L	MW-4	04/23/2018	ND	4.0000		
Lead, total	ug/L	MW-4	10/12/2018	ND	4.0000		
Lead, total	ug/L	MW-4	04/16/2019	ND	4.0000		
Lead, total	ug/L	MW-4	10/17/2019	ND	4.0000		
Lead, total	ug/L	MW-4	04/09/2020	ND	4.0000		
Lead, total	ug/L	MW-4	10/08/2020	ND	4.0000		
Lead, total	ug/L	MW-4	04/15/2021	ND	4.0000		
Lead, total	ug/L	MW-4	10/28/2021	ND	4.0000		
Lead, total	ug/L	MW-4	04/13/2022	ND	4.0000		
Lead, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Lead, total	ug/L	MW-4	04/06/2023	ND	7.6000		
Lead, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Lead, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Lead, total	ug/L	MW-5	10/14/2014	ND	4.0000		
Lead, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Lead, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Lead, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Lead, total	ug/L	MW-5	10/11/2016	ND	4.0000		
Lead, total	ug/L	MW-5	04/20/2017	ND	4.0000		
Lead, total	ug/L	MW-5	10/12/2017	ND	4.0000		
Lead, total	ug/L	MW-5	04/23/2018	ND	4.0000		
Lead, total	ug/L	MW-5	10/12/2018	ND	4.0000		
Lead, total	ug/L	MW-5	04/16/2019	ND	4.0000		
Lead, total	ug/L	MW-5	10/17/2019	ND	4.0000		
Lead, total	ug/L	MW-5	04/09/2020	ND	4.0000		
Lead, total	ug/L	MW-5	10/08/2020	ND	4.0000		
Lead, total	ug/L	MW-5	04/15/2021	ND	4.0000		
Lead, total	ug/L	MW-5	10/28/2021	ND	4.0000		
Lead, total	ug/L	MW-5	04/13/2022	ND	4.0000		
Lead, total	ug/L	MW-5	10/19/2022	ND	4.0000		
Lead, total	ug/L	MW-5	04/06/2023	ND	6.2000		
Lead, total	ug/L	MW-5	10/10/2023	ND	4.0000		
Lead, total	ug/L	MW-5	04/11/2024	ND	4.0000		
Lead, total	ug/L	MW-9	10/14/2014	ND	4.0000		
Lead, total	ug/L	MW-9	01/12/2015	ND	4.0000		
Lead, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Lead, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Lead, total	ug/L	MW-9	09/22/2015	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
Lead, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Lead, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Lead, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Lead, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Lead, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Lead, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Lead, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Lead, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Lead, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Lead, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Lead, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Lead, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Lead, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Lead, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Lead, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Lead, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Lead, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Nickel, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Nickel, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Nickel, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Nickel, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Nickel, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Nickel, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Nickel, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Nickel, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Nickel, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Nickel, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-4	10/14/2014		6.2000	
Nickel, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Nickel, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Nickel, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-4	04/20/2017		9.5000	
Nickel, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-4	04/23/2018		4.5000	
Nickel, total	ug/L	MW-4	10/12/2018		4.7000	
Nickel, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-4	10/17/2019		6.0000	
Nickel, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Nickel, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Nickel, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Nickel, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Nickel, total	ug/L	MW-4	04/06/2023		9.8000	
Nickel, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-5	10/14/2014		5.9000	
Nickel, total	ug/L	MW-5	04/13/2015		6.3000	
Nickel, total	ug/L	MW-5	09/23/2015		5.7000	
Nickel, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Nickel, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Nickel, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Nickel, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Nickel, total	ug/L	MW-5	04/09/2020		6.8000	
Nickel, total	ug/L	MW-5	10/08/2020		6.6000	
Nickel, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-5	10/28/2021	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	
Nickel, total	ug/L	MW-5	04/13/2022	ND	4.0000		
Nickel, total	ug/L	MW-5	10/19/2022		5.4000		
Nickel, total	ug/L	MW-5	04/06/2023		13.1000		*
Nickel, total	ug/L	MW-5	10/10/2023	ND	4.0000		
Nickel, total	ug/L	MW-5	04/11/2024	ND	4.0000		
Nickel, total	ug/L	MW-9	10/14/2014	ND	4.0000		
Nickel, total	ug/L	MW-9	01/12/2015		4.0000		
Nickel, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Nickel, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Nickel, total	ug/L	MW-9	09/22/2015	ND	4.0000		
Nickel, total	ug/L	MW-9	04/12/2016	ND	4.0000		
Nickel, total	ug/L	MW-9	10/11/2016	ND	4.0000		
Nickel, total	ug/L	MW-9	04/20/2017	ND	4.0000		
Nickel, total	ug/L	MW-9	10/12/2017	ND	4.0000		
Nickel, total	ug/L	MW-9	04/23/2018	ND	4.0000		
Nickel, total	ug/L	MW-9	10/12/2018	ND	4.0000		
Nickel, total	ug/L	MW-9	04/16/2019	ND	4.0000		
Nickel, total	ug/L	MW-9	10/17/2019	ND	4.0000		
Nickel, total	ug/L	MW-9	04/09/2020	ND	4.0000		
Nickel, total	ug/L	MW-9	10/08/2020	ND	4.0000		
Nickel, total	ug/L	MW-9	04/15/2021	ND	4.0000		
Nickel, total	ug/L	MW-9	10/28/2021		4.2000		
Nickel, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Nickel, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Nickel, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Nickel, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Nickel, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Selenium, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Selenium, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Selenium, total	ug/L	MW-14	04/13/2015		5.1000		
Selenium, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Selenium, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Selenium, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Selenium, total	ug/L	MW-14	10/11/2016		5.5000		
Selenium, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Selenium, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Selenium, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Selenium, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Selenium, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Selenium, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Selenium, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Selenium, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Selenium, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Selenium, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Selenium, total	ug/L	MW-14	10/19/2022		5.5000		
Selenium, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Selenium, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Selenium, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Selenium, total	ug/L	MW-4	10/14/2014	ND	4.0000		
Selenium, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Selenium, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Selenium, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Selenium, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Selenium, total	ug/L	MW-4	04/20/2017	ND	4.0000		
Selenium, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Selenium, total	ug/L	MW-4	04/23/2018	ND	4.0000		
Selenium, total	ug/L	MW-4	10/12/2018	ND	4.0000		
Selenium, total	ug/L	MW-4	04/16/2019	ND	4.0000		
Selenium, total	ug/L	MW-4	10/17/2019	ND	4.0000		
Selenium, total	ug/L	MW-4	04/09/2020	ND	4.0000		
Selenium, total	ug/L	MW-4	10/08/2020	ND	4.0000		
Selenium, total	ug/L	MW-4	04/15/2021	ND	4.0000		
Selenium, total	ug/L	MW-4	10/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-4	04/13/2022	ND	4.0000		
Selenium, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Selenium, total	ug/L	MW-4	04/06/2023	ND	4.0000		
Selenium, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Selenium, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Selenium, total	ug/L	MW-5	10/14/2014	ND	4.0000		
Selenium, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Selenium, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Selenium, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Selenium, total	ug/L	MW-5	10/11/2016	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-5	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Selenium, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Selenium, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Selenium, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Selenium, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Selenium, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Selenium, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Selenium, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Selenium, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Silver, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Silver, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Silver, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Silver, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Silver, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Silver, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Silver, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Silver, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Silver, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Silver, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Silver, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Silver, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Silver, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Silver, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Silver, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Silver, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Silver, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Silver, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Silver, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Silver, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Silver, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Silver, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Silver, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Silver, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Silver, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Silver, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Silver, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Silver, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Silver, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Silver, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Silver, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Silver, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Silver, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Silver, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Silver, total	ug/L	MW-4	10/28/2021	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-4	04/13/2022	ND	4.0000		
Silver, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Silver, total	ug/L	MW-4	04/06/2023	ND	4.0000		
Silver, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Silver, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Silver, total	ug/L	MW-5	10/14/2014	ND	4.0000		
Silver, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Silver, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Silver, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Silver, total	ug/L	MW-5	10/11/2016	ND	4.0000		
Silver, total	ug/L	MW-5	04/20/2017	ND	4.0000		
Silver, total	ug/L	MW-5	10/12/2017	ND	4.0000		
Silver, total	ug/L	MW-5	04/23/2018	ND	4.0000		
Silver, total	ug/L	MW-5	10/12/2018	ND	4.0000		
Silver, total	ug/L	MW-5	04/16/2019	ND	4.0000		
Silver, total	ug/L	MW-5	10/17/2019	ND	4.0000		
Silver, total	ug/L	MW-5	04/09/2020	ND	4.0000		
Silver, total	ug/L	MW-5	10/08/2020	ND	4.0000		
Silver, total	ug/L	MW-5	04/15/2021	ND	4.0000		
Silver, total	ug/L	MW-5	10/28/2021	ND	4.0000		
Silver, total	ug/L	MW-5	04/13/2022	ND	4.0000		
Silver, total	ug/L	MW-5	10/19/2022	ND	4.0000		
Silver, total	ug/L	MW-5	04/06/2023	ND	4.0000		
Silver, total	ug/L	MW-5	10/10/2023	ND	4.0000		
Silver, total	ug/L	MW-5	04/11/2024	ND	4.0000		
Silver, total	ug/L	MW-9	10/14/2014	ND	4.0000		
Silver, total	ug/L	MW-9	01/12/2015	ND	4.0000		
Silver, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Silver, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Silver, total	ug/L	MW-9	09/22/2015	ND	4.0000		
Silver, total	ug/L	MW-9	04/12/2016	ND	4.0000		
Silver, total	ug/L	MW-9	10/11/2016	ND	4.0000		
Silver, total	ug/L	MW-9	04/20/2017	ND	4.0000		
Silver, total	ug/L	MW-9	10/12/2017	ND	4.0000		
Silver, total	ug/L	MW-9	04/23/2018	ND	4.0000		
Silver, total	ug/L	MW-9	10/12/2018	ND	4.0000		
Silver, total	ug/L	MW-9	04/16/2019	ND	4.0000		
Silver, total	ug/L	MW-9	10/17/2019	ND	4.0000		
Silver, total	ug/L	MW-9	04/09/2020	ND	4.0000		
Silver, total	ug/L	MW-9	10/08/2020	ND	4.0000		
Silver, total	ug/L	MW-9	04/15/2021	ND	4.0000		
Silver, total	ug/L	MW-9	10/28/2021	ND	4.0000		
Silver, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Silver, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Silver, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Silver, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Silver, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Thallium, total	ug/L	MW-14	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	01/12/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	07/21/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/16/2019	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/17/2019	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/09/2020	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/08/2020	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/15/2021	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/28/2021	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/13/2022	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/19/2022	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/06/2023	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/10/2023	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/11/2024	ND	2.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/11/2016	ND	4.0000	2.0000	**

* - 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	
Thallium, total	ug/L	MW-4	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-4	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-4	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-4	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-4	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-4	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-4	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-4	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-4	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-4	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-4	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-5	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-5	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-5	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-5	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-5	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-5	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-5	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-5	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-5	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-5	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-5	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-9	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	01/12/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/14/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	07/21/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	09/22/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-9	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-9	04/11/2024	ND	2.0000		
Vanadium, total	ug/L	MW-14	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-14	01/12/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	07/21/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/28/2021	ND	20.0000		

* - 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	
Vanadium, total	ug/L	MW-14	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-4	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-5	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-9	01/12/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/14/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	07/21/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/22/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-14	10/14/2014	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	01/12/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	04/13/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	07/21/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	09/23/2015	ND	20.0000		
Zinc, total	ug/L	MW-14	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	10/11/2016	ND	8.0000	20.0000	**

* - 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-14	04/20/2017	ND	20.0000		
Zinc, total	ug/L	MW-14	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	04/23/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	10/12/2018		16.1000		
Zinc, total	ug/L	MW-14	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-14	10/17/2019	ND	20.0000		
Zinc, total	ug/L	MW-14	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-14	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-14	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-14	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-14	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-14	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-14	04/06/2023	ND	20.0000		
Zinc, total	ug/L	MW-14	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-14	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-4	10/14/2014		40.0000		
Zinc, total	ug/L	MW-4	01/12/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-4	04/13/2015		12.4000		
Zinc, total	ug/L	MW-4	09/23/2015		10.3000		
Zinc, total	ug/L	MW-4	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-4	10/11/2016		11.9000		
Zinc, total	ug/L	MW-4	01/17/2017		58.9000		
Zinc, total	ug/L	MW-4	04/20/2017		57.6000		
Zinc, total	ug/L	MW-4	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-4	04/23/2018		159.0000		
Zinc, total	ug/L	MW-4	10/12/2018		237.0000		
Zinc, total	ug/L	MW-4	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-4	10/17/2019		130.0000		
Zinc, total	ug/L	MW-4	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-4	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-4	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-4	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-4	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-4	10/19/2022		216.0000		
Zinc, total	ug/L	MW-4	04/06/2023		627.0000		*
Zinc, total	ug/L	MW-4	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-4	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-5	10/14/2014		24.7000		
Zinc, total	ug/L	MW-5	04/13/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	09/23/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	10/11/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/20/2017		16.5000		
Zinc, total	ug/L	MW-5	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/23/2018		15.2000		
Zinc, total	ug/L	MW-5	10/12/2018		20.3000		
Zinc, total	ug/L	MW-5	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-5	10/17/2019		83.1000		*
Zinc, total	ug/L	MW-5	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-5	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-5	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-5	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-5	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-5	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-5	04/06/2023		411.0000		*
Zinc, total	ug/L	MW-5	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-5	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-9	10/14/2014	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	01/12/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/14/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	07/21/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	09/23/2015	ND	20.0000		
Zinc, total	ug/L	MW-9	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/11/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/20/2017	ND	20.0000		
Zinc, total	ug/L	MW-9	10/12/2017	ND	8.0000		
Zinc, total	ug/L	MW-9	04/23/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/12/2018		9.0000		
Zinc, total	ug/L	MW-9	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-9	10/17/2019		29.9000		
Zinc, total	ug/L	MW-9	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-9	10/28/2021	ND	20.0000		

* - 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-9	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	04/06/2023		21.3000		
Zinc, total	ug/L	MW-9	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-9	04/11/2024	ND	20.0000		

* - 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-2	04/11/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-3	04/11/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-6	04/11/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-7	04/11/2024	ND	2.0000	2.5000
Arsenic, total	ug/L	MW-2	04/11/2024		4.3000	4.5000
Arsenic, total	ug/L	MW-3	04/11/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/11/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-7	04/11/2024	ND	4.0000	4.5000
Barium, total	ug/L	MW-2	04/11/2024		33.9000	304.2772
Barium, total	ug/L	MW-3	04/11/2024		96.4000	304.2772
Barium, total	ug/L	MW-6	04/11/2024		21.8000	304.2772
Barium, total	ug/L	MW-7	04/11/2024		19.8000	304.2772
Beryllium, total	ug/L	MW-2	04/11/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-3	04/11/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-6	04/11/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-7	04/11/2024	ND	4.0000	4.0000
Cadmium, total	ug/L	MW-2	04/11/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-3	04/11/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-6	04/11/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-7	04/11/2024	ND	0.8000	5.3000
Chromium, total	ug/L	MW-2	04/11/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-3	04/11/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-6	04/11/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-7	04/11/2024	ND	8.0000	9.1000
Cobalt, total	ug/L	MW-2	04/11/2024		2.3000	3.5000
Cobalt, total	ug/L	MW-3	04/11/2024	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-6	04/11/2024	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-7	04/11/2024	ND	0.4000	3.5000
Copper, total	ug/L	MW-2	04/11/2024	ND	4.0000	9.6000
Copper, total	ug/L	MW-3	04/11/2024	ND	4.0000	9.6000
Copper, total	ug/L	MW-6	04/11/2024	ND	4.0000	9.6000
Copper, total	ug/L	MW-7	04/11/2024	ND	4.0000	9.6000
Lead, total	ug/L	MW-2	04/11/2024	ND	4.0000	7.6000
Lead, total	ug/L	MW-3	04/11/2024	ND	4.0000	7.6000
Lead, total	ug/L	MW-6	04/11/2024	ND	4.0000	7.6000
Lead, total	ug/L	MW-7	04/11/2024	ND	4.0000	7.6000
Nickel, total	ug/L	MW-2	04/11/2024	ND	4.0000	9.8000
Nickel, total	ug/L	MW-3	04/11/2024	ND	4.0000	9.8000
Nickel, total	ug/L	MW-6	04/11/2024	ND	4.0000	9.8000
Nickel, total	ug/L	MW-7	04/11/2024	ND	4.0000	9.8000
Selenium, total	ug/L	MW-2	04/11/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-3	04/11/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-6	04/11/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-7	04/11/2024	ND	4.0000	5.5000
Silver, total	ug/L	MW-2	04/11/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-3	04/11/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-6	04/11/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-7	04/11/2024	ND	4.0000	4.0000
Thallium, total	ug/L	MW-2	04/11/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-3	04/11/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-6	04/11/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-7	04/11/2024	ND	2.0000	2.0000
Vanadium, total	ug/L	MW-2	04/11/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-3	04/11/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-6	04/11/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-7	04/11/2024	ND	20.0000	20.0000
Zinc, total	ug/L	MW-2	04/11/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-3	04/11/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-6	04/11/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-7	04/11/2024	ND	20.0000	237.0000

* - 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	Upgradient			Downgradient		
	Detect	N	Proportion	Detect	N	Proportion
Antimony, total	1	84	0.012	0	104	0.000
Arsenic, total	1	84	0.012	30	126	0.238
Barium, total	83	83	1.000	140	140	1.000
Beryllium, total	0	84	0.000	0	104	0.000
Cadmium, total	4	84	0.048	9	113	0.080
Chromium, total	2	84	0.024	2	104	0.019
Cobalt, total	10	84	0.119	50	114	0.439
Copper, total	6	84	0.071	14	113	0.124
Lead, total	2	84	0.024	8	113	0.071
Nickel, total	14	83	0.169	69	141	0.489
Selenium, total	3	84	0.036	0	104	0.000
Silver, total	0	84	0.000	0	104	0.000
Thallium, total	0	84	0.000	0	104	0.000
Vanadium, total	0	84	0.000	1	104	0.010
Zinc, total	18	83	0.217	54	124	0.435

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	1	84	0.012									nonpar
Arsenic, total	1	84	0.012									nonpar
Barium, total	83	83	1.000	2.065	0.756					2.326	normal	normal
Beryllium, total	0	84	0.000									nonpar
Cadmium, total	4	84	0.048									nonpar
Chromium, total	2	84	0.024									nonpar
Cobalt, total	10	84	0.119	0.132	0.200					2.326	normal	nonpar
Copper, total	6	84	0.071	0.105	0.895					2.326	normal	nonpar
Lead, total	2	84	0.024									nonpar
Nickel, total	14	83	0.169	0.124	0.164					2.326	normal	nonpar
Selenium, total	3	84	0.036	0.495	0.495					2.326	normal	nonpar
Silver, total	0	84	0.000									nonpar
Thallium, total	0	84	0.000									nonpar
Vanadium, total	0	84	0.000									nonpar
Zinc, total	18	83	0.217	0.132	0.220					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	1	84					2.5000	nonpar	0.99
Arsenic, total	ug/L	1	84					4.5000	nonpar	0.99
Barium, total	ug/L	83	83	142.0024	67.9848	0.0100	2.3869	304.2772	normal	
Beryllium, total	ug/L	0	84					4.0000	nonpar	*** 0.99
Cadmium, total	ug/L	4	84					5.3000	nonpar	0.99
Chromium, total	ug/L	2	84					9.1000	nonpar	0.99
Cobalt, total	ug/L	10	84					3.5000	nonpar	0.99
Copper, total	ug/L	6	84					9.6000	nonpar	0.99
Lead, total	ug/L	2	84					7.6000	nonpar	0.99
Nickel, total	ug/L	14	83					9.8000	nonpar	0.99
Selenium, total	ug/L	3	84					5.5000	nonpar	0.99
Silver, total	ug/L	0	84					4.0000	nonpar	*** 0.99
Thallium, total	ug/L	0	84					2.0000	nonpar	*** 0.99
Vanadium, total	ug/L	0	84					20.0000	nonpar	*** 0.99
Zinc, total	ug/L	18	83					237.0000	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**

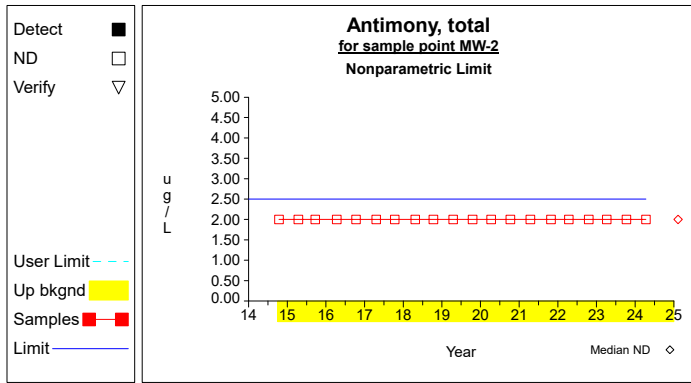
Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Barium, total	ug/L	MW-5	04/15/2021	71.8000		10/14/2014-04/11/2024	21	0.5381
Barium, total	ug/L	MW-5	04/11/2024	71.7000		10/14/2014-04/11/2024	21	0.5381
Nickel, total	ug/L	MW-5	04/06/2023	13.1000		10/14/2014-04/11/2024	20	0.5381
Zinc, total	ug/L	MW-5	10/17/2019	83.1000		10/14/2014-04/11/2024	20	0.5503
Zinc, total	ug/L	MW-5	04/06/2023	411.0000		10/14/2014-04/11/2024	20	0.5503

N = Total number of independent measurements in background at each well.

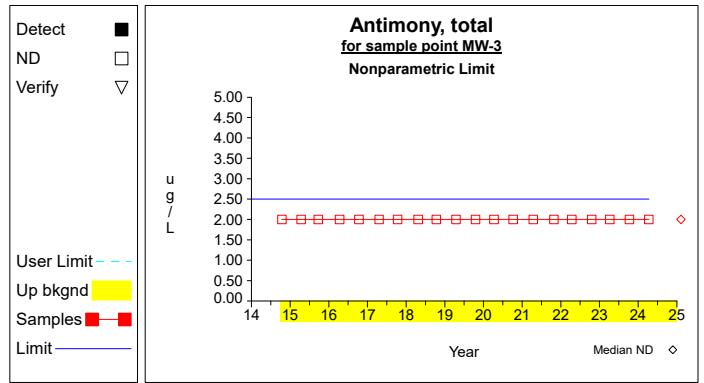
Date Range = Dates of the first and last measurements included in background at each well.

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.

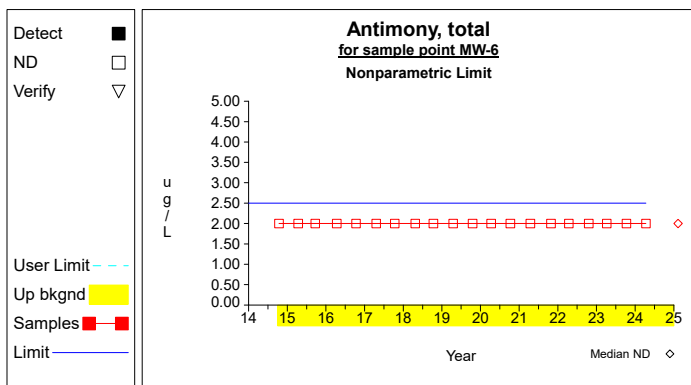
Up vs. Down Prediction Limits



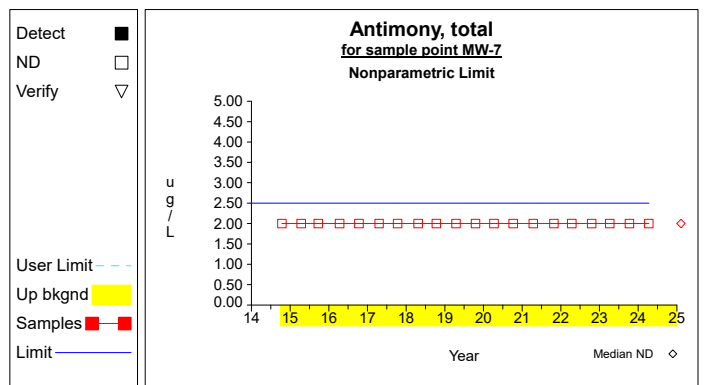
Graph 1



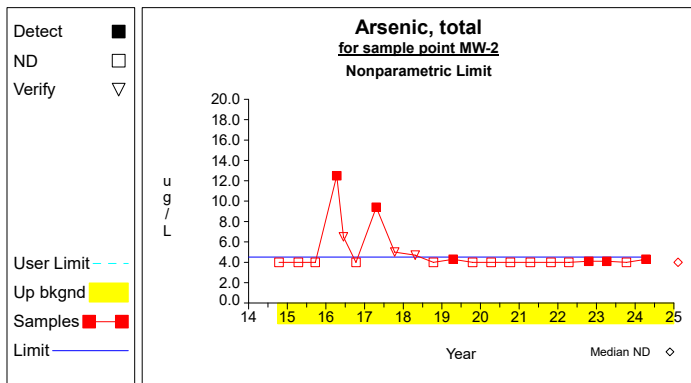
Graph 2



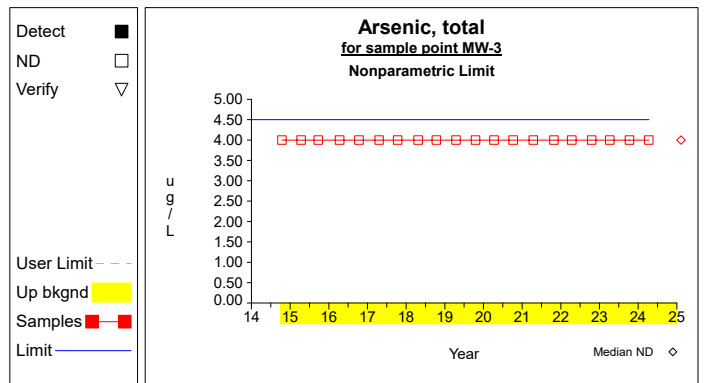
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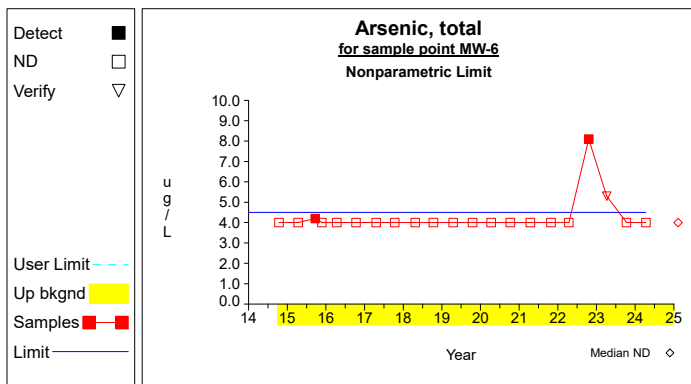
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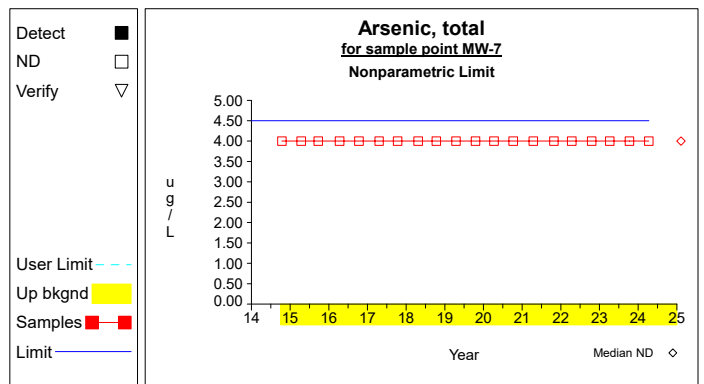
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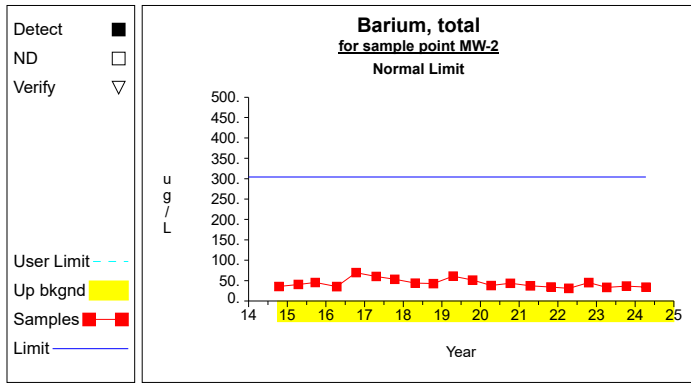


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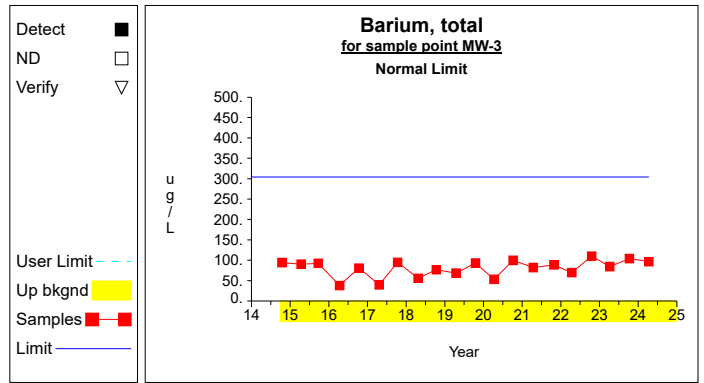


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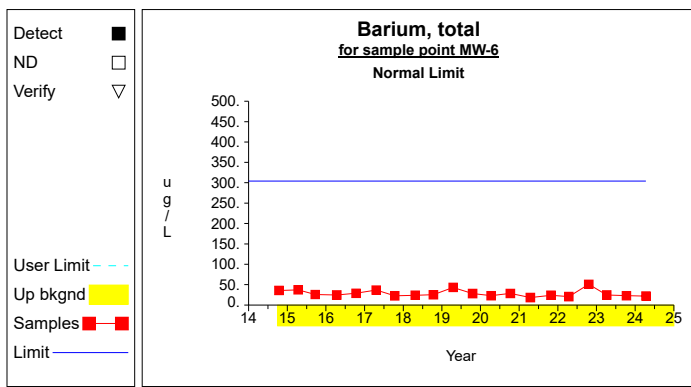
Up vs. Down Prediction Limits



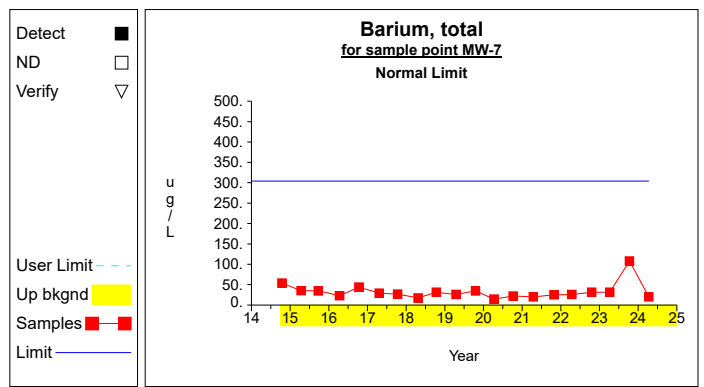
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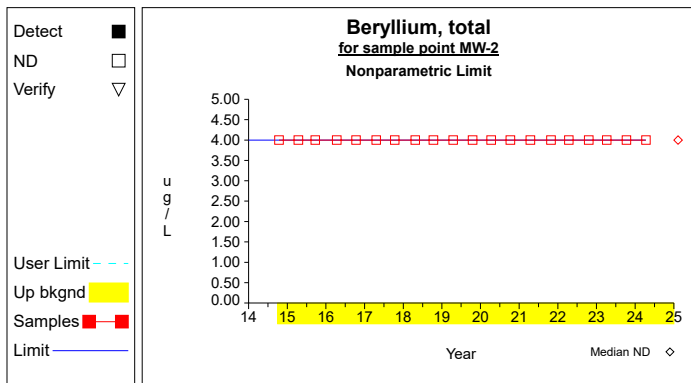
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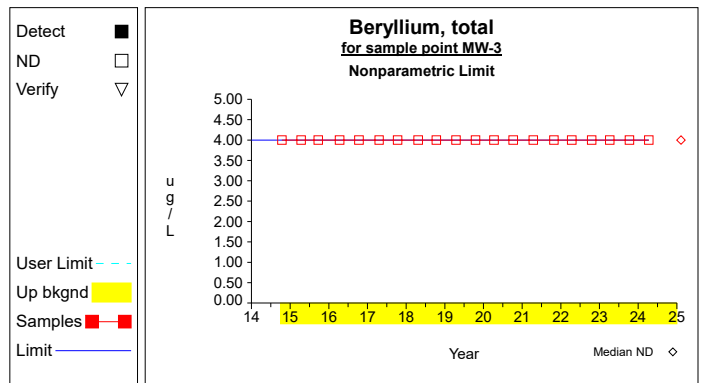
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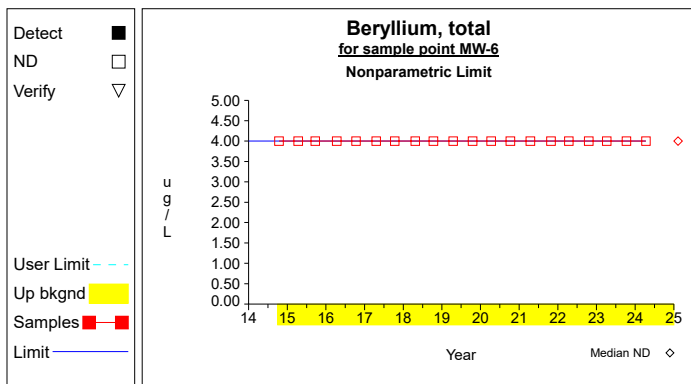
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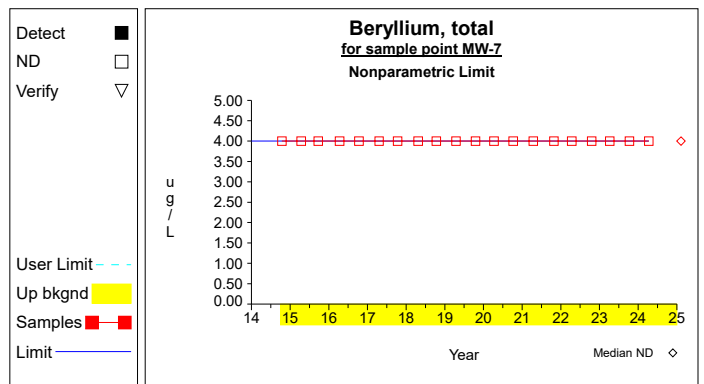
Graph 13



Graph 14

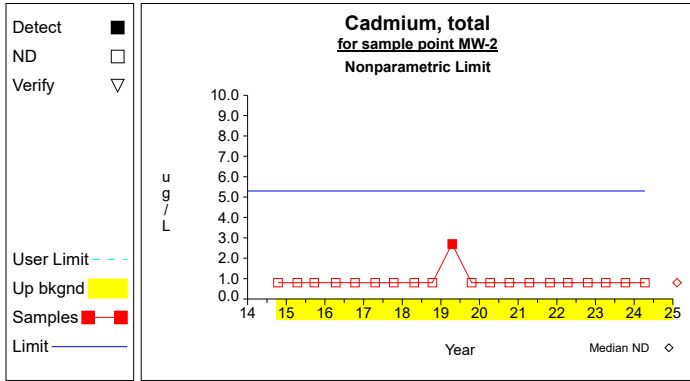


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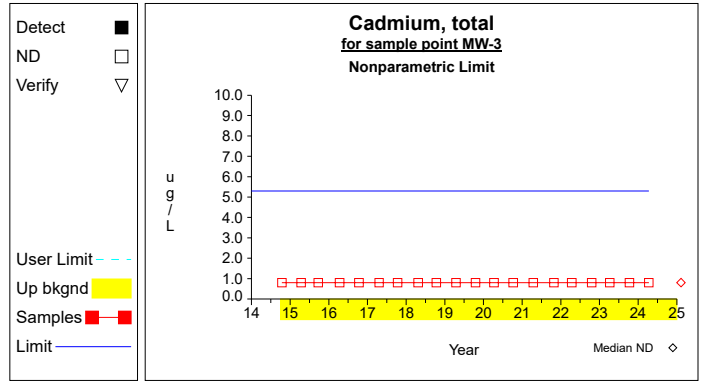


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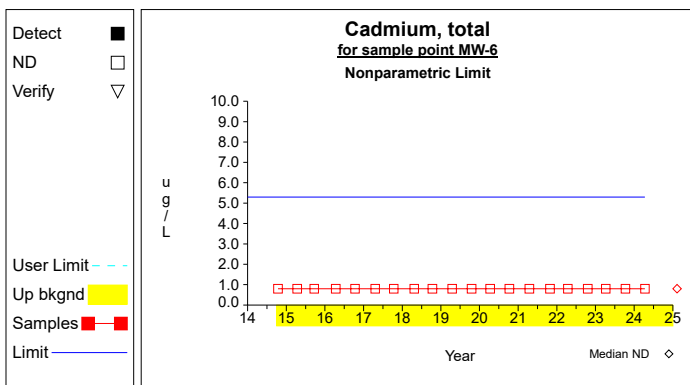
Up vs. Down Prediction Limits



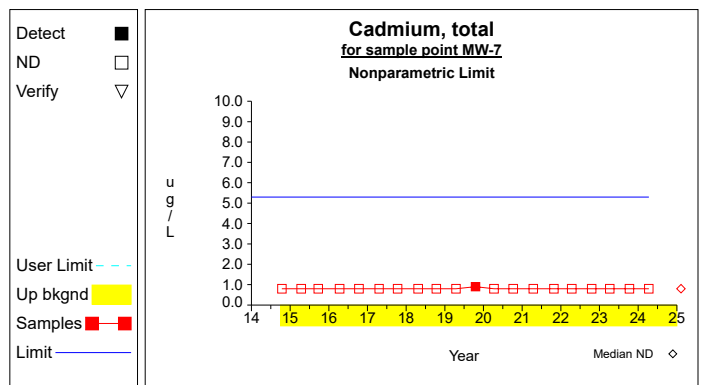
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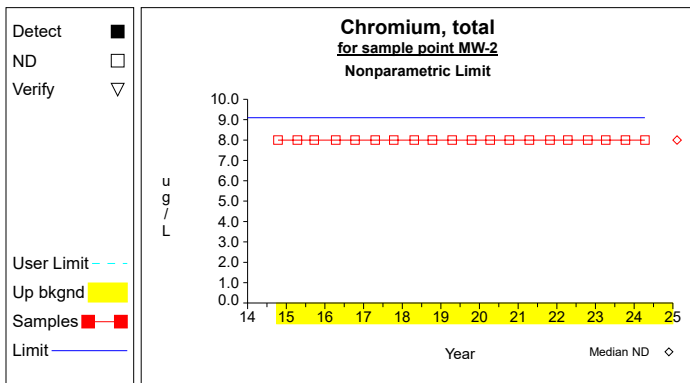
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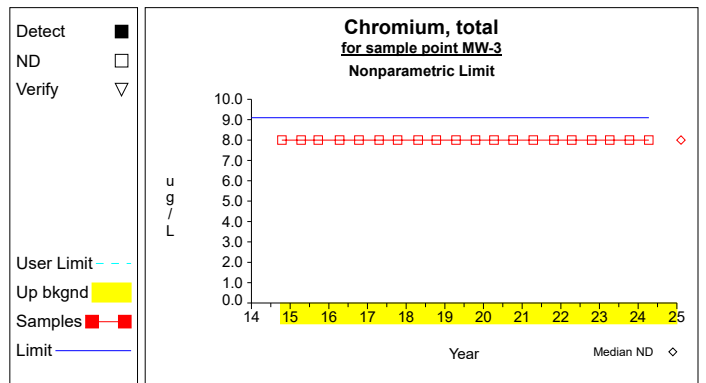
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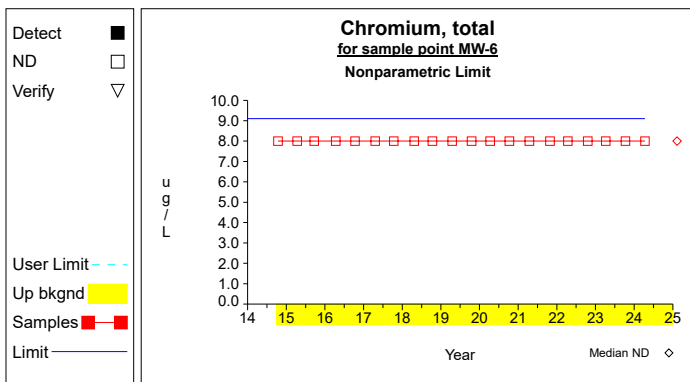
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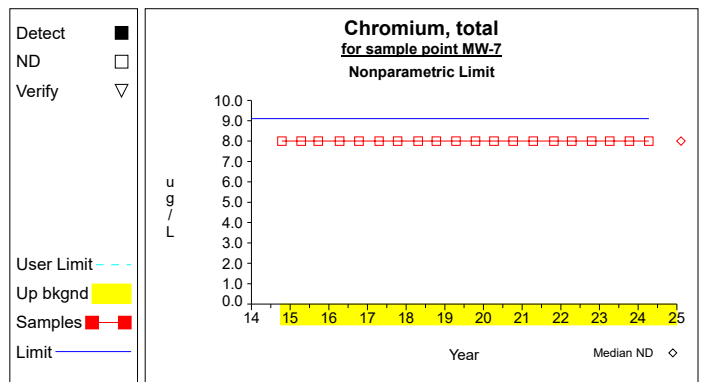
Graph 21



Graph 22

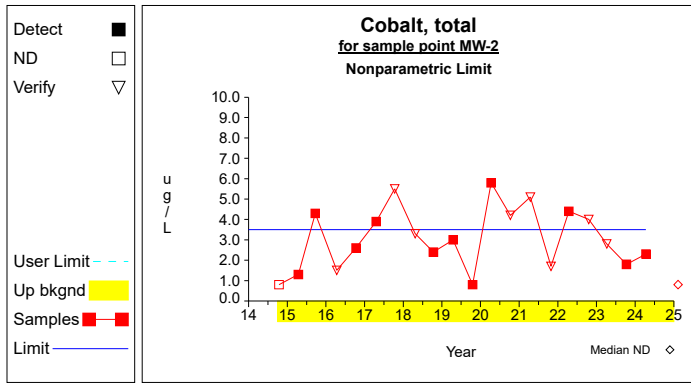


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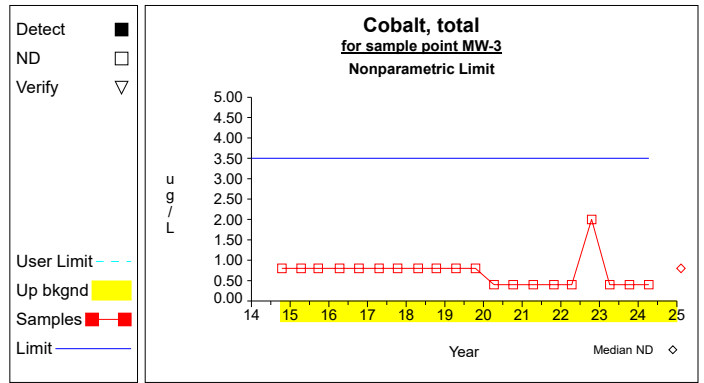


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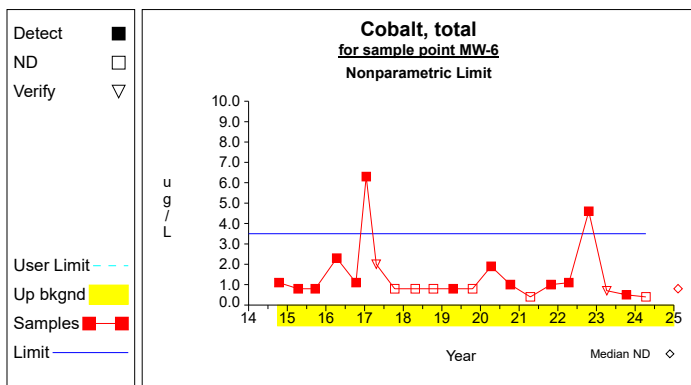
Up vs. Down Prediction Limits



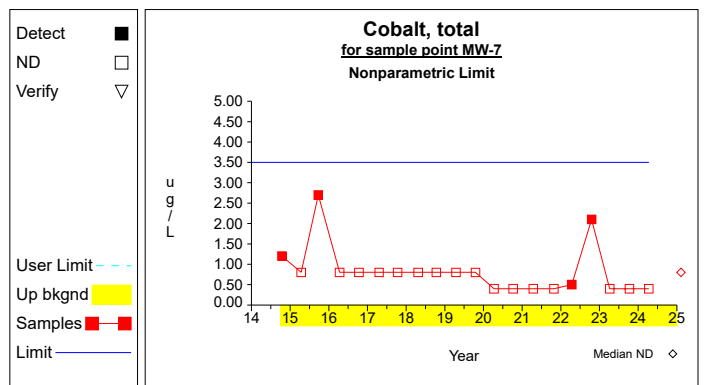
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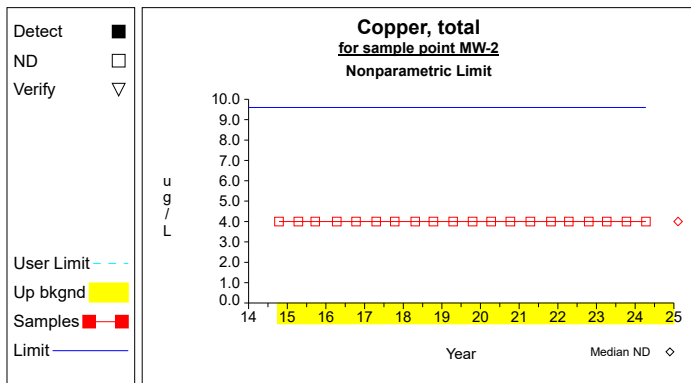
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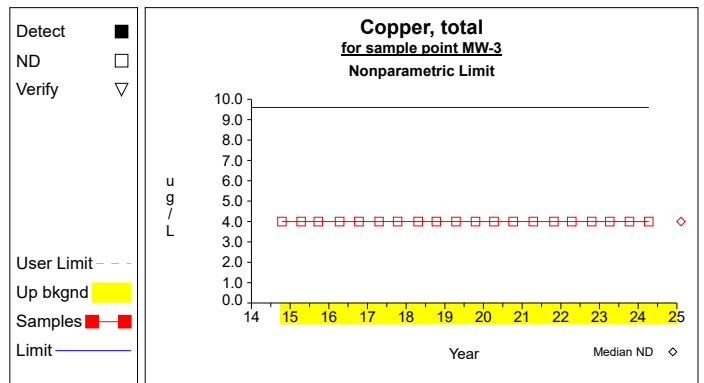
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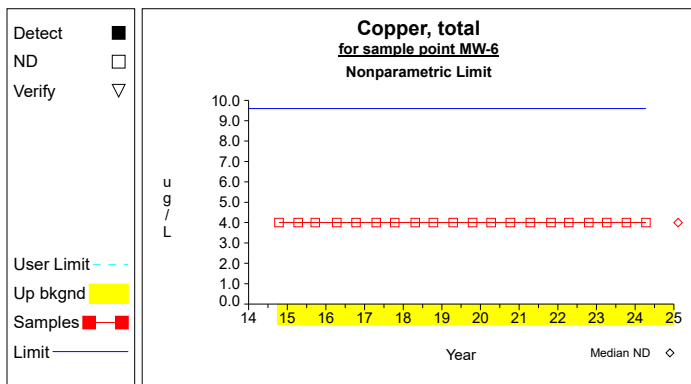
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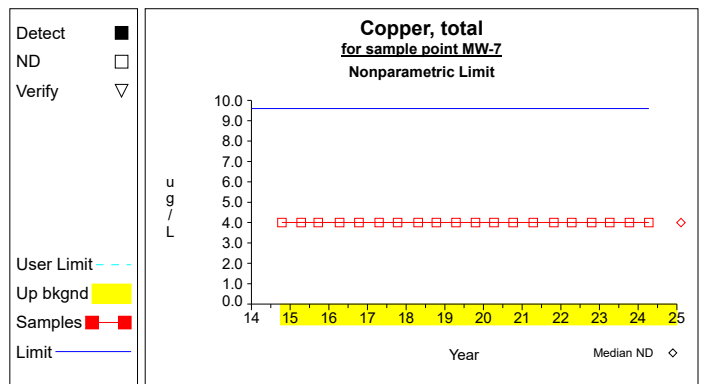
Graph 29



Graph 30

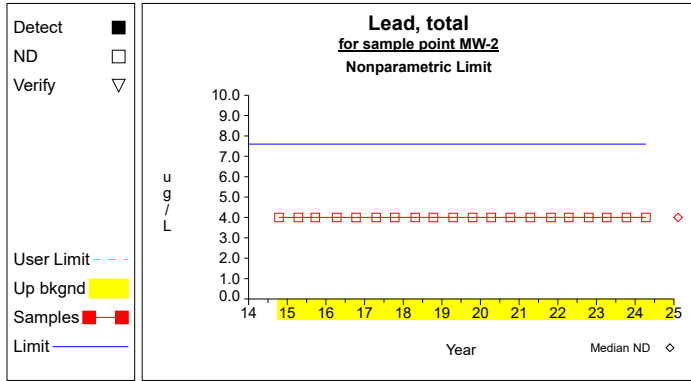


Graph 31

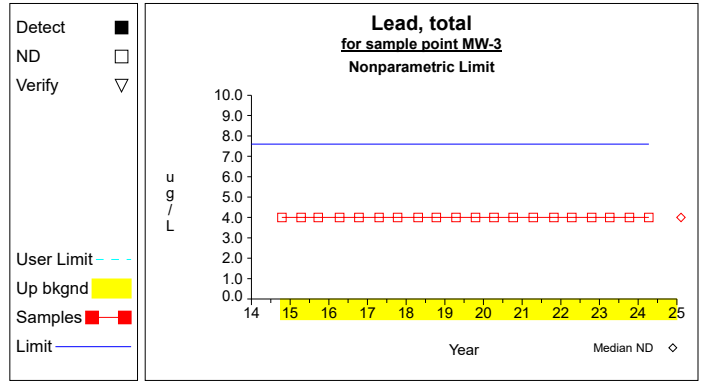


Graph 32

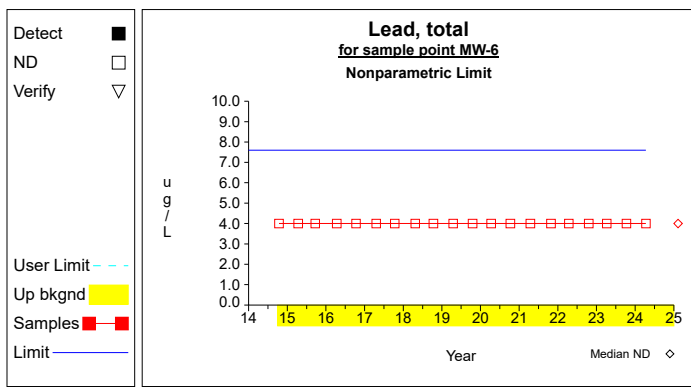
Up vs. Down Prediction Limits



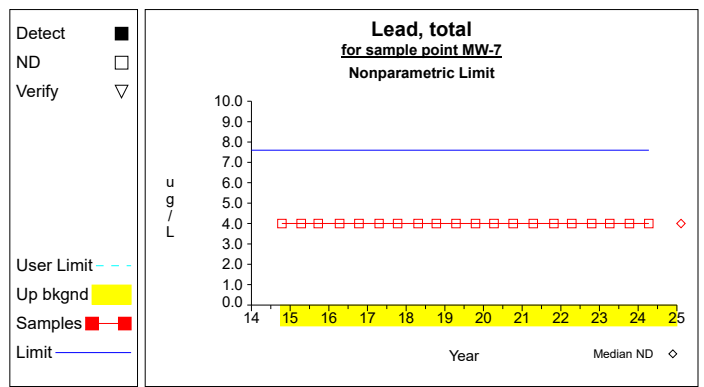
Graph 33



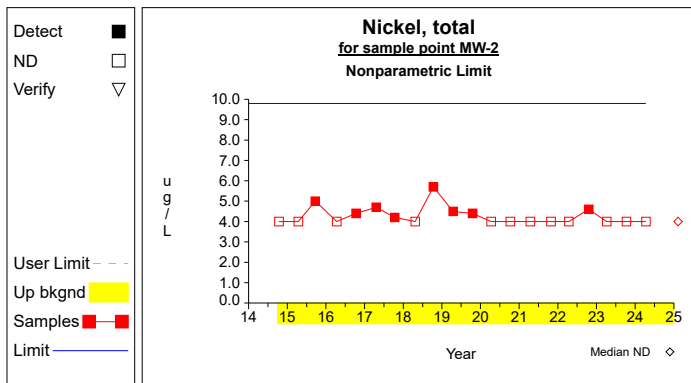
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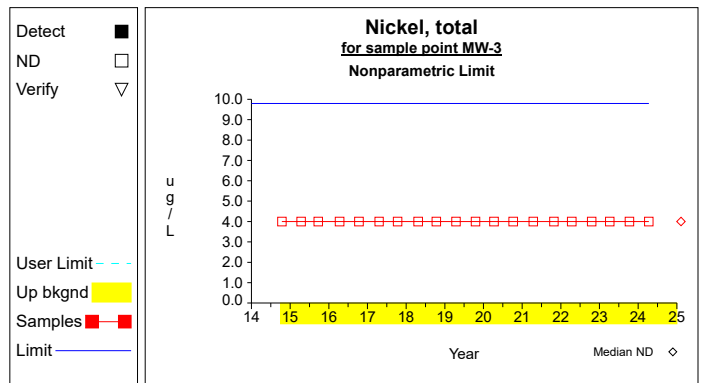
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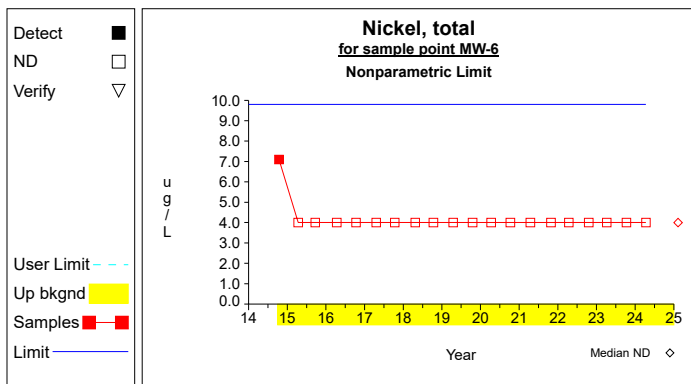
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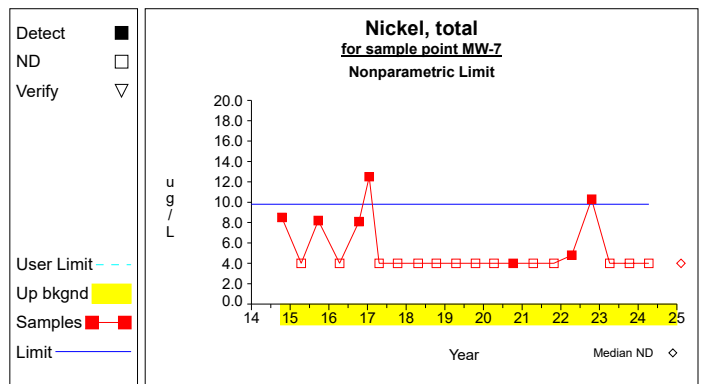
Graph 37



Graph 38

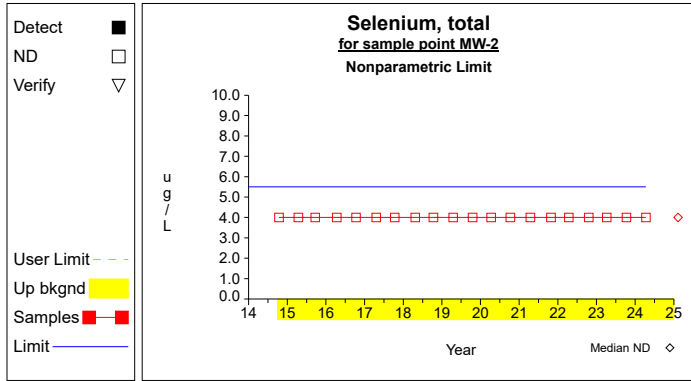


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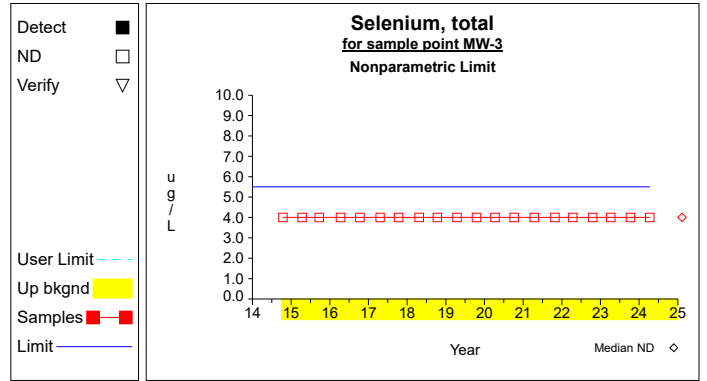


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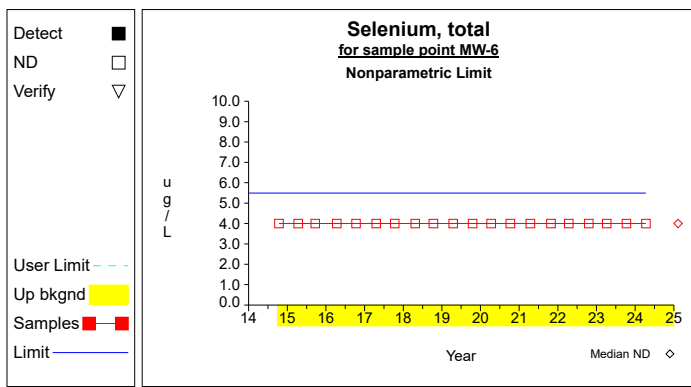
Up vs. Down Prediction Limits



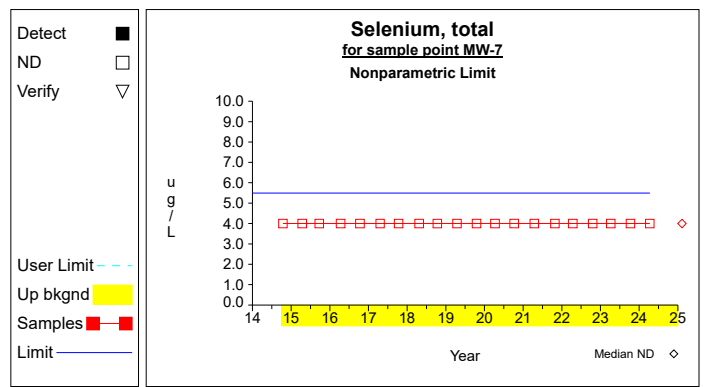
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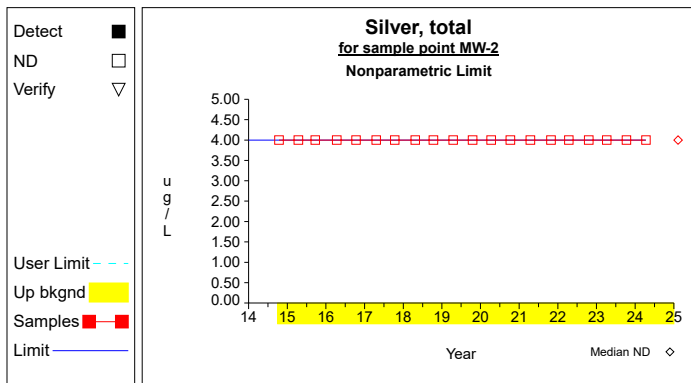
Graph 42



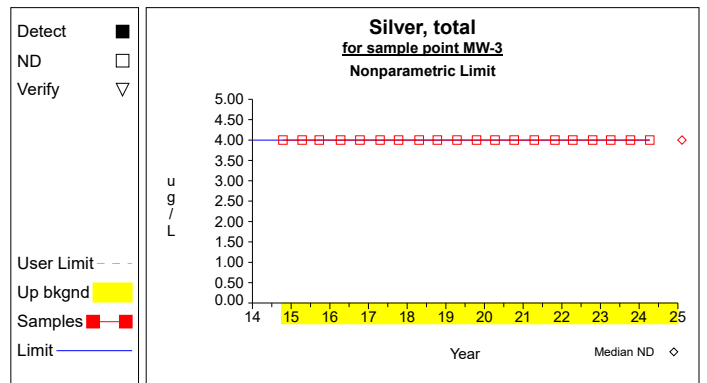
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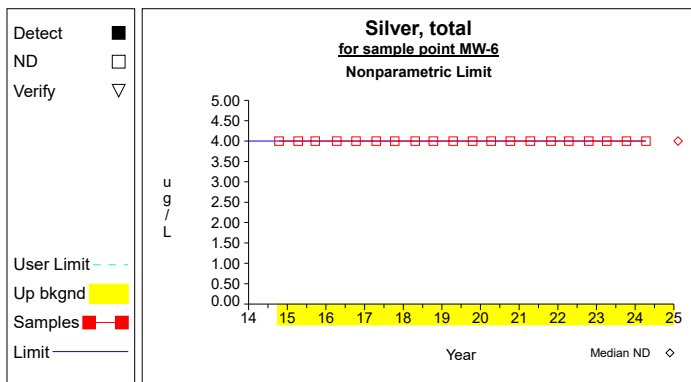
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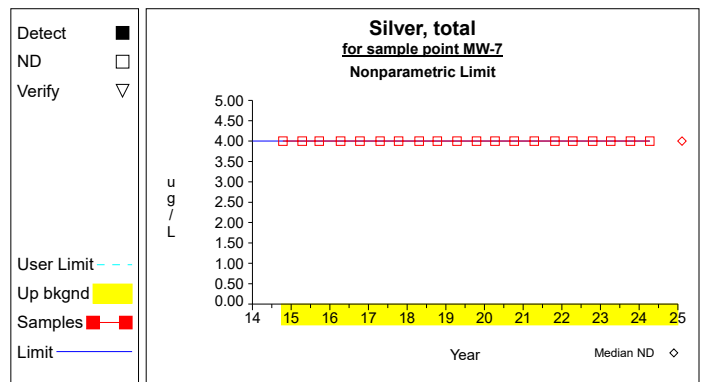
Graph 45



Graph 46

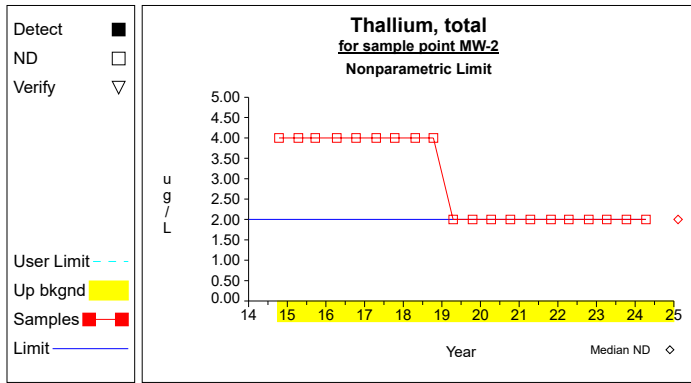


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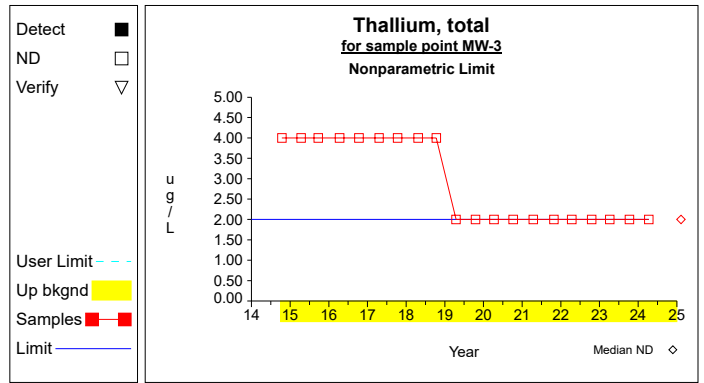


Graph 48

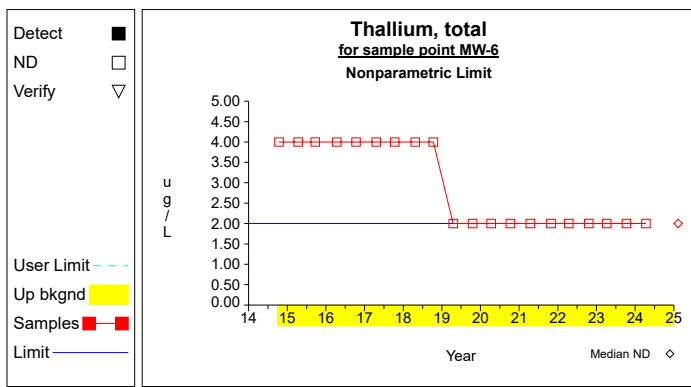
Up vs. Down Prediction Limits



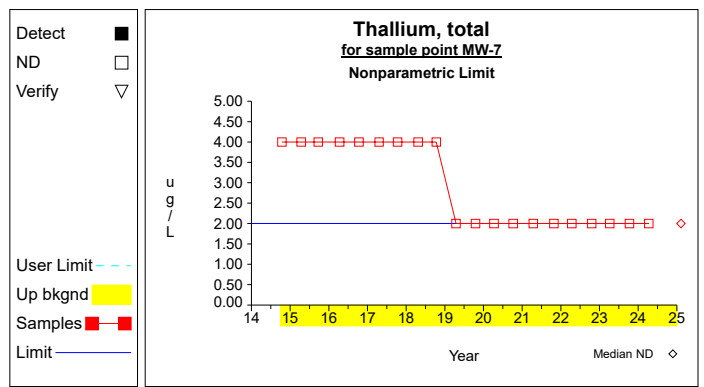
Graph 49



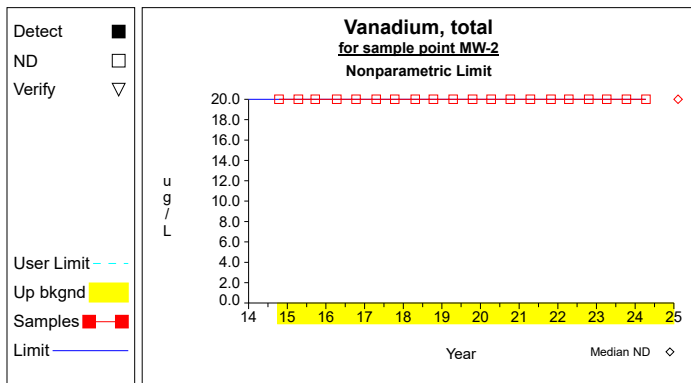
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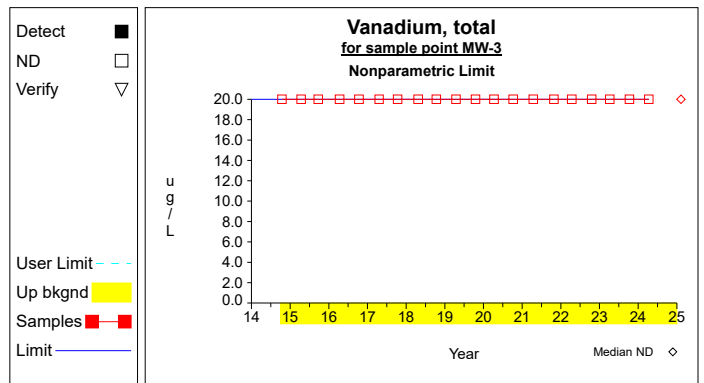
Graph 51



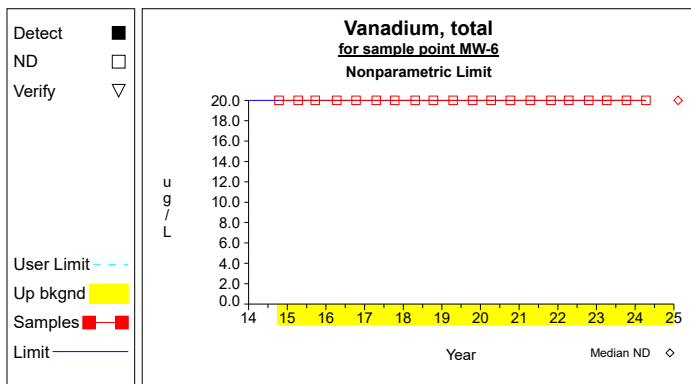
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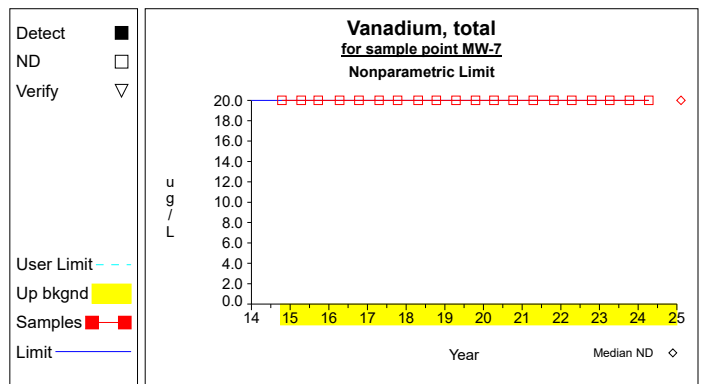
Graph 53



Graph 54

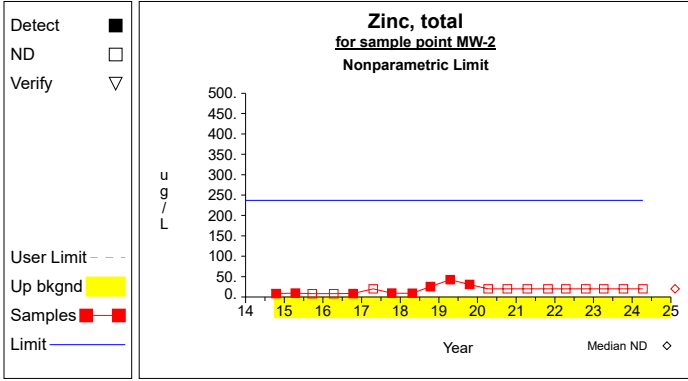


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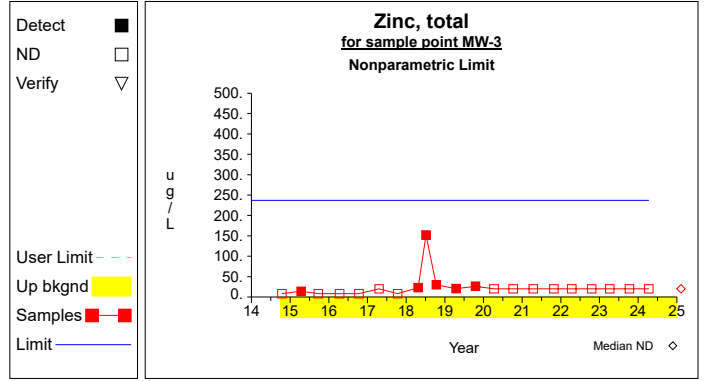


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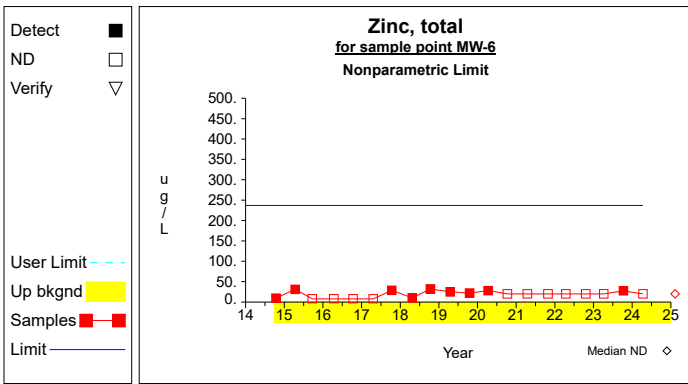
Up vs. Down Prediction Limits



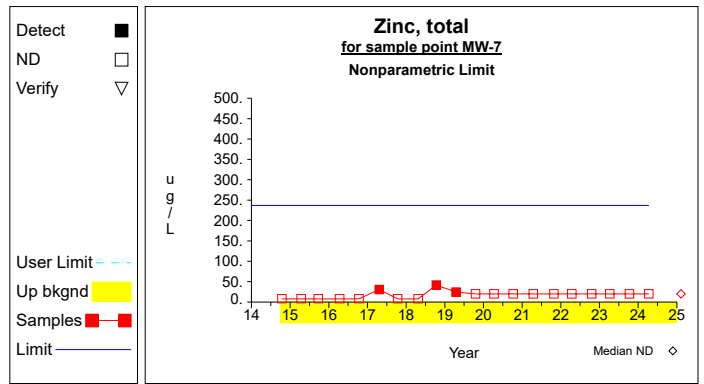
Graph 57



Graph 58

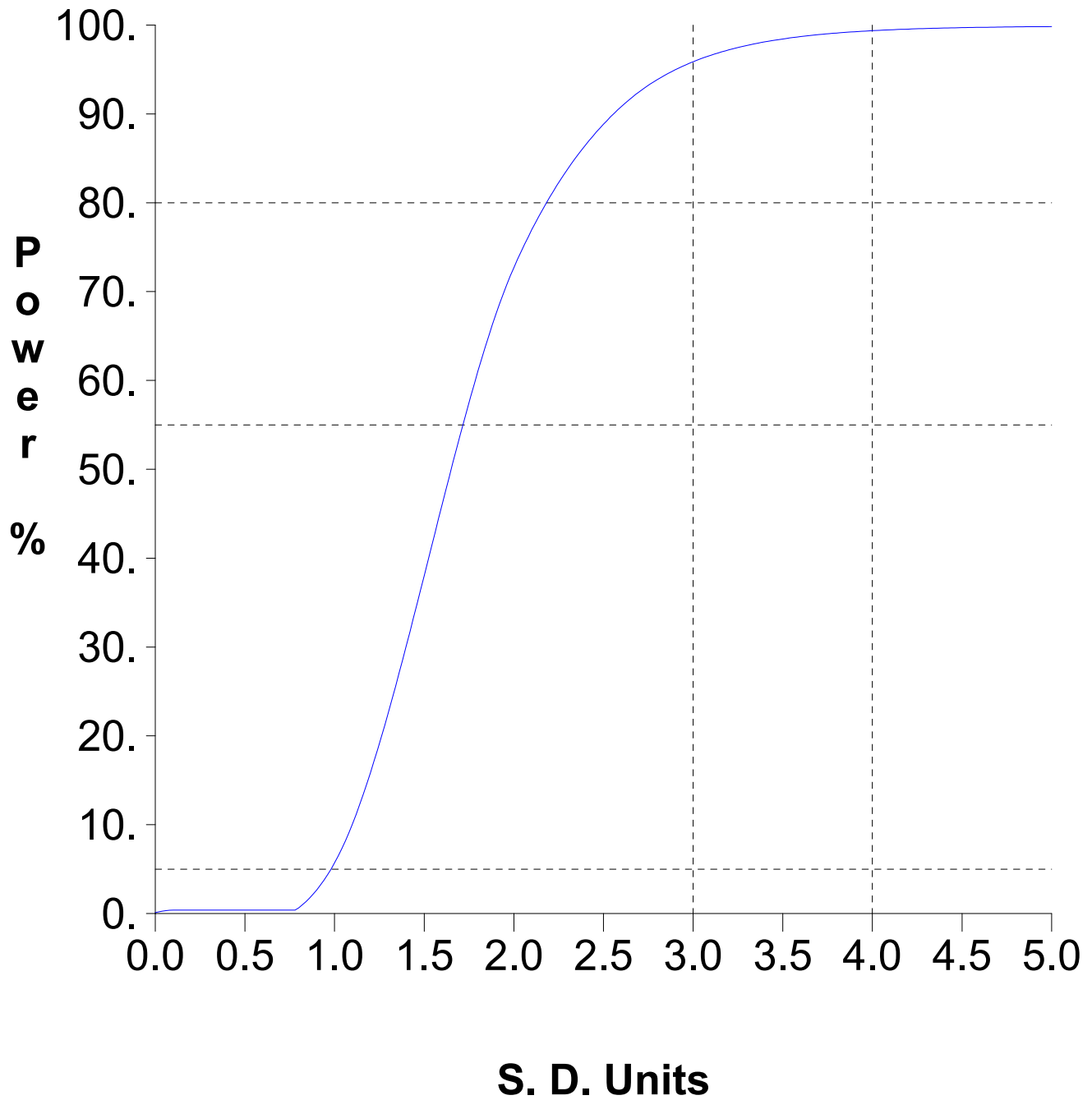


Graph 59



Graph 60

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



Attachment C

Historical Organic Compound Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
1,1-dichloropropene	MW-11	4/11/2024		3.5	1.0	ug/L
Diethyl phthalate	MW-11	4/08/2014		8	8	ug/L
Diethyl phthalate	MW-11	4/08/2014		8	8	ug/L
Methyl parathion	MW-11	10/14/2014		2.9	.4	ug/L
Phorate	MW-11	10/14/2014		.9	.4	ug/L
Thionazin	MW-11	10/14/2014		.5	.4	ug/L
Trichloroethylene	MW-11	4/11/2024		3.3	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	4/16/2019		16	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	4/09/2020		16	6	ug/L
Acetone	MW-14	5/24/2010		44.9	10.0	ug/L
Acetone	MW-14	10/12/2017		11.8	10.0	ug/L
Toluene	MW-14	5/24/2010		3.2	1.0	ug/L
Xylenes, total	MW-14	5/24/2010		4.9	2.0	ug/L
1,1-dichloropropene	MW-15	4/11/2024		3.5	1.0	ug/L
Acetone	MW-15	10/12/2017		10.8	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/21/2013		50	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	4/14/2015		11	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/11/2016		19	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/12/2017		15	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/12/2018		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	4/16/2019		7	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/17/2019		7	6	ug/L
Trichloroethylene	MW-15	4/11/2024		3.3	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/08/2020		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/28/2021		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/19/2022		19	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/12/2017		35	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/17/2019		25	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/28/2021		12	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	4/13/2022		11	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-3	10/17/2019		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-4	4/23/2018		11	6	ug/L
Acetone	MW-5	10/12/2017		12.2	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	4/23/2018		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	7/05/2018		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	10/17/2019		10	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	4/06/2023		7	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-7	4/15/2009		10	8	ug/L
Acetone	MW-9	5/24/2010		45.1	10.0	ug/L
Acetone	MW-9	10/12/2017		11.2	10.0	ug/L
Toluene	MW-9	5/24/2010		3.6	1.0	ug/L
Xylenes, total	MW-9	5/24/2010		5.6	2.0	ug/L
2-butanone (mek)	SW-1	10/12/2018		7.7	5.0	ug/L
Acetone	SW-1	4/20/2017		15.7	10.0	ug/L
Acetone	SW-1	10/12/2018		27.2	10.0	ug/L
Phorate	SW-2	10/14/2014		.4	.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

Appendix B.2 – Fall Statistical Evaluation Report

GROUND WATER STATISTICS

FOR THE

FLOYD-MITCHELL-CHICKASAW COUNTIES

SANITARY LANDFILL

Second Semi-Annual Monitoring Event in 2024

Prepared for:
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November 2024

INTRODUCTION

This report summarizes the results of the statistical analysis used to evaluate the ground water quality data obtained during the second semi-annual monitoring event in 2024 at the Floyd-Mitchell-Chickasaw Counties Sanitary Landfill near Elma, in Mitchell County, 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. Interwell statistics were used for comparisons of current data to background data at Floyd-Mitchell-Chickasaw Counties Sanitary Landfill. The statistical plan conforms with IAC 567, Chapter 113.10 and the USEPA statistical guidance document (“*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance*”, March 2009).

Ground Water Monitoring Program

The groundwater monitoring network for Floyd-Mitchell-Chickasaw Counties Sanitary Landfill includes downgradient detection sample points MW-11, MW-12, MW-15, MW-16, SW-1, and SW-2. Upgradient sample points along the western border of the Expansion Area include MW-9 and MW-14. Monitoring wells MW-4 and MW-5 were approved by the IDNR as additional background wells in the revised permit (August 2020). Each of the groundwater monitoring wells is to be sampled at least semiannually 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 second semi-annual monitoring event in 2024 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. Both of these methods were previously applied to the Floyd-Mitchell-Chickasaw Counties Landfill data using the DUMPStat[®] statistical program. The Expansion Area upgradient wells have not been monitored regularly so there was insufficient background data available to do upgradient versus downgradient comparisons previously. 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-4, MW-5, MW-9, and MW-14 during the period from October 2014 through the current data. A summary of the background data from monitoring wells MW-4, MW-5, MW-9, and MW-14, 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 sample points MW-11, MW-12, MW-15, and MW-16 compared to the site prediction limits. Prediction

limit exceedances are flagged with asterisks. For the second semi-annual 2024 monitoring data, there were no site prediction limit exceedances detected.

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. Barium was detected at a frequency of 50% or greater in the upgradient wells so barium was tested for normality. The remainder of the metals are rarely detected (less than 50%) in the upgradient wells so nonparametric prediction limits were used in those cases.

Table 4 summarizes the results of the Shapiro-Wilk test. The background barium data has a normal distribution so barium uses a normal site prediction limit. 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 1% and the test becomes sensitive to 4 standard deviation unit increases over background.

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. There were no VOCs detected in the ground water at Floyd-Mitchell-Chickasaw Counties Landfill during the second semi-annual monitoring event in 2024. Historical detections are summarized in Attachment C.

Attachment A

Summary of the Data obtained during the Second Semi-Annual Monitoring Event in 2024

Table 1

Analytical Data Summary for 10/17/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
(3 4)-methylphenol	ug/L							^0.8					
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<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	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<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	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L												
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L							^0.8					
1,2,4-trichlorobenzene	ug/L							^1.1					
1,2-dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L							^0.8					
1,3,5-trinitrobenzene	ug/L							^0.8					
1,3-dichlorobenzene	ug/L							^1.1					
1,3-dichloropropane	ug/L							^1.1					
1,3-dinitrobenzene	ug/L							^0.8					
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L							^0.8					
1,4-phenylenediamine	ug/L							^0.8					
1-naphthylamine	ug/L							^0.8					
2,2-dichloropropane	ug/L							^1.1					
2,3,4,6-tetrachlorophenol	ug/L							^0.8					
2,4,5-t	ug/L							^1.5					
2,4,5-tp (silvex)	ug/L							^1.5					
2,4,5-trichlorophenol	ug/L							^0.8					
2,4,6-trichlorophenol	ug/L							^0.8					
2,4-d	ug/L							^0.8					
2,4-dichlorophenol	ug/L							^0.8					
2,4-dimethylphenol	ug/L							^0.8					
2,4-dinitrophenol	ug/L							^0.8					
2,4-dinitrotoluene	ug/L							^0.8					
2,6-dichlorophenol	ug/L							^0.8					
2,6-dinitrotoluene	ug/L							^0.8					
2-acetylaminofluorene	ug/L							^0.8					
2-butanone (mek)	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-chloronaphthalene	ug/L							^0.8					
2-chlorophenol	ug/L							^0.8					
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L							^0.8					
2-methylphenol	ug/L							^0.8					
2-naphthylamine	ug/L							^0.8					
2-nitroaniline	ug/L							^0.8					
2-nitrophenol	ug/L							^0.8					
3,3'-dichlorobenzidine	ug/L							^0.8					
3,3'-dimethylbenzidine	ug/L							^0.8					
3-methylcholanthrene	ug/L							^0.8					
3-nitroaniline	ug/L							^0.8					
4,4'-ddd	ug/L							^1.05					
4,4'-dde	ug/L							^1.05					
4,4'-ddt	ug/L							^1.05					
4,6-dinitro-2-methylphenol	ug/L							^0.8					
4-aminobiphenyl	ug/L							^0.8					
4-bromophenyl phenyl ether	ug/L							^0.8					
4-chloro-3-methylphenol	ug/L							^0.8					
4-chloroaniline	ug/L							^0.8					
4-chlorophenyl phenyl ether	ug/L							^0.8					
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L							^0.8					
4-nitrophenol	ug/L							^0.8					
5-nitro-o-toluidine	ug/L							^0.8					
7,12-dimethylbenz(a)anthracene	ug/L							^0.8					
Acenaphthene	ug/L							^0.8					
Acenaphthylene	ug/L							^0.8					
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile	ug/L							^1.0					
Acetophenone	ug/L							^0.8					
Acrolein	ug/L							^1.0					
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin	ug/L							^1.05					
Allyl chloride	ug/L							^1.1					
Alpha-bhc	ug/L							^1.05					
Anthracene	ug/L							^0.8					

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

Table 1

Analytical Data Summary for 10/17/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L							<.2					
Arochlor 1221	ug/L							<.2					
Arochlor 1232	ug/L							<.2					
Arochlor 1242	ug/L							<.2					
Arochlor 1248	ug/L							<.2					
Arochlor 1254	ug/L							<.2					
Arochlor 1260	ug/L							<.2					
Arsenic, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	17.7	<4.0	<4.0
Azobenzene	ug/L							<.8					
Barium, total	ug/L	20.9	140.0	220.0	27.9	43.2	45.1	113.0	76.7	287.0	74.4	26.0	137.0
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
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	<4	<4	<4	<4	<4	<.4	<4	<4	<4	<4	<4
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	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L							<.8					
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	1.1	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L							<.1					
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L							<.8					
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L							<.1					
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<.8	<.8	<8	<8	<8	<8
Chrysene	ug/L							<.8					
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.4	<.4	<.4	<.4	<.4	2.3	<.4	<.4	3.5	5.1	<.4	<.4
Copper, total	ug/L	<4.0	<4.0	<4.0	<4.0	4.9	<4.0	<4.0	<4.0	12.6	<4.0	<4.0	<4.0
Cyanide, total	mg/L							<.01					
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	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L							<.1					
Dieldrin	ug/L							<.05					
Diethyl phthalate	ug/L							<.8					
Dimethoate	ug/L							<.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					
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	<1	<1	<1	<1	<1
Famphur	ug/L							<.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 1

Analytical Data Summary for 10/17/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
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	△.0	<4.0	11.9	<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	△.2	<1	<1	<1	<1	<1
Methyl methacrylate	ug/L							△.1					
Methyl methanesulfonate	ug/L							△.8					
Methyl parathion	ug/L							△.4					
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	△.5	<5	<5	<5	<5	<5
Naphthalene	ug/L							△.8					
Nickel, total	ug/L	<4.0	<4.0	<4.0	<4.0	4.6	4.9	4.4	<4.0	16.3	5.0	4.0	<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					
O-toluidine	ug/L							△.8					
Parathion	ug/L							△.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							△.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	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	△.4	<4	<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Sulfide, total	mg/L							△.1					
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<2	<2	<2	<2	<2	<2	△.2	<2	<2	<2	<2	<2
Thionazin	ug/L							△.4					
Tin, total	ug/L							△.20					
Toluene	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Toxaphene	ug/L							△.2					
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<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	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	△.20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	△.5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	△.2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	△.20.0	70.9	1080.0	25.4	<20.0	<20.0

* - 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-14	10/14/2014		2.5000	
Antimony, total	ug/L	MW-14	01/12/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	04/13/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	07/21/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	09/23/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-14	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-14	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-14	10/12/2017	ND	2.0000	
Antimony, total	ug/L	MW-14	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-14	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-14	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-14	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-14	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-14	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-14	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-14	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-14	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-14	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-14	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-14	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-14	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-14	10/17/2024	ND	2.0000	
Antimony, total	ug/L	MW-4	10/14/2014	ND	2.0000	
Antimony, total	ug/L	MW-4	04/13/2015	ND	2.0000	
Antimony, total	ug/L	MW-4	09/23/2015	ND	2.0000	
Antimony, total	ug/L	MW-4	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-4	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-4	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-4	10/12/2017	ND	2.0000	
Antimony, total	ug/L	MW-4	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-4	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-4	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-4	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-4	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-4	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-4	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-4	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-4	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-4	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-4	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-4	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-4	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-4	10/17/2024	ND	2.0000	
Antimony, total	ug/L	MW-5	10/14/2014	ND	2.0000	
Antimony, total	ug/L	MW-5	04/13/2015	ND	2.0000	
Antimony, total	ug/L	MW-5	09/23/2015	ND	2.0000	
Antimony, total	ug/L	MW-5	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-5	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-5	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-5	10/12/2017	ND	2.0000	
Antimony, total	ug/L	MW-5	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-5	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-5	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-5	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-5	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-5	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-5	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-5	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-5	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-5	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-5	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-5	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-5	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-5	10/17/2024	ND	2.0000	
Antimony, total	ug/L	MW-9	10/14/2014	ND	2.0000	
Antimony, total	ug/L	MW-9	01/12/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	04/14/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	07/21/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	09/22/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-9	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-9	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-9	10/12/2017	ND	2.0000	

* - 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
Antimony, total	ug/L	MW-9	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-9	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-9	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-9	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-9	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-9	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-9	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-9	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-9	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-9	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-9	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-9	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-9	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-9	10/17/2024	ND	2.0000	
Arsenic, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Arsenic, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Arsenic, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Arsenic, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Arsenic, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/06/2023	ND	4.5000	
Arsenic, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Arsenic, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/06/2023	ND	4.5000	
Arsenic, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/17/2024	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
Arsenic, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/17/2024		4.0000	
Arsenic, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Arsenic, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Arsenic, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Arsenic, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Barium, total	ug/L	MW-14	10/14/2014		184.0000	
Barium, total	ug/L	MW-14	01/12/2015		169.0000	
Barium, total	ug/L	MW-14	04/13/2015		143.0000	
Barium, total	ug/L	MW-14	07/21/2015		141.0000	
Barium, total	ug/L	MW-14	09/23/2015		185.0000	
Barium, total	ug/L	MW-14	04/12/2016		121.0000	
Barium, total	ug/L	MW-14	10/11/2016		125.0000	
Barium, total	ug/L	MW-14	04/20/2017		140.0000	
Barium, total	ug/L	MW-14	10/12/2017		170.0000	
Barium, total	ug/L	MW-14	04/23/2018		126.0000	
Barium, total	ug/L	MW-14	10/12/2018		128.0000	
Barium, total	ug/L	MW-14	04/16/2019		114.0000	
Barium, total	ug/L	MW-14	10/17/2019		155.0000	
Barium, total	ug/L	MW-14	04/09/2020		117.0000	
Barium, total	ug/L	MW-14	10/08/2020		137.0000	
Barium, total	ug/L	MW-14	04/15/2021		120.0000	
Barium, total	ug/L	MW-14	10/28/2021		102.0000	
Barium, total	ug/L	MW-14	04/13/2022		107.0000	
Barium, total	ug/L	MW-14	10/19/2022		133.0000	
Barium, total	ug/L	MW-14	04/06/2023		117.0000	
Barium, total	ug/L	MW-14	10/10/2023		140.0000	
Barium, total	ug/L	MW-14	04/11/2024		114.0000	
Barium, total	ug/L	MW-14	10/17/2024		220.0000	
Barium, total	ug/L	MW-4	10/14/2014		141.0000	
Barium, total	ug/L	MW-4	04/13/2015		103.0000	
Barium, total	ug/L	MW-4	09/23/2015		92.5000	
Barium, total	ug/L	MW-4	04/12/2016		66.2000	
Barium, total	ug/L	MW-4	10/11/2016		77.7000	
Barium, total	ug/L	MW-4	04/20/2017		128.0000	
Barium, total	ug/L	MW-4	10/12/2017		83.8000	
Barium, total	ug/L	MW-4	04/23/2018		116.0000	
Barium, total	ug/L	MW-4	10/12/2018		111.0000	
Barium, total	ug/L	MW-4	04/16/2019		71.2000	
Barium, total	ug/L	MW-4	10/17/2019		137.0000	
Barium, total	ug/L	MW-4	04/09/2020		65.3000	
Barium, total	ug/L	MW-4	10/08/2020		75.2000	
Barium, total	ug/L	MW-4	04/15/2021		49.6000	
Barium, total	ug/L	MW-4	10/28/2021		73.2000	
Barium, total	ug/L	MW-4	04/13/2022		63.6000	
Barium, total	ug/L	MW-4	10/19/2022		81.8000	
Barium, total	ug/L	MW-4	04/06/2023		162.0000	
Barium, total	ug/L	MW-4	10/10/2023		67.4000	
Barium, total	ug/L	MW-4	04/11/2024		33.4000	
Barium, total	ug/L	MW-4	10/17/2024		76.7000	
Barium, total	ug/L	MW-5	10/14/2014		251.0000	
Barium, total	ug/L	MW-5	04/13/2015		272.0000	

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted
Barium, total	ug/L	MW-5	09/23/2015		330.0000	
Barium, total	ug/L	MW-5	11/24/2015		328.0000	
Barium, total	ug/L	MW-5	04/12/2016		167.0000	
Barium, total	ug/L	MW-5	10/11/2016		262.0000	
Barium, total	ug/L	MW-5	04/20/2017		338.0000	
Barium, total	ug/L	MW-5	10/12/2017		276.0000	
Barium, total	ug/L	MW-5	04/23/2018		206.0000	
Barium, total	ug/L	MW-5	10/12/2018		212.0000	
Barium, total	ug/L	MW-5	04/16/2019		193.0000	
Barium, total	ug/L	MW-5	10/17/2019		296.0000	
Barium, total	ug/L	MW-5	04/09/2020		268.0000	
Barium, total	ug/L	MW-5	10/08/2020		268.0000	
Barium, total	ug/L	MW-5	04/15/2021		71.8000	*
Barium, total	ug/L	MW-5	10/28/2021		175.0000	
Barium, total	ug/L	MW-5	04/13/2022		180.0000	
Barium, total	ug/L	MW-5	10/19/2022		250.0000	
Barium, total	ug/L	MW-5	04/06/2023		206.0000	
Barium, total	ug/L	MW-5	10/10/2023		202.0000	
Barium, total	ug/L	MW-5	04/11/2024		71.7000	*
Barium, total	ug/L	MW-5	10/17/2024		287.0000	
Barium, total	ug/L	MW-9	10/14/2014		114.0000	
Barium, total	ug/L	MW-9	01/12/2015		115.0000	
Barium, total	ug/L	MW-9	04/14/2015		138.0000	
Barium, total	ug/L	MW-9	07/21/2015		111.0000	
Barium, total	ug/L	MW-9	09/22/2015		114.0000	
Barium, total	ug/L	MW-9	04/12/2016		99.2000	
Barium, total	ug/L	MW-9	10/11/2016		106.0000	
Barium, total	ug/L	MW-9	04/20/2017		116.0000	
Barium, total	ug/L	MW-9	10/12/2017		105.0000	
Barium, total	ug/L	MW-9	04/23/2018		110.0000	
Barium, total	ug/L	MW-9	10/12/2018		106.0000	
Barium, total	ug/L	MW-9	04/16/2019		106.0000	
Barium, total	ug/L	MW-9	10/17/2019		113.0000	
Barium, total	ug/L	MW-9	04/09/2020		93.9000	
Barium, total	ug/L	MW-9	10/08/2020		98.7000	
Barium, total	ug/L	MW-9	04/15/2021		93.2000	
Barium, total	ug/L	MW-9	10/28/2021		91.9000	
Barium, total	ug/L	MW-9	04/13/2022		105.0000	
Barium, total	ug/L	MW-9	10/19/2022		102.0000	
Barium, total	ug/L	MW-9	04/06/2023		96.1000	
Barium, total	ug/L	MW-9	10/10/2023		89.8000	
Barium, total	ug/L	MW-9	04/11/2024		95.5000	
Barium, total	ug/L	MW-9	10/17/2024		137.0000	
Beryllium, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Beryllium, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Beryllium, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Beryllium, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Beryllium, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Beryllium, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Beryllium, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Beryllium, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Beryllium, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Beryllium, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Beryllium, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Beryllium, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Beryllium, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Beryllium, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Beryllium, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Beryllium, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Beryllium, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Beryllium, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Beryllium, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Beryllium, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Beryllium, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Beryllium, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Beryllium, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Beryllium, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/23/2018	ND	4.0000	

* - Outlier for that well and constituent.
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 *** - 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-4	10/12/2018	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/06/2023	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Beryllium, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/17/2024	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Beryllium, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Cadmium, total	ug/L	MW-14	10/14/2014	ND	0.8000	
Cadmium, total	ug/L	MW-14	01/12/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/13/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	07/21/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	09/23/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/12/2016	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/11/2016	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/20/2017	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/12/2017	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/23/2018	ND	5.3000	
Cadmium, total	ug/L	MW-14	10/12/2018	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/16/2019	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/17/2019	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/09/2020	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/08/2020	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/15/2021	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/28/2021	ND	0.8000	

* - 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
Cadmium, total	ug/L	MW-14	04/13/2022	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/19/2022	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/06/2023	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/10/2023	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/11/2024	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/17/2024	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/14/2014	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/13/2015	ND	0.8000	
Cadmium, total	ug/L	MW-4	09/23/2015	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/12/2016	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/11/2016	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/20/2017	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/12/2017	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/23/2018	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/12/2018	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/16/2019	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/17/2019	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/09/2020	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/08/2020	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/15/2021	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/28/2021	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/13/2022	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/19/2022	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/06/2023	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/10/2023	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/11/2024	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/17/2024	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/14/2014	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/13/2015	ND	0.8000	
Cadmium, total	ug/L	MW-5	09/23/2015	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/12/2016	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/11/2016	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/20/2017	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/12/2017	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/23/2018	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/12/2018	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/16/2019	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/17/2019	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/09/2020	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/08/2020	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/15/2021	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/28/2021	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/13/2022	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/19/2022	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/06/2023		1.1000	
Cadmium, total	ug/L	MW-5	10/10/2023	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/11/2024	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/17/2024		1.1000	
Cadmium, total	ug/L	MW-9	10/14/2014	ND	0.8000	
Cadmium, total	ug/L	MW-9	01/12/2015	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/14/2015	ND	0.8000	
Cadmium, total	ug/L	MW-9	07/21/2015	ND	0.8000	
Cadmium, total	ug/L	MW-9	09/22/2015	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/12/2016	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/11/2016	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/20/2017	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/12/2017	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/23/2018	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/12/2018	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/16/2019		1.2000	
Cadmium, total	ug/L	MW-9	10/17/2019	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/09/2020	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/08/2020	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/15/2021	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/28/2021	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/13/2022	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/19/2022		1.3000	
Cadmium, total	ug/L	MW-9	04/06/2023	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/10/2023	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/11/2024	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/17/2024	ND	0.8000	
Chromium, total	ug/L	MW-14	10/14/2014	ND	8.0000	
Chromium, total	ug/L	MW-14	01/12/2015	ND	8.0000	
Chromium, total	ug/L	MW-14	04/13/2015	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
Chromium, total	ug/L	MW-14	07/21/2015	ND	8.0000	
Chromium, total	ug/L	MW-14	09/23/2015	ND	8.0000	
Chromium, total	ug/L	MW-14	04/12/2016	ND	8.0000	
Chromium, total	ug/L	MW-14	10/11/2016	ND	8.0000	
Chromium, total	ug/L	MW-14	04/20/2017	ND	8.0000	
Chromium, total	ug/L	MW-14	10/12/2017	ND	8.0000	
Chromium, total	ug/L	MW-14	04/23/2018	ND	8.0000	
Chromium, total	ug/L	MW-14	10/12/2018	ND	8.0000	
Chromium, total	ug/L	MW-14	04/16/2019	ND	8.0000	
Chromium, total	ug/L	MW-14	10/17/2019	ND	8.0000	
Chromium, total	ug/L	MW-14	04/09/2020	ND	8.0000	
Chromium, total	ug/L	MW-14	10/08/2020	ND	8.0000	
Chromium, total	ug/L	MW-14	04/15/2021	ND	8.0000	
Chromium, total	ug/L	MW-14	10/28/2021	ND	8.0000	
Chromium, total	ug/L	MW-14	04/13/2022	ND	8.0000	
Chromium, total	ug/L	MW-14	10/19/2022	ND	8.0000	
Chromium, total	ug/L	MW-14	04/06/2023	ND	8.0000	
Chromium, total	ug/L	MW-14	10/10/2023	ND	8.0000	
Chromium, total	ug/L	MW-14	04/11/2024	ND	8.0000	
Chromium, total	ug/L	MW-14	10/17/2024	ND	8.0000	
Chromium, total	ug/L	MW-4	10/14/2014	ND	8.0000	
Chromium, total	ug/L	MW-4	04/13/2015	ND	8.0000	
Chromium, total	ug/L	MW-4	09/23/2015	ND	8.0000	
Chromium, total	ug/L	MW-4	04/12/2016	ND	8.0000	
Chromium, total	ug/L	MW-4	10/11/2016	ND	8.0000	
Chromium, total	ug/L	MW-4	04/20/2017		9.1000	
Chromium, total	ug/L	MW-4	10/12/2017	ND	8.0000	
Chromium, total	ug/L	MW-4	04/23/2018	ND	8.0000	
Chromium, total	ug/L	MW-4	10/12/2018	ND	8.0000	
Chromium, total	ug/L	MW-4	04/16/2019	ND	8.0000	
Chromium, total	ug/L	MW-4	10/17/2019	ND	8.0000	
Chromium, total	ug/L	MW-4	04/09/2020	ND	8.0000	
Chromium, total	ug/L	MW-4	10/08/2020	ND	8.0000	
Chromium, total	ug/L	MW-4	04/15/2021	ND	8.0000	
Chromium, total	ug/L	MW-4	10/28/2021	ND	8.0000	
Chromium, total	ug/L	MW-4	04/13/2022	ND	8.0000	
Chromium, total	ug/L	MW-4	10/19/2022	ND	8.0000	
Chromium, total	ug/L	MW-4	04/06/2023		8.3000	
Chromium, total	ug/L	MW-4	10/10/2023	ND	8.0000	
Chromium, total	ug/L	MW-4	04/11/2024	ND	8.0000	
Chromium, total	ug/L	MW-4	10/17/2024	ND	8.0000	
Chromium, total	ug/L	MW-5	10/14/2014	ND	8.0000	
Chromium, total	ug/L	MW-5	04/13/2015	ND	8.0000	
Chromium, total	ug/L	MW-5	09/23/2015	ND	8.0000	
Chromium, total	ug/L	MW-5	04/12/2016	ND	8.0000	
Chromium, total	ug/L	MW-5	10/11/2016	ND	8.0000	
Chromium, total	ug/L	MW-5	04/20/2017	ND	8.0000	
Chromium, total	ug/L	MW-5	10/12/2017	ND	8.0000	
Chromium, total	ug/L	MW-5	04/23/2018	ND	8.0000	
Chromium, total	ug/L	MW-5	10/12/2018	ND	8.0000	
Chromium, total	ug/L	MW-5	04/16/2019	ND	8.0000	
Chromium, total	ug/L	MW-5	10/17/2019	ND	8.0000	
Chromium, total	ug/L	MW-5	04/09/2020	ND	8.0000	
Chromium, total	ug/L	MW-5	10/08/2020	ND	8.0000	
Chromium, total	ug/L	MW-5	04/15/2021	ND	8.0000	
Chromium, total	ug/L	MW-5	10/28/2021	ND	8.0000	
Chromium, total	ug/L	MW-5	04/13/2022	ND	8.0000	
Chromium, total	ug/L	MW-5	10/19/2022	ND	8.0000	
Chromium, total	ug/L	MW-5	04/06/2023	ND	8.0000	
Chromium, total	ug/L	MW-5	10/10/2023	ND	8.0000	
Chromium, total	ug/L	MW-5	04/11/2024	ND	8.0000	
Chromium, total	ug/L	MW-5	10/17/2024	ND	8.0000	
Chromium, total	ug/L	MW-9	10/14/2014	ND	8.0000	
Chromium, total	ug/L	MW-9	01/12/2015	ND	8.0000	
Chromium, total	ug/L	MW-9	04/14/2015	ND	8.0000	
Chromium, total	ug/L	MW-9	07/21/2015	ND	8.0000	
Chromium, total	ug/L	MW-9	09/22/2015	ND	8.0000	
Chromium, total	ug/L	MW-9	04/12/2016	ND	8.0000	
Chromium, total	ug/L	MW-9	10/11/2016	ND	8.0000	
Chromium, total	ug/L	MW-9	04/20/2017	ND	8.0000	
Chromium, total	ug/L	MW-9	10/12/2017	ND	8.0000	
Chromium, total	ug/L	MW-9	04/23/2018	ND	8.0000	
Chromium, total	ug/L	MW-9	10/12/2018	ND	8.0000	
Chromium, total	ug/L	MW-9	04/16/2019	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	
Chromium, total	ug/L	MW-9	10/17/2019	ND	8.0000		
Chromium, total	ug/L	MW-9	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	10/08/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	04/15/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	10/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	04/13/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	10/19/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	04/06/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	10/10/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	04/11/2024	ND	8.0000		
Chromium, total	ug/L	MW-9	10/17/2024	ND	8.0000		
Cobalt, total	ug/L	MW-14	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-14	01/12/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	07/21/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/17/2019	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-14	04/06/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/17/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/14/2014		2.1000		
Cobalt, total	ug/L	MW-4	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-4	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-4	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/20/2017		3.3000		
Cobalt, total	ug/L	MW-4	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/23/2018		2.8000		
Cobalt, total	ug/L	MW-4	10/12/2018		1.4000		
Cobalt, total	ug/L	MW-4	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-4	10/17/2019		2.0000		
Cobalt, total	ug/L	MW-4	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-4	04/06/2023		3.5000		
Cobalt, total	ug/L	MW-4	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/17/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-5	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/17/2019	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/09/2020		3.4000		
Cobalt, total	ug/L	MW-5	10/08/2020		0.6000		
Cobalt, total	ug/L	MW-5	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	04/13/2022		0.4000		
Cobalt, total	ug/L	MW-5	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-5	04/06/2023		2.7000		
Cobalt, total	ug/L	MW-5	10/10/2023	ND	0.4000	0.8000	**

* - 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	
Cobalt, total	ug/L	MW-5	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	10/17/2024		3.5000		
Cobalt, total	ug/L	MW-9	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-9	01/12/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/14/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	07/21/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	09/22/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/17/2019	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-9	04/06/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/17/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Copper, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Copper, total	ug/L	MW-14	04/13/2015	ND	4.0000		
Copper, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Copper, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Copper, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Copper, total	ug/L	MW-14	10/11/2016	ND	4.0000		
Copper, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Copper, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Copper, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Copper, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Copper, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Copper, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Copper, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Copper, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Copper, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Copper, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Copper, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Copper, total	ug/L	MW-14	10/19/2022		7.0000		
Copper, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Copper, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Copper, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Copper, total	ug/L	MW-14	10/17/2024	ND	4.0000		
Copper, total	ug/L	MW-4	10/14/2014		6.1000		
Copper, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Copper, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Copper, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Copper, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Copper, total	ug/L	MW-4	04/20/2017		5.5000		
Copper, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Copper, total	ug/L	MW-4	04/23/2018	ND	4.0000		
Copper, total	ug/L	MW-4	10/12/2018	ND	4.0000		
Copper, total	ug/L	MW-4	04/16/2019	ND	4.0000		
Copper, total	ug/L	MW-4	10/17/2019		4.3000		
Copper, total	ug/L	MW-4	04/09/2020	ND	4.0000		
Copper, total	ug/L	MW-4	10/08/2020	ND	4.0000		
Copper, total	ug/L	MW-4	04/15/2021	ND	4.0000		
Copper, total	ug/L	MW-4	10/28/2021	ND	4.0000		
Copper, total	ug/L	MW-4	04/13/2022	ND	4.0000		
Copper, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Copper, total	ug/L	MW-4	04/06/2023		9.1000		
Copper, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Copper, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Copper, total	ug/L	MW-4	10/17/2024	ND	4.0000		
Copper, total	ug/L	MW-5	10/14/2014	ND	4.0000		
Copper, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Copper, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Copper, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Copper, total	ug/L	MW-5	10/11/2016	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-5	04/20/2017	ND	4.0000	
Copper, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Copper, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Copper, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Copper, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Copper, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Copper, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Copper, total	ug/L	MW-5	04/06/2023		9.6000	
Copper, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Copper, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Copper, total	ug/L	MW-5	10/17/2024		12.6000	
Copper, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Copper, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Copper, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Copper, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Copper, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Copper, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Copper, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Copper, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Copper, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Copper, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Copper, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Copper, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Copper, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Copper, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Copper, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Copper, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Copper, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Copper, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Lead, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Lead, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Lead, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Lead, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Lead, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Lead, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Lead, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Lead, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Lead, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Lead, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Lead, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Lead, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Lead, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Lead, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Lead, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Lead, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Lead, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Lead, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Lead, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Lead, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Lead, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Lead, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Lead, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Lead, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Lead, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Lead, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Lead, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Lead, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Lead, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Lead, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Lead, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Lead, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Lead, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Lead, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Lead, total	ug/L	MW-4	04/09/2020	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
Lead, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Lead, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Lead, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Lead, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Lead, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Lead, total	ug/L	MW-4	04/06/2023		7.6000	
Lead, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Lead, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Lead, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Lead, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Lead, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Lead, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Lead, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Lead, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Lead, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Lead, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Lead, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Lead, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Lead, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Lead, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Lead, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Lead, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Lead, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Lead, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Lead, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Lead, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Lead, total	ug/L	MW-5	04/06/2023		6.2000	
Lead, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Lead, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Lead, total	ug/L	MW-5	10/17/2024		11.9000	
Lead, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Lead, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Lead, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Lead, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Lead, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Lead, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Lead, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Lead, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Lead, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Lead, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Lead, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Lead, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Lead, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Lead, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Lead, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Lead, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Lead, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Lead, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Lead, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Lead, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Lead, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Lead, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Lead, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Nickel, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Nickel, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Nickel, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Nickel, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Nickel, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Nickel, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Nickel, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Nickel, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Nickel, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Nickel, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Nickel, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-14	10/10/2023	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
Nickel, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Nickel, total	ug/L	MW-4	10/14/2014		6.2000	
Nickel, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Nickel, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Nickel, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-4	04/20/2017		9.5000	
Nickel, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-4	04/23/2018		4.5000	
Nickel, total	ug/L	MW-4	10/12/2018		4.7000	
Nickel, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-4	10/17/2019		6.0000	
Nickel, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Nickel, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Nickel, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Nickel, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Nickel, total	ug/L	MW-4	04/06/2023		9.8000	
Nickel, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Nickel, total	ug/L	MW-5	10/14/2014		5.9000	
Nickel, total	ug/L	MW-5	04/13/2015		6.3000	
Nickel, total	ug/L	MW-5	09/23/2015		5.7000	
Nickel, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Nickel, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Nickel, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Nickel, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Nickel, total	ug/L	MW-5	04/09/2020		6.8000	
Nickel, total	ug/L	MW-5	10/08/2020		6.6000	
Nickel, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Nickel, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-5	10/19/2022		5.4000	
Nickel, total	ug/L	MW-5	04/06/2023		13.1000	*
Nickel, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-5	10/17/2024		16.3000	*
Nickel, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Nickel, total	ug/L	MW-9	01/12/2015		4.0000	
Nickel, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Nickel, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Nickel, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Nickel, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Nickel, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Nickel, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Nickel, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Nickel, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Nickel, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Nickel, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-9	10/28/2021		4.2000	
Nickel, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Nickel, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Nickel, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Selenium, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Selenium, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Selenium, total	ug/L	MW-14	04/13/2015		5.1000	
Selenium, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Selenium, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Selenium, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Selenium, total	ug/L	MW-14	10/11/2016		5.5000	

* - 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-14	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Selenium, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-14	10/19/2022		5.5000	
Selenium, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Selenium, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Selenium, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Selenium, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Selenium, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Selenium, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Selenium, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Selenium, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Selenium, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Selenium, total	ug/L	MW-4	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Selenium, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Selenium, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Selenium, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Selenium, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Selenium, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Selenium, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Selenium, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Selenium, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Selenium, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Selenium, total	ug/L	MW-5	10/17/2024	ND	4.0000	
Selenium, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Selenium, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Selenium, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Selenium, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-9	04/15/2021	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
Selenium, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Selenium, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Selenium, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Silver, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Silver, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Silver, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Silver, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Silver, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Silver, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Silver, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Silver, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Silver, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Silver, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Silver, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Silver, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Silver, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Silver, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Silver, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Silver, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Silver, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Silver, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Silver, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Silver, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Silver, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Silver, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Silver, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Silver, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Silver, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Silver, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Silver, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Silver, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Silver, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Silver, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Silver, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Silver, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Silver, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Silver, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Silver, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Silver, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Silver, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Silver, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Silver, total	ug/L	MW-4	04/06/2023	ND	4.0000	
Silver, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Silver, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Silver, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Silver, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Silver, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Silver, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Silver, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Silver, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Silver, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Silver, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Silver, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Silver, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Silver, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Silver, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Silver, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Silver, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Silver, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Silver, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Silver, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Silver, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Silver, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Silver, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Silver, total	ug/L	MW-5	10/17/2024	ND	4.0000	
Silver, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-9	01/12/2015	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	
Silver, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Silver, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Silver, total	ug/L	MW-9	09/22/2015	ND	4.0000		
Silver, total	ug/L	MW-9	04/12/2016	ND	4.0000		
Silver, total	ug/L	MW-9	10/11/2016	ND	4.0000		
Silver, total	ug/L	MW-9	04/20/2017	ND	4.0000		
Silver, total	ug/L	MW-9	10/12/2017	ND	4.0000		
Silver, total	ug/L	MW-9	04/23/2018	ND	4.0000		
Silver, total	ug/L	MW-9	10/12/2018	ND	4.0000		
Silver, total	ug/L	MW-9	04/16/2019	ND	4.0000		
Silver, total	ug/L	MW-9	10/17/2019	ND	4.0000		
Silver, total	ug/L	MW-9	04/09/2020	ND	4.0000		
Silver, total	ug/L	MW-9	10/08/2020	ND	4.0000		
Silver, total	ug/L	MW-9	04/15/2021	ND	4.0000		
Silver, total	ug/L	MW-9	10/28/2021	ND	4.0000		
Silver, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Silver, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Silver, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Silver, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Silver, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Silver, total	ug/L	MW-9	10/17/2024	ND	4.0000		
Thallium, total	ug/L	MW-14	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	01/12/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	07/21/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-14	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-14	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-14	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-14	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-14	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-14	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-14	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-14	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-14	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-14	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-14	10/17/2024	ND	2.0000		
Thallium, total	ug/L	MW-4	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-4	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-4	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-4	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-4	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-4	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-4	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-4	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-4	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-4	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-4	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-4	10/17/2024	ND	2.0000		
Thallium, total	ug/L	MW-5	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/12/2018	ND	4.0000	2.0000	**

* - 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	
Thallium, total	ug/L	MW-5	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-5	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-5	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-5	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-5	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-5	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-5	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-5	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-5	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-5	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-5	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-5	10/17/2024	ND	2.0000		
Thallium, total	ug/L	MW-9	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	01/12/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/14/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	07/21/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	09/22/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-9	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-9	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-9	10/17/2024	ND	2.0000		
Vanadium, total	ug/L	MW-14	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-14	01/12/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	07/21/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/17/2024	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-4	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/13/2022	ND	20.0000		

* - 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	
Vanadium, total	ug/L	MW-4	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/17/2024	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-5	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/17/2024	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-9	01/12/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/14/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	07/21/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/22/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/17/2024	ND	20.0000		
Zinc, total	ug/L	MW-14	10/14/2014	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	01/12/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	04/13/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	07/21/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	09/23/2015	ND	20.0000		
Zinc, total	ug/L	MW-14	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	10/11/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	04/20/2017	ND	20.0000		
Zinc, total	ug/L	MW-14	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	04/23/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	10/12/2018		16.1000		
Zinc, total	ug/L	MW-14	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-14	10/17/2019	ND	20.0000		
Zinc, total	ug/L	MW-14	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-14	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-14	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-14	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-14	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-14	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-14	04/06/2023	ND	20.0000		
Zinc, total	ug/L	MW-14	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-14	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-14	10/17/2024	ND	20.0000		
Zinc, total	ug/L	MW-4	10/14/2014		40.0000		
Zinc, total	ug/L	MW-4	01/12/2015	ND	8.0000	20.0000	**

* - 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-4	04/13/2015		12.4000		
Zinc, total	ug/L	MW-4	09/23/2015		10.3000		
Zinc, total	ug/L	MW-4	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-4	10/11/2016		11.9000		
Zinc, total	ug/L	MW-4	01/17/2017		58.9000		
Zinc, total	ug/L	MW-4	04/20/2017		57.6000		
Zinc, total	ug/L	MW-4	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-4	04/23/2018		159.0000		
Zinc, total	ug/L	MW-4	10/12/2018		237.0000		
Zinc, total	ug/L	MW-4	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-4	10/17/2019		130.0000		
Zinc, total	ug/L	MW-4	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-4	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-4	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-4	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-4	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-4	10/19/2022		216.0000		
Zinc, total	ug/L	MW-4	04/06/2023		627.0000		*
Zinc, total	ug/L	MW-4	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-4	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-4	10/17/2024		70.9000		
Zinc, total	ug/L	MW-5	10/14/2014		24.7000		
Zinc, total	ug/L	MW-5	04/13/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	09/23/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	10/11/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/20/2017		16.5000		
Zinc, total	ug/L	MW-5	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/23/2018		15.2000		
Zinc, total	ug/L	MW-5	10/12/2018		20.3000		
Zinc, total	ug/L	MW-5	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-5	10/17/2019		83.1000		
Zinc, total	ug/L	MW-5	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-5	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-5	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-5	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-5	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-5	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-5	04/06/2023		411.0000		*
Zinc, total	ug/L	MW-5	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-5	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-5	10/17/2024		1080.0000		*
Zinc, total	ug/L	MW-9	10/14/2014	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	01/12/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/14/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	07/21/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	09/23/2015	ND	20.0000		
Zinc, total	ug/L	MW-9	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/11/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/20/2017	ND	20.0000		
Zinc, total	ug/L	MW-9	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/23/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/12/2018		9.0000		
Zinc, total	ug/L	MW-9	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-9	10/17/2019		29.9000		
Zinc, total	ug/L	MW-9	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-9	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-9	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	04/06/2023		21.3000		
Zinc, total	ug/L	MW-9	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-9	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-9	10/17/2024	ND	20.0000		

* - 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	10/17/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-12	10/17/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-15	10/17/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-16	10/17/2024	ND	2.0000	2.5000
Arsenic, total	ug/L	MW-11	10/17/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-12	10/17/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-15	10/17/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-16	10/17/2024	ND	4.0000	4.5000
Barium, total	ug/L	MW-11	10/17/2024		20.9000	382.3899
Barium, total	ug/L	MW-12	10/17/2024		140.0000	382.3899
Barium, total	ug/L	MW-15	10/17/2024		27.9000	382.3899
Barium, total	ug/L	MW-16	10/17/2024		43.2000	382.3899
Beryllium, total	ug/L	MW-11	10/17/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-12	10/17/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-15	10/17/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-16	10/17/2024	ND	4.0000	4.0000
Cadmium, total	ug/L	MW-11	10/17/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-12	10/17/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-15	10/17/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-16	10/17/2024	ND	0.8000	5.3000
Chromium, total	ug/L	MW-11	10/17/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-12	10/17/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-15	10/17/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-16	10/17/2024	ND	8.0000	9.1000
Cobalt, total	ug/L	MW-11	10/17/2024	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-12	10/17/2024	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-15	10/17/2024	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-16	10/17/2024	ND	0.4000	3.5000
Copper, total	ug/L	MW-11	10/17/2024	ND	4.0000	12.6000
Copper, total	ug/L	MW-12	10/17/2024	ND	4.0000	12.6000
Copper, total	ug/L	MW-15	10/17/2024	ND	4.0000	12.6000
Copper, total	ug/L	MW-16	10/17/2024	ND	4.9000	12.6000
Lead, total	ug/L	MW-11	10/17/2024	ND	4.0000	11.9000
Lead, total	ug/L	MW-12	10/17/2024	ND	4.0000	11.9000
Lead, total	ug/L	MW-15	10/17/2024	ND	4.0000	11.9000
Lead, total	ug/L	MW-16	10/17/2024	ND	4.0000	11.9000
Nickel, total	ug/L	MW-11	10/17/2024	ND	4.0000	9.8000
Nickel, total	ug/L	MW-12	10/17/2024	ND	4.0000	9.8000
Nickel, total	ug/L	MW-15	10/17/2024	ND	4.0000	9.8000
Nickel, total	ug/L	MW-16	10/17/2024	ND	4.6000	9.8000
Selenium, total	ug/L	MW-11	10/17/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-12	10/17/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-15	10/17/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-16	10/17/2024	ND	4.0000	5.5000
Silver, total	ug/L	MW-11	10/17/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-12	10/17/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-15	10/17/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-16	10/17/2024	ND	4.0000	4.0000
Thallium, total	ug/L	MW-11	10/17/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-12	10/17/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-15	10/17/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-16	10/17/2024	ND	2.0000	2.0000
Vanadium, total	ug/L	MW-11	10/17/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-12	10/17/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-15	10/17/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-16	10/17/2024	ND	20.0000	20.0000
Zinc, total	ug/L	MW-11	10/17/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-12	10/17/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-15	10/17/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-16	10/17/2024	ND	20.0000	237.0000

* - 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	Upgradient			Downgradient		
	Detect	N	Proportion	Detect	N	Proportion
Antimony, total	1	88	0.011	2	110	0.018
Arsenic, total	2	88	0.023	7	111	0.063
Barium, total	87	87	1.000	110	110	1.000
Beryllium, total	0	88	0.000	0	110	0.000
Cadmium, total	5	88	0.057	11	111	0.099
Chromium, total	2	88	0.023	12	110	0.109
Cobalt, total	11	88	0.125	22	110	0.200
Copper, total	7	88	0.080	33	111	0.297
Lead, total	3	88	0.034	19	110	0.173
Nickel, total	14	86	0.163	44	113	0.389
Selenium, total	3	88	0.034	4	110	0.036
Silver, total	0	88	0.000	0	110	0.000
Thallium, total	0	88	0.000	3	110	0.027
Vanadium, total	0	88	0.000	7	110	0.064
Zinc, total	20	87	0.230	41	112	0.366

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	1	88	0.011									nonpar
Arsenic, total	2	88	0.023									nonpar
Barium, total	87	87	1.000	2.701	1.307					2.326	lognor	lognor
Beryllium, total	0	88	0.000									nonpar
Cadmium, total	5	88	0.057									nonpar
Chromium, total	2	88	0.023									nonpar
Cobalt, total	11	88	0.125	0.525	0.752					2.326	normal	normal
Copper, total	7	88	0.080	0.105	0.895					2.326	normal	normal
Lead, total	3	88	0.034									nonpar
Nickel, total	14	86	0.163	0.124	0.164					2.326	normal	normal
Selenium, total	3	88	0.034	0.495	0.495					2.326	normal	normal
Silver, total	0	88	0.000									nonpar
Thallium, total	0	88	0.000									nonpar
Vanadium, total	0	88	0.000									nonpar
Zinc, total	20	87	0.230	1.812	1.318					2.326	normal	normal

* - 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	1	88					2.5000	nonpar		0.99
Arsenic, total	ug/L	2	88					4.5000	nonpar		0.99
Barium, total	ug/L	87	87	4.8650	0.4536	0.0100	2.3841	382.3899	lognor		
Beryllium, total	ug/L	0	88					4.0000	nonpar	***	0.99
Cadmium, total	ug/L	5	88					5.3000	nonpar		0.99
Chromium, total	ug/L	2	88					9.1000	nonpar		0.99
Cobalt, total	ug/L	11	88					3.5000	nonpar		0.99
Copper, total	ug/L	7	88					12.6000	nonpar		0.99
Lead, total	ug/L	3	88					11.9000	nonpar		0.99
Nickel, total	ug/L	14	86					9.8000	nonpar		0.99
Selenium, total	ug/L	3	88					5.5000	nonpar		0.99
Silver, total	ug/L	0	88					4.0000	nonpar	***	0.99
Thallium, total	ug/L	0	88					2.0000	nonpar	***	0.99
Vanadium, total	ug/L	0	88					20.0000	nonpar	***	0.99
Zinc, total	ug/L	20	87					237.0000	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**

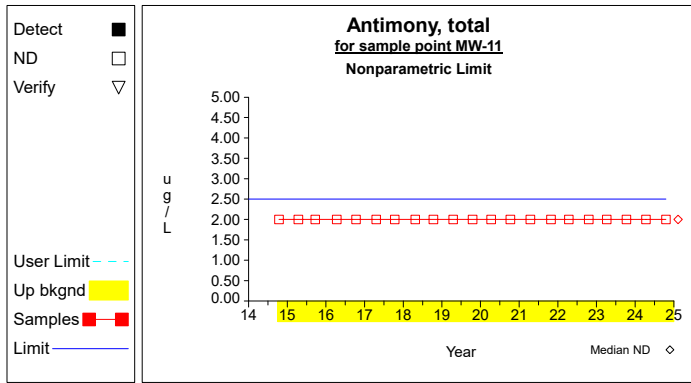
Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Barium, total	ug/L	MW-5	04/15/2021	71.8000		10/14/2014-10/17/2024	22	0.5263
Barium, total	ug/L	MW-5	04/11/2024	71.7000		10/14/2014-10/17/2024	22	0.5263
Nickel, total	ug/L	MW-5	04/06/2023	13.1000		10/14/2014-10/17/2024	21	0.5381
Nickel, total	ug/L	MW-5	10/17/2024	16.3000		10/14/2014-10/17/2024	21	0.5381
Zinc, total	ug/L	MW-5	04/06/2023	411.0000		10/14/2014-10/17/2024	21	0.5381
Zinc, total	ug/L	MW-5	10/17/2024	1080.0000		10/14/2014-10/17/2024	21	0.5381

N = Total number of independent measurements in background at each well.

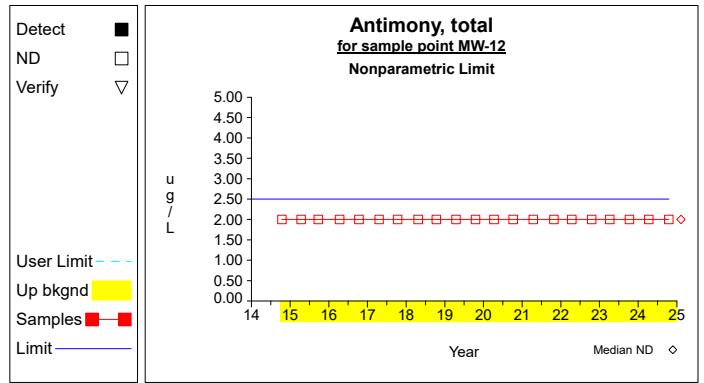
Date Range = Dates of the first and last measurements included in background at each well.

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.

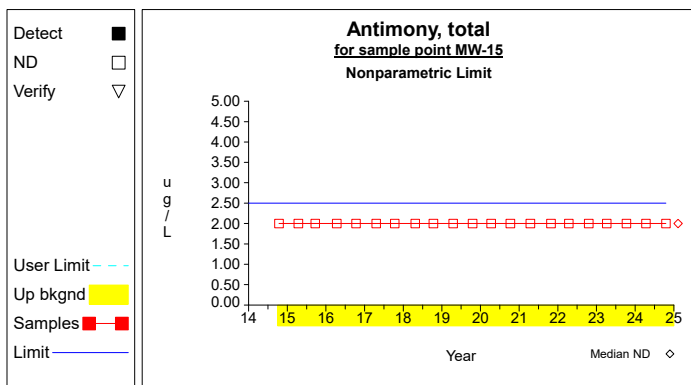
Up vs. Down Prediction Limits



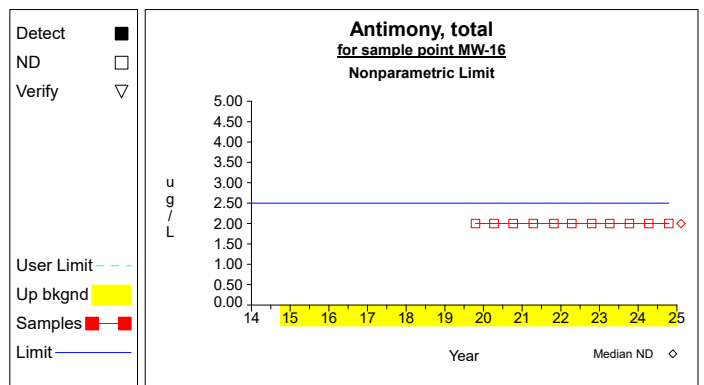
Graph 1



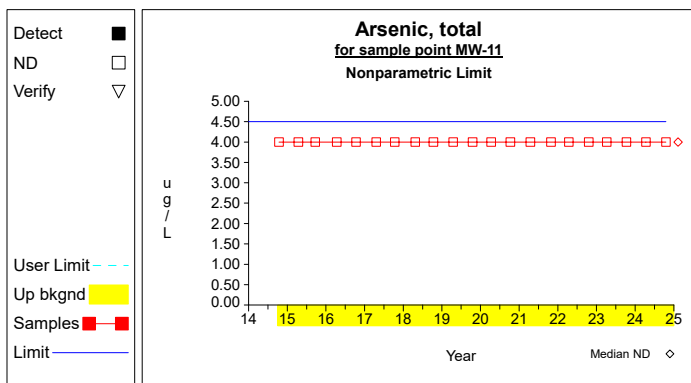
Graph 2



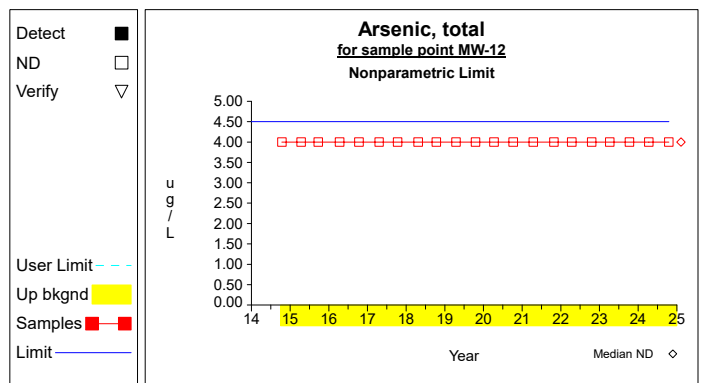
Graph 3



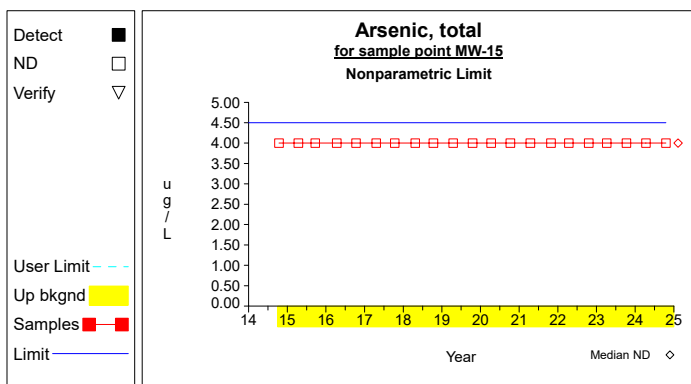
Graph 4



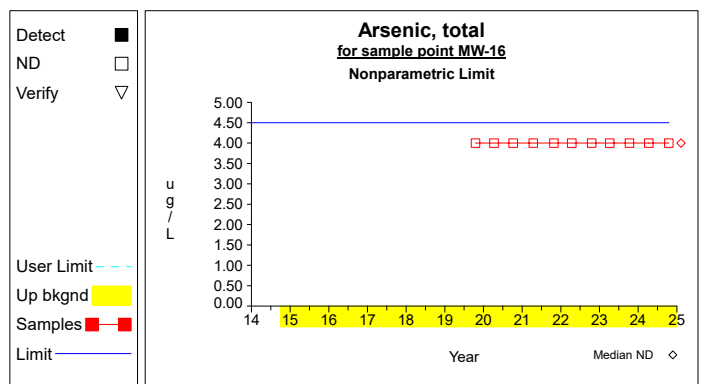
Graph 5



Graph 6

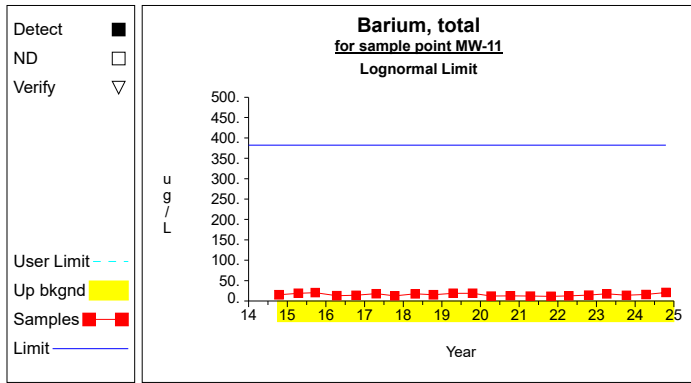


Graph 7

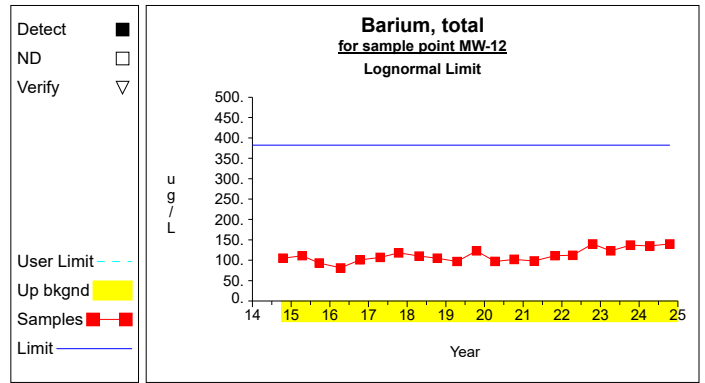


Graph 8

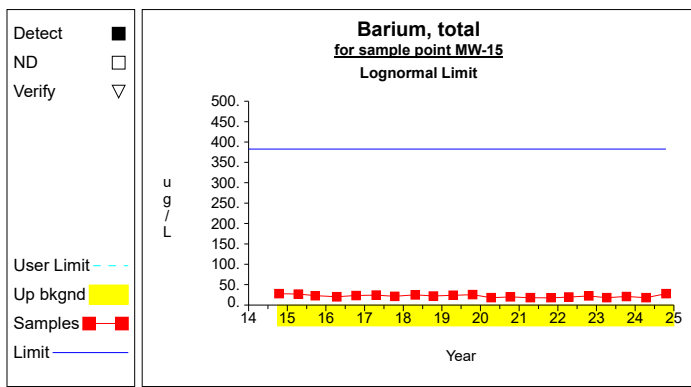
Up vs. Down Prediction Limits



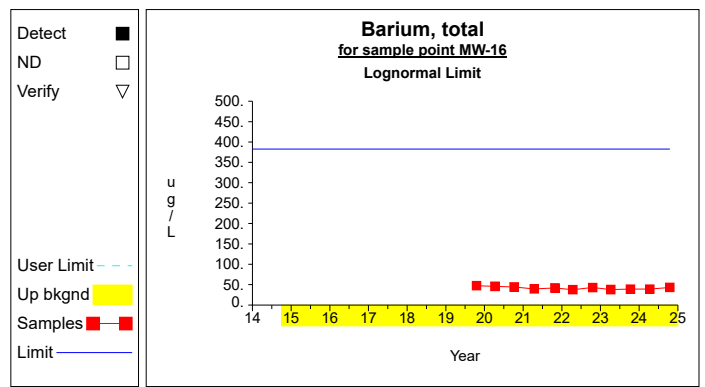
Graph 9



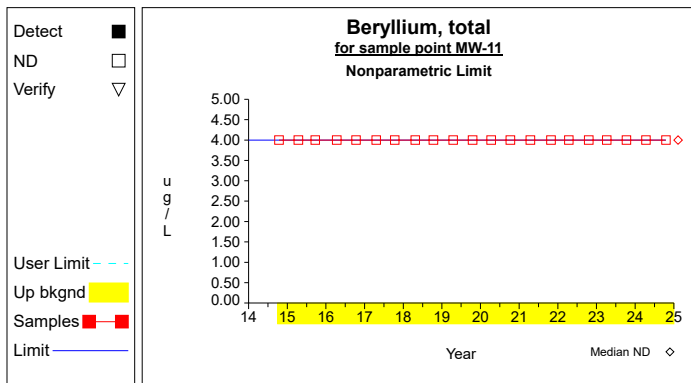
Graph 10



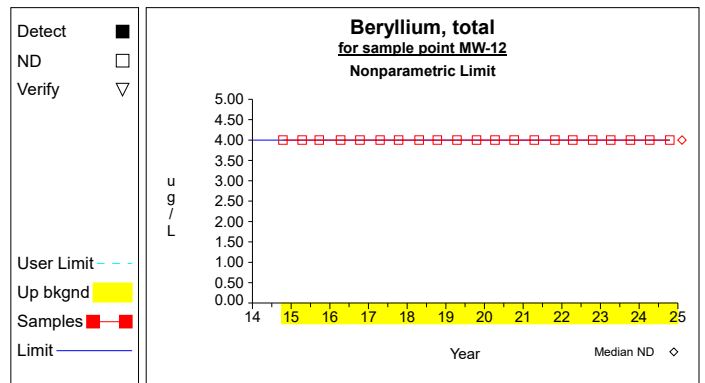
Graph 11



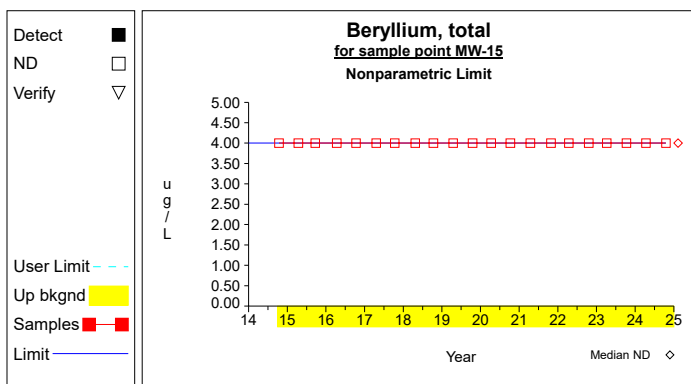
Graph 12



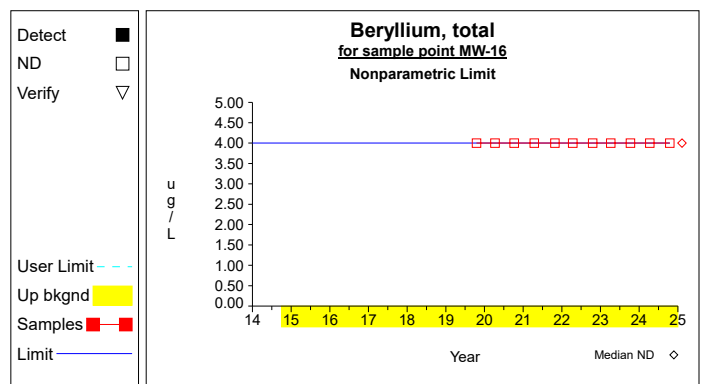
Graph 13



Graph 14

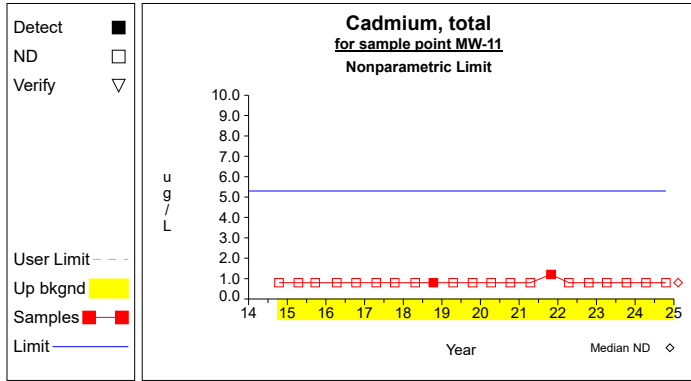


Graph 15

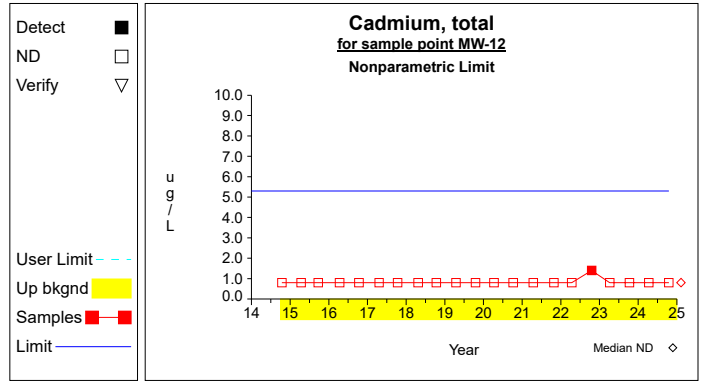


Graph 16

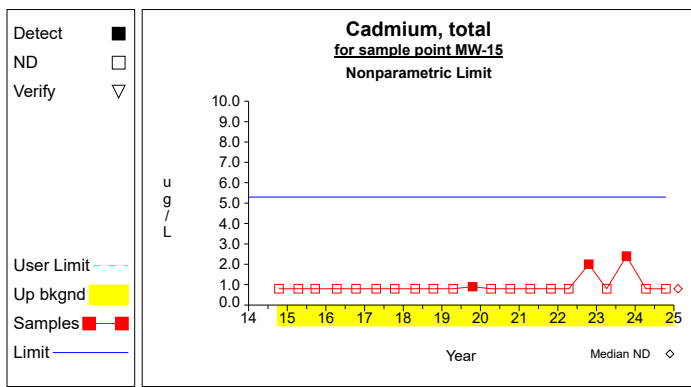
Up vs. Down Prediction Limits



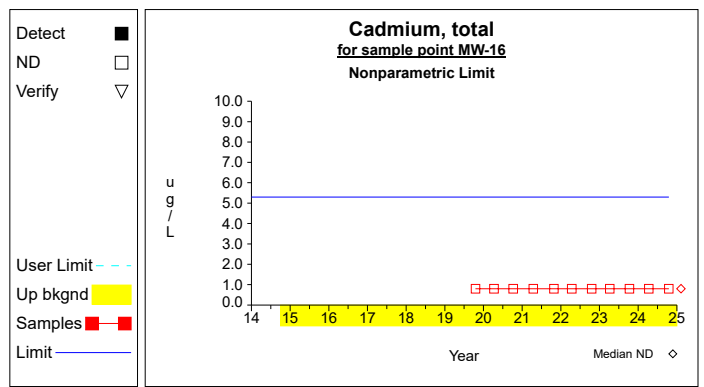
Graph 17



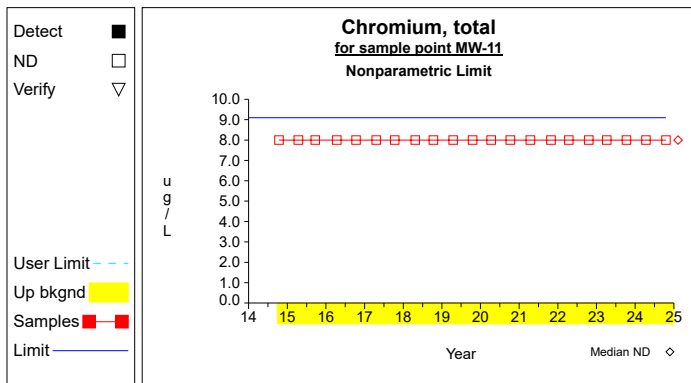
Graph 18



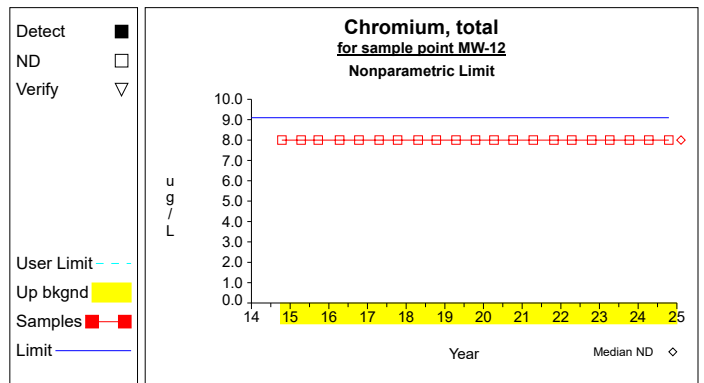
Graph 19



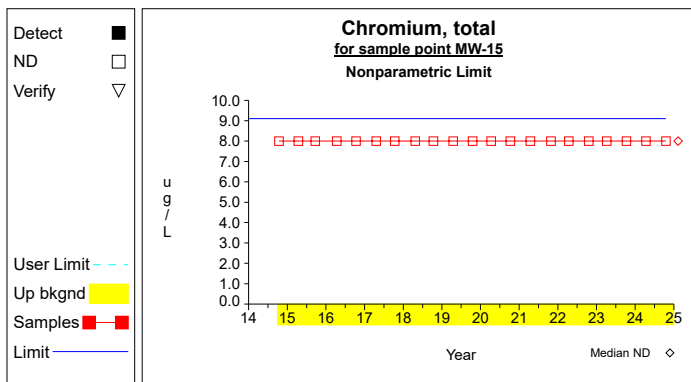
Graph 20



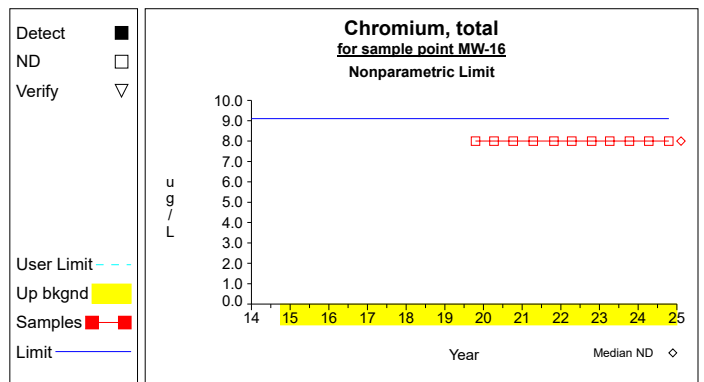
Graph 21



Graph 22

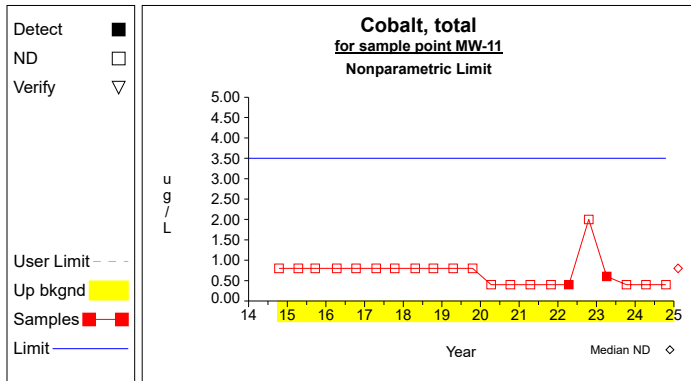


Graph 23

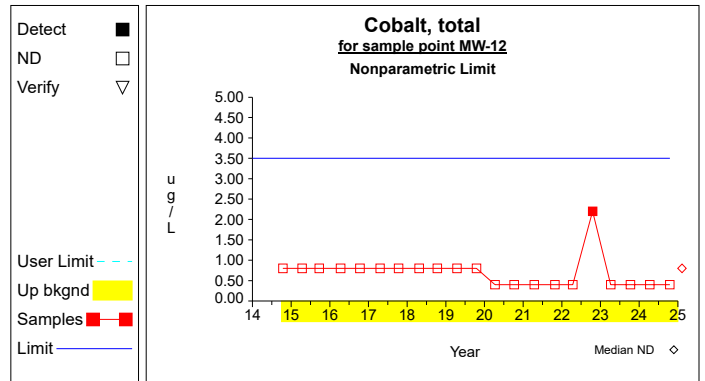


Graph 24

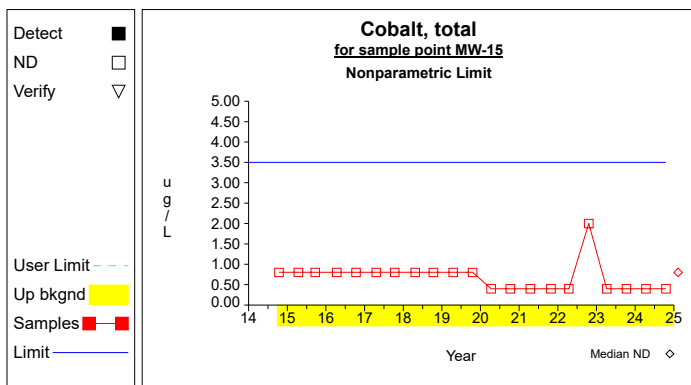
Up vs. Down Prediction Limits



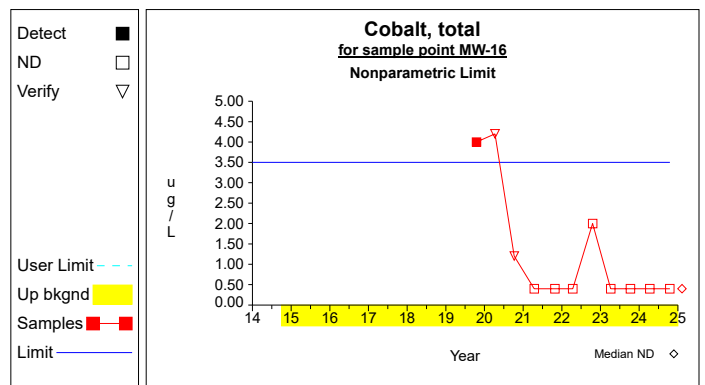
Graph 25



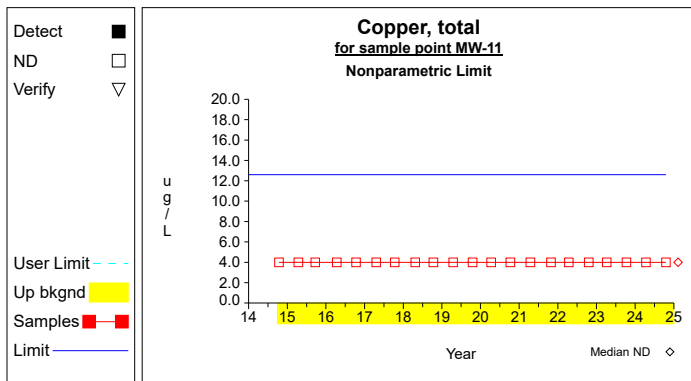
Graph 26



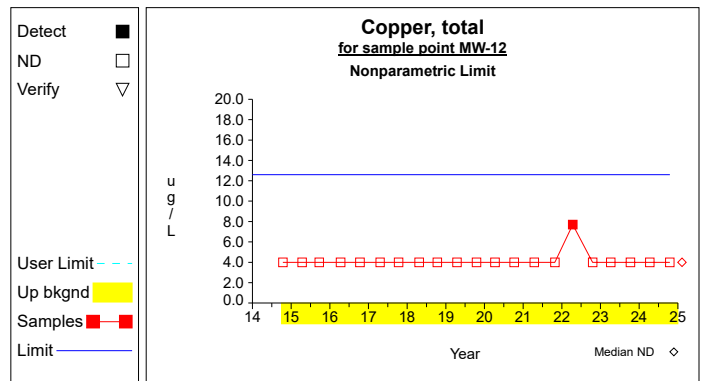
Graph 27



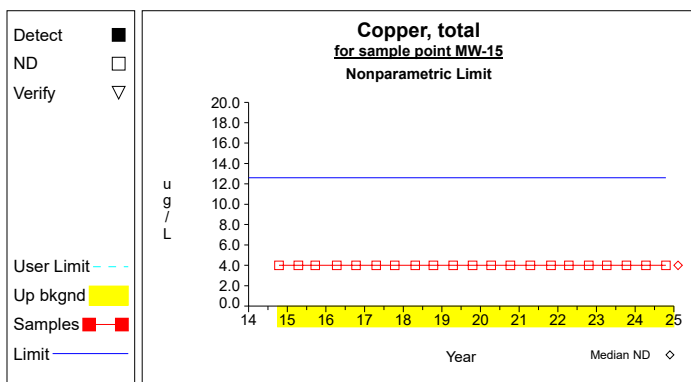
Graph 28



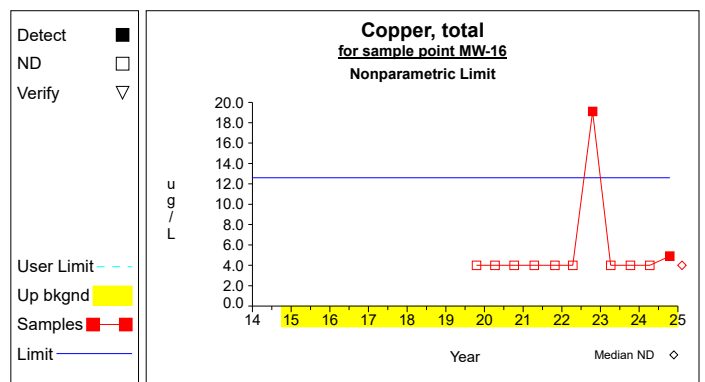
Graph 29



Graph 30

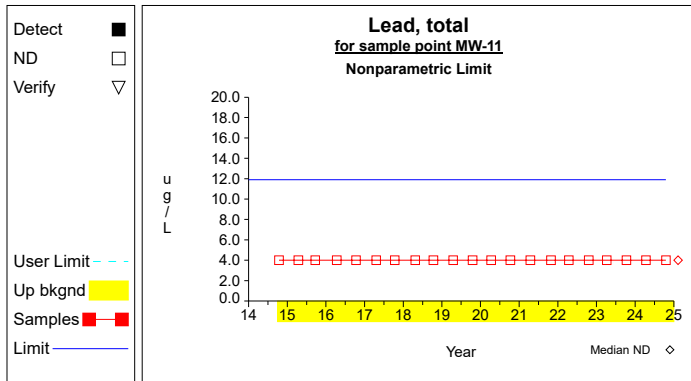


Graph 31

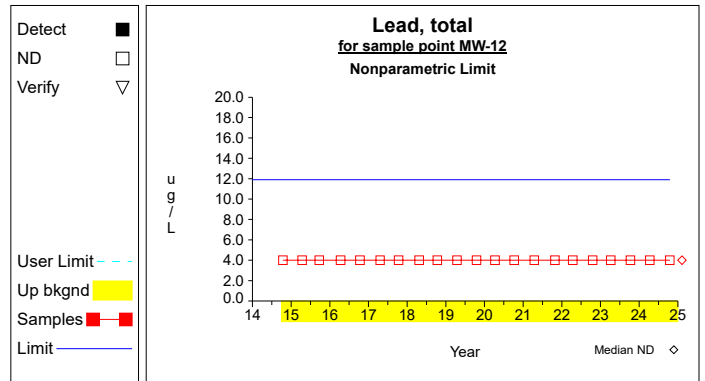


Graph 32

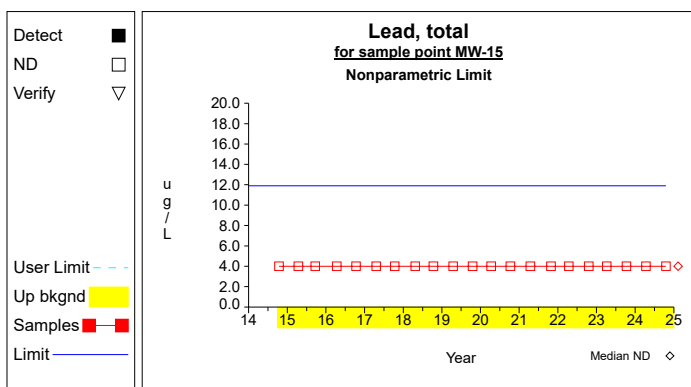
Up vs. Down Prediction Limits



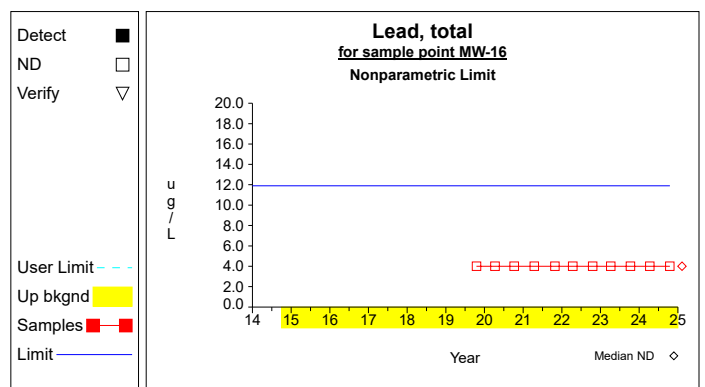
Graph 33



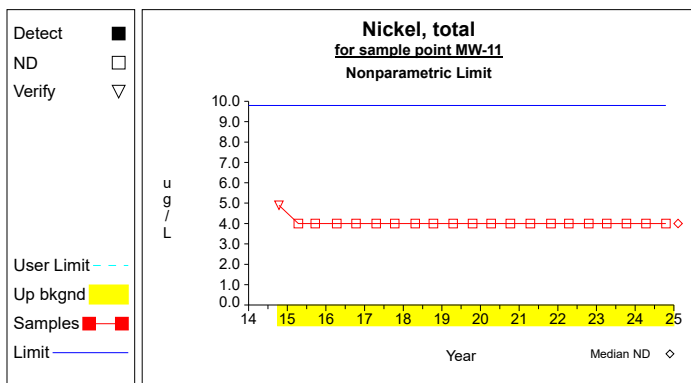
Graph 34



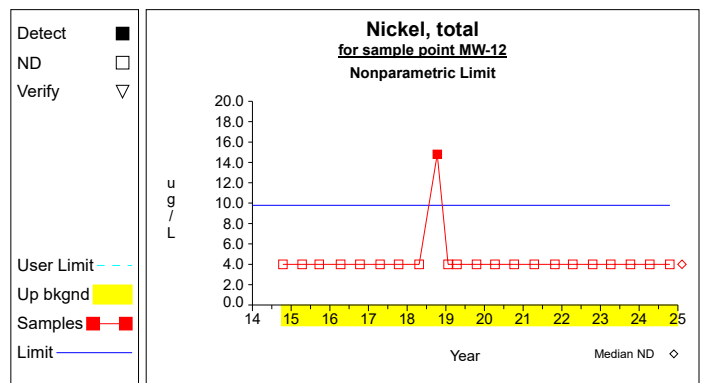
Graph 35



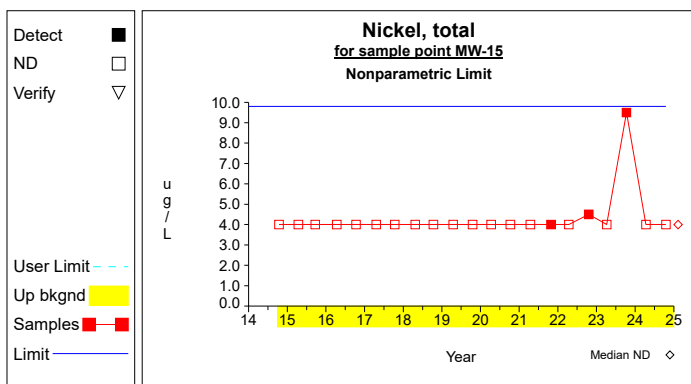
Graph 36



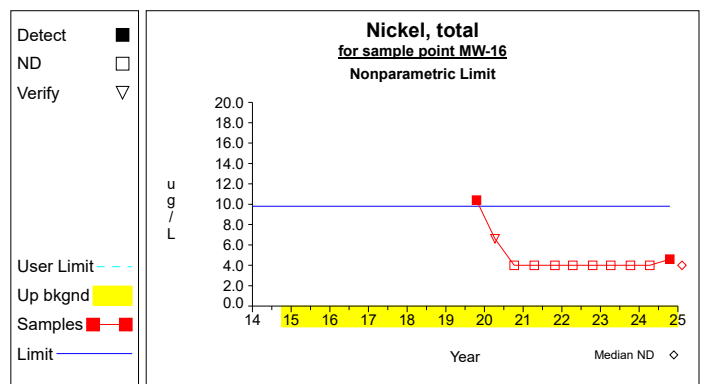
Graph 37



Graph 38

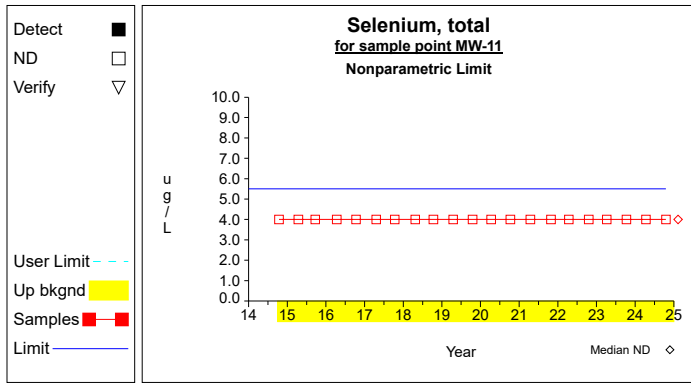


Graph 39

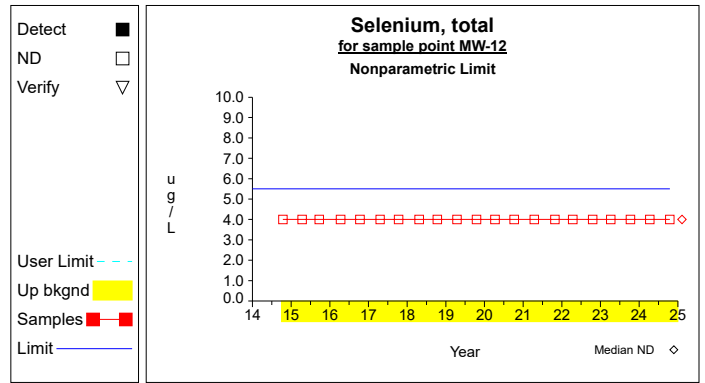


Graph 40

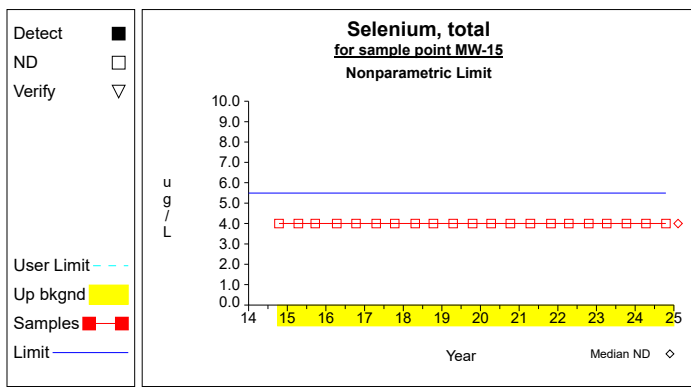
Up vs. Down Prediction Limits



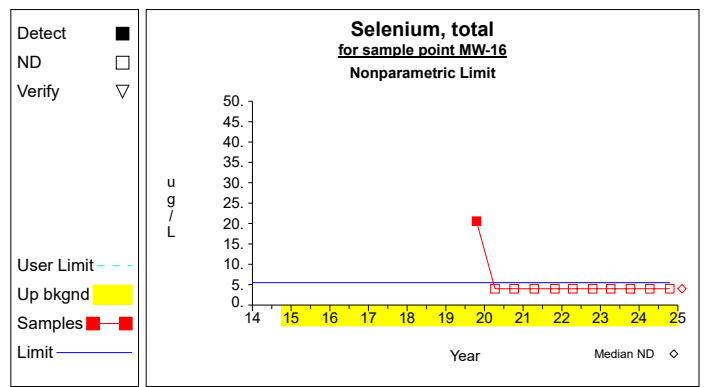
Graph 41



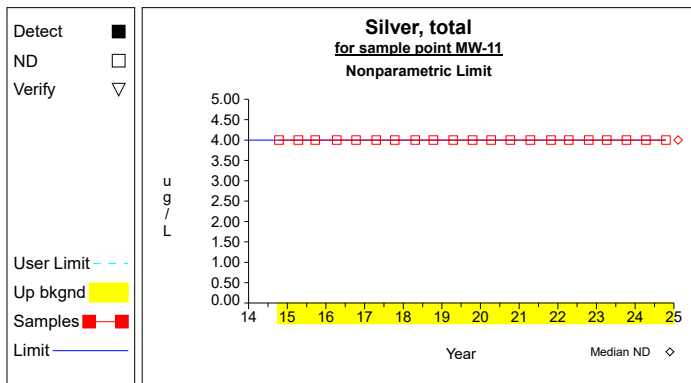
Graph 42



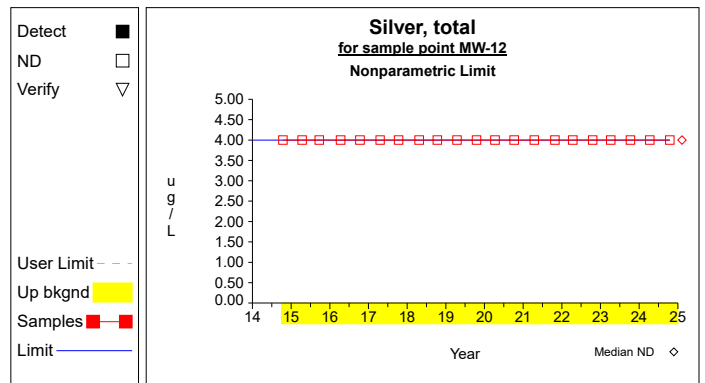
Graph 43



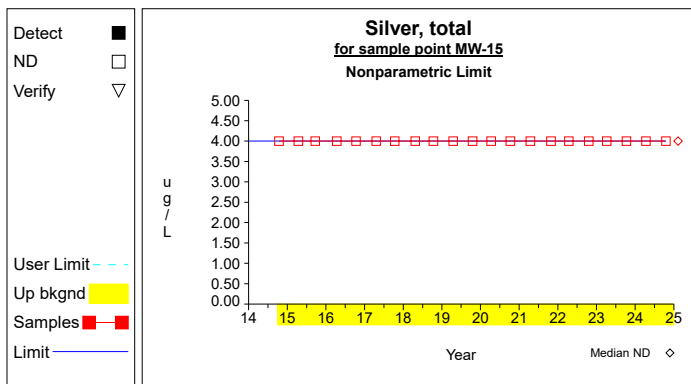
Graph 44



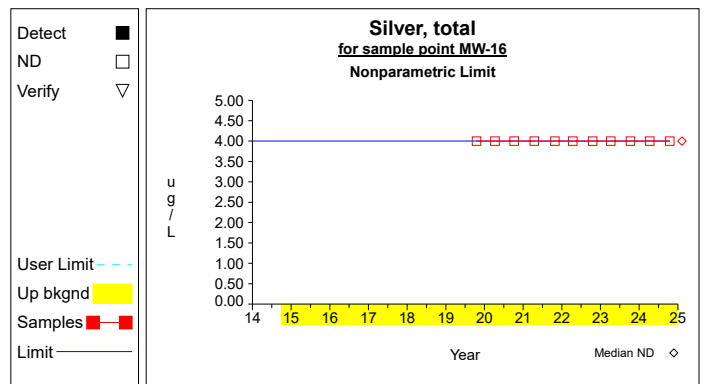
Graph 45



Graph 46

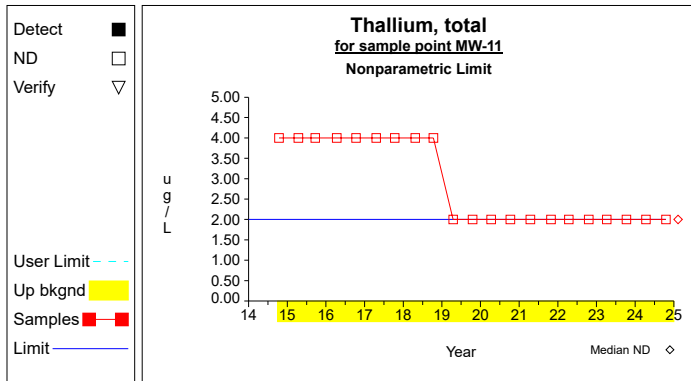


Graph 47

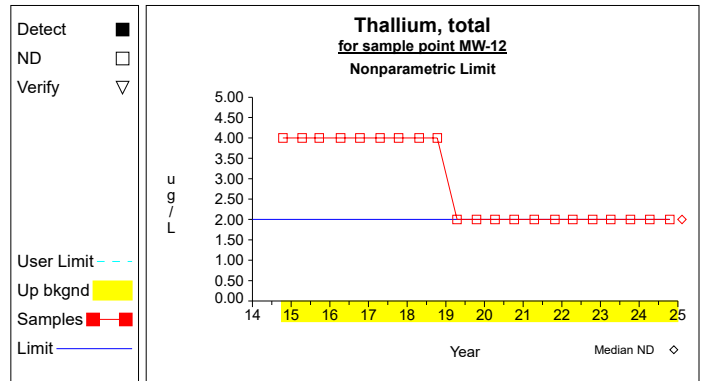


Graph 48

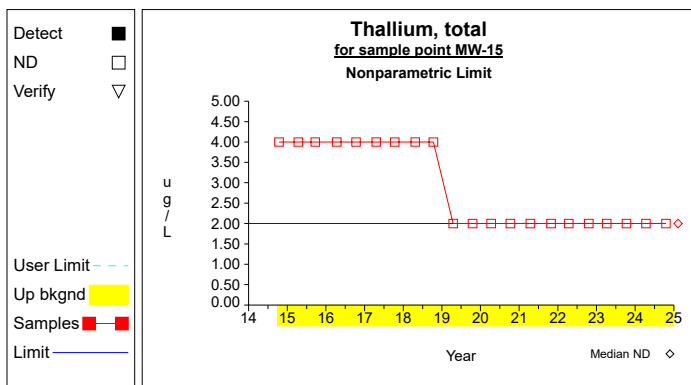
Up vs. Down Prediction Limits



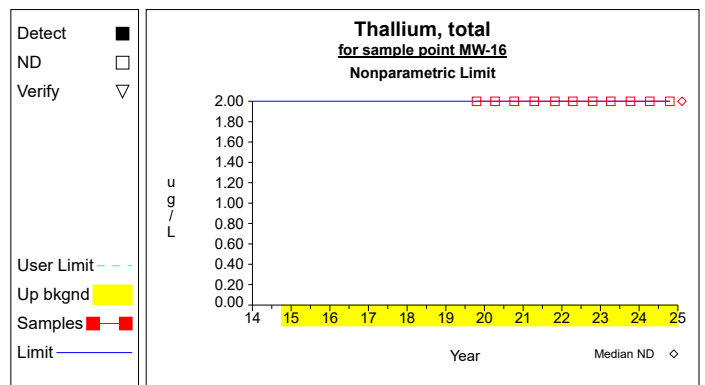
Graph 49



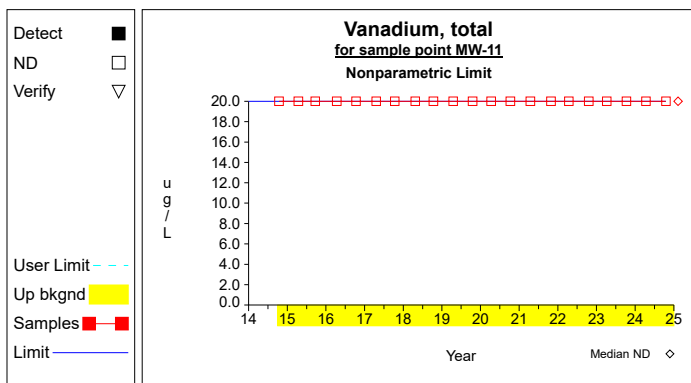
Graph 50



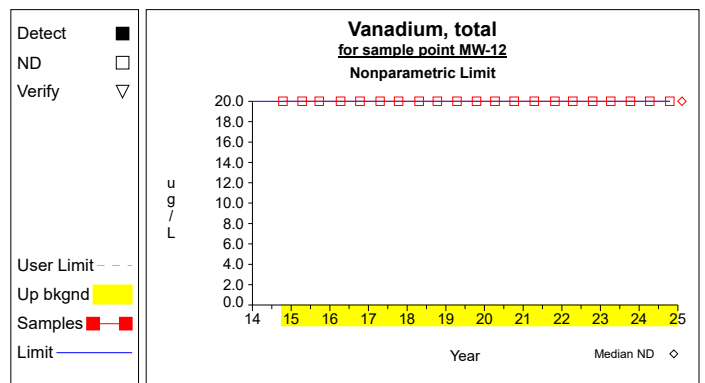
Graph 51



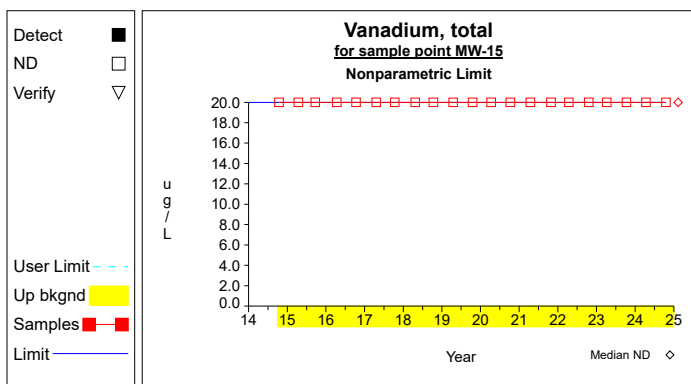
Graph 52



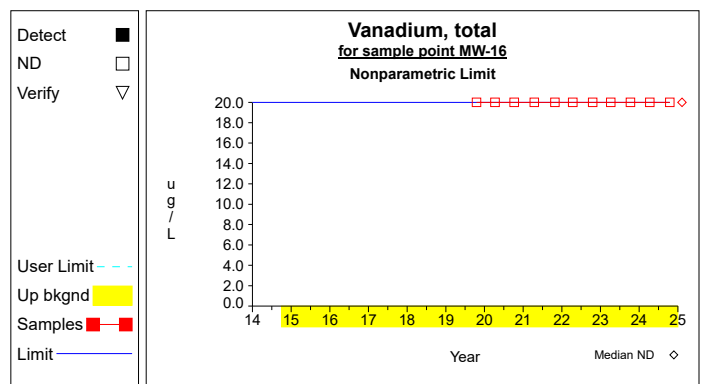
Graph 53



Graph 54

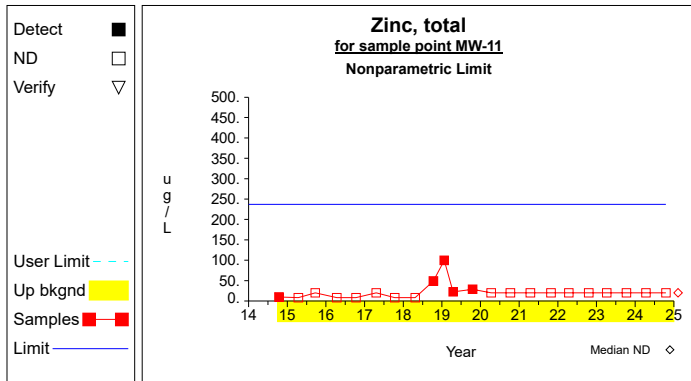


Graph 55

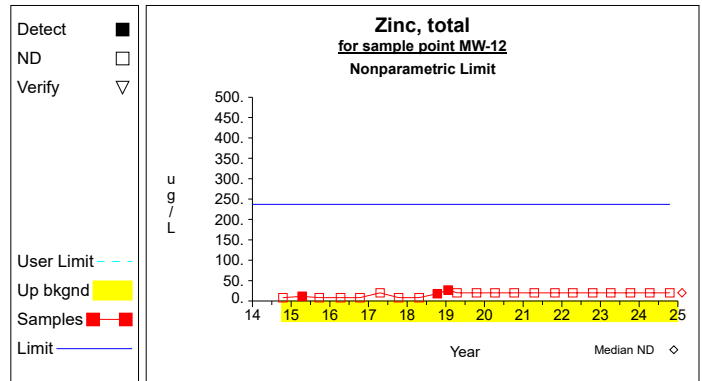


Graph 56

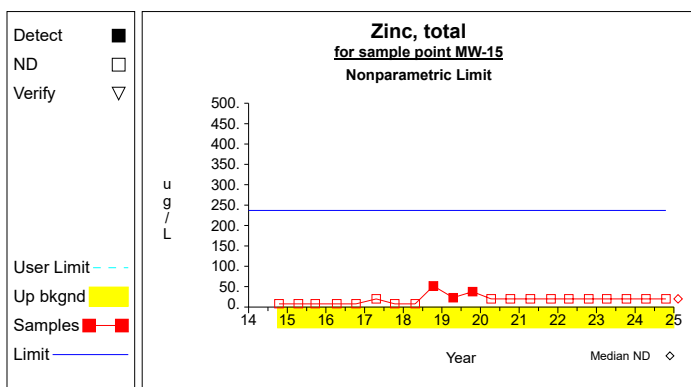
Up vs. Down Prediction Limits



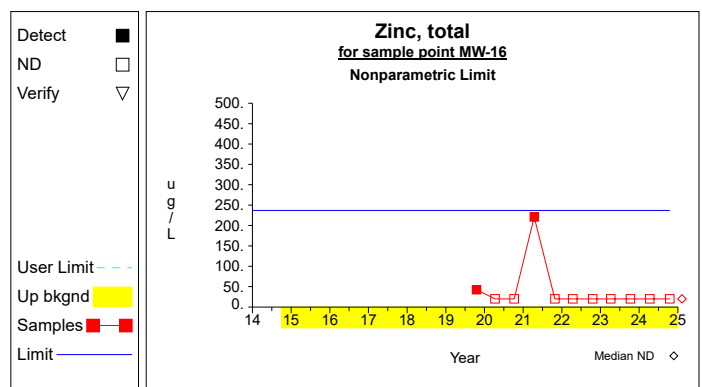
Graph 57



Graph 58

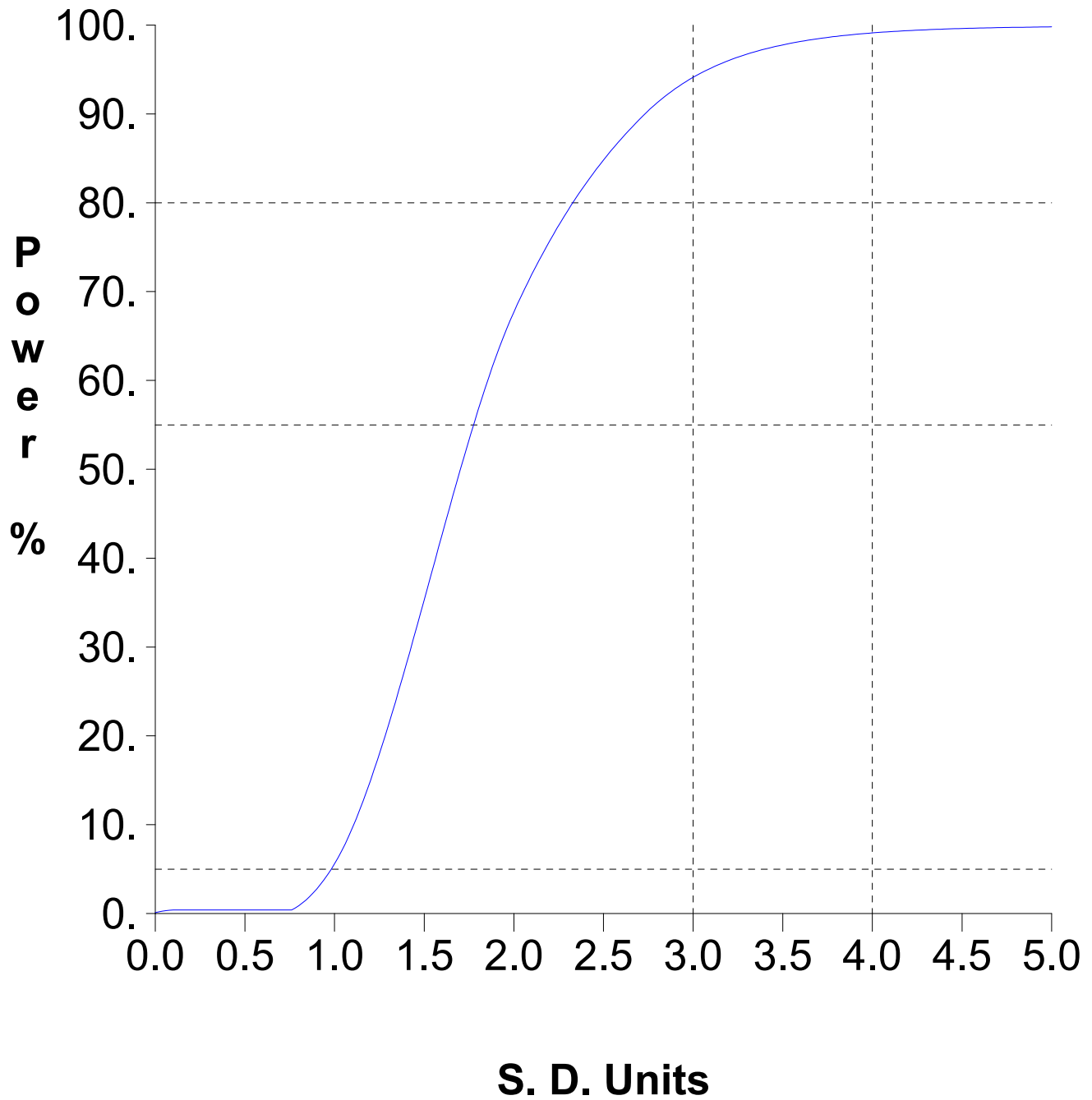


Graph 59



Graph 60

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



Worksheet 1 - Upgradient vs. Downgradient Comparisons**Antimony, total (ug/L)****Nonparametric Prediction Limit**

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 2.5	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons**Arsenic, total (ug/L)****Nonparametric Prediction Limit**

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 4.5	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons**Barium, total (ug/L)****Lognormal Prediction Limit**

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	$Y = \log_e(X)$	Transform to natural logarithmic scale.
2	$\bar{Y} = \text{sum}[Y] / N$ = 423.258 / 87 = 4.865	Compute mean on a natural log scale.
3	$S_Y = ((\text{sum}[Y^2] - \text{sum}[Y]^2/N) / (N-1))^{1/2}$ = ((2076.861 - 179147.464/87) / (87-1)) ^{1/2} = 0.454	Compute sd on a natural log scale.
4	alpha = min[(1-.95 ^{1/K}) ^{1/2} , .01] = min[(1-.95 ^{1/60}) ^{1/2} , .01] = 0.01	Adjusted per comparison false positive rate. Pass initial or 1 resample.
5	PL = exp[$\bar{Y} + tS_Y(1+1/N)^{1/2}$] = exp[4.865 + (2.37*0.454)(1+1/87) ^{1/2}] = 382.39	One-sided lognormal prediction limit (t is Student's t on N-1 degrees of freedom and 1-alpha confidence level).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Beryllium, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = median(X) = 4.0	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Cadmium, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 5.3	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Chromium, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 9.1	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Cobalt, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 3.5	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Copper, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 12.6	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Lead, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 11.9	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Nickel, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 9.8	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Selenium, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 5.5	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons**Silver, total (ug/L)****Nonparametric Prediction Limit**

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = median(X) = 4.0	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons**Thallium, total (ug/L)****Nonparametric Prediction Limit**

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = median(X) = 2.0	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons**Vanadium, total (ug/L)****Nonparametric Prediction Limit**

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = median(X) = 20.0	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons**Zinc, total (ug/L)****Nonparametric Prediction Limit**

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 237.0	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Attachment C

Historical Organic Compound Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Diethyl phthalate	MW-11	4/08/2014		8	8	ug/L
Diethyl phthalate	MW-11	4/08/2014		8	8	ug/L
Methyl parathion	MW-11	10/14/2014		2.9	.4	ug/L
Phorate	MW-11	10/14/2014		.9	.4	ug/L
Thionazin	MW-11	10/14/2014		.5	.4	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	4/16/2019		16	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	4/09/2020		16	6	ug/L
Acetone	MW-14	5/24/2010		44.9	10.0	ug/L
Acetone	MW-14	10/12/2017		11.8	10.0	ug/L
Toluene	MW-14	5/24/2010		3.2	1.0	ug/L
Xylenes, total	MW-14	5/24/2010		4.9	2.0	ug/L
Acetone	MW-15	10/12/2017		10.8	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/21/2013		50	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	4/14/2015		11	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/11/2016		19	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/12/2017		15	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/12/2018		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	4/16/2019		7	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/17/2019		7	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/08/2020		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/28/2021		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/19/2022		19	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/12/2017		35	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/17/2019		25	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/28/2021		12	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	4/13/2022		11	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-3	10/17/2019		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-4	4/23/2018		11	6	ug/L
Acetone	MW-5	10/12/2017		12.2	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	4/23/2018		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	7/05/2018		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	10/17/2019		10	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	4/06/2023		7	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-7	4/15/2009		10	8	ug/L
Acetone	MW-9	5/24/2010		45.1	10.0	ug/L
Acetone	MW-9	10/12/2017		11.2	10.0	ug/L
Toluene	MW-9	5/24/2010		3.6	1.0	ug/L
Xylenes, total	MW-9	5/24/2010		5.6	2.0	ug/L
2-butanone (mek)	SW-1	10/12/2018		7.7	5.0	ug/L
Acetone	SW-1	4/20/2017		15.7	10.0	ug/L
Acetone	SW-1	10/12/2018		27.2	10.0	ug/L
Phorate	SW-2	10/14/2014		.4	.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

GROUND WATER STATISTICS

FOR THE

FLOYD-MITCHELL-CHICKASAW COUNTIES

CLOSED SANITARY LANDFILL

Second Semi-Annual Monitoring Event in 2024

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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 second semi-annual monitoring event in 2024 at the Floyd-Mitchell-Chickasaw Counties Closed Sanitary Landfill near Elma, in Mitchell County, 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. Interwell statistics were used for comparisons of current data to background data at Floyd-Mitchell-Chickasaw Counties Closed Sanitary Landfill. The statistical plan conforms with IAC 567, Chapter 113.10 and the USEPA statistical guidance document (“*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance*”, March 2009).

Ground Water Monitoring Program

The groundwater monitoring network for Floyd-Mitchell-Chickasaw Counties Closed Sanitary Landfill includes detection sample points MW-2, MW-3, MW-6, and MW-7. Upgradient sample points along the western border of the Expansion Area include MW-9 and MW-14. Monitoring wells MW-4 and MW-5 were approved by the IDNR as additional background wells in the revised permit (August 2020). Each of the groundwater monitoring wells is to be sampled at least semiannually 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 second semi-annual monitoring event in 2024 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. Both of these methods were previously applied to the Floyd-Mitchell-Chickasaw Counties Closed Landfill data using the DUMPStat® statistical program. The Expansion Area upgradient wells have not been monitored regularly so there was insufficient background data available to do upgradient versus downgradient comparisons previously. 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-4, MW-5, MW-9, and MW-14 during the period from October 2014 through the current data. A summary of the background data from monitoring wells MW-4, MW-5, MW-9, and MW-14, 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 sample points MW-2, MW-3, MW-6, and MW-7 compared to the site prediction limits. Prediction limit

exceedances are flagged with asterisks. For the second semi-annual 2024 monitoring data, the site prediction limit exceedances detected are summarized in the Table below.

Summary of Prediction Limit Exceedances for the Second Semi-Annual Monitoring Event in 2024

Well	Trace Metal	Result	Prediction Limit	Prediction Limit Type	Verified or Awaiting Verification
MW-6	Arsenic, µg/L	17.7	4.5000	Nonparametric	Awaiting Verification
	Cobalt, µg/L	5.1	3.5000	Nonparametric	Awaiting Verification

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. Barium is detected at a frequency of 50% or greater in the upgradient wells so barium was tested for normality. The remainder of the metals are rarely detected (less than 50%) in the upgradient wells so nonparametric prediction limits were used in those cases.

Table 4 summarizes the results of the Shapiro-Wilk test. The background barium data has a normal distribution so barium uses a normal site prediction limit. 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 1% and the test becomes sensitive to 4 standard deviation unit increases over background.

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.

There were no VOCs detected in the ground water at Floyd-Mitchell-Chickasaw Counties Landfill during the second semi-annual monitoring event in 2024. Historical VOC detections are summarized in Attachment C.

Attachment A

Summary of the Data obtained during the Second Semi-Annual Monitoring Event in 2024

Table 1

Analytical Data Summary for 10/17/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
(3 4)-methylphenol	ug/L							^0.8					
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<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	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<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	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L												
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L							^0.8					
1,2,4-trichlorobenzene	ug/L							^1.1					
1,2-dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L							^0.8					
1,3,5-trinitrobenzene	ug/L							^0.8					
1,3-dichlorobenzene	ug/L							^1.1					
1,3-dichloropropane	ug/L							^1.1					
1,3-dinitrobenzene	ug/L							^0.8					
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L							^0.8					
1,4-phenylenediamine	ug/L							^0.8					
1-naphthylamine	ug/L							^0.8					
2,2-dichloropropane	ug/L							^1.1					
2,3,4,6-tetrachlorophenol	ug/L							^0.8					
2,4,5-t	ug/L							^1.5					
2,4,5-tp (silvex)	ug/L							^1.5					
2,4,5-trichlorophenol	ug/L							^0.8					
2,4,6-trichlorophenol	ug/L							^0.8					
2,4-d	ug/L							^0.8					
2,4-dichlorophenol	ug/L							^0.8					
2,4-dimethylphenol	ug/L							^0.8					
2,4-dinitrophenol	ug/L							^0.8					
2,4-dinitrotoluene	ug/L							^0.8					
2,6-dichlorophenol	ug/L							^0.8					
2,6-dinitrotoluene	ug/L							^0.8					
2-acetylaminofluorene	ug/L							^0.8					
2-butanone (mek)	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-chloronaphthalene	ug/L							^0.8					
2-chlorophenol	ug/L							^0.8					
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L							^0.8					
2-methylphenol	ug/L							^0.8					
2-naphthylamine	ug/L							^0.8					
2-nitroaniline	ug/L							^0.8					
2-nitrophenol	ug/L							^0.8					
3,3'-dichlorobenzidine	ug/L							^0.8					
3,3'-dimethylbenzidine	ug/L							^0.8					
3-methylcholanthrene	ug/L							^0.8					
3-nitroaniline	ug/L							^0.8					
4,4'-ddd	ug/L							^1.05					
4,4'-dde	ug/L							^1.05					
4,4'-ddt	ug/L							^1.05					
4,6-dinitro-2-methylphenol	ug/L							^0.8					
4-aminobiphenyl	ug/L							^0.8					
4-bromophenyl phenyl ether	ug/L							^0.8					
4-chloro-3-methylphenol	ug/L							^0.8					
4-chloroaniline	ug/L							^0.8					
4-chlorophenyl phenyl ether	ug/L							^0.8					
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L							^0.8					
4-nitrophenol	ug/L							^0.8					
5-nitro-o-toluidine	ug/L							^0.8					
7,12-dimethylbenz(a)anthracene	ug/L							^0.8					
Acenaphthene	ug/L							^0.8					
Acenaphthylene	ug/L							^0.8					
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile	ug/L							^1.0					
Acetophenone	ug/L							^0.8					
Acrolein	ug/L							^1.0					
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin	ug/L							^1.05					
Allyl chloride	ug/L							^1.1					
Alpha-bhc	ug/L							^1.05					
Anthracene	ug/L							^0.8					

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

Table 1

Analytical Data Summary for 10/17/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L							<.2					
Arochlor 1221	ug/L							<.2					
Arochlor 1232	ug/L							<.2					
Arochlor 1242	ug/L							<.2					
Arochlor 1248	ug/L							<.2					
Arochlor 1254	ug/L							<.2					
Arochlor 1260	ug/L							<.2					
Arsenic, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	17.7	<4.0	<4.0
Azobenzene	ug/L							<.8					
Barium, total	ug/L	20.9	140.0	220.0	27.9	43.2	45.1	113.0	76.7	287.0	74.4	26.0	137.0
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
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	<4	<4	<4	<4	<4	<.4	<4	<4	<4	<4	<4
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	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L							<.8					
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	1.1	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L							<.1					
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L							<.8					
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L							<.1					
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<.8	<.8	<8	<8	<8	<8
Chrysene	ug/L							<.8					
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.4	<.4	<.4	<.4	<.4	2.3	<.4	<.4	3.5	5.1	<.4	<.4
Copper, total	ug/L	<4.0	<4.0	<4.0	<4.0	4.9	<4.0	<4.0	<4.0	12.6	<4.0	<4.0	<4.0
Cyanide, total	mg/L							<.01					
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	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L							<.1					
Dieldrin	ug/L							<.05					
Diethyl phthalate	ug/L							<.8					
Dimethoate	ug/L							<.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					
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	<1	<1	<1	<1	<1
Famphur	ug/L							<.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 1

Analytical Data Summary for 10/17/2024

Constituents	Units	MW-11	MW-12	MW-14	MW-15	MW-16	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-9
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	△.0	<4.0	11.9	<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	△.2	<1	<1	<1	<1	<1
Methyl methacrylate	ug/L							△.1					
Methyl methanesulfonate	ug/L							△.8					
Methyl parathion	ug/L							△.4					
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	△.5	<5	<5	<5	<5	<5
Naphthalene	ug/L							△.8					
Nickel, total	ug/L	<4.0	<4.0	<4.0	<4.0	4.6	4.9	4.4	<4.0	16.3	5.0	4.0	<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					
O-toluidine	ug/L							△.8					
Parathion	ug/L							△.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							△.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	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	△.4	<4	<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Sulfide, total	mg/L							△.1					
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<2	<2	<2	<2	<2	<2	△.2	<2	<2	<2	<2	<2
Thionazin	ug/L							△.4					
Tin, total	ug/L							△.20					
Toluene	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Toxaphene	ug/L							△.2					
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<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	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	△.20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	△.5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	△.1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	△.2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	△.20.0	70.9	1080.0	25.4	<20.0	<20.0

* - 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-14	10/14/2014		2.5000	
Antimony, total	ug/L	MW-14	01/12/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	04/13/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	07/21/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	09/23/2015	ND	2.0000	
Antimony, total	ug/L	MW-14	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-14	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-14	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-14	10/12/2017	ND	2.0000	
Antimony, total	ug/L	MW-14	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-14	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-14	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-14	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-14	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-14	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-14	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-14	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-14	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-14	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-14	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-14	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-14	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-14	10/17/2024	ND	2.0000	
Antimony, total	ug/L	MW-4	10/14/2014	ND	2.0000	
Antimony, total	ug/L	MW-4	04/13/2015	ND	2.0000	
Antimony, total	ug/L	MW-4	09/23/2015	ND	2.0000	
Antimony, total	ug/L	MW-4	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-4	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-4	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-4	10/12/2017	ND	2.0000	
Antimony, total	ug/L	MW-4	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-4	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-4	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-4	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-4	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-4	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-4	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-4	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-4	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-4	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-4	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-4	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-4	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-4	10/17/2024	ND	2.0000	
Antimony, total	ug/L	MW-5	10/14/2014	ND	2.0000	
Antimony, total	ug/L	MW-5	04/13/2015	ND	2.0000	
Antimony, total	ug/L	MW-5	09/23/2015	ND	2.0000	
Antimony, total	ug/L	MW-5	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-5	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-5	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-5	10/12/2017	ND	2.0000	
Antimony, total	ug/L	MW-5	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-5	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-5	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-5	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-5	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-5	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-5	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-5	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-5	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-5	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-5	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-5	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-5	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-5	10/17/2024	ND	2.0000	
Antimony, total	ug/L	MW-9	10/14/2014	ND	2.0000	
Antimony, total	ug/L	MW-9	01/12/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	04/14/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	07/21/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	09/22/2015	ND	2.0000	
Antimony, total	ug/L	MW-9	04/12/2016	ND	2.0000	
Antimony, total	ug/L	MW-9	10/11/2016	ND	2.0000	
Antimony, total	ug/L	MW-9	04/20/2017	ND	2.0000	
Antimony, total	ug/L	MW-9	10/12/2017	ND	2.0000	

* - 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
Antimony, total	ug/L	MW-9	04/23/2018	ND	2.0000	
Antimony, total	ug/L	MW-9	10/12/2018	ND	2.0000	
Antimony, total	ug/L	MW-9	04/16/2019	ND	2.0000	
Antimony, total	ug/L	MW-9	10/17/2019	ND	2.0000	
Antimony, total	ug/L	MW-9	04/09/2020	ND	2.0000	
Antimony, total	ug/L	MW-9	10/08/2020	ND	2.0000	
Antimony, total	ug/L	MW-9	04/15/2021	ND	2.0000	
Antimony, total	ug/L	MW-9	10/28/2021	ND	2.0000	
Antimony, total	ug/L	MW-9	04/13/2022	ND	2.0000	
Antimony, total	ug/L	MW-9	10/19/2022	ND	2.0000	
Antimony, total	ug/L	MW-9	04/06/2023	ND	2.0000	
Antimony, total	ug/L	MW-9	10/10/2023	ND	2.0000	
Antimony, total	ug/L	MW-9	04/11/2024	ND	2.0000	
Antimony, total	ug/L	MW-9	10/17/2024	ND	2.0000	
Arsenic, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Arsenic, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Arsenic, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Arsenic, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Arsenic, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Arsenic, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Arsenic, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/06/2023		4.5000	
Arsenic, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Arsenic, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Arsenic, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Arsenic, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/13/2022	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
Arsenic, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Arsenic, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Arsenic, total	ug/L	MW-5	10/17/2024		4.0000	
Arsenic, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Arsenic, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Arsenic, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Arsenic, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Arsenic, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Arsenic, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Barium, total	ug/L	MW-14	10/14/2014		184.0000	
Barium, total	ug/L	MW-14	01/12/2015		169.0000	
Barium, total	ug/L	MW-14	04/13/2015		143.0000	
Barium, total	ug/L	MW-14	07/21/2015		141.0000	
Barium, total	ug/L	MW-14	09/23/2015		185.0000	
Barium, total	ug/L	MW-14	04/12/2016		121.0000	
Barium, total	ug/L	MW-14	10/11/2016		125.0000	
Barium, total	ug/L	MW-14	04/20/2017		140.0000	
Barium, total	ug/L	MW-14	10/12/2017		170.0000	
Barium, total	ug/L	MW-14	04/23/2018		126.0000	
Barium, total	ug/L	MW-14	10/12/2018		128.0000	
Barium, total	ug/L	MW-14	04/16/2019		114.0000	
Barium, total	ug/L	MW-14	10/17/2019		155.0000	
Barium, total	ug/L	MW-14	04/09/2020		117.0000	
Barium, total	ug/L	MW-14	10/08/2020		137.0000	
Barium, total	ug/L	MW-14	04/15/2021		120.0000	
Barium, total	ug/L	MW-14	10/28/2021		102.0000	
Barium, total	ug/L	MW-14	04/13/2022		107.0000	
Barium, total	ug/L	MW-14	10/19/2022		133.0000	
Barium, total	ug/L	MW-14	04/06/2023		117.0000	
Barium, total	ug/L	MW-14	10/10/2023		140.0000	
Barium, total	ug/L	MW-14	04/11/2024		114.0000	
Barium, total	ug/L	MW-14	10/17/2024		220.0000	
Barium, total	ug/L	MW-4	10/14/2014		141.0000	
Barium, total	ug/L	MW-4	04/13/2015		103.0000	
Barium, total	ug/L	MW-4	09/23/2015		92.5000	
Barium, total	ug/L	MW-4	04/12/2016		66.2000	
Barium, total	ug/L	MW-4	10/11/2016		77.7000	
Barium, total	ug/L	MW-4	04/20/2017		128.0000	
Barium, total	ug/L	MW-4	10/12/2017		83.8000	
Barium, total	ug/L	MW-4	04/23/2018		116.0000	
Barium, total	ug/L	MW-4	10/12/2018		111.0000	
Barium, total	ug/L	MW-4	04/16/2019		71.2000	
Barium, total	ug/L	MW-4	10/17/2019		137.0000	
Barium, total	ug/L	MW-4	04/09/2020		65.3000	
Barium, total	ug/L	MW-4	10/08/2020		75.2000	
Barium, total	ug/L	MW-4	04/15/2021		49.6000	
Barium, total	ug/L	MW-4	10/28/2021		73.2000	
Barium, total	ug/L	MW-4	04/13/2022		63.6000	
Barium, total	ug/L	MW-4	10/19/2022		81.8000	
Barium, total	ug/L	MW-4	04/06/2023		162.0000	
Barium, total	ug/L	MW-4	10/10/2023		67.4000	
Barium, total	ug/L	MW-4	04/11/2024		33.4000	
Barium, total	ug/L	MW-4	10/17/2024		76.7000	
Barium, total	ug/L	MW-5	10/14/2014		251.0000	
Barium, total	ug/L	MW-5	04/13/2015		272.0000	

* - 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	
Barium, total	ug/L	MW-5	09/23/2015		330.0000		
Barium, total	ug/L	MW-5	11/24/2015		328.0000		
Barium, total	ug/L	MW-5	04/12/2016		167.0000		
Barium, total	ug/L	MW-5	10/11/2016		262.0000		
Barium, total	ug/L	MW-5	04/20/2017		338.0000		
Barium, total	ug/L	MW-5	10/12/2017		276.0000		
Barium, total	ug/L	MW-5	04/23/2018		206.0000		
Barium, total	ug/L	MW-5	10/12/2018		212.0000		
Barium, total	ug/L	MW-5	04/16/2019		193.0000		
Barium, total	ug/L	MW-5	10/17/2019		296.0000		
Barium, total	ug/L	MW-5	04/09/2020		268.0000		
Barium, total	ug/L	MW-5	10/08/2020		268.0000		
Barium, total	ug/L	MW-5	04/15/2021		71.8000		*
Barium, total	ug/L	MW-5	10/28/2021		175.0000		
Barium, total	ug/L	MW-5	04/13/2022		180.0000		
Barium, total	ug/L	MW-5	10/19/2022		250.0000		
Barium, total	ug/L	MW-5	04/06/2023		206.0000		
Barium, total	ug/L	MW-5	10/10/2023		202.0000		
Barium, total	ug/L	MW-5	04/11/2024		71.7000		*
Barium, total	ug/L	MW-5	10/17/2024		287.0000		
Barium, total	ug/L	MW-9	10/14/2014		114.0000		
Barium, total	ug/L	MW-9	01/12/2015		115.0000		
Barium, total	ug/L	MW-9	04/14/2015		138.0000		
Barium, total	ug/L	MW-9	07/21/2015		111.0000		
Barium, total	ug/L	MW-9	09/22/2015		114.0000		
Barium, total	ug/L	MW-9	04/12/2016		99.2000		
Barium, total	ug/L	MW-9	10/11/2016		106.0000		
Barium, total	ug/L	MW-9	04/20/2017		116.0000		
Barium, total	ug/L	MW-9	10/12/2017		105.0000		
Barium, total	ug/L	MW-9	04/23/2018		110.0000		
Barium, total	ug/L	MW-9	10/12/2018		106.0000		
Barium, total	ug/L	MW-9	04/16/2019		106.0000		
Barium, total	ug/L	MW-9	10/17/2019		113.0000		
Barium, total	ug/L	MW-9	04/09/2020		93.9000		
Barium, total	ug/L	MW-9	10/08/2020		98.7000		
Barium, total	ug/L	MW-9	04/15/2021		93.2000		
Barium, total	ug/L	MW-9	10/28/2021		91.9000		
Barium, total	ug/L	MW-9	04/13/2022		105.0000		
Barium, total	ug/L	MW-9	10/19/2022		102.0000		
Barium, total	ug/L	MW-9	04/06/2023		96.1000		
Barium, total	ug/L	MW-9	10/10/2023		89.8000		
Barium, total	ug/L	MW-9	04/11/2024		95.5000		
Barium, total	ug/L	MW-9	10/17/2024		137.0000		
Beryllium, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Beryllium, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/13/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/11/2016	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/19/2022	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Beryllium, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Beryllium, total	ug/L	MW-14	10/17/2024	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/14/2014	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Beryllium, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/20/2017	ND	4.0000		
Beryllium, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Beryllium, total	ug/L	MW-4	04/23/2018	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-4	10/12/2018	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/06/2023	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Beryllium, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Beryllium, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Beryllium, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Beryllium, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Beryllium, total	ug/L	MW-5	10/17/2024	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Beryllium, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Beryllium, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Beryllium, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Cadmium, total	ug/L	MW-14	10/14/2014	ND	0.8000	
Cadmium, total	ug/L	MW-14	01/12/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/13/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	07/21/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	09/23/2015	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/12/2016	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/11/2016	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/20/2017	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/12/2017	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/23/2018	ND	5.3000	
Cadmium, total	ug/L	MW-14	10/12/2018	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/16/2019	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/17/2019	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/09/2020	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/08/2020	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/15/2021	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/28/2021	ND	0.8000	

* - 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
Cadmium, total	ug/L	MW-14	04/13/2022	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/19/2022	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/06/2023	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/10/2023	ND	0.8000	
Cadmium, total	ug/L	MW-14	04/11/2024	ND	0.8000	
Cadmium, total	ug/L	MW-14	10/17/2024	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/14/2014	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/13/2015	ND	0.8000	
Cadmium, total	ug/L	MW-4	09/23/2015	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/12/2016	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/11/2016	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/20/2017	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/12/2017	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/23/2018	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/12/2018	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/16/2019	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/17/2019	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/09/2020	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/08/2020	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/15/2021	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/28/2021	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/13/2022	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/19/2022	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/06/2023	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/10/2023	ND	0.8000	
Cadmium, total	ug/L	MW-4	04/11/2024	ND	0.8000	
Cadmium, total	ug/L	MW-4	10/17/2024	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/14/2014	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/13/2015	ND	0.8000	
Cadmium, total	ug/L	MW-5	09/23/2015	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/12/2016	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/11/2016	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/20/2017	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/12/2017	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/23/2018	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/12/2018	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/16/2019	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/17/2019	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/09/2020	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/08/2020	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/15/2021	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/28/2021	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/13/2022	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/19/2022	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/06/2023		1.1000	
Cadmium, total	ug/L	MW-5	10/10/2023	ND	0.8000	
Cadmium, total	ug/L	MW-5	04/11/2024	ND	0.8000	
Cadmium, total	ug/L	MW-5	10/17/2024		1.1000	
Cadmium, total	ug/L	MW-9	10/14/2014	ND	0.8000	
Cadmium, total	ug/L	MW-9	01/12/2015	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/14/2015	ND	0.8000	
Cadmium, total	ug/L	MW-9	07/21/2015	ND	0.8000	
Cadmium, total	ug/L	MW-9	09/22/2015	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/12/2016	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/11/2016	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/20/2017	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/12/2017	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/23/2018	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/12/2018	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/16/2019		1.2000	
Cadmium, total	ug/L	MW-9	10/17/2019	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/09/2020	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/08/2020	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/15/2021	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/28/2021	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/13/2022	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/19/2022		1.3000	
Cadmium, total	ug/L	MW-9	04/06/2023	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/10/2023	ND	0.8000	
Cadmium, total	ug/L	MW-9	04/11/2024	ND	0.8000	
Cadmium, total	ug/L	MW-9	10/17/2024	ND	0.8000	
Chromium, total	ug/L	MW-14	10/14/2014	ND	8.0000	
Chromium, total	ug/L	MW-14	01/12/2015	ND	8.0000	
Chromium, total	ug/L	MW-14	04/13/2015	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
Chromium, total	ug/L	MW-14	07/21/2015	ND	8.0000	
Chromium, total	ug/L	MW-14	09/23/2015	ND	8.0000	
Chromium, total	ug/L	MW-14	04/12/2016	ND	8.0000	
Chromium, total	ug/L	MW-14	10/11/2016	ND	8.0000	
Chromium, total	ug/L	MW-14	04/20/2017	ND	8.0000	
Chromium, total	ug/L	MW-14	10/12/2017	ND	8.0000	
Chromium, total	ug/L	MW-14	04/23/2018	ND	8.0000	
Chromium, total	ug/L	MW-14	10/12/2018	ND	8.0000	
Chromium, total	ug/L	MW-14	04/16/2019	ND	8.0000	
Chromium, total	ug/L	MW-14	10/17/2019	ND	8.0000	
Chromium, total	ug/L	MW-14	04/09/2020	ND	8.0000	
Chromium, total	ug/L	MW-14	10/08/2020	ND	8.0000	
Chromium, total	ug/L	MW-14	04/15/2021	ND	8.0000	
Chromium, total	ug/L	MW-14	10/28/2021	ND	8.0000	
Chromium, total	ug/L	MW-14	04/13/2022	ND	8.0000	
Chromium, total	ug/L	MW-14	10/19/2022	ND	8.0000	
Chromium, total	ug/L	MW-14	04/06/2023	ND	8.0000	
Chromium, total	ug/L	MW-14	10/10/2023	ND	8.0000	
Chromium, total	ug/L	MW-14	04/11/2024	ND	8.0000	
Chromium, total	ug/L	MW-14	10/17/2024	ND	8.0000	
Chromium, total	ug/L	MW-4	10/14/2014	ND	8.0000	
Chromium, total	ug/L	MW-4	04/13/2015	ND	8.0000	
Chromium, total	ug/L	MW-4	09/23/2015	ND	8.0000	
Chromium, total	ug/L	MW-4	04/12/2016	ND	8.0000	
Chromium, total	ug/L	MW-4	10/11/2016	ND	8.0000	
Chromium, total	ug/L	MW-4	04/20/2017		9.1000	
Chromium, total	ug/L	MW-4	10/12/2017	ND	8.0000	
Chromium, total	ug/L	MW-4	04/23/2018	ND	8.0000	
Chromium, total	ug/L	MW-4	10/12/2018	ND	8.0000	
Chromium, total	ug/L	MW-4	04/16/2019	ND	8.0000	
Chromium, total	ug/L	MW-4	10/17/2019	ND	8.0000	
Chromium, total	ug/L	MW-4	04/09/2020	ND	8.0000	
Chromium, total	ug/L	MW-4	10/08/2020	ND	8.0000	
Chromium, total	ug/L	MW-4	04/15/2021	ND	8.0000	
Chromium, total	ug/L	MW-4	10/28/2021	ND	8.0000	
Chromium, total	ug/L	MW-4	04/13/2022	ND	8.0000	
Chromium, total	ug/L	MW-4	10/19/2022	ND	8.0000	
Chromium, total	ug/L	MW-4	04/06/2023		8.3000	
Chromium, total	ug/L	MW-4	10/10/2023	ND	8.0000	
Chromium, total	ug/L	MW-4	04/11/2024	ND	8.0000	
Chromium, total	ug/L	MW-4	10/17/2024	ND	8.0000	
Chromium, total	ug/L	MW-5	10/14/2014	ND	8.0000	
Chromium, total	ug/L	MW-5	04/13/2015	ND	8.0000	
Chromium, total	ug/L	MW-5	09/23/2015	ND	8.0000	
Chromium, total	ug/L	MW-5	04/12/2016	ND	8.0000	
Chromium, total	ug/L	MW-5	10/11/2016	ND	8.0000	
Chromium, total	ug/L	MW-5	04/20/2017	ND	8.0000	
Chromium, total	ug/L	MW-5	10/12/2017	ND	8.0000	
Chromium, total	ug/L	MW-5	04/23/2018	ND	8.0000	
Chromium, total	ug/L	MW-5	10/12/2018	ND	8.0000	
Chromium, total	ug/L	MW-5	04/16/2019	ND	8.0000	
Chromium, total	ug/L	MW-5	10/17/2019	ND	8.0000	
Chromium, total	ug/L	MW-5	04/09/2020	ND	8.0000	
Chromium, total	ug/L	MW-5	10/08/2020	ND	8.0000	
Chromium, total	ug/L	MW-5	04/15/2021	ND	8.0000	
Chromium, total	ug/L	MW-5	10/28/2021	ND	8.0000	
Chromium, total	ug/L	MW-5	04/13/2022	ND	8.0000	
Chromium, total	ug/L	MW-5	10/19/2022	ND	8.0000	
Chromium, total	ug/L	MW-5	04/06/2023	ND	8.0000	
Chromium, total	ug/L	MW-5	10/10/2023	ND	8.0000	
Chromium, total	ug/L	MW-5	04/11/2024	ND	8.0000	
Chromium, total	ug/L	MW-5	10/17/2024	ND	8.0000	
Chromium, total	ug/L	MW-9	10/14/2014	ND	8.0000	
Chromium, total	ug/L	MW-9	01/12/2015	ND	8.0000	
Chromium, total	ug/L	MW-9	04/14/2015	ND	8.0000	
Chromium, total	ug/L	MW-9	07/21/2015	ND	8.0000	
Chromium, total	ug/L	MW-9	09/22/2015	ND	8.0000	
Chromium, total	ug/L	MW-9	04/12/2016	ND	8.0000	
Chromium, total	ug/L	MW-9	10/11/2016	ND	8.0000	
Chromium, total	ug/L	MW-9	04/20/2017	ND	8.0000	
Chromium, total	ug/L	MW-9	10/12/2017	ND	8.0000	
Chromium, total	ug/L	MW-9	04/23/2018	ND	8.0000	
Chromium, total	ug/L	MW-9	10/12/2018	ND	8.0000	
Chromium, total	ug/L	MW-9	04/16/2019	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	
Chromium, total	ug/L	MW-9	10/17/2019	ND	8.0000		
Chromium, total	ug/L	MW-9	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	10/08/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	04/15/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	10/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	04/13/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	10/19/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	04/06/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	10/10/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	04/11/2024	ND	8.0000		
Chromium, total	ug/L	MW-9	10/17/2024	ND	8.0000		
Cobalt, total	ug/L	MW-14	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-14	01/12/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	07/21/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-14	10/17/2019	ND	0.8000		
Cobalt, total	ug/L	MW-14	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-14	04/06/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-14	10/17/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/14/2014		2.1000		
Cobalt, total	ug/L	MW-4	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-4	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-4	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/20/2017		3.3000		
Cobalt, total	ug/L	MW-4	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-4	04/23/2018		2.8000		
Cobalt, total	ug/L	MW-4	10/12/2018		1.4000		
Cobalt, total	ug/L	MW-4	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-4	10/17/2019		2.0000		
Cobalt, total	ug/L	MW-4	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-4	04/06/2023		3.5000		
Cobalt, total	ug/L	MW-4	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-4	10/17/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/13/2015	ND	0.8000		
Cobalt, total	ug/L	MW-5	09/23/2015	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-5	10/17/2019	ND	0.8000		
Cobalt, total	ug/L	MW-5	04/09/2020		3.4000		
Cobalt, total	ug/L	MW-5	10/08/2020		0.6000		
Cobalt, total	ug/L	MW-5	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	04/13/2022		0.4000		
Cobalt, total	ug/L	MW-5	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-5	04/06/2023		2.7000		
Cobalt, total	ug/L	MW-5	10/10/2023	ND	0.4000	0.8000	**

* - 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	
Cobalt, total	ug/L	MW-5	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-5	10/17/2024		3.5000		
Cobalt, total	ug/L	MW-9	10/14/2014	ND	0.8000		
Cobalt, total	ug/L	MW-9	01/12/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/14/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	07/21/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	09/22/2015	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/12/2016	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/11/2016	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/20/2017	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/12/2017	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW-9	10/17/2019	ND	0.8000		
Cobalt, total	ug/L	MW-9	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/08/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/15/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/28/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/13/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/19/2022	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-9	04/06/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/10/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	04/11/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-9	10/17/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-14	10/14/2014	ND	4.0000		
Copper, total	ug/L	MW-14	01/12/2015	ND	4.0000		
Copper, total	ug/L	MW-14	04/13/2015	ND	4.0000		
Copper, total	ug/L	MW-14	07/21/2015	ND	4.0000		
Copper, total	ug/L	MW-14	09/23/2015	ND	4.0000		
Copper, total	ug/L	MW-14	04/12/2016	ND	4.0000		
Copper, total	ug/L	MW-14	10/11/2016	ND	4.0000		
Copper, total	ug/L	MW-14	04/20/2017	ND	4.0000		
Copper, total	ug/L	MW-14	10/12/2017	ND	4.0000		
Copper, total	ug/L	MW-14	04/23/2018	ND	4.0000		
Copper, total	ug/L	MW-14	10/12/2018	ND	4.0000		
Copper, total	ug/L	MW-14	04/16/2019	ND	4.0000		
Copper, total	ug/L	MW-14	10/17/2019	ND	4.0000		
Copper, total	ug/L	MW-14	04/09/2020	ND	4.0000		
Copper, total	ug/L	MW-14	10/08/2020	ND	4.0000		
Copper, total	ug/L	MW-14	04/15/2021	ND	4.0000		
Copper, total	ug/L	MW-14	10/28/2021	ND	4.0000		
Copper, total	ug/L	MW-14	04/13/2022	ND	4.0000		
Copper, total	ug/L	MW-14	10/19/2022		7.0000		
Copper, total	ug/L	MW-14	04/06/2023	ND	4.0000		
Copper, total	ug/L	MW-14	10/10/2023	ND	4.0000		
Copper, total	ug/L	MW-14	04/11/2024	ND	4.0000		
Copper, total	ug/L	MW-14	10/17/2024	ND	4.0000		
Copper, total	ug/L	MW-4	10/14/2014		6.1000		
Copper, total	ug/L	MW-4	04/13/2015	ND	4.0000		
Copper, total	ug/L	MW-4	09/23/2015	ND	4.0000		
Copper, total	ug/L	MW-4	04/12/2016	ND	4.0000		
Copper, total	ug/L	MW-4	10/11/2016	ND	4.0000		
Copper, total	ug/L	MW-4	04/20/2017		5.5000		
Copper, total	ug/L	MW-4	10/12/2017	ND	4.0000		
Copper, total	ug/L	MW-4	04/23/2018	ND	4.0000		
Copper, total	ug/L	MW-4	10/12/2018	ND	4.0000		
Copper, total	ug/L	MW-4	04/16/2019	ND	4.0000		
Copper, total	ug/L	MW-4	10/17/2019		4.3000		
Copper, total	ug/L	MW-4	04/09/2020	ND	4.0000		
Copper, total	ug/L	MW-4	10/08/2020	ND	4.0000		
Copper, total	ug/L	MW-4	04/15/2021	ND	4.0000		
Copper, total	ug/L	MW-4	10/28/2021	ND	4.0000		
Copper, total	ug/L	MW-4	04/13/2022	ND	4.0000		
Copper, total	ug/L	MW-4	10/19/2022	ND	4.0000		
Copper, total	ug/L	MW-4	04/06/2023		9.1000		
Copper, total	ug/L	MW-4	10/10/2023	ND	4.0000		
Copper, total	ug/L	MW-4	04/11/2024	ND	4.0000		
Copper, total	ug/L	MW-4	10/17/2024	ND	4.0000		
Copper, total	ug/L	MW-5	10/14/2014	ND	4.0000		
Copper, total	ug/L	MW-5	04/13/2015	ND	4.0000		
Copper, total	ug/L	MW-5	09/23/2015	ND	4.0000		
Copper, total	ug/L	MW-5	04/12/2016	ND	4.0000		
Copper, total	ug/L	MW-5	10/11/2016	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-5	04/20/2017	ND	4.0000	
Copper, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Copper, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Copper, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Copper, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Copper, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Copper, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Copper, total	ug/L	MW-5	04/06/2023		9.6000	
Copper, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Copper, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Copper, total	ug/L	MW-5	10/17/2024		12.6000	
Copper, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Copper, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Copper, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Copper, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Copper, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Copper, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Copper, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Copper, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Copper, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Copper, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Copper, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Copper, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Copper, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Copper, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Copper, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Copper, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Copper, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Copper, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Copper, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Copper, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Copper, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Copper, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Copper, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Lead, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Lead, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Lead, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Lead, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Lead, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Lead, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Lead, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Lead, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Lead, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Lead, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Lead, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Lead, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Lead, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Lead, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Lead, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Lead, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Lead, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Lead, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Lead, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Lead, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Lead, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Lead, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Lead, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Lead, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Lead, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Lead, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Lead, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Lead, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Lead, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Lead, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Lead, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Lead, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Lead, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Lead, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Lead, total	ug/L	MW-4	04/09/2020	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
Lead, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Lead, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Lead, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Lead, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Lead, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Lead, total	ug/L	MW-4	04/06/2023		7.6000	
Lead, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Lead, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Lead, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Lead, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Lead, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Lead, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Lead, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Lead, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Lead, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Lead, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Lead, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Lead, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Lead, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Lead, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Lead, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Lead, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Lead, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Lead, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Lead, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Lead, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Lead, total	ug/L	MW-5	04/06/2023		6.2000	
Lead, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Lead, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Lead, total	ug/L	MW-5	10/17/2024		11.9000	
Lead, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Lead, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Lead, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Lead, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Lead, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Lead, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Lead, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Lead, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Lead, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Lead, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Lead, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Lead, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Lead, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Lead, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Lead, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Lead, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Lead, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Lead, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Lead, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Lead, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Lead, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Lead, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Lead, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Nickel, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Nickel, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Nickel, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Nickel, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Nickel, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Nickel, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Nickel, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Nickel, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Nickel, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Nickel, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Nickel, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Nickel, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-14	10/10/2023	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
Nickel, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Nickel, total	ug/L	MW-4	10/14/2014		6.2000	
Nickel, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Nickel, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Nickel, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-4	04/20/2017		9.5000	
Nickel, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-4	04/23/2018		4.5000	
Nickel, total	ug/L	MW-4	10/12/2018		4.7000	
Nickel, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-4	10/17/2019		6.0000	
Nickel, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Nickel, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Nickel, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Nickel, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Nickel, total	ug/L	MW-4	04/06/2023		9.8000	
Nickel, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Nickel, total	ug/L	MW-5	10/14/2014		5.9000	
Nickel, total	ug/L	MW-5	04/13/2015		6.3000	
Nickel, total	ug/L	MW-5	09/23/2015		5.7000	
Nickel, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Nickel, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Nickel, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Nickel, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Nickel, total	ug/L	MW-5	04/09/2020		6.8000	
Nickel, total	ug/L	MW-5	10/08/2020		6.6000	
Nickel, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Nickel, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-5	10/19/2022		5.4000	
Nickel, total	ug/L	MW-5	04/06/2023		13.1000	*
Nickel, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-5	10/17/2024		16.3000	*
Nickel, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Nickel, total	ug/L	MW-9	01/12/2015		4.0000	
Nickel, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Nickel, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Nickel, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Nickel, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Nickel, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Nickel, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Nickel, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Nickel, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Nickel, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Nickel, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Nickel, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Nickel, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Nickel, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Nickel, total	ug/L	MW-9	04/15/2021	ND	4.0000	
Nickel, total	ug/L	MW-9	10/28/2021		4.2000	
Nickel, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Nickel, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Nickel, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Nickel, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Nickel, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Nickel, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Selenium, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Selenium, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Selenium, total	ug/L	MW-14	04/13/2015		5.1000	
Selenium, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Selenium, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Selenium, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Selenium, total	ug/L	MW-14	10/11/2016		5.5000	

* - 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-14	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Selenium, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-14	10/19/2022		5.5000	
Selenium, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Selenium, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Selenium, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Selenium, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Selenium, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Selenium, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Selenium, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Selenium, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Selenium, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Selenium, total	ug/L	MW-4	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Selenium, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Selenium, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Selenium, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Selenium, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Selenium, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Selenium, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Selenium, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Selenium, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Selenium, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Selenium, total	ug/L	MW-5	10/17/2024	ND	4.0000	
Selenium, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Selenium, total	ug/L	MW-9	01/12/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	04/14/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	07/21/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	09/22/2015	ND	4.0000	
Selenium, total	ug/L	MW-9	04/12/2016	ND	4.0000	
Selenium, total	ug/L	MW-9	10/11/2016	ND	4.0000	
Selenium, total	ug/L	MW-9	04/20/2017	ND	4.0000	
Selenium, total	ug/L	MW-9	10/12/2017	ND	4.0000	
Selenium, total	ug/L	MW-9	04/23/2018	ND	4.0000	
Selenium, total	ug/L	MW-9	10/12/2018	ND	4.0000	
Selenium, total	ug/L	MW-9	04/16/2019	ND	4.0000	
Selenium, total	ug/L	MW-9	10/17/2019	ND	4.0000	
Selenium, total	ug/L	MW-9	04/09/2020	ND	4.0000	
Selenium, total	ug/L	MW-9	10/08/2020	ND	4.0000	
Selenium, total	ug/L	MW-9	04/15/2021	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
Selenium, total	ug/L	MW-9	10/28/2021	ND	4.0000	
Selenium, total	ug/L	MW-9	04/13/2022	ND	4.0000	
Selenium, total	ug/L	MW-9	10/19/2022	ND	4.0000	
Selenium, total	ug/L	MW-9	04/06/2023	ND	4.0000	
Selenium, total	ug/L	MW-9	10/10/2023	ND	4.0000	
Selenium, total	ug/L	MW-9	04/11/2024	ND	4.0000	
Selenium, total	ug/L	MW-9	10/17/2024	ND	4.0000	
Silver, total	ug/L	MW-14	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-14	01/12/2015	ND	4.0000	
Silver, total	ug/L	MW-14	04/13/2015	ND	4.0000	
Silver, total	ug/L	MW-14	07/21/2015	ND	4.0000	
Silver, total	ug/L	MW-14	09/23/2015	ND	4.0000	
Silver, total	ug/L	MW-14	04/12/2016	ND	4.0000	
Silver, total	ug/L	MW-14	10/11/2016	ND	4.0000	
Silver, total	ug/L	MW-14	04/20/2017	ND	4.0000	
Silver, total	ug/L	MW-14	10/12/2017	ND	4.0000	
Silver, total	ug/L	MW-14	04/23/2018	ND	4.0000	
Silver, total	ug/L	MW-14	10/12/2018	ND	4.0000	
Silver, total	ug/L	MW-14	04/16/2019	ND	4.0000	
Silver, total	ug/L	MW-14	10/17/2019	ND	4.0000	
Silver, total	ug/L	MW-14	04/09/2020	ND	4.0000	
Silver, total	ug/L	MW-14	10/08/2020	ND	4.0000	
Silver, total	ug/L	MW-14	04/15/2021	ND	4.0000	
Silver, total	ug/L	MW-14	10/28/2021	ND	4.0000	
Silver, total	ug/L	MW-14	04/13/2022	ND	4.0000	
Silver, total	ug/L	MW-14	10/19/2022	ND	4.0000	
Silver, total	ug/L	MW-14	04/06/2023	ND	4.0000	
Silver, total	ug/L	MW-14	10/10/2023	ND	4.0000	
Silver, total	ug/L	MW-14	04/11/2024	ND	4.0000	
Silver, total	ug/L	MW-14	10/17/2024	ND	4.0000	
Silver, total	ug/L	MW-4	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-4	04/13/2015	ND	4.0000	
Silver, total	ug/L	MW-4	09/23/2015	ND	4.0000	
Silver, total	ug/L	MW-4	04/12/2016	ND	4.0000	
Silver, total	ug/L	MW-4	10/11/2016	ND	4.0000	
Silver, total	ug/L	MW-4	04/20/2017	ND	4.0000	
Silver, total	ug/L	MW-4	10/12/2017	ND	4.0000	
Silver, total	ug/L	MW-4	04/23/2018	ND	4.0000	
Silver, total	ug/L	MW-4	10/12/2018	ND	4.0000	
Silver, total	ug/L	MW-4	04/16/2019	ND	4.0000	
Silver, total	ug/L	MW-4	10/17/2019	ND	4.0000	
Silver, total	ug/L	MW-4	04/09/2020	ND	4.0000	
Silver, total	ug/L	MW-4	10/08/2020	ND	4.0000	
Silver, total	ug/L	MW-4	04/15/2021	ND	4.0000	
Silver, total	ug/L	MW-4	10/28/2021	ND	4.0000	
Silver, total	ug/L	MW-4	04/13/2022	ND	4.0000	
Silver, total	ug/L	MW-4	10/19/2022	ND	4.0000	
Silver, total	ug/L	MW-4	04/06/2023	ND	4.0000	
Silver, total	ug/L	MW-4	10/10/2023	ND	4.0000	
Silver, total	ug/L	MW-4	04/11/2024	ND	4.0000	
Silver, total	ug/L	MW-4	10/17/2024	ND	4.0000	
Silver, total	ug/L	MW-5	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-5	04/13/2015	ND	4.0000	
Silver, total	ug/L	MW-5	09/23/2015	ND	4.0000	
Silver, total	ug/L	MW-5	04/12/2016	ND	4.0000	
Silver, total	ug/L	MW-5	10/11/2016	ND	4.0000	
Silver, total	ug/L	MW-5	04/20/2017	ND	4.0000	
Silver, total	ug/L	MW-5	10/12/2017	ND	4.0000	
Silver, total	ug/L	MW-5	04/23/2018	ND	4.0000	
Silver, total	ug/L	MW-5	10/12/2018	ND	4.0000	
Silver, total	ug/L	MW-5	04/16/2019	ND	4.0000	
Silver, total	ug/L	MW-5	10/17/2019	ND	4.0000	
Silver, total	ug/L	MW-5	04/09/2020	ND	4.0000	
Silver, total	ug/L	MW-5	10/08/2020	ND	4.0000	
Silver, total	ug/L	MW-5	04/15/2021	ND	4.0000	
Silver, total	ug/L	MW-5	10/28/2021	ND	4.0000	
Silver, total	ug/L	MW-5	04/13/2022	ND	4.0000	
Silver, total	ug/L	MW-5	10/19/2022	ND	4.0000	
Silver, total	ug/L	MW-5	04/06/2023	ND	4.0000	
Silver, total	ug/L	MW-5	10/10/2023	ND	4.0000	
Silver, total	ug/L	MW-5	04/11/2024	ND	4.0000	
Silver, total	ug/L	MW-5	10/17/2024	ND	4.0000	
Silver, total	ug/L	MW-9	10/14/2014	ND	4.0000	
Silver, total	ug/L	MW-9	01/12/2015	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	
Silver, total	ug/L	MW-9	04/14/2015	ND	4.0000		
Silver, total	ug/L	MW-9	07/21/2015	ND	4.0000		
Silver, total	ug/L	MW-9	09/22/2015	ND	4.0000		
Silver, total	ug/L	MW-9	04/12/2016	ND	4.0000		
Silver, total	ug/L	MW-9	10/11/2016	ND	4.0000		
Silver, total	ug/L	MW-9	04/20/2017	ND	4.0000		
Silver, total	ug/L	MW-9	10/12/2017	ND	4.0000		
Silver, total	ug/L	MW-9	04/23/2018	ND	4.0000		
Silver, total	ug/L	MW-9	10/12/2018	ND	4.0000		
Silver, total	ug/L	MW-9	04/16/2019	ND	4.0000		
Silver, total	ug/L	MW-9	10/17/2019	ND	4.0000		
Silver, total	ug/L	MW-9	04/09/2020	ND	4.0000		
Silver, total	ug/L	MW-9	10/08/2020	ND	4.0000		
Silver, total	ug/L	MW-9	04/15/2021	ND	4.0000		
Silver, total	ug/L	MW-9	10/28/2021	ND	4.0000		
Silver, total	ug/L	MW-9	04/13/2022	ND	4.0000		
Silver, total	ug/L	MW-9	10/19/2022	ND	4.0000		
Silver, total	ug/L	MW-9	04/06/2023	ND	4.0000		
Silver, total	ug/L	MW-9	10/10/2023	ND	4.0000		
Silver, total	ug/L	MW-9	04/11/2024	ND	4.0000		
Silver, total	ug/L	MW-9	10/17/2024	ND	4.0000		
Thallium, total	ug/L	MW-14	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	01/12/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	07/21/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-14	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-14	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-14	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-14	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-14	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-14	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-14	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-14	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-14	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-14	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-14	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-14	10/17/2024	ND	2.0000		
Thallium, total	ug/L	MW-4	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-4	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-4	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-4	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-4	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-4	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-4	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-4	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-4	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-4	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-4	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-4	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-4	10/17/2024	ND	2.0000		
Thallium, total	ug/L	MW-5	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/13/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	09/23/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-5	10/12/2018	ND	4.0000	2.0000	**

* - 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	
Thallium, total	ug/L	MW-5	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-5	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-5	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-5	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-5	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-5	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-5	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-5	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-5	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-5	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-5	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-5	10/17/2024	ND	2.0000		
Thallium, total	ug/L	MW-9	10/14/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	01/12/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/14/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	07/21/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	09/22/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/12/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/11/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/20/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/12/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/23/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/12/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/16/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	10/17/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	04/09/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	10/08/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	04/15/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	10/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	04/13/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	10/19/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	04/06/2023	ND	2.0000		
Thallium, total	ug/L	MW-9	10/10/2023	ND	2.0000		
Thallium, total	ug/L	MW-9	04/11/2024	ND	2.0000		
Thallium, total	ug/L	MW-9	10/17/2024	ND	2.0000		
Vanadium, total	ug/L	MW-14	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-14	01/12/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	07/21/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-14	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-14	10/17/2024	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-4	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/13/2022	ND	20.0000		

* - 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	
Vanadium, total	ug/L	MW-4	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-4	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-4	10/17/2024	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/13/2015	ND	20.0000		
Vanadium, total	ug/L	MW-5	09/23/2015	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-5	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-5	10/17/2024	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/14/2014	ND	20.0000		
Vanadium, total	ug/L	MW-9	01/12/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/14/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	07/21/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/22/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/12/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/11/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/20/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/12/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/17/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/08/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/15/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/13/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/19/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/06/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/10/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/11/2024	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/17/2024	ND	20.0000		
Zinc, total	ug/L	MW-14	10/14/2014	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	01/12/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	04/13/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	07/21/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	09/23/2015	ND	20.0000		
Zinc, total	ug/L	MW-14	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	10/11/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	04/20/2017	ND	20.0000		
Zinc, total	ug/L	MW-14	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	04/23/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-14	10/12/2018		16.1000		
Zinc, total	ug/L	MW-14	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-14	10/17/2019	ND	20.0000		
Zinc, total	ug/L	MW-14	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-14	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-14	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-14	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-14	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-14	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-14	04/06/2023	ND	20.0000		
Zinc, total	ug/L	MW-14	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-14	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-14	10/17/2024	ND	20.0000		
Zinc, total	ug/L	MW-4	10/14/2014		40.0000		
Zinc, total	ug/L	MW-4	01/12/2015	ND	8.0000	20.0000	**

* - 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-4	04/13/2015		12.4000		
Zinc, total	ug/L	MW-4	09/23/2015		10.3000		
Zinc, total	ug/L	MW-4	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-4	10/11/2016		11.9000		
Zinc, total	ug/L	MW-4	01/17/2017		58.9000		
Zinc, total	ug/L	MW-4	04/20/2017		57.6000		
Zinc, total	ug/L	MW-4	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-4	04/23/2018		159.0000		
Zinc, total	ug/L	MW-4	10/12/2018		237.0000		
Zinc, total	ug/L	MW-4	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-4	10/17/2019		130.0000		
Zinc, total	ug/L	MW-4	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-4	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-4	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-4	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-4	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-4	10/19/2022		216.0000		
Zinc, total	ug/L	MW-4	04/06/2023		627.0000		*
Zinc, total	ug/L	MW-4	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-4	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-4	10/17/2024		70.9000		
Zinc, total	ug/L	MW-5	10/14/2014		24.7000		
Zinc, total	ug/L	MW-5	04/13/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	09/23/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	10/11/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/20/2017		16.5000		
Zinc, total	ug/L	MW-5	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-5	04/23/2018		15.2000		
Zinc, total	ug/L	MW-5	10/12/2018		20.3000		
Zinc, total	ug/L	MW-5	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-5	10/17/2019		83.1000		
Zinc, total	ug/L	MW-5	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-5	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-5	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-5	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-5	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-5	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-5	04/06/2023		411.0000		*
Zinc, total	ug/L	MW-5	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-5	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-5	10/17/2024		1080.0000		*
Zinc, total	ug/L	MW-9	10/14/2014	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	01/12/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/14/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	07/21/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	09/23/2015	ND	20.0000		
Zinc, total	ug/L	MW-9	04/12/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/11/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/20/2017	ND	20.0000		
Zinc, total	ug/L	MW-9	10/12/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/23/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/12/2018		9.0000		
Zinc, total	ug/L	MW-9	04/16/2019	ND	20.0000		
Zinc, total	ug/L	MW-9	10/17/2019		29.9000		
Zinc, total	ug/L	MW-9	04/09/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	10/08/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	04/15/2021	ND	20.0000		
Zinc, total	ug/L	MW-9	10/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-9	04/13/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	10/19/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	04/06/2023		21.3000		
Zinc, total	ug/L	MW-9	10/10/2023	ND	20.0000		
Zinc, total	ug/L	MW-9	04/11/2024	ND	20.0000		
Zinc, total	ug/L	MW-9	10/17/2024	ND	20.0000		

* - 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-2	10/17/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-3	10/17/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-6	10/17/2024	ND	2.0000	2.5000
Antimony, total	ug/L	MW-7	10/17/2024	ND	2.0000	2.5000
Arsenic, total	ug/L	MW-2	10/17/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-3	10/17/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/17/2024		17.7000 *	4.5000
Arsenic, total	ug/L	MW-7	10/17/2024	ND	4.0000	4.5000
Barium, total	ug/L	MW-2	10/17/2024		45.1000	382.3899
Barium, total	ug/L	MW-3	10/17/2024		113.0000	382.3899
Barium, total	ug/L	MW-6	10/17/2024		74.4000	382.3899
Barium, total	ug/L	MW-7	10/17/2024		26.0000	382.3899
Beryllium, total	ug/L	MW-2	10/17/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-3	10/17/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-6	10/17/2024	ND	4.0000	4.0000
Beryllium, total	ug/L	MW-7	10/17/2024	ND	4.0000	4.0000
Cadmium, total	ug/L	MW-2	10/17/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-3	10/17/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-6	10/17/2024	ND	0.8000	5.3000
Cadmium, total	ug/L	MW-7	10/17/2024	ND	0.8000	5.3000
Chromium, total	ug/L	MW-2	10/17/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-3	10/17/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-6	10/17/2024	ND	8.0000	9.1000
Chromium, total	ug/L	MW-7	10/17/2024	ND	8.0000	9.1000
Cobalt, total	ug/L	MW-2	10/17/2024		2.3000	3.5000
Cobalt, total	ug/L	MW-3	10/17/2024	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-6	10/17/2024		5.1000 *	3.5000
Cobalt, total	ug/L	MW-7	10/17/2024	ND	0.4000	3.5000
Copper, total	ug/L	MW-2	10/17/2024	ND	4.0000	12.6000
Copper, total	ug/L	MW-3	10/17/2024	ND	4.0000	12.6000
Copper, total	ug/L	MW-6	10/17/2024	ND	4.0000	12.6000
Copper, total	ug/L	MW-7	10/17/2024	ND	4.0000	12.6000
Lead, total	ug/L	MW-2	10/17/2024	ND	4.0000	11.9000
Lead, total	ug/L	MW-3	10/17/2024	ND	4.0000	11.9000
Lead, total	ug/L	MW-6	10/17/2024	ND	4.0000	11.9000
Lead, total	ug/L	MW-7	10/17/2024	ND	4.0000	11.9000
Nickel, total	ug/L	MW-2	10/17/2024		4.9000	9.8000
Nickel, total	ug/L	MW-3	10/17/2024		4.4000	9.8000
Nickel, total	ug/L	MW-6	10/17/2024		5.0000	9.8000
Nickel, total	ug/L	MW-7	10/17/2024		4.0000	9.8000
Selenium, total	ug/L	MW-2	10/17/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-3	10/17/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-6	10/17/2024	ND	4.0000	5.5000
Selenium, total	ug/L	MW-7	10/17/2024	ND	4.0000	5.5000
Silver, total	ug/L	MW-2	10/17/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-3	10/17/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-6	10/17/2024	ND	4.0000	4.0000
Silver, total	ug/L	MW-7	10/17/2024	ND	4.0000	4.0000
Thallium, total	ug/L	MW-2	10/17/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-3	10/17/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-6	10/17/2024	ND	2.0000	2.0000
Thallium, total	ug/L	MW-7	10/17/2024	ND	2.0000	2.0000
Vanadium, total	ug/L	MW-2	10/17/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-3	10/17/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-6	10/17/2024	ND	20.0000	20.0000
Vanadium, total	ug/L	MW-7	10/17/2024	ND	20.0000	20.0000
Zinc, total	ug/L	MW-2	10/17/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-3	10/17/2024	ND	20.0000	237.0000
Zinc, total	ug/L	MW-6	10/17/2024		25.4000	237.0000
Zinc, total	ug/L	MW-7	10/17/2024	ND	20.0000	237.0000

* - 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	Upgradient			Downgradient		
	Detect	N	Proportion	Detect	N	Proportion
Antimony, total	1	88	0.011	0	108	0.000
Arsenic, total	2	88	0.023	31	130	0.238
Barium, total	87	87	1.000	144	144	1.000
Beryllium, total	0	88	0.000	0	108	0.000
Cadmium, total	5	88	0.057	9	117	0.077
Chromium, total	2	88	0.023	2	108	0.019
Cobalt, total	11	88	0.125	52	118	0.441
Copper, total	7	88	0.080	14	117	0.120
Lead, total	3	88	0.034	8	117	0.068
Nickel, total	14	86	0.163	73	145	0.503
Selenium, total	3	88	0.034	0	108	0.000
Silver, total	0	88	0.000	0	108	0.000
Thallium, total	0	88	0.000	0	108	0.000
Vanadium, total	0	88	0.000	1	108	0.009
Zinc, total	20	87	0.230	55	128	0.430

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	1	88	0.011									nonpar
Arsenic, total	2	88	0.023									nonpar
Barium, total	87	87	1.000	2.701	1.307					2.326	lognor	lognor
Beryllium, total	0	88	0.000									nonpar
Cadmium, total	5	88	0.057									nonpar
Chromium, total	2	88	0.023									nonpar
Cobalt, total	11	88	0.125	0.525	0.752					2.326	normal	nonpar
Copper, total	7	88	0.080	0.105	0.895					2.326	normal	nonpar
Lead, total	3	88	0.034									nonpar
Nickel, total	14	86	0.163	0.124	0.164					2.326	normal	nonpar
Selenium, total	3	88	0.034	0.495	0.495					2.326	normal	nonpar
Silver, total	0	88	0.000									nonpar
Thallium, total	0	88	0.000									nonpar
Vanadium, total	0	88	0.000									nonpar
Zinc, total	20	87	0.230	1.812	1.318					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	1	88					2.5000	nonpar		0.99
Arsenic, total	ug/L	2	88					4.5000	nonpar		0.99
Barium, total	ug/L	87	87	4.8650	0.4536	0.0100	2.3841	382.3899	lognor		
Beryllium, total	ug/L	0	88					4.0000	nonpar	***	0.99
Cadmium, total	ug/L	5	88					5.3000	nonpar		0.99
Chromium, total	ug/L	2	88					9.1000	nonpar		0.99
Cobalt, total	ug/L	11	88					3.5000	nonpar		0.99
Copper, total	ug/L	7	88					12.6000	nonpar		0.99
Lead, total	ug/L	3	88					11.9000	nonpar		0.99
Nickel, total	ug/L	14	86					9.8000	nonpar		0.99
Selenium, total	ug/L	3	88					5.5000	nonpar		0.99
Silver, total	ug/L	0	88					4.0000	nonpar	***	0.99
Thallium, total	ug/L	0	88					2.0000	nonpar	***	0.99
Vanadium, total	ug/L	0	88					20.0000	nonpar	***	0.99
Zinc, total	ug/L	20	87					237.0000	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
Barium, total	ug/L	MW-5	04/15/2021	71.8000		10/14/2014-10/17/2024	22	0.5263
Barium, total	ug/L	MW-5	04/11/2024	71.7000		10/14/2014-10/17/2024	22	0.5263
Nickel, total	ug/L	MW-5	04/06/2023	13.1000		10/14/2014-10/17/2024	21	0.5381
Nickel, total	ug/L	MW-5	10/17/2024	16.3000		10/14/2014-10/17/2024	21	0.5381
Zinc, total	ug/L	MW-5	04/06/2023	411.0000		10/14/2014-10/17/2024	21	0.5381
Zinc, total	ug/L	MW-5	10/17/2024	1080.0000		10/14/2014-10/17/2024	21	0.5381

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.

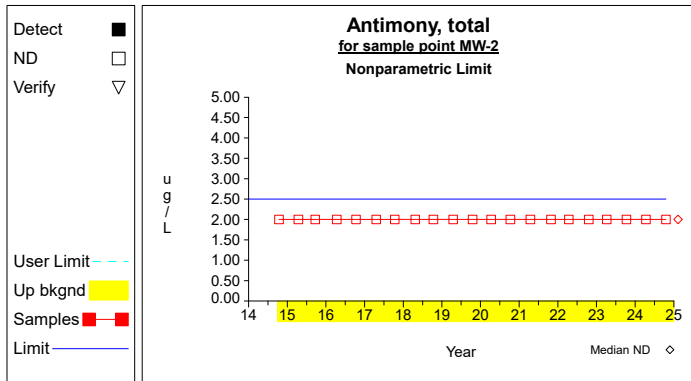
Table 8

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

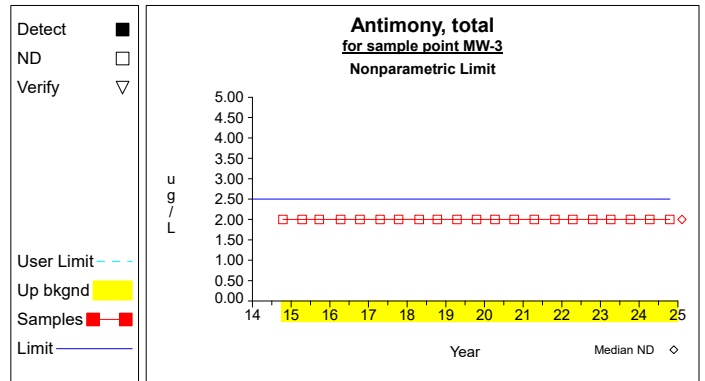
Constituent	Units	Well	Date		Result	Pred. Limit
Arsenic, total	ug/L	MW-6	04/15/2009		11.5000 *	4.5000
Arsenic, total	ug/L	MW-6	06/17/2009		14.5000 *	4.5000
Arsenic, total	ug/L	MW-6	07/24/2009	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/19/2009		15.0000 *	4.5000
Arsenic, total	ug/L	MW-6	11/02/2009		8.7000 *	4.5000
Arsenic, total	ug/L	MW-6	04/19/2010		19.5000 *	4.5000
Arsenic, total	ug/L	MW-6	07/16/2010		10.2000 *	4.5000
Arsenic, total	ug/L	MW-6	09/22/2010		5.6000 *	4.5000
Arsenic, total	ug/L	MW-6	04/13/2011		10.0000 *	4.5000
Arsenic, total	ug/L	MW-6	09/28/2011		15.5000 *	4.5000
Arsenic, total	ug/L	MW-6	04/23/2012		29.4000 *	4.5000
Arsenic, total	ug/L	MW-6	09/24/2012		11.3000 *	4.5000
Arsenic, total	ug/L	MW-6	04/24/2013	ND	8.0000	4.5000
Arsenic, total	ug/L	MW-6	10/21/2013	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/08/2014		6.3000 *	4.5000
Arsenic, total	ug/L	MW-6	07/17/2014	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/14/2014	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/13/2015	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	09/23/2015		4.2000	4.5000
Arsenic, total	ug/L	MW-6	11/24/2015	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/12/2016	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/11/2016	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/20/2017	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/12/2017	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/23/2018	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/12/2018	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/16/2019	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/17/2019	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/09/2020	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/08/2020	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/15/2021	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/28/2021	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/13/2022	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/19/2022		8.1000 *	4.5000
Arsenic, total	ug/L	MW-6	04/06/2023		5.3000 *	4.5000
Arsenic, total	ug/L	MW-6	10/10/2023	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	04/11/2024	ND	4.0000	4.5000
Arsenic, total	ug/L	MW-6	10/17/2024		17.7000 *	4.5000
Cobalt, total	ug/L	MW-6	04/15/2009	ND	4.0000	3.5000
Cobalt, total	ug/L	MW-6	04/23/2012	ND	4.0000	3.5000
Cobalt, total	ug/L	MW-6	09/24/2012	ND	4.0000	3.5000
Cobalt, total	ug/L	MW-6	04/24/2013	ND	4.0000	3.5000
Cobalt, total	ug/L	MW-6	10/21/2013	ND	4.0000	3.5000
Cobalt, total	ug/L	MW-6	04/08/2014	ND	4.0000	3.5000
Cobalt, total	ug/L	MW-6	10/14/2014		1.1000	3.5000
Cobalt, total	ug/L	MW-6	04/13/2015		0.8000	3.5000
Cobalt, total	ug/L	MW-6	09/23/2015		0.8000	3.5000
Cobalt, total	ug/L	MW-6	04/12/2016		2.3000	3.5000
Cobalt, total	ug/L	MW-6	10/11/2016		1.1000	3.5000
Cobalt, total	ug/L	MW-6	01/17/2017		6.3000 *	3.5000
Cobalt, total	ug/L	MW-6	04/20/2017		2.0000	3.5000
Cobalt, total	ug/L	MW-6	10/12/2017	ND	0.8000	3.5000
Cobalt, total	ug/L	MW-6	04/23/2018	ND	0.8000	3.5000
Cobalt, total	ug/L	MW-6	10/12/2018	ND	0.8000	3.5000
Cobalt, total	ug/L	MW-6	04/16/2019		0.8000	3.5000
Cobalt, total	ug/L	MW-6	10/17/2019	ND	0.8000	3.5000
Cobalt, total	ug/L	MW-6	04/09/2020		1.9000	3.5000
Cobalt, total	ug/L	MW-6	10/08/2020		1.0000	3.5000
Cobalt, total	ug/L	MW-6	04/15/2021	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-6	10/28/2021		1.0000	3.5000
Cobalt, total	ug/L	MW-6	04/13/2022		1.1000	3.5000
Cobalt, total	ug/L	MW-6	10/19/2022		4.6000 *	3.5000
Cobalt, total	ug/L	MW-6	04/06/2023		0.7000	3.5000
Cobalt, total	ug/L	MW-6	10/10/2023		0.5000	3.5000
Cobalt, total	ug/L	MW-6	04/11/2024	ND	0.4000	3.5000
Cobalt, total	ug/L	MW-6	10/17/2024		5.1000 *	3.5000

* - Significantly increased over background.
 ** - Detect at limit for 100% NDs in background (NPPL only).
 *** - Manual exclusion.
 ND = Not Detected, Result = detection limit.

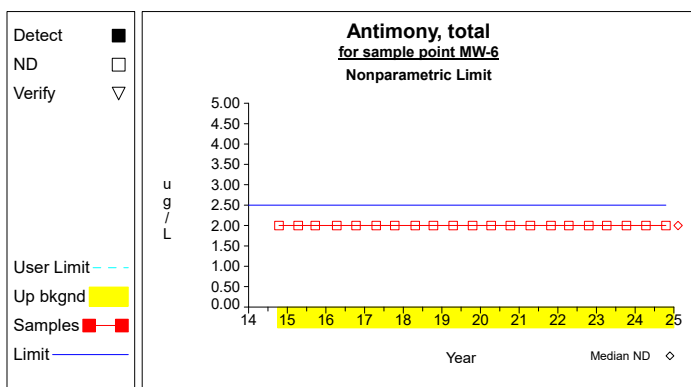
Up vs. Down Prediction Limits



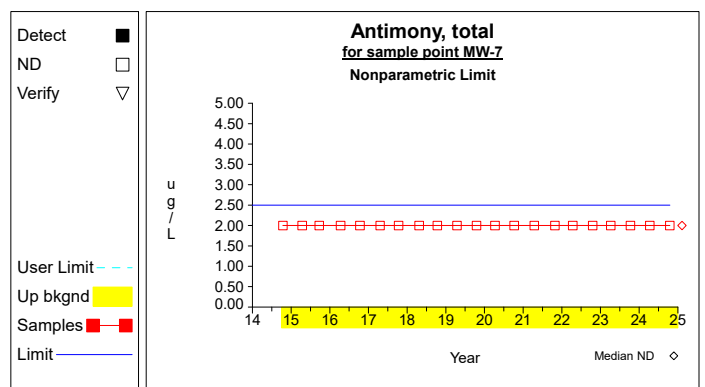
Graph 1



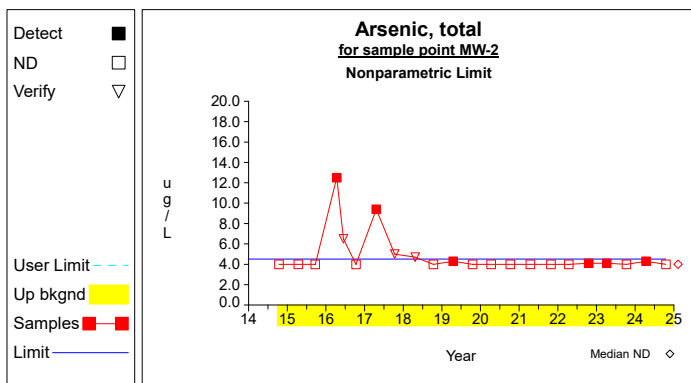
Graph 2



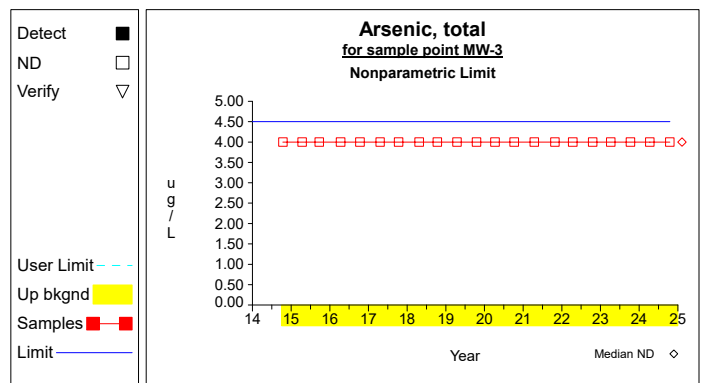
Graph 3



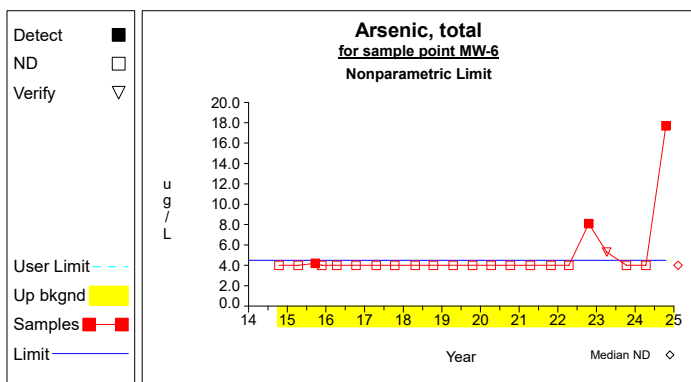
Graph 4



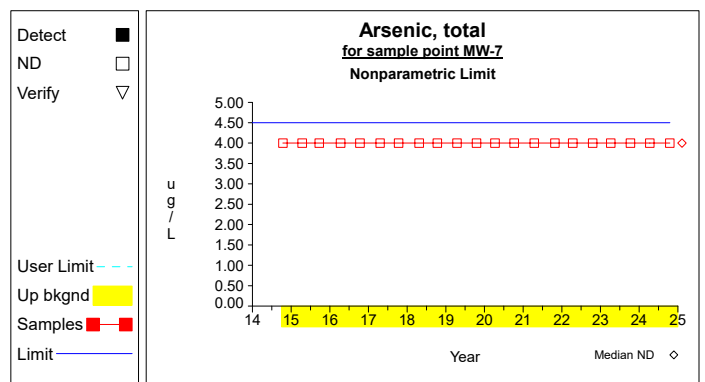
Graph 5



Graph 6

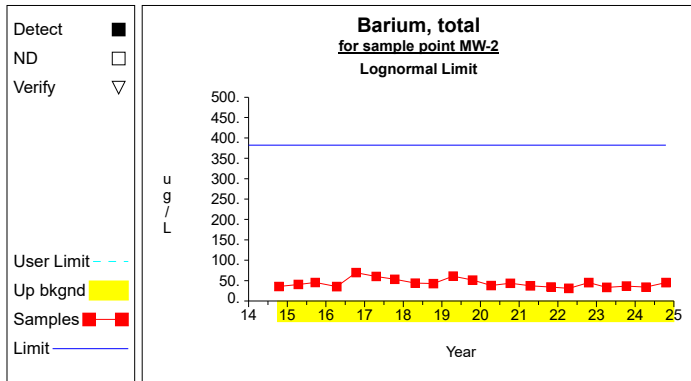


Graph 7

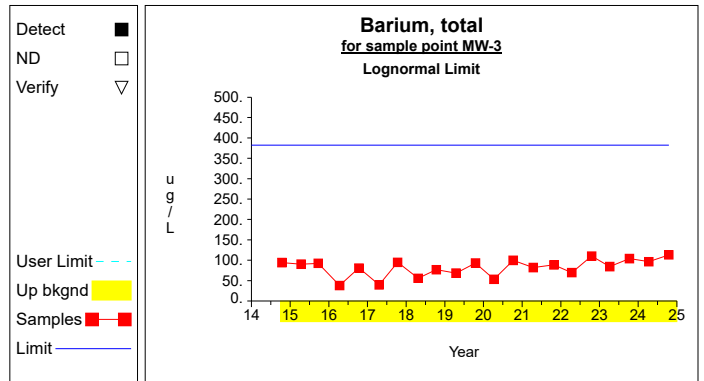


Graph 8

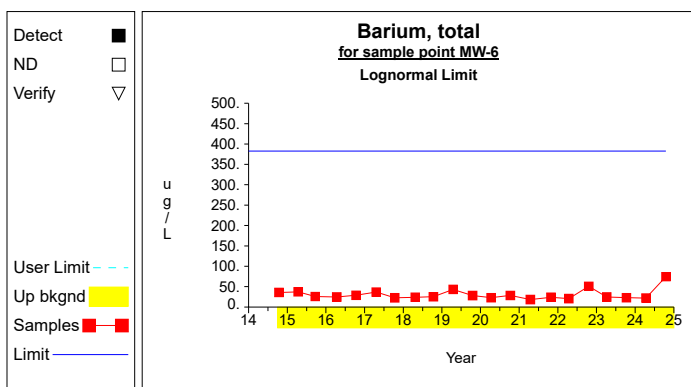
Up vs. Down Prediction Limits



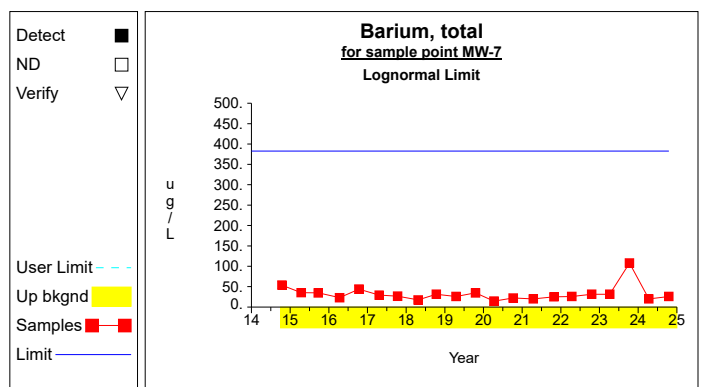
Graph 9



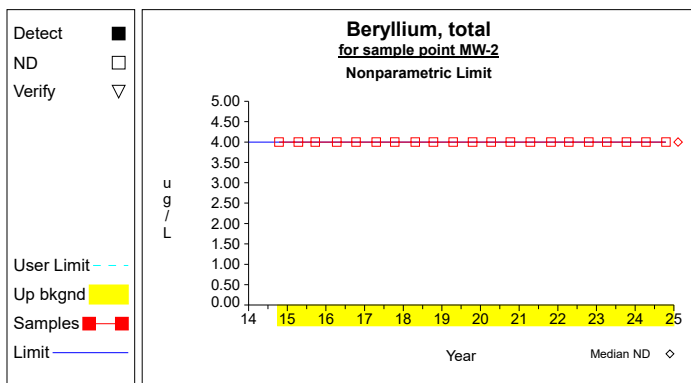
Graph 10



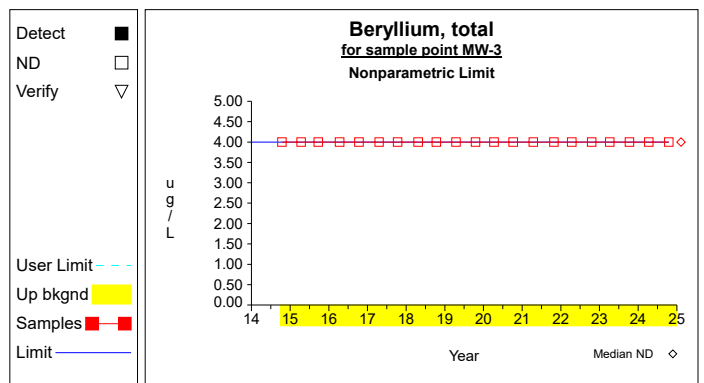
Graph 11



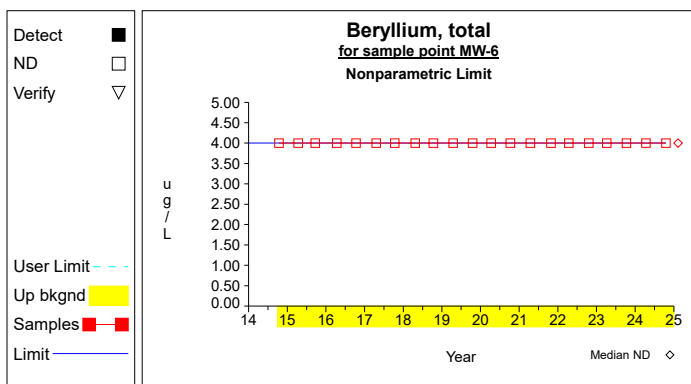
Graph 12



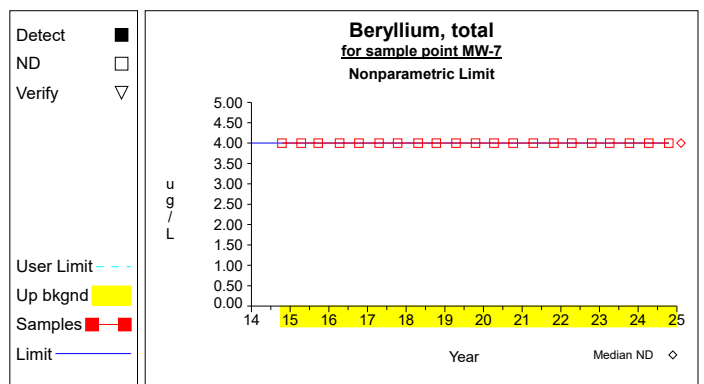
Graph 13



Graph 14

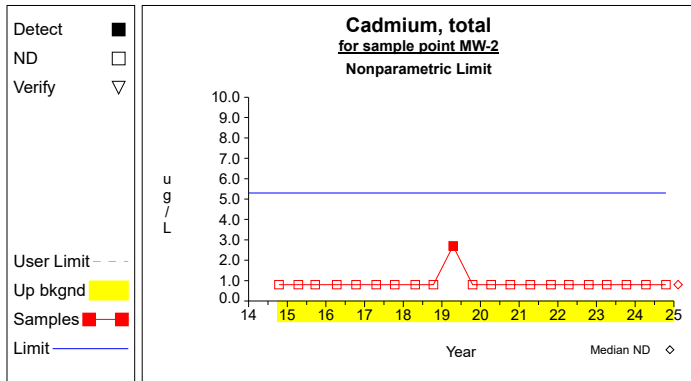


Graph 15

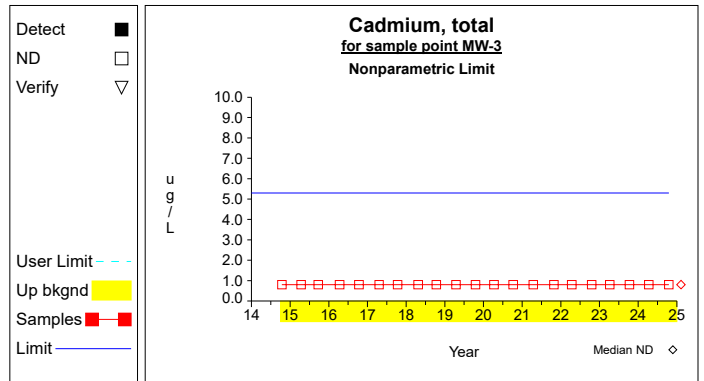


Graph 16

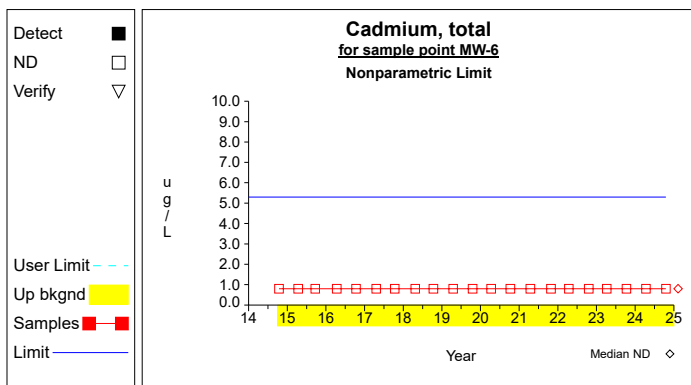
Up vs. Down Prediction Limits



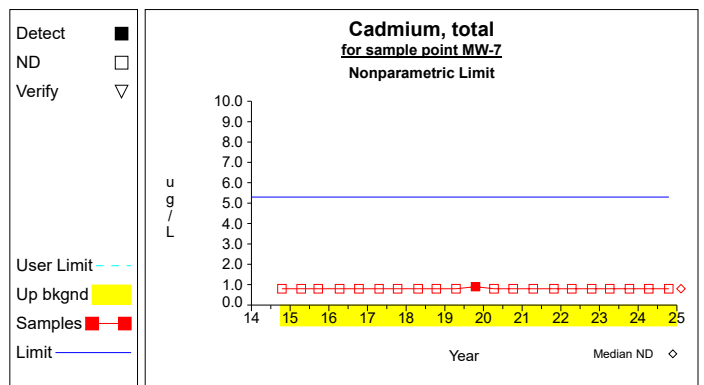
Graph 17



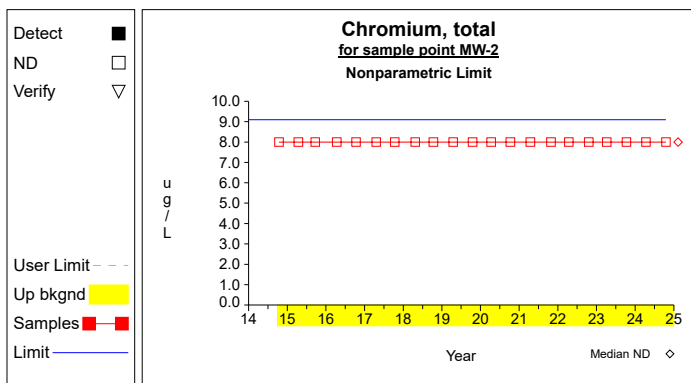
Graph 18



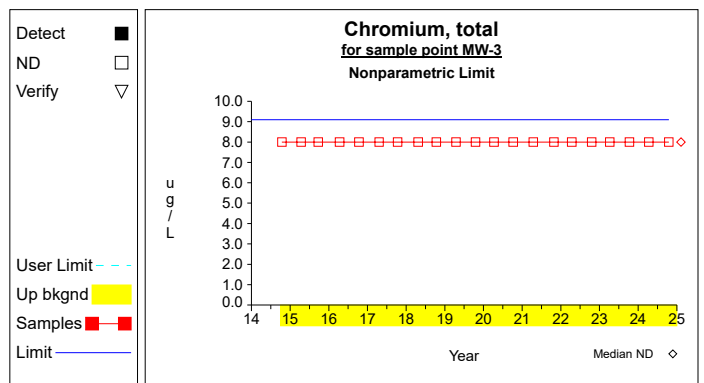
Graph 19



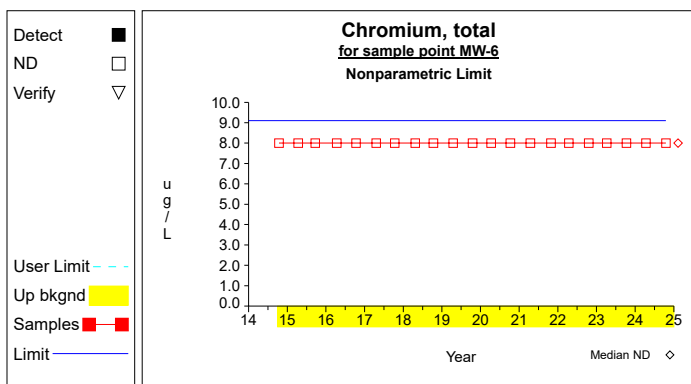
Graph 20



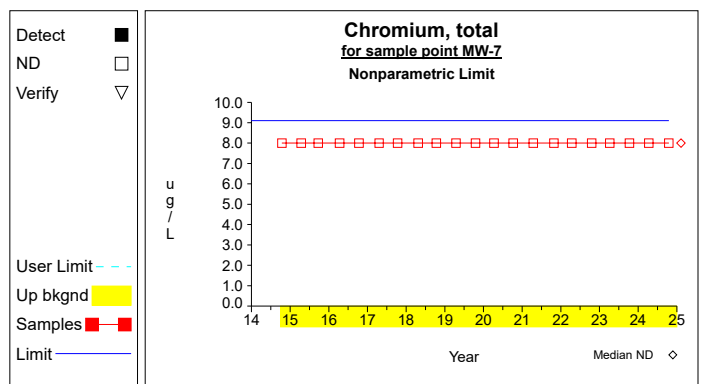
Graph 21



Graph 22

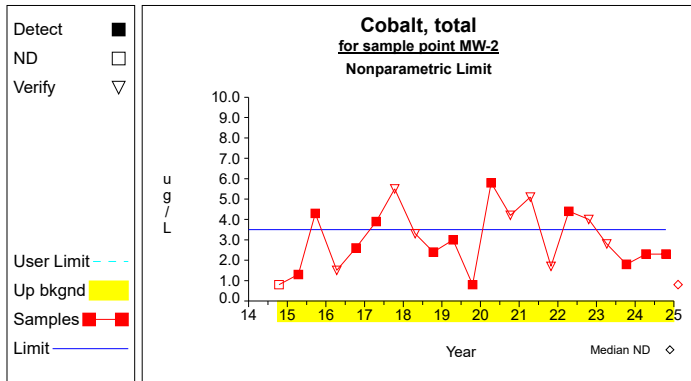


Graph 23

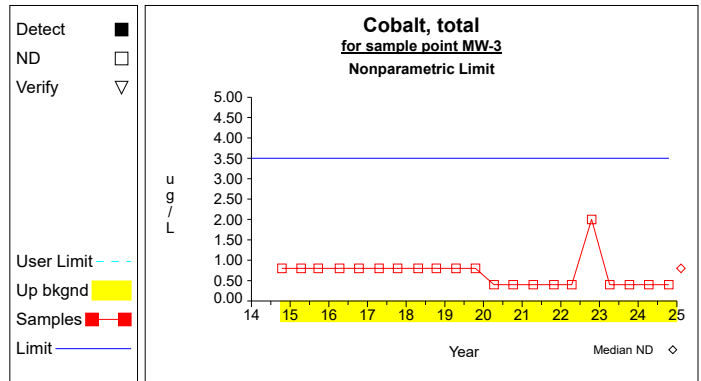


Graph 24

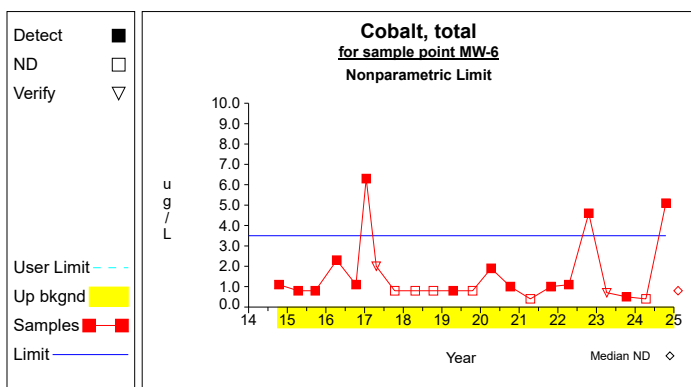
Up vs. Down Prediction Limits



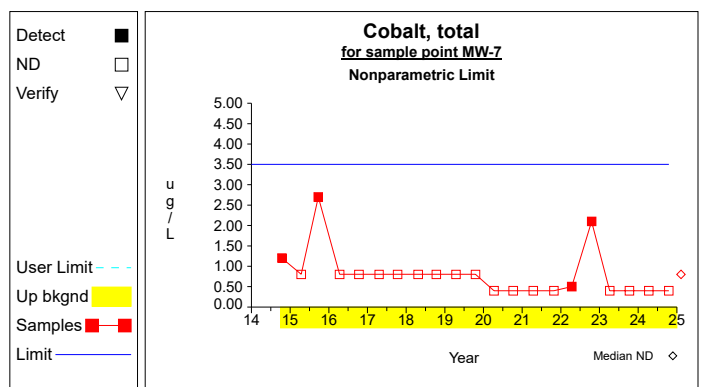
Graph 25



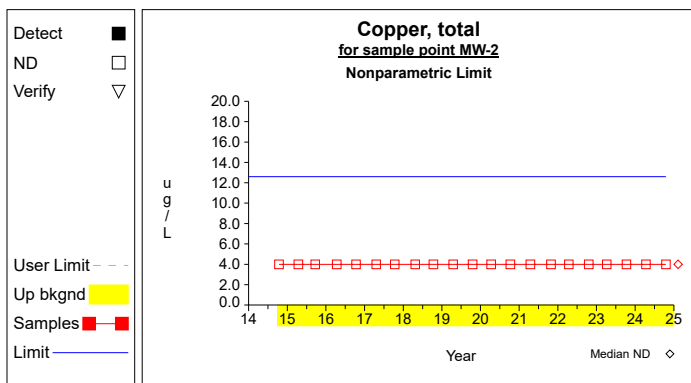
Graph 26



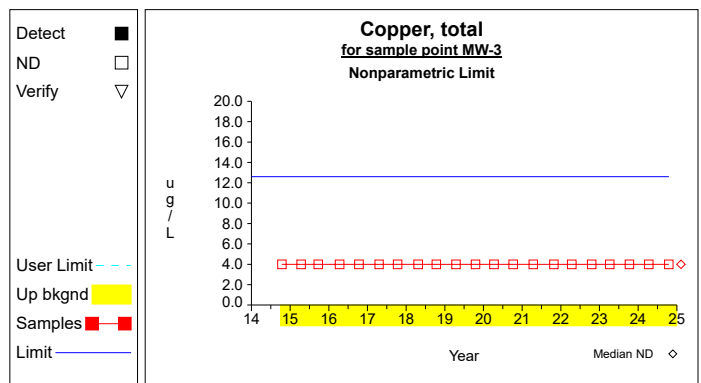
Graph 27



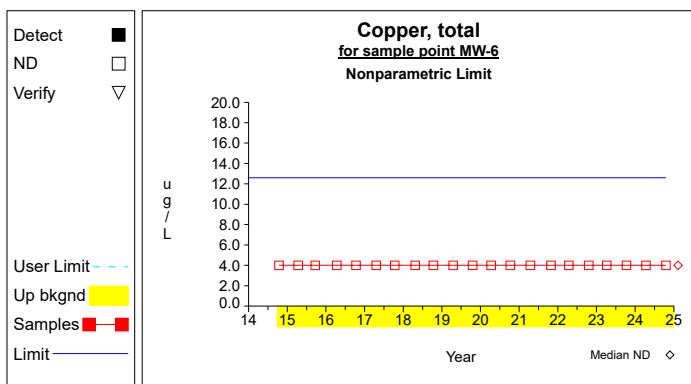
Graph 28



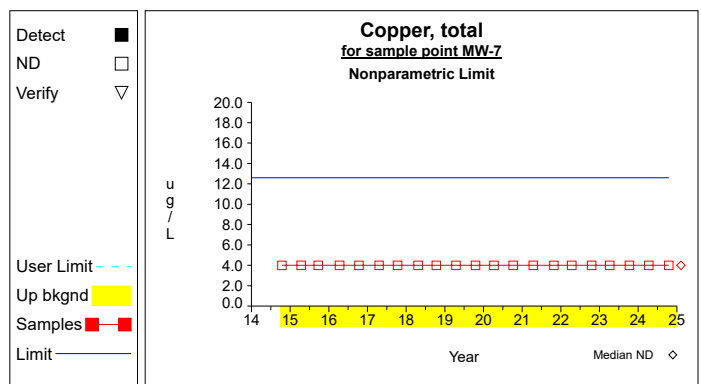
Graph 29



Graph 30

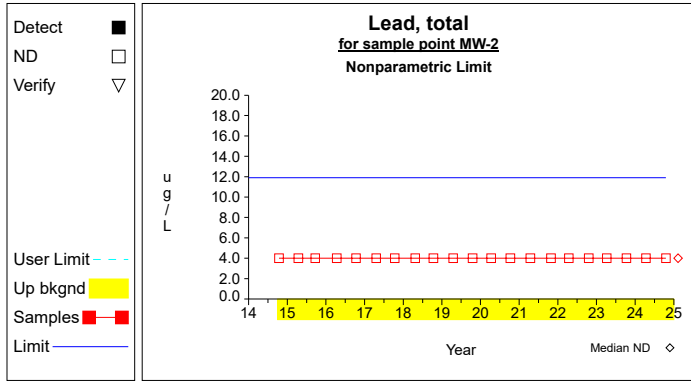


Graph 31

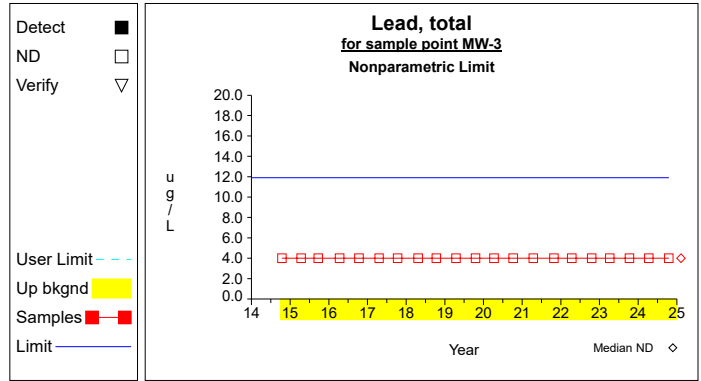


Graph 32

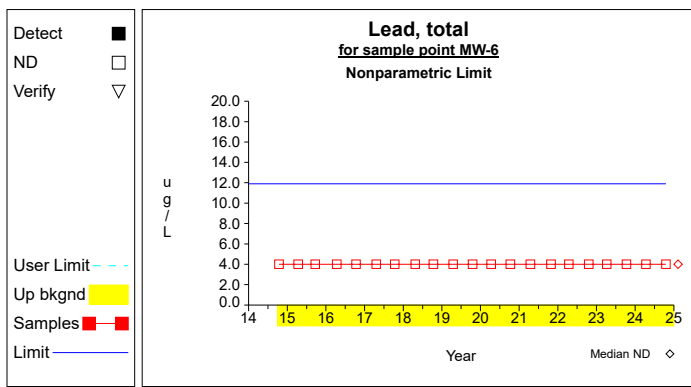
Up vs. Down Prediction Limits



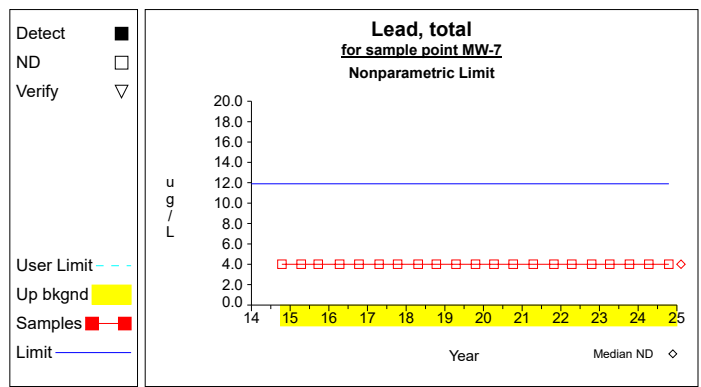
Graph 33



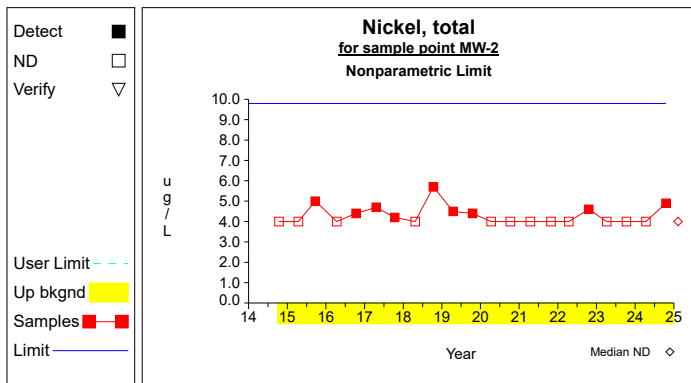
Graph 34



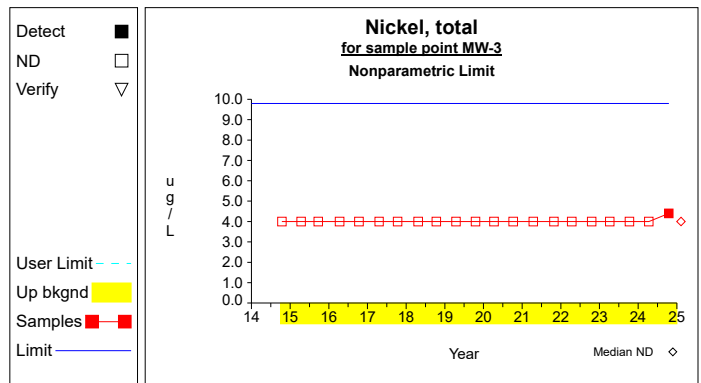
Graph 35



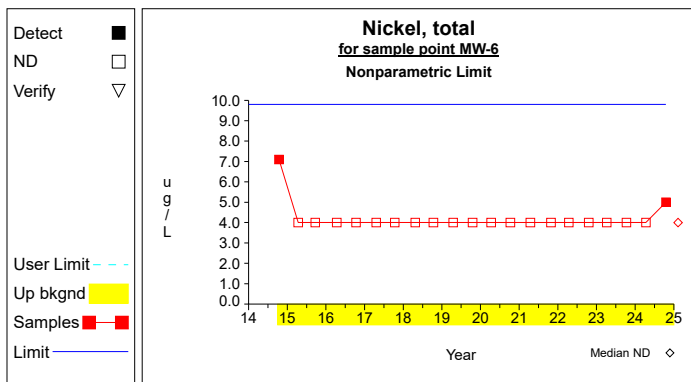
Graph 36



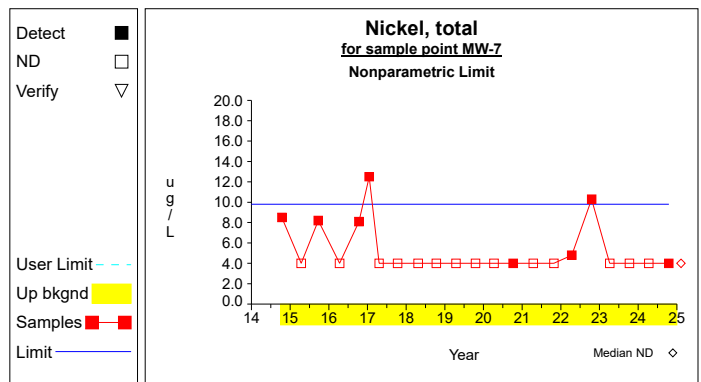
Graph 37



Graph 38

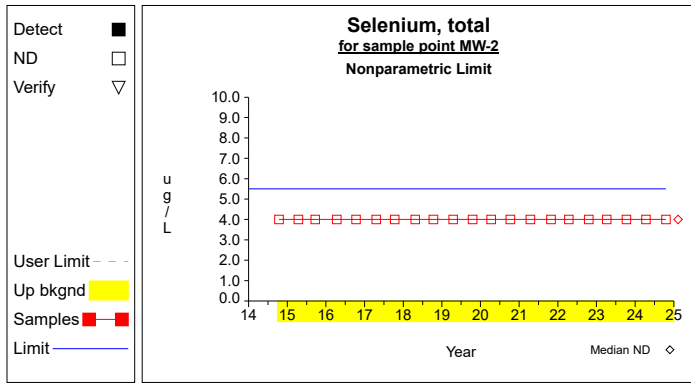


Graph 39

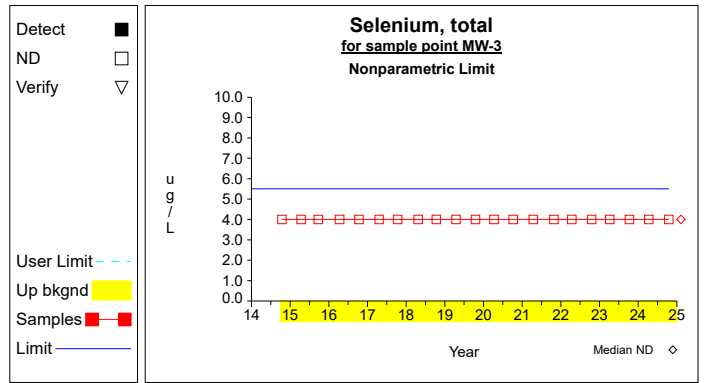


Graph 40

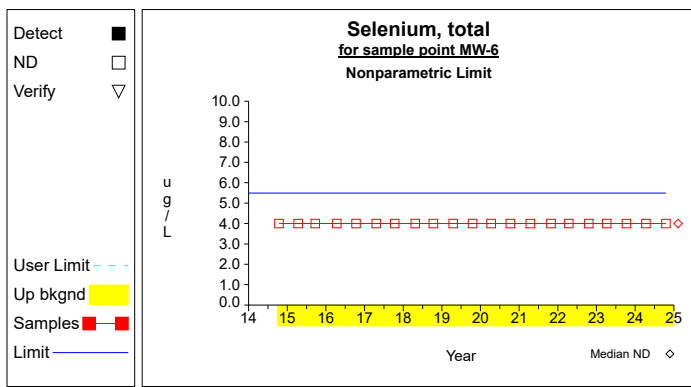
Up vs. Down Prediction Limits



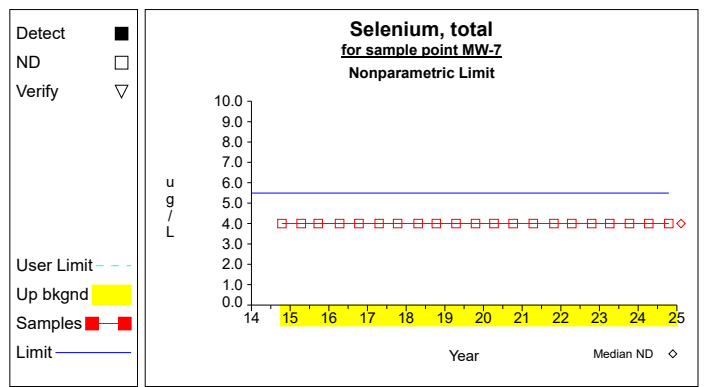
Graph 41



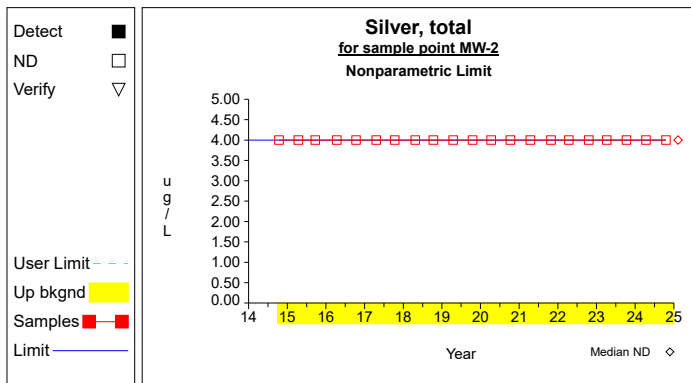
Graph 42



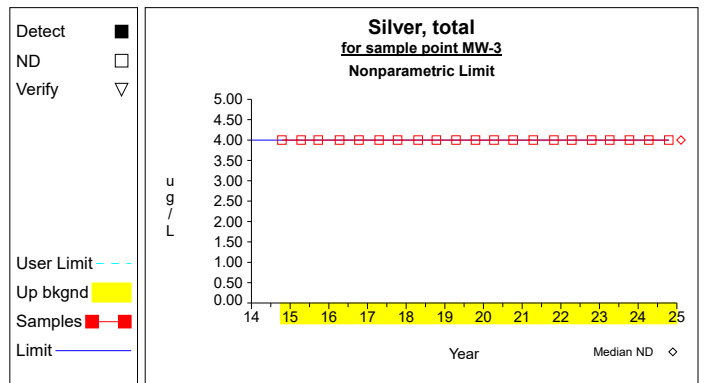
Graph 43



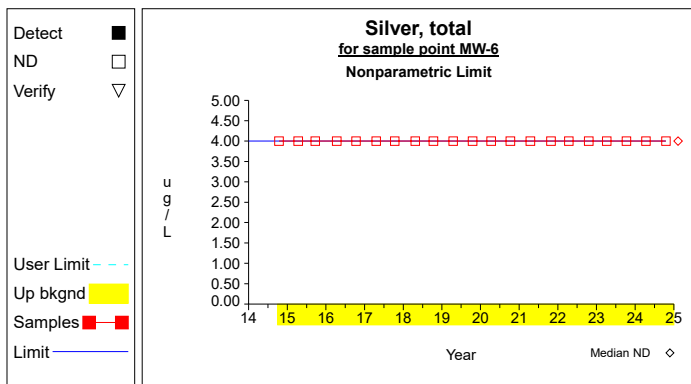
Graph 44



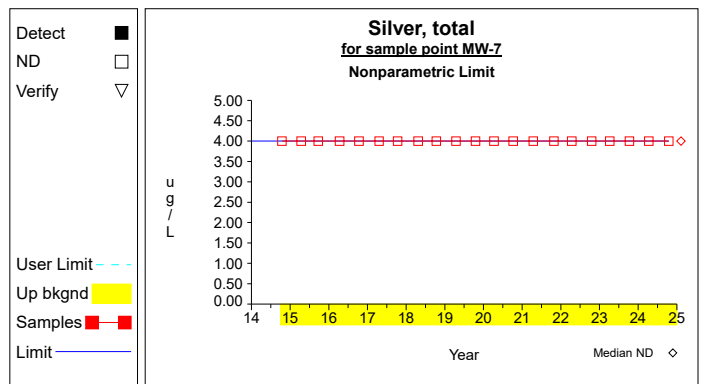
Graph 45



Graph 46

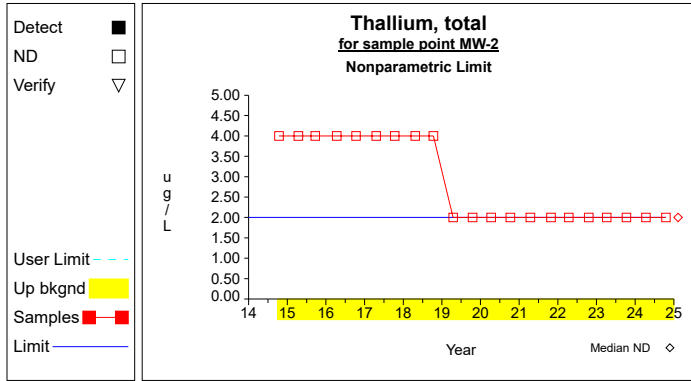


Graph 47

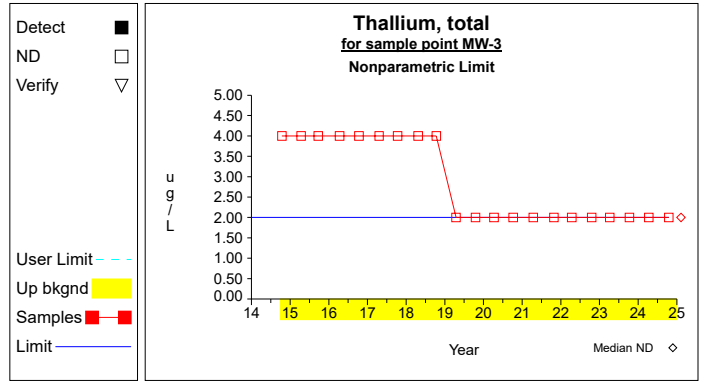


Graph 48

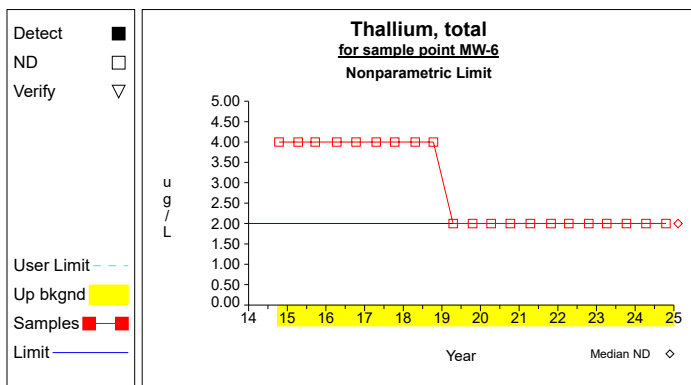
Up vs. Down Prediction Limits



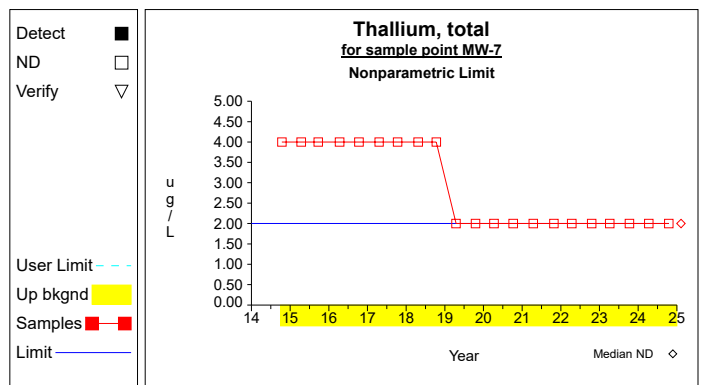
Graph 49



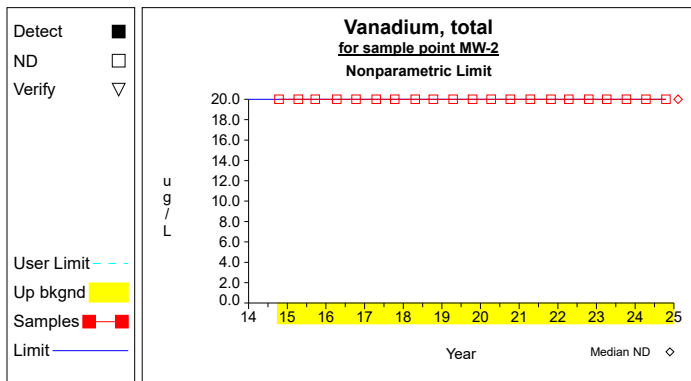
Graph 50



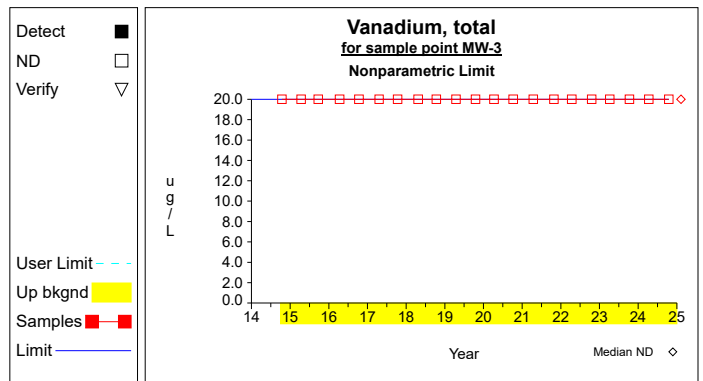
Graph 51



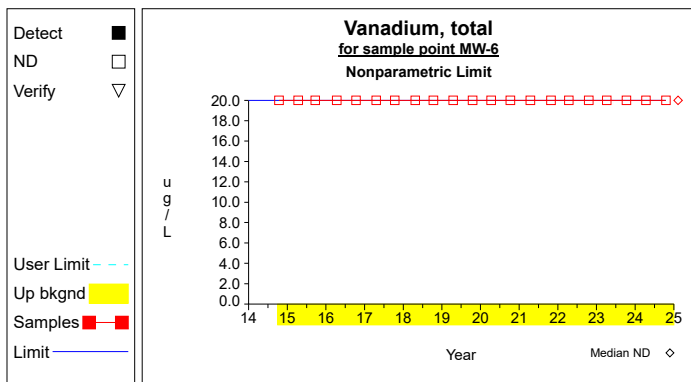
Graph 52



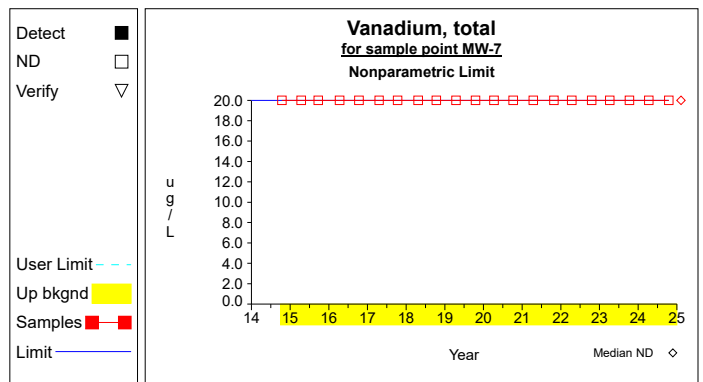
Graph 53



Graph 54

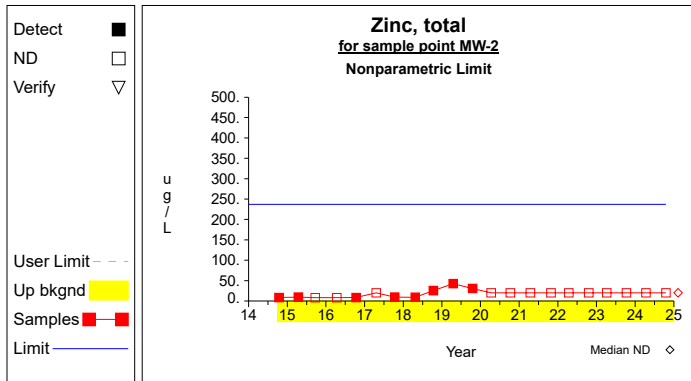


Graph 55

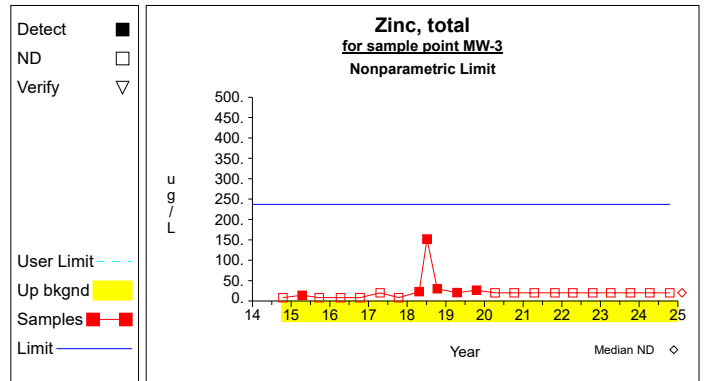


Graph 56

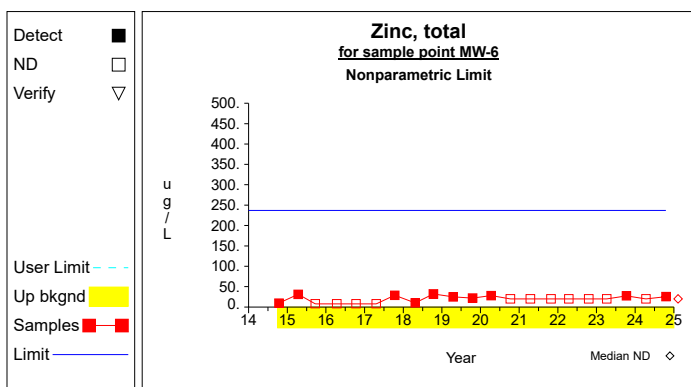
Up vs. Down Prediction Limits



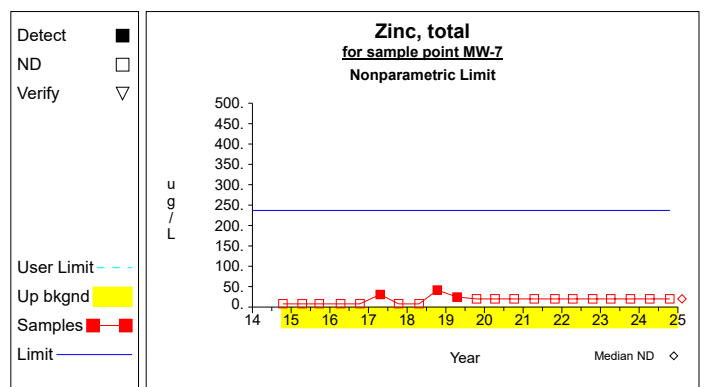
Graph 57



Graph 58

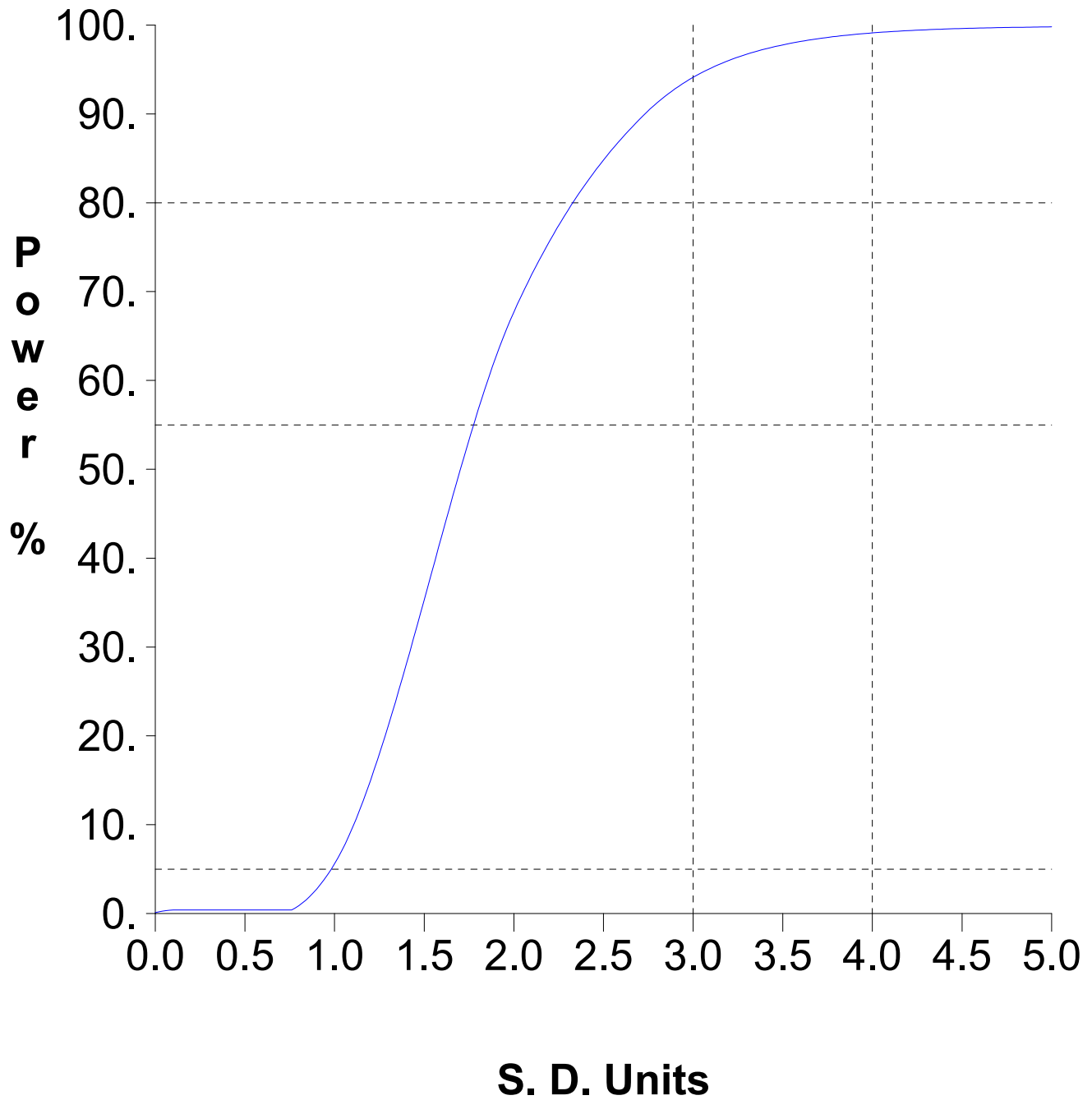


Graph 59



Graph 60

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



Worksheet 1 - Upgradient vs. Downgradient Comparisons**Antimony, total (ug/L)****Nonparametric Prediction Limit**

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 2.5	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons**Arsenic, total (ug/L)****Nonparametric Prediction Limit**

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 4.5	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons**Barium, total (ug/L)****Lognormal Prediction Limit**

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	$Y = \log_e(X)$	Transform to natural logarithmic scale.
2	$\bar{Y} = \text{sum}[Y] / N$ = 423.258 / 87 = 4.865	Compute mean on a natural log scale.
3	$S_Y = ((\text{sum}[Y^2] - \text{sum}[Y]^2/N) / (N-1))^{1/2}$ = ((2076.861 - 179147.464/87) / (87-1)) ^{1/2} = 0.454	Compute sd on a natural log scale.
4	alpha = min[(1-.95 ^{1/K}) ^{1/2} , .01] = min[(1-.95 ^{1/60}) ^{1/2} , .01] = 0.01	Adjusted per comparison false positive rate. Pass initial or 1 resample.
5	PL = exp[$\bar{Y} + tS_Y(1+1/N)^{1/2}$] = exp[4.865 + (2.37*0.454)(1+1/87) ^{1/2}] = 382.39	One-sided lognormal prediction limit (t is Student's t on N-1 degrees of freedom and 1-alpha confidence level).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Beryllium, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = median(X) = 4.0	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Cadmium, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 5.3	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Chromium, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 9.1	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Cobalt, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 3.5	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Copper, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 12.6	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Lead, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 11.9	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Nickel, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 9.8	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Selenium, total (ug/L)
Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 5.5	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons

Silver, total (ug/L)

Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = median(X) = 4.0	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons

Thallium, total (ug/L)

Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = median(X) = 2.0	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons

Vanadium, total (ug/L)

Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = median(X) = 20.0	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons

Zinc, total (ug/L)

Nonparametric Prediction Limit

<u>Step</u>	<u>Equation</u>	<u>Description</u>
1	PL = max(X) = 237.0	Compute nonparametric prediction limit as largest background measurement.
2	Conf = 0.99	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Attachment C

Historical Organic Compound Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Diethyl phthalate	MW-11	4/08/2014		8	8	ug/L
Diethyl phthalate	MW-11	4/08/2014		8	8	ug/L
Methyl parathion	MW-11	10/14/2014		2.9	.4	ug/L
Phorate	MW-11	10/14/2014		.9	.4	ug/L
Thionazin	MW-11	10/14/2014		.5	.4	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	4/16/2019		16	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	4/09/2020		16	6	ug/L
Acetone	MW-14	5/24/2010		44.9	10.0	ug/L
Acetone	MW-14	10/12/2017		11.8	10.0	ug/L
Toluene	MW-14	5/24/2010		3.2	1.0	ug/L
Xylenes, total	MW-14	5/24/2010		4.9	2.0	ug/L
Acetone	MW-15	10/12/2017		10.8	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/21/2013		50	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	4/14/2015		11	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/11/2016		19	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/12/2017		15	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/12/2018		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	4/16/2019		7	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-15	10/17/2019		7	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/08/2020		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/28/2021		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-16	10/19/2022		19	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/12/2017		35	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/17/2019		25	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	10/28/2021		12	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-2	4/13/2022		11	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-3	10/17/2019		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-4	4/23/2018		11	6	ug/L
Acetone	MW-5	10/12/2017		12.2	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	4/23/2018		6	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	7/05/2018		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	10/17/2019		10	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-6	4/06/2023		7	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-7	4/15/2009		10	8	ug/L
Acetone	MW-9	5/24/2010		45.1	10.0	ug/L
Acetone	MW-9	10/12/2017		11.2	10.0	ug/L
Toluene	MW-9	5/24/2010		3.6	1.0	ug/L
Xylenes, total	MW-9	5/24/2010		5.6	2.0	ug/L
2-butanone (mek)	SW-1	10/12/2018		7.7	5.0	ug/L
Acetone	SW-1	4/20/2017		15.7	10.0	ug/L
Acetone	SW-1	10/12/2018		27.2	10.0	ug/L
Phorate	SW-2	10/14/2014		.4	.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

Appendix C

Laboratory Reports for Reporting Period *With Chain of Custody*



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Project Description

6028

For:

Todd Whipple

HLW Engineering

PO Box 314

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Thursday, May 23, 2024

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.

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



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

HLW Engineering

Project Name: 6028

Todd Whipple
PO Box 314
Story City, IA 50248

Project / PO Number: N/A
Received: 04/12/2024
Reported: 05/23/2024

Case Narrative

Amended Report, May 23, 2024: The 1,1-Dichloropropene and Trichloroethene detectable results originally reported for samples 1HD1048-05 and 07 were not correct due to an analyst error. The corrected results of Non-Detect for both analytes in both samples are included in this report.

James Eggers
Quality Assurance Officer

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>
MW-9 (up)	1HD1048-01	Aqueous	GRAB		04/11/24 11:29	04/12/24 12:02
MW-14 (up)	1HD1048-02	Aqueous	GRAB		04/11/24 11:45	04/12/24 12:02
MW-4 (up)	1HD1048-03	Aqueous	GRAB		04/11/24 09:40	04/12/24 12:02
MW-5 (up)	1HD1048-04	Aqueous	GRAB		04/11/24 10:47	04/12/24 12:02
MW-11	1HD1048-05	Aqueous	GRAB		04/11/24 13:51	04/12/24 12:02
MW-12	1HD1048-06	Aqueous	GRAB		04/11/24 13:01	04/12/24 12:02
MW-15	1HD1048-07	Aqueous	GRAB		04/11/24 14:21	04/12/24 12:02
MW-16	1HD1048-08	Aqueous	GRAB		04/11/24 12:43	04/12/24 12:02
MW-2	1HD1048-09	Aqueous	GRAB		04/11/24 08:53	04/12/24 12:02
MW-3	1HD1048-10	Aqueous	GRAB		04/11/24 13:21	04/12/24 12:02
MW-6	1HD1048-11	Aqueous	GRAB		04/11/24 12:05	04/12/24 12:02
MW-7	1HD1048-12	Aqueous	GRAB		04/11/24 12:25	04/12/24 12:02
Duplicate	1HD1048-13	Aqueous	GRAB		04/11/24 00:00	04/12/24 12:02



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Analytical Testing Parameters

Client Sample ID:	MW-9 (up)	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 11:29
Lab Sample ID:	1HD1048-01		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Acetone	<10.0	10.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Chloroform	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Benzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Toluene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Styrene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-9 (up)	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 11:29
Lab Sample ID:	1HD1048-01		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2019	LJS
Surrogate: Dibromofluoromethane	99.0	Limit: 80-126	% Rec	1		04/15/24 0000	04/15/24 2019	LJS
Surrogate: Dibromofluoromethane	99.0	Limit: 75-136	% Rec	1		04/15/24 0000	04/15/24 2019	LJS
Surrogate: 1,2-Dichloroethane-d4	105	Limit: 61-142	% Rec	1		04/15/24 0000	04/15/24 2019	LJS
Surrogate: 1,2-Dichloroethane-d4	105	Limit: 63-138	% Rec	1		04/15/24 0000	04/15/24 2019	LJS
Surrogate: Toluene-d8	99.9	Limit: 87-116	% Rec	1		04/15/24 0000	04/15/24 2019	LJS
Surrogate: Toluene-d8	99.9	Limit: 82-121	% Rec	1		04/15/24 0000	04/15/24 2019	LJS
Surrogate: 4-Bromofluorobenzene	102	Limit: 80-116	% Rec	1		04/15/24 0000	04/15/24 2019	LJS
Surrogate: 4-Bromofluorobenzene	102	Limit: 85-111	% Rec	1		04/15/24 0000	04/15/24 2019	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Barium, total	0.0955	0.0040	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0810	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0810	JAR



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-14 (up)	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 11:45
Lab Sample ID:	1HD1048-02		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Acetone	<10.0	10.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Chloroform	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Benzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Toluene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Styrene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Bromoform	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-14 (up)	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 11:45
Lab Sample ID:	1HD1048-02		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/15/24 0000	04/15/24 2046	LJS
Surrogate: Dibromofluoromethane	97.4	Limit: 80-126	% Rec	1		04/15/24 0000	04/15/24 2046	LJS
Surrogate: Dibromofluoromethane	97.4	Limit: 75-136	% Rec	1		04/15/24 0000	04/15/24 2046	LJS
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		04/15/24 0000	04/15/24 2046	LJS
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 63-138	% Rec	1		04/15/24 0000	04/15/24 2046	LJS
Surrogate: Toluene-d8	99.7	Limit: 87-116	% Rec	1		04/15/24 0000	04/15/24 2046	LJS
Surrogate: Toluene-d8	99.7	Limit: 82-121	% Rec	1		04/15/24 0000	04/15/24 2046	LJS
Surrogate: 4-Bromofluorobenzene	101	Limit: 85-111	% Rec	1		04/15/24 0000	04/15/24 2046	LJS
Surrogate: 4-Bromofluorobenzene	101	Limit: 80-116	% Rec	1		04/15/24 0000	04/15/24 2046	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Barium, total	0.114	0.0040	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0835	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0835	JAR



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-4 (up)	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 9:40
Lab Sample ID:	1HD1048-03		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Vinyl Chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Bromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Chloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Acetone	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Methyl Iodide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Carbon Disulfide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Methylene Chloride	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Acrylonitrile	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1457	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Vinyl Acetate	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Bromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Chloroform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Benzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Trichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Dibromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Bromodichloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Toluene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Dibromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Chlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Xylenes, total	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Styrene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Bromoform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-4 (up)	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 9:40
Lab Sample ID:	1HD1048-03		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1457	LNH
Surrogate: Dibromofluoromethane	98.6	Limit: 75-136	% Rec	1		04/17/24 0000	04/17/24 1457	LNH
Surrogate: Dibromofluoromethane	98.6	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1457	LJS
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1457	LJS
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 61-142	% Rec	1		04/17/24 0000	04/17/24 1457	LNH
Surrogate: Toluene-d8	98.2	Limit: 82-121	% Rec	1		04/17/24 0000	04/17/24 1457	LNH
Surrogate: Toluene-d8	98.2	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1457	LJS
Surrogate: 4-Bromofluorobenzene	100	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1457	LJS
Surrogate: 4-Bromofluorobenzene	100	Limit: 80-116	% Rec	1		04/17/24 0000	04/17/24 1457	LNH

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Barium, total	0.0334	0.0040	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0841	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0841	JAR



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-5 (up)	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 10:47
Lab Sample ID:	1HD1048-04		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Vinyl Chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Bromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Chloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Acetone	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Methyl Iodide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Carbon Disulfide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Methylene Chloride	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Acrylonitrile	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1520	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Vinyl Acetate	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Bromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Chloroform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Benzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Trichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Dibromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Bromodichloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Toluene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Dibromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Chlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Xylenes, total	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Styrene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Bromoform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-5 (up)	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 10:47
Lab Sample ID:	1HD1048-04		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1520	LNH
Surrogate: Dibromofluoromethane	98.3	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1520	LJS
Surrogate: Dibromofluoromethane	98.3	Limit: 75-136	% Rec	1		04/17/24 0000	04/17/24 1520	LNH
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		04/17/24 0000	04/17/24 1520	LNH
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1520	LJS
Surrogate: Toluene-d8	97.8	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1520	LJS
Surrogate: Toluene-d8	97.8	Limit: 82-121	% Rec	1		04/17/24 0000	04/17/24 1520	LNH
Surrogate: 4-Bromofluorobenzene	99.3	Limit: 80-116	% Rec	1		04/17/24 0000	04/17/24 1520	LNH
Surrogate: 4-Bromofluorobenzene	99.3	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1520	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Barium, total	0.0717	0.0040	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0847	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0847	JAR



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-11	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 13:51
Lab Sample ID:	1HD1048-05		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Dichlorodifluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Chloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Acrolein	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Acetone	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Methyl Iodide	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Acetonitrile	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
2,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
2-Butanone (MEK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Chloroform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,1-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Benzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Toluene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Ethyl Methacrylate	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,3-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-11	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 13:51
Lab Sample ID:	1HD1048-05		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Chlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Styrene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Bromoform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,3-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,2-Dibromo-3-chloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
1,2,4-Trichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Allyl chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Chloroprene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Methacrylonitrile	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Methyl Methacrylate	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Propionitrile	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: Dibromofluoromethane	98.5	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: Dibromofluoromethane	98.5	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: Toluene-d8	98.4	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: Toluene-d8	98.4	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: Toluene-d8	98.4	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: 4-Bromofluorobenzene	100	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: 4-Bromofluorobenzene	100	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1543	LJS
Surrogate: 4-Bromofluorobenzene	100	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1543	LJS

Determination of General Solvents	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8015C								
Isobutanol	<1.0	1.0	mg/L	1		04/15/24 0830	04/15/24 2109	PDS

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3520C/EPA 8270C								
N-Nitrosodimethylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Methyl Methanesulfonate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
N-Nitrosodiethylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
N-Nitrosomethylethylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Ethyl Methanesulfonate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Phenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-11	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 13:51
Lab Sample ID:	1HD1048-05		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bis(2-Chloroethyl) Ether	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2-Chlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Benzyl Alcohol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2-Methylphenol (o-Cresol)	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Bis[2-Chloroisopropyl]ether	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
n-Nitroso-di-n-propylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
N-Nitrosopyrrolidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Acetophenone	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
o-Toluidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
(3 & 4)-Methylphenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Hexachloroethane	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Nitrobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
N-Nitrosopiperidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Isophorone	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2-Nitrophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2,4-Dimethylphenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Bis (2-Chloroethoxy) Methane	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2,4-Dichlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Naphthalene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
4-Chloroaniline	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2,6-Dichlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Hexachloropropene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Hexachlorobutadiene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
N-Nitrosodi-n-butylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
1,4-Phenylenediamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
4-Chloro-3-methylphenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2-Methylnaphthalene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Isosafrole	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
1,2,4,5-Tetrachlorobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Hexachlorocyclopentadiene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2,4,6-Trichlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2,4,5-Trichlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Safrole	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2-Chloronaphthalene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2-Nitroaniline	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
1,4-Naphthoquinone	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Dimethylphthalate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
1,3-Dinitrobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
1,2-Dinitrobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2,6-Dinitrotoluene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Acenaphthylene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
3-Nitroaniline	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Acenaphthene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-11	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 13:51
Lab Sample ID:	1HD1048-05		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2,4-Dinitrophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
4-Nitrophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Dibenzofuran	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2,4-Dinitrotoluene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2,3,4,6-Tetrachlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Pentachlorobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
1-Naphthylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2-Naphthylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Diethyl Phthalate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Fluorene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
4-Chlorophenyl Phenyl Ether	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
4-Nitroaniline	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
5-Nitro-o-toluidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
4,6-Dinitro-2-methylphenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
N-Nitrosodiphenylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Diphenylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Azobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Diallate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
1,3,5-Trinitrobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Phenacetin	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
4-Bromophenyl Phenyl Ether	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
4-Aminobiphenyl	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Pentachlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Pronamide	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Pentachloronitrobenzene (PCNB)	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Phenanthrene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Anthracene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Di-n-butyl Phthalate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Methapyrilene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Fluoranthene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Isodrin	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Chlorobenzilate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Pyrene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
p-(Dimethylamino)azobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
3,3-Dimethylbenzidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Butyl Benzyl Phthalate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Benzo(a)anthracene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Chrysene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Kepone	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
3,3'-Dichlorobenzidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
2-Acetylamino fluorene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Di-n-octyl Phthalate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-11	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 13:51
Lab Sample ID:	1HD1048-05		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Benzo(b)Fluoranthene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
7,12-Dimethylbenz [a] anthracene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Benzo(k)Fluoranthene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Benzo(a)Pyrene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
3-Methylcholanthrene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Dibenzo(a,h)anthracene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Indeno(1,2,3-cd)Pyrene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Benzo(g,h,i)perylene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1817	EPP
Surrogate: 2-Fluorophenol	82.4	Limit: 24-136	% Rec	1		04/15/24 1345	04/29/24 1817	EPP
Surrogate: Phenol-d6	80.5	Limit: 15-140	% Rec	1		04/15/24 1345	04/29/24 1817	EPP
Surrogate: Nitrobenzene-d5	90.0	Limit: 29-130	% Rec	1		04/15/24 1345	04/29/24 1817	EPP
Surrogate: 2-Fluorobiphenyl	83.2	Limit: 23-113	% Rec	1		04/15/24 1345	04/29/24 1817	EPP
Surrogate: 2,4,6-Tribromophenol	94.4	Limit: 15-139	% Rec	1		04/15/24 1345	04/29/24 1817	EPP
Surrogate: Terphenyl-dl4	101	Limit: 27-141	% Rec	1		04/15/24 1345	04/29/24 1817	EPP

Determination of Organophosphorus Insecticides	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8141								
O,O,O-Triethyl phosphorothioate	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2212	EPP
Thionazin	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2212	EPP
Phorate	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2212	EPP
Dimethoate	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2212	EPP
Disulfoton	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2212	EPP
Methyl Parathion	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2212	EPP
Parathion	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2212	EPP
Famphur	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2212	EPP
Surrogate: 2-Nitro-m-xylene	78.9	Limit: 38-122	% Rec	1		04/15/24 1644	04/18/24 2212	EPP

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8151A								
2,4-D	<2.0	2.0	ug/L	1		04/15/24 1731	04/30/24 1750	MSV
2,4,5-TP (Silvex)	<0.5	0.5	ug/L	1		04/15/24 1731	04/30/24 1750	MSV
2,4,5-T	<0.5	0.5	ug/L	1		04/15/24 1731	04/30/24 1750	MSV
Dinoseb	<0.5	0.5	ug/L	1		04/15/24 1731	04/30/24 1750	MSV
Surrogate: 2,5-Dichlorobenzoic Acid	104	Limit: 31-116	% Rec	1		04/15/24 1731	04/30/24 1750	MSV

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8081								
Alpha-BHC	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Gamma-BHC [Lindane]	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Beta-BHC	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Heptachlor	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-11	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 13:51
Lab Sample ID:	1HD1048-05		

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Delta-BHC	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Aldrin	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Heptachlor Epoxide	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Endosulfan I	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
4,4`-DDE	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Dieldrin	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Endrin	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
4,4`-DDD	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Endosulfan II	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
4,4`-DDT	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Endrin Aldehyde	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Endosulfan Sulfate	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Methoxychlor	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Chlordane	<0.10	0.10	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Toxaphene	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Hexachlorobenzene	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Surrogate: Tetrachloro-m-xylene	90.1	Limit: 10-121	% Rec	1		04/15/24 1643	04/17/24 1943	EPP

Determination of Polychlorinated Biphenyls (PCB)	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082								
Arochlor 1016	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Arochlor 1221	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Arochlor 1232	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Arochlor 1242	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Arochlor 1248	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Arochlor 1254	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Arochlor 1260	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1943	EPP
Surrogate: Tetrachloro-m-xylene	97.0	Limit: 38-121	% Rec	1		04/15/24 1643	04/17/24 1943	EPP
Surrogate: Decachlorobiphenyl	75.2	Limit: 25-119	% Rec	1		04/15/24 1643	04/17/24 1943	EPP

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 376.2								
Sulfide, total	<0.15	0.15	mg/L	1		04/16/24 0914	04/16/24 1006	CHP
EPA 9010B								
Cyanide, total	<0.005	0.005	mg/L	1		04/18/24 1716	04/21/24 1210	CHP

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Barium, total	0.0160	0.0040	mg/L	4		04/19/24 1716	04/23/24 0853	JAR



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CERTIFICATE OF ANALYSIS

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Sample Matrix:	Aqueous	Collection Date:	04/11/2024 13:51
Lab Sample ID:	1HD1048-05		

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Tin, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0853	JAR
EPA 7470A								
Mercury, total	<0.00050	0.00050	mg/L	1		04/16/24 1340	04/17/24 1707	JAR



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-12	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 13:01
Lab Sample ID:	1HD1048-06		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Vinyl Chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Bromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Chloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Acetone	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Methyl Iodide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Carbon Disulfide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Methylene Chloride	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Acrylonitrile	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1605	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Vinyl Acetate	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Bromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Chloroform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Benzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Trichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Dibromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Bromodichloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Toluene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Dibromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Chlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Xylenes, total	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Styrene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Bromoform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-12	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 13:01
Lab Sample ID:	1HD1048-06		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1605	LNH
Surrogate: Dibromofluoromethane	98.4	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1605	LJS
Surrogate: Dibromofluoromethane	98.4	Limit: 75-136	% Rec	1		04/17/24 0000	04/17/24 1605	LNH
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1605	LJS
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		04/17/24 0000	04/17/24 1605	LNH
Surrogate: Toluene-d8	98.3	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1605	LJS
Surrogate: Toluene-d8	98.3	Limit: 82-121	% Rec	1		04/17/24 0000	04/17/24 1605	LNH
Surrogate: 4-Bromofluorobenzene	100	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1605	LJS
Surrogate: 4-Bromofluorobenzene	100	Limit: 80-116	% Rec	1		04/17/24 0000	04/17/24 1605	LNH

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Barium, total	0.135	0.0040	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0912	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0912	JAR

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-15	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 14:21
Lab Sample ID:	1HD1048-07		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Dichlorodifluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Chloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Acrolein	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Acetone	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Methyl Iodide	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Acetonitrile	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
2,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
2-Butanone (MEK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Chloroform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,1-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Benzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Toluene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Ethyl Methacrylate	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,3-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-15	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 14:21
Lab Sample ID:	1HD1048-07		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Chlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Styrene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Bromoform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,3-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,2-Dibromo-3-chloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
1,2,4-Trichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Allyl chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Chloroprene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Methacrylonitrile	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Methyl Methacrylate	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Propionitrile	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: Dibromofluoromethane	97.4	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: Dibromofluoromethane	97.4	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: Toluene-d8	98.0	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: Toluene-d8	98.0	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: Toluene-d8	98.0	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: 4-Bromofluorobenzene	98.7	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: 4-Bromofluorobenzene	98.7	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1628	LJS
Surrogate: 4-Bromofluorobenzene	98.7	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1628	LJS

Determination of General Solvents	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8015C								
Isobutanol	<1.0	1.0	mg/L	1		04/15/24 0830	04/15/24 2140	PDS

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3520C/EPA 8270C								
N-Nitrosodimethylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Methyl Methanesulfonate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
N-Nitrosodiethylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
N-Nitrosomethylethylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Ethyl Methanesulfonate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Phenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-15	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 14:21
Lab Sample ID:	1HD1048-07		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bis(2-Chloroethyl) Ether	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2-Chlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Benzyl Alcohol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2-Methylphenol (o-Cresol)	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Bis[2-Chloroisopropyl]ether	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
n-Nitroso-di-n-propylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
N-Nitrosopyrrolidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Acetophenone	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
o-Toluidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
(3 & 4)-Methylphenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Hexachloroethane	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Nitrobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
N-Nitrosopiperidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Isophorone	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2-Nitrophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2,4-Dimethylphenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Bis (2-Chloroethoxy) Methane	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2,4-Dichlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Naphthalene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
4-Chloroaniline	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2,6-Dichlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Hexachloropropene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Hexachlorobutadiene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
N-Nitrosodi-n-butylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
1,4-Phenylenediamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
4-Chloro-3-methylphenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2-Methylnaphthalene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Isosafrole	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
1,2,4,5-Tetrachlorobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Hexachlorocyclopentadiene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2,4,6-Trichlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2,4,5-Trichlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Safrole	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2-Chloronaphthalene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2-Nitroaniline	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
1,4-Naphthoquinone	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Dimethylphthalate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
1,3-Dinitrobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
1,2-Dinitrobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2,6-Dinitrotoluene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Acenaphthylene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
3-Nitroaniline	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Acenaphthene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-15	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 14:21
Lab Sample ID:	1HD1048-07		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2,4-Dinitrophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
4-Nitrophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Dibenzofuran	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2,4-Dinitrotoluene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2,3,4,6-Tetrachlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Pentachlorobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
1-Naphthylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2-Naphthylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Diethyl Phthalate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Fluorene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
4-Chlorophenyl Phenyl Ether	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
4-Nitroaniline	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
5-Nitro-o-toluidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
4,6-Dinitro-2-methylphenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
N-Nitrosodiphenylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Diphenylamine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Azobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Diallate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
1,3,5-Trinitrobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Phenacetin	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
4-Bromophenyl Phenyl Ether	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
4-Aminobiphenyl	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Pentachlorophenol	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Pronamide	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Pentachloronitrobenzene (PCNB)	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Phenanthrene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Anthracene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Di-n-butyl Phthalate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Methapyrilene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Fluoranthene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Isodrin	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Chlorobenzilate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Pyrene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
p-(Dimethylamino)azobenzene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
3,3-Dimethylbenzidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Butyl Benzyl Phthalate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Benzo(a)anthracene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Chrysene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Kepone	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
3,3'-Dichlorobenzidine	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
2-Acetylamino fluorene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Di-n-octyl Phthalate	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-15	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 14:21
Lab Sample ID:	1HD1048-07		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Benzo(b)Fluoranthene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
7,12-Dimethylbenz [a] anthracene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Benzo(k)Fluoranthene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Benzo(a)Pyrene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
3-Methylcholanthrene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Dibenzo(a,h)anthracene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Indeno(1,2,3-cd)Pyrene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Benzo(g,h,i)perylene	<8	8	ug/L	1		04/15/24 1345	04/29/24 1842	EPP
Surrogate: 2-Fluorophenol	73.0	Limit: 24-136	% Rec	1		04/15/24 1345	04/29/24 1842	EPP
Surrogate: Phenol-d6	73.2	Limit: 15-140	% Rec	1		04/15/24 1345	04/29/24 1842	EPP
Surrogate: Nitrobenzene-d5	99.0	Limit: 29-130	% Rec	1		04/15/24 1345	04/29/24 1842	EPP
Surrogate: 2-Fluorobiphenyl	90.0	Limit: 23-113	% Rec	1		04/15/24 1345	04/29/24 1842	EPP
Surrogate: 2,4,6-Tribromophenol	66.0	Limit: 15-139	% Rec	1		04/15/24 1345	04/29/24 1842	EPP
Surrogate: Terphenyl-dl4	97.6	Limit: 27-141	% Rec	1		04/15/24 1345	04/29/24 1842	EPP

Determination of Organophosphorus Insecticides	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8141								
O,O,O-Triethyl phosphorothioate	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2310	EPP
Thionazin	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2310	EPP
Phorate	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2310	EPP
Dimethoate	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2310	EPP
Disulfoton	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2310	EPP
Methyl Parathion	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2310	EPP
Parathion	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2310	EPP
Famphur	<0.4	0.4	ug/L	1		04/15/24 1644	04/18/24 2310	EPP
Surrogate: 2-Nitro-m-xylene	83.4	Limit: 38-122	% Rec	1		04/15/24 1644	04/18/24 2310	EPP

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8151A								
2,4-D	<2.0	2.0	ug/L	1		04/15/24 1731	04/30/24 1823	MSV
2,4,5-TP (Silvex)	<0.5	0.5	ug/L	1		04/15/24 1731	04/30/24 1823	MSV
2,4,5-T	<0.5	0.5	ug/L	1		04/15/24 1731	04/30/24 1823	MSV
Dinoseb	<0.5	0.5	ug/L	1		04/15/24 1731	04/30/24 1823	MSV
Surrogate: 2,5-Dichlorobenzoic Acid	99.5	Limit: 31-116	% Rec	1		04/15/24 1731	04/30/24 1823	MSV

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8081								
Alpha-BHC	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Gamma-BHC [Lindane]	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Beta-BHC	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Heptachlor	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID: MW-15	Collected By: Whipple, Todd
Sample Matrix: Aqueous	Collection Date: 04/11/2024 14:21
Lab Sample ID: 1HD1048-07	

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Delta-BHC	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Aldrin	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Heptachlor Epoxide	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Endosulfan I	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
4,4`-DDE	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Dieldrin	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Endrin	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
4,4`-DDD	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Endosulfan II	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
4,4`-DDT	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Endrin Aldehyde	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Endosulfan Sulfate	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Methoxychlor	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Chlordane	<0.10	0.10	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Toxaphene	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Hexachlorobenzene	<0.05	0.05	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Surrogate: Tetrachloro-m-xylene	94.1	Limit: 10-121	% Rec	1		04/15/24 1643	04/17/24 1958	EPP

Determination of Polychlorinated Biphenyls (PCB)	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082								
Arochlor 1016	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Arochlor 1221	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Arochlor 1232	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Arochlor 1242	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Arochlor 1248	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Arochlor 1254	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Arochlor 1260	<0.20	0.20	ug/L	1		04/15/24 1643	04/17/24 1958	EPP
Surrogate: Tetrachloro-m-xylene	101	Limit: 38-121	% Rec	1		04/15/24 1643	04/17/24 1958	EPP
Surrogate: Decachlorobiphenyl	88.9	Limit: 25-119	% Rec	1		04/15/24 1643	04/17/24 1958	EPP

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 376.2								
Sulfide, total	<0.15	0.15	mg/L	1		04/16/24 0914	04/16/24 1006	CHP
EPA 9010B								
Cyanide, total	<0.005	0.005	mg/L	1		04/18/24 1716	04/21/24 1210	CHP

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Barium, total	0.0181	0.0040	mg/L	4		04/19/24 1716	04/23/24 0918	JAR



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-15	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 14:21
Lab Sample ID:	1HD1048-07		

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Tin, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0918	JAR
EPA 7470A								
Mercury, total	<0.00050	0.00050	mg/L	1		04/16/24 1340	04/17/24 1709	JAR



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-16	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 12:43
Lab Sample ID:	1HD1048-08		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Vinyl Chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Bromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Chloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Acetone	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Methyl Iodide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Carbon Disulfide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Methylene Chloride	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Acrylonitrile	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1651	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Vinyl Acetate	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Bromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Chloroform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Benzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Trichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Dibromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Bromodichloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Toluene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Dibromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Chlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Xylenes, total	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Styrene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Bromoform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID: MW-16	Collected By: Whipple, Todd
Sample Matrix: Aqueous	Collection Date: 04/11/2024 12:43
Lab Sample ID: 1HD1048-08	

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1651	LNH
Surrogate: Dibromofluoromethane	98.0	Limit: 75-136	% Rec	1		04/17/24 0000	04/17/24 1651	LNH
Surrogate: Dibromofluoromethane	98.0	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1651	LJS
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1651	LJS
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		04/17/24 0000	04/17/24 1651	LNH
Surrogate: Toluene-d8	97.4	Limit: 82-121	% Rec	1		04/17/24 0000	04/17/24 1651	LNH
Surrogate: Toluene-d8	97.4	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1651	LJS
Surrogate: 4-Bromofluorobenzene	98.4	Limit: 80-116	% Rec	1		04/17/24 0000	04/17/24 1651	LNH
Surrogate: 4-Bromofluorobenzene	98.4	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1651	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Barium, total	0.0391	0.0040	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0924	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0924	JAR



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-2	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 8:53
Lab Sample ID:	1HD1048-09		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Vinyl Chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Bromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Chloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Acetone	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Methyl Iodide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Carbon Disulfide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Methylene Chloride	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Acrylonitrile	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1714	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Vinyl Acetate	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Bromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Chloroform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Benzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Trichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Dibromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Bromodichloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Toluene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Dibromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Chlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Xylenes, total	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Styrene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Bromoform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID: MW-2	Collected By: Whipple, Todd
Sample Matrix: Aqueous	Collection Date: 04/11/2024 8:53
Lab Sample ID: 1HD1048-09	

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1714	LNH
Surrogate: Dibromofluoromethane	97.0	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1714	LJS
Surrogate: Dibromofluoromethane	97.0	Limit: 75-136	% Rec	1		04/17/24 0000	04/17/24 1714	LNH
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1714	LJS
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 61-142	% Rec	1		04/17/24 0000	04/17/24 1714	LNH
Surrogate: Toluene-d8	98.3	Limit: 82-121	% Rec	1		04/17/24 0000	04/17/24 1714	LNH
Surrogate: Toluene-d8	98.3	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1714	LJS
Surrogate: 4-Bromofluorobenzene	99.2	Limit: 80-116	% Rec	1		04/17/24 0000	04/17/24 1714	LNH
Surrogate: 4-Bromofluorobenzene	99.2	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1714	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Arsenic, total	0.0043	0.0040	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Barium, total	0.0339	0.0040	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Cobalt, total	0.0023	0.0004	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0930	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0930	JAR



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-3	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 13:21
Lab Sample ID:	1HD1048-10		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Vinyl Chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Bromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Chloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Acetone	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Methyl Iodide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Carbon Disulfide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Methylene Chloride	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Acrylonitrile	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1737	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Vinyl Acetate	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Bromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Chloroform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Benzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Trichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Dibromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Bromodichloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Toluene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Dibromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Chlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Xylenes, total	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Styrene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Bromoform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID: MW-3	Collected By: Whipple, Todd
Sample Matrix: Aqueous	Collection Date: 04/11/2024 13:21
Lab Sample ID: 1HD1048-10	

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1737	LNH
Surrogate: Dibromofluoromethane	96.7	Limit: 75-136	% Rec	1		04/17/24 0000	04/17/24 1737	LNH
Surrogate: Dibromofluoromethane	96.7	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1737	LJS
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1737	LJS
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 61-142	% Rec	1		04/17/24 0000	04/17/24 1737	LNH
Surrogate: Toluene-d8	98.2	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1737	LJS
Surrogate: Toluene-d8	98.2	Limit: 82-121	% Rec	1		04/17/24 0000	04/17/24 1737	LNH
Surrogate: 4-Bromofluorobenzene	99.1	Limit: 80-116	% Rec	1		04/17/24 0000	04/17/24 1737	LNH
Surrogate: 4-Bromofluorobenzene	99.1	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1737	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Barium, total	0.0964	0.0040	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0936	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0936	JAR



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-6	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 12:05
Lab Sample ID:	1HD1048-11		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Vinyl Chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Bromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Chloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Acetone	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Methyl Iodide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Carbon Disulfide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Methylene Chloride	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Acrylonitrile	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1759	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Vinyl Acetate	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Bromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Chloroform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Benzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Trichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Dibromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Bromodichloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Toluene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Dibromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Chlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Xylenes, total	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Styrene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Bromoform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-6	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 12:05
Lab Sample ID:	1HD1048-11		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1759	LNH
Surrogate: Dibromofluoromethane	96.5	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1759	LJS
Surrogate: Dibromofluoromethane	96.5	Limit: 75-136	% Rec	1		04/17/24 0000	04/17/24 1759	LNH
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 61-142	% Rec	1		04/17/24 0000	04/17/24 1759	LNH
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1759	LJS
Surrogate: Toluene-d8	98.4	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1759	LJS
Surrogate: Toluene-d8	98.4	Limit: 82-121	% Rec	1		04/17/24 0000	04/17/24 1759	LNH
Surrogate: 4-Bromofluorobenzene	98.8	Limit: 80-116	% Rec	1		04/17/24 0000	04/17/24 1759	LNH
Surrogate: 4-Bromofluorobenzene	98.8	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1759	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Barium, total	0.0218	0.0040	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0943	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0943	JAR



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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-7	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 12:25
Lab Sample ID:	1HD1048-12		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Vinyl Chloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Bromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Chloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Acetone	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Methyl Iodide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Carbon Disulfide	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Methylene Chloride	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Acrylonitrile	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1822	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Vinyl Acetate	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Bromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Chloroform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Benzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Trichloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Dibromomethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Bromodichloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Toluene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Dibromochloromethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Chlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Xylenes, total	<2.0	2.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Styrene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Bromoform	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	MW-7	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 12:25
Lab Sample ID:	1HD1048-12		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/17/24 0000	04/17/24 1822	LNH
Surrogate: Dibromofluoromethane	96.8	Limit: 80-126	% Rec	1		04/17/24 0000	04/17/24 1822	LJS
Surrogate: Dibromofluoromethane	96.8	Limit: 75-136	% Rec	1		04/17/24 0000	04/17/24 1822	LNH
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 61-142	% Rec	1		04/17/24 0000	04/17/24 1822	LNH
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 63-138	% Rec	1		04/17/24 0000	04/17/24 1822	LJS
Surrogate: Toluene-d8	97.5	Limit: 82-121	% Rec	1		04/17/24 0000	04/17/24 1822	LNH
Surrogate: Toluene-d8	97.5	Limit: 87-116	% Rec	1		04/17/24 0000	04/17/24 1822	LJS
Surrogate: 4-Bromofluorobenzene	98.6	Limit: 80-116	% Rec	1		04/17/24 0000	04/17/24 1822	LNH
Surrogate: 4-Bromofluorobenzene	98.6	Limit: 85-111	% Rec	1		04/17/24 0000	04/17/24 1822	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Arsenic, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Barium, total	0.0198	0.0040	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Cobalt, total	<0.0004	0.0004	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0949	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0949	JAR

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CERTIFICATE OF ANALYSIS

1HD1048

Client Sample ID:	Duplicate	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024
Lab Sample ID:	1HD1048-13		

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Arsenic, total	0.0042	0.0040	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Barium, total	0.0334	0.0040	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Beryllium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Cadmium, total	<0.0008	0.0008	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Chromium, total	<0.0080	0.0080	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Cobalt, total	0.0023	0.0004	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Copper, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Lead, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Nickel, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Silver, total	<0.0040	0.0040	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Thallium, total	<0.0020	0.0020	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Vanadium, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0955	JAR
Zinc, total	<0.0200	0.0200	mg/L	4		04/19/24 1716	04/23/24 0955	JAR



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8015C	1HD0875	1HD0875-BS1	
		1HD0875-BLK1	
		1HD1048-05	MW-11
		1HD1048-07	MW-15
		1HD0875-MS1	1HD0193-01
		1HD0875-MSD1	1HD0193-01
Method	Batch	Laboratory ID	Client / Source ID
EPA 8270C	1HD0906	1HD0906-BLK1	
		1HD0906-BS1	
		1HD0906-BSD1	
		1HD1048-05	MW-11
		1HD1048-07	MW-15
Method	Batch	Laboratory ID	Client / Source ID
EPA 8081	1HD0934	1HD0934-BLK1	
		1HD0934-BS1	
		1HD0934-BSD1	
		1HD1048-05	MW-11
		1HD1048-07	MW-15
Method	Batch	Laboratory ID	Client / Source ID
EPA 8082	1HD0935	1HD0935-BLK1	
		1HD0935-BS1	
		1HD0935-BSD1	
		1HD1048-05	MW-11
		1HD1048-07	MW-15
Method	Batch	Laboratory ID	Client / Source ID
EPA 8141	1HD0937	1HD0937-BLK1	
		1HD1048-05	MW-11
		1HD1048-07	MW-15
		1HD0937-BS1	
		1HD0937-BSD1	
Method	Batch	Laboratory ID	Client / Source ID
EPA 8151A	1HD0942	1HD0942-BLK1	
		1HD0942-BS1	
		1HD0942-BSD1	
		1HD1048-05	MW-11
		1HD1048-07	MW-15



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HD0944	1HD0944-BS1	
		1HD0944-BSD1	
		1HD0944-BLK1	
		1HD1048-01	MW-9 (up)
		1HD1048-02	MW-14 (up)

Method	Batch	Laboratory ID	Client / Source ID
EPA 376.2	1HD0959	1HD0959-MS1	1HD1048-05
		1HD0959-BLK1	
		1HD0959-MSD1	1HD1048-05
		1HD1048-05	MW-11
		1HD1048-07	MW-15
		1HD0959-BS1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 7470A	1HD0991	1HD0991-BLK1	
		1HD0991-BS1	
		1HD0991-MS1	1HD0953-07
		1HD0991-MSD1	1HD0953-07
		1HD1048-05	MW-11
		1HD1048-07	MW-15

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HD1128	1HD1128-BS1	
		1HD1128-BSD1	
		1HD1128-BLK1	
		1HD1048-03	MW-4 (up)
		1HD1048-04	MW-5 (up)
		1HD1048-05	MW-11
		1HD1048-06	MW-12
		1HD1048-07	MW-15
		1HD1048-08	MW-16
		1HD1048-09	MW-2
		1HD1048-10	MW-3
		1HD1048-11	MW-6
		1HD1048-12	MW-7
		1HD1128-MSD1	1HD0953-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 9010B	1HD1205	1HD1048-07	MW-15
		1HD1205-BS1	



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CERTIFICATE OF ANALYSIS

1HD1048

EPA 9010B	1HD1205	1HD1205-MS1	1HD0814-02
		1HD1205-MSD1	1HD0814-02
		1HD1048-05	MW-11
		1HD1205-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HD1266	1HD1266-BLK1	
		1HD1266-BS1	
		1HD1048-01	MW-9 (up)
		1HD1266-MS1	1HD1048-01
		1HD1266-MSD1	1HD1048-01
		1HD1048-02	MW-14 (up)
		1HD1048-03	MW-4 (up)
		1HD1048-04	MW-5 (up)
		1HD1048-05	MW-11
		1HD1048-06	MW-12
		1HD1048-07	MW-15
		1HD1048-08	MW-16
		1HD1048-09	MW-2
		1HD1048-10	MW-3
		1HD1048-11	MW-6
		1HD1048-12	MW-7
		1HD1048-13	Duplicate
		1HD1266-PS1	1HD1048-01

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
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Batch 1HD0944 - EPA 5030B - EPA 8260B

Blank (1HD0944-BLK1)

Prepared: 04/15/24 00:00 Analyzed: 04/15/24 10:55

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							



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0944 - EPA 5030B - EPA 8260B

Blank (1HD0944-BLK1)

Prepared: 04/15/24 00:00 Analyzed: 04/15/24 10:55

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							
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	59.0		ug/L	50.2		118	80-126			
Surrogate: Dibromofluoromethane	59.0		ug/L	50.2		118	75-136			
Surrogate: 1,2-Dichloroethane-d4	60.2		ug/L	50.1		120	63-138			
Surrogate: 1,2-Dichloroethane-d4	60.2		ug/L	50.1		120	61-142			
Surrogate: Toluene-d8	52.0		ug/L	50.4		103	87-116			
Surrogate: Toluene-d8	52.0		ug/L	50.4		103	82-121			
Surrogate: 4-Bromofluorobenzene	51.0		ug/L	50.1		102	85-111			
Surrogate: 4-Bromofluorobenzene	51.0		ug/L	50.1		102	80-116			

LCS (1HD0944-BS1)

Prepared: 04/15/24 00:00 Analyzed: 04/15/24 09:35

QM-18

Chloromethane	43.47	1.0	ug/L	30.6		142	63-155			
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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0944 - EPA 5030B - EPA 8260B										
LCS (1HD0944-BS1)	Prepared: 04/15/24 00:00 Analyzed: 04/15/24 09:35									QM-18
Vinyl Chloride	39.95	1.0	ug/L	30.2		132	70-154			
Bromomethane	37.62	1.0	ug/L	28.8		131	52-176			
Chloroethane	42.75	1.0	ug/L	31.6		135	72-148			
Trichlorofluoromethane	40.36	1.0	ug/L	32.6		124	70-152			
1,1-Dichloroethylene	62.35	1.0	ug/L	50.0		125	70-148			
Acetone	177.2	10.0	ug/L	102		174	43-172			QS-02
Methyl Iodide	113.0	1.0	ug/L	99.7		113	69-170			
Carbon Disulfide	112.9	1.0	ug/L	101		112	72-162			
Methylene Chloride	55.13	5.0	ug/L	50.0		110	68-142			
Acrylonitrile	121.2	5.0	ug/L	100		121	67-144			
trans-1,2-Dichloroethylene	61.74	1.0	ug/L	50.0		123	66-148			
1,1-Dichloroethane	60.70	1.0	ug/L	50.0		121	66-143			
Vinyl Acetate	134.5	5.0	ug/L	102		132	43-153			
cis-1,2-Dichloroethylene	60.07	1.0	ug/L	50.0		120	71-149			
2-Butanone (MEK)	157.9	10.0	ug/L	103		153	52-159			
Bromochloromethane	60.87	1.0	ug/L	50.0		122	69-143			
Chloroform	58.04	1.0	ug/L	50.0		116	69-144			
1,1,1-Trichloroethane	57.20	1.0	ug/L	50.0		114	62-129			
Carbon Tetrachloride	57.93	1.0	ug/L	50.0		116	63-141			
Benzene	52.57	1.0	ug/L	50.0		105	71-134			
1,2-Dichloroethane	49.77	1.0	ug/L	50.0		99.5	72-132			
Trichloroethylene	51.44	1.0	ug/L	50.0		103	71-135			
1,2-Dichloropropane	52.62	1.0	ug/L	50.0		105	69-136			
Dibromomethane	52.31	1.0	ug/L	50.0		105	73-147			
Bromodichloromethane	50.73	1.0	ug/L	50.0		101	68-129			
cis-1,3-Dichloropropene	51.12	1.0	ug/L	50.0		102	65-134			
4-Methyl-2-pentanone (MIBK)	115.8	5.0	ug/L	101		114	58-147			
Toluene	51.92	1.0	ug/L	50.0		104	72-133			
trans-1,3-Dichloropropene	52.17	1.0	ug/L	50.0		104	67-130			
1,1,2-Trichloroethane	51.49	1.0	ug/L	50.0		103	69-135			
Tetrachloroethylene	48.53	1.0	ug/L	50.0		97.1	69-130			
2-Hexanone (MBK)	122.2	5.0	ug/L	103		118	55-144			
Dibromochloromethane	47.64	1.0	ug/L	50.0		95.3	73-127			
1,2-Dibromoethane	47.72	1.0	ug/L	50.0		95.4	67-132			
Chlorobenzene	48.26	1.0	ug/L	50.0		96.5	72-123			
1,1,1,2-Tetrachloroethane	48.71	1.0	ug/L	50.0		97.4	73-127			
Ethylbenzene	49.70	1.0	ug/L	50.0		99.4	71-127			
Xylenes, total	148.9	2.0	ug/L	150		99.3	74-127			
Styrene	49.00	1.0	ug/L	50.0		98.0	66-126			
Bromoform	46.62	1.0	ug/L	50.0		93.2	68-130			
1,2,3-Trichloropropane	51.06	1.0	ug/L	50.0		102	63-136			
trans-1,4-Dichloro-2-butene	95.01	5.0	ug/L	104		91.4	54-134			
1,1,2,2-Tetrachloroethane	52.47	1.0	ug/L	50.0		105	61-131			

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0944 - EPA 5030B - EPA 8260B										
LCS (1HD0944-BS1)	Prepared: 04/15/24 00:00 Analyzed: 04/15/24 09:35									QM-18
1,4-Dichlorobenzene	48.14	1.0	ug/L	50.0		96.3	70-129			
1,2-Dichlorobenzene	50.33	1.0	ug/L	50.0		101	69-126			
1,2-Dibromo-3-chloropropane	51.40	5.0	ug/L	50.0		103	50-143			
<i>Surrogate: Dibromofluoromethane</i>	58.8		ug/L	50.2		117	80-126			
<i>Surrogate: Dibromofluoromethane</i>	58.8		ug/L	50.2		117	75-136			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	59.1		ug/L	50.1		118	63-138			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	59.1		ug/L	50.1		118	61-142			
<i>Surrogate: Toluene-d8</i>	53.7		ug/L	50.4		107	87-116			
<i>Surrogate: Toluene-d8</i>	53.7		ug/L	50.4		107	82-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	50.0		ug/L	50.1		99.7	85-111			
<i>Surrogate: 4-Bromofluorobenzene</i>	50.0		ug/L	50.1		99.7	80-116			
LCS Dup (1HD0944-BSD1)	Prepared: 04/15/24 00:00 Analyzed: 04/15/24 10:01									
Chloromethane	39.72	1.0	ug/L	30.6		130	63-155	9.02	24	QM-18
Vinyl Chloride	36.19	1.0	ug/L	30.2		120	70-154	9.88	25	QM-18
Bromomethane	36.05	1.0	ug/L	28.8		125	52-176	4.26	27	QM-18
Chloroethane	39.82	1.0	ug/L	31.6		126	72-148	7.10	25	QM-18
Trichlorofluoromethane	37.30	1.0	ug/L	32.6		114	70-152	7.88	26	QM-18
1,1-Dichloroethylene	58.03	1.0	ug/L	50.0		116	70-148	7.18	24	QM-18
Acetone	159.3	10.0	ug/L	102		156	43-172	10.7	30	QM-18
Methyl Iodide	107.8	1.0	ug/L	99.7		108	69-170	4.78	30	QM-18
Carbon Disulfide	105.6	1.0	ug/L	101		105	72-162	6.75	24	QM-18
Methylene Chloride	54.25	5.0	ug/L	50.0		108	68-142	1.61	21	QM-18
Acrylonitrile	119.0	5.0	ug/L	100		119	67-144	1.82	24	QM-18
trans-1,2-Dichloroethylene	58.08	1.0	ug/L	50.0		116	66-148	6.11	27	QM-18
1,1-Dichloroethane	57.81	1.0	ug/L	50.0		116	66-143	4.88	24	QM-18
Vinyl Acetate	144.0	5.0	ug/L	102		141	43-153	6.81	30	QM-18
cis-1,2-Dichloroethylene	59.52	1.0	ug/L	50.0		119	71-149	0.920	26	QM-18
2-Butanone (MEK)	150.0	10.0	ug/L	103		145	52-159	5.14	27	QM-18
Bromochloromethane	59.05	1.0	ug/L	50.0		118	69-143	3.04	23	QM-18
Chloroform	56.00	1.0	ug/L	50.0		112	69-144	3.58	23	QM-18
1,1,1-Trichloroethane	54.20	1.0	ug/L	50.0		108	62-129	5.39	24	QM-18
Carbon Tetrachloride	54.42	1.0	ug/L	50.0		109	63-141	6.25	25	QM-18
Benzene	50.18	1.0	ug/L	50.0		100	71-134	4.65	24	QM-18
1,2-Dichloroethane	49.25	1.0	ug/L	50.0		98.5	72-132	1.05	24	QM-18
Trichloroethylene	48.68	1.0	ug/L	50.0		97.4	71-135	5.51	24	QM-18
1,2-Dichloropropane	50.98	1.0	ug/L	50.0		102	69-136	3.17	24	QM-18
Dibromomethane	51.82	1.0	ug/L	50.0		104	73-147	0.941	25	QM-18
Bromodichloromethane	49.59	1.0	ug/L	50.0		99.2	68-129	2.27	22	QM-18
cis-1,3-Dichloropropene	49.99	1.0	ug/L	50.0		100	65-134	2.24	23	QM-18
4-Methyl-2-pentanone (MIBK)	115.2	5.0	ug/L	101		114	58-147	0.554	27	QM-18
Toluene	49.70	1.0	ug/L	50.0		99.4	72-133	4.37	24	QM-18
trans-1,3-Dichloropropene	51.25	1.0	ug/L	50.0		102	67-130	1.78	24	QM-18
1,1,2-Trichloroethane	51.30	1.0	ug/L	50.0		103	69-135	0.370	23	QM-18



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0944 - EPA 5030B - EPA 8260B

LCS Dup (1HD0944-BSD1)

Prepared: 04/15/24 00:00 Analyzed: 04/15/24 10:01

Tetrachloroethylene	46.56	1.0	ug/L	50.0		93.1	69-130	4.14	25	QM-18
2-Hexanone (MBK)	118.9	5.0	ug/L	103		115	55-144	2.74	25	QM-18
Dibromochloromethane	47.05	1.0	ug/L	50.0		94.1	73-127	1.25	22	QM-18
1,2-Dibromoethane	47.78	1.0	ug/L	50.0		95.6	67-132	0.126	24	QM-18
Chlorobenzene	47.14	1.0	ug/L	50.0		94.3	72-123	2.35	23	QM-18
1,1,1,2-Tetrachloroethane	47.80	1.0	ug/L	50.0		95.6	73-127	1.89	24	QM-18
Ethylbenzene	48.20	1.0	ug/L	50.0		96.4	71-127	3.06	26	QM-18
Xylenes, total	143.8	2.0	ug/L	150		95.8	74-127	3.55	25	QM-18
Styrene	48.10	1.0	ug/L	50.0		96.2	66-126	1.85	23	QM-18
Bromoform	46.20	1.0	ug/L	50.0		92.4	68-130	0.905	23	QM-18
1,2,3-Trichloropropane	50.56	1.0	ug/L	50.0		101	63-136	0.984	24	QM-18
trans-1,4-Dichloro-2-butene	94.42	5.0	ug/L	104		90.9	54-134	0.623	27	QM-18
1,1,2,2-Tetrachloroethane	51.72	1.0	ug/L	50.0		103	61-131	1.44	29	QM-18
1,4-Dichlorobenzene	47.39	1.0	ug/L	50.0		94.8	70-129	1.57	24	QM-18
1,2-Dichlorobenzene	49.19	1.0	ug/L	50.0		98.4	69-126	2.29	26	QM-18
1,2-Dibromo-3-chloropropane	51.64	5.0	ug/L	50.0		103	50-143	0.466	30	QM-18
Surrogate: Dibromofluoromethane	58.4		ug/L	50.2		116	80-126			QM-18
Surrogate: Dibromofluoromethane	58.4		ug/L	50.2		116	75-136			QM-18
Surrogate: 1,2-Dichloroethane-d4	58.5		ug/L	50.1		117	63-138			QM-18
Surrogate: 1,2-Dichloroethane-d4	58.5		ug/L	50.1		117	61-142			QM-18
Surrogate: Toluene-d8	53.0		ug/L	50.4		105	87-116			QM-18
Surrogate: Toluene-d8	53.0		ug/L	50.4		105	82-121			QM-18
Surrogate: 4-Bromofluorobenzene	49.8		ug/L	50.1		99.2	85-111			QM-18
Surrogate: 4-Bromofluorobenzene	49.8		ug/L	50.1		99.2	80-116			QM-18

Batch 1HD1128 - EPA 5030B - EPA 8260B

Blank (1HD1128-BLK1)

Prepared: 04/17/24 00:00 Analyzed: 04/17/24 10:52

Dichlorodifluoromethane	<1.0	1.0	ug/L							
Chloromethane	<1.0	1.0	ug/L							
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
Acrolein	<10.0	10.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Acetone	<10.0	10.0	ug/L							

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
Blank (1HD1128-BLK1)										
Prepared: 04/17/24 00:00 Analyzed: 04/17/24 10:52										
Methyl Iodide	<2.0	2.0	ug/L							
Methyl Iodide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Acetonitrile	<10.0	10.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
Vinyl Acetate	<5.0	5.0	ug/L							
Vinyl Acetate	<5.0	5.0	ug/L							
2,2-Dichloropropane	<1.0	1.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
2-Butanone (MEK)	<5.0	5.0	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
1,1-Dichloropropene	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
Blank (1HD1128-BLK1)				Prepared: 04/17/24 00:00 Analyzed: 04/17/24 10:52						
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
Ethyl Methacrylate	<10.0	10.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
1,3-Dichloropropane	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<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							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,3-Dichlorobenzene	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<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-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
Blank (1HD1128-BLK1)										
				Prepared: 04/17/24 00:00 Analyzed: 04/17/24 10:52						
1,2,4-Trichlorobenzene	<1.0	1.0	ug/L							
Allyl chloride	<1.0	1.0	ug/L							
Chloroprene	<1.0	1.0	ug/L							
Methacrylonitrile	<1.0	1.0	ug/L							
Methyl Methacrylate	<1.0	1.0	ug/L							
Propionitrile	<10.0	10.0	ug/L							
<hr/>										
Surrogate: Dibromofluoromethane	50.8		ug/L	50.2		101	80-126			
Surrogate: Dibromofluoromethane	50.8		ug/L	50.2		101	80-126			
Surrogate: Dibromofluoromethane	50.8		ug/L	50.2		101	80-126			
Surrogate: Dibromofluoromethane	50.8		ug/L	50.2		101	75-136			
Surrogate: 1,2-Dichloroethane-d4	52.2		ug/L	50.1		104	63-138			
Surrogate: 1,2-Dichloroethane-d4	52.2		ug/L	50.1		104	63-138			
Surrogate: 1,2-Dichloroethane-d4	52.2		ug/L	50.1		104	63-138			
Surrogate: 1,2-Dichloroethane-d4	52.2		ug/L	50.1		104	63-138			
Surrogate: 1,2-Dichloroethane-d4	52.2		ug/L	50.1		104	61-142			
Surrogate: Toluene-d8	49.8		ug/L	50.4		98.9	87-116			
Surrogate: Toluene-d8	49.8		ug/L	50.4		98.9	87-116			
Surrogate: Toluene-d8	49.8		ug/L	50.4		98.9	87-116			
Surrogate: Toluene-d8	49.8		ug/L	50.4		98.9	87-116			
Surrogate: Toluene-d8	49.8		ug/L	50.4		98.9	82-121			
Surrogate: 4-Bromofluorobenzene	50.1		ug/L	50.1		100	85-111			
Surrogate: 4-Bromofluorobenzene	50.1		ug/L	50.1		100	85-111			
Surrogate: 4-Bromofluorobenzene	50.1		ug/L	50.1		100	85-111			
Surrogate: 4-Bromofluorobenzene	50.1		ug/L	50.1		100	85-111			
Surrogate: 4-Bromofluorobenzene	50.1		ug/L	50.1		100	80-116			
<hr/>										
LCS (1HD1128-BS1)				Prepared: 04/17/24 00:00 Analyzed: 04/17/24 09:43						
Dichlorodifluoromethane	36.96	1.0	ug/L	31.6		117	44-139			
Chloromethane	35.00	1.0	ug/L	30.6		114	56-152			
Chloromethane	35.00	1.0	ug/L	30.6		114	63-155			
Vinyl Chloride	32.94	1.0	ug/L	30.2		109	62-151			
Vinyl Chloride	32.94	1.0	ug/L	30.2		109	70-154			
Bromomethane	36.18	1.0	ug/L	28.8		126	61-162			
Bromomethane	36.18	1.0	ug/L	28.8		126	52-176			
Chloroethane	37.13	1.0	ug/L	31.6		117	69-138			
Chloroethane	37.13	1.0	ug/L	31.6		117	72-148			
Trichlorofluoromethane	34.23	1.0	ug/L	32.6		105	70-143			
Trichlorofluoromethane	34.23	1.0	ug/L	32.6		105	70-152			
Acrolein	111.6	10.0	ug/L	100		111	27-144			
1,1-Dichloroethylene	51.74	1.0	ug/L	50.0		103	76-140			
1,1-Dichloroethylene	51.74	1.0	ug/L	50.0		103	70-148			
Acetone	96.62	10.0	ug/L	102		94.7	51-156			
Acetone	96.62	10.0	ug/L	102		94.7	43-172			
Methyl Iodide	107.8	2.0	ug/L	99.7		108	81-166			
Methyl Iodide	107.8	1.0	ug/L	99.7		108	69-170			



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
LCS (1HD1128-BS1)										
Prepared: 04/17/24 00:00 Analyzed: 04/17/24 09:43										
Carbon Disulfide	96.63	1.0	ug/L	101		95.7	76-147			
Carbon Disulfide	96.63	1.0	ug/L	101		95.7	72-162			
Acetonitrile	61.13	10.0	ug/L	101		60.8	46-156			
Methylene Chloride	52.53	5.0	ug/L	50.0		105	67-139			
Methylene Chloride	52.53	5.0	ug/L	50.0		105	68-142			
Acrylonitrile	104.7	5.0	ug/L	100		104	67-144			
Acrylonitrile	104.7	5.0	ug/L	100		104	67-144			
trans-1,2-Dichloroethylene	52.99	1.0	ug/L	50.0		106	72-135			
trans-1,2-Dichloroethylene	52.99	1.0	ug/L	50.0		106	66-148			
1,1-Dichloroethane	51.94	1.0	ug/L	50.0		104	72-129			
1,1-Dichloroethane	51.94	1.0	ug/L	50.0		104	66-143			
Vinyl Acetate	120.3	5.0	ug/L	102		118	24-144			
Vinyl Acetate	120.3	5.0	ug/L	102		118	43-153			
2,2-Dichloropropane	50.51	1.0	ug/L	50.0		101	64-131			
cis-1,2-Dichloroethylene	61.48	1.0	ug/L	50.0		123	81-137			
cis-1,2-Dichloroethylene	61.48	1.0	ug/L	50.0		123	71-149			
2-Butanone (MEK)	114.8	5.0	ug/L	103		111	47-149			
2-Butanone (MEK)	114.8	10.0	ug/L	103		111	52-159			
Bromochloromethane	53.14	1.0	ug/L	50.0		106	75-138			
Bromochloromethane	53.14	1.0	ug/L	50.0		106	69-143			
Chloroform	50.52	1.0	ug/L	50.0		101	78-131			
Chloroform	50.52	1.0	ug/L	50.0		101	69-144			
1,1,1-Trichloroethane	49.53	1.0	ug/L	50.0		99.1	67-121			
1,1,1-Trichloroethane	49.53	1.0	ug/L	50.0		99.1	62-129			
1,1-Dichloropropene	50.00	1.0	ug/L	50.0		100	80-131			
Carbon Tetrachloride	52.27	1.0	ug/L	50.0		105	71-131			
Carbon Tetrachloride	52.27	1.0	ug/L	50.0		105	63-141			
Benzene	50.17	1.0	ug/L	50.0		100	77-130			
Benzene	50.17	1.0	ug/L	50.0		100	71-134			
1,2-Dichloroethane	49.18	1.0	ug/L	50.0		98.4	76-126			
1,2-Dichloroethane	49.18	1.0	ug/L	50.0		98.4	72-132			
Trichloroethylene	49.90	1.0	ug/L	50.0		99.8	80-124			
Trichloroethylene	49.90	1.0	ug/L	50.0		99.8	71-135			
1,2-Dichloropropane	50.54	1.0	ug/L	50.0		101	81-125			
1,2-Dichloropropane	50.54	1.0	ug/L	50.0		101	69-136			
Dibromomethane	51.17	1.0	ug/L	50.0		102	84-134			
Dibromomethane	51.17	1.0	ug/L	50.0		102	73-147			
Bromodichloromethane	50.01	1.0	ug/L	50.0		100	78-121			
Bromodichloromethane	50.01	1.0	ug/L	50.0		100	68-129			
cis-1,3-Dichloropropene	51.52	1.0	ug/L	50.0		103	78-120			
cis-1,3-Dichloropropene	51.52	1.0	ug/L	50.0		103	65-134			
4-Methyl-2-pentanone (MIBK)	110.9	5.0	ug/L	101		109	67-143			
4-Methyl-2-pentanone (MIBK)	110.9	5.0	ug/L	101		109	58-147			

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
LCS (1HD1128-BS1)										
				Prepared: 04/17/24 00:00 Analyzed: 04/17/24 09:43						
Toluene	48.54	1.0	ug/L	50.0		97.1	77-130			
Toluene	48.54	1.0	ug/L	50.0		97.1	72-133			
trans-1,3-Dichloropropene	53.05	1.0	ug/L	50.0		106	77-123			
trans-1,3-Dichloropropene	53.05	1.0	ug/L	50.0		106	67-130			
Ethyl Methacrylate	107.8	10.0	ug/L	101		107	52-148			
1,1,2-Trichloroethane	50.45	1.0	ug/L	50.0		101	78-124			
1,1,2-Trichloroethane	50.45	1.0	ug/L	50.0		101	69-135			
Tetrachloroethylene	49.16	1.0	ug/L	50.0		98.3	73-124			
Tetrachloroethylene	49.16	1.0	ug/L	50.0		98.3	69-130			
1,3-Dichloropropane	56.12	1.0	ug/L	50.0		112	78-131			
2-Hexanone (MBK)	114.9	5.0	ug/L	103		111	57-145			
2-Hexanone (MBK)	114.9	5.0	ug/L	103		111	55-144			
Dibromochloromethane	51.27	1.0	ug/L	50.0		103	78-126			
Dibromochloromethane	51.27	1.0	ug/L	50.0		103	73-127			
1,2-Dibromoethane	50.06	1.0	ug/L	50.0		100	69-126			
1,2-Dibromoethane	50.06	1.0	ug/L	50.0		100	67-132			
Chlorobenzene	49.45	1.0	ug/L	50.0		98.9	76-120			
Chlorobenzene	49.45	1.0	ug/L	50.0		98.9	72-123			
1,1,1,2-Tetrachloroethane	50.94	1.0	ug/L	50.0		102	81-122			
1,1,1,2-Tetrachloroethane	50.94	1.0	ug/L	50.0		102	73-127			
Ethylbenzene	51.13	1.0	ug/L	50.0		102	74-121			
Ethylbenzene	51.13	1.0	ug/L	50.0		102	71-127			
Xylenes, total	155.3	2.0	ug/L	150		104	75-122			
Xylenes, total	155.3	2.0	ug/L	150		104	74-127			
Styrene	52.92	1.0	ug/L	50.0		106	76-119			
Styrene	52.92	1.0	ug/L	50.0		106	66-126			
Bromoform	50.16	1.0	ug/L	50.0		100	74-127			
Bromoform	50.16	1.0	ug/L	50.0		100	68-130			
1,2,3-Trichloropropane	50.70	1.0	ug/L	50.0		101	73-125			
1,2,3-Trichloropropane	50.70	1.0	ug/L	50.0		101	63-136			
trans-1,4-Dichloro-2-butene	96.67	5.0	ug/L	104		93.0	55-135			
trans-1,4-Dichloro-2-butene	96.67	5.0	ug/L	104		93.0	54-134			
1,1,2,2-Tetrachloroethane	51.17	1.0	ug/L	50.0		102	58-133			
1,1,2,2-Tetrachloroethane	51.17	1.0	ug/L	50.0		102	61-131			
1,3-Dichlorobenzene	50.86	1.0	ug/L	50.0		102	70-125			
1,4-Dichlorobenzene	48.68	1.0	ug/L	50.0		97.4	69-128			
1,4-Dichlorobenzene	48.68	1.0	ug/L	50.0		97.4	70-129			
1,2-Dichlorobenzene	50.70	1.0	ug/L	50.0		101	70-125			
1,2-Dichlorobenzene	50.70	1.0	ug/L	50.0		101	69-126			
1,2-Dibromo-3-chloropropane	53.00	1.0	ug/L	50.0		106	54-147			
1,2-Dibromo-3-chloropropane	53.00	5.0	ug/L	50.0		106	50-143			
1,2,4-Trichlorobenzene	51.96	1.0	ug/L	50.0		104	55-149			
Allyl chloride	32.69	1.0	ug/L	35.7		91.5	76-134			

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
LCS (1HD1128-BS1)										
				Prepared: 04/17/24 00:00 Analyzed: 04/17/24 09:43						
Chloroprene	57.08	1.0	ug/L	50.0		114	74-141			
Methacrylonitrile	65.34	1.0	ug/L	64.3		102	73-143			
Methyl Methacrylate	58.27	1.0	ug/L	57.3		102	72-123			
Propionitrile	83.18	10.0	ug/L	50.0		166	50-151			QS-02
Surrogate: Dibromofluoromethane	51.6		ug/L	50.2		103	80-126			
Surrogate: Dibromofluoromethane	51.6		ug/L	50.2		103	80-126			
Surrogate: Dibromofluoromethane	51.6		ug/L	50.2		103	80-126			
Surrogate: Dibromofluoromethane	51.6		ug/L	50.2		103	75-136			
Surrogate: 1,2-Dichloroethane-d4	51.4		ug/L	50.1		103	63-138			
Surrogate: 1,2-Dichloroethane-d4	51.4		ug/L	50.1		103	63-138			
Surrogate: 1,2-Dichloroethane-d4	51.4		ug/L	50.1		103	63-138			
Surrogate: 1,2-Dichloroethane-d4	51.4		ug/L	50.1		103	63-138			
Surrogate: 1,2-Dichloroethane-d4	51.4		ug/L	50.1		103	61-142			
Surrogate: Toluene-d8	50.5		ug/L	50.4		100	87-116			
Surrogate: Toluene-d8	50.5		ug/L	50.4		100	87-116			
Surrogate: Toluene-d8	50.5		ug/L	50.4		100	87-116			
Surrogate: Toluene-d8	50.5		ug/L	50.4		100	87-116			
Surrogate: Toluene-d8	50.5		ug/L	50.4		100	82-121			
Surrogate: 4-Bromofluorobenzene	50.5		ug/L	50.1		101	85-111			
Surrogate: 4-Bromofluorobenzene	50.5		ug/L	50.1		101	85-111			
Surrogate: 4-Bromofluorobenzene	50.5		ug/L	50.1		101	85-111			
Surrogate: 4-Bromofluorobenzene	50.5		ug/L	50.1		101	85-111			
Surrogate: 4-Bromofluorobenzene	50.5		ug/L	50.1		101	80-116			
LCS Dup (1HD1128-BSD1)										
				Prepared: 04/17/24 00:00 Analyzed: 04/17/24 10:06						
Dichlorodifluoromethane	35.90	1.0	ug/L	31.6		114	44-139	2.91	30	
Chloromethane	34.35	1.0	ug/L	30.6		112	56-152	1.87	30	
Chloromethane	34.35	1.0	ug/L	30.6		112	63-155	1.87	24	
Vinyl Chloride	31.99	1.0	ug/L	30.2		106	62-151	2.93	28	
Vinyl Chloride	31.99	1.0	ug/L	30.2		106	70-154	2.93	25	
Bromomethane	35.57	1.0	ug/L	28.8		124	61-162	1.70	28	
Bromomethane	35.57	1.0	ug/L	28.8		124	52-176	1.70	27	
Chloroethane	36.29	1.0	ug/L	31.6		115	69-138	2.29	29	
Chloroethane	36.29	1.0	ug/L	31.6		115	72-148	2.29	25	
Trichlorofluoromethane	33.29	1.0	ug/L	32.6		102	70-143	2.78	27	
Trichlorofluoromethane	33.29	1.0	ug/L	32.6		102	70-152	2.78	26	
Acrolein	110.0	10.0	ug/L	100		110	27-144	1.39	30	
1,1-Dichloroethylene	50.21	1.0	ug/L	50.0		100	76-140	3.00	30	
1,1-Dichloroethylene	50.21	1.0	ug/L	50.0		100	70-148	3.00	24	
Acetone	94.31	10.0	ug/L	102		92.5	51-156	2.42	30	
Acetone	94.31	10.0	ug/L	102		92.5	43-172	2.42	30	
Methyl Iodide	107.7	2.0	ug/L	99.7		108	81-166	0.158	29	
Methyl Iodide	107.7	1.0	ug/L	99.7		108	69-170	0.158	30	
Carbon Disulfide	93.23	1.0	ug/L	101		92.3	76-147	3.58	27	
Carbon Disulfide	93.23	1.0	ug/L	101		92.3	72-162	3.58	24	

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
LCS Dup (1HD1128-BSD1)										
Prepared: 04/17/24 00:00 Analyzed: 04/17/24 10:06										
Acetonitrile	61.83	10.0	ug/L	101		61.5	46-156	1.14	30	
Methylene Chloride	51.70	5.0	ug/L	50.0		103	67-139	1.59	26	
Methylene Chloride	51.70	5.0	ug/L	50.0		103	68-142	1.59	21	
Acrylonitrile	103.9	5.0	ug/L	100		103	67-144	0.786	24	
Acrylonitrile	103.9	5.0	ug/L	100		103	67-144	0.786	24	
trans-1,2-Dichloroethylene	51.85	1.0	ug/L	50.0		104	72-135	2.17	28	
trans-1,2-Dichloroethylene	51.85	1.0	ug/L	50.0		104	66-148	2.17	27	
1,1-Dichloroethane	50.77	1.0	ug/L	50.0		102	72-129	2.28	26	
1,1-Dichloroethane	50.77	1.0	ug/L	50.0		102	66-143	2.28	24	
Vinyl Acetate	122.0	5.0	ug/L	102		120	24-144	1.43	30	
Vinyl Acetate	122.0	5.0	ug/L	102		120	43-153	1.43	30	
2,2-Dichloropropane	48.84	1.0	ug/L	50.0		97.7	64-131	3.36	26	
cis-1,2-Dichloroethylene	59.99	1.0	ug/L	50.0		120	81-137	2.45	27	
cis-1,2-Dichloroethylene	59.99	1.0	ug/L	50.0		120	71-149	2.45	26	
2-Butanone (MEK)	117.7	5.0	ug/L	103		114	47-149	2.53	30	
2-Butanone (MEK)	117.7	10.0	ug/L	103		114	52-159	2.53	27	
Bromochloromethane	53.06	1.0	ug/L	50.0		106	75-138	0.151	24	
Bromochloromethane	53.06	1.0	ug/L	50.0		106	69-143	0.151	23	
Chloroform	49.75	1.0	ug/L	50.0		99.5	78-131	1.54	27	
Chloroform	49.75	1.0	ug/L	50.0		99.5	69-144	1.54	23	
1,1,1-Trichloroethane	48.56	1.0	ug/L	50.0		97.1	67-121	1.98	28	
1,1,1-Trichloroethane	48.56	1.0	ug/L	50.0		97.1	62-129	1.98	24	
1,1-Dichloropropene	48.47	1.0	ug/L	50.0		96.9	80-131	3.11	30	
Carbon Tetrachloride	50.86	1.0	ug/L	50.0		102	71-131	2.73	28	
Carbon Tetrachloride	50.86	1.0	ug/L	50.0		102	63-141	2.73	25	
Benzene	48.98	1.0	ug/L	50.0		98.0	77-130	2.40	25	
Benzene	48.98	1.0	ug/L	50.0		98.0	71-134	2.40	24	
1,2-Dichloroethane	48.51	1.0	ug/L	50.0		97.0	76-126	1.37	24	
1,2-Dichloroethane	48.51	1.0	ug/L	50.0		97.0	72-132	1.37	24	
Trichloroethylene	48.56	1.0	ug/L	50.0		97.1	80-124	2.72	27	
Trichloroethylene	48.56	1.0	ug/L	50.0		97.1	71-135	2.72	24	
1,2-Dichloropropane	49.97	1.0	ug/L	50.0		99.9	81-125	1.13	25	
1,2-Dichloropropane	49.97	1.0	ug/L	50.0		99.9	69-136	1.13	24	
Dibromomethane	50.85	1.0	ug/L	50.0		102	84-134	0.627	23	
Dibromomethane	50.85	1.0	ug/L	50.0		102	73-147	0.627	25	
Bromodichloromethane	49.25	1.0	ug/L	50.0		98.5	78-121	1.53	25	
Bromodichloromethane	49.25	1.0	ug/L	50.0		98.5	68-129	1.53	22	
cis-1,3-Dichloropropene	50.94	1.0	ug/L	50.0		102	78-120	1.13	26	
cis-1,3-Dichloropropene	50.94	1.0	ug/L	50.0		102	65-134	1.13	23	
4-Methyl-2-pentanone (MIBK)	110.2	5.0	ug/L	101		109	67-143	0.606	26	
4-Methyl-2-pentanone (MIBK)	110.2	5.0	ug/L	101		109	58-147	0.606	27	
Toluene	47.59	1.0	ug/L	50.0		95.2	77-130	1.98	27	
Toluene	47.59	1.0	ug/L	50.0		95.2	72-133	1.98	24	

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
LCS Dup (1HD1128-BSD1)				Prepared: 04/17/24 00:00 Analyzed: 04/17/24 10:06						
trans-1,3-Dichloropropene	52.41	1.0	ug/L	50.0		105	77-123	1.21	28	
trans-1,3-Dichloropropene	52.41	1.0	ug/L	50.0		105	67-130	1.21	24	
Ethyl Methacrylate	106.8	10.0	ug/L	101		106	52-148	0.942	30	
1,1,2-Trichloroethane	50.36	1.0	ug/L	50.0		101	78-124	0.179	24	
1,1,2-Trichloroethane	50.36	1.0	ug/L	50.0		101	69-135	0.179	23	
Tetrachloroethylene	47.65	1.0	ug/L	50.0		95.3	73-124	3.12	26	
Tetrachloroethylene	47.65	1.0	ug/L	50.0		95.3	69-130	3.12	25	
1,3-Dichloropropane	55.88	1.0	ug/L	50.0		112	78-131	0.429	24	
2-Hexanone (MBK)	113.7	5.0	ug/L	103		110	57-145	1.02	30	
2-Hexanone (MBK)	113.7	5.0	ug/L	103		110	55-144	1.02	25	
Dibromochloromethane	50.92	1.0	ug/L	50.0		102	78-126	0.685	23	
Dibromochloromethane	50.92	1.0	ug/L	50.0		102	73-127	0.685	22	
1,2-Dibromoethane	49.79	1.0	ug/L	50.0		99.6	69-126	0.541	22	
1,2-Dibromoethane	49.79	1.0	ug/L	50.0		99.6	67-132	0.541	24	
Chlorobenzene	48.35	1.0	ug/L	50.0		96.7	76-120	2.25	25	
Chlorobenzene	48.35	1.0	ug/L	50.0		96.7	72-123	2.25	23	
1,1,1,2-Tetrachloroethane	50.25	1.0	ug/L	50.0		100	81-122	1.36	23	
1,1,1,2-Tetrachloroethane	50.25	1.0	ug/L	50.0		100	73-127	1.36	24	
Ethylbenzene	50.01	1.0	ug/L	50.0		100	74-121	2.21	27	
Ethylbenzene	50.01	1.0	ug/L	50.0		100	71-127	2.21	26	
Xylenes, total	152.1	2.0	ug/L	150		101	75-122	2.08	26	
Xylenes, total	152.1	2.0	ug/L	150		101	74-127	2.08	25	
Styrene	51.87	1.0	ug/L	50.0		104	76-119	2.00	26	
Styrene	51.87	1.0	ug/L	50.0		104	66-126	2.00	23	
Bromoform	49.79	1.0	ug/L	50.0		99.6	74-127	0.740	22	
Bromoform	49.79	1.0	ug/L	50.0		99.6	68-130	0.740	23	
1,2,3-Trichloropropane	50.09	1.0	ug/L	50.0		100	73-125	1.21	20	
1,2,3-Trichloropropane	50.09	1.0	ug/L	50.0		100	63-136	1.21	24	
trans-1,4-Dichloro-2-butene	95.55	5.0	ug/L	104		92.0	55-135	1.17	26	
trans-1,4-Dichloro-2-butene	95.55	5.0	ug/L	104		92.0	54-134	1.17	27	
1,1,2,2-Tetrachloroethane	51.10	1.0	ug/L	50.0		102	58-133	0.137	28	
1,1,2,2-Tetrachloroethane	51.10	1.0	ug/L	50.0		102	61-131	0.137	29	
1,3-Dichlorobenzene	49.79	1.0	ug/L	50.0		99.7	70-125	2.13	27	
1,4-Dichlorobenzene	48.07	1.0	ug/L	50.0		96.1	69-128	1.26	29	
1,4-Dichlorobenzene	48.07	1.0	ug/L	50.0		96.1	70-129	1.26	24	
1,2-Dichlorobenzene	49.93	1.0	ug/L	50.0		99.9	70-125	1.53	25	
1,2-Dichlorobenzene	49.93	1.0	ug/L	50.0		99.9	69-126	1.53	26	
1,2-Dibromo-3-chloropropane	51.50	1.0	ug/L	50.0		103	54-147	2.87	29	
1,2-Dibromo-3-chloropropane	51.50	5.0	ug/L	50.0		103	50-143	2.87	30	
1,2,4-Trichlorobenzene	51.78	1.0	ug/L	50.0		104	55-149	0.347	30	
Allyl chloride	32.20	1.0	ug/L	35.7		90.1	76-134	1.51	30	
Chloroprene	55.85	1.0	ug/L	50.0		112	74-141	2.18	30	
Methacrylonitrile	65.46	1.0	ug/L	64.3		102	73-143	0.183	30	



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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										

LCS Dup (1HD1128-BSD1)

Prepared: 04/17/24 00:00 Analyzed: 04/17/24 10:06

Methyl Methacrylate	59.32	1.0	ug/L	57.3		103	72-123	1.79	30	
Propionitrile	84.20	10.0	ug/L	50.0		168	50-151	1.22	30	QS-02
Surrogate: Dibromofluoromethane	51.5		ug/L	50.2		103	80-126			
Surrogate: Dibromofluoromethane	51.5		ug/L	50.2		103	80-126			
Surrogate: Dibromofluoromethane	51.5		ug/L	50.2		103	80-126			
Surrogate: Dibromofluoromethane	51.5		ug/L	50.2		103	75-136			
Surrogate: 1,2-Dichloroethane-d4	51.7		ug/L	50.1		103	63-138			
Surrogate: 1,2-Dichloroethane-d4	51.7		ug/L	50.1		103	63-138			
Surrogate: 1,2-Dichloroethane-d4	51.7		ug/L	50.1		103	63-138			
Surrogate: 1,2-Dichloroethane-d4	51.7		ug/L	50.1		103	63-138			
Surrogate: 1,2-Dichloroethane-d4	51.7		ug/L	50.1		103	61-142			
Surrogate: Toluene-d8	50.5		ug/L	50.4		100	87-116			
Surrogate: Toluene-d8	50.5		ug/L	50.4		100	87-116			
Surrogate: Toluene-d8	50.5		ug/L	50.4		100	87-116			
Surrogate: Toluene-d8	50.5		ug/L	50.4		100	87-116			
Surrogate: Toluene-d8	50.5		ug/L	50.4		100	82-121			
Surrogate: 4-Bromofluorobenzene	50.4		ug/L	50.1		100	85-111			
Surrogate: 4-Bromofluorobenzene	50.4		ug/L	50.1		100	85-111			
Surrogate: 4-Bromofluorobenzene	50.4		ug/L	50.1		100	85-111			
Surrogate: 4-Bromofluorobenzene	50.4		ug/L	50.1		100	85-111			
Surrogate: 4-Bromofluorobenzene	50.4		ug/L	50.1		100	80-116			

Matrix Spike (1HD1128-MS1)

Source: 1HD0953-07

Prepared: 04/17/24 00:00 Analyzed: 04/17/24 20:16

Dichlorodifluoromethane	305.0	10.0	ug/L	316	ND	96.5	47-137			
Chloromethane	280.3	10.0	ug/L	306	ND	91.5	49-154			
Chloromethane	280.3	10.0	ug/L	306	ND	91.5	61-152			
Vinyl Chloride	281.3	10.0	ug/L	302	ND	93.1	61-152			
Vinyl Chloride	281.3	10.0	ug/L	302	ND	93.1	66-149			
Bromomethane	175.0	10.0	ug/L	288	ND	60.8	47-168			
Bromomethane	175.0	10.0	ug/L	288	ND	60.8	43-171			
Chloroethane	319.7	10.0	ug/L	316	ND	101	61-148			
Chloroethane	319.7	10.0	ug/L	316	ND	101	69-148			
Trichlorofluoromethane	291.3	10.0	ug/L	326	ND	89.3	73-147			
Trichlorofluoromethane	291.3	10.0	ug/L	326	ND	89.3	62-163			
Acrolein	977.4	100	ug/L	1000	ND	97.5	20-164			
1,1-Dichloroethylene	439.6	10.0	ug/L	500	ND	87.9	68-153			
1,1-Dichloroethylene	439.6	10.0	ug/L	500	ND	87.9	70-148			
Acetone	843.6	100	ug/L	1020	ND	82.7	45-175			
Acetone	843.6	100	ug/L	1020	ND	82.7	45-173			
Methyl Iodide	962.9	20.0	ug/L	997	ND	96.6	79-167			
Methyl Iodide	962.9	10.0	ug/L	997	ND	96.6	62-167			
Carbon Disulfide	824.4	10.0	ug/L	1010	ND	81.6	72-156			
Carbon Disulfide	824.4	10.0	ug/L	1010	ND	81.6	71-163			
Acetonitrile	486.4	100	ug/L	1010	ND	48.4	38-166			
Methylene Chloride	435.4	50.0	ug/L	500	ND	87.1	64-143			

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
Matrix Spike (1HD1128-MS1)	Source: 1HD0953-07			Prepared: 04/17/24 00:00 Analyzed: 04/17/24 20:16						
Methylene Chloride	435.4	50.0	ug/L	500	ND	87.1	69-140			
Acrylonitrile	888.6	50.0	ug/L	1000	ND	88.6	58-151			
Acrylonitrile	888.6	50.0	ug/L	1000	ND	88.6	58-151			
trans-1,2-Dichloroethylene	442.8	10.0	ug/L	500	ND	88.6	65-145			
trans-1,2-Dichloroethylene	442.8	10.0	ug/L	500	ND	88.6	69-144			
1,1-Dichloroethane	433.9	10.0	ug/L	500	ND	86.8	68-136			
1,1-Dichloroethane	433.9	10.0	ug/L	500	ND	86.8	70-138			
Vinyl Acetate	996.8	50.0	ug/L	1020	ND	97.8	58-143			
Vinyl Acetate	996.8	50.0	ug/L	1020	ND	97.8	58-142			
2,2-Dichloropropane	378.2	10.0	ug/L	500	ND	75.6	50-118			
cis-1,2-Dichloroethylene	508.4	10.0	ug/L	500	ND	102	67-153			
cis-1,2-Dichloroethylene	508.4	10.0	ug/L	500	ND	102	68-151			
2-Butanone (MEK)	1046	50.0	ug/L	1030	ND	101	52-159			
2-Butanone (MEK)	1046	100	ug/L	1030	ND	101	50-160			
Bromochloromethane	449.3	10.0	ug/L	500	ND	89.9	61-151			
Bromochloromethane	449.3	10.0	ug/L	500	ND	89.9	65-143			
Chloroform	425.3	10.0	ug/L	500	ND	85.1	77-132			
Chloroform	425.3	10.0	ug/L	500	ND	85.1	71-143			
1,1,1-Trichloroethane	415.6	10.0	ug/L	500	ND	83.1	71-118			
1,1,1-Trichloroethane	415.6	10.0	ug/L	500	ND	83.1	63-133			
1,1-Dichloropropene	424.4	10.0	ug/L	500	ND	84.9	82-128			
Carbon Tetrachloride	443.5	10.0	ug/L	500	ND	88.7	71-133			
Carbon Tetrachloride	443.5	10.0	ug/L	500	ND	88.7	63-142			
Benzene	452.4	10.0	ug/L	500	3.45	89.8	81-125			
Benzene	452.4	10.0	ug/L	500	3.70	89.7	69-133			
1,2-Dichloroethane	440.4	10.0	ug/L	500	ND	88.1	75-125			
1,2-Dichloroethane	440.4	10.0	ug/L	500	ND	88.1	63-138			
Trichloroethylene	446.5	10.0	ug/L	500	ND	89.3	83-120			
Trichloroethylene	446.5	10.0	ug/L	500	ND	89.3	71-133			
1,2-Dichloropropane	453.2	10.0	ug/L	500	ND	90.6	80-124			
1,2-Dichloropropane	453.2	10.0	ug/L	500	ND	90.6	69-132			
Dibromomethane	467.9	10.0	ug/L	500	ND	93.6	84-131			
Dibromomethane	467.9	10.0	ug/L	500	ND	93.6	70-147			
Bromodichloromethane	446.7	10.0	ug/L	500	ND	89.3	79-118			
Bromodichloromethane	446.7	10.0	ug/L	500	ND	89.3	67-130			
cis-1,3-Dichloropropene	441.6	10.0	ug/L	500	ND	88.3	75-116			
cis-1,3-Dichloropropene	441.6	10.0	ug/L	500	ND	88.3	61-126			
4-Methyl-2-pentanone (MIBK)	1014	50.0	ug/L	1010	ND	100	65-149			
4-Methyl-2-pentanone (MIBK)	1014	50.0	ug/L	1010	ND	100	55-147			
Toluene	434.7	10.0	ug/L	500	ND	86.9	82-123			
Toluene	434.7	10.0	ug/L	500	ND	86.9	71-133			
trans-1,3-Dichloropropene	458.5	10.0	ug/L	500	ND	91.7	75-117			
trans-1,3-Dichloropropene	458.5	10.0	ug/L	500	ND	91.7	63-124			

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
Matrix Spike (1HD1128-MS1)	Source: 1HD0953-07			Prepared: 04/17/24 00:00 Analyzed: 04/17/24 20:16						
Ethyl Methacrylate	977.1	100	ug/L	1010	ND	97.1	73-135			
1,1,2-Trichloroethane	455.9	10.0	ug/L	500	ND	91.2	77-122			
1,1,2-Trichloroethane	455.9	10.0	ug/L	500	ND	91.2	69-133			
Tetrachloroethylene	447.6	10.0	ug/L	500	ND	89.5	74-120			
Tetrachloroethylene	447.6	10.0	ug/L	500	ND	89.5	70-124			
1,3-Dichloropropane	519.0	10.0	ug/L	500	ND	104	80-127			
2-Hexanone (MBK)	1062	50.0	ug/L	1030	ND	103	57-150			
2-Hexanone (MBK)	1062	50.0	ug/L	1030	ND	103	53-141			
Dibromochloromethane	462.2	10.0	ug/L	500	ND	92.4	80-120			
Dibromochloromethane	462.2	10.0	ug/L	500	ND	92.4	74-122			
1,2-Dibromoethane	465.7	10.0	ug/L	500	ND	93.1	67-125			
1,2-Dibromoethane	465.7	10.0	ug/L	500	ND	93.1	66-127			
Chlorobenzene	454.5	10.0	ug/L	500	7.58	89.4	81-113			
Chlorobenzene	454.5	10.0	ug/L	500	9.21	89.1	76-116			
1,1,1,2-Tetrachloroethane	461.5	10.0	ug/L	500	ND	92.3	80-119			
1,1,1,2-Tetrachloroethane	461.5	10.0	ug/L	500	ND	92.3	77-121			
Ethylbenzene	463.2	10.0	ug/L	500	ND	92.6	78-114			
Ethylbenzene	463.2	10.0	ug/L	500	ND	92.6	73-124			
Xylenes, total	1407	20.0	ug/L	1500	ND	93.8	77-116			
Xylenes, total	1407	20.0	ug/L	1500	ND	93.8	75-123			
Styrene	477.2	10.0	ug/L	500	ND	95.4	78-114			
Styrene	477.2	10.0	ug/L	500	ND	95.4	70-120			
Bromoform	442.1	10.0	ug/L	500	ND	88.4	69-125			
Bromoform	442.1	10.0	ug/L	500	ND	88.4	70-124			
1,2,3-Trichloropropane	461.0	10.0	ug/L	500	ND	92.2	72-125			
1,2,3-Trichloropropane	461.0	10.0	ug/L	500	ND	92.2	62-135			
trans-1,4-Dichloro-2-butene	838.9	50.0	ug/L	1040	ND	80.7	48-131			
trans-1,4-Dichloro-2-butene	838.9	50.0	ug/L	1040	ND	80.7	50-120			
1,1,2,2-Tetrachloroethane	467.9	10.0	ug/L	500	ND	93.6	51-138			
1,1,2,2-Tetrachloroethane	467.9	10.0	ug/L	500	ND	93.6	63-126			
1,3-Dichlorobenzene	458.8	10.0	ug/L	500	ND	91.8	70-122			
1,4-Dichlorobenzene	447.1	10.0	ug/L	500	ND	89.4	70-124			
1,4-Dichlorobenzene	447.1	10.0	ug/L	500	ND	89.4	72-119			
1,2-Dichlorobenzene	463.5	10.0	ug/L	500	ND	92.7	68-123			
1,2-Dichlorobenzene	463.5	10.0	ug/L	500	ND	92.7	71-117			
1,2-Dibromo-3-chloropropane	469.7	10.0	ug/L	500	ND	93.9	46-149			
1,2-Dibromo-3-chloropropane	469.7	50.0	ug/L	500	ND	93.9	49-134			
1,2,4-Trichlorobenzene	455.1	10.0	ug/L	500	ND	91.0	60-137			
Allyl chloride	289.7	10.0	ug/L	357	ND	81.1	60-140			
Chloroprene	514.1	10.0	ug/L	500	ND	103	60-140			
Methacrylonitrile	585.4	10.0	ug/L	643	ND	91.1	60-140			
Methyl Methacrylate	554.8	10.0	ug/L	573	ND	96.8	60-140			
Propionitrile	783.3	100	ug/L	500	ND	157	60-140			QS-02



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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
Matrix Spike (1HD1128-MS1)		Source: 1HD0953-07			Prepared: 04/17/24 00:00 Analyzed: 04/17/24 20:16					
Surrogate: Dibromofluoromethane	477		ug/L	502		95.1	80-126			
Surrogate: Dibromofluoromethane	477		ug/L	502		95.1	80-126			
Surrogate: Dibromofluoromethane	477		ug/L	502		95.1	80-126			
Surrogate: Dibromofluoromethane	477		ug/L	502		95.1	75-136			
Surrogate: 1,2-Dichloroethane-d4	484		ug/L	501		96.7	63-138			
Surrogate: 1,2-Dichloroethane-d4	484		ug/L	501		96.7	63-138			
Surrogate: 1,2-Dichloroethane-d4	484		ug/L	501		96.7	63-138			
Surrogate: 1,2-Dichloroethane-d4	484		ug/L	501		96.7	63-138			
Surrogate: 1,2-Dichloroethane-d4	484		ug/L	501		96.7	61-142			
Surrogate: Toluene-d8	503		ug/L	504		99.8	87-116			
Surrogate: Toluene-d8	503		ug/L	504		99.8	87-116			
Surrogate: Toluene-d8	503		ug/L	504		99.8	87-116			
Surrogate: Toluene-d8	503		ug/L	504		99.8	87-116			
Surrogate: Toluene-d8	503		ug/L	504		99.8	82-121			
Surrogate: 4-Bromofluorobenzene	497		ug/L	501		99.2	85-111			
Surrogate: 4-Bromofluorobenzene	497		ug/L	501		99.2	85-111			
Surrogate: 4-Bromofluorobenzene	497		ug/L	501		99.2	85-111			
Surrogate: 4-Bromofluorobenzene	497		ug/L	501		99.2	85-111			
Surrogate: 4-Bromofluorobenzene	497		ug/L	501		99.2	80-116			
Matrix Spike Dup (1HD1128-MSD1)		Source: 1HD0953-07			Prepared: 04/17/24 00:00 Analyzed: 04/17/24 20:39					
Dichlorodifluoromethane	299.9	10.0	ug/L	316	ND	94.9	47-137	1.69	20	
Chloromethane	275.1	10.0	ug/L	306	ND	89.8	49-154	1.87	25	
Chloromethane	275.1	10.0	ug/L	306	ND	89.8	61-152	1.87	26	
Vinyl Chloride	274.9	10.0	ug/L	302	ND	91.0	61-152	2.30	24	
Vinyl Chloride	274.9	10.0	ug/L	302	ND	91.0	66-149	2.30	23	
Bromomethane	169.8	10.0	ug/L	288	ND	59.0	47-168	3.02	30	
Bromomethane	169.8	10.0	ug/L	288	ND	59.0	43-171	3.02	29	
Chloroethane	294.3	10.0	ug/L	316	ND	93.0	61-148	8.27	29	
Chloroethane	294.3	10.0	ug/L	316	ND	93.0	69-148	8.27	25	
Trichlorofluoromethane	279.3	10.0	ug/L	326	ND	85.6	73-147	4.21	24	
Trichlorofluoromethane	279.3	10.0	ug/L	326	ND	85.6	62-163	4.21	25	
Acrolein	1026	100	ug/L	1000	ND	102	20-164	4.87	24	
1,1-Dichloroethylene	441.2	10.0	ug/L	500	ND	88.2	68-153	0.363	21	
1,1-Dichloroethylene	441.2	10.0	ug/L	500	ND	88.2	70-148	0.363	22	
Acetone	818.9	100	ug/L	1020	ND	80.3	45-175	2.97	23	
Acetone	818.9	100	ug/L	1020	ND	80.3	45-173	2.97	30	
Methyl Iodide	925.2	20.0	ug/L	997	ND	92.8	79-167	3.99	14	
Methyl Iodide	925.2	10.0	ug/L	997	ND	92.8	62-167	3.99	24	
Carbon Disulfide	801.6	10.0	ug/L	1010	ND	79.4	72-156	2.80	19	
Carbon Disulfide	801.6	10.0	ug/L	1010	ND	79.4	71-163	2.80	22	
Acetonitrile	445.7	100	ug/L	1010	ND	44.3	38-166	8.73	20	
Methylene Chloride	429.7	50.0	ug/L	500	ND	85.9	64-143	1.32	19	
Methylene Chloride	429.7	50.0	ug/L	500	ND	85.9	69-140	1.32	19	
Acrylonitrile	878.3	50.0	ug/L	1000	ND	87.5	58-151	1.17	15	
Acrylonitrile	878.3	50.0	ug/L	1000	ND	87.5	58-151	1.17	15	

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Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HD1128-MSD1)	Source: 1HD0953-07			Prepared: 04/17/24 00:00 Analyzed: 04/17/24 20:39						
trans-1,2-Dichloroethylene	438.9	10.0	ug/L	500	ND	87.8	65-145	0.885	18	
trans-1,2-Dichloroethylene	438.9	10.0	ug/L	500	ND	87.8	69-144	0.885	22	
1,1-Dichloroethane	425.2	10.0	ug/L	500	ND	85.0	68-136	2.03	17	
1,1-Dichloroethane	425.2	10.0	ug/L	500	ND	85.0	70-138	2.03	20	
Vinyl Acetate	956.5	50.0	ug/L	1020	ND	93.9	58-143	4.13	14	
Vinyl Acetate	956.5	50.0	ug/L	1020	ND	93.9	58-142	4.13	24	
2,2-Dichloropropane	366.0	10.0	ug/L	500	ND	73.2	50-118	3.28	17	
cis-1,2-Dichloroethylene	415.8	10.0	ug/L	500	ND	83.2	67-153	20.0	22	
cis-1,2-Dichloroethylene	415.8	10.0	ug/L	500	ND	83.2	68-151	20.0	22	
2-Butanone (MEK)	1006	50.0	ug/L	1030	ND	97.4	52-159	3.84	28	
2-Butanone (MEK)	1006	100	ug/L	1030	ND	97.4	50-160	3.84	23	
Bromochloromethane	439.9	10.0	ug/L	500	ND	88.0	61-151	2.11	27	
Bromochloromethane	439.9	10.0	ug/L	500	ND	88.0	65-143	2.11	22	
Chloroform	418.1	10.0	ug/L	500	ND	83.6	77-132	1.71	17	
Chloroform	418.1	10.0	ug/L	500	ND	83.6	71-143	1.71	21	
1,1,1-Trichloroethane	412.0	10.0	ug/L	500	ND	82.4	71-118	0.870	15	
1,1,1-Trichloroethane	412.0	10.0	ug/L	500	ND	82.4	63-133	0.870	23	
1,1-Dichloropropene	412.7	10.0	ug/L	500	ND	82.5	82-128	2.80	16	
Carbon Tetrachloride	436.0	10.0	ug/L	500	ND	87.2	71-133	1.71	14	
Carbon Tetrachloride	436.0	10.0	ug/L	500	ND	87.2	63-142	1.71	22	
Benzene	442.5	10.0	ug/L	500	3.45	87.8	81-125	2.21	12	
Benzene	442.5	10.0	ug/L	500	3.70	87.8	69-133	2.21	18	
1,2-Dichloroethane	436.1	10.0	ug/L	500	ND	87.2	75-125	0.981	13	
1,2-Dichloroethane	436.1	10.0	ug/L	500	ND	87.2	63-138	0.981	20	
Trichloroethylene	436.3	10.0	ug/L	500	ND	87.3	83-120	2.31	11	
Trichloroethylene	436.3	10.0	ug/L	500	ND	87.3	71-133	2.31	23	
1,2-Dichloropropane	444.1	10.0	ug/L	500	ND	88.8	80-124	2.03	11	
1,2-Dichloropropane	444.1	10.0	ug/L	500	ND	88.8	69-132	2.03	20	
Dibromomethane	456.6	10.0	ug/L	500	ND	91.3	84-131	2.44	13	
Dibromomethane	456.6	10.0	ug/L	500	ND	91.3	70-147	2.44	22	
Bromodichloromethane	437.5	10.0	ug/L	500	ND	87.5	79-118	2.08	11	
Bromodichloromethane	437.5	10.0	ug/L	500	ND	87.5	67-130	2.08	21	
cis-1,3-Dichloropropene	434.4	10.0	ug/L	500	ND	86.9	75-116	1.64	11	
cis-1,3-Dichloropropene	434.4	10.0	ug/L	500	ND	86.9	61-126	1.64	21	
4-Methyl-2-pentanone (MIBK)	1004	50.0	ug/L	1010	ND	99.0	65-149	0.952	14	
4-Methyl-2-pentanone (MIBK)	1004	50.0	ug/L	1010	ND	99.0	55-147	0.952	23	
Toluene	424.9	10.0	ug/L	500	ND	85.0	82-123	2.28	12	
Toluene	424.9	10.0	ug/L	500	ND	85.0	71-133	2.28	19	
trans-1,3-Dichloropropene	449.2	10.0	ug/L	500	ND	89.8	75-117	2.05	11	
trans-1,3-Dichloropropene	449.2	10.0	ug/L	500	ND	89.8	63-124	2.05	21	
Ethyl Methacrylate	963.9	100	ug/L	1010	ND	95.8	73-135	1.36	10	
1,1,2-Trichloroethane	452.1	10.0	ug/L	500	ND	90.4	77-122	0.837	11	
1,1,2-Trichloroethane	452.1	10.0	ug/L	500	ND	90.4	69-133	0.837	19	

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1128 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HD1128-MSD1)	Source: 1HD0953-07			Prepared: 04/17/24 00:00 Analyzed: 04/17/24 20:39						
Tetrachloroethylene	442.9	10.0	ug/L	500	ND	88.6	74-120	1.06	17	
Tetrachloroethylene	442.9	10.0	ug/L	500	ND	88.6	70-124	1.06	24	
1,3-Dichloropropane	516.8	10.0	ug/L	500	ND	103	80-127	0.425	13	
2-Hexanone (MBK)	1079	50.0	ug/L	1030	ND	104	57-150	1.61	17	
2-Hexanone (MBK)	1079	50.0	ug/L	1030	ND	104	53-141	1.61	24	
Dibromochloromethane	463.8	10.0	ug/L	500	ND	92.8	80-120	0.346	12	
Dibromochloromethane	463.8	10.0	ug/L	500	ND	92.8	74-122	0.346	21	
1,2-Dibromoethane	467.8	10.0	ug/L	500	ND	93.6	67-125	0.450	12	
1,2-Dibromoethane	467.8	10.0	ug/L	500	ND	93.6	66-127	0.450	23	
Chlorobenzene	449.1	10.0	ug/L	500	7.58	88.3	81-113	1.20	14	
Chlorobenzene	449.1	10.0	ug/L	500	9.21	88.0	76-116	1.20	21	
1,1,1,2-Tetrachloroethane	455.4	10.0	ug/L	500	ND	91.1	80-119	1.33	15	
1,1,1,2-Tetrachloroethane	455.4	10.0	ug/L	500	ND	91.1	77-121	1.33	25	
Ethylbenzene	457.5	10.0	ug/L	500	ND	91.5	78-114	1.24	14	
Ethylbenzene	457.5	10.0	ug/L	500	ND	91.5	73-124	1.24	20	
Xylenes, total	1385	20.0	ug/L	1500	ND	92.3	77-116	1.57	13	
Xylenes, total	1385	20.0	ug/L	1500	ND	92.3	75-123	1.57	20	
Styrene	473.3	10.0	ug/L	500	ND	94.7	78-114	0.821	12	
Styrene	473.3	10.0	ug/L	500	ND	94.7	70-120	0.821	23	
Bromoform	443.3	10.0	ug/L	500	ND	88.7	69-125	0.271	14	
Bromoform	443.3	10.0	ug/L	500	ND	88.7	70-124	0.271	22	
1,2,3-Trichloropropane	468.3	10.0	ug/L	500	ND	93.7	72-125	1.57	18	
1,2,3-Trichloropropane	468.3	10.0	ug/L	500	ND	93.7	62-135	1.57	28	
trans-1,4-Dichloro-2-butene	835.1	50.0	ug/L	1040	ND	80.4	48-131	0.454	17	
trans-1,4-Dichloro-2-butene	835.1	50.0	ug/L	1040	ND	80.4	50-120	0.454	26	
1,1,2,2-Tetrachloroethane	475.5	10.0	ug/L	500	ND	95.1	51-138	1.61	30	
1,1,2,2-Tetrachloroethane	475.5	10.0	ug/L	500	ND	95.1	63-126	1.61	24	
1,3-Dichlorobenzene	454.5	10.0	ug/L	500	ND	91.0	70-122	0.942	30	
1,4-Dichlorobenzene	441.6	10.0	ug/L	500	ND	88.3	70-124	1.24	28	
1,4-Dichlorobenzene	441.6	10.0	ug/L	500	ND	88.3	72-119	1.24	24	
1,2-Dichlorobenzene	458.3	10.0	ug/L	500	ND	91.7	68-123	1.13	29	
1,2-Dichlorobenzene	458.3	10.0	ug/L	500	ND	91.7	71-117	1.13	24	
1,2-Dibromo-3-chloropropane	477.9	10.0	ug/L	500	ND	95.6	46-149	1.73	30	
1,2-Dibromo-3-chloropropane	477.9	50.0	ug/L	500	ND	95.6	49-134	1.73	28	
1,2,4-Trichlorobenzene	452.6	10.0	ug/L	500	ND	90.5	60-137	0.551	30	
Allyl chloride	285.6	10.0	ug/L	357	ND	79.9	60-140	1.43	30	
Chloroprene	502.1	10.0	ug/L	500	ND	100	60-140	2.36	30	
Methacrylonitrile	581.1	10.0	ug/L	643	ND	90.4	60-140	0.737	30	
Methyl Methacrylate	562.0	10.0	ug/L	573	ND	98.0	60-140	1.29	30	
Propionitrile	752.2	100	ug/L	500	ND	150	60-140	4.05	30	QS-02
Surrogate: Dibromofluoromethane	476		ug/L	502		94.9	80-126			
Surrogate: Dibromofluoromethane	476		ug/L	502		94.9	80-126			

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD1128 - EPA 5030B - EPA 8260B

Matrix Spike Dup (1HD1128-MSD1) Source: 1HD0953-07 Prepared: 04/17/24 00:00 Analyzed: 04/17/24 20:39

Surrogate: Dibromofluoromethane	476		ug/L	502		94.9	80-126			
Surrogate: Dibromofluoromethane	476		ug/L	502		94.9	75-136			
Surrogate: 1,2-Dichloroethane-d4	482		ug/L	501		96.3	63-138			
Surrogate: 1,2-Dichloroethane-d4	482		ug/L	501		96.3	63-138			
Surrogate: 1,2-Dichloroethane-d4	482		ug/L	501		96.3	63-138			
Surrogate: 1,2-Dichloroethane-d4	482		ug/L	501		96.3	63-138			
Surrogate: 1,2-Dichloroethane-d4	482		ug/L	501		96.3	61-142			
Surrogate: Toluene-d8	495		ug/L	504		98.2	87-116			
Surrogate: Toluene-d8	495		ug/L	504		98.2	87-116			
Surrogate: Toluene-d8	495		ug/L	504		98.2	87-116			
Surrogate: Toluene-d8	495		ug/L	504		98.2	87-116			
Surrogate: Toluene-d8	495		ug/L	504		98.2	82-121			
Surrogate: 4-Bromofluorobenzene	504		ug/L	501		100	85-111			
Surrogate: 4-Bromofluorobenzene	504		ug/L	501		100	85-111			
Surrogate: 4-Bromofluorobenzene	504		ug/L	501		100	85-111			
Surrogate: 4-Bromofluorobenzene	504		ug/L	501		100	85-111			
Surrogate: 4-Bromofluorobenzene	504		ug/L	501		100	80-116			

Determination of General Solvents	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0875 - Semi-Vol GC - EPA 8015C

Blank (1HD0875-BLK1) Prepared: 04/15/24 08:30 Analyzed: 04/15/24 16:51

Isobutanol	<1.0	1.0	mg/L							
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LCS (1HD0875-BS1) Prepared: 04/15/24 08:30 Analyzed: 04/15/24 14:19

Isobutanol	27.31	1.0	mg/L	26.0		105	40-135			
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Matrix Spike (1HD0875-MS1) Source: 1HD0193-01 Prepared: 04/15/24 08:30 Analyzed: 04/15/24 22:12

Isobutanol	27.26	1.0	mg/L	26.0	ND	105	63-135			
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Matrix Spike Dup (1HD0875-MSD1) Source: 1HD0193-01 Prepared: 04/15/24 08:30 Analyzed: 04/15/24 22:43

Isobutanol	26.89	1.0	mg/L	26.0	ND	103	63-135	1.35	30	
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Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0906 - 3520C BNA Cont Liq - EPA 8270C

Blank (1HD0906-BLK1) Prepared: 04/15/24 13:45 Analyzed: 04/29/24 16:14

N-Nitrosodimethylamine	<8	8	ug/L							
Methyl Methanesulfonate	<8	8	ug/L							
N-Nitrosodiethylamine	<8	8	ug/L							
N-Nitrosomethylethylamine	<8	8	ug/L							
Ethyl Methanesulfonate	<8	8	ug/L							
Phenol	<8	8	ug/L							



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CERTIFICATE OF ANALYSIS

1HD1048

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Base/Neutral/Acid Extractable Compounds										
Batch 1HD0906 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HD0906-BLK1)				Prepared: 04/15/24 13:45 Analyzed: 04/29/24 16:14						
Bis(2-Chloroethyl) Ether	<8	8	ug/L							
2-Chlorophenol	<8	8	ug/L							
Benzyl Alcohol	<8	8	ug/L							
2-Methylphenol (o-Cresol)	<8	8	ug/L							
Bis[2-Chloroisopropyl]ether	<8	8	ug/L							
n-Nitroso-di-n-propylamine	<8	8	ug/L							
N-Nitrosopyrrolidine	<8	8	ug/L							
Acetophenone	<8	8	ug/L							
o-Toluidine	<8	8	ug/L							
(3 & 4)-Methylphenol	<8	8	ug/L							
Hexachloroethane	<8	8	ug/L							
Nitrobenzene	<8	8	ug/L							
N-Nitrosopiperidine	<8	8	ug/L							
Isophorone	<8	8	ug/L							
2-Nitrophenol	<8	8	ug/L							
2,4-Dimethylphenol	<8	8	ug/L							
Bis (2-Chloroethoxy) Methane	<8	8	ug/L							
2,4-Dichlorophenol	<8	8	ug/L							
Naphthalene	<8	8	ug/L							
4-Chloroaniline	<8	8	ug/L							
2,6-Dichlorophenol	<8	8	ug/L							
Hexachloropropene	<8	8	ug/L							
Hexachlorobutadiene	<8	8	ug/L							
N-Nitrosodi-n-butylamine	<8	8	ug/L							
1,4-Phenylenediamine	<8	8	ug/L							
4-Chloro-3-methylphenol	<8	8	ug/L							
2-Methylnaphthalene	<8	8	ug/L							
Isosafrole	<8	8	ug/L							
1,2,4,5-Tetrachlorobenzene	<8	8	ug/L							
Hexachlorocyclopentadiene	<8	8	ug/L							
2,4,6-Trichlorophenol	<8	8	ug/L							
2,4,5-Trichlorophenol	<8	8	ug/L							
Safrole	<8	8	ug/L							
2-Chloronaphthalene	<8	8	ug/L							
2-Nitroaniline	<8	8	ug/L							
1,4-Naphthoquinone	<8	8	ug/L							
Dimethylphthalate	<8	8	ug/L							
1,3-Dinitrobenzene	<8	8	ug/L							
1,2-Dinitrobenzene	<8	8	ug/L							
2,6-Dinitrotoluene	<8	8	ug/L							
Acenaphthylene	<8	8	ug/L							
3-Nitroaniline	<8	8	ug/L							

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Base/Neutral/Acid Extractable Compounds										
Batch 1HD0906 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HD0906-BLK1)				Prepared: 04/15/24 13:45 Analyzed: 04/29/24 16:14						
Acenaphthene	<8	8	ug/L							
2,4-Dinitrophenol	<8	8	ug/L							
4-Nitrophenol	<8	8	ug/L							
Dibenzofuran	<8	8	ug/L							
2,4-Dinitrotoluene	<8	8	ug/L							
2,3,4,6-Tetrachlorophenol	<8	8	ug/L							
Pentachlorobenzene	<8	8	ug/L							
1-Naphthylamine	<8	8	ug/L							
2-Naphthylamine	<8	8	ug/L							
Diethyl Phthalate	<8	8	ug/L							
Fluorene	<8	8	ug/L							
4-Chlorophenyl Phenyl Ether	<8	8	ug/L							
4-Nitroaniline	<8	8	ug/L							
5-Nitro-o-toluidine	<8	8	ug/L							
4,6-Dinitro-2-methylphenol	<8	8	ug/L							
N-Nitrosodiphenylamine	<8	8	ug/L							
Diphenylamine	<8	8	ug/L							
Azobenzene	<8	8	ug/L							
Diallate	<8	8	ug/L							
1,3,5-Trinitrobenzene	<8	8	ug/L							
Phenacetin	<8	8	ug/L							
4-Bromophenyl Phenyl Ether	<8	8	ug/L							
4-Aminobiphenyl	<8	8	ug/L							
Pentachlorophenol	<8	8	ug/L							
Pronamide	<8	8	ug/L							
Pentachloronitrobenzene (PCNB)	<8	8	ug/L							
Phenanthrene	<8	8	ug/L							
Anthracene	<8	8	ug/L							
Di-n-butyl Phthalate	<8	8	ug/L							
Methapyrilene	<8	8	ug/L							
Fluoranthene	<8	8	ug/L							
Isodrin	<8	8	ug/L							
Chlorobenzilate	<8	8	ug/L							
Pyrene	<8	8	ug/L							
p-(Dimethylamino)azobenzene	<8	8	ug/L							
3,3-Dimethylbenzidine	<8	8	ug/L							
Butyl Benzyl Phthalate	<8	8	ug/L							
Benzo(a)anthracene	<8	8	ug/L							
Chrysene	<8	8	ug/L							
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L							
Kepone	<8	8	ug/L							
3,3'-Dichlorobenzidine	<8	8	ug/L							

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Base/Neutral/Acid Extractable Compounds										
Batch 1HD0906 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HD0906-BLK1)										
				Prepared: 04/15/24 13:45 Analyzed: 04/29/24 16:14						
2-Acetylaminofluorene	<8	8	ug/L							
Di-n-octyl Phthalate	<8	8	ug/L							
Benzo(b)Fluoranthene	<8	8	ug/L							
7,12-Dimethylbenz [a] anthracene	<8	8	ug/L							
Benzo(k)Fluoranthene	<8	8	ug/L							
Benzo(a)Pyrene	<8	8	ug/L							
3-Methylcholanthrene	<8	8	ug/L							
Dibenzo(a,h)anthracene	<8	8	ug/L							
Indeno(1,2,3-cd)Pyrene	<8	8	ug/L							
Benzo(g,h,i)perylene	<8	8	ug/L							
Surrogate: 2-Fluorophenol										
	21.3		ug/L	29.6		72.0	24-136			
Surrogate: Phenol-d6										
	22.9		ug/L	30.5		75.2	15-140			
Surrogate: Nitrobenzene-d5										
	23.2		ug/L	30.0		77.3	29-130			
Surrogate: 2-Fluorobiphenyl										
	19.9		ug/L	28.8		69.0	23-113			
Surrogate: 2,4,6-Tribromophenol										
	25.2		ug/L	29.7		84.8	15-139			
Surrogate: Terphenyl-d14										
	27.5		ug/L	28.8		95.5	27-141			
LCS (1HD0906-BS1)										
				Prepared: 04/15/24 13:45 Analyzed: 04/29/24 16:39						
N-Nitrosodimethylamine	20.3	8	ug/L	25.0		81.4	36-138			
Methyl Methanesulfonate	18.7	8	ug/L	25.0		74.6	22-114			
N-Nitrosodiethylamine	43.2	8	ug/L	100		43.2	52-114			QS-03
N-Nitrosomethylethylamine	44.5	8	ug/L	100		44.5	36-120			
Ethyl Methanesulfonate	20.9	8	ug/L	25.0		83.4	46-110			
Phenol	21.6	8	ug/L	25.0		86.5	50-112			
Bis(2-Chloroethyl) Ether	18.8	8	ug/L	25.0		75.0	39-151			
2-Chlorophenol	20.2	8	ug/L	25.0		80.8	56-116			
Benzyl Alcohol	24.0	8	ug/L	25.0		95.8	13-158			
2-Methylphenol (o-Cresol)	21.2	8	ug/L	25.0		84.8	53-131			
Bis[2-Chloroisopropyl]ether	24.3	8	ug/L	25.0		97.1	50-121			
n-Nitroso-di-n-propylamine	23.6	8	ug/L	25.0		94.4	50-138			
N-Nitrosopyrrolidine	44.2	8	ug/L	100		44.2	31-118			
Acetophenone	22.2	8	ug/L	25.0		88.8	45-104			
o-Toluidine	29.9	8	ug/L	100		29.9	10-163			
(3 & 4)-Methylphenol	23.9	8	ug/L	25.0		95.6	30-164			
Hexachloroethane	15.7	8	ug/L	25.0		62.9	10-110			
Nitrobenzene	24.5	8	ug/L	25.0		97.8	47-134			
N-Nitrosopiperidine	47.8	8	ug/L	100		47.8	51-122			QS-03
Isophorone	25.0	8	ug/L	25.0		99.9	54-128			
2-Nitrophenol	24.5	8	ug/L	25.0		98.1	54-117			
2,4-Dimethylphenol	25.6	8	ug/L	25.0		103	52-118			
Bis (2-Chloroethoxy) Methane	12.4	8	ug/L	25.0		49.8	13-132			
2,4-Dichlorophenol	25.7	8	ug/L	25.0		103	58-114			
Naphthalene	22.4	8	ug/L	25.0		89.4	37-116			

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0906 - 3520C BNA Cont Liq - EPA 8270C										
LCS (1HD0906-BS1)				Prepared: 04/15/24 13:45 Analyzed: 04/29/24 16:39						
2,6-Dichlorophenol	23.4	8	ug/L	25.0		93.5	52-129			
Hexachloropropene	10.7	8	ug/L	25.0		42.8	14-110			
Hexachlorobutadiene	12.5	8	ug/L	25.0		49.9	14-110			
N-Nitrosodi-n-butylamine	47.0	8	ug/L	100		47.0	40-135			
4-Chloro-3-methylphenol	27.0	8	ug/L	25.0		108	57-136			
2-Methylnaphthalene	21.7	8	ug/L	25.0		86.7	44-111			
Isosafrole	20.0	8	ug/L	25.0		80.2	49-107			
1,2,4,5-Tetrachlorobenzene	14.0	8	ug/L	25.0		56.1	42-110			
Hexachlorocyclopentadiene	16.2	8	ug/L	25.0		64.6	11-110			
2,4,6-Trichlorophenol	24.2	8	ug/L	25.0		96.6	55-120			
2,4,5-Trichlorophenol	26.3	8	ug/L	25.0		105	55-121			
Safrole	13.5	8	ug/L	25.0		53.8	40-118			
2-Chloronaphthalene	15.2	8	ug/L	25.0		60.9	47-127			
2-Nitroaniline	24.0	8	ug/L	25.0		96.1	36-143			
Dimethylphthalate	24.5	8	ug/L	25.0		98.0	59-128			
1,3-Dinitrobenzene	24.2	8	ug/L	25.0		96.8	63-125			
1,2-Dinitrobenzene	24.9	8	ug/L	25.0		99.6	63-123			
2,6-Dinitrotoluene	24.6	8	ug/L	25.0		98.6	60-127			
Acenaphthylene	18.9	8	ug/L	25.0		75.5	49-113			
Acenaphthene	22.1	8	ug/L	25.0		88.6	50-119			
2,4-Dinitrophenol	26.2	8	ug/L	25.0		105	27-157			
4-Nitrophenol	24.4	8	ug/L	25.0		97.4	49-154			
Dibenzofuran	22.6	8	ug/L	25.0		90.6	56-121			
2,4-Dinitrotoluene	25.3	8	ug/L	25.0		101	53-138			
2,3,4,6-Tetrachlorophenol	25.4	8	ug/L	25.0		101	47-132			
Pentachlorobenzene	19.6	8	ug/L	25.0		78.4	41-125			
Diethyl Phthalate	25.9	8	ug/L	25.0		103	53-138			
Fluorene	24.1	8	ug/L	25.0		96.3	54-125			
4-Chlorophenyl Phenyl Ether	23.2	8	ug/L	25.0		92.6	51-122			
4-Nitroaniline	<8	8	ug/L	25.0		31.4	10-136			
4,6-Dinitro-2-methylphenol	24.4	8	ug/L	25.0		97.6	49-137			
Diphenylamine	18.6	8	ug/L	25.0		74.2	35-151			
Azobenzene	23.6	8	ug/L	25.0		94.5	16-156			
Diallate	22.8	8	ug/L	25.0		91.3	54-132			
1,3,5-Trinitrobenzene	23.7	8	ug/L	25.0		94.9	57-173			
Phenacetin	23.9	8	ug/L	25.0		95.6	55-121			
4-Bromophenyl Phenyl Ether	22.8	8	ug/L	25.0		91.4	53-122			
Pentachlorophenol	25.4	8	ug/L	25.0		102	18-152			
Pronamide	19.2	8	ug/L	25.0		76.8	42-122			
Pentachloronitrobenzene (PCNB)	24.0	8	ug/L	25.0		95.9	50-128			
Phenanthrene	24.0	8	ug/L	25.0		96.2	59-131			
Anthracene	22.1	8	ug/L	25.0		88.3	59-127			

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0906 - 3520C BNA Cont Liq - EPA 8270C										
LCS (1HD0906-BS1)				Prepared: 04/15/24 13:45 Analyzed: 04/29/24 16:39						
Di-n-butyl Phthalate	26.0	8	ug/L	25.0		104	64-148			
Fluoranthene	26.0	8	ug/L	25.0		104	62-132			
Isodrin	23.3	8	ug/L	25.0		93.2	46-130			
Chlorobenzilate	22.3	8	ug/L	25.0		89.1	48-150			
Pyrene	26.4	8	ug/L	25.0		106	58-135			
p-(Dimethylamino)azobenzene	26.2	8	ug/L	100		26.2	28-146			QS-03
Butyl Benzyl Phthalate	24.2	8	ug/L	25.0		96.6	52-150			
Benzo(a)anthracene	24.3	8	ug/L	25.0		97.0	58-131			
Chrysene	25.4	8	ug/L	25.0		101	59-131			
Bis(2-Ethylhexyl) Phthalate	26.4	6	ug/L	25.0		105	33-184			
2-Acetylaminofluorene	57.8	8	ug/L	100		57.8	47-166			
Di-n-octyl Phthalate	29.6	8	ug/L	25.0		118	48-162			
Benzo(b)Fluoranthene	29.0	8	ug/L	25.0		116	50-146			
7,12-Dimethylbenz [a] anthracene	20.4	8	ug/L	25.0		81.7	22-155			
Benzo(k)Fluoranthene	27.1	8	ug/L	25.0		109	54-144			
Benzo(a)Pyrene	22.2	8	ug/L	25.0		88.9	39-148			
3-Methylcholanthrene	11.5	8	ug/L	25.0		46.1	34-118			
Dibenzo(a,h)anthracene	27.7	8	ug/L	25.0		111	46-153			
Indeno(1,2,3-cd)Pyrene	26.8	8	ug/L	25.0		107	48-152			
Benzo(g,h,i)perylene	26.1	8	ug/L	25.0		104	47-161			
<i>Surrogate: 2-Fluorophenol</i>	23.9		ug/L	29.6		80.9	24-136			
<i>Surrogate: Phenol-d6</i>	25.6		ug/L	30.5		84.2	15-140			
<i>Surrogate: Nitrobenzene-d5</i>	28.9		ug/L	30.0		96.2	38-115			
<i>Surrogate: 2-Fluorobiphenyl</i>	24.8		ug/L	28.8		86.1	33-110			
<i>Surrogate: 2,4,6-Tribromophenol</i>	31.4		ug/L	29.7		105	15-139			
<i>Surrogate: Terphenyl-d14</i>	32.0		ug/L	28.8		111	30-142			
LCS Dup (1HD0906-BSD1)				Prepared: 04/15/24 13:45 Analyzed: 04/29/24 17:03						
N-Nitrosodimethylamine	18.8	8	ug/L	25.0		75.3	36-138	7.76	30	
Methyl Methanesulfonate	17.9	8	ug/L	25.0		71.5	22-114	4.33	23	
N-Nitrosodiethylamine	40.4	8	ug/L	100		40.4	52-114	6.69	18	QS-03
N-Nitrosomethylethylamine	42.4	8	ug/L	100		42.4	36-120	4.70	22	
Ethyl Methanesulfonate	18.8	8	ug/L	25.0		75.2	46-110	10.4	24	
Phenol	20.5	8	ug/L	25.0		82.2	50-112	5.12	28	
Bis(2-Chloroethyl) Ether	16.9	8	ug/L	25.0		67.4	39-151	10.7	30	
2-Chlorophenol	20.1	8	ug/L	25.0		80.4	56-116	0.546	22	
Benzyl Alcohol	22.3	8	ug/L	25.0		89.2	13-158	7.18	30	
2-Methylphenol (o-Cresol)	20.5	8	ug/L	25.0		82.0	53-131	3.31	25	
Bis[2-Chloroisopropyl]ether	20.1	8	ug/L	25.0		80.5	50-121	18.7	25	
n-Nitroso-di-n-propylamine	22.4	8	ug/L	25.0		89.7	50-138	5.04	30	
N-Nitrosopyrrolidine	41.4	8	ug/L	100		41.4	31-118	6.50	30	
Acetophenone	20.6	8	ug/L	25.0		82.2	45-104	7.67	30	
o-Toluidine	28.2	8	ug/L	100		28.2	10-163	5.72	30	

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0906 - 3520C BNA Cont Liq - EPA 8270C									
LCS Dup (1HD0906-BSD1)				Prepared: 04/15/24 13:45 Analyzed: 04/29/24 17:03					
(3 & 4)-Methylphenol	22.6	8	ug/L	25.0		90.3 30-164	5.72	30	
Hexachloroethane	13.6	8	ug/L	25.0		54.5 10-110	14.4	37	
Nitrobenzene	22.5	8	ug/L	25.0		89.9 47-134	8.48	28	
N-Nitrosopiperidine	43.9	8	ug/L	100		43.9 51-122	8.38	30	QS-03
Isophorone	22.5	8	ug/L	25.0		89.8 54-128	10.6	22	
2-Nitrophenol	22.2	8	ug/L	25.0		88.8 54-117	9.97	21	
2,4-Dimethylphenol	22.9	8	ug/L	25.0		91.8 52-118	11.2	23	
Bis (2-Chloroethoxy) Methane	18.7	8	ug/L	25.0		74.6 13-132	40.0	30	QR-02
2,4-Dichlorophenol	23.6	8	ug/L	25.0		94.4 58-114	8.48	20	
Naphthalene	19.5	8	ug/L	25.0		78.0 37-116	13.6	17	
2,6-Dichlorophenol	21.6	8	ug/L	25.0		86.4 52-129	7.91	16	
Hexachloropropene	8.9	8	ug/L	25.0		35.4 14-110	18.7	29	
Hexachlorobutadiene	11.4	8	ug/L	25.0		45.8 14-110	8.70	29	
N-Nitrosodi-n-butylamine	43.7	8	ug/L	100		43.7 40-135	7.26	23	
4-Chloro-3-methylphenol	24.9	8	ug/L	25.0		99.6 57-136	8.20	18	
2-Methylnaphthalene	18.4	8	ug/L	25.0		73.5 44-111	16.5	20	
Isosafrole	18.1	8	ug/L	25.0		72.4 49-107	10.2	12	
1,2,4,5-Tetrachlorobenzene	12.9	8	ug/L	25.0		51.7 42-110	8.17	30	
Hexachlorocyclopentadiene	11.1	8	ug/L	25.0		44.3 11-110	37.3	29	QR-02
2,4,6-Trichlorophenol	24.5	8	ug/L	25.0		98.0 55-120	1.44	15	
2,4,5-Trichlorophenol	25.9	8	ug/L	25.0		104 55-121	1.49	16	
Safrole	19.0	8	ug/L	25.0		75.9 40-118	34.0	30	QR-02
2-Chloronaphthalene	14.1	8	ug/L	25.0		56.4 47-127	7.71	17	
2-Nitroaniline	24.6	8	ug/L	25.0		98.6 36-143	2.55	30	
Dimethylphthalate	25.8	8	ug/L	25.0		103 59-128	5.25	15	
1,3-Dinitrobenzene	27.1	8	ug/L	25.0		108 63-125	11.2	14	
1,2-Dinitrobenzene	25.5	8	ug/L	25.0		102 63-123	2.26	18	
2,6-Dinitrotoluene	25.8	8	ug/L	25.0		103 60-127	4.64	13	
Acenaphthylene	21.7	8	ug/L	25.0		86.8 49-113	13.9	23	
Acenaphthene	20.9	8	ug/L	25.0		83.7 50-119	5.67	16	
2,4-Dinitrophenol	29.8	8	ug/L	25.0		119 27-157	12.6	23	
4-Nitrophenol	23.7	8	ug/L	25.0		95.0 49-154	2.58	28	
Dibenzofuran	22.3	8	ug/L	25.0		89.1 56-121	1.69	18	
2,4-Dinitrotoluene	24.7	8	ug/L	25.0		98.6 53-138	2.56	18	
2,3,4,6-Tetrachlorophenol	28.6	8	ug/L	25.0		114 47-132	11.9	29	
Pentachlorobenzene	19.2	8	ug/L	25.0		76.7 41-125	2.17	22	
Diethyl Phthalate	26.5	8	ug/L	25.0		106 53-138	2.60	18	
Fluorene	22.5	8	ug/L	25.0		89.9 54-125	6.83	14	
4-Chlorophenyl Phenyl Ether	21.9	8	ug/L	25.0		87.7 51-122	5.46	15	
4-Nitroaniline	9.1	8	ug/L	25.0		36.4 10-136	15.0	30	
4,6-Dinitro-2-methylphenol	25.0	8	ug/L	25.0		100 49-137	2.47	16	
Diphenylamine	21.2	8	ug/L	25.0		84.8 35-151	13.3	30	

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Base/Neutral/Acid Extractable Compounds										
Batch 1HD0906 - 3520C BNA Cont Liq - EPA 8270C										
LCS Dup (1HD0906-BSD1)										
				Prepared: 04/15/24 13:45 Analyzed: 04/29/24 17:03						
Azobenzene	23.4	8	ug/L	25.0		93.6	16-156	0.893	30	
Diallate	22.4	8	ug/L	25.0		89.6	54-132	1.90	25	
1,3,5-Trinitrobenzene	23.2	8	ug/L	25.0		93.0	57-173	2.04	30	
Phenacetin	23.4	8	ug/L	25.0		93.8	55-121	1.90	30	
4-Bromophenyl Phenyl Ether	23.3	8	ug/L	25.0		93.1	53-122	1.87	16	
Pentachlorophenol	27.5	8	ug/L	25.0		110	18-152	7.71	30	
Pronamide	21.6	8	ug/L	25.0		86.2	42-122	11.5	30	
Pentachloronitrobenzene (PCNB)	23.9	8	ug/L	25.0		95.6	50-128	0.292	18	
Phenanthrene	24.2	8	ug/L	25.0		96.9	59-131	0.746	16	
Anthracene	23.7	8	ug/L	25.0		94.8	59-127	7.16	16	
Di-n-butyl Phthalate	26.5	8	ug/L	25.0		106	64-148	1.67	30	
Fluoranthene	25.8	8	ug/L	25.0		103	62-132	0.735	16	
Isodrin	21.9	8	ug/L	25.0		87.7	46-130	6.10	29	
Chlorobenzilate	22.1	8	ug/L	25.0		88.4	48-150	0.811	30	
Pyrene	24.5	8	ug/L	25.0		98.1	58-135	7.38	18	
p-(Dimethylamino)azobenzene	21.0	8	ug/L	100		21.0	28-146	22.1	30	QS-03
Butyl Benzyl Phthalate	24.1	8	ug/L	25.0		96.2	52-150	0.415	30	
Benzo(a)anthracene	24.0	8	ug/L	25.0		95.8	58-131	1.29	30	
Chrysene	25.0	8	ug/L	25.0		100	59-131	1.35	30	
Bis(2-Ethylhexyl) Phthalate	28.6	6	ug/L	25.0		114	33-184	8.08	30	
2-Acetylaminofluorene	54.9	8	ug/L	100		54.9	47-166	5.23	30	
Di-n-octyl Phthalate	29.3	8	ug/L	25.0		117	48-162	0.985	30	
Benzo(b)Fluoranthene	28.3	8	ug/L	25.0		113	50-146	2.34	30	
7,12-Dimethylbenz [a] anthracene	21.2	8	ug/L	25.0		84.7	22-155	3.61	30	
Benzo(k)Fluoranthene	28.6	8	ug/L	25.0		114	54-144	5.27	30	
Benzo(a)Pyrene	24.3	8	ug/L	25.0		97.4	39-148	9.11	30	
3-Methylcholanthrene	19.9	8	ug/L	25.0		79.6	34-118	53.2	30	QR-02
Dibenzo(a,h)anthracene	25.6	8	ug/L	25.0		103	46-153	7.58	30	
Indeno(1,2,3-cd)Pyrene	25.3	8	ug/L	25.0		101	48-152	5.79	30	
Benzo(g,h,i)perylene	25.3	8	ug/L	25.0		101	47-161	3.31	30	
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Surrogate: 2-Fluorophenol	22.4		ug/L	29.6		75.8	24-136			
Surrogate: Phenol-d6	24.6		ug/L	30.5		80.6	15-140			
Surrogate: Nitrobenzene-d5	26.8		ug/L	30.0		89.2	38-115			
Surrogate: 2-Fluorobiphenyl	23.8		ug/L	28.8		82.6	33-110			
Surrogate: 2,4,6-Tribromophenol	30.2		ug/L	29.7		102	15-139			
Surrogate: Terphenyl-d14	30.0		ug/L	28.8		104	30-142			

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Organophosphorus Insecticides										
Batch 1HD0937 - 3510C NP/OC Sep Fnl - EPA 8141										



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CERTIFICATE OF ANALYSIS

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Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0937 - 3510C NP/OC Sep Fnl - EPA 8141

Blank (1HD0937-BLK1)										
Prepared: 04/15/24 16:44 Analyzed: 04/18/24 19:18										
O,O,O-Triethyl phosphorothioate	<0.4	0.4	ug/L							
Thionazin	<0.4	0.4	ug/L							
Phorate	<0.4	0.4	ug/L							
Dimethoate	<0.4	0.4	ug/L							
Disulfoton	<0.4	0.4	ug/L							
Methyl Parathion	<0.4	0.4	ug/L							
Parathion	<0.4	0.4	ug/L							
Famphur	<0.4	0.4	ug/L							

Surrogate: 2-Nitro-m-xylene ND ug/L 8.34 38-122 A-01

LCS (1HD0937-BS1)										
Prepared: 04/15/24 16:44 Analyzed: 04/19/24 00:08										
O,O,O-Triethyl phosphorothioate	3.86	0.4	ug/L	4.02		95.8	42-115			
Thionazin	3.98	0.4	ug/L	4.03		98.8	28-118			
Phorate	3.88	0.4	ug/L	4.03		96.1	18-159			
Dimethoate	5.05	0.4	ug/L	4.03		125	43-155			
Disulfoton	3.65	0.4	ug/L	4.03		90.6	37-126			
Methyl Parathion	3.96	0.4	ug/L	4.04		98.0	28-145			
Parathion	3.62	0.4	ug/L	4.00		90.6	52-121			
Famphur	4.53	0.4	ug/L	4.02		113	44-144			

Surrogate: 2-Nitro-m-xylene 7.84 ug/L 8.34 94.0 38-122

LCS Dup (1HD0937-BSD1)										
Prepared: 04/15/24 16:44 Analyzed: 04/19/24 01:06										
O,O,O-Triethyl phosphorothioate	3.79	0.4	ug/L	4.02		94.2	42-115	1.70	30	
Thionazin	4.02	0.4	ug/L	4.03		99.5	28-118	0.750	30	
Phorate	3.86	0.4	ug/L	4.03		95.7	18-159	0.388	30	
Dimethoate	4.68	0.4	ug/L	4.03		116	43-155	7.61	22	
Disulfoton	3.88	0.4	ug/L	4.03		96.3	37-126	6.11	30	
Methyl Parathion	4.01	0.4	ug/L	4.04		99.3	28-145	1.25	28	
Parathion	3.72	0.4	ug/L	4.00		92.9	52-121	2.45	26	
Famphur	4.30	0.4	ug/L	4.02		107	44-144	5.21	28	

Surrogate: 2-Nitro-m-xylene 7.68 ug/L 8.34 92.0 38-122

Determination of Chlorinated	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0942 - EPA 8151A - EPA 8151A

Blank (1HD0942-BLK1)										
Prepared: 04/15/24 17:31 Analyzed: 04/30/24 09:58										
2,4-D	<2.0	2.0	ug/L							
2,4,5-TP (Silvex)	<0.5	0.5	ug/L							
2,4,5-T	<0.5	0.5	ug/L							
Dinoseb	<0.5	0.5	ug/L							



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1HD1048

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0942 - EPA 8151A - EPA 8151A										

Blank (1HD0942-BLK1) Prepared: 04/15/24 17:31 Analyzed: 04/30/24 09:58

Surrogate: 2,5-Dichlorobenzoic Acid 1.96 ug/L 2.02 96.8 31-116

LCS (1HD0942-BS1) Prepared: 04/15/24 17:31 Analyzed: 04/30/24 10:31

2,4-D	<2.0	2.0	ug/L	1.15		87.0	16-161			
2,4,5-TP (Silvex)	0.54	0.5	ug/L	0.575		94.8	35-141			
2,4,5-T	0.70	0.5	ug/L	0.575		121	54-149			
Dinoseb	0.74	0.5	ug/L	1.15		63.9	10-133			

Surrogate: 2,5-Dichlorobenzoic Acid 1.92 ug/L 2.02 95.3 31-116

LCS Dup (1HD0942-BSD1) Prepared: 04/15/24 17:31 Analyzed: 04/30/24 16:12

2,4-D	<2.0	2.0	ug/L	1.15		89.6	16-161	2.96	30	
2,4,5-TP (Silvex)	0.57	0.5	ug/L	0.575		99.1	35-141	4.48	30	
2,4,5-T	0.70	0.5	ug/L	0.575		122	54-149	0.717	30	
Dinoseb	<0.5	0.5	ug/L	1.15		31.3	10-133	68.5	30	QR-02

Surrogate: 2,5-Dichlorobenzoic Acid 2.04 ug/L 2.02 101 31-116

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0934 - 3510C NP/OC Sep Fnl - EPA 8081

Blank (1HD0934-BLK1) Prepared: 04/15/24 16:43 Analyzed: 04/17/24 17:02

Alpha-BHC	<0.05	0.05	ug/L							
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							
Methoxychlor	<0.05	0.05	ug/L							
Chlordane	<0.10	0.10	ug/L							
Toxaphene	<0.20	0.20	ug/L							
Hexachlorobenzene	<0.05	0.05	ug/L							



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CERTIFICATE OF ANALYSIS

1HD1048

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Organochlorine Insecticides & Metabolites										
Batch 1HD0934 - 3510C NP/OC Sep Fnl - EPA 8081										
Blank (1HD0934-BLK1)				Prepared: 04/15/24 16:43 Analyzed: 04/17/24 17:02						
Surrogate: Tetrachloro-m-xylene	0.521		ug/L	0.600		86.8	10-121			
LCS (1HD0934-BS1)				Prepared: 04/15/24 16:43 Analyzed: 04/17/24 17:17						
Alpha-BHC	0.236	0.05	ug/L	0.250		94.5	33-123			
Gamma-BHC [Lindane]	0.228	0.05	ug/L	0.250		91.1	34-120			
Beta-BHC	0.225	0.05	ug/L	0.250		89.9	33-125			
Heptachlor	0.255	0.05	ug/L	0.250		102	32-117			
Delta-BHC	0.268	0.05	ug/L	0.250		107	24-140			
Aldrin	0.207	0.05	ug/L	0.250		82.7	29-122			
Heptachlor Epoxide	0.222	0.05	ug/L	0.250		88.6	37-137			
Endosulfan I	0.239	0.05	ug/L	0.250		95.6	27-141			
4,4'-DDE	0.227	0.05	ug/L	0.250		90.6	38-147			
Dieldrin	0.217	0.05	ug/L	0.250		86.8	32-137			
Endrin	0.320	0.05	ug/L	0.250		128	25-142			
4,4'-DDD	0.227	0.05	ug/L	0.250		90.8	43-146			
Endosulfan II	0.238	0.05	ug/L	0.250		95.3	36-140			
4,4'-DDT	0.296	0.05	ug/L	0.250		118	39-140			
Endrin Aldehyde	0.236	0.05	ug/L	0.250		94.3	17-150			
Endosulfan Sulfate	0.246	0.05	ug/L	0.250		98.5	41-135			
Methoxychlor	0.337	0.05	ug/L	0.250		135	40-148			
Surrogate: Tetrachloro-m-xylene	0.545		ug/L	0.600		90.9	10-121			
LCS Dup (1HD0934-BSD1)				Prepared: 04/15/24 16:43 Analyzed: 04/17/24 17:32						
Alpha-BHC	0.243	0.05	ug/L	0.250		97.0	33-123	2.60	30	
Gamma-BHC [Lindane]	0.235	0.05	ug/L	0.250		94.1	34-120	3.24	30	
Beta-BHC	0.233	0.05	ug/L	0.250		93.4	33-125	3.79	30	
Heptachlor	0.256	0.05	ug/L	0.250		102	32-117	0.339	30	
Delta-BHC	0.271	0.05	ug/L	0.250		109	24-140	1.26	30	
Aldrin	0.209	0.05	ug/L	0.250		83.5	29-122	0.977	30	
Heptachlor Epoxide	0.229	0.05	ug/L	0.250		91.5	37-137	3.19	30	
Endosulfan I	0.243	0.05	ug/L	0.250		97.2	27-141	1.65	30	
4,4'-DDE	0.229	0.05	ug/L	0.250		91.6	38-147	1.03	30	
Dieldrin	0.222	0.05	ug/L	0.250		88.8	32-137	2.27	30	
Endrin	0.324	0.05	ug/L	0.250		130	25-142	1.32	30	
4,4'-DDD	0.234	0.05	ug/L	0.250		93.6	43-146	3.05	30	
Endosulfan II	0.241	0.05	ug/L	0.250		96.5	36-140	1.25	30	
4,4'-DDT	0.302	0.05	ug/L	0.250		121	39-140	2.24	30	
Endrin Aldehyde	0.233	0.05	ug/L	0.250		93.4	17-150	0.919	30	
Endosulfan Sulfate	0.249	0.05	ug/L	0.250		99.6	41-135	1.16	30	
Methoxychlor	0.342	0.05	ug/L	0.250		137	40-148	1.50	30	
Surrogate: Tetrachloro-m-xylene	0.534		ug/L	0.600		89.0	10-121			

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CERTIFICATE OF ANALYSIS

1HD1048

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0935 - 3510C NP/OC Sep Fnl - EPA 8082

Blank (1HD0935-BLK1)										
Prepared: 04/15/24 16:43 Analyzed: 04/17/24 17:02										
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 0.561 ug/L 0.600 93.4 38-121
 Surrogate: Decachlorobiphenyl 0.274 ug/L 0.600 45.7 25-119

LCS (1HD0935-BS1)										
Prepared: 04/15/24 16:43 Analyzed: 04/17/24 17:46										
Arochlor 1016	2.014	0.20	ug/L	2.60		77.5	25-126			
Arochlor 1260	2.665	0.20	ug/L	2.60		102	29-142			

Surrogate: Tetrachloro-m-xylene 0.571 ug/L 0.600 95.2 38-121
 Surrogate: Decachlorobiphenyl 0.296 ug/L 0.600 49.4 25-119

LCS Dup (1HD0935-BSD1)										
Prepared: 04/15/24 16:43 Analyzed: 04/17/24 18:01										
Arochlor 1016	1.954	0.20	ug/L	2.60		75.2	25-126	3.02	30	
Arochlor 1260	2.565	0.20	ug/L	2.60		98.6	29-142	3.82	30	

Surrogate: Tetrachloro-m-xylene 0.534 ug/L 0.600 89.1 38-121
 Surrogate: Decachlorobiphenyl 0.322 ug/L 0.600 53.7 25-119

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0959 - Wet Chem Preparation - EPA 376.2

Blank (1HD0959-BLK1)										
Prepared: 04/16/24 09:14 Analyzed: 04/16/24 10:06										
Sulfide, total	<0.10	0.10	mg/L							

LCS (1HD0959-BS1)										
Prepared: 04/16/24 09:14 Analyzed: 04/16/24 10:06										
Sulfide, total	0.336	0.10	mg/L	0.31		107	59-110			

Matrix Spike (1HD0959-MS1)										
Source: 1HD1048-05 Prepared: 04/16/24 09:14 Analyzed: 04/16/24 10:06										
Sulfide, total	0.532	0.15	mg/L	0.47	ND	113	50-150			

Matrix Spike Dup (1HD0959-MSD1)										
Source: 1HD1048-05 Prepared: 04/16/24 09:14 Analyzed: 04/16/24 10:06										
Sulfide, total	0.571	0.15	mg/L	0.47	ND	121	50-150	6.93	30	

Batch 1HD1205 - Wet Chem Preparation - EPA 9010B

Blank (1HD1205-BLK1)										
Prepared: 04/18/24 17:16 Analyzed: 04/21/24 12:10										
Cyanide, total	<0.005	0.005	mg/L							

LCS (1HD1205-BS1)										
Prepared: 04/18/24 17:16 Analyzed: 04/21/24 12:10										



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD1205 - Wet Chem Preparation - EPA 9010B

LCS (1HD1205-BS1) Prepared: 04/18/24 17:16 Analyzed: 04/21/24 12:10										
Cyanide, total	0.0307	0.005	mg/L	0.0300		102	66-136			
Matrix Spike (1HD1205-MS1) Source: 1HD0814-02 Prepared: 04/18/24 17:16 Analyzed: 04/21/24 12:10										
Cyanide, total	0.0344	0.005	mg/L	0.0300	ND	115	59-153			
Matrix Spike Dup (1HD1205-MSD1) Source: 1HD0814-02 Prepared: 04/18/24 17:16 Analyzed: 04/21/24 12:10										
Cyanide, total	0.0352	0.005	mg/L	0.0300	ND	117	59-153	2.26	30	

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0991 - EPA 7470A Hg Water - EPA 7470A

Blank (1HD0991-BLK1) Prepared: 04/16/24 13:40 Analyzed: 04/17/24 16:17										
Mercury, total	<0.00050	0.00050	mg/L							
LCS (1HD0991-BS1) Prepared: 04/16/24 13:40 Analyzed: 04/17/24 16:19										
Mercury, total	0.00247	0.00050	mg/L	0.00250		98.7	80-120			
Matrix Spike (1HD0991-MS1) Source: 1HD0953-07 Prepared: 04/16/24 13:40 Analyzed: 04/17/24 16:23										
Mercury, total	0.00248	0.00050	mg/L	0.00250	ND	99.2	75-125			
Matrix Spike Dup (1HD0991-MSD1) Source: 1HD0953-07 Prepared: 04/16/24 13:40 Analyzed: 04/17/24 16:26										
Mercury, total	0.00243	0.00050	mg/L	0.00250	ND	97.3	75-125	1.96	20	

Batch 1HD1266 - EPA 3005A Total Recoverable Metals - EPA 6020A

Blank (1HD1266-BLK1) Prepared: 04/19/24 17:16 Analyzed: 04/23/24 07:58										
Antimony, total	<0.0020	0.0020	mg/L							
Arsenic, total	<0.0040	0.0040	mg/L							
Barium, total	<0.0040	0.0040	mg/L							
Beryllium, total	<0.0040	0.0040	mg/L							
Cadmium, total	<0.0008	0.0008	mg/L							
Chromium, total	<0.0080	0.0080	mg/L							
Cobalt, total	<0.0004	0.0004	mg/L							
Copper, total	<0.0040	0.0040	mg/L							
Lead, total	<0.0040	0.0040	mg/L							
Nickel, total	<0.0040	0.0040	mg/L							
Selenium, total	<0.0040	0.0040	mg/L							
Silver, total	<0.0040	0.0040	mg/L							
Thallium, total	<0.0020	0.0020	mg/L							
Tin, total	<0.0200	0.0200	mg/L							
Vanadium, total	<0.0200	0.0200	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1HD1266-BS1) Prepared: 04/19/24 17:16 Analyzed: 04/23/24 08:04										
Antimony, total	0.0962	0.0020	mg/L	0.100		96.2	80-120			
Arsenic, total	0.0977	0.0040	mg/L	0.100		97.7	80-120			



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1266 - EPA 3005A Total Recoverable Metals - EPA 6020A										
LCS (1HD1266-BS1)				Prepared: 04/19/24 17:16 Analyzed: 04/23/24 08:04						
Barium, total	0.107	0.0040	mg/L	0.100		107	80-120			
Beryllium, total	0.102	0.0040	mg/L	0.100		102	80-120			
Cadmium, total	0.0997	0.0008	mg/L	0.100		99.7	80-120			
Chromium, total	0.0998	0.0080	mg/L	0.100		99.8	80-120			
Cobalt, total	0.106	0.0004	mg/L	0.100		106	80-120			
Copper, total	0.108	0.0040	mg/L	0.100		108	80-120			
Lead, total	0.0998	0.0040	mg/L	0.100		99.8	80-120			
Nickel, total	0.107	0.0040	mg/L	0.100		107	80-120			
Selenium, total	0.0966	0.0040	mg/L	0.100		96.6	80-120			
Silver, total	0.102	0.0040	mg/L	0.100		102	80-120			
Thallium, total	0.100	0.0020	mg/L	0.100		100	80-120			
Tin, total	0.0995	0.0200	mg/L	0.100		99.5	80-120			
Vanadium, total	0.105	0.0200	mg/L	0.100		105	80-120			
Zinc, total	0.107	0.0200	mg/L	0.100		107	80-120			
Matrix Spike (1HD1266-MS1)				Source: 1HD1048-01 Prepared: 04/19/24 17:16 Analyzed: 04/23/24 08:16						
Antimony, total	0.100	0.0020	mg/L	0.100	ND	100	75-125			
Arsenic, total	0.102	0.0040	mg/L	0.100	0.0011	101	75-125			
Barium, total	0.211	0.0040	mg/L	0.100	0.0955	115	75-125			
Beryllium, total	0.0987	0.0040	mg/L	0.100	ND	98.7	75-125			
Cadmium, total	0.101	0.0008	mg/L	0.100	ND	101	75-125			
Chromium, total	0.0995	0.0080	mg/L	0.100	0.0006	98.9	75-125			
Cobalt, total	0.109	0.0004	mg/L	0.100	ND	109	75-125			
Copper, total	0.104	0.0040	mg/L	0.100	ND	104	75-125			
Lead, total	0.0989	0.0040	mg/L	0.100	ND	98.9	75-125			
Nickel, total	0.107	0.0040	mg/L	0.100	ND	107	75-125			
Selenium, total	0.0984	0.0040	mg/L	0.100	ND	98.4	75-125			
Silver, total	0.102	0.0040	mg/L	0.100	ND	102	75-125			
Thallium, total	0.100	0.0020	mg/L	0.100	0.0002	100	75-125			
Tin, total	0.102	0.0200	mg/L	0.100	ND	102	75-125			
Vanadium, total	0.105	0.0200	mg/L	0.100	ND	105	75-125			
Zinc, total	0.108	0.0200	mg/L	0.100	ND	108	75-125			
Matrix Spike Dup (1HD1266-MSD1)				Source: 1HD1048-01 Prepared: 04/19/24 17:16 Analyzed: 04/23/24 08:23						
Antimony, total	0.0991	0.0020	mg/L	0.100	ND	99.1	75-125	1.32	20	
Arsenic, total	0.100	0.0040	mg/L	0.100	0.0011	99.2	75-125	1.85	20	
Barium, total	0.207	0.0040	mg/L	0.100	0.0955	112	75-125	1.78	20	
Beryllium, total	0.0968	0.0040	mg/L	0.100	ND	96.8	75-125	1.87	20	
Cadmium, total	0.0999	0.0008	mg/L	0.100	ND	99.9	75-125	0.678	20	
Chromium, total	0.0982	0.0080	mg/L	0.100	0.0006	97.6	75-125	1.32	20	
Cobalt, total	0.106	0.0004	mg/L	0.100	ND	106	75-125	2.78	20	
Copper, total	0.104	0.0040	mg/L	0.100	ND	104	75-125	0.627	20	
Lead, total	0.0975	0.0040	mg/L	0.100	ND	97.5	75-125	1.48	20	
Nickel, total	0.105	0.0040	mg/L	0.100	ND	105	75-125	2.21	20	
Selenium, total	0.0982	0.0040	mg/L	0.100	ND	98.2	75-125	0.237	20	



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1266 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Matrix Spike Dup (1HD1266-MSD1)										
		Source: 1HD1048-01		Prepared: 04/19/24 17:16 Analyzed: 04/23/24 08:23						
Silver, total	0.102	0.0040	mg/L	0.100	ND	102	75-125	0.396	20	
Thallium, total	0.0999	0.0020	mg/L	0.100	0.0002	99.7	75-125	0.309	20	
Tin, total	0.103	0.0200	mg/L	0.100	ND	103	75-125	0.620	20	
Vanadium, total	0.103	0.0200	mg/L	0.100	ND	103	75-125	1.31	20	
Zinc, total	0.107	0.0200	mg/L	0.100	ND	107	75-125	1.15	20	
Post Spike (1HD1266-PS1)										
		Source: 1HD1048-01		Prepared: 04/19/24 17:16 Analyzed: 04/24/24 10:51						
Antimony, total	0.0766		mg/L	0.100	0.0001	76.4	80-120			PS-01
Arsenic, total	0.0758		mg/L	0.100	0.0011	74.8	80-120			PS-01
Barium, total	0.170		mg/L	0.100	0.0955	74.8	80-120			PS-01
Beryllium, total	0.0721		mg/L	0.100	0.000004	72.1	80-120			PS-01
Cadmium, total	0.0736		mg/L	0.100	0.000004	73.5	80-120			PS-01
Chromium, total	0.0759		mg/L	0.100	0.0006	75.2	80-120			PS-01
Cobalt, total	0.0759		mg/L	0.100	0.00007	75.8	80-120			PS-01
Copper, total	0.0747		mg/L	0.100	-0.0005	74.7	80-120			PS-01
Lead, total	0.0742		mg/L	0.100	0.00002	74.2	80-120			PS-01
Nickel, total	0.0851		mg/L	0.100	-0.0013	85.1	80-120			PS-01
Selenium, total	0.0714		mg/L	0.100	0.0004	71.0	80-120			PS-01
Silver, total	0.0759		mg/L	0.100	0.0002	75.8	80-120			PS-01
Thallium, total	0.0743		mg/L	0.100	0.0002	74.1	80-120			PS-01
Tin, total	0.0783		mg/L	0.100	0.00005	78.2	75-125			
Vanadium, total	0.0840		mg/L	0.100	0.0054	78.6	80-120			PS-01
Zinc, total	0.0827		mg/L	0.100	0.0119	70.8	80-120			PS-01

Definitions

- A-01:** Surrogate not added to batch blank.
- PS-01:** The post spike recovery was below acceptance limits. However, all other QC was acceptable.
- QM-18:** LCS/LCSD were analyzed in place of MS/MSD due to instrument malfunction.
- QR-02:** The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QS-02:** The spike recovery for this QC sample exceeded established acceptance limits. However, all samples were below the reporting and/or regulatory limit so the data is acceptable.
- QS-03:** The blank spike recovery was below established acceptance limits.
- RL:** Reporting Limit
- RPD:** Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 0.0°C

Cooler Inspection Checklist

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



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1048

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:

A rectangular box containing a handwritten signature in black ink that reads "Heather Murphy".

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
05/23/24 14:51



SITE INFORMATION

Sampler: TODD WHIPPLE

Project: FMC SLF - New Reqs
6028

REPORT TO

Todd Whipple
HLW Engineering
PO Box 314
Story City, IA 50248

INVOICE TO

Christian Fox
Floyd Mitchell SWMA
3354 330th St
Fima, IA 50628

SPECIAL INSTRUCTIONS

None

Turn Around Time
 Standard RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HD1048

Temperature 0.0/1.8

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	MW-9 (up)	Water	GRAB	<u>4/11/24</u>	<u>11:29</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>01</u>
-001	MW-14 (up)	Water	GRAB	<u>4/11/24</u>	<u>11:45</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>02</u>
-001	MW-4 (up)	Water	GRAB	<u>4/11/24</u>	<u>9:40</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>03</u>
-001	MW-5 (up)	Water	GRAB	<u>4/11/24</u>	<u>10:47</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>04</u>
-001	MW-11	Water	GRAB	<u>4/11/24</u>	<u>13:51</u>	<u>17</u>	Indfill-app2-inorg-6020 Indfill-app2-org	<u>05</u>
-001	MW-12	Water	GRAB	<u>4/11/24</u>	<u>13:01</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>06</u>
-001	MW-15	Water	GRAB	<u>4/11/24</u>	<u>14:21</u>	<u>17</u>	Indfill-app2-inorg-6020 Indfill-app2-org	<u>07</u>

Relinquished By [Signature] Date/Time 4/12/24

Relinquished By _____ Date/Time _____

Received for Lab By [Signature] Date/Time 4/12/24 12:02

Remarks:

Received By _____ Date/Time _____



SITE INFORMATION

Sampler: TODD WHIPPLE

Project: FMC SLF - New Reqs
6028

REPORT TO

Todd Whipple
HLW Engineering
PO Box 314
Story City, IA 50248

INVOICE TO

Christian Fox
Floyd Mitchell SWMA
3354 330th St
Fima, IA 50628

SPECIAL INSTRUCTIONS

None

Turn Around Time
 Standard RUSH, need by ___/___/___

LAB USE ONLY

Work Order: IHD1048

Temperature: 0.0/1.8

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	MW-16	Water	GRAB	<u>4/11/24</u>	<u>12:43</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>0108</u>
-001	MW-2	Water	GRAB	<u>4/11/24</u>	<u>8:53</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>0209</u>
-001	MW-3	Water	GRAB	<u>4/11/24</u>	<u>13:21</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>0310</u>
-001	MW-6	Water	GRAB	<u>4/11/24</u>	<u>12:05</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>0411</u>
-001	MW-7	Water	GRAB	<u>4/11/24</u>	<u>12:25</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>0512</u>
-001	Duplicate	Water	GRAB	<u>4/11/24</u>	<u>✓</u>	<u>1</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>13</u>

Relinquished By [Signature] Date/Time 4/12/24

Relinquished By _____ Date/Time _____

Received By _____ Date/Time _____

Received for Lab By [Signature] Date/Time 4/12/24 12:02

Remarks:



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Project Description

6028

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Sue Thompson

Client Services Manager

Thursday, November 7, 2024

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.

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



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6028

Project / PO Number: N/A
Received: 10/18/2024
Reported: 11/07/2024

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>
MW-9 (up)	1HJ1617-01	Aqueous	GRAB		10/17/24 09:04	10/18/24 10:39
MW-14 (up)	1HJ1617-02	Aqueous	GRAB		10/17/24 08:50	10/18/24 10:39
MW-4 (up)	1HJ1617-03	Aqueous	GRAB		10/17/24 09:30	10/18/24 10:39
MW-5 (up)	1HJ1617-04	Aqueous	GRAB		10/17/24 09:16	10/18/24 10:39
MW-11	1HJ1617-05	Aqueous	GRAB		10/17/24 10:52	10/18/24 10:39
MW-12	1HJ1617-06	Aqueous	GRAB		10/17/24 11:05	10/18/24 10:39
MW-15	1HJ1617-07	Aqueous	GRAB		10/17/24 11:19	10/18/24 10:39
MW-16	1HJ1617-08	Aqueous	GRAB		10/17/24 11:41	10/18/24 10:39
MW-2	1HJ1617-09	Aqueous	GRAB		10/17/24 10:38	10/18/24 10:39
MW-3	1HJ1617-10	Aqueous	GRAB		10/17/24 10:16	10/18/24 10:39
MW-6	1HJ1617-11	Aqueous	GRAB		10/17/24 11:58	10/18/24 10:39
MW-7	1HJ1617-12	Aqueous	GRAB		10/17/24 12:13	10/18/24 10:39
Duplicate	1HJ1617-13	Aqueous	GRAB		10/17/24 08:50	10/18/24 10:39



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Analytical Testing Parameters

Client Sample ID:	MW-9 (up)	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 9:04
Lab Sample ID:	1HJ1617-01		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0132	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-9 (up)	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 9:04
Lab Sample ID:	1HJ1617-01		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1915	CSM
Surrogate: Dibromofluoromethane	97.7	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0132	CSM
Surrogate: Dibromofluoromethane	97.0	Limit: 75-136	% Rec	1		10/22/24 0000	10/22/24 1915	CSM
Surrogate: Dibromofluoromethane	97.0	Limit: 57-134	% Rec	1		10/22/24 0000	10/22/24 1915	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0132	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 53-140	% Rec	1		10/22/24 0000	10/22/24 1915	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 61-142	% Rec	1		10/22/24 0000	10/22/24 1915	CSM
Surrogate: Toluene-d8	94.4	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0132	CSM
Surrogate: Toluene-d8	94.6	Limit: 86-114	% Rec	1		10/22/24 0000	10/22/24 1915	CSM
Surrogate: Toluene-d8	94.6	Limit: 82-121	% Rec	1		10/22/24 0000	10/22/24 1915	CSM
Surrogate: 4-Bromofluorobenzene	100	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0132	CSM
Surrogate: 4-Bromofluorobenzene	97.3	Limit: 80-116	% Rec	1		10/22/24 0000	10/22/24 1915	CSM
Surrogate: 4-Bromofluorobenzene	97.3	Limit: 78-121	% Rec	1		10/22/24 0000	10/22/24 1915	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Barium, total	0.137	0.0040	mg/L	4	M2	10/24/24 0758	10/24/24 1810	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1810	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1810	RVV



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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-14 (up)	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 8:50
Lab Sample ID:	1HJ1617-02		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0155	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-14 (up)	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 8:50
Lab Sample ID:	1HJ1617-02		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 1937	CSM
Surrogate: Dibromofluoromethane	98.0	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0155	CSM
Surrogate: Dibromofluoromethane	96.1	Limit: 75-136	% Rec	1		10/22/24 0000	10/22/24 1937	CSM
Surrogate: Dibromofluoromethane	96.1	Limit: 57-134	% Rec	1		10/22/24 0000	10/22/24 1937	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		10/22/24 0000	10/22/24 1937	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 53-140	% Rec	1		10/22/24 0000	10/22/24 1937	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0155	CSM
Surrogate: Toluene-d8	94.7	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0155	CSM
Surrogate: Toluene-d8	94.8	Limit: 82-121	% Rec	1		10/22/24 0000	10/22/24 1937	CSM
Surrogate: Toluene-d8	94.8	Limit: 86-114	% Rec	1		10/22/24 0000	10/22/24 1937	CSM
Surrogate: 4-Bromofluorobenzene	98.9	Limit: 80-116	% Rec	1		10/22/24 0000	10/22/24 1937	CSM
Surrogate: 4-Bromofluorobenzene	98.9	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0155	CSM
Surrogate: 4-Bromofluorobenzene	98.9	Limit: 78-121	% Rec	1		10/22/24 0000	10/22/24 1937	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Barium, total	0.220	0.0040	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1847	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1847	RVV



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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-4 (up)	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 9:30
Lab Sample ID:	1HJ1617-03		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0218	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-4 (up)	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 9:30
Lab Sample ID:	1HJ1617-03		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2000	CSM
Surrogate: Dibromofluoromethane	97.0	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0218	CSM
Surrogate: Dibromofluoromethane	96.6	Limit: 75-136	% Rec	1		10/22/24 0000	10/22/24 2000	CSM
Surrogate: Dibromofluoromethane	96.6	Limit: 57-134	% Rec	1		10/22/24 0000	10/22/24 2000	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/22/24 0000	10/22/24 2000	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0218	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 53-140	% Rec	1		10/22/24 0000	10/22/24 2000	CSM
Surrogate: Toluene-d8	94.3	Limit: 82-121	% Rec	1		10/22/24 0000	10/22/24 2000	CSM
Surrogate: Toluene-d8	95.5	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0218	CSM
Surrogate: Toluene-d8	94.3	Limit: 86-114	% Rec	1		10/22/24 0000	10/22/24 2000	CSM
Surrogate: 4-Bromofluorobenzene	98.5	Limit: 80-116	% Rec	1		10/22/24 0000	10/22/24 2000	CSM
Surrogate: 4-Bromofluorobenzene	100	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0218	CSM
Surrogate: 4-Bromofluorobenzene	98.5	Limit: 78-121	% Rec	1		10/22/24 0000	10/22/24 2000	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Barium, total	0.0767	0.0040	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1853	RVV
Zinc, total	0.0709	0.0200	mg/L	4		10/24/24 0758	10/24/24 1853	RVV



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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-5 (up)	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 9:16
Lab Sample ID:	1HJ1617-04		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0241	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-5 (up)	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 9:16
Lab Sample ID:	1HJ1617-04		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2022	CSM
Surrogate: Dibromofluoromethane	96.9	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0241	CSM
Surrogate: Dibromofluoromethane	96.5	Limit: 57-134	% Rec	1		10/22/24 0000	10/22/24 2022	CSM
Surrogate: Dibromofluoromethane	96.5	Limit: 75-136	% Rec	1		10/22/24 0000	10/22/24 2022	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 53-140	% Rec	1		10/22/24 0000	10/22/24 2022	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0241	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 61-142	% Rec	1		10/22/24 0000	10/22/24 2022	CSM
Surrogate: Toluene-d8	94.7	Limit: 86-114	% Rec	1		10/22/24 0000	10/22/24 2022	CSM
Surrogate: Toluene-d8	94.8	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0241	CSM
Surrogate: Toluene-d8	94.7	Limit: 82-121	% Rec	1		10/22/24 0000	10/22/24 2022	CSM
Surrogate: 4-Bromofluorobenzene	97.0	Limit: 78-121	% Rec	1		10/22/24 0000	10/22/24 2022	CSM
Surrogate: 4-Bromofluorobenzene	99.5	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0241	CSM
Surrogate: 4-Bromofluorobenzene	97.0	Limit: 80-116	% Rec	1		10/22/24 0000	10/22/24 2022	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Arsenic, total	0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Barium, total	0.287	0.0040	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Cadmium, total	0.0011	0.0008	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Cobalt, total	0.0035	0.0004	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Copper, total	0.0126	0.0040	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Lead, total	0.0119	0.0040	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Nickel, total	0.0163	0.0040	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1859	RVV
Zinc, total	1.08	0.0200	mg/L	4		10/24/24 0758	10/24/24 1859	RVV



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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-11	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 10:52
Lab Sample ID:	1HJ1617-05		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0303	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-11	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 10:52
Lab Sample ID:	1HJ1617-05		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2045	CSM
Surrogate: Dibromofluoromethane	96.4	Limit: 75-136	% Rec	1		10/22/24 0000	10/22/24 2045	CSM
Surrogate: Dibromofluoromethane	96.4	Limit: 57-134	% Rec	1		10/22/24 0000	10/22/24 2045	CSM
Surrogate: Dibromofluoromethane	96.6	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0303	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 53-140	% Rec	1		10/22/24 0000	10/22/24 2045	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0303	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		10/22/24 0000	10/22/24 2045	CSM
Surrogate: Toluene-d8	94.6	Limit: 82-121	% Rec	1		10/22/24 0000	10/22/24 2045	CSM
Surrogate: Toluene-d8	94.6	Limit: 86-114	% Rec	1		10/22/24 0000	10/22/24 2045	CSM
Surrogate: Toluene-d8	94.9	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0303	CSM
Surrogate: 4-Bromofluorobenzene	97.0	Limit: 78-121	% Rec	1		10/22/24 0000	10/22/24 2045	CSM
Surrogate: 4-Bromofluorobenzene	99.7	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0303	CSM
Surrogate: 4-Bromofluorobenzene	97.0	Limit: 80-116	% Rec	1		10/22/24 0000	10/22/24 2045	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Barium, total	0.0209	0.0040	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1905	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1905	RVV



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-12	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 11:05
Lab Sample ID:	1HJ1617-06		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0326	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-12	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 11:05
Lab Sample ID:	1HJ1617-06		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/22/24 2107	CSM
Surrogate: Dibromofluoromethane	97.6	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0326	CSM
Surrogate: Dibromofluoromethane	96.8	Limit: 57-134	% Rec	1		10/22/24 0000	10/22/24 2107	CSM
Surrogate: Dibromofluoromethane	96.8	Limit: 75-136	% Rec	1		10/22/24 0000	10/22/24 2107	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0326	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 53-140	% Rec	1		10/22/24 0000	10/22/24 2107	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 61-142	% Rec	1		10/22/24 0000	10/22/24 2107	CSM
Surrogate: Toluene-d8	95.5	Limit: 82-121	% Rec	1		10/22/24 0000	10/22/24 2107	CSM
Surrogate: Toluene-d8	94.7	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0326	CSM
Surrogate: Toluene-d8	95.5	Limit: 86-114	% Rec	1		10/22/24 0000	10/22/24 2107	CSM
Surrogate: 4-Bromofluorobenzene	98.9	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0326	CSM
Surrogate: 4-Bromofluorobenzene	97.5	Limit: 78-121	% Rec	1		10/22/24 0000	10/22/24 2107	CSM
Surrogate: 4-Bromofluorobenzene	97.5	Limit: 80-116	% Rec	1		10/22/24 0000	10/22/24 2107	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Barium, total	0.140	0.0040	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/25/24 1041	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/25/24 1041	RVV



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-15	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 11:19
Lab Sample ID:	1HJ1617-07		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0349	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM

Microbac Laboratories, Inc., Newton

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID: MW-15	Collected By: JGH
Sample Matrix: Aqueous	Collection Date: 10/17/2024 11:19
Lab Sample ID: 1HJ1617-07	

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0031	CSM
Surrogate: Dibromofluoromethane	95.6	Limit: 57-134	% Rec	1		10/22/24 0000	10/23/24 0031	CSM
Surrogate: Dibromofluoromethane	98.8	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0349	CSM
Surrogate: Dibromofluoromethane	95.6	Limit: 75-136	% Rec	1		10/22/24 0000	10/23/24 0031	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 53-140	% Rec	1		10/22/24 0000	10/23/24 0031	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		10/22/24 0000	10/23/24 0031	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0349	CSM
Surrogate: Toluene-d8	95.3	Limit: 86-114	% Rec	1		10/22/24 0000	10/23/24 0031	CSM
Surrogate: Toluene-d8	95.5	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0349	CSM
Surrogate: Toluene-d8	95.3	Limit: 82-121	% Rec	1		10/22/24 0000	10/23/24 0031	CSM
Surrogate: 4-Bromofluorobenzene	99.0	Limit: 78-121	% Rec	1		10/22/24 0000	10/23/24 0031	CSM
Surrogate: 4-Bromofluorobenzene	99.0	Limit: 80-116	% Rec	1		10/22/24 0000	10/23/24 0031	CSM
Surrogate: 4-Bromofluorobenzene	101	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0349	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Barium, total	0.0279	0.0040	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1918	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1918	RVV



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-16	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 11:41
Lab Sample ID:	1HJ1617-08		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0412	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM

Microbac Laboratories, Inc., Newton

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-16	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 11:41
Lab Sample ID:	1HJ1617-08		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0054	CSM
Surrogate: Dibromofluoromethane	97.6	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0412	CSM
Surrogate: Dibromofluoromethane	95.5	Limit: 57-134	% Rec	1		10/22/24 0000	10/23/24 0054	CSM
Surrogate: Dibromofluoromethane	95.5	Limit: 75-136	% Rec	1		10/22/24 0000	10/23/24 0054	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0412	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 53-140	% Rec	1		10/22/24 0000	10/23/24 0054	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		10/22/24 0000	10/23/24 0054	CSM
Surrogate: Toluene-d8	94.5	Limit: 86-114	% Rec	1		10/22/24 0000	10/23/24 0054	CSM
Surrogate: Toluene-d8	95.2	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0412	CSM
Surrogate: Toluene-d8	94.5	Limit: 82-121	% Rec	1		10/22/24 0000	10/23/24 0054	CSM
Surrogate: 4-Bromofluorobenzene	99.5	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0412	CSM
Surrogate: 4-Bromofluorobenzene	98.9	Limit: 78-121	% Rec	1		10/22/24 0000	10/23/24 0054	CSM
Surrogate: 4-Bromofluorobenzene	98.9	Limit: 80-116	% Rec	1		10/22/24 0000	10/23/24 0054	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Barium, total	0.0432	0.0040	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Copper, total	0.0049	0.0040	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Nickel, total	0.0046	0.0040	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1924	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1924	RVV



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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID: MW-2	Collected By: JGH
Sample Matrix: Aqueous	Collection Date: 10/17/2024 10:38
Lab Sample ID: 1HJ1617-09	

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0435	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-2	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 10:38
Lab Sample ID:	1HJ1617-09		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0116	CSM
Surrogate: Dibromofluoromethane	96.1	Limit: 75-136	% Rec	1		10/22/24 0000	10/23/24 0116	CSM
Surrogate: Dibromofluoromethane	97.5	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0435	CSM
Surrogate: Dibromofluoromethane	96.1	Limit: 57-134	% Rec	1		10/22/24 0000	10/23/24 0116	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0435	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 53-140	% Rec	1		10/22/24 0000	10/23/24 0116	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 61-142	% Rec	1		10/22/24 0000	10/23/24 0116	CSM
Surrogate: Toluene-d8	94.8	Limit: 86-114	% Rec	1		10/22/24 0000	10/23/24 0116	CSM
Surrogate: Toluene-d8	95.6	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0435	CSM
Surrogate: Toluene-d8	94.8	Limit: 82-121	% Rec	1		10/22/24 0000	10/23/24 0116	CSM
Surrogate: 4-Bromofluorobenzene	99.2	Limit: 80-116	% Rec	1		10/22/24 0000	10/23/24 0116	CSM
Surrogate: 4-Bromofluorobenzene	99.2	Limit: 78-121	% Rec	1		10/22/24 0000	10/23/24 0116	CSM
Surrogate: 4-Bromofluorobenzene	99.3	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0435	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Barium, total	0.0451	0.0040	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Cobalt, total	0.0023	0.0004	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Nickel, total	0.0049	0.0040	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1930	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1930	RVV



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-3	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 10:16
Lab Sample ID:	1HJ1617-10		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Dichlorodifluoromethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Chloromethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Acrolein	<10.0	10.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Acetone	<10.0	10.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Methyl Iodide	<2.0	2.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Acetonitrile	<10.0	10.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
2,2-Dichloropropane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
2-Butanone (MEK)	<5.0	5.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Chloroform	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,1-Dichloropropene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Benzene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Toluene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Ethyl Methacrylate	<10.0	10.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,3-Dichloropropane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-3	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 10:16
Lab Sample ID:	1HJ1617-10		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Chlorobenzene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Styrene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Bromoform	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,3-Dichlorobenzene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
1,2-Dibromo-3-chloropropane	<1.0	1.0	ug/L	1	Q3	10/23/24 0000	10/23/24 2051	CSM
1,2,4-Trichlorobenzene	<1.0	1.0	ug/L	1		10/23/24 0000	10/23/24 2051	CSM
Allyl chloride	<1.0	1.0	ug/L	1		10/30/24 0000	10/30/24 1717	CSM
Chloroprene	<1.0	1.0	ug/L	1		10/30/24 0000	10/30/24 1717	CSM
Methacrylonitrile	<1.0	1.0	ug/L	1		10/30/24 0000	10/30/24 1717	CSM
Methyl Methacrylate	<1.0	1.0	ug/L	1		10/30/24 0000	10/30/24 1717	CSM
Propionitrile	<10.0	10.0	ug/L	1		10/30/24 0000	10/30/24 1717	CSM
Surrogate: Dibromofluoromethane	102	Limit: 57-134	% Rec	1		10/30/24 0000	10/30/24 1717	CSM
Surrogate: Dibromofluoromethane	95.9	Limit: 57-134	% Rec	1		10/23/24 0000	10/23/24 2051	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 53-140	% Rec	1		10/23/24 0000	10/23/24 2051	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 53-140	% Rec	1		10/23/24 0000	10/23/24 2051	CSM
Surrogate: 1,2-Dichloroethane-d4	99.2	Limit: 53-140	% Rec	1		10/30/24 0000	10/30/24 1717	CSM
Surrogate: Toluene-d8	95.9	Limit: 86-114	% Rec	1		10/23/24 0000	10/23/24 2051	CSM
Surrogate: Toluene-d8	96.7	Limit: 86-114	% Rec	1		10/30/24 0000	10/30/24 1717	CSM
Surrogate: Toluene-d8	95.9	Limit: 86-114	% Rec	1		10/23/24 0000	10/23/24 2051	CSM
Surrogate: 4-Bromofluorobenzene	99.1	Limit: 78-121	% Rec	1		10/23/24 0000	10/23/24 2051	CSM
Surrogate: 4-Bromofluorobenzene	99.1	Limit: 78-121	% Rec	1		10/23/24 0000	10/23/24 2051	CSM
Surrogate: 4-Bromofluorobenzene	98.7	Limit: 78-121	% Rec	1		10/30/24 0000	10/30/24 1717	CSM

Determination of General Solvents	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8015C								
Isobutanol	<1.0	1.0	mg/L	1			10/31/24 1123	PDS

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3520C/EPA 8270C								
N-Nitrosodimethylamine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Methyl Methanesulfonate	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
N-Nitrosodiethylamine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
N-Nitrosomethylethylamine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Ethyl Methanesulfonate	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Phenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP



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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-3	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 10:16
Lab Sample ID:	1HJ1617-10		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bis(2-Chloroethyl) Ether	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2-Chlorophenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Benzyl Alcohol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2-Methylphenol (o-Cresol)	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Bis[2-Chloroisopropyl]ether	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
n-Nitroso-di-n-propylamine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
N-Nitrosopyrrolidine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Acetophenone	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
o-Toluidine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
(3 & 4)-Methylphenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Hexachloroethane	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Nitrobenzene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
N-Nitrosopiperidine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Isophorone	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2-Nitrophenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2,4-Dimethylphenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Bis (2-Chloroethoxy) Methane	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2,4-Dichlorophenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Naphthalene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
4-Chloroaniline	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2,6-Dichlorophenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Hexachloropropene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Hexachlorobutadiene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
N-Nitrosodi-n-butylamine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
1,4-Phenylenediamine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
4-Chloro-3-methylphenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2-Methylnaphthalene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Isosafrole	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
1,2,4,5-Tetrachlorobenzene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Hexachlorocyclopentadiene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2,4,6-Trichlorophenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2,4,5-Trichlorophenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Safrole	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2-Chloronaphthalene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2-Nitroaniline	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
1,4-Naphthoquinone	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Dimethylphthalate	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
1,3-Dinitrobenzene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
1,2-Dinitrobenzene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2,6-Dinitrotoluene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Acenaphthylene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
3-Nitroaniline	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Acenaphthene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-3	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 10:16
Lab Sample ID:	1HJ1617-10		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2,4-Dinitrophenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
4-Nitrophenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Dibenzofuran	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2,4-Dinitrotoluene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2,3,4,6-Tetrachlorophenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Pentachlorobenzene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
1-Naphthylamine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2-Naphthylamine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Diethyl Phthalate	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Fluorene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
4-Chlorophenyl Phenyl Ether	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
4-Nitroaniline	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
5-Nitro-o-toluidine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
4,6-Dinitro-2-methylphenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
N-Nitrosodiphenylamine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Diphenylamine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Azobenzene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Diallate	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
1,3,5-Trinitrobenzene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Phenacetin	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
4-Bromophenyl Phenyl Ether	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
4-Aminobiphenyl	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Pentachlorophenol	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Pronamide	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Pentachloronitrobenzene (PCNB)	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Phenanthrene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Anthracene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Di-n-butyl Phthalate	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Methapyrilene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Fluoranthene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Isodrin	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Chlorobenzilate	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Pyrene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
p-(Dimethylamino)azobenzene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
3,3-Dimethylbenzidine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Butyl Benzyl Phthalate	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Benzo(a)anthracene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Chrysene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Kepone	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
3,3'-Dichlorobenzidine	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
2-Acetylamino fluorene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Di-n-octyl Phthalate	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-3	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 10:16
Lab Sample ID:	1HJ1617-10		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Benzo(b)Fluoranthene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
7,12-Dimethylbenz [a] anthracene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Benzo(k)Fluoranthene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Benzo(a)Pyrene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
3-Methylcholanthrene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Dibenzo(a,h)anthracene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Indeno(1,2,3-cd)Pyrene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Benzo(g,h,i)perylene	<8	8	ug/L	1		10/23/24 1234	10/28/24 1714	EPP
Surrogate: 2-Fluorophenol	61.9	Limit: 10-149	% Rec	1		10/23/24 1234	10/28/24 1714	EPP
Surrogate: Phenol-d6	66.8	Limit: 10-143	% Rec	1		10/23/24 1234	10/28/24 1714	EPP
Surrogate: Nitrobenzene-d5	69.4	Limit: 20-149	% Rec	1		10/23/24 1234	10/28/24 1714	EPP
Surrogate: 2-Fluorobiphenyl	71.8	Limit: 11-146	% Rec	1		10/23/24 1234	10/28/24 1714	EPP
Surrogate: 2,4,6-Tribromophenol	84.5	Limit: 10-153	% Rec	1		10/23/24 1234	10/28/24 1714	EPP
Surrogate: Terphenyl-dl4	70.0	Limit: 27-155	% Rec	1		10/23/24 1234	10/28/24 1714	EPP

Determination of Organophosphorus Insecticides	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8141								
O,O,O-Triethyl phosphorothioate	<0.4	0.4	ug/L	1		10/24/24 0957	10/30/24 1626	EPP
Thionazin	<0.4	0.4	ug/L	1		10/24/24 0957	10/30/24 1626	EPP
Phorate	<0.4	0.4	ug/L	1		10/24/24 0957	10/30/24 1626	EPP
Dimethoate	<0.4	0.4	ug/L	1		10/24/24 0957	10/30/24 1626	EPP
Disulfoton	<0.4	0.4	ug/L	1		10/24/24 0957	10/30/24 1626	EPP
Methyl Parathion	<0.4	0.4	ug/L	1		10/24/24 0957	10/30/24 1626	EPP
Parathion	<0.4	0.4	ug/L	1		10/24/24 0957	10/30/24 1626	EPP
Famphur	<0.4	0.4	ug/L	1		10/24/24 0957	10/30/24 1626	EPP
Surrogate: 2-Nitro-m-xylene	74.5	Limit: 15-154	% Rec	1		10/24/24 0957	10/30/24 1626	EPP

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8151A								
2,4-D	<2.0	2.0	ug/L	1		10/21/24 1608	10/23/24 2320	EPP
2,4,5-TP (Silvex)	<0.5	0.5	ug/L	1		10/21/24 1608	10/23/24 2320	EPP
2,4,5-T	<0.5	0.5	ug/L	1		10/21/24 1608	10/23/24 2320	EPP
Dinoseb	<0.5	0.5	ug/L	1		10/21/24 1608	10/23/24 2320	EPP
Surrogate: 2,5-Dichlorobenzoic Acid	126	Limit: 36-159	% Rec	1		10/21/24 1608	10/23/24 2320	EPP

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8081								
Alpha-BHC	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Gamma-BHC [Lindane]	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Beta-BHC	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Heptachlor	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP



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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-3	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 10:16
Lab Sample ID:	1HJ1617-10		

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Delta-BHC	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Aldrin	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Heptachlor Epoxide	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Endosulfan I	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
4,4`-DDE	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Dieldrin	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Endrin	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
4,4`-DDD	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Endosulfan II	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
4,4`-DDT	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Endrin Aldehyde	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Endosulfan Sulfate	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Methoxychlor	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Chlordane	<0.10	0.10	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Toxaphene	<0.20	0.20	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Hexachlorobenzene	<0.05	0.05	ug/L	1		10/24/24 0951	11/05/24 1225	EPP
Surrogate: Tetrachloro-m-xylene	77.2	Limit: 40-116	% Rec	1		10/24/24 0951	11/05/24 1225	EPP

Determination of Polychlorinated Biphenyls (PCB)	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082								
Arochlor 1016	<0.20	0.20	ug/L	1		10/24/24 0954	11/05/24 1225	EPP
Arochlor 1221	<0.20	0.20	ug/L	1		10/24/24 0954	11/05/24 1225	EPP
Arochlor 1232	<0.20	0.20	ug/L	1		10/24/24 0954	11/05/24 1225	EPP
Arochlor 1242	<0.20	0.20	ug/L	1		10/24/24 0954	11/05/24 1225	EPP
Arochlor 1248	<0.20	0.20	ug/L	1		10/24/24 0954	11/05/24 1225	EPP
Arochlor 1254	<0.20	0.20	ug/L	1		10/24/24 0954	11/05/24 1225	EPP
Arochlor 1260	<0.20	0.20	ug/L	1		10/24/24 0954	11/05/24 1225	EPP
Surrogate: Tetrachloro-m-xylene	77.2	Limit: 37-120	% Rec	1		10/24/24 0954	11/05/24 1225	EPP
Surrogate: Decachlorobiphenyl	65.1	Limit: 22-116	% Rec	1		10/24/24 0954	11/05/24 1225	EPP

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 376.2								
Sulfide, total	<0.10	0.10	mg/L	1			10/24/24 1104	AKK
EPA 9014								
Cyanide, total	<0.010	0.010	mg/L	1			10/31/24 1258	KKJ

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Barium, total	0.113	0.0040	mg/L	4		10/24/24 0758	10/24/24 1936	RVV



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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-3	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 10:16
Lab Sample ID:	1HJ1617-10		

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Nickel, total	0.0044	0.0040	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Tin, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1936	RVV
EPA 7470A								
Mercury, total	<0.00050	0.00050	mg/L	1		10/29/24 1509	10/30/24 1512	JAR



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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-6	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 11:58
Lab Sample ID:	1HJ1617-11		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0458	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-6	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 11:58
Lab Sample ID:	1HJ1617-11		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0201	CSM
Surrogate: Dibromofluoromethane	97.5	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0458	CSM
Surrogate: Dibromofluoromethane	95.5	Limit: 57-134	% Rec	1		10/22/24 0000	10/23/24 0201	CSM
Surrogate: Dibromofluoromethane	95.5	Limit: 75-136	% Rec	1		10/22/24 0000	10/23/24 0201	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 61-142	% Rec	1		10/22/24 0000	10/23/24 0201	CSM
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 53-140	% Rec	1		10/22/24 0000	10/23/24 0201	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0458	CSM
Surrogate: Toluene-d8	95.1	Limit: 86-114	% Rec	1		10/22/24 0000	10/23/24 0201	CSM
Surrogate: Toluene-d8	95.2	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0458	CSM
Surrogate: Toluene-d8	95.1	Limit: 82-121	% Rec	1		10/22/24 0000	10/23/24 0201	CSM
Surrogate: 4-Bromofluorobenzene	99.9	Limit: 80-116	% Rec	1		10/22/24 0000	10/23/24 0201	CSM
Surrogate: 4-Bromofluorobenzene	98.7	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0458	CSM
Surrogate: 4-Bromofluorobenzene	99.9	Limit: 78-121	% Rec	1		10/22/24 0000	10/23/24 0201	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Arsenic, total	0.0177	0.0040	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Barium, total	0.0744	0.0040	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Cobalt, total	0.0051	0.0004	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Nickel, total	0.0050	0.0040	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 1954	RVV
Zinc, total	0.0254	0.0200	mg/L	4		10/24/24 0758	10/24/24 1954	RVV



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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-7	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 12:13
Lab Sample ID:	1HJ1617-12		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0521	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM

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CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	MW-7	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 12:13
Lab Sample ID:	1HJ1617-12		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0224	CSM
Surrogate: Dibromofluoromethane	97.1	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0521	CSM
Surrogate: Dibromofluoromethane	96.6	Limit: 75-136	% Rec	1		10/22/24 0000	10/23/24 0224	CSM
Surrogate: Dibromofluoromethane	96.6	Limit: 57-134	% Rec	1		10/22/24 0000	10/23/24 0224	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/22/24 0000	10/23/24 0224	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 53-140	% Rec	1		10/22/24 0000	10/23/24 0224	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0521	CSM
Surrogate: Toluene-d8	95.2	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0521	CSM
Surrogate: Toluene-d8	94.6	Limit: 86-114	% Rec	1		10/22/24 0000	10/23/24 0224	CSM
Surrogate: Toluene-d8	94.6	Limit: 82-121	% Rec	1		10/22/24 0000	10/23/24 0224	CSM
Surrogate: 4-Bromofluorobenzene	99.4	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0521	CSM
Surrogate: 4-Bromofluorobenzene	98.5	Limit: 80-116	% Rec	1		10/22/24 0000	10/23/24 0224	CSM
Surrogate: 4-Bromofluorobenzene	98.5	Limit: 78-121	% Rec	1		10/22/24 0000	10/23/24 0224	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Barium, total	0.0260	0.0040	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Nickel, total	0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 2000	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/24/24 2000	RVV



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	Duplicate	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 8:50
Lab Sample ID:	1HJ1617-13		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D								
Chloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Acetone	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/29/24 0000	10/30/24 0544	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Chloroform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Benzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Toluene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Styrene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Bromoform	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Client Sample ID:	Duplicate	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	10/17/2024 8:50
Lab Sample ID:	1HJ1617-13		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/22/24 0000	10/23/24 0247	CSM
Surrogate: Dibromofluoromethane	94.7	Limit: 57-134	% Rec	1		10/22/24 0000	10/23/24 0247	CSM
Surrogate: Dibromofluoromethane	98.0	Limit: 75-136	% Rec	1		10/29/24 0000	10/30/24 0544	CSM
Surrogate: Dibromofluoromethane	94.7	Limit: 75-136	% Rec	1		10/22/24 0000	10/23/24 0247	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 53-140	% Rec	1		10/22/24 0000	10/23/24 0247	CSM
Surrogate: 1,2-Dichloroethane-d4	106	Limit: 61-142	% Rec	1		10/29/24 0000	10/30/24 0544	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		10/22/24 0000	10/23/24 0247	CSM
Surrogate: Toluene-d8	95.1	Limit: 86-114	% Rec	1		10/22/24 0000	10/23/24 0247	CSM
Surrogate: Toluene-d8	95.6	Limit: 82-121	% Rec	1		10/29/24 0000	10/30/24 0544	CSM
Surrogate: Toluene-d8	95.1	Limit: 82-121	% Rec	1		10/22/24 0000	10/23/24 0247	CSM
Surrogate: 4-Bromofluorobenzene	99.9	Limit: 78-121	% Rec	1		10/22/24 0000	10/23/24 0247	CSM
Surrogate: 4-Bromofluorobenzene	99.6	Limit: 80-116	% Rec	1		10/29/24 0000	10/30/24 0544	CSM
Surrogate: 4-Bromofluorobenzene	99.9	Limit: 80-116	% Rec	1		10/22/24 0000	10/23/24 0247	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Barium, total	0.153	0.0040	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/25/24 1047	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/24/24 0758	10/25/24 1047	RVV



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8151A	1HJ1247	1HJ1617-10	MW-3
		1HJ1247-BLK1	
		1HJ1247-BS1	
		1HJ1247-BSD1	
Method	Batch	Laboratory ID	Client / Source ID
EPA 7470A	1HJ1332	1HJ1332-BLK1	1HJ0941-11 1HJ0941-11
		1HJ1332-BS1	
		1HJ1332-MS1	
		1HJ1332-MSD1	
Method	Batch	Laboratory ID	Client / Source ID
EPA 8260D	1HJ1355	1HJ1355-BS1	MW-9 (up) MW-14 (up) MW-4 (up) MW-5 (up) MW-11 MW-12 1HJ1617-04 1HJ1617-04 MW-15 MW-16 MW-2 MW-6 MW-7 Duplicate 1HJ1633-01 1HJ1633-01
		1HJ1355-BSD1	
		1HJ1355-BLK1	
		1HJ1617-01	
		1HJ1617-02	
		1HJ1617-03	
		1HJ1617-04	
		1HJ1617-05	
		1HJ1617-06	
		1HJ1355-MS1	
		1HJ1355-MSD1	
		1HJ1355-BS2	
		1HJ1355-BSD2	
		1HJ1355-BLK2	
		1HJ1617-07	
		1HJ1617-08	
		1HJ1617-09	
		1HJ1617-11	
		1HJ1617-12	
		1HJ1617-13	
1HJ1355-MS2			
1HJ1355-MSD2			
Method	Batch	Laboratory ID	Client / Source ID
EPA 8270C	1HJ1400	1HJ1400-BLK1	MW-3
		1HJ1617-10	
		1HJ1400-BS1	
		1HJ1400-BSD1	



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HJ1462	1HJ1462-BLK1	
		1HJ1462-BS1	
		1HJ1617-01	MW-9 (up)
		1HJ1462-MS1	1HJ1617-01
		1HJ1462-PS1	1HJ1617-01
		1HJ1617-02	MW-14 (up)
		1HJ1617-03	MW-4 (up)
		1HJ1617-04	MW-5 (up)
		1HJ1617-05	MW-11
		1HJ1617-07	MW-15
		1HJ1617-08	MW-16
		1HJ1617-09	MW-2
		1HJ1617-10	MW-3
		1HJ1617-11	MW-6
		1HJ1617-12	MW-7
		1HJ1462-MSD1	1HJ1617-01
1HJ1462-PS1	1HJ1617-01		
1HJ1617-06	MW-12		
1HJ1617-13	Duplicate		

Method	Batch	Laboratory ID	Client / Source ID
EPA 8081	1HJ1479	1HJ1479-BLK1	
		1HJ1479-BS1	
		1HJ1479-BSD1	
		1HJ1617-10	MW-3

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082	1HJ1481	1HJ1481-BLK1	
		1HJ1617-10	MW-3
		1HJ1481-BS1	
		1HJ1481-BSD1	
		1HJ1481-SRM1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 8141	1HJ1482	1HJ1482-BLK1	
		1HJ1617-10	MW-3
		1HJ1482-BS1	
		1HJ1482-BSD1	
		1HJ1482-SRM1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 376.2	1HJ1499	1HJ1499-MSD1	1HJ1617-10



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CERTIFICATE OF ANALYSIS

1HJ1617

EPA 376.2	1HJ1499	1HJ1617-10	MW-3
		1HJ1499-MS1	1HJ1617-10
		1HJ1499-BS1	
		1HJ1499-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260D	1HJ1517	1HJ1517-BS1	
		1HJ1517-BSD1	
		1HJ1517-BLK1	
		1HJ1617-10	MW-3
		1HJ1517-MS1	1HJ1633-03
		1HJ1517-MSD1	1HJ1633-03

Method	Batch	Laboratory ID	Client / Source ID
EPA 7470A	1HJ1758	1HJ1758-BLK1	
		1HJ1758-BS1	
		1HJ1617-10RE1	MW-3
		1HJ1758-MS1	1HJ1746-04
		1HJ1758-MSD1	1HJ1746-04

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260D	1HJ1776	1HJ1776-BS1	
		1HJ1776-BSD1	
		1HJ1776-BLK1	
		1HJ1776-BS2	
		1HJ1776-BSD2	
		1HJ1776-BLK2	
		1HJ1617-01RE1	MW-9 (up)
		1HJ1617-02RE1	MW-14 (up)
		1HJ1617-03RE1	MW-4 (up)
		1HJ1617-04RE1	MW-5 (up)
		1HJ1617-05RE1	MW-11
		1HJ1617-06RE1	MW-12
		1HJ1617-07RE1	MW-15
		1HJ1617-08RE1	MW-16
		1HJ1617-09RE1	MW-2
		1HJ1617-11RE1	MW-6
		1HJ1617-12RE1	MW-7
		1HJ1617-13RE1	Duplicate
		1HJ1776-MS1	1HJ1549-02RE1
		1HJ1776-MSD1	1HJ1549-02RE1
		1HJ1776-MS2	1HJ1617-12RE1
		1HJ1776-MSD2	1HJ1617-12RE1



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Method	Batch	Laboratory ID	Client / Source ID
EPA 9014	1HJ1873	1HJ1873-BLK1	
		1HJ1873-BS1	
		1HJ1873-BS2	
		1HJ1873-MS1	1HJ1617-10
		1HJ1873-MSD1	1HJ1617-10
		1HJ1617-10	MW-3

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260D	1HJ1879	1HJ1879-BS1	
		1HJ1879-BSD1	
		1HJ1879-BLK1	
		1HJ1617-10	MW-3
		1HJ1879-MS1	1HJ1617-10
		1HJ1879-MSD1	1HJ1617-10

Method	Batch	Laboratory ID	Client / Source ID
EPA 8015C	1HK0030	1HJ1617-10	MW-3
		1HK0030-BS1	
		1HK0030-BLK1	
		1HK0030-MS1	1HJ1617-10
		1HK0030-MSD1	1HJ1617-10

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 1HJ1355 - EPA 5030B - EPA 8260D										

Blank (1HJ1355-BLK1)				Prepared: 10/22/24 00:00 Analyzed: 10/22/24 11:05						
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							



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
Blank (1HJ1355-BLK1)										
Prepared: 10/22/24 00:00 Analyzed: 10/22/24 11:05										
Bromochloromethane	<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							
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							
<i>Surrogate: Dibromofluoromethane</i>	49.7		ug/L	50.2		99.0	57-134			
<i>Surrogate: Dibromofluoromethane</i>	49.7		ug/L	50.2		99.0	75-136			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	53.4		ug/L	50.4		106	53-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	53.4		ug/L	50.4		106	61-142			
<i>Surrogate: Toluene-d8</i>	47.5		ug/L	50.5		94.2	86-114			
<i>Surrogate: Toluene-d8</i>	47.5		ug/L	50.5		94.2	82-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	49.8		ug/L	50.2		99.2	78-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	49.8		ug/L	50.2		99.2	80-116			
Blank (1HJ1355-BLK2)										
Prepared: 10/22/24 00:00 Analyzed: 10/23/24 00:08										
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
Blank (1HJ1355-BLK2)				Prepared: 10/22/24 00:00 Analyzed: 10/23/24 00:08						
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							
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							

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
Blank (1HJ1355-BLK2)				Prepared: 10/22/24 00:00 Analyzed: 10/23/24 00:08						
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	47.7		ug/L	50.2		95.0	57-134			
Surrogate: Dibromofluoromethane	47.7		ug/L	50.2		95.0	75-136			
Surrogate: 1,2-Dichloroethane-d4	51.7		ug/L	50.4		103	53-140			
Surrogate: 1,2-Dichloroethane-d4	51.7		ug/L	50.4		103	61-142			
Surrogate: Toluene-d8	47.4		ug/L	50.5		93.8	86-114			
Surrogate: Toluene-d8	47.4		ug/L	50.5		93.8	82-121			
Surrogate: 4-Bromofluorobenzene	49.6		ug/L	50.2		98.8	78-121			
Surrogate: 4-Bromofluorobenzene	49.6		ug/L	50.2		98.8	80-116			
LCS (1HJ1355-BS1)				Prepared: 10/22/24 00:00 Analyzed: 10/22/24 09:57						
Chloromethane	33.57	1.0	ug/L	30.3		111	63-155			
Vinyl Chloride	31.86	1.0	ug/L	30.2		105	70-154			
Bromomethane	37.63	1.0	ug/L	30.1		125	52-176			
Chloroethane	28.28	1.0	ug/L	30.3		93.3	72-148			
Trichlorofluoromethane	26.16	1.0	ug/L	30.3		86.3	70-152			
1,1-Dichloroethylene	51.06	1.0	ug/L	50.1		102	70-148			
Acetone	114.7	10.0	ug/L	100		115	43-172			
Methyl Iodide	109.1	1.0	ug/L	100		109	69-170			
Carbon Disulfide	76.66	1.0	ug/L	100		76.7	72-162			
Methylene Chloride	52.22	5.0	ug/L	50.1		104	68-142			
Acrylonitrile	90.68	5.0	ug/L	50.2		181	56-135			Q2
trans-1,2-Dichloroethylene	52.85	1.0	ug/L	50.1		106	66-148			
1,1-Dichloroethane	52.98	1.0	ug/L	50.1		106	66-143			
Vinyl Acetate	104.3	5.0	ug/L	156		67.0	43-153			
cis-1,2-Dichloroethylene	52.78	1.0	ug/L	50.4		105	71-149			
2-Butanone (MEK)	109.4	10.0	ug/L	100		109	52-159			
Bromochloromethane	53.71	1.0	ug/L	50.4		107	69-143			
Chloroform	52.28	1.0	ug/L	50.1		104	69-144			
1,1,1-Trichloroethane	51.21	1.0	ug/L	50.1		102	62-129			
Carbon Tetrachloride	52.02	1.0	ug/L	50.1		104	63-141			
Benzene	52.98	1.0	ug/L	50.4		105	71-134			
1,2-Dichloroethane	57.23	1.0	ug/L	50.1		114	72-132			
Trichloroethylene	51.21	1.0	ug/L	50.1		102	71-135			
1,2-Dichloropropane	52.16	1.0	ug/L	50.1		104	69-136			
Dibromomethane	54.27	1.0	ug/L	50.4		108	73-147			
Bromodichloromethane	52.75	1.0	ug/L	50.1		105	68-129			
cis-1,3-Dichloropropene	50.66	1.0	ug/L	50.1		101	65-134			
4-Methyl-2-pentanone (MIBK)	111.6	5.0	ug/L	100		112	58-147			
Toluene	51.15	1.0	ug/L	50.5		101	72-133			
trans-1,3-Dichloropropene	51.90	1.0	ug/L	50.1		104	67-130			
1,1,2-Trichloroethane	51.52	1.0	ug/L	50.1		103	69-135			
Tetrachloroethylene	52.63	1.0	ug/L	50.1		105	69-130			
2-Hexanone (MBK)	109.3	5.0	ug/L	100		109	55-144			

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
LCS (1HJ1355-BS1)										
				Prepared: 10/22/24 00:00 Analyzed: 10/22/24 09:57						
Dibromochloromethane	53.17	1.0	ug/L	50.1		106	73-127			
1,2-Dibromoethane	53.07	1.0	ug/L	50.2		106	67-132			
Chlorobenzene	52.05	1.0	ug/L	50.1		104	72-123			
1,1,1,2-Tetrachloroethane	54.73	1.0	ug/L	50.3		109	73-127			
Ethylbenzene	54.58	1.0	ug/L	50.2		109	71-127			
Xylenes, total	160.4	2.0	ug/L	151		106	74-127			
Styrene	54.79	1.0	ug/L	50.4		109	66-126			
Bromoform	51.81	1.0	ug/L	50.1		103	68-130			
1,2,3-Trichloropropane	51.78	1.0	ug/L	50.3		103	63-136			
trans-1,4-Dichloro-2-butene	102.6	5.0	ug/L	100		103	54-134			
1,1,1,2-Tetrachloroethane	53.02	1.0	ug/L	50.1		106	61-131			
1,4-Dichlorobenzene	50.94	1.0	ug/L	50.1		102	70-129			
1,2-Dichlorobenzene	52.10	1.0	ug/L	50.1		104	69-126			
1,2-Dibromo-3-chloropropane	44.67	5.0	ug/L	50.1		89.1	50-143			
<i>Surrogate: Dibromofluoromethane</i>	49.9		ug/L	50.2		99.4	57-134			
<i>Surrogate: Dibromofluoromethane</i>	49.9		ug/L	50.2		99.4	75-136			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.1		ug/L	50.4		103	53-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.1		ug/L	50.4		103	61-142			
<i>Surrogate: Toluene-d8</i>	49.8		ug/L	50.5		98.8	86-114			
<i>Surrogate: Toluene-d8</i>	49.8		ug/L	50.5		98.8	82-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	49.4		ug/L	50.2		98.4	78-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	49.4		ug/L	50.2		98.4	80-116			
LCS (1HJ1355-BS2)										
				Prepared: 10/22/24 00:00 Analyzed: 10/22/24 23:01						
Chloromethane	29.08	1.0	ug/L	30.3		95.9	63-155			
Vinyl Chloride	27.21	1.0	ug/L	30.2		90.0	70-154			
Bromomethane	31.91	1.0	ug/L	30.1		106	52-176			
Chloroethane	24.50	1.0	ug/L	30.3		80.8	72-148			
Trichlorofluoromethane	22.69	1.0	ug/L	30.3		74.9	70-152			
1,1-Dichloroethylene	44.10	1.0	ug/L	50.1		88.0	70-148			
Acetone	116.6	10.0	ug/L	100		117	43-172			
Methyl Iodide	94.09	1.0	ug/L	100		94.1	69-170			
Methylene Chloride	45.89	5.0	ug/L	50.1		91.6	68-142			
Acrylonitrile	85.78	5.0	ug/L	50.2		171	56-135			Q2
trans-1,2-Dichloroethylene	47.04	1.0	ug/L	50.1		93.9	66-148			
1,1-Dichloroethane	47.44	1.0	ug/L	50.1		94.7	66-143			
Vinyl Acetate	94.40	5.0	ug/L	156		60.6	43-153			
cis-1,2-Dichloroethylene	47.40	1.0	ug/L	50.4		94.1	71-149			
2-Butanone (MEK)	104.5	10.0	ug/L	100		104	52-159			
Bromochloromethane	48.94	1.0	ug/L	50.4		97.1	69-143			
Chloroform	47.13	1.0	ug/L	50.1		94.1	69-144			
1,1,1-Trichloroethane	45.49	1.0	ug/L	50.1		90.8	62-129			
Carbon Tetrachloride	45.94	1.0	ug/L	50.1		91.7	63-141			
Benzene	50.43	1.0	ug/L	50.4		100	71-134			

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1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1355 - EPA 5030B - EPA 8260D

LCS (1HJ1355-BS2)

Prepared: 10/22/24 00:00 Analyzed: 10/22/24 23:01

1,2-Dichloroethane	55.60	1.0	ug/L	50.1		111	72-132			
Trichloroethylene	48.69	1.0	ug/L	50.1		97.2	71-135			
1,2-Dichloropropane	50.84	1.0	ug/L	50.1		101	69-136			
Dibromomethane	52.43	1.0	ug/L	50.4		104	73-147			
Bromodichloromethane	50.34	1.0	ug/L	50.1		101	68-129			
cis-1,3-Dichloropropene	48.04	1.0	ug/L	50.1		95.9	65-134			
4-Methyl-2-pentanone (MIBK)	114.6	5.0	ug/L	100		115	58-147			
Toluene	48.88	1.0	ug/L	50.5		96.8	72-133			
trans-1,3-Dichloropropene	49.81	1.0	ug/L	50.1		99.5	67-130			
1,1,2-Trichloroethane	49.95	1.0	ug/L	50.1		99.7	69-135			
Tetrachloroethylene	49.35	1.0	ug/L	50.1		98.5	69-130			
2-Hexanone (MBK)	113.9	5.0	ug/L	100		114	55-144			
Dibromochloromethane	51.11	1.0	ug/L	50.1		102	73-127			
1,2-Dibromoethane	52.32	1.0	ug/L	50.2		104	67-132			
Chlorobenzene	49.79	1.0	ug/L	50.1		99.4	72-123			
1,1,1,2-Tetrachloroethane	52.40	1.0	ug/L	50.3		104	73-127			
Ethylbenzene	52.33	1.0	ug/L	50.2		104	71-127			
Xylenes, total	152.5	2.0	ug/L	151		101	74-127			
Styrene	52.43	1.0	ug/L	50.4		104	66-126			
Bromoform	50.61	1.0	ug/L	50.1		101	68-130			
1,2,3-Trichloropropane	52.68	1.0	ug/L	50.3		105	63-136			
trans-1,4-Dichloro-2-butene	100.9	5.0	ug/L	100		101	54-134			
1,1,2,2-Tetrachloroethane	53.13	1.0	ug/L	50.1		106	61-131			
1,4-Dichlorobenzene	48.61	1.0	ug/L	50.1		97.0	70-129			
1,2-Dichlorobenzene	49.77	1.0	ug/L	50.1		99.4	69-126			
1,2-Dibromo-3-chloropropane	46.69	5.0	ug/L	50.1		93.1	50-143			

Surrogate: Dibromofluoromethane	47.2		ug/L	50.2		94.0	57-134			
Surrogate: Dibromofluoromethane	47.2		ug/L	50.2		94.0	75-136			
Surrogate: 1,2-Dichloroethane-d4	49.5		ug/L	50.4		98.3	53-140			
Surrogate: 1,2-Dichloroethane-d4	49.5		ug/L	50.4		98.3	61-142			
Surrogate: Toluene-d8	49.8		ug/L	50.5		98.7	86-114			
Surrogate: Toluene-d8	49.8		ug/L	50.5		98.7	82-121			
Surrogate: 4-Bromofluorobenzene	50.1		ug/L	50.2		99.9	78-121			
Surrogate: 4-Bromofluorobenzene	50.1		ug/L	50.2		99.9	80-116			

LCS Dup (1HJ1355-BSD1)

Prepared: 10/22/24 00:00 Analyzed: 10/22/24 10:20

Chloromethane	31.48	1.0	ug/L	30.3		104	63-155	6.43	24	
Vinyl Chloride	29.84	1.0	ug/L	30.2		98.6	70-154	6.55	25	
Bromomethane	34.68	1.0	ug/L	30.1		115	52-176	8.16	27	
Chloroethane	26.57	1.0	ug/L	30.3		87.6	72-148	6.24	25	
Trichlorofluoromethane	24.32	1.0	ug/L	30.3		80.2	70-152	7.29	26	
1,1-Dichloroethylene	47.51	1.0	ug/L	50.1		94.8	70-148	7.20	24	
Acetone	111.6	10.0	ug/L	100		112	43-172	2.69	30	
Methyl Iodide	104.9	1.0	ug/L	100		105	69-170	3.95	30	

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1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
LCS Dup (1HJ1355-BSD1)										
				Prepared: 10/22/24 00:00 Analyzed: 10/22/24 10:20						
Carbon Disulfide	71.74	1.0	ug/L	100		71.7	72-162	6.63	24	S
Methylene Chloride	49.68	5.0	ug/L	50.1		99.2	68-142	4.99	21	
Acrylonitrile	88.06	5.0	ug/L	50.2		175	56-135	2.93	16	Q2
trans-1,2-Dichloroethylene	49.89	1.0	ug/L	50.1		99.6	66-148	5.76	27	
1,1-Dichloroethane	50.16	1.0	ug/L	50.1		100	66-143	5.47	24	
Vinyl Acetate	101.0	5.0	ug/L	156		64.9	43-153	3.16	30	
cis-1,2-Dichloroethylene	50.08	1.0	ug/L	50.4		99.5	71-149	5.25	26	
2-Butanone (MEK)	102.7	10.0	ug/L	100		103	52-159	6.31	27	
Bromochloromethane	51.18	1.0	ug/L	50.4		102	69-143	4.82	23	
Chloroform	49.86	1.0	ug/L	50.1		99.6	69-144	4.74	23	
1,1,1-Trichloroethane	48.43	1.0	ug/L	50.1		96.6	62-129	5.58	24	
Carbon Tetrachloride	49.02	1.0	ug/L	50.1		97.9	63-141	5.94	25	
Benzene	50.72	1.0	ug/L	50.4		101	71-134	4.36	24	
1,2-Dichloroethane	55.65	1.0	ug/L	50.1		111	72-132	2.80	24	
Trichloroethylene	49.14	1.0	ug/L	50.1		98.1	71-135	4.13	24	
1,2-Dichloropropane	50.25	1.0	ug/L	50.1		100	69-136	3.73	24	
Dibromomethane	52.42	1.0	ug/L	50.4		104	73-147	3.47	25	
Bromodichloromethane	50.53	1.0	ug/L	50.1		101	68-129	4.30	22	
cis-1,3-Dichloropropene	49.03	1.0	ug/L	50.1		97.9	65-134	3.27	23	
4-Methyl-2-pentanone (MIBK)	109.9	5.0	ug/L	100		110	58-147	1.48	27	
Toluene	48.80	1.0	ug/L	50.5		96.7	72-133	4.70	24	
trans-1,3-Dichloropropene	50.55	1.0	ug/L	50.1		101	67-130	2.64	24	
1,1,2-Trichloroethane	50.13	1.0	ug/L	50.1		100	69-135	2.73	23	
Tetrachloroethylene	49.92	1.0	ug/L	50.1		99.6	69-130	5.29	25	
2-Hexanone (MBK)	106.0	5.0	ug/L	100		106	55-144	3.02	25	
Dibromochloromethane	50.87	1.0	ug/L	50.1		102	73-127	4.42	22	
1,2-Dibromoethane	51.52	1.0	ug/L	50.2		103	67-132	2.96	24	
Chlorobenzene	49.91	1.0	ug/L	50.1		99.7	72-123	4.20	23	
1,1,1,2-Tetrachloroethane	52.38	1.0	ug/L	50.3		104	73-127	4.39	24	
Ethylbenzene	52.00	1.0	ug/L	50.2		104	71-127	4.84	26	
Xylenes, total	153.2	2.0	ug/L	151		101	74-127	4.59	25	
Styrene	52.46	1.0	ug/L	50.4		104	66-126	4.34	23	
Bromoform	50.15	1.0	ug/L	50.1		100	68-130	3.26	23	
1,2,3-Trichloropropane	50.73	1.0	ug/L	50.3		101	63-136	2.05	24	
trans-1,4-Dichloro-2-butene	99.63	5.0	ug/L	100		99.6	54-134	2.95	27	
1,1,2,2-Tetrachloroethane	51.28	1.0	ug/L	50.1		102	61-131	3.34	29	
1,4-Dichlorobenzene	49.53	1.0	ug/L	50.1		98.8	70-129	2.81	24	
1,2-Dichlorobenzene	50.64	1.0	ug/L	50.1		101	69-126	2.84	26	
1,2-Dibromo-3-chloropropane	45.00	5.0	ug/L	50.1		89.8	50-143	0.736	30	

Surrogate: Dibromofluoromethane	50.2		ug/L	50.2		100	57-134			
Surrogate: Dibromofluoromethane	50.2		ug/L	50.2		100	75-136			
Surrogate: 1,2-Dichloroethane-d4	52.2		ug/L	50.4		104	53-140			
Surrogate: 1,2-Dichloroethane-d4	52.2		ug/L	50.4		104	61-142			

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
LCS Dup (1HJ1355-BSD1)				Prepared: 10/22/24 00:00 Analyzed: 10/22/24 10:20						
Surrogate: Toluene-d8	50.0		ug/L	50.5		99.0	86-114			
Surrogate: Toluene-d8	50.0		ug/L	50.5		99.0	82-121			
Surrogate: 4-Bromofluorobenzene	49.9		ug/L	50.2		99.4	78-121			
Surrogate: 4-Bromofluorobenzene	49.9		ug/L	50.2		99.4	80-116			
LCS Dup (1HJ1355-BSD2)				Prepared: 10/22/24 00:00 Analyzed: 10/22/24 23:23						
Chloromethane	30.71	1.0	ug/L	30.3		101	63-155	5.45	24	
Vinyl Chloride	28.82	1.0	ug/L	30.2		95.3	70-154	5.75	25	
Bromomethane	32.93	1.0	ug/L	30.1		109	52-176	3.15	27	
Chloroethane	26.09	1.0	ug/L	30.3		86.1	72-148	6.29	25	
Trichlorofluoromethane	24.13	1.0	ug/L	30.3		79.6	70-152	6.15	26	
1,1-Dichloroethylene	46.79	1.0	ug/L	50.1		93.3	70-148	5.92	24	
Acetone	114.9	10.0	ug/L	100		115	43-172	1.43	30	
Methyl Iodide	99.97	1.0	ug/L	100		100	69-170	6.06	30	
Methylene Chloride	47.98	5.0	ug/L	50.1		95.8	68-142	4.45	21	
Acrylonitrile	85.67	5.0	ug/L	50.2		171	56-135	0.128	16	Q2
trans-1,2-Dichloroethylene	49.63	1.0	ug/L	50.1		99.1	66-148	5.36	27	
1,1-Dichloroethane	49.54	1.0	ug/L	50.1		98.9	66-143	4.33	24	
Vinyl Acetate	96.42	5.0	ug/L	156		61.9	43-153	2.12	30	
cis-1,2-Dichloroethylene	49.70	1.0	ug/L	50.4		98.7	71-149	4.74	26	
2-Butanone (MEK)	102.5	10.0	ug/L	100		103	52-159	1.90	27	
Bromochloromethane	50.70	1.0	ug/L	50.4		101	69-143	3.53	23	
Chloroform	49.23	1.0	ug/L	50.1		98.3	69-144	4.36	23	
1,1,1-Trichloroethane	47.79	1.0	ug/L	50.1		95.4	62-129	4.93	24	
Carbon Tetrachloride	48.48	1.0	ug/L	50.1		96.8	63-141	5.38	25	
Benzene	53.03	1.0	ug/L	50.4		105	71-134	5.03	24	
1,2-Dichloroethane	58.60	1.0	ug/L	50.1		117	72-132	5.25	24	
Trichloroethylene	50.92	1.0	ug/L	50.1		102	71-135	4.48	24	
1,2-Dichloropropane	52.85	1.0	ug/L	50.1		106	69-136	3.88	24	
Dibromomethane	53.93	1.0	ug/L	50.4		107	73-147	2.82	25	
Bromodichloromethane	52.53	1.0	ug/L	50.1		105	68-129	4.26	22	
cis-1,3-Dichloropropene	49.95	1.0	ug/L	50.1		99.7	65-134	3.90	23	
4-Methyl-2-pentanone (MIBK)	113.3	5.0	ug/L	100		113	58-147	1.14	27	
Toluene	51.29	1.0	ug/L	50.5		102	72-133	4.81	24	
trans-1,3-Dichloropropene	51.27	1.0	ug/L	50.1		102	67-130	2.89	24	
1,1,2-Trichloroethane	51.40	1.0	ug/L	50.1		103	69-135	2.86	23	
Tetrachloroethylene	51.29	1.0	ug/L	50.1		102	69-130	3.86	25	
2-Hexanone (MBK)	108.9	5.0	ug/L	100		109	55-144	4.52	25	
Dibromochloromethane	52.05	1.0	ug/L	50.1		104	73-127	1.82	22	
1,2-Dibromoethane	52.70	1.0	ug/L	50.2		105	67-132	0.724	24	
Chlorobenzene	51.95	1.0	ug/L	50.1		104	72-123	4.25	23	
1,1,1,2-Tetrachloroethane	53.49	1.0	ug/L	50.3		106	73-127	2.06	24	
Ethylbenzene	54.56	1.0	ug/L	50.2		109	71-127	4.17	26	

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
LCS Dup (1HJ1355-BSD2)										
				Prepared: 10/22/24 00:00 Analyzed: 10/22/24 23:23						
Xylenes, total	158.8	2.0	ug/L	151		105	74-127	4.02	25	
Styrene	54.10	1.0	ug/L	50.4		107	66-126	3.14	23	
Bromoform	50.66	1.0	ug/L	50.1		101	68-130	0.0987	23	
1,2,3-Trichloropropane	52.37	1.0	ug/L	50.3		104	63-136	0.590	24	
trans-1,4-Dichloro-2-butene	100.2	5.0	ug/L	100		100	54-134	0.676	27	
1,1,2,2-Tetrachloroethane	53.17	1.0	ug/L	50.1		106	61-131	0.0753	29	
1,4-Dichlorobenzene	50.24	1.0	ug/L	50.1		100	70-129	3.30	24	
1,2-Dichlorobenzene	51.54	1.0	ug/L	50.1		103	69-126	3.49	26	
1,2-Dibromo-3-chloropropane	45.39	5.0	ug/L	50.1		90.5	50-143	2.82	30	
<i>Surrogate: Dibromofluoromethane</i>	47.1		ug/L	50.2		93.7	57-134			
<i>Surrogate: Dibromofluoromethane</i>	47.1		ug/L	50.2		93.7	75-136			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.9		ug/L	50.4		99.0	53-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.9		ug/L	50.4		99.0	61-142			
<i>Surrogate: Toluene-d8</i>	50.3		ug/L	50.5		99.6	86-114			
<i>Surrogate: Toluene-d8</i>	50.3		ug/L	50.5		99.6	82-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	50.0		ug/L	50.2		99.7	78-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	50.0		ug/L	50.2		99.7	80-116			
Matrix Spike (1HJ1355-MS1)										
				Source: 1HJ1617-04 Prepared: 10/22/24 00:00 Analyzed: 10/22/24 21:30						
Chloromethane	324.6	10.0	ug/L	303	ND	107	61-152			
Vinyl Chloride	301.7	10.0	ug/L	302	ND	99.7	66-149			
Bromomethane	309.7	10.0	ug/L	301	ND	103	43-171			
Chloroethane	258.7	10.0	ug/L	303	ND	85.3	69-148			
Trichlorofluoromethane	247.4	10.0	ug/L	303	ND	81.6	62-163			
1,1-Dichloroethylene	462.5	10.0	ug/L	501	ND	92.3	70-148			
Acetone	1159	100	ug/L	1000	ND	116	45-173			
Methyl Iodide	924.2	10.0	ug/L	1000	ND	92.4	62-167			
Carbon Disulfide	695.9	10.0	ug/L	1000	ND	69.6	71-163			M2
Methylene Chloride	462.2	50.0	ug/L	501	ND	92.2	69-140			
Acrylonitrile	851.1	50.0	ug/L	502	ND	170	38-147			M1
trans-1,2-Dichloroethylene	480.0	10.0	ug/L	501	ND	95.8	69-144			
1,1-Dichloroethane	471.5	10.0	ug/L	501	ND	94.1	70-138			
Vinyl Acetate	942.3	50.0	ug/L	1560	ND	60.5	58-142			
cis-1,2-Dichloroethylene	473.8	10.0	ug/L	504	ND	94.1	68-151			
2-Butanone (MEK)	1008	100	ug/L	1000	ND	101	50-160			
Bromochloromethane	480.3	10.0	ug/L	504	ND	95.3	65-143			
Chloroform	465.8	10.0	ug/L	501	ND	93.0	71-143			
1,1,1-Trichloroethane	461.2	10.0	ug/L	501	ND	92.0	63-133			
Carbon Tetrachloride	467.1	10.0	ug/L	501	ND	93.3	63-142			
Benzene	500.9	10.0	ug/L	504	ND	99.3	69-133			
1,2-Dichloroethane	545.7	10.0	ug/L	501	ND	109	63-138			
Trichloroethylene	481.7	10.0	ug/L	501	ND	96.2	71-133			
1,2-Dichloropropane	493.0	10.0	ug/L	501	ND	98.4	69-132			
Dibromomethane	513.5	10.0	ug/L	504	ND	102	70-147			

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
Matrix Spike (1HJ1355-MS1)	Source: 1HJ1617-04			Prepared: 10/22/24 00:00 Analyzed: 10/22/24 21:30						
Bromodichloromethane	495.7	10.0	ug/L	501	ND	99.0	67-130			
cis-1,3-Dichloropropene	467.2	10.0	ug/L	501	ND	93.3	61-126			
4-Methyl-2-pentanone (MIBK)	1094	50.0	ug/L	1000	ND	109	55-147			
Toluene	477.2	10.0	ug/L	505	ND	94.5	71-133			
trans-1,3-Dichloropropene	479.1	10.0	ug/L	501	ND	95.7	63-124			
1,1,2-Trichloroethane	496.8	10.0	ug/L	501	ND	99.2	69-133			
Tetrachloroethylene	496.4	10.0	ug/L	501	ND	99.1	70-124			
2-Hexanone (MBK)	1076	50.0	ug/L	1000	ND	108	53-141			
Dibromochloromethane	493.7	10.0	ug/L	501	ND	98.6	74-122			
1,2-Dibromoethane	506.1	10.0	ug/L	502	ND	101	66-127			
Chlorobenzene	488.0	10.0	ug/L	501	ND	97.4	76-116			
1,1,1,2-Tetrachloroethane	510.3	10.0	ug/L	503	ND	101	77-121			
Ethylbenzene	515.0	10.0	ug/L	502	ND	103	73-124			
Xylenes, total	1500	20.0	ug/L	1510	ND	99.3	75-123			
Styrene	512.2	10.0	ug/L	504	ND	102	70-120			
Bromoform	486.4	10.0	ug/L	501	ND	97.1	70-124			
1,2,3-Trichloropropane	505.2	10.0	ug/L	503	ND	100	62-135			
trans-1,4-Dichloro-2-butene	980.9	50.0	ug/L	1000	ND	98.1	50-120			
1,1,2,2-Tetrachloroethane	503.5	10.0	ug/L	501	ND	100	63-126			
1,4-Dichlorobenzene	468.5	10.0	ug/L	501	ND	93.5	72-119			
1,2-Dichlorobenzene	484.2	10.0	ug/L	501	ND	96.7	71-117			
1,2-Dibromo-3-chloropropane	431.1	50.0	ug/L	501	ND	86.0	49-134			
<i>Surrogate: Dibromofluoromethane</i>	469		ug/L	502		93.3	57-134			
<i>Surrogate: Dibromofluoromethane</i>	469		ug/L	502		93.3	75-136			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	492		ug/L	504		97.7	53-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	492		ug/L	504		97.7	61-142			
<i>Surrogate: Toluene-d8</i>	498		ug/L	505		98.7	86-114			
<i>Surrogate: Toluene-d8</i>	498		ug/L	505		98.7	82-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	500		ug/L	502		99.7	78-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	500		ug/L	502		99.7	80-116			
Matrix Spike (1HJ1355-MS2)	Source: 1HJ1633-01			Prepared: 10/22/24 00:00 Analyzed: 10/23/24 08:04						
Chloromethane	343.5	10.0	ug/L	303	ND	113	61-152			
Vinyl Chloride	324.7	10.0	ug/L	302	ND	107	66-149			
Bromomethane	302.5	10.0	ug/L	301	ND	100	43-171			
Chloroethane	276.1	10.0	ug/L	303	ND	91.1	69-148			
Trichlorofluoromethane	265.2	10.0	ug/L	303	ND	87.5	62-163			
1,1-Dichloroethylene	497.4	10.0	ug/L	501	ND	99.2	70-148			
Acetone	1254	100	ug/L	1000	ND	125	45-173			
Methyl Iodide	884.6	10.0	ug/L	1000	ND	88.5	62-167			
Methylene Chloride	483.5	50.0	ug/L	501	ND	96.5	69-140			
Acrylonitrile	917.8	50.0	ug/L	502	ND	183	38-147			M1
trans-1,2-Dichloroethylene	512.1	10.0	ug/L	501	ND	102	69-144			
1,1-Dichloroethane	500.1	10.0	ug/L	501	ND	99.8	70-138			

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
Matrix Spike (1HJ1355-MS2)	Source: 1HJ1633-01			Prepared: 10/22/24 00:00 Analyzed: 10/23/24 08:04						
Vinyl Acetate	947.6	50.0	ug/L	1560	ND	60.8	58-142			
cis-1,2-Dichloroethylene	478.9	10.0	ug/L	504	ND	95.1	68-151			
2-Butanone (MEK)	1062	100	ug/L	1000	ND	106	50-160			
Bromochloromethane	501.9	10.0	ug/L	504	ND	99.6	65-143			
Chloroform	488.7	10.0	ug/L	501	ND	97.6	71-143			
1,1,1-Trichloroethane	483.0	10.0	ug/L	501	ND	96.4	63-133			
Carbon Tetrachloride	495.1	10.0	ug/L	501	ND	98.8	63-142			
Benzene	533.9	10.0	ug/L	504	ND	106	69-133			
1,2-Dichloroethane	568.6	10.0	ug/L	501	ND	114	63-138			
Trichloroethylene	509.8	10.0	ug/L	501	ND	102	71-133			
1,2-Dichloropropane	518.2	10.0	ug/L	501	ND	103	69-132			
Dibromomethane	531.1	10.0	ug/L	504	ND	105	70-147			
Bromodichloromethane	518.8	10.0	ug/L	501	ND	104	67-130			
cis-1,3-Dichloropropene	467.6	10.0	ug/L	501	ND	93.4	61-126			
4-Methyl-2-pentanone (MIBK)	1175	50.0	ug/L	1000	ND	118	55-147			
Toluene	508.7	10.0	ug/L	505	ND	101	71-133			
trans-1,3-Dichloropropene	478.6	10.0	ug/L	501	ND	95.6	63-124			
1,1,2-Trichloroethane	509.2	10.0	ug/L	501	ND	102	69-133			
Tetrachloroethylene	516.7	10.0	ug/L	501	ND	103	70-124			
2-Hexanone (MBK)	1149	50.0	ug/L	1000	ND	115	53-141			
Dibromochloromethane	514.5	10.0	ug/L	501	ND	103	74-122			
1,2-Dibromoethane	524.5	10.0	ug/L	502	ND	104	66-127			
Chlorobenzene	511.2	10.0	ug/L	501	ND	102	76-116			
1,1,1,2-Tetrachloroethane	528.1	10.0	ug/L	503	ND	105	77-121			
Ethylbenzene	543.3	10.0	ug/L	502	ND	108	73-124			
Xylenes, total	1584	20.0	ug/L	1510	ND	105	75-123			
Styrene	537.3	10.0	ug/L	504	ND	107	70-120			
Bromoform	502.3	10.0	ug/L	501	ND	100	70-124			
1,2,3-Trichloropropane	542.0	10.0	ug/L	503	ND	108	62-135			
trans-1,4-Dichloro-2-butene	961.2	50.0	ug/L	1000	ND	96.1	50-120			
1,1,2,2-Tetrachloroethane	540.0	10.0	ug/L	501	ND	108	63-126			
1,4-Dichlorobenzene	491.4	10.0	ug/L	501	ND	98.0	72-119			
1,2-Dichlorobenzene	507.4	10.0	ug/L	501	ND	101	71-117			
1,2-Dibromo-3-chloropropane	467.9	50.0	ug/L	501	ND	93.3	49-134			
Surrogate: Dibromofluoromethane	468		ug/L	502		93.3	57-134			
Surrogate: Dibromofluoromethane	468		ug/L	502		93.3	75-136			
Surrogate: 1,2-Dichloroethane-d4	499		ug/L	504		99.1	53-140			
Surrogate: 1,2-Dichloroethane-d4	499		ug/L	504		99.1	61-142			
Surrogate: Toluene-d8	502		ug/L	505		99.4	86-114			
Surrogate: Toluene-d8	502		ug/L	505		99.4	82-121			
Surrogate: 4-Bromofluorobenzene	500		ug/L	502		99.6	78-121			
Surrogate: 4-Bromofluorobenzene	500		ug/L	502		99.6	80-116			
Matrix Spike Dup (1HJ1355-MSD1)	Source: 1HJ1617-04			Prepared: 10/22/24 00:00 Analyzed: 10/22/24 21:53						



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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (1HJ1355-MSD1)	Source: 1HJ1617-04			Prepared: 10/22/24 00:00 Analyzed: 10/22/24 21:53						
Chloromethane	324.4	10.0	ug/L	303	ND	107	61-152	0.0616	26	
Vinyl Chloride	309.5	10.0	ug/L	302	ND	102	66-149	2.55	23	
Bromomethane	331.1	10.0	ug/L	301	ND	110	43-171	6.68	29	
Chloroethane	264.9	10.0	ug/L	303	ND	87.4	69-148	2.37	25	
Trichlorofluoromethane	253.9	10.0	ug/L	303	ND	83.8	62-163	2.59	25	
1,1-Dichloroethylene	477.1	10.0	ug/L	501	ND	95.2	70-148	3.11	22	
Acetone	1142	100	ug/L	1000	ND	114	45-173	1.46	30	
Methyl Iodide	988.7	10.0	ug/L	1000	ND	98.9	62-167	6.74	24	
Carbon Disulfide	710.0	10.0	ug/L	1000	ND	71.0	71-163	2.01	22	
Methylene Chloride	462.7	50.0	ug/L	501	ND	92.3	69-140	0.108	19	
Acrylonitrile	857.2	50.0	ug/L	502	ND	171	38-147	0.714	30	M1
trans-1,2-Dichloroethylene	489.0	10.0	ug/L	501	ND	97.6	69-144	1.86	22	
1,1-Dichloroethane	483.6	10.0	ug/L	501	ND	96.5	70-138	2.53	20	
Vinyl Acetate	954.5	50.0	ug/L	1560	ND	61.3	58-142	1.29	24	
cis-1,2-Dichloroethylene	487.0	10.0	ug/L	504	ND	96.7	68-151	2.75	22	
2-Butanone (MEK)	1020	100	ug/L	1000	ND	102	50-160	1.24	23	
Bromochloromethane	486.8	10.0	ug/L	504	ND	96.6	65-143	1.34	22	
Chloroform	476.3	10.0	ug/L	501	ND	95.1	71-143	2.23	21	
1,1,1-Trichloroethane	477.9	10.0	ug/L	501	ND	95.4	63-133	3.56	23	
Carbon Tetrachloride	489.4	10.0	ug/L	501	ND	97.7	63-142	4.66	22	
Benzene	516.3	10.0	ug/L	504	ND	102	69-133	3.03	18	
1,2-Dichloroethane	545.3	10.0	ug/L	501	ND	109	63-138	0.0733	20	
Trichloroethylene	497.0	10.0	ug/L	501	ND	99.2	71-133	3.13	23	
1,2-Dichloropropane	501.2	10.0	ug/L	501	ND	100	69-132	1.65	20	
Dibromomethane	514.0	10.0	ug/L	504	ND	102	70-147	0.0973	22	
Bromodichloromethane	501.3	10.0	ug/L	501	ND	100	67-130	1.12	21	
cis-1,3-Dichloropropene	477.0	10.0	ug/L	501	ND	95.2	61-126	2.08	21	
4-Methyl-2-pentanone (MIBK)	1107	50.0	ug/L	1000	ND	111	55-147	1.15	23	
Toluene	494.7	10.0	ug/L	505	ND	98.0	71-133	3.60	19	
trans-1,3-Dichloropropene	486.4	10.0	ug/L	501	ND	97.1	63-124	1.51	21	
1,1,2-Trichloroethane	491.7	10.0	ug/L	501	ND	98.2	69-133	1.03	19	
Tetrachloroethylene	507.2	10.0	ug/L	501	ND	101	70-124	2.15	24	
2-Hexanone (MBK)	1078	50.0	ug/L	1000	ND	108	53-141	0.204	24	
Dibromochloromethane	495.2	10.0	ug/L	501	ND	98.9	74-122	0.303	21	
1,2-Dibromoethane	505.5	10.0	ug/L	502	ND	101	66-127	0.119	23	
Chlorobenzene	496.0	10.0	ug/L	501	ND	99.0	76-116	1.63	21	
1,1,1,2-Tetrachloroethane	516.0	10.0	ug/L	503	ND	102	77-121	1.11	25	
Ethylbenzene	531.7	10.0	ug/L	502	ND	106	73-124	3.19	20	
Xylenes, total	1540	20.0	ug/L	1510	ND	102	75-123	2.64	20	
Styrene	518.9	10.0	ug/L	504	ND	103	70-120	1.30	23	
Bromoform	487.0	10.0	ug/L	501	ND	97.2	70-124	0.123	22	
1,2,3-Trichloropropane	505.8	10.0	ug/L	503	ND	100	62-135	0.119	28	
trans-1,4-Dichloro-2-butene	978.5	50.0	ug/L	1000	ND	97.8	50-120	0.245	26	

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1355 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (1HJ1355-MSD1)	Source: 1HJ1617-04			Prepared: 10/22/24 00:00 Analyzed: 10/22/24 21:53						
1,1,2,2-Tetrachloroethane	515.7	10.0	ug/L	501	ND	103	63-126	2.39	24	
1,4-Dichlorobenzene	483.9	10.0	ug/L	501	ND	96.5	72-119	3.23	24	
1,2-Dichlorobenzene	495.3	10.0	ug/L	501	ND	98.9	71-117	2.27	24	
1,2-Dibromo-3-chloropropane	440.1	50.0	ug/L	501	ND	87.8	49-134	2.07	28	
<i>Surrogate: Dibromofluoromethane</i>	472		ug/L	502		94.0	57-134			
<i>Surrogate: Dibromofluoromethane</i>	472		ug/L	502		94.0	75-136			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	500		ug/L	504		99.4	53-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	500		ug/L	504		99.4	61-142			
<i>Surrogate: Toluene-d8</i>	501		ug/L	505		99.3	86-114			
<i>Surrogate: Toluene-d8</i>	501		ug/L	505		99.3	82-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	496		ug/L	502		98.9	78-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	496		ug/L	502		98.9	80-116			
Matrix Spike Dup (1HJ1355-MSD2)	Source: 1HJ1633-01			Prepared: 10/22/24 00:00 Analyzed: 10/23/24 08:26						
Chloromethane	327.6	10.0	ug/L	303	ND	108	61-152	4.74	26	
Vinyl Chloride	307.4	10.0	ug/L	302	ND	102	66-149	5.47	23	
Bromomethane	317.8	10.0	ug/L	301	ND	106	43-171	4.93	29	
Chloroethane	268.4	10.0	ug/L	303	ND	88.5	69-148	2.83	25	
Trichlorofluoromethane	251.4	10.0	ug/L	303	ND	83.0	62-163	5.34	25	
1,1-Dichloroethylene	477.4	10.0	ug/L	501	ND	95.2	70-148	4.10	22	
Acetone	1207	100	ug/L	1000	ND	121	45-173	3.84	30	
Methyl Iodide	967.6	10.0	ug/L	1000	ND	96.8	62-167	8.96	24	
Methylene Chloride	472.5	50.0	ug/L	501	ND	94.3	69-140	2.30	19	
Acrylonitrile	880.4	50.0	ug/L	502	ND	175	38-147	4.16	30	M1
trans-1,2-Dichloroethylene	492.2	10.0	ug/L	501	ND	98.3	69-144	3.96	22	
1,1-Dichloroethane	493.4	10.0	ug/L	501	ND	98.5	70-138	1.35	20	
Vinyl Acetate	946.7	50.0	ug/L	1560	ND	60.8	58-142	0.0950	24	
cis-1,2-Dichloroethylene	475.5	10.0	ug/L	504	ND	94.4	68-151	0.712	22	
2-Butanone (MEK)	1046	100	ug/L	1000	ND	105	50-160	1.51	23	
Bromochloromethane	502.8	10.0	ug/L	504	ND	99.8	65-143	0.179	22	
Chloroform	484.2	10.0	ug/L	501	ND	96.7	71-143	0.925	21	
1,1,1-Trichloroethane	477.8	10.0	ug/L	501	ND	95.3	63-133	1.08	23	
Carbon Tetrachloride	486.6	10.0	ug/L	501	ND	97.1	63-142	1.73	22	
Benzene	525.0	10.0	ug/L	504	ND	104	69-133	1.68	18	
1,2-Dichloroethane	571.8	10.0	ug/L	501	ND	114	63-138	0.561	20	
Trichloroethylene	506.5	10.0	ug/L	501	ND	101	71-133	0.649	23	
1,2-Dichloropropane	519.4	10.0	ug/L	501	ND	104	69-132	0.231	20	
Dibromomethane	538.6	10.0	ug/L	504	ND	107	70-147	1.40	22	
Bromodichloromethane	518.9	10.0	ug/L	501	ND	104	67-130	0.0193	21	
cis-1,3-Dichloropropene	473.7	10.0	ug/L	501	ND	94.6	61-126	1.30	21	
4-Methyl-2-pentanone (MIBK)	1165	50.0	ug/L	1000	ND	117	55-147	0.854	23	
Toluene	503.6	10.0	ug/L	505	ND	99.8	71-133	1.01	19	
trans-1,3-Dichloropropene	488.9	10.0	ug/L	501	ND	97.6	63-124	2.13	21	
1,1,2-Trichloroethane	513.7	10.0	ug/L	501	ND	103	69-133	0.880	19	



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1355 - EPA 5030B - EPA 8260D

Matrix Spike Dup (1HJ1355-MSD2)	Source: 1HJ1633-01	Prepared: 10/22/24 00:00 Analyzed: 10/23/24 08:26								
Tetrachloroethylene	509.7	10.0	ug/L	501	ND	102	70-124	1.36	24	
2-Hexanone (MBK)	1132	50.0	ug/L	1000	ND	113	53-141	1.53	24	
Dibromochloromethane	516.0	10.0	ug/L	501	ND	103	74-122	0.291	21	
1,2-Dibromoethane	523.5	10.0	ug/L	502	ND	104	66-127	0.191	23	
Chlorobenzene	510.9	10.0	ug/L	501	ND	102	76-116	0.0587	21	
1,1,1,2-Tetrachloroethane	525.7	10.0	ug/L	503	ND	104	77-121	0.455	25	
Ethylbenzene	540.3	10.0	ug/L	502	ND	108	73-124	0.554	20	
Xylenes, total	1583	20.0	ug/L	1510	ND	105	75-123	0.0316	20	
Styrene	540.7	10.0	ug/L	504	ND	107	70-120	0.631	23	
Bromoform	506.4	10.0	ug/L	501	ND	101	70-124	0.813	22	
1,2,3-Trichloropropane	535.8	10.0	ug/L	503	ND	106	62-135	1.15	28	
trans-1,4-Dichloro-2-butene	955.3	50.0	ug/L	1000	ND	95.5	50-120	0.616	26	
1,1,2,2-Tetrachloroethane	542.7	10.0	ug/L	501	ND	108	63-126	0.499	24	
1,4-Dichlorobenzene	489.8	10.0	ug/L	501	ND	97.7	72-119	0.326	24	
1,2-Dichlorobenzene	505.3	10.0	ug/L	501	ND	101	71-117	0.415	24	
1,2-Dibromo-3-chloropropane	462.9	50.0	ug/L	501	ND	92.3	49-134	1.07	28	
Surrogate: Dibromofluoromethane	467		ug/L	502		93.1	57-134			
Surrogate: Dibromofluoromethane	467		ug/L	502		93.1	75-136			
Surrogate: 1,2-Dichloroethane-d4	500		ug/L	504		99.2	53-140			
Surrogate: 1,2-Dichloroethane-d4	500		ug/L	504		99.2	61-142			
Surrogate: Toluene-d8	498		ug/L	505		98.7	86-114			
Surrogate: Toluene-d8	498		ug/L	505		98.7	82-121			
Surrogate: 4-Bromofluorobenzene	504		ug/L	502		100	78-121			
Surrogate: 4-Bromofluorobenzene	504		ug/L	502		100	80-116			

Batch 1HJ1517 - EPA 5030B - EPA 8260D

Blank (1HJ1517-BLK1)	Prepared: 10/23/24 00:00 Analyzed: 10/23/24 15:48									
Dichlorodifluoromethane	<1.0	1.0	ug/L							
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							
Acrolein	<10.0	10.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Methyl Iodide	<2.0	2.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Acetonitrile	<10.0	10.0	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							



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1517 - EPA 5030B - EPA 8260D										
Blank (1HJ1517-BLK1)										
Prepared: 10/23/24 00:00 Analyzed: 10/23/24 15:48										
Vinyl Acetate	<5.0	5.0	ug/L							
2,2-Dichloropropane	<1.0	1.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
2-Butanone (MEK)	<5.0	5.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
1,1-Dichloropropene	<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							
Ethyl Methacrylate	<10.0	10.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
1,3-Dichloropropane	<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							
1,3-Dichlorobenzene	<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	<1.0	1.0	ug/L							
1,2,4-Trichlorobenzene	<1.0	1.0	ug/L							

Surrogate: Dibromofluoromethane	47.5	ug/L	50.2	94.6	57-134
Surrogate: 1,2-Dichloroethane-d4	50.8	ug/L	50.4	101	53-140



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1517 - EPA 5030B - EPA 8260D										
Blank (1HJ1517-BLK1)										
				Prepared: 10/23/24 00:00 Analyzed: 10/23/24 15:48						
Surrogate: 1,2-Dichloroethane-d4	50.8		ug/L	50.4		101	53-140			
Surrogate: Toluene-d8	47.8		ug/L	50.5		94.7	86-114			
Surrogate: Toluene-d8	47.8		ug/L	50.5		94.7	86-114			
Surrogate: 4-Bromofluorobenzene	49.9		ug/L	50.2		99.4	78-121			
Surrogate: 4-Bromofluorobenzene	49.9		ug/L	50.2		99.4	78-121			
LCS (1HJ1517-BS1)										
				Prepared: 10/23/24 00:00 Analyzed: 10/23/24 14:41						
Dichlorodifluoromethane	26.38	1.0	ug/L	30.3		87.1	49-138			
Chloromethane	35.40	1.0	ug/L	30.3		117	60-141			
Vinyl Chloride	35.61	1.0	ug/L	30.2		118	65-137			
Bromomethane	38.05	1.0	ug/L	30.1		126	47-173			
Chloroethane	28.14	1.0	ug/L	30.3		92.8	67-145			
Trichlorofluoromethane	27.24	1.0	ug/L	30.3		89.9	63-127			
Acrolein	36.94	10.0	ug/L	50.4		73.4	21-142			
1,1-Dichloroethylene	46.21	1.0	ug/L	50.1		92.2	69-136			
Acetone	89.83	10.0	ug/L	100		89.8	45-153			
Methyl Iodide	87.27	2.0	ug/L	100		87.3	58-156			
Carbon Disulfide	83.54	1.0	ug/L	100		83.5	68-128			
Acetonitrile	81.03	10.0	ug/L	100		81.0	35-177			
Methylene Chloride	44.70	5.0	ug/L	50.1		89.2	65-124			
Acrylonitrile	36.52	5.0	ug/L	50.2		72.7	56-135			
trans-1,2-Dichloroethylene	47.38	1.0	ug/L	50.1		94.6	74-126			
1,1-Dichloroethane	46.66	1.0	ug/L	50.1		93.1	73-122			
Vinyl Acetate	134.3	5.0	ug/L	156		86.2	24-171			
2,2-Dichloropropane	48.93	1.0	ug/L	50.3		97.2	68-120			
cis-1,2-Dichloroethylene	47.08	1.0	ug/L	50.4		93.5	65-149			
2-Butanone (MEK)	76.94	5.0	ug/L	100		76.9	57-147			
Bromochloromethane	46.35	1.0	ug/L	50.4		92.0	76-125			
Chloroform	45.57	1.0	ug/L	50.1		91.0	71-125			
1,1,1-Trichloroethane	45.87	1.0	ug/L	50.1		91.5	66-118			
1,1-Dichloropropene	46.74	1.0	ug/L	50.5		92.6	69-130			
Carbon Tetrachloride	46.22	1.0	ug/L	50.1		92.3	68-126			
Benzene	49.62	1.0	ug/L	50.4		98.4	81-123			
1,2-Dichloroethane	50.74	1.0	ug/L	50.1		101	70-130			
Trichloroethylene	48.04	1.0	ug/L	50.1		95.9	84-118			
1,2-Dichloropropane	48.22	1.0	ug/L	50.1		96.3	87-118			
Dibromomethane	45.88	1.0	ug/L	50.4		91.1	82-126			
Bromodichloromethane	47.45	1.0	ug/L	50.1		94.7	80-116			
cis-1,3-Dichloropropene	46.32	1.0	ug/L	50.1		92.5	83-116			
4-Methyl-2-pentanone (MIBK)	88.52	5.0	ug/L	100		88.5	74-138			
Toluene	47.79	1.0	ug/L	50.5		94.7	78-123			
trans-1,3-Dichloropropene	45.61	1.0	ug/L	50.1		91.1	75-120			
Ethyl Methacrylate	87.18	10.0	ug/L	100		87.2	77-129			



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1517 - EPA 5030B - EPA 8260D										
LCS (1HJ1517-BS1)										
				Prepared: 10/23/24 00:00 Analyzed: 10/23/24 14:41						
1,1,2-Trichloroethane	45.10	1.0	ug/L	50.1		90.0	81-121			
Tetrachloroethylene	49.26	1.0	ug/L	50.1		98.3	76-120			
1,3-Dichloropropane	48.91	1.0	ug/L	50.4		97.0	86-131			
2-Hexanone (MBK)	86.67	5.0	ug/L	100		86.7	76-139			
Dibromochloromethane	47.51	1.0	ug/L	50.1		94.9	83-123			
1,2-Dibromoethane	46.14	1.0	ug/L	50.2		91.9	86-115			
Chlorobenzene	48.53	1.0	ug/L	50.1		96.9	82-117			
1,1,1,2-Tetrachloroethane	49.21	1.0	ug/L	50.3		97.7	86-119			
Ethylbenzene	51.30	1.0	ug/L	50.2		102	80-122			
Xylenes, total	148.1	2.0	ug/L	151		98.0	81-122			
Styrene	50.16	1.0	ug/L	50.4		99.6	85-118			
Bromoform	45.02	1.0	ug/L	50.1		89.8	80-123			
1,2,3-Trichloropropane	44.34	1.0	ug/L	50.3		88.1	83-126			
trans-1,4-Dichloro-2-butene	93.16	5.0	ug/L	100		93.2	67-118			
1,1,2,2-Tetrachloroethane	43.80	1.0	ug/L	50.1		87.4	81-124			
1,3-Dichlorobenzene	46.74	1.0	ug/L	50.1		93.3	83-114			
1,4-Dichlorobenzene	47.15	1.0	ug/L	50.1		94.1	83-117			
1,2-Dichlorobenzene	46.26	1.0	ug/L	50.1		92.3	83-116			
1,2-Dibromo-3-chloropropane	35.99	1.0	ug/L	50.1		71.8	77-128			Q3
1,2,4-Trichlorobenzene	39.53	1.0	ug/L	50.4		78.5	66-134			
<i>Surrogate: Dibromofluoromethane</i>										
	46.5		ug/L	50.2		92.7	57-134			
<i>Surrogate: 1,2-Dichloroethane-d4</i>										
	48.2		ug/L	50.4		95.7	53-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>										
	48.2		ug/L	50.4		95.7	53-140			
<i>Surrogate: Toluene-d8</i>										
	49.3		ug/L	50.5		97.7	86-114			
<i>Surrogate: Toluene-d8</i>										
	49.3		ug/L	50.5		97.7	86-114			
<i>Surrogate: 4-Bromofluorobenzene</i>										
	50.1		ug/L	50.2		99.9	78-121			
<i>Surrogate: 4-Bromofluorobenzene</i>										
	50.1		ug/L	50.2		99.9	78-121			
LCS Dup (1HJ1517-BSD1)										
				Prepared: 10/23/24 00:00 Analyzed: 10/23/24 15:03						
Dichlorodifluoromethane	25.38	1.0	ug/L	30.3		83.8	49-138	3.86	22	
Chloromethane	34.61	1.0	ug/L	30.3		114	60-141	2.26	30	
Vinyl Chloride	34.44	1.0	ug/L	30.2		114	65-137	3.34	20	
Bromomethane	37.51	1.0	ug/L	30.1		125	47-173	1.43	17	
Chloroethane	27.84	1.0	ug/L	30.3		91.8	67-145	1.07	30	
Trichlorofluoromethane	26.64	1.0	ug/L	30.3		87.9	63-127	2.23	15	
Acrolein	44.20	10.0	ug/L	50.4		87.8	21-142	17.9	18	
1,1-Dichloroethylene	45.54	1.0	ug/L	50.1		90.9	69-136	1.46	30	
Acetone	108.4	10.0	ug/L	100		108	45-153	18.8	23	
Methyl Iodide	86.62	2.0	ug/L	100		86.6	58-156	0.748	17	
Carbon Disulfide	82.34	1.0	ug/L	100		82.3	68-128	1.45	30	
Acetonitrile	97.42	10.0	ug/L	100		97.4	35-177	18.4	30	
Methylene Chloride	45.42	5.0	ug/L	50.1		90.6	65-124	1.60	30	
Acrylonitrile	42.39	5.0	ug/L	50.2		84.4	56-135	14.9	16	
trans-1,2-Dichloroethylene	47.64	1.0	ug/L	50.1		95.1	74-126	0.547	30	

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1517 - EPA 5030B - EPA 8260D										
LCS Dup (1HJ1517-BSD1)										
				Prepared: 10/23/24 00:00 Analyzed: 10/23/24 15:03						
1,1-Dichloroethane	47.82	1.0	ug/L	50.1		95.4	73-122	2.46	30	
Vinyl Acetate	147.8	5.0	ug/L	156		94.9	24-171	9.59	30	
2,2-Dichloropropane	49.81	1.0	ug/L	50.3		99.0	68-120	1.78	14	
cis-1,2-Dichloroethylene	48.41	1.0	ug/L	50.4		96.1	65-149	2.79	30	
2-Butanone (MEK)	98.33	5.0	ug/L	100		98.3	57-147	24.4	18	R1
Bromochloromethane	48.44	1.0	ug/L	50.4		96.1	76-125	4.41	30	
Chloroform	47.10	1.0	ug/L	50.1		94.0	71-125	3.30	30	
1,1,1-Trichloroethane	46.78	1.0	ug/L	50.1		93.3	66-118	1.96	30	
1,1-Dichloropropene	47.98	1.0	ug/L	50.5		95.1	69-130	2.62	30	
Carbon Tetrachloride	47.34	1.0	ug/L	50.1		94.5	68-126	2.39	13	
Benzene	51.27	1.0	ug/L	50.4		102	81-123	3.27	30	
1,2-Dichloroethane	53.94	1.0	ug/L	50.1		108	70-130	6.11	30	
Trichloroethylene	49.62	1.0	ug/L	50.1		99.1	84-118	3.24	30	
1,2-Dichloropropane	50.64	1.0	ug/L	50.1		101	87-118	4.90	30	
Dibromomethane	50.19	1.0	ug/L	50.4		99.6	82-126	8.97	30	
Bromodichloromethane	50.12	1.0	ug/L	50.1		100	80-116	5.47	30	
cis-1,3-Dichloropropene	49.34	1.0	ug/L	50.1		98.5	83-116	6.31	30	
4-Methyl-2-pentanone (MIBK)	112.2	5.0	ug/L	100		112	74-138	23.6	30	
Toluene	50.31	1.0	ug/L	50.5		99.7	78-123	5.14	30	
trans-1,3-Dichloropropene	49.33	1.0	ug/L	50.1		98.5	75-120	7.84	30	
Ethyl Methacrylate	101.4	10.0	ug/L	100		101	77-129	15.0	30	
1,1,2-Trichloroethane	49.31	1.0	ug/L	50.1		98.4	81-121	8.92	30	
Tetrachloroethylene	51.13	1.0	ug/L	50.1		102	76-120	3.73	30	
1,3-Dichloropropane	52.97	1.0	ug/L	50.4		105	86-131	7.97	30	
2-Hexanone (MBK)	113.5	5.0	ug/L	100		113	76-139	26.8	15	R1
Dibromochloromethane	50.88	1.0	ug/L	50.1		102	83-123	6.85	15	
1,2-Dibromoethane	51.43	1.0	ug/L	50.2		102	86-115	10.8	30	
Chlorobenzene	50.73	1.0	ug/L	50.1		101	82-117	4.43	30	
1,1,1,2-Tetrachloroethane	51.92	1.0	ug/L	50.3		103	86-119	5.36	30	
Ethylbenzene	53.34	1.0	ug/L	50.2		106	80-122	3.90	30	
Xylenes, total	155.5	2.0	ug/L	151		103	81-122	4.88	30	
Styrene	52.91	1.0	ug/L	50.4		105	85-118	5.34	30	
Bromoform	50.65	1.0	ug/L	50.1		101	80-123	11.8	30	
1,2,3-Trichloropropane	52.86	1.0	ug/L	50.3		105	83-126	17.5	30	
trans-1,4-Dichloro-2-butene	113.7	5.0	ug/L	100		114	67-118	19.8	10	R1
1,1,2,2-Tetrachloroethane	52.77	1.0	ug/L	50.1		105	81-124	18.6	30	
1,3-Dichlorobenzene	49.37	1.0	ug/L	50.1		98.6	83-114	5.47	30	
1,4-Dichlorobenzene	49.79	1.0	ug/L	50.1		99.3	83-117	5.45	30	
1,2-Dichlorobenzene	49.59	1.0	ug/L	50.1		99.0	83-116	6.95	30	
1,2-Dibromo-3-chloropropane	47.36	1.0	ug/L	50.1		94.5	77-128	27.3	30	
1,2,4-Trichlorobenzene	44.96	1.0	ug/L	50.4		89.3	66-134	12.9	30	
Surrogate: Dibromofluoromethane	45.8		ug/L	50.2		91.2	57-134			



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1517 - EPA 5030B - EPA 8260D

LCS Dup (1HJ1517-BSD1)

Prepared: 10/23/24 00:00 Analyzed: 10/23/24 15:03

Surrogate: 1,2-Dichloroethane-d4	48.7		ug/L	50.4		96.8	53-140			
Surrogate: 1,2-Dichloroethane-d4	48.7		ug/L	50.4		96.8	53-140			
Surrogate: Toluene-d8	49.7		ug/L	50.5		98.5	86-114			
Surrogate: Toluene-d8	49.7		ug/L	50.5		98.5	86-114			
Surrogate: 4-Bromofluorobenzene	50.1		ug/L	50.2		99.9	78-121			
Surrogate: 4-Bromofluorobenzene	50.1		ug/L	50.2		99.9	78-121			

Matrix Spike (1HJ1517-MS1)

Source: 1HJ1633-03

Prepared: 10/23/24 00:00 Analyzed: 10/23/24 21:36

Dichlorodifluoromethane	253.5	10.0	ug/L	300	ND	84.5	37-140			
Chloromethane	344.0	10.0	ug/L	300	ND	115	47-147			
Vinyl Chloride	317.5	10.0	ug/L	300	ND	106	55-142			
Bromomethane	337.7	10.0	ug/L	300	ND	113	34-160			
Chloroethane	276.1	10.0	ug/L	300	ND	92.0	54-154			
Trichlorofluoromethane	254.2	10.0	ug/L	300	ND	84.7	49-131			
Acrolein	483.5	100	ug/L	1000	ND	48.1	22-138			
1,1-Dichloroethylene	480.2	10.0	ug/L	500	ND	96.0	57-143			
Acetone	1140	100	ug/L	1010	ND	113	27-173			
Methyl Iodide	898.9	20.0	ug/L	1020	ND	88.2	39-157			
Carbon Disulfide	712.2	10.0	ug/L	1030	ND	69.3	53-136			
Acetonitrile	1026	100	ug/L	1030	ND	99.9	11-189			
Methylene Chloride	470.9	50.0	ug/L	500	ND	94.2	57-128			
Acrylonitrile	867.3	50.0	ug/L	1000	ND	86.4	38-147			
trans-1,2-Dichloroethylene	494.0	10.0	ug/L	500	ND	98.8	61-135			
1,1-Dichloroethane	486.4	10.0	ug/L	500	ND	97.3	60-131			
Vinyl Acetate	948.7	50.0	ug/L	1000	ND	94.9	24-163			
2,2-Dichloropropane	451.8	10.0	ug/L	500	ND	90.4	37-112			
cis-1,2-Dichloroethylene	482.5	10.0	ug/L	500	ND	96.5	47-162			
2-Butanone (MEK)	1028	50.0	ug/L	1020	ND	101	45-156			
Bromochloromethane	490.8	10.0	ug/L	500	ND	98.2	55-132			
Chloroform	474.4	10.0	ug/L	500	ND	94.9	45-142			
1,1,1-Trichloroethane	464.3	10.0	ug/L	500	ND	92.9	52-128			
1,1-Dichloropropene	455.8	10.0	ug/L	500	ND	91.2	49-138			
Carbon Tetrachloride	472.0	10.0	ug/L	500	ND	94.4	56-132			
Benzene	514.0	10.0	ug/L	500	ND	103	77-124			
1,2-Dichloroethane	544.0	10.0	ug/L	500	ND	109	67-130			
Trichloroethylene	487.6	10.0	ug/L	500	ND	97.5	75-123			
1,2-Dichloropropane	500.1	10.0	ug/L	500	ND	100	75-126			
Dibromomethane	509.7	10.0	ug/L	500	ND	102	72-131			
Bromodichloromethane	494.3	10.0	ug/L	500	ND	98.9	70-123			
cis-1,3-Dichloropropene	469.6	10.0	ug/L	500	ND	93.9	68-119			
4-Methyl-2-pentanone (MIBK)	1106	50.0	ug/L	1000	ND	110	57-153			
Toluene	489.8	10.0	ug/L	500	ND	98.0	63-131			
trans-1,3-Dichloropropene	479.2	10.0	ug/L	500	ND	95.8	65-121			
Ethyl Methacrylate	993.2	100	ug/L	1020	ND	97.0	62-137			



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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1517 - EPA 5030B - EPA 8260D										
Matrix Spike (1HJ1517-MS1)	Source: 1HJ1633-03			Prepared: 10/23/24 00:00 Analyzed: 10/23/24 21:36						
1,1,2-Trichloroethane	491.8	10.0	ug/L	500	ND	98.4	76-124			
Tetrachloroethylene	491.3	10.0	ug/L	500	ND	98.3	77-117			
1,3-Dichloropropane	584.5	10.0	ug/L	500	ND	117	81-132			
2-Hexanone (MBK)	1073	50.0	ug/L	993	ND	108	63-152			
Dibromochloromethane	492.7	10.0	ug/L	500	ND	98.5	77-124			
1,2-Dibromoethane	499.1	10.0	ug/L	500	ND	99.8	82-117			
Chlorobenzene	490.1	10.0	ug/L	500	ND	98.0	82-114			
1,1,1,2-Tetrachloroethane	507.5	10.0	ug/L	500	ND	102	82-118			
Ethylbenzene	521.5	10.0	ug/L	500	ND	104	80-119			
Xylenes, total	1514	20.0	ug/L	1500	ND	101	81-119			
Styrene	514.9	10.0	ug/L	500	ND	103	81-119			
Bromoform	483.1	10.0	ug/L	500	ND	96.6	74-122			
1,2,3-Trichloropropane	502.4	10.0	ug/L	500	ND	100	72-138			
trans-1,4-Dichloro-2-butene	974.4	50.0	ug/L	1030	ND	94.8	56-116			
1,1,2,2-Tetrachloroethane	514.4	10.0	ug/L	500	ND	103	78-126			
1,3-Dichlorobenzene	478.6	10.0	ug/L	500	ND	95.7	81-113			
1,4-Dichlorobenzene	469.4	10.0	ug/L	500	ND	93.9	81-116			
1,2-Dichlorobenzene	482.1	10.0	ug/L	500	ND	96.4	81-116			
1,2-Dibromo-3-chloropropane	435.3	10.0	ug/L	500	ND	87.1	63-138			
1,2,4-Trichlorobenzene	449.1	10.0	ug/L	500	ND	89.8	65-132			
<i>Surrogate: Dibromofluoromethane</i>	474		ug/L	502		94.4	57-134			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	502		ug/L	504		99.6	53-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	502		ug/L	504		99.6	53-140			
<i>Surrogate: Toluene-d8</i>	504		ug/L	505		99.9	86-114			
<i>Surrogate: Toluene-d8</i>	504		ug/L	505		99.9	86-114			
<i>Surrogate: 4-Bromofluorobenzene</i>	500		ug/L	502		99.6	78-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	500		ug/L	502		99.6	78-121			
Matrix Spike Dup (1HJ1517-MSD1)	Source: 1HJ1633-03			Prepared: 10/23/24 00:00 Analyzed: 10/23/24 21:59						
Dichlorodifluoromethane	222.9	10.0	ug/L	300	ND	74.3	37-140	12.8	18	
Chloromethane	305.0	10.0	ug/L	300	ND	102	47-147	12.0	18	
Vinyl Chloride	285.2	10.0	ug/L	300	ND	95.1	55-142	10.7	20	
Bromomethane	307.4	10.0	ug/L	300	ND	102	34-160	9.39	22	
Chloroethane	249.6	10.0	ug/L	300	ND	83.2	54-154	10.1	20	
Trichlorofluoromethane	230.1	10.0	ug/L	300	ND	76.7	49-131	9.95	14	
Acrolein	518.9	100	ug/L	1000	ND	51.7	22-138	7.06	30	
1,1-Dichloroethylene	438.0	10.0	ug/L	500	ND	87.6	57-143	9.19	15	
Acetone	1089	100	ug/L	1010	ND	108	27-173	4.50	30	
Methyl Iodide	902.1	20.0	ug/L	1020	ND	88.6	39-157	0.355	12	
Carbon Disulfide	650.5	10.0	ug/L	1030	ND	63.3	53-136	9.06	20	
Acetonitrile	985.6	100	ug/L	1030	ND	96.0	11-189	4.01	24	
Methylene Chloride	440.1	50.0	ug/L	500	ND	88.0	57-128	6.76	14	
Acrylonitrile	843.4	50.0	ug/L	1000	ND	84.0	38-147	2.79	30	
trans-1,2-Dichloroethylene	458.1	10.0	ug/L	500	ND	91.6	61-135	7.54	12	

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1517 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (1HJ1517-MSD1)	Source: 1HJ1633-03			Prepared: 10/23/24 00:00 Analyzed: 10/23/24 21:59						
1,1-Dichloroethane	458.2	10.0	ug/L	500	ND	91.6	60-131	5.97	15	
Vinyl Acetate	916.2	50.0	ug/L	1000	ND	91.6	24-163	3.49	16	
2,2-Dichloropropane	418.5	10.0	ug/L	500	ND	83.7	37-112	7.65	13	
cis-1,2-Dichloroethylene	452.1	10.0	ug/L	500	ND	90.4	47-162	6.51	22	
2-Butanone (MEK)	1034	50.0	ug/L	1020	ND	102	45-156	0.534	20	
Bromochloromethane	470.0	10.0	ug/L	500	ND	94.0	55-132	4.33	15	
Chloroform	449.6	10.0	ug/L	500	ND	89.9	45-142	5.37	12	
1,1,1-Trichloroethane	440.7	10.0	ug/L	500	ND	88.1	52-128	5.22	14	
1,1-Dichloropropene	431.7	10.0	ug/L	500	ND	86.3	49-138	5.43	12	
Carbon Tetrachloride	447.2	10.0	ug/L	500	ND	89.4	56-132	5.40	12	
Benzene	484.4	10.0	ug/L	500	ND	96.9	77-124	5.93	12	
1,2-Dichloroethane	525.1	10.0	ug/L	500	ND	105	67-130	3.54	13	
Trichloroethylene	460.6	10.0	ug/L	500	ND	92.1	75-123	5.70	11	
1,2-Dichloropropane	481.0	10.0	ug/L	500	ND	96.2	75-126	3.89	11	
Dibromomethane	493.2	10.0	ug/L	500	ND	98.6	72-131	3.29	12	
Bromodichloromethane	477.7	10.0	ug/L	500	ND	95.5	70-123	3.42	10	
cis-1,3-Dichloropropene	449.9	10.0	ug/L	500	ND	90.0	68-119	4.28	10	
4-Methyl-2-pentanone (MIBK)	1090	50.0	ug/L	1000	ND	109	57-153	1.40	11	
Toluene	461.6	10.0	ug/L	500	ND	92.3	63-131	5.93	15	
trans-1,3-Dichloropropene	460.2	10.0	ug/L	500	ND	92.0	65-121	4.05	14	
Ethyl Methacrylate	972.6	100	ug/L	1020	ND	95.0	62-137	2.10	10	
1,1,2-Trichloroethane	473.4	10.0	ug/L	500	ND	94.7	76-124	3.81	12	
Tetrachloroethylene	461.4	10.0	ug/L	500	ND	92.3	77-117	6.28	12	
1,3-Dichloropropane	560.8	10.0	ug/L	500	ND	112	81-132	4.14	12	
2-Hexanone (MBK)	1057	50.0	ug/L	993	ND	106	63-152	1.51	19	
Dibromochloromethane	472.5	10.0	ug/L	500	ND	94.5	77-124	4.19	17	
1,2-Dibromoethane	482.7	10.0	ug/L	500	ND	96.5	82-117	3.34	14	
Chlorobenzene	463.3	10.0	ug/L	500	ND	92.7	82-114	5.62	11	
1,1,1,2-Tetrachloroethane	480.7	10.0	ug/L	500	ND	96.1	82-118	5.42	15	
Ethylbenzene	490.7	10.0	ug/L	500	ND	98.1	80-119	6.09	11	
Xylenes, total	1432	20.0	ug/L	1500	ND	95.5	81-119	5.57	11	
Styrene	492.7	10.0	ug/L	500	ND	98.5	81-119	4.41	12	
Bromoform	465.7	10.0	ug/L	500	ND	93.1	74-122	3.67	12	
1,2,3-Trichloropropane	493.1	10.0	ug/L	500	ND	98.6	72-138	1.87	14	
trans-1,4-Dichloro-2-butene	952.3	50.0	ug/L	1030	ND	92.6	56-116	2.29	10	
1,1,2,2-Tetrachloroethane	505.3	10.0	ug/L	500	ND	101	78-126	1.78	13	
1,3-Dichlorobenzene	462.9	10.0	ug/L	500	ND	92.6	81-113	3.34	14	
1,4-Dichlorobenzene	455.5	10.0	ug/L	500	ND	91.1	81-116	3.01	14	
1,2-Dichlorobenzene	464.7	10.0	ug/L	500	ND	92.9	81-116	3.68	13	
1,2-Dibromo-3-chloropropane	437.6	10.0	ug/L	500	ND	87.5	63-138	0.527	17	
1,2,4-Trichlorobenzene	433.6	10.0	ug/L	500	ND	86.7	65-132	3.51	15	
Surrogate: Dibromofluoromethane	472		ug/L	502		94.1	57-134			

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1517 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (1HJ1517-MSD1)	Source: 1HJ1633-03			Prepared: 10/23/24 00:00 Analyzed: 10/23/24 21:59						
Surrogate: 1,2-Dichloroethane-d4	500		ug/L	504		99.3	53-140			
Surrogate: 1,2-Dichloroethane-d4	500		ug/L	504		99.3	53-140			
Surrogate: Toluene-d8	504		ug/L	505		99.9	86-114			
Surrogate: Toluene-d8	504		ug/L	505		99.9	86-114			
Surrogate: 4-Bromofluorobenzene	500		ug/L	502		99.7	78-121			
Surrogate: 4-Bromofluorobenzene	500		ug/L	502		99.7	78-121			
Batch 1HJ1776 - EPA 5030B - EPA 8260D										
Blank (1HJ1776-BLK1)				Prepared: 10/29/24 00:00 Analyzed: 10/29/24 11:40						
Carbon Disulfide	<1.0	1.0	ug/L							
Surrogate: Dibromofluoromethane	51.4		ug/L	50.2		102	75-136			
Surrogate: 1,2-Dichloroethane-d4	53.5		ug/L	50.4		106	61-142			
Surrogate: Toluene-d8	47.7		ug/L	50.5		94.6	82-121			
Surrogate: 4-Bromofluorobenzene	50.7		ug/L	50.2		101	80-116			
Blank (1HJ1776-BLK2)				Prepared: 10/29/24 00:00 Analyzed: 10/29/24 22:51						
Carbon Disulfide	<1.0	1.0	ug/L							
Surrogate: Dibromofluoromethane	49.0		ug/L	50.2		97.7	75-136			
Surrogate: 1,2-Dichloroethane-d4	52.6		ug/L	50.4		104	61-142			
Surrogate: Toluene-d8	48.1		ug/L	50.5		95.4	82-121			
Surrogate: 4-Bromofluorobenzene	50.2		ug/L	50.2		100	80-116			
LCS (1HJ1776-BS1)				Prepared: 10/29/24 00:00 Analyzed: 10/29/24 10:31						
Carbon Disulfide	93.38	1.0	ug/L	100		93.4	72-162			
Surrogate: Dibromofluoromethane	50.8		ug/L	50.2		101	75-136			
Surrogate: 1,2-Dichloroethane-d4	50.9		ug/L	50.4		101	61-142			
Surrogate: Toluene-d8	49.4		ug/L	50.5		97.8	82-121			
Surrogate: 4-Bromofluorobenzene	49.5		ug/L	50.2		98.6	80-116			
LCS (1HJ1776-BS2)				Prepared: 10/29/24 00:00 Analyzed: 10/29/24 21:42						
Carbon Disulfide	89.88	1.0	ug/L	100		89.9	72-162			
Surrogate: Dibromofluoromethane	48.6		ug/L	50.2		96.8	75-136			
Surrogate: 1,2-Dichloroethane-d4	50.5		ug/L	50.4		100	61-142			
Surrogate: Toluene-d8	50.2		ug/L	50.5		99.4	82-121			
Surrogate: 4-Bromofluorobenzene	49.9		ug/L	50.2		99.5	80-116			
LCS Dup (1HJ1776-BSD1)				Prepared: 10/29/24 00:00 Analyzed: 10/29/24 10:54						
Carbon Disulfide	87.66	1.0	ug/L	100		87.7	72-162	6.32	24	
Surrogate: Dibromofluoromethane	50.4		ug/L	50.2		100	75-136			
Surrogate: 1,2-Dichloroethane-d4	52.0		ug/L	50.4		103	61-142			
Surrogate: Toluene-d8	49.4		ug/L	50.5		97.9	82-121			
Surrogate: 4-Bromofluorobenzene	50.4		ug/L	50.2		100	80-116			
LCS Dup (1HJ1776-BSD2)				Prepared: 10/29/24 00:00 Analyzed: 10/29/24 22:05						



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1776 - EPA 5030B - EPA 8260D

LCS Dup (1HJ1776-BSD2)

Prepared: 10/29/24 00:00 Analyzed: 10/29/24 22:05

Carbon Disulfide	82.70	1.0	ug/L	100		82.7	72-162	8.32	24	
Surrogate: Dibromofluoromethane	47.4		ug/L	50.2		94.4	75-136			
Surrogate: 1,2-Dichloroethane-d4	50.8		ug/L	50.4		101	61-142			
Surrogate: Toluene-d8	50.5		ug/L	50.5		100	82-121			
Surrogate: 4-Bromofluorobenzene	50.3		ug/L	50.2		100	80-116			

Matrix Spike (1HJ1776-MS1)

Source: 1HJ1549-02RE1 Prepared: 10/29/24 00:00 Analyzed: 10/30/24 06:53

Carbon Disulfide	879.6	10.0	ug/L	1000	ND	88.0	71-163			
Surrogate: Dibromofluoromethane	474		ug/L	502		94.3	75-136			
Surrogate: 1,2-Dichloroethane-d4	499		ug/L	504		99.2	61-142			
Surrogate: Toluene-d8	505		ug/L	505		100	82-121			
Surrogate: 4-Bromofluorobenzene	499		ug/L	502		99.4	80-116			

Matrix Spike (1HJ1776-MS2)

Source: 1HJ1617-12RE1 Prepared: 10/29/24 00:00 Analyzed: 10/30/24 07:38

Carbon Disulfide	831.9	10.0	ug/L	1000	ND	83.2	71-163			
Surrogate: Dibromofluoromethane	470		ug/L	502		93.7	75-136			
Surrogate: 1,2-Dichloroethane-d4	491		ug/L	504		97.5	61-142			
Surrogate: Toluene-d8	503		ug/L	505		99.6	82-121			
Surrogate: 4-Bromofluorobenzene	507		ug/L	502		101	80-116			

Matrix Spike Dup (1HJ1776-MSD1)

Source: 1HJ1549-02RE1 Prepared: 10/29/24 00:00 Analyzed: 10/30/24 07:16

Carbon Disulfide	814.3	10.0	ug/L	1000	ND	81.4	71-163	7.71	22	
Surrogate: Dibromofluoromethane	468		ug/L	502		93.2	75-136			
Surrogate: 1,2-Dichloroethane-d4	494		ug/L	504		98.1	61-142			
Surrogate: Toluene-d8	503		ug/L	505		99.6	82-121			
Surrogate: 4-Bromofluorobenzene	506		ug/L	502		101	80-116			

Matrix Spike Dup (1HJ1776-MSD2)

Source: 1HJ1617-12RE1 Prepared: 10/29/24 00:00 Analyzed: 10/30/24 08:01

Carbon Disulfide	810.8	10.0	ug/L	1000	ND	81.1	71-163	2.57	22	
Surrogate: Dibromofluoromethane	474		ug/L	502		94.3	75-136			
Surrogate: 1,2-Dichloroethane-d4	498		ug/L	504		98.9	61-142			
Surrogate: Toluene-d8	501		ug/L	505		99.2	82-121			
Surrogate: 4-Bromofluorobenzene	512		ug/L	502		102	80-116			

Batch 1HJ1879 - EPA 5030B - EPA 8260D

Blank (1HJ1879-BLK1)

Prepared: 10/30/24 00:00 Analyzed: 10/30/24 16:54

Allyl chloride	<1.0	1.0	ug/L							
Chloroprene	<1.0	1.0	ug/L							
Methacrylonitrile	<1.0	1.0	ug/L							
Methyl Methacrylate	<1.0	1.0	ug/L							
Propionitrile	<10.0	10.0	ug/L							
Surrogate: Dibromofluoromethane	51.2		ug/L	50.2		102	57-134			
Surrogate: 1,2-Dichloroethane-d4	50.0		ug/L	50.4		99.3	53-140			



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1879 - EPA 5030B - EPA 8260D										
Blank (1HJ1879-BLK1) Prepared: 10/30/24 00:00 Analyzed: 10/30/24 16:54										
Surrogate: Toluene-d8	48.7		ug/L	50.5		96.4	86-114			
Surrogate: 4-Bromofluorobenzene	49.9		ug/L	50.2		99.5	78-121			
LCS (1HJ1879-BS1) Prepared: 10/30/24 00:00 Analyzed: 10/30/24 15:45										
Allyl chloride	56.25	1.0	ug/L	50.0		112	40-154			
Chloroprene	55.13	1.0	ug/L	50.0		110	57-134			
Methacrylonitrile	45.84	1.0	ug/L	50.0		91.7	59-124			
Methyl Methacrylate	44.05	1.0	ug/L	50.0		88.1	64-130			
Propionitrile	43.97	10.0	ug/L	50.0		87.9	32-180			
Surrogate: Dibromofluoromethane	50.8		ug/L	50.2		101	57-134			
Surrogate: 1,2-Dichloroethane-d4	48.9		ug/L	50.4		97.1	53-140			
Surrogate: Toluene-d8	48.0		ug/L	50.5		95.2	86-114			
Surrogate: 4-Bromofluorobenzene	49.9		ug/L	50.2		99.4	78-121			
LCS Dup (1HJ1879-BSD1) Prepared: 10/30/24 00:00 Analyzed: 10/30/24 16:08										
Allyl chloride	55.01	1.0	ug/L	50.0		110	40-154	2.23	16	
Chloroprene	54.69	1.0	ug/L	50.0		109	57-134	0.801	15	
Methacrylonitrile	54.40	1.0	ug/L	50.0		109	59-124	17.1	17	R1
Methyl Methacrylate	51.68	1.0	ug/L	50.0		103	64-130	15.9	17	
Propionitrile	53.79	10.0	ug/L	50.0		108	32-180	20.1	21	
Surrogate: Dibromofluoromethane	50.2		ug/L	50.2		100	57-134			
Surrogate: 1,2-Dichloroethane-d4	49.0		ug/L	50.4		97.2	53-140			
Surrogate: Toluene-d8	48.9		ug/L	50.5		96.8	86-114			
Surrogate: 4-Bromofluorobenzene	50.4		ug/L	50.2		100	78-121			
Matrix Spike (1HJ1879-MS1) Source: 1HJ1617-10 Prepared: 10/30/24 00:00 Analyzed: 10/30/24 17:40										
Allyl chloride	567.1	10.0	ug/L	500	ND	113	60-140			
Chloroprene	566.7	10.0	ug/L	500	ND	113	62-121			
Methacrylonitrile	541.1	10.0	ug/L	500	ND	108	60-140			
Methyl Methacrylate	507.3	10.0	ug/L	500	ND	101	60-140			
Propionitrile	528.0	100	ug/L	500	ND	106	60-140			
Surrogate: Dibromofluoromethane	511		ug/L	502		102	57-134			
Surrogate: 1,2-Dichloroethane-d4	504		ug/L	504		100	53-140			
Surrogate: Toluene-d8	491		ug/L	505		97.2	86-114			
Surrogate: 4-Bromofluorobenzene	505		ug/L	502		101	78-121			
Matrix Spike Dup (1HJ1879-MSD1) Source: 1HJ1617-10 Prepared: 10/30/24 00:00 Analyzed: 10/30/24 18:03										
Allyl chloride	559.4	10.0	ug/L	500	ND	112	60-140	1.37	30	
Chloroprene	558.3	10.0	ug/L	500	ND	112	62-121	1.49	30	
Methacrylonitrile	545.8	10.0	ug/L	500	ND	109	60-140	0.865	30	
Methyl Methacrylate	519.9	10.0	ug/L	500	ND	104	60-140	2.45	30	
Propionitrile	536.5	100	ug/L	500	ND	107	60-140	1.60	30	
Surrogate: Dibromofluoromethane	510		ug/L	502		102	57-134			
Surrogate: 1,2-Dichloroethane-d4	498		ug/L	504		99.0	53-140			



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1879 - EPA 5030B - EPA 8260D

Matrix Spike Dup (1HJ1879-MSD1)	Source: 1HJ1617-10	Prepared: 10/30/24 00:00 Analyzed: 10/30/24 18:03								
Surrogate: Toluene-d8	494		ug/L	505		97.8	86-114			
Surrogate: 4-Bromofluorobenzene	498		ug/L	502		99.2	78-121			

Determination of General Solvents	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HK0030 - Semi-Vol GC - EPA 8015C

Blank (1HK0030-BLK1)	Prepared: 10/31/24 11:23 Analyzed: 11/01/24 14:09									
Isobutanol	<1.0	1.0	mg/L							

LCS (1HK0030-BS1)	Prepared: 10/31/24 11:23 Analyzed: 11/01/24 12:03									
Isobutanol	25.88	1.0	mg/L	24.0		108	77-128			

Matrix Spike (1HK0030-MS1)	Source: 1HJ1617-10	Prepared: 10/31/24 11:23 Analyzed: 11/01/24 15:00								
Isobutanol	25.28	1.0	mg/L	24.0	ND	105	63-135			

Matrix Spike Dup (1HK0030-MSD1)	Source: 1HJ1617-10	Prepared: 10/31/24 11:23 Analyzed: 11/01/24 15:25								
Isobutanol	25.41	1.0	mg/L	24.0	ND	106	63-135	0.525	30	

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1400 - 3520C BNA Cont Liq - EPA 8270C

Blank (1HJ1400-BLK1)	Prepared: 10/23/24 12:34 Analyzed: 10/28/24 16:50									
N-Nitrosodimethylamine	<8	8	ug/L							
Methyl Methanesulfonate	<8	8	ug/L							
N-Nitrosodiethylamine	<8	8	ug/L							
N-Nitrosomethylethylamine	<8	8	ug/L							
Ethyl Methanesulfonate	<8	8	ug/L							
Phenol	<8	8	ug/L							
Bis(2-Chloroethyl) Ether	<8	8	ug/L							
2-Chlorophenol	<8	8	ug/L							
Benzyl Alcohol	<8	8	ug/L							
2-Methylphenol (o-Cresol)	<8	8	ug/L							
Bis[2-Chloroisopropyl]ether	<8	8	ug/L							
n-Nitroso-di-n-propylamine	<8	8	ug/L							
N-Nitrosopyrrolidine	<8	8	ug/L							
Acetophenone	<8	8	ug/L							
o-Toluidine	<8	8	ug/L							
(3 & 4)-Methylphenol	<8	8	ug/L							
Hexachloroethane	<8	8	ug/L							
Nitrobenzene	<8	8	ug/L							
N-Nitrosopiperidine	<8	8	ug/L							



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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Base/Neutral/Acid Extractable Compounds										
Batch 1HJ1400 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HJ1400-BLK1)				Prepared: 10/23/24 12:34 Analyzed: 10/28/24 16:50						
Isophorone	<8	8	ug/L							
2-Nitrophenol	<8	8	ug/L							
2,4-Dimethylphenol	<8	8	ug/L							
Bis (2-Chloroethoxy) Methane	<8	8	ug/L							
2,4-Dichlorophenol	<8	8	ug/L							
Naphthalene	<8	8	ug/L							
4-Chloroaniline	<8	8	ug/L							
2,6-Dichlorophenol	<8	8	ug/L							
Hexachloropropene	<8	8	ug/L							
Hexachlorobutadiene	<8	8	ug/L							
N-Nitrosodi-n-butylamine	<8	8	ug/L							
1,4-Phenylenediamine	<8	8	ug/L							
4-Chloro-3-methylphenol	<8	8	ug/L							
2-Methylnaphthalene	<8	8	ug/L							
Isosafrole	<8	8	ug/L							
1,2,4,5-Tetrachlorobenzene	<8	8	ug/L							
Hexachlorocyclopentadiene	<8	8	ug/L							
2,4,6-Trichlorophenol	<8	8	ug/L							
2,4,5-Trichlorophenol	<8	8	ug/L							
Safrole	<8	8	ug/L							
2-Chloronaphthalene	<8	8	ug/L							
2-Nitroaniline	<8	8	ug/L							
1,4-Naphthoquinone	<8	8	ug/L							
Dimethylphthalate	<8	8	ug/L							
1,3-Dinitrobenzene	<8	8	ug/L							
1,2-Dinitrobenzene	<8	8	ug/L							
2,6-Dinitrotoluene	<8	8	ug/L							
Acenaphthylene	<8	8	ug/L							
3-Nitroaniline	<8	8	ug/L							
Acenaphthene	<8	8	ug/L							
2,4-Dinitrophenol	<8	8	ug/L							
4-Nitrophenol	<8	8	ug/L							
Dibenzofuran	<8	8	ug/L							
2,4-Dinitrotoluene	<8	8	ug/L							
2,3,4,6-Tetrachlorophenol	<8	8	ug/L							
Pentachlorobenzene	<8	8	ug/L							
1-Naphthylamine	<8	8	ug/L							
2-Naphthylamine	<8	8	ug/L							
Diethyl Phthalate	<8	8	ug/L							
Fluorene	<8	8	ug/L							
4-Chlorophenyl Phenyl Ether	<8	8	ug/L							
4-Nitroaniline	<8	8	ug/L							

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Base/Neutral/Acid Extractable Compounds										
Batch 1HJ1400 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HJ1400-BLK1)										
				Prepared: 10/23/24 12:34 Analyzed: 10/28/24 16:50						
5-Nitro-o-toluidine	<8	8	ug/L							
4,6-Dinitro-2-methylphenol	<8	8	ug/L							
N-Nitrosodiphenylamine	<8	8	ug/L							
Diphenylamine	<8	8	ug/L							
Azobenzene	<8	8	ug/L							
Diallate	<8	8	ug/L							
1,3,5-Trinitrobenzene	<8	8	ug/L							
Phenacetin	<8	8	ug/L							
4-Bromophenyl Phenyl Ether	<8	8	ug/L							
4-Aminobiphenyl	<8	8	ug/L							
Pentachlorophenol	<8	8	ug/L							
Pronamide	<8	8	ug/L							
Pentachloronitrobenzene (PCNB)	<8	8	ug/L							
Phenanthrene	<8	8	ug/L							
Anthracene	<8	8	ug/L							
Di-n-butyl Phthalate	<8	8	ug/L							
Methapyrilene	<8	8	ug/L							
Fluoranthene	<8	8	ug/L							
Isodrin	<8	8	ug/L							
Chlorobenzilate	<8	8	ug/L							
Pyrene	<8	8	ug/L							
p-(Dimethylamino)azobenzene	<8	8	ug/L							
3,3-Dimethylbenzidine	<8	8	ug/L							
Butyl Benzyl Phthalate	<8	8	ug/L							
Benzo(a)anthracene	<8	8	ug/L							
Chrysene	<8	8	ug/L							
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L							
Kepon	<8	8	ug/L							
3,3'-Dichlorobenzidine	<8	8	ug/L							
2-Acetylaminofluorene	<8	8	ug/L							
Di-n-octyl Phthalate	<8	8	ug/L							
Benzo(b)Fluoranthene	<8	8	ug/L							
7,12-Dimethylbenz [a] anthracene	<8	8	ug/L							
Benzo(k)Fluoranthene	<8	8	ug/L							
Benzo(a)Pyrene	<8	8	ug/L							
3-Methylcholanthrene	<8	8	ug/L							
Dibenzo(a,h)anthracene	<8	8	ug/L							
Indeno(1,2,3-cd)Pyrene	<8	8	ug/L							
Benzo(g,h,i)perylene	<8	8	ug/L							

Surrogate: 2-Fluorophenol	ND	ug/L	30.9	1.36	10-149	S2
Surrogate: Phenol-d6	ND	ug/L	29.4	10.5	10-143	
Surrogate: Nitrobenzene-d5	ND	ug/L	30.8		20-149	S2

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1400 - 3520C BNA Cont Liq - EPA 8270C									
Blank (1HJ1400-BLK1)									
				Prepared: 10/23/24 12:34 Analyzed: 10/28/24 16:50					
Surrogate: 2-Fluorobiphenyl	ND		ug/L	29.3		27.3 11-146			
Surrogate: 2,4,6-Tribromophenol	30.5		ug/L	30.1		101 10-153			
Surrogate: Terphenyl-d14	29.0		ug/L	30.9		94.0 27-155			
LCS (1HJ1400-BS1)									
				Prepared: 10/23/24 12:34 Analyzed: 10/28/24 17:39					
N-Nitrosodimethylamine	21.6	8	ug/L	25.0		86.4 22-124			
Methyl Methanesulfonate	20.2	8	ug/L	25.0		80.6 25-115			
N-Nitrosodiethylamine	53.2	8	ug/L	50.0		106 19-133			
N-Nitrosomethylethylamine	63.3	8	ug/L	50.0		127 10-149			
Ethyl Methanesulfonate	23.8	8	ug/L	25.0		95.4 29-118			
Phenol	19.8	8	ug/L	25.0		79.2 19-130			
Bis(2-Chloroethyl) Ether	25.1	8	ug/L	25.0		100 23-131			
2-Chlorophenol	16.0	8	ug/L	25.0		64.2 20-159			
Benzyl Alcohol	18.1	8	ug/L	25.0		72.5 17-138			
2-Methylphenol (o-Cresol)	17.9	8	ug/L	25.0		71.5 29-130			
Bis[2-Chloroisopropyl]ether	16.2	8	ug/L	25.0		64.8 29-121			
n-Nitroso-di-n-propylamine	16.8	8	ug/L	25.0		67.1 33-130			
N-Nitrosopyrrolidine	52.5	8	ug/L	50.0		105 24-135			
Acetophenone	24.8	8	ug/L	25.0		99.2 35-129			
o-Toluidine	19.1	8	ug/L	50.0		38.1 10-119			
(3 & 4)-Methylphenol	18.8	8	ug/L	25.0		75.1 27-136			
Hexachloroethane	9.6	8	ug/L	25.0		38.6 18-88			
Nitrobenzene	17.5	8	ug/L	25.0		70.0 32-133			
N-Nitrosopiperidine	51.7	8	ug/L	50.0		103 24-134			
Isophorone	19.7	8	ug/L	25.0		78.8 37-131			
2-Nitrophenol	17.4	8	ug/L	25.0		69.6 41-127			
2,4-Dimethylphenol	20.1	8	ug/L	25.0		80.5 34-133			
Bis (2-Chloroethoxy) Methane	21.2	8	ug/L	25.0		85.0 29-117			
2,4-Dichlorophenol	17.1	8	ug/L	25.0		68.6 41-134			
Naphthalene	14.5	8	ug/L	25.0		58.0 31-107			
2,6-Dichlorophenol	23.0	8	ug/L	25.0		91.9 21-151			
Hexachloropropene	12.8	8	ug/L	25.0		51.3 19-70			
Hexachlorobutadiene	11.5	8	ug/L	25.0		45.9 12-100			
N-Nitrosodi-n-butylamine	49.8	8	ug/L	50.0		99.6 13-144			
4-Chloro-3-methylphenol	23.1	8	ug/L	25.0		92.6 46-141			
2-Methylnaphthalene	14.1	8	ug/L	25.0		56.3 35-110			
Isosafrole	20.0	8	ug/L	25.0		80.1 38-122			
1,2,4,5-Tetrachlorobenzene	19.7	8	ug/L	25.0		78.8 31-102			
Hexachlorocyclopentadiene	8.4	8	ug/L	25.0		33.6 10-113			
2,4,6-Trichlorophenol	17.3	8	ug/L	25.0		69.2 41-146			
2,4,5-Trichlorophenol	18.4	8	ug/L	25.0		73.6 45-149			
Safrole	21.7	8	ug/L	25.0		86.7 36-122			

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1400 - 3520C BNA Cont Liq - EPA 8270C									
LCS (1HJ1400-BS1)				Prepared: 10/23/24 12:34 Analyzed: 10/28/24 17:39					
2-Chloronaphthalene	14.0	8	ug/L	25.0		56.0 20-146			
2-Nitroaniline	18.3	8	ug/L	25.0		73.2 38-149			
1,4-Naphthoquinone	30.4	8	ug/L	25.0		122 45-170			
Dimethylphthalate	17.4	8	ug/L	25.0		69.5 40-149			
1,3-Dinitrobenzene	20.0	8	ug/L	25.0		80.2 30-171			
1,2-Dinitrobenzene	31.2	8	ug/L	25.0		125 35-159			
2,6-Dinitrotoluene	18.4	8	ug/L	25.0		73.7 40-148			
Acenaphthylene	15.0	8	ug/L	25.0		60.0 35-128			
Acenaphthene	14.6	8	ug/L	25.0		58.5 34-132			
2,4-Dinitrophenol	17.6	8	ug/L	25.0		70.5 27-165			
4-Nitrophenol	17.5	8	ug/L	25.0		70.1 35-159			
Dibenzofuran	15.5	8	ug/L	25.0		61.9 37-136			
2,4-Dinitrotoluene	17.4	8	ug/L	25.0		69.8 42-154			
2,3,4,6-Tetrachlorophenol	21.7	8	ug/L	25.0		87.0 29-163			
Pentachlorobenzene	25.0	8	ug/L	25.0		100 53-128			
Diethyl Phthalate	17.5	8	ug/L	25.0		70.0 39-156			
Fluorene	15.4	8	ug/L	25.0		61.8 34-139			
4-Chlorophenyl Phenyl Ether	16.1	8	ug/L	25.0		64.4 39-138			
4-Nitroaniline	12.7	8	ug/L	25.0		51.0 10-151			
5-Nitro-o-toluidine	21.1	8	ug/L	50.0		42.3 10-145			
4,6-Dinitro-2-methylphenol	19.2	8	ug/L	25.0		77.0 36-161			
Diphenylamine	17.8	8	ug/L	25.0		71.0 20-160			
Azobenzene	18.2	8	ug/L	25.0		73.0 31-153			
Diallate	30.5	8	ug/L	25.0		122 43-167			
1,3,5-Trinitrobenzene	29.8	8	ug/L	25.0		119 50-167			
Phenacetin	24.9	8	ug/L	25.0		99.6 55-146			
4-Bromophenyl Phenyl Ether	21.8	8	ug/L	25.0		87.1 31-156			
Pentachlorophenol	17.2	8	ug/L	25.0		68.7 13-159			
Pronamide	22.1	8	ug/L	25.0		88.5 53-139			
Pentachloronitrobenzene (PCNB)	31.3	8	ug/L	25.0		125 56-165			
Phenanthrene	18.0	8	ug/L	25.0		71.9 35-147			
Anthracene	18.2	8	ug/L	25.0		72.7 36-146			
Di-n-butyl Phthalate	20.0	8	ug/L	25.0		80.2 37-164			
Fluoranthene	19.8	8	ug/L	25.0		79.4 38-155			
Isodrin	23.0	8	ug/L	25.0		91.8 34-148			
Chlorobenzilate	30.2	8	ug/L	25.0		121 60-136			
Pyrene	16.3	8	ug/L	25.0		65.2 37-157			
p-(Dimethylamino)azobenzene	42.7	8	ug/L	50.0		85.4 10-155			
Butyl Benzyl Phthalate	14.4	8	ug/L	25.0		57.8 52-150			
Benzo(a)anthracene	17.4	8	ug/L	25.0		69.5 39-149			
Chrysene	17.0	8	ug/L	25.0		68.2 39-149			
Bis(2-Ethylhexyl) Phthalate	16.5	6	ug/L	25.0		66.0 27-186			

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1400 - 3520C BNA Cont Liq - EPA 8270C									
LCS (1HJ1400-BS1)				Prepared: 10/23/24 12:34 Analyzed: 10/28/24 17:39					
Kepone	753.2	8	ug/L	25.0		NR 10-147			Q2
2-Acetylaminofluorene	41.0	8	ug/L	50.0		81.9 20-171			
Di-n-octyl Phthalate	13.9	8	ug/L	25.0		55.8 39-171			
Benzo(b)Fluoranthene	17.8	8	ug/L	25.0		71.3 39-165			
7,12-Dimethylbenz [a] anthracene	23.6	8	ug/L	25.0		94.5 22-155			
Benzo(k)Fluoranthene	17.8	8	ug/L	25.0		71.3 41-160			
Benzo(a)Pyrene	18.0	8	ug/L	25.0		72.1 37-151			
3-Methylcholanthrene	24.2	8	ug/L	25.0		96.6 28-140			
Dibenzo(a,h)anthracene	20.2	8	ug/L	25.0		81.0 17-178			
Indeno(1,2,3-cd)Pyrene	20.0	8	ug/L	25.0		80.2 18-176			
Benzo(g,h,i)perylene	20.7	8	ug/L	25.0		82.8 11-179			
<i>Surrogate: 2-Fluorophenol</i>	24.8		ug/L	30.9		80.0 10-149			
<i>Surrogate: Phenol-d6</i>	26.0		ug/L	29.4		88.5 10-143			
<i>Surrogate: Nitrobenzene-d5</i>	21.1		ug/L	30.8		68.5 31-137			
<i>Surrogate: 2-Fluorobiphenyl</i>	21.0		ug/L	29.3		71.9 29-131			
<i>Surrogate: 2,4,6-Tribromophenol</i>	36.4		ug/L	30.1		121 10-153			
<i>Surrogate: Terphenyl-d14</i>	27.4		ug/L	30.9		88.6 30-142			
LCS Dup (1HJ1400-BSD1)				Prepared: 10/23/24 12:34 Analyzed: 10/28/24 18:03					
N-Nitrosodimethylamine	19.2	8	ug/L	25.0		76.9 22-124	11.7	27	
Methyl Methanesulfonate	18.9	8	ug/L	25.0		75.6 25-115	6.40	16	
N-Nitrosodiethylamine	50.1	8	ug/L	50.0		100 19-133	6.02	30	
N-Nitrosomethylethylamine	60.8	8	ug/L	50.0		122 10-149	3.95	30	
Ethyl Methanesulfonate	23.0	8	ug/L	25.0		92.1 29-118	3.50	17	
Phenol	18.6	8	ug/L	25.0		74.5 19-130	6.09	30	
Bis(2-Chloroethyl) Ether	22.6	8	ug/L	25.0		90.3 23-131	10.6	24	
2-Chlorophenol	14.8	8	ug/L	25.0		59.2 20-159	8.11	30	
Benzyl Alcohol	16.5	8	ug/L	25.0		65.8 17-138	9.60	30	
2-Methylphenol (o-Cresol)	16.8	8	ug/L	25.0		67.1 29-130	6.29	30	
Bis[2-Chloroisopropyl]ether	15.3	8	ug/L	25.0		61.3 29-121	5.58	26	
n-Nitroso-di-n-propylamine	15.9	8	ug/L	25.0		63.6 33-130	5.32	21	
N-Nitrosopyrrolidine	53.1	8	ug/L	50.0		106 24-135	1.19	30	
Acetophenone	23.9	8	ug/L	25.0		95.5 35-129	3.78	22	
o-Toluidine	18.5	8	ug/L	50.0		37.0 10-119	2.87	30	
(3 & 4)-Methylphenol	18.2	8	ug/L	25.0		73.0 27-136	2.86	30	
Hexachloroethane	8.1	8	ug/L	25.0		32.3 18-88	17.7	30	
Nitrobenzene	16.0	8	ug/L	25.0		63.8 32-133	9.21	26	
N-Nitrosopiperidine	50.8	8	ug/L	50.0		102 24-134	1.83	30	
Isophorone	18.5	8	ug/L	25.0		74.1 37-131	6.12	28	
2-Nitrophenol	15.9	8	ug/L	25.0		63.5 41-127	9.20	30	
2,4-Dimethylphenol	19.2	8	ug/L	25.0		76.9 34-133	4.57	30	
Bis (2-Chloroethoxy) Methane	20.0	8	ug/L	25.0		80.1 29-117	5.91	30	
2,4-Dichlorophenol	16.4	8	ug/L	25.0		65.8 41-134	4.11	30	

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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1400 - 3520C BNA Cont Liq - EPA 8270C										
LCS Dup (1HJ1400-BSD1)				Prepared: 10/23/24 12:34 Analyzed: 10/28/24 18:03						
Naphthalene	13.1	8	ug/L	25.0		52.4	31-107	10.2	30	
2,6-Dichlorophenol	22.3	8	ug/L	25.0		89.0	21-151	3.14	30	
Hexachloropropene	11.6	8	ug/L	25.0		46.4	19-70	9.98	30	
Hexachlorobutadiene	10.1	8	ug/L	25.0		40.4	12-100	12.9	30	
N-Nitrosodi-n-butylamine	48.7	8	ug/L	50.0		97.5	13-144	2.17	30	
4-Chloro-3-methylphenol	22.1	8	ug/L	25.0		88.5	46-141	4.46	30	
2-Methylnaphthalene	13.1	8	ug/L	25.0		52.4	35-110	7.22	30	
Isosafrole	19.7	8	ug/L	25.0		78.9	38-122	1.56	29	
1,2,4,5-Tetrachlorobenzene	19.0	8	ug/L	25.0		75.8	31-102	3.78	30	
Hexachlorocyclopentadiene	<8	8	ug/L	25.0		28.0	10-113	18.0	30	
2,4,6-Trichlorophenol	16.6	8	ug/L	25.0		66.6	41-146	3.89	30	
2,4,5-Trichlorophenol	17.7	8	ug/L	25.0		70.7	45-149	3.99	30	
Safrole	21.2	8	ug/L	25.0		84.6	36-122	2.38	30	
2-Chloronaphthalene	13.3	8	ug/L	25.0		53.1	20-146	5.28	30	
2-Nitroaniline	17.5	8	ug/L	25.0		69.9	38-149	4.70	30	
1,4-Naphthoquinone	29.7	8	ug/L	25.0		119	45-170	2.23	30	
Dimethylphthalate	17.1	8	ug/L	25.0		68.3	40-149	1.74	23	
1,3-Dinitrobenzene	19.9	8	ug/L	25.0		79.6	30-171	0.751	26	
1,2-Dinitrobenzene	20.2	8	ug/L	25.0		80.9	35-159	42.8	26	R3
2,6-Dinitrotoluene	18.0	8	ug/L	25.0		71.8	40-148	2.64	30	
Acenaphthylene	14.2	8	ug/L	25.0		56.7	35-128	5.69	30	
Acenaphthene	13.8	8	ug/L	25.0		55.2	34-132	5.77	30	
2,4-Dinitrophenol	17.8	8	ug/L	25.0		71.1	27-165	0.791	30	
4-Nitrophenol	18.9	8	ug/L	25.0		75.6	35-159	7.57	30	
Dibenzofuran	15.0	8	ug/L	25.0		59.9	37-136	3.22	30	
2,4-Dinitrotoluene	17.5	8	ug/L	25.0		70.0	42-154	0.343	30	
2,3,4,6-Tetrachlorophenol	22.1	8	ug/L	25.0		88.3	29-163	1.51	30	
Pentachlorobenzene	24.9	8	ug/L	25.0		99.5	53-128	0.601	30	
Diethyl Phthalate	17.4	8	ug/L	25.0		69.7	39-156	0.515	30	
Fluorene	15.3	8	ug/L	25.0		61.3	34-139	0.780	30	
4-Chlorophenyl Phenyl Ether	15.5	8	ug/L	25.0		61.8	39-138	3.99	30	
4-Nitroaniline	13.5	8	ug/L	25.0		54.2	10-151	6.09	30	
5-Nitro-o-toluidine	26.8	8	ug/L	50.0		53.6	10-145	23.7	30	
4,6-Dinitro-2-methylphenol	19.8	8	ug/L	25.0		79.4	36-161	3.07	30	
Diphenylamine	17.6	8	ug/L	25.0		70.6	20-160	0.621	30	
Azobenzene	18.2	8	ug/L	25.0		72.6	31-153	0.494	30	
Diallate	31.5	8	ug/L	25.0		126	43-167	3.19	30	
1,3,5-Trinitrobenzene	30.7	8	ug/L	25.0		123	50-167	3.00	30	
Phenacetin	25.5	8	ug/L	25.0		102	55-146	2.34	24	
4-Bromophenyl Phenyl Ether	21.7	8	ug/L	25.0		86.8	31-156	0.414	30	
Pentachlorophenol	19.5	8	ug/L	25.0		77.9	13-159	12.5	30	
Pronamide	23.0	8	ug/L	25.0		92.1	53-139	4.03	30	

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1HJ1617

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1400 - 3520C BNA Cont Liq - EPA 8270C

LCS Dup (1HJ1400-BSD1)

Prepared: 10/23/24 12:34 Analyzed: 10/28/24 18:03

Pentachloronitrobenzene (PCNB)	32.6	8	ug/L	25.0		130	56-165	4.01	30	
Phenanthrene	18.1	8	ug/L	25.0		72.3	35-147	0.555	30	
Anthracene	18.2	8	ug/L	25.0		72.6	36-146	0.110	30	
Di-n-butyl Phthalate	20.3	8	ug/L	25.0		81.1	37-164	1.14	30	
Fluoranthene	19.9	8	ug/L	25.0		79.8	38-155	0.452	30	
Isodrin	23.8	8	ug/L	25.0		95.0	34-148	3.38	30	
Chlorobenzilate	31.1	8	ug/L	25.0		124	60-136	3.01	30	
Pyrene	16.3	8	ug/L	25.0		65.2	37-157	0.123	30	
p-(Dimethylamino)azobenzene	44.5	8	ug/L	50.0		89.1	10-155	4.24	30	
Butyl Benzyl Phthalate	14.1	8	ug/L	25.0		56.3	52-150	2.59	30	
Benzo(a)anthracene	17.3	8	ug/L	25.0		69.2	39-149	0.404	30	
Chrysene	17.6	8	ug/L	25.0		70.6	39-149	3.40	30	
Bis(2-Ethylhexyl) Phthalate	19.5	6	ug/L	25.0		78.2	27-186	16.9	30	
Kepone	1361	8	ug/L	25.0		NR	10-147	57.5	30	Q2
2-Acetylaminofluorene	42.3	8	ug/L	50.0		84.6	20-171	3.24	30	
Di-n-octyl Phthalate	13.6	8	ug/L	25.0		54.2	39-171	2.76	30	
Benzo(b)Fluoranthene	17.8	8	ug/L	25.0		71.3	39-165	0.0561	30	
7,12-Dimethylbenz [a] anthracene	22.9	8	ug/L	25.0		91.6	22-155	3.09	30	
Benzo(k)Fluoranthene	17.8	8	ug/L	25.0		71.2	41-160	0.112	30	
Benzo(a)Pyrene	18.1	8	ug/L	25.0		72.3	37-151	0.277	30	
3-Methylcholanthrene	24.2	8	ug/L	25.0		96.7	28-140	0.0827	30	
Dibenzo(a,h)anthracene	20.1	8	ug/L	25.0		80.4	17-178	0.694	30	
Indeno(1,2,3-cd)Pyrene	20.1	8	ug/L	25.0		80.6	18-176	0.448	30	
Benzo(g,h,i)perylene	20.9	8	ug/L	25.0		83.6	11-179	0.913	30	

Surrogate: 2-Fluorophenol	21.8		ug/L	30.9		70.5	10-149			
Surrogate: Phenol-d6	24.3		ug/L	29.4		82.8	10-143			
Surrogate: Nitrobenzene-d5	19.1		ug/L	30.8		62.0	31-137			
Surrogate: 2-Fluorobiphenyl	20.2		ug/L	29.3		69.2	29-131			
Surrogate: 2,4,6-Tribromophenol	36.0		ug/L	30.1		120	10-153			
Surrogate: Terphenyl-d14	27.1		ug/L	30.9		87.9	30-142			

Determination of Organophosphorus Insecticides	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1482 - 3510C NP/OC Sep Fnl - EPA 8141

Blank (1HJ1482-BLK1)

Prepared: 10/24/24 09:57 Analyzed: 10/30/24 15:28

O,O,O-Triethyl phosphorothioate	<0.4	0.4	ug/L							
Thionazin	<0.4	0.4	ug/L							
Phorate	<0.4	0.4	ug/L							
Dimethoate	<0.4	0.4	ug/L							
Disulfoton	<0.4	0.4	ug/L							

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Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Organophosphorus Insecticides										
Batch 1HJ1482 - 3510C NP/OC Sep Fnl - EPA 8141										
Blank (1HJ1482-BLK1)										
				Prepared: 10/24/24 09:57 Analyzed: 10/30/24 15:28						
Methyl Parathion	<0.4	0.4	ug/L							
Parathion	<0.4	0.4	ug/L							
Famphur	<0.4	0.4	ug/L							
<i>Surrogate: 2-Nitro-m-xylene</i>										
	6.50		ug/L	8.34		78.0	15-154			
LCS (1HJ1482-BS1)										
				Prepared: 10/24/24 09:57 Analyzed: 10/30/24 17:24						
O,O,O-Triethyl phosphorothioate	3.37	0.4	ug/L	4.00		84.2	29-156			
Thionazin	3.60	0.4	ug/L	4.00		89.9	63-131			
Phorate	3.59	0.4	ug/L	4.00		89.8	51-136			
Dimethoate	4.61	0.4	ug/L	4.00		115	42-157			
Disulfoton	3.18	0.4	ug/L	4.00		79.4	37-158			
Methyl Parathion	3.22	0.4	ug/L	4.00		80.5	66-140			
Parathion	3.34	0.4	ug/L	4.00		83.5	66-120			
Famphur	3.35	0.4	ug/L	4.00		83.8	67-129			
<i>Surrogate: 2-Nitro-m-xylene</i>										
	7.86		ug/L	8.34		94.3	15-154			
LCS Dup (1HJ1482-BSD1)										
				Prepared: 10/24/24 09:57 Analyzed: 10/30/24 18:22						
O,O,O-Triethyl phosphorothioate	3.26	0.4	ug/L	4.00		81.6	29-156	3.17	30	
Thionazin	3.62	0.4	ug/L	4.00		90.5	63-131	0.693	30	
Phorate	3.62	0.4	ug/L	4.00		90.4	51-136	0.694	30	
Dimethoate	4.70	0.4	ug/L	4.00		117	42-157	1.83	30	
Disulfoton	3.30	0.4	ug/L	4.00		82.4	37-158	3.71	30	
Methyl Parathion	3.27	0.4	ug/L	4.00		81.8	66-140	1.54	30	
Parathion	3.32	0.4	ug/L	4.00		83.0	66-120	0.601	26	
Famphur	3.36	0.4	ug/L	4.00		84.0	67-129	0.298	30	
<i>Surrogate: 2-Nitro-m-xylene</i>										
	7.98		ug/L	8.34		95.7	15-154			
Reference (1HJ1482-SRM1)										
				Prepared: 10/24/24 09:57 Analyzed: 10/30/24 19:20						
O,O,O-Triethyl phosphorothioate	3.68	0.4	ug/L	4.00		92.0	80-120			
Thionazin	3.64	0.4	ug/L	4.00		90.9	80-120			
Phorate	4.25	0.4	ug/L	4.00		106	80-120			
Dimethoate	5.34	0.4	ug/L	4.00		134	80-120			Q4
Disulfoton	3.97	0.4	ug/L	4.00		99.2	80-120			
Methyl Parathion	3.58	0.4	ug/L	4.00		89.5	80-120			
Parathion	3.72	0.4	ug/L	4.00		93.0	80-120			
Famphur	3.46	0.4	ug/L	4.00		86.4	80-120			
<i>Surrogate: 2-Nitro-m-xylene</i>										
	9.04		ug/L	8.34		108	15-154			

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1247 - EPA 8151A - EPA 8151A										
Blank (1HJ1247-BLK1)										
Prepared: 10/21/24 16:08 Analyzed: 10/23/24 23:52										
2,4-D	<2.0	2.0	ug/L							
2,4,5-TP (Silvex)	<0.5	0.5	ug/L							
2,4,5-T	<0.5	0.5	ug/L							
Dinoseb	<0.5	0.5	ug/L							

<i>Surrogate: 2,5-Dichlorobenzoic Acid</i>	2.49		ug/L	2.02		123	36-159			
LCS (1HJ1247-BS1)										
Prepared: 10/21/24 16:08 Analyzed: 10/24/24 00:24										
2,4-D	<2.0	2.0	ug/L	1.00		99.5	34-138			
2,4,5-TP (Silvex)	0.50	0.5	ug/L	0.500		100	35-145			
2,4,5-T	0.52	0.5	ug/L	0.500		105	17-168			
Dinoseb	0.86	0.5	ug/L	1.00		85.5	10-140			

<i>Surrogate: 2,5-Dichlorobenzoic Acid</i>	2.45		ug/L	2.02		121	36-159			
LCS Dup (1HJ1247-BSD1)										
Prepared: 10/21/24 16:08 Analyzed: 10/24/24 00:56										
2,4-D	<2.0	2.0	ug/L	1.00		112	34-138	12.3	30	
2,4,5-TP (Silvex)	0.53	0.5	ug/L	0.500		106	35-145	5.83	30	
2,4,5-T	0.54	0.5	ug/L	0.500		108	17-168	2.82	30	
Dinoseb	0.83	0.5	ug/L	1.00		83.0	10-140	2.97	30	

<i>Surrogate: 2,5-Dichlorobenzoic Acid</i>	2.64		ug/L	2.02		130	36-159			
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Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1479 - 3510C NP/OC Sep Fnl - EPA 8081

Blank (1HJ1479-BLK1)										
Prepared: 10/24/24 09:51 Analyzed: 11/05/24 10:46										
Alpha-BHC	<0.05	0.05	ug/L							
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							



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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Organochlorine Insecticides & Metabolites										
Batch 1HJ1479 - 3510C NP/OC Sep Fnl - EPA 8081										
Blank (1HJ1479-BLK1)										
				Prepared: 10/24/24 09:51 Analyzed: 11/05/24 10:46						
Methoxychlor	<0.05	0.05	ug/L							
Chlordane	<0.10	0.10	ug/L							
Toxaphene	<0.20	0.20	ug/L							
Hexachlorobenzene	<0.05	0.05	ug/L							
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>0.459</i>		ug/L	<i>0.600</i>		<i>76.5</i>	<i>40-116</i>			
LCS (1HJ1479-BS1)										
				Prepared: 10/24/24 09:51 Analyzed: 11/05/24 11:00						
Alpha-BHC	0.238	0.05	ug/L	0.250		95.2	52-118			
Gamma-BHC [Lindane]	0.274	0.05	ug/L	0.250		109	53-122			
Beta-BHC	0.246	0.05	ug/L	0.250		98.3	54-116			
Heptachlor	0.266	0.05	ug/L	0.250		106	58-126			
Delta-BHC	0.301	0.05	ug/L	0.250		120	54-134			
Aldrin	0.231	0.05	ug/L	0.250		92.6	47-122			
Heptachlor Epoxide	0.279	0.05	ug/L	0.250		111	50-123			
Endosulfan I	0.284	0.05	ug/L	0.250		114	55-124			
4,4'-DDE	0.279	0.05	ug/L	0.250		111	49-141			
Dieldrin	0.270	0.05	ug/L	0.250		108	50-118			
Endrin	0.294	0.05	ug/L	0.250		118	39-170			
4,4'-DDD	0.304	0.05	ug/L	0.250		121	59-135			
Endosulfan II	0.302	0.05	ug/L	0.250		121	56-127			
4,4'-DDT	0.317	0.05	ug/L	0.250		127	67-150			
Endrin Aldehyde	0.293	0.05	ug/L	0.250		117	57-125			
Endosulfan Sulfate	0.280	0.05	ug/L	0.250		112	53-131			
Methoxychlor	0.323	0.05	ug/L	0.250		129	63-153			
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>0.444</i>		ug/L	<i>0.600</i>		<i>74.1</i>	<i>40-116</i>			
LCS Dup (1HJ1479-BSD1)										
				Prepared: 10/24/24 09:51 Analyzed: 11/05/24 11:14						
Alpha-BHC	0.251	0.05	ug/L	0.250		101	52-118	5.40	30	
Gamma-BHC [Lindane]	0.283	0.05	ug/L	0.250		113	53-122	3.49	30	
Beta-BHC	0.251	0.05	ug/L	0.250		100	54-116	2.07	30	
Heptachlor	0.282	0.05	ug/L	0.250		113	58-126	5.92	30	
Delta-BHC	0.301	0.05	ug/L	0.250		120	54-134	0.0249	30	
Aldrin	0.242	0.05	ug/L	0.250		96.7	47-122	4.35	30	
Heptachlor Epoxide	0.280	0.05	ug/L	0.250		112	50-123	0.615	30	
Endosulfan I	0.287	0.05	ug/L	0.250		115	55-124	1.20	30	
4,4'-DDE	0.280	0.05	ug/L	0.250		112	49-141	0.424	30	
Dieldrin	0.271	0.05	ug/L	0.250		108	50-118	0.446	30	
Endrin	0.295	0.05	ug/L	0.250		118	39-170	0.0747	30	
4,4'-DDD	0.285	0.05	ug/L	0.250		114	59-135	6.47	30	
Endosulfan II	0.299	0.05	ug/L	0.250		120	56-127	0.706	30	
4,4'-DDT	0.317	0.05	ug/L	0.250		127	67-150	0.107	30	
Endrin Aldehyde	0.282	0.05	ug/L	0.250		113	57-125	3.72	30	

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1HJ1617

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1479 - 3510C NP/OC Sep Fnl - EPA 8081

LCS Dup (1HJ1479-BSD1) Prepared: 10/24/24 09:51 Analyzed: 11/05/24 11:14										
Endosulfan Sulfate	0.280	0.05	ug/L	0.250		112	53-131	0.0107	30	
Methoxychlor	0.327	0.05	ug/L	0.250		131	63-153	1.18	30	
Surrogate: Tetrachloro-m-xylene	0.462		ug/L	0.600		77.0	40-116			

Determination of Polychlorinated Biphenyls (PCB)	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1481 - 3510C NP/OC Sep Fnl - EPA 8082

Blank (1HJ1481-BLK1) Prepared: 10/24/24 09:54 Analyzed: 11/05/24 10:46										
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	0.456		ug/L	0.600		75.9	37-120			
Surrogate: Decachlorobiphenyl	0.572		ug/L	0.600		95.3	22-116			

LCS (1HJ1481-BS1) Prepared: 10/24/24 09:54 Analyzed: 11/05/24 12:54										
Arochlor 1016	2.774	0.20	ug/L	2.60		107	42-132			
Arochlor 1260	3.261	0.20	ug/L	2.60		125	50-139			

Surrogate: Tetrachloro-m-xylene	0.490		ug/L	0.600		81.6	37-120			
Surrogate: Decachlorobiphenyl	0.588		ug/L	0.600		98.0	22-116			

LCS Dup (1HJ1481-BSD1) Prepared: 10/24/24 09:54 Analyzed: 11/05/24 13:09										
Arochlor 1016	2.873	0.20	ug/L	2.60		111	42-132	3.51	20	
Arochlor 1260	3.350	0.20	ug/L	2.60		129	50-139	2.70	24	

Surrogate: Tetrachloro-m-xylene	0.483		ug/L	0.600		80.6	37-120			
Surrogate: Decachlorobiphenyl	0.592		ug/L	0.600		98.7	22-116			

Reference (1HJ1481-SRM1) Prepared: 10/24/24 09:54 Analyzed: 11/05/24 13:23										
Surrogate: Tetrachloro-m-xylene	0.569		ug/L	0.600		94.8	37-120			
Surrogate: Decachlorobiphenyl	0.630		ug/L	0.600		105	22-116			

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HJ1499 - Wet Chem Preparation - EPA 376.2



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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Conventional Chemistry Parameters										
Batch 1HJ1499 - Wet Chem Preparation - EPA 376.2										
Blank (1HJ1499-BLK1)			Prepared & Analyzed: 10/24/24 11:04							
Sulfide, total	<0.10	0.10	mg/L							
LCS (1HJ1499-BS1)			Prepared & Analyzed: 10/24/24 11:04							
Sulfide, total	0.356	0.10	mg/L	0.31		113	56-118			
Matrix Spike (1HJ1499-MS1)			Source: 1HJ1617-10 Prepared & Analyzed: 10/24/24 11:04							
Sulfide, total	0.375	0.10	mg/L	0.31	ND	119	50-150			
Matrix Spike Dup (1HJ1499-MSD1)			Source: 1HJ1617-10 Prepared & Analyzed: 10/24/24 11:04							
Sulfide, total	0.365	0.10	mg/L	0.31	ND	116	50-150	2.77	30	
Batch 1HJ1873 - Wet Chem Preparation - EPA 9014										
Blank (1HJ1873-BLK1)			Prepared & Analyzed: 10/31/24 12:58							
Cyanide, total	<0.010	0.010	mg/L							
LCS (1HJ1873-BS1)			Prepared & Analyzed: 10/31/24 12:58							
Cyanide, total	0.0183	0.010	mg/L	0.0200		91.7	66-127			
LCS (1HJ1873-BS2)			Prepared & Analyzed: 10/31/24 12:58							
Cyanide, total	0.0212	0.010	mg/L	0.0200		106	66-127			
Matrix Spike (1HJ1873-MS1)			Source: 1HJ1617-10 Prepared & Analyzed: 10/31/24 12:58							
Cyanide, total	0.0165	0.010	mg/L	0.0200	ND	82.6	56-132			
Matrix Spike Dup (1HJ1873-MSD1)			Source: 1HJ1617-10 Prepared & Analyzed: 10/31/24 12:58							
Cyanide, total	0.0200	0.010	mg/L	0.0200	ND	100	56-132	19.1	28	
Determination of Total Metals										
Batch 1HJ1332 - EPA 7470A Hg Water - EPA 7470A										
Blank (1HJ1332-BLK1)			Prepared: 10/22/24 15:12 Analyzed: 10/24/24 11:04							
Mercury, total	<0.00050	0.00050	mg/L							
LCS (1HJ1332-BS1)			Prepared: 10/22/24 15:12 Analyzed: 10/24/24 11:07							
Mercury, total	0.00234	0.00050	mg/L	0.00250		93.7	80-120			
Matrix Spike (1HJ1332-MS1)			Source: 1HJ0941-11 Prepared: 10/22/24 15:12 Analyzed: 10/24/24 11:11							
Mercury, total	0.0430	0.00500	mg/L	0.0250	0.0190	95.9	75-125			
Matrix Spike Dup (1HJ1332-MSD1)			Source: 1HJ0941-11 Prepared: 10/22/24 15:12 Analyzed: 10/24/24 11:13							
Mercury, total	0.0452	0.00500	mg/L	0.0250	0.0190	105	75-125	4.87	20	
Batch 1HJ1462 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HJ1462-BLK1)			Prepared: 10/24/24 07:58 Analyzed: 10/24/24 17:46							
Antimony, total	<0.0020	0.0020	mg/L							
Arsenic, total	<0.0040	0.0040	mg/L							
Barium, total	<0.0040	0.0040	mg/L							
Beryllium, total	<0.0040	0.0040	mg/L							



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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1462 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HJ1462-BLK1)										
Prepared: 10/24/24 07:58 Analyzed: 10/24/24 17:46										
Cadmium, total	<0.0008	0.0008	mg/L							
Chromium, total	<0.0080	0.0080	mg/L							
Cobalt, total	<0.0004	0.0004	mg/L							
Copper, total	<0.0040	0.0040	mg/L							
Lead, total	<0.0040	0.0040	mg/L							
Nickel, total	<0.0040	0.0040	mg/L							
Selenium, total	<0.0040	0.0040	mg/L							
Silver, total	<0.0040	0.0040	mg/L							
Thallium, total	<0.0020	0.0020	mg/L							
Tin, total	<0.0200	0.0200	mg/L							
Vanadium, total	<0.0200	0.0200	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1HJ1462-BS1)										
Prepared: 10/24/24 07:58 Analyzed: 10/24/24 17:52										
Antimony, total	0.0963	0.0020	mg/L	0.100		96.3	80-120			
Arsenic, total	0.0956	0.0040	mg/L	0.100		95.6	80-120			
Barium, total	0.107	0.0040	mg/L	0.100		107	80-120			
Beryllium, total	0.101	0.0040	mg/L	0.100		101	80-120			
Cadmium, total	0.0936	0.0008	mg/L	0.100		93.6	80-120			
Chromium, total	0.0943	0.0080	mg/L	0.100		94.3	80-120			
Cobalt, total	0.103	0.0004	mg/L	0.100		103	80-120			
Copper, total	0.101	0.0040	mg/L	0.100		101	80-120			
Lead, total	0.0985	0.0040	mg/L	0.100		98.5	80-120			
Nickel, total	0.102	0.0040	mg/L	0.100		102	80-120			
Selenium, total	0.0939	0.0040	mg/L	0.100		93.9	80-120			
Silver, total	0.0981	0.0040	mg/L	0.100		98.1	80-120			
Thallium, total	0.0972	0.0020	mg/L	0.100		97.2	80-120			
Tin, total	0.0948	0.0200	mg/L	0.100		94.8	80-120			
Vanadium, total	0.0972	0.0200	mg/L	0.100		97.2	80-120			
Zinc, total	0.0963	0.0200	mg/L	0.100		96.3	80-120			
Matrix Spike (1HJ1462-MS1)										
Source: 1HJ1617-01 Prepared: 10/24/24 07:58 Analyzed: 10/24/24 18:16										
Antimony, total	0.0997	0.0020	mg/L	0.100	ND	99.7	75-125			
Arsenic, total	0.0992	0.0040	mg/L	0.100	0.0028	96.4	75-125			
Barium, total	0.223	0.0040	mg/L	0.100	0.137	86.0	75-125			
Beryllium, total	0.106	0.0040	mg/L	0.100	ND	106	75-125			
Cadmium, total	0.0978	0.0008	mg/L	0.100	0.0003	97.5	75-125			
Chromium, total	0.0994	0.0080	mg/L	0.100	0.0011	98.3	75-125			
Cobalt, total	0.106	0.0004	mg/L	0.100	ND	106	75-125			
Copper, total	0.100	0.0040	mg/L	0.100	0.0027	97.4	75-125			
Lead, total	0.100	0.0040	mg/L	0.100	ND	100	75-125			
Nickel, total	0.105	0.0040	mg/L	0.100	0.0039	101	75-125			
Selenium, total	0.0997	0.0040	mg/L	0.100	ND	99.7	75-125			
Silver, total	0.101	0.0040	mg/L	0.100	ND	101	75-125			
Thallium, total	0.100	0.0020	mg/L	0.100	ND	100	75-125			



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CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1462 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Matrix Spike (1HJ1462-MS1) Source: 1HJ1617-01 Prepared: 10/24/24 07:58 Analyzed: 10/24/24 18:16										
Tin, total	0.100	0.0200	mg/L	0.100	ND	100	75-125			
Vanadium, total	0.110	0.0200	mg/L	0.100	ND	110	75-125			
Zinc, total	0.0992	0.0200	mg/L	0.100	ND	99.2	75-125			
Matrix Spike Dup (1HJ1462-MSD1) Source: 1HJ1617-01 Prepared: 10/24/24 07:58 Analyzed: 10/25/24 10:29										
Antimony, total	0.0978	0.0020	mg/L	0.100	ND	97.8	75-125	1.95	20	
Arsenic, total	0.0933	0.0040	mg/L	0.100	0.0028	90.5	75-125	6.17	20	
Barium, total	0.203	0.0040	mg/L	0.100	0.137	65.7	75-125	9.55	20	M2
Beryllium, total	0.101	0.0040	mg/L	0.100	ND	101	75-125	4.81	20	
Cadmium, total	0.0910	0.0008	mg/L	0.100	0.0003	90.7	75-125	7.20	20	
Chromium, total	0.0954	0.0080	mg/L	0.100	0.0011	94.2	75-125	4.12	20	
Cobalt, total	0.0957	0.0004	mg/L	0.100	ND	95.7	75-125	9.86	20	
Copper, total	0.0968	0.0040	mg/L	0.100	0.0027	94.1	75-125	3.35	20	
Lead, total	0.0871	0.0040	mg/L	0.100	ND	87.1	75-125	13.8	20	
Nickel, total	0.0974	0.0040	mg/L	0.100	0.0039	93.5	75-125	7.33	20	
Selenium, total	0.0839	0.0040	mg/L	0.100	ND	83.9	75-125	17.3	20	
Silver, total	0.0912	0.0040	mg/L	0.100	ND	91.2	75-125	10.1	20	
Thallium, total	0.0877	0.0020	mg/L	0.100	ND	87.7	75-125	13.4	20	
Tin, total	0.0924	0.0200	mg/L	0.100	ND	92.4	75-125	7.86	20	
Vanadium, total	0.102	0.0200	mg/L	0.100	ND	102	75-125	6.97	20	
Zinc, total	0.0910	0.0200	mg/L	0.100	ND	91.0	75-125	8.65	20	
Post Spike (1HJ1462-PS1) Source: 1HJ1617-01 Prepared: 10/24/24 07:58 Analyzed: 10/24/24 18:41										
Antimony, total	0.0762		mg/L	0.0800	0.0002	95.0	80-120			
Arsenic, total	0.0759		mg/L	0.0800	0.0027	91.5	80-120			
Barium, total	0.183		mg/L	0.0800	0.134	60.3	80-120			M2
Beryllium, total	0.0790		mg/L	0.0800	0.00001	98.8	80-120			
Cadmium, total	0.0730		mg/L	0.0800	0.0003	90.9	80-120			
Chromium, total	0.0760		mg/L	0.0800	0.0011	93.7	80-120			
Cobalt, total	0.0808		mg/L	0.0800	0.0001	101	80-120			
Copper, total	0.0769		mg/L	0.0800	0.0026	92.8	80-120			
Lead, total	0.0761		mg/L	0.0800	0.000004	95.1	80-120			
Nickel, total	0.0806		mg/L	0.0800	0.0038	96.0	80-120			
Selenium, total	0.0733		mg/L	0.0800	0.0013	90.0	80-120			
Silver, total	0.0769		mg/L	0.0800	0.00002	96.1	80-120			
Thallium, total	0.0770		mg/L	0.0800	0.00008	96.1	80-120			
Tin, total	0.0786		mg/L	0.0800	0.0004	97.7	75-125			
Vanadium, total	0.0845		mg/L	0.0800	0.0097	93.4	80-120			
Zinc, total	0.0752		mg/L	0.0800	0.0053	87.5	80-120			
Batch 1HJ1758 - EPA 7470A Hg Water - EPA 7470A										
Blank (1HJ1758-BLK1) Prepared: 10/29/24 15:09 Analyzed: 10/30/24 15:07										
Mercury, total	<0.00050	0.00050	mg/L							
LCS (1HJ1758-BS1) Prepared: 10/29/24 15:09 Analyzed: 10/30/24 15:09										



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1617

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1758 - EPA 7470A Hg Water - EPA 7470A										
LCS (1HJ1758-BS1)				Prepared: 10/29/24 15:09 Analyzed: 10/30/24 15:09						
Mercury, total	0.00248	0.00050	mg/L	0.00250		99.2	80-120			
Matrix Spike (1HJ1758-MS1)				Source: 1HJ1746-04 Prepared: 10/29/24 15:09 Analyzed: 10/30/24 15:21						
Mercury, total	0.00253	0.00050	mg/L	0.00250	ND	101	75-125			
Matrix Spike Dup (1HJ1758-MSD1)				Source: 1HJ1746-04 Prepared: 10/29/24 15:09 Analyzed: 10/30/24 15:23						
Mercury, total	0.00262	0.00050	mg/L	0.00250	ND	105	75-125	3.61	20	

Definitions

- M1:** Matrix spike recovery is above acceptance limits.
- M2:** Matrix spike recovery is below acceptance limits.
- Q2:** LCS recovery is above acceptance limits.
- Q3:** LCS recovery is below acceptance limits. The reported value is estimated.
- Q4:** ICV recovery is above acceptance limits. Values that are <RL are not affected
- R1:** Duplicate RPD is outside acceptance criteria.
- R3:** Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
- RL:** Reporting Limit
- RPD:** Relative Percent Difference
- S:** Spike recovery outside of acceptance limits.
- S2:** Surrogate recovery is below acceptance limits.

Cooler Receipt Log

Cooler ID: N1-13108 Temp: 1.1°C Cooler ID: N2-20002 Temp: 1.1°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:

Sue Thompson
Client Services Manager
11/07/24 16:56



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



1 H J 1 6 1 7

HLW Engineering
 PM: Heather Murphy

Page 1 of
 Printed: 10/3/2024 2:40:00P

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Page 77 of 78

SITE INFORMATION

Sampler: JGH
 Project: FMC SLF - New Regs
6028

REPORT TO

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

INVOICE TO

Christian Fox
 Floyd Mitchell SWMA
 3354 330th St
 Elma, IA 50626

SPECIAL INSTRUCTIONS

None

Turn Around Time

Standard RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HJ1617
 Temperature 1-1
 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	MW-9 (up)	Aqueous	GRAB	10/17/24	9:04	7	Indfil-app1-voc-group Indfil-app1-metals-6020	01
-001	MW-14 (up)	Aqueous	GRAB	10/17/24	8:50	7	Indfil-app1-voc-group Indfil-app1-metals-6020	02
-001	MW-4 (up)	Aqueous	GRAB	10/17/24	9:30	7	Indfil-app1-voc-group Indfil-app1-metals-6020	03
-001	MW-5 (up)	Aqueous	GRAB	10/17/24	9:16	7	Indfil-app1-voc-group Indfil-app1-metals-6020	04
-001	MW-11	Aqueous	GRAB	10/17/24	10:52	7	Indfil-app2-morg-6020 Indfil-app2-org Indfil-app1-voc Indfil-app1-metals	05
-001	MW-12	Aqueous	GRAB	10/17/24	11:05	7	Indfil-app1-voc-group Indfil-app1-metals-6020	06
-001	MW-15	Aqueous	GRAB	10/17/24	11:19	7	Indfil-app1-voc-group Indfil-app1-metals-6020	07

JGH 10/18/24
 Relinquished By Date/Time

Received By Date/Time

Relinquished By Date/Time
Scholar 10/18/24 10:39
 Received for Lab By Date/Time

Original - Lab Copy Yellow - Sampler Copy

Remarks:

CHAIN OF CUSTODY RECORD



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



1 H J 1 6 1 7

HLW Engineering
 PM: Heather Murphy

SITE INFORMATION

Sampler: Left
 Project: FMC SLF - New Regs
 6028

REPORT TO

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

INVOICE TO

Christian Fox
 Floyd Mitchell SWMA
 3354 330th St
 Elma, IA 50628

SPECIAL INSTRUCTIONS

None

Turn Around Time

Standard RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HJ1617

Temperature 1.1

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	MW-16	Aqueous	GRAB	10/17/24	11:41	7	Indfil-app1-voc-group Indfil-app1-metals-6020	08
-001	MW-2	Aqueous	GRAB	10/17/24	10:38	7	Indfil-app1-voc-group Indfil-app1-metals-6020	09
-001	MW-3	Aqueous	GRAB	10/17/24	10:16	17	Indfil-app2-org-6020 Indfil-app2-org	10
-001	MW-6	Aqueous	GRAB	10/17/24	11:58	7	Indfil-app1-voc-group Indfil-app1-metals-6020	11
-001	MW-7	Aqueous	GRAB	10/17/24	12:13	7	Indfil-app1-voc-group Indfil-app1-metals-6020	12
-001	Duplicate	Aqueous	GRAB	10/17/24	8:50	7	Indfil-app1-voc-group Indfil-app1-metals-6020	13

[Signature] 10/18/24
 Relinquished By Date/Time

[Signature] 10/18/24 10:39
 Relinquished By Date/Time
 Received for Lab By Date/Time

Remarks:

Received By Date/Time

Original - Lab Copy Yellow - Sampler Copy

Appendix D

Summary of Turbidity Data

FMC Sanitary Landfill

Field Turbidity Over Time

No-Purge Sampling

	10/14/14	1/12/15	4/14/15	7/21/15	9/22/15	11/24/15	4/12/16	10/11/16	1/17/17	4/20/17	10/12/17	4/23/18
Well	NTU	NTU	NTU	NTU	NTU	NTU	NTU	NTU	NTU	NTU	NTU	NTU
2	23.84		196		8.03		108	132.9		263	30.29	386
3	0.6		0.3		0.41		0.21	0.2		1.61	0.19	1.73
4	113.8	2.44	1.95		1.35		5.79	1.71	40	78.6	0.83	98.9
5	5.82		1.74		6.17	0.21	1.82	5.75		7.32	1.9	3.25
6	22.48		152.3		51.75	2.88	106.2	47.97	265	204	1.7	12.6
7	0.71		1.01		2.29		5.47	2.4	1.52	1.32	0.17	0.77
9	1.01	2.87	0.42	1.34	0.25		0.14	0.56		0.43	0.24	0.39
11	0.96		1.21		11.99		0.43	0.56		2.16	0.26	0.44
12	3.08		0.53		0.06		0.23	0.57		1.23	0.32	1.1
14	2.95	1.81	0.72	6.67	0.12		0.13	0.31		0.56	0.15	1.89
15	1.73		1.06		0.57		0.51	12.55		0.77	0.14	1.6
16												
Max	113.80	21.20	196.00	8.37	51.75	2.88	108.00	132.90	265.00	263.00	30.29	386.00
Min	0.52	1.81	0.10	1.34	0.04	0.21	0.13	0.20	0.80	0.43	0.14	0.39
Median	3.02	2.87	1.14	6.67	1.82	1.55	1.35	2.06	20.76	1.47	0.26	1.73
Average	14.69	7.60	28.44	5.46	6.85	1.55	18.99	16.26	76.83	46.80	3.29	46.24

FMC San

Field Turbic

No-Purge

	7/5/18	10/12/18	4/16/19	10/17/19	4/9/20	10/8/20	4/15/21	10/28/21	4/13/22	10/19/22	4/6/23	10/10/23
Well	NTU	NTU	NTU	NTU	NTU	NTU	NTU	NTU	NTU	NTU	NTU	NTU
2		21.0	3.72	42.7	164.5	51.4	77.78	26.51	40.15	119.00	126	3.96
3	1.37	1.4	0.82	0.62	1.68	3.44	1.38	1.73	1.29	2.83	2.48	3.61
4		18.9	2.11	60	1.22	1.49	2.1	0.8	2.6	134	706	3.78
5		0.8	1.81	1.95	1.08	1.9	2.03	0.96	1.33	2.00	19.2	4.08
6		1.85	13.6	29.8	12.83	7.33	65.82	4.18	7.49	8.7	78	22.29
7		1.92	5.02	0.84	0.71	1.27	1.64	2.91	2.87	1.11	1.25	1.31
9		2.24	0.35	1.03	2.84	1.58	1.71	0.91	1.08	1.33	2.54	1.9
11		0.62	0.59	0.57	0.79	1.86	2.29	1.79	1.81	4.05	11.7	1.75
12		0.44	0.42	0.4	0.89	2.06	1.91	0.81	1.3	12.1	3.77	3.03
14		0.78	2.96	0.76	0.88	1.1	1.61	0.42	0.97	1.55	3.52	2.49
15		0.4	0.52	0.84	1.14	1.68	1.57	0.67	0.98	1.86	10.7	2.58
16				0.66	0.67	1.35	2.7	1.25	0.6	2.17	1.83	3.53
Max	1.37	23.30	13.60	60.00	164.50	51.38	77.78	26.51	40.15	134.00	706.00	22.29
Min	1.37	0.40	0.35	0.40	0.67	1.10	1.38	0.42	0.60	1.11	1.25	1.31
Median	1.37	1.63	1.81	0.84	1.11	1.77	1.97	1.11	1.32	2.50	7.24	3.28
Average	1.37	6.14	2.90	11.68	15.77	6.37	13.55	3.58	5.21	24.23	80.58	4.53

FMC San

Field Turbic

No-Purge

	4/11/24	10/17/24	Max	Min	Ave	Std Dev
Well	NTU	NTU				
2	14.18	6.25	386.00	3.72	87.87	98.99
3	1.86	3.22	3.61	0.19	1.50	1.07
4	3.08	5.7	706.00	0.80	55.96	147.55
5	2.91	16.80	19.20	0.21	4.13	4.90
6	19.17	138	265.00	1.70	55.48	71.65
7	4.33	0.89	5.47	0.17	1.90	1.43
9	4.09	1.57	4.09	0.14	1.34	1.03
11	1.62	1.56	11.99	0.26	2.33	3.28
12	2.38	4.81	12.10	0.06	1.97	2.66
14	2.08	2.37	6.67	0.12	1.60	1.49
15	1.92	1.95	12.55	0.14	2.18	3.22
16	2.43	1.36	3.53	0.60	1.69	0.94
Max	19.17	138.00				
Min	1.62	0.89				
Median	2.67	2.80				
Average	5.00	15.37				

Appendix E

Summary of Prediction Limit Exceedances

Spring 2016†		Fall 2016	
MW-2	Arsenic	MW-2	Cobalt
			Nickel
			Zinc
MW-4	None	MW-4	Zinc
MW-5	None	MW-5	Barium
MW-6	None	MW-6	Cobalt
MW-7	None	MW-7	Nickel
MW-15	None	MW-15	Bis (2ethylhexyl) phthalate
SW-1	None	SW-1	Cobalt
			Nickel

† Predates use of the validated Site Prediction Limits.

Spring 2017		Fall 2017	
MW-2	Arsenic	MW-2	Arsenic
	Cobalt		Cobalt
	Nickel		Nickel
			Zinc
			Bis (2ethylhexyl) phthalate
MW-4	Chromium	MW-4	None
	Cobalt		
	Copper		
	Nickel		
	Zinc		
MW-5	Barium	MW-5	Barium
	Zinc		
MW-6	Cobalt	MW-6	Zinc
MW-7	Zinc	MW-7	None
MW-15	None	MW-15	Bis (2ethylhexyl) phthalate
SW-1	Cobalt	SW-1	Connect to LCS
	Nickel		

Spring 2018		Fall 2018	
MW-2	Arsenic	MW-2	Cobalt
	Cobalt		Nickel
	Zinc		Zinc
MW-3	Zinc	MW-3	Zinc
MW-4	Cobalt	MW-4	Cobalt
	Nickel		Nickel
	Zinc		Zinc
	Bis (2ethylhexyl) phthalate		
MW-5	Barium	MW-5	Barium
	Zinc		Zinc
MW-6	Zinc	MW-6	Zinc
	Bis (2ethylhexyl) phthalate		
MW-7	None	MW-7	Zinc
MW-11	None	MW-11	Zinc
MW-12	None	MW-12	Zinc
MW-15	None	MW-15	Zinc
			Bis (2ethylhexyl) phthalate

Spring 2019		Fall 2019	
MW-2	Arsenic	MW-2	Nickel
	Cobalt		Zinc
	Nickel		Bis (2ethylhexyl) phthalate
	Zinc		
MW-3	Zinc	MW-3	Bis (2ethylhexyl) phthalate
MW-4	None	MW-4	Cobalt
			Copper
			Nickel
MW-5	None	MW-5	Barium
			Zinc
MW-6	Zinc	MW-6	Bis (2ethylhexyl) phthalate
MW-7	Zinc	MW-7	None
MW-11	Zinc	MW-11	None
MW-12	Bis (2ethylhexyl) phthalate	MW-12	None
MW-15	Zinc	MW-15	Zinc
	Bis (2ethylhexyl) phthalate		Bis (2ethylhexyl) phthalate

Spring 2020		Fall 2020	
MW-2	Cobalt	MW-2	Cobalt
MW-6	Cobalt	MW-6	None
MW-12	Bis (2ethylhexyl) phthalate	MW-12	None
MW-16	Cobalt	MW-16	Bis (2ethylhexyl) phthalate
	Nickel		

Spring 2021		Fall 2021	
MW-2	Cobalt	MW-2	Bis (2ethylhexyl) phthalate
MW-16	None	MW-16	Bis (2ethylhexyl) phthalate

Spring 2022		Fall 2022	
MW-2	Cobalt	MW-2	Arsenic
	Bis (2ethylhexyl) phthalate		Cobalt
			Nickel
MW-6	None	MW-6	Arsenic
			Cobalt
MW-7	None	MW-7	Nickel
MW-12	Copper	MW-12	None
MW-16	None	MW-16	Copper
			Bis (2ethylhexyl) phthalate

Spring 2023		Fall 2023	
MW-6	Arsenic	MW-6	None
	Bis (2ethylhexyl) phthalate		

Spring 2024		Fall 2024	
MW-6	None	MW-6	Arsenic
			Cobalt

Appendix F

Summary of Results - On-Going Assessment Monitoring

Bis(2-ethylhexyl) phthalate detections (ug/L) (Green Highlights = Full Appendix II Samples)

Date	MW-11	MW-12	MW-15	MW-16	MW-2	MW-3	MW-6	MW-7
10/21/2013	NT	NT	50.0	---	NT	NT	NT	NT
4/8/2014	<8	NT	<8	---	NT	NT	NT	NT
10/14/2014	<8	NT	<10	---	NT	NT	NT	NT
4/14/2015	NT	NT	11.0	---	NT	NT	NT	NT
9/22/2015	NT	NT	<10	---	NT	NT	NT	NT
4/12/2016	NT	NT	<10	---	NT	NT	NT	NT
10/11/2016	NT	NT	19.0	---	<8	NT	NT	NT
4/20/2017	NT	NT	<6	---	NT	NT	<6	<6
10/12/2017	NT	NT	15.0	---	35.0	NT	NT	NT
4/23/2018	NT	NT	<6	---	<6	NT	6.0	<6
7/5/2018	NT	NT	NT	---	NT	NT	8.0	NT
10/12/2018	NT	NT	6.0	---	<6	<6	<6	NT
4/16/2019	<6	16.0	7.0	---	<6	NT	<6	NT
10/17/2019	NT	<6	7.0	---	25.0	<6	10.0	NT
4/9/2020	NT	16.0	<6	NT	<6	NT	<6	NT
10/8/2020	NT	<6	<6	8.0	<6	NT	<6	NT
12/9/2020	NT	NT	NT	<6	NT	NT	NT	NT
4/15/2021	NT	<6	<6	NT	<6	NT	<6	NT
10/28/2021	NT	<6	<6	6.0	12.0	NT	<6	NT
4/13/2022	NT	<6	<6	lab error	11.0	NT	<6	NT
10/19/2022	NT	NT	NT	19.0	<6	NT	NT	NT
4/6/2023	NT	NT	NT	<6	NT	NT	7.0	<6
10/10/2023	NT	NT	NT	NT	NT	NT	<6	NT
4/11/2024	<6	NT	<6	NT	NT	NT	NT	NT
10/17/2024	NT	NT	NT	NT	NT	<6	NT	NT

Appendix G

Leachate Collection System Performance Evaluation Report

Appendix G.1 - Treatment Agreement with Osage POTW



IOWA DEPARTMENT OF NATURAL RESOURCES
TREATMENT AGREEMENT FORM

NOTICE

A properly executed Treatment Agreement must be submitted by the industrial user not less than one hundred eighty (180) days before the new significant industrial user proposes to discharge into a wastewater disposal system. Any proposed expansion, production increase, or process modification that may result in any change to a previous Treatment Agreement requires execution of a new Treatment Agreement.

Significant Industrial User

Name: Floyd-Mitchell Solid Waste Management Agency
Mailing Address: 3354 330th St, Elma, IA 50628
Email Address: fmcdirector21@gmail.com
Authorized Representative: Christian Fox Phone: 641-982-4288

System Receiving Waste

Name: City of Osage
Mailing Address: 806 Main Street, Osage, IA 50461
Email Address: jdunlay@osage.net
Authorized Representative: Jerry Dunlay Phone: 641-732-3709

CERTIFICATION OF INDUSTRIAL USER

I am the duly authorized representative for the significant industrial user identified above and state that the proposed discharge to the system receiving waste identified above shall not exceed the quantities listed on page two of this form after:

Effective Date: 3/7/2022

I further assure that notice of any anticipated increase in pollutants contributed shall be given to the owner of the system identified above sufficiently in advance of such increase to allow this contributor to submit a new treatment agreement to the Department of Natural Resources no later than sixty days in advance of the increase or change.

Name: Christian Fox Title: Director FMC Landfill
Signature: Date: 3/9/2022

CERTIFICATION OF SYSTEM RECEIVING WASTE

I am the duly authorized representative for the facility owner named above and state that the owner agrees to accept the discharge described on page two from the contractor identified above, and accepts responsibility for providing treatment of the volume and quantities described on the reverse in accordance with the provisions of Chapter 455B, Code of Iowa, and the rules of the Department of Natural Resources. This agreement is conditioned on the industrial contributor complying with all applicable standards and requirements of the Department of Natural Resources and the United State Environmental Protection Agency. This agreement is entered for the purpose of identifying pollutants contributed and limiting the quantity contributed, and shall not otherwise be construed to affect local ordinances, sewer service agreements or fee systems entered into between the parties.

This agreement may be modified or terminated by the owner of the disposal system if additional pollutants or additional quantities or volumes of pollutants are contributed other than identified on the reverse, or because of any condition that requires either a temporary or permanent reduction or elimination of the accepted contribution.

Name: Jerry Dunlay Title: Public Works Director
Signature: _____ Date: _____

1. Process Description

Specific Manufacturing Process: Stored Landfill Leachate
 SIC Codes: 4953 NAICS Codes: 562212

Consumption

Principal Raw Materials: Municipal Solid Waste
 Amount Consumed per Day: 30,000 tons per year

Production

Principal Products: Landfill Leachate
 Amount Produced per Day: 3.5 MGY (9,800 GPD)

2. Hourly Maximum Flow Contribution: NA

3. Days of Operation per Week: 5

4. Hours of Operation During Peak Day of Operation: 8

5. Range of pH Level in Contribution: Minimum: 6.5 Maximum: 9

6. Description of Pretreatment Provided

Leachate is stored in a 1.0 Million Gallon Lagoon with minimal aeration

7. Description of any Batch or Periodic Discharges

NA

8. Compatible Wastes in Contribution

Wastewater Parameter	Average	Maximum	Wastewater Parameter	Average	Maximum
Flow (MGD)	0.018	0.024	Ammonia Nitrogen (lbs/day)		
BOD5 (lbs/day)	50	60	Oil and Grease (mg/l)		
Total Suspended Solids (lbs/day)	35	65			
Total Kjeldahl Nitrogen (lbs/day)	40	60			

9. Incompatible Wastes in Contribution

Wastewater Parameter	Average		Maximum	
	mg/l	lbs/day	mg/l	lbs/day

INSTRUCTIONS FOR COMPLETION OF PAGE 2**ITEM 1**

- A) Describe the specific manufacturing process of the industrial user. Enter the Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) code(s) for the industrial user. SIC and NAICS codes and descriptions can be found on the NAICS association website at <https://www.naics.com/search/>.
- B) Specify the principal raw material(s) and the maximum quantity consumed in any one day. Report quantities in the units of measurement found in the table on the next page. If your industry is not in the table, use the units of measurement normally used by your industry.
- C) Specify the principal product(s) and the maximum quantity produced in any one day. Report quantities in the units of measurement found in the table on the next page. If your industry is not in the table, use the units of measurement normally used by your industry.

ITEM 2 - Hourly Maximum is the maximum discharge during any single hour in the peak period of operation.

ITEM 6 - Describe all pretreatment of waste prior to discharge to municipal collection system.

ITEM 7 - Describe any occasional or intermittent discharge and include the frequency of discharges and the amount. Such discharges could upset a treatment plant because of the shock effect of a sudden change in influent loading.

ITEM 8 - Enter limits on compatible wastes here. Compatible wastes are those that the receiving treatment works was designed to treat and removes to a significant degree. Average is the 30-day average, not including days with no discharge. Maximum is the maximum single-day contribution during a peak period of operation. Average and maximum limits must be included for all limited parameters.

ITEM 9 - Enter limits on incompatible wastes here. Incompatible wastes means any wastes not qualifying within the definition in Item 8. List all such waste parameters that are contributed in concentrations greater than that present in the raw water supply. **USE THE AVERAGE FLOW LIMIT FOR AVERAGE AND MAXIMUM MASS CALCULATIONS.** Average and maximum limits must be included for all limited parameters.

***NOTE:** A "Significant industrial user" means an industrial user of a publicly-owned treatment works (POTW) that meets any one of the following conditions:

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 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW;
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 POTW or for violating any pretreatment standards or requirements.

Upon a finding that an industrial user meeting the criteria in paragraph "1" or "2" of this definition has no reasonable potential for adversely affecting the operation of the POTW or for violating any pretreatment standard or requirement, the department may, at any time on its own initiative or in response to a request received from an industrial user or POTW, determine that an industrial user is not a significant industrial user.

Questions may be directed to Julie Faas, 515-725-8409 or julie.faas@dnr.iowa.gov.

Return the form to npdes.mail@dnr.iowa.gov.

STANDARD UNITS OF MEASUREMENT BY SIC CODE

SIC CODE	CODE	UNITS OF MEASUREMENT	INDUSTRY
201; 2077	A-1	Pounds live weight killed (meatpacking in slaughterhouse or packinghouse; poultry processing)	Meat products
	A-2	Pound product (slaughtering & rendering; processing)	
	A-3	Pound raw material (rendering in offsite plant)	
202; 5143	B-1	1,000 lb. milk equivalent	Dairy products
2033; 2034; 2037; 2038	C-1	Ton raw material	Canned and preserved fruits and vegetables
204	D-1	1,000 bu. processed	Grain mill products
2061	E-1	Ton sugar cane processed	Raw cane sugar
2062	E-2	Ton raw sugar processed	Cane sugar refining
2063	E-3	Ton beets sliced	Beet sugar
2077		See SIC 201	
2084	F-1	Ton grapes pressed	Wine, brandy, and brandy spirits
	F-2	1,000 gallon wine (table wine for process season only)	
2085	F-3	1,000 bu. grain processed	Distilled liquor, except brandy
2086	F-4	1,000 standard cases	Bottled and canned soft drinks
2091; 2092	G-1	Ton raw material	Seafoods
22	H-1	1,000 lb. raw material	Textile mill products
	H-2	or 1,000 lb. product	
2421	I-1	1,000 fbm	Sawmills and planing mills
2435; 2436	I-2	1,000 ft ² on three-eighths inch basis	Veneer and plywood
2491	I-3	1,000 ft ³ treated	Wood preserving
2492	I-4	1,000 ft ² on three-fourths inch basis	Particle board
26	J-1	Ton product	Paper and allied products
2812; 2816; 2819	K-1	Ton product	Inorganic chemicals
2821; 2823; 2824; 2891; 3079	L-1	1,000 lb. product	Plastic material and synthetics industry
2822	M-1	1,000 lb. rubber produced	Synthetic rubber (vulcanizable elastomers)
283	N-1	1,000 lb. raw material	Drugs and pharmaceuticals
2481	O-1	1,000 lb. product	Soap and detergent
	O-2	or 1,000 gallon product	
2865; 2869	P-1	1,000 lb. product	Organic chemicals
2873; 2874; 2875	Q-1	1,000 ton product	Fertilizer industry
2879	R-1	1,000 lb. product	Agricultural chemicals and pesticides
2891		See SIC 2821	
2911	S-1	1,000 bbl. crude or partially refined feed stock (stream day)	Petroleum refining
3011; 3021; 3031; 3041; 3069	T-1	1,000 lb. raw material	Rubber products
3111	U-1	1,000 lb. green salted hides or pickled skins	Leather tanning and finishing
3211; 3231	V-1	1,000 ton product	Flat glass and glass products made; purchased glass
	V-2	or 1,000 ft ² mirrored surface (for mirrored glass only)	
3241	V-3	1,000 bbl. product	Hydraulic cement
327	V-4	1,000 ton product	Concrete, gypsum and plastic products
3292	V-5	1,000 ton asbestos used	Asbestos products
331	W-1	Ton dry coal	Coke making
	W-2	Ton hot metal	Blast furnaces
	W-3	Ton liquid steel	Steelworks
	W-4	Ton hot formed steel	Hot forming
	W-5	Ton processed steel	Rolling and finishing mills
332	W-6	Ton metal cast	Iron and steel foundries
333	X-1	1,000 lb. metal product	Primary smelting and refining of nonferrous metals
334	X-2	1,000 lb. metal product	Secondary smelting and refining of nonferrous metals
335	X-3	1,000 lb. metal processed	Rolling, drawing, and extruding of nonferrous metals
336	X-4	1,000 lb. metal cast	Nonferrous foundries
3465; 3711; 3714	Y-1	Unit production	Automobile manufacturing
	Y-2	or square feet	
4911; 4931	Z-1	1,000 Mwd generated	Electric power services
4961	Z-1	1 million lb. steam produced	Steam supply



AMENDMENT TO NPDES PERMIT

Iowa NPDES Permit Number: 6663001
EPA Number: IA00329556

Date of Permit Issuance: May 1, 2019
Date of Permit Expiration: April 30, 2024
Date of this Amendment: November 1, 2020

Name and Mailing Address of Applicant:

City of Osage
806 Main St
PO Box 29
Osage, IA 50461-0029

Identity and Location of Facility:

Osage City of STP
Off 357th St, West of town
Osage, IA 50461
Section 26, T98N, R17W
Mitchell County

Pursuant to the authority of 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 being amended to remove total Kjeldahl nitrogen and ammonia-nitrogen limits from Mitchell County Industrial Pretreatment Facility and replace them with total nitrogen limits. The amendment also adds Valent Biosciences (Utility & Low Load) as a significant industrial user, including adding monitoring and limits. The enclosed pages replace pages 23 – 33 of your original permit.

For the Department of Natural Resources:

By _____
Julie Faas
NPDES Section
ENVIRONMENTAL SERVICES DIVISION

IOWA DEPARTMENT OF NATURAL RESOURCES
National Pollutant Discharge Elimination System (NPDES) Permit

OWNER NAME & ADDRESS

CITY OF OSAGE
806 MAIN STREET
PO BOX 29
OSAGE, IA 50461-0029

FACILITY NAME & ADDRESS

OSAGE CITY OF STP
OFF OF 357TH STREET, WEST OF
TOWN
OSAGE, IA 50461-0029

Section 26, T98N, R17W
Mitchell County

IOWA NPDES PERMIT NUMBER: 6663001
DATE OF ISSUANCE: 05/01/2019
DATE OF EXPIRATION: 04/30/2024

**YOU ARE REQUIRED TO FILE FOR RENEWAL
OF THIS PERMIT BY:** 11/02/2023
EPA NUMBER: IA0032956

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 _____

Ryan Olive
NPDES Section
ENVIRONMENTAL SERVICES DIVISION

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Outfall No.: 001 DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

Receiving Stream: SUGAR CREEK

Route of Flow: SUGAR 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: OSAGE CITY OF STP

Permit Number: 6663001

Effluent Limitations:

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

001 DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

<i>Outfall: 001 Effective Dates: 05/01/2019 to 04/30/2024</i>			
<u>Parameter</u>	<u>Season</u>	<u>Limit Type</u>	<u>Limits</u>
CBOD5		85% Removal Required	
	Yearly	7 Day Average	40 MG/L 357 LBS/DAY
	Yearly	30 Day Average	25 MG/L 223 LBS/DAY
TOTAL SUSPENDED SOLIDS		85% Removal Required	
	Yearly	7 Day Average	45 MG/L 402 LBS/DAY
	Yearly	30 Day Average	30 MG/L 268 LBS/DAY
ACUTE TOXICITY, CERIODAPHNIA			
	Yearly	Daily Maximum	1 NO TOXICITY
ACUTE TOXICITY, PIMEPHALES			
	Yearly	Daily Maximum	1 NO TOXICITY
PH			
	Yearly	Daily Maximum	9.0 STD UNITS
	Yearly	Daily Minimum	6.5 STD UNITS
E. COLI			
	Yearly	Geometric Mean	126 #/100 ML

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

<i>Outfall: 001 Effective Dates: 09/01/2023 to 04/30/2024</i>			
<u>Parameter</u>	<u>Season</u>	<u>Limit Type</u>	<u>Limits</u>
AMMONIA NITROGEN (N)			
	JAN	30 Day Average	4.1 MG/L 35.8 LBS/DAY
	JAN	Daily Maximum	15.3 MG/L 136.2 LBS/DAY
	FEB	30 Day Average	4.7 MG/L 41.4 LBS/DAY
	FEB	Daily Maximum	14.3 MG/L 127.4 LBS/DAY
	MAR	30 Day Average	2.5 MG/L 21.9 LBS/DAY
	MAR	Daily Maximum	14.7 MG/L 131.7 LBS/DAY
	APR	30 Day Average	1.8 MG/L 16.0 LBS/DAY
	APR	Daily Maximum	15.8 MG/L 140.7 LBS/DAY
	MAY	30 Day Average	2.1 MG/L 18.2 LBS/DAY
	MAY	Daily Maximum	15.2 MG/L 136.1 LBS/DAY
	JUN	30 Day Average	1.6 MG/L 13.7 LBS/DAY
	JUN	Daily Maximum	14.5 MG/L 129.4 LBS/DAY
	JUL	30 Day Average	1.2 MG/L 10.5 LBS/DAY
	JUL	Daily Maximum	17.6 MG/L 157.6 LBS/DAY
	AUG	30 Day Average	1.1 MG/L 10.0 LBS/DAY
	AUG	Daily Maximum	16.3 MG/L 145.4 LBS/DAY
	SEP	30 Day Average	1.3 MG/L 11.1 LBS/DAY
	SEP	Daily Maximum	16.5 MG/L 147.8 LBS/DAY
	OCT	30 Day Average	1.9 MG/L 16.3 LBS/DAY
	OCT	Daily Maximum	15.8 MG/L 140.7 LBS/DAY
	NOV	30 Day Average	2.8 MG/L 24.4 LBS/DAY
	NOV	Daily Maximum	14.7 MG/L 131.6 LBS/DAY
	DEC	30 Day Average	3.0 MG/L 26.0 LBS/DAY
	DEC	Daily Maximum	16.0 MG/L 143.0 LBS/DAY

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

<i>Outfall: 001 Effective Dates: 09/01/2023 to 04/30/2024</i>			
<u>Parameter</u>	<u>Season</u>	<u>Limit Type</u>	<u>Limits</u>
NITROGEN, TOTAL (AS N)			
	Yearly	30 Day Average	239.2 LBS/DAY
	Yearly	Daily Maximum	391.5 LBS/DAY
DISSOLVED OXYGEN			
	Yearly	Daily Minimum	4.9 MG/L

<i>Outfall: 001 Effective Dates: 04/01/2024 to 04/30/2024</i>			
<u>Parameter</u>	<u>Season</u>	<u>Limit Type</u>	<u>Limits</u>
COPPER, TOTAL (AS CU)			
	Yearly	30 Day Average	0.01757 MG/L 0.1563 LBS/DAY
	Yearly	Daily Maximum	0.02700 MG/L 0.2411 LBS/DAY

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

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: OSAGE CITY OF STP

Permit Number: 6663001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from 05/01/2019 to 04/30/2024				
001	FLOW	7/WEEK OR DAILY	CALCULATED	RAW WASTE - TOTAL
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE - STORM WATER BASIN RETURN
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE - STORM WATER BASIN INFLUENT
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE - MECHANICAL PLANT INFLUENT
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	2 TIMES PER WEEK	24 HOUR COMPOSITE	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	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	FINAL EFFLUENT
001	ACUTE TOXICITY, CERIODAPHNIA	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	ACUTE TOXICITY, PIMEPHALES	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	AMMONIA NITROGEN (N)	2 TIMES PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from 05/01/2019 to 04/30/2024				
001	CBOD5	2 TIMES PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	CHLORIDE (AS CL)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	COPPER, TOTAL (AS CU)	1 EVERY 2 WEEKS	24 HOUR COMPOSITE	EFFLUENT AFTER 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	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	PH	2 TIMES PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	TEMPERATURE	2 TIMES PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	TOTAL SUSPENDED SOLIDS	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Special Monitoring Requirements

Outfall # Description

001 FLOW

To calculate the total raw waste flow (TOTAL RAW WASTE FLOW = MECHANICAL PLANT INFLUENT+ INFLUENT TO STORM WATER RETENTION BASIN- STORM WATER BASIN RETURN)

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 126 org/100 ml specified on page 3 of this permit for outfall(s) 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 year-round. 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(s) 001.

The facility must collect and analyze a minimum of five samples in one calendar month during each sample period during the year. The recreational season sample periods are March 15 – May 31, June 1 – August 31, and September 1 – November 15. The winter sampling period is November 16 – March 14. For example, for the winter sample period, the operator may choose January 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 December or February as well, as long as each of the 5 samples are collected during a single calendar month. The same principle applies to the other three sample periods during the year. 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.

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

E. COLI (Continued)

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>

COPPER, TOTAL (AS CU)

EPA approved test methods shall be used to test at or below the limits on pages 5 of this permit. If a sample result is not at a detection level which is low enough to demonstrate compliance with the limit in the permit, the facility will be considered non-compliant with that limit.

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Significant Industrial User Discharges:

Significant Industrial User: A-Z DRYING COMPANY (SOUTH PLANT)

Outfall # Outfall Description

002 SOUTH PLANT EFFLUENT PRIOR TO DISCHARGE TO CITY SEWER.

Significant Industrial User Effluent Limitations

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

A-Z DRYING COMPANY (SOUTH PLANT)			
Outfall: 002 Effective Dates: 05/01/2019 to 04/30/2024			
Parameter	Season	Limit Type	Limit Values
FLOW			
	Yearly	30 Day Average	0.075 MGD
	Yearly	DAILY MAXIMUM	0.175 MGD
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	30 Day Average	400 LBS/DAY
	Yearly	DAILY MAXIMUM	500 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	30 Day Average	475 LBS/DAY
	Yearly	DAILY MAXIMUM	710 LBS/DAY
PH			
	Yearly	DAILY MAXIMUM	9.0 STD UNITS
	Yearly	DAILY MINIMUM	6.0 STD UNITS

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

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: OSAGE CITY OF STP

Permit Number: 6663001

A-Z DRYING COMPANY (SOUTH PLANT)				
Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
002	BIOCHEMICAL OXYGEN DEMAND (BOD5)	1 TIME PER WEEK	24 HOUR COMPOSITE	PRIOR TO DISCHARGE TO CITY SEWER
002	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	PRIOR TO DISCHARGE TO CITY SEWER
002	PH	1 TIME PER WEEK	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
002	TOTAL SUSPENDED SOLIDS	1 EVERY MONTH	24 HOUR COMPOSITE	PRIOR TO DISCHARGE TO CITY SEWER

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Significant Industrial User Discharges:

Significant Industrial User: FOX RIVER MILLS INC.

Outfall # Outfall Description

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

Significant Industrial User Effluent Limitations

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

FOX RIVER MILLS INC.			
Outfall: 001 Effective Dates: 05/01/2019 to 04/30/2024			
Parameter	Season	Limit Type	Limit Values
FLOW			
	Yearly	30 Day Average	0.150 MGD
	Yearly	DAILY MAXIMUM	0.200 MGD
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	30 Day Average	350 LBS/DAY
	Yearly	DAILY MAXIMUM	500 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	30 Day Average	200 LBS/DAY
	Yearly	DAILY MAXIMUM	350 LBS/DAY
PH			
	Yearly	DAILY MAXIMUM	9.3 STD UNITS
	Yearly	DAILY MINIMUM	5.7 STD UNITS

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

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: OSAGE CITY OF STP

Permit Number: 6663001

FOX RIVER MILLS INC.

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	1 TIME 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	PH	1 TIME PER WEEK	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	TOTAL SUSPENDED SOLIDS	1 EVERY MONTH	24 HOUR COMPOSITE	PRIOR TO DISCHARGE TO CITY SEWER

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Significant Industrial User Discharges:

Significant Industrial User: FLOYD-MITCHELL SOLID WASTE MANAGEMENT AGENCY

Outfall # Outfall Description

001 LANDFILL LEACHATE TRANSPORTED TO THE TREATMENT PLANT FOR DISPOSAL.

Significant Industrial User Effluent Limitations

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

<i>FLOYD-MITCHELL SOLID WASTE MANAGEMENT AGENCY</i>			
<i>Outfall: 001 Effective Dates: 05/01/2019 to 04/30/2024</i>			
<u>Parameter</u>	<u>Season</u>	<u>Limit Type</u>	<u>Limit Values</u>
FLOW			
	Yearly	30 Day Average	0.0100 MGD
	Yearly	DAILY MAXIMUM	0.0120 MGD
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	30 Day Average	50 LBS/DAY
	Yearly	DAILY MAXIMUM	60 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	30 Day Average	35 LBS/DAY
	Yearly	DAILY MAXIMUM	65 LBS/DAY
NITROGEN, TOTAL KJELDAHL (AS N)			
	Yearly	30 Day Average	13 LBS/DAY
	Yearly	DAILY MAXIMUM	24 LBS/DAY
PH			
	Yearly	DAILY MAXIMUM	9.0 STD UNITS
	Yearly	DAILY MINIMUM	6.2 STD UNITS

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

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: OSAGE CITY OF STP

Permit Number: 6663001

FLOYD-MITCHELL SOLID WASTE MANAGEMENT AGENCY				
Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	1 EVERY BATCH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	FLOW	1 EVERY BATCH	ESTIMATED	PRIOR TO DISCHARGE TO CITY SEWER
001	NITROGEN, TOTAL KJELDAHL (AS N)	1 EVERY BATCH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	PH	1 EVERY BATCH	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 BATCH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

FLOYD-MITCHELL SOLID WASTE MANAGEMENT AGENCY Special Monitoring Requirements

Outfall # Description

001 SANITARY LANDFILL LEACHATE

REFER TO PAGES 21 AND 22 LISTING ADDITIONAL LEACHATE MONITORING REQUIREMENTS.

ADDITIONAL MONITORING REQUIREMENTS – FLOYD-MITCHELL SOLID WASTE
MANAGEMENT AGENCY

The permittee shall analyze a representative sample of the leachate discharge from the Floyd-Mitchell Solid Waste Management Agency at least annually for each of the pollutants listed below.

Conventional Pollutants and Metals

Biochemical Oxygen Demand (BOD ₅)	1,1,1-Trichloroethane (methyl chloroform)
Total Organic Carbon	Carbon tetrachloride
Total Dissolved Solids	Bromodichloromethane
Total Suspended Solids	1,1,2,2-Tetrachloroethane
Ammonia Nitrogen	1,2-Dichloropropane
pH	1,3-Dichloropropene
Arsenic, Total (as As)	Trichloroethene
Barium, Total (as Ba)	Dibromochloromethane
Cadmium, Total (as Cd)	1,1,2-Trichloroethane
Chromium, Total (as Cr)	Benzene
Copper, Total (as Cu)	2-Chloroethyl vinyl ether
Iron, Total (as Fe)	Bromoform
Lead, Total (as Pb)	Tetrachloroethene
Mercury, Total (as Hg)	Toluene
Nickel, Total (as Ni)	Chlorobenzene
Selenium, Total (as Se)	Ethylbenzene
Silver, Total (as Ag)	
Zinc, Total (as Zn)	

Volatile Compounds

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

Acid Extractable Compounds

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

Chlorinated Hydrocarbon Insecticides

Methods of Analysis: EPA Methods 608 or 625

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

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
Dibenz (a,h) anthracene
Benzo (g,h,i) perylene

Polychlorinated Biphenyls

Methods of Analysis: EPA Methods 608 or 625

Arochlor-1016
Arochlor-1221
Arochlor-1232
Arochlor-1242
Arochlor-1248
Arochlor-1254
Arochlor-1260

Base/Neutral Compounds

Methods of Analysis: EPA Methods 625 or 1625

bis (2-chloroethyl) ether
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Benzyl alcohol
1,2-Dichlorobenzene
bis (2-chloroisopropyl) ether
N-Nitroso-dipropylamine

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Significant Industrial User Discharges:

Significant Industrial User: MITCHELL COUNTY INDUSTRIAL PRETREATMENT FACILITY

Outfall # Outfall Description

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

Significant Industrial User Effluent Limitations

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

MITCHELL COUNTY INDUSTRIAL PRETREATMENT FACILITY			
Outfall: 001 Effective Dates: 05/01/2019 to 04/30/2024			
Parameter	Season	Limit Type	Limit Values
FLOW			
	Yearly	30 Day Average	0.250 MGD
	Yearly	DAILY MAXIMUM	0.300 MGD
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	30 Day Average	625 LBS/DAY
	Yearly	DAILY MAXIMUM	750 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	30 Day Average	535 LBS/DAY
	Yearly	DAILY MAXIMUM	640 LBS/DAY
OIL AND GREASE			
	Yearly	30 Day Average	200 MG/L
	Yearly	DAILY MAXIMUM	300 MG/L
PH			
	Yearly	DAILY MINIMUM	6.0 STD UNITS
NITROGEN, TOTAL (AS N)			
	Yearly	30 Day Average	150 LBS/DAY
	Yearly	DAILY MAXIMUM	180 LBS/DAY
Outfall: 001 Effective Dates: 11/01/2020 to 04/30/2024			
PH			
	Yearly	DAILY MAXIMUM	9.5 STD UNITS

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

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. All effluent samples for which a limit applies must be analyzed using sufficiently sensitive methods (i.e. testing procedures) approved under 567 IAC Chapter 63 and 40 CFR Part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter I, subchapter N or O.

For the purposes of this paragraph, an approved method is sufficiently sensitive when:

- (1) the method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or
- (2) the method has the lowest ML of the approved analytical methods for the measured pollutant or pollutant parameter.

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, 30-day averages 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) 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.

(e) 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.

(f) Operational performance monitoring for treatment unit process control shall be conducted to ensure that the facility is properly operated in accordance with its design. The results of any operational performance monitoring need not be reported to the department, but shall be maintained in accordance with rule 567 IAC 63.2 (455B). The results of any operational performance monitoring specified in this permit shall be submitted to the department in accordance with these reporting requirements.

(g) Chapter 63 of the rules provides you with further explanation of your monitoring requirements.

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

MITCHELL COUNTY INDUSTRIAL PRETREATMENT FACILITY

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	NITROGEN, TOTAL (AS N)	2 TIMES PER WEEK	24 HOUR COMPOSITE	PRIOR TO DISCHARGE TO CITY SEWER
001	OIL AND GREASE	1 TIME PER WEEK	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: OSAGE CITY OF STP

Permit Number: 6663001

Significant Industrial User Discharges:

Significant Industrial User: VALENT BIOSCIENCES LLC (Utility & Low Load)

Outfall # Outfall Description

001 Cooling tower blowdown, RO concentrate, boiler blowdown water, low loading water

Significant Industrial User Effluent Limitations

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

VALENT BIOSCIENCES LLC (Utility & Low Load)			
Outfall: 001 Effective Dates: 11/01/2020 to 04/30/2024			
Parameter	Season	Limit Type	Limit Values
FLOW			
	Yearly	30 Day Average	0.100 MGD
	Yearly	DAILY MAXIMUM	0.25 MGD
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	30 Day Average	200 LBS/DAY
	Yearly	DAILY MAXIMUM	250 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	30 Day Average	100 LBS/DAY
	Yearly	DAILY MAXIMUM	150 LBS/DAY
AMMONIA NITROGEN (N)			
	Yearly	30 Day Average	45 LBS/DAY
	Yearly	DAILY MAXIMUM	54 LBS/DAY
NITROGEN, TOTAL KJELDAHL (AS N)			
	Yearly	30 Day Average	85 LBS/DAY
	Yearly	DAILY MAXIMUM	105 LBS/DAY
OIL AND GREASE			
	Yearly	30 Day Average	200 MG/L
	Yearly	DAILY MAXIMUM	300 MG/L
PH			
	Yearly	DAILY MAXIMUM	9.5 STD UNITS
	Yearly	DAILY MINIMUM	6.0 STD UNITS

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

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. All effluent samples for which a limit applies must be analyzed using sufficiently sensitive methods (i.e. testing procedures) approved under 567 IAC Chapter 63 and 40 CFR Part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter I, subchapter N or O.

For the purposes of this paragraph, an approved method is sufficiently sensitive when:

- (1) the method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or
- (2) the method has the lowest ML of the approved analytical methods for the measured pollutant or pollutant parameter.

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, 30-day averages 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) 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.

(e) 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.

(f) Operational performance monitoring for treatment unit process control shall be conducted to ensure that the facility is properly operated in accordance with its design. The results of any operational performance monitoring need not be reported to the department, but shall be maintained in accordance with rule 567 IAC 63.2 (455B). The results of any operational performance monitoring specified in this permit shall be submitted to the department in accordance with these reporting requirements.

(g) Chapter 63 of the rules provides you with further explanation of your monitoring requirements.

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

VALENT BIOSCIENCES LLC (Utility & Low Load)				
Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
001	AMMONIA NITROGEN (N)	1 TIME PER WEEK	24 HOUR COMPOSITE	PRIOR TO DISCHARGE TO CITY SEWER
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	1 TIME 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	NITROGEN, TOTAL KJELDAHL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	PRIOR TO DISCHARGE TO CITY SEWER
001	OIL AND GREASE	1 EVERY 2 WEEKS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	PH	1 TIME PER WEEK	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	TOTAL SUSPENDED SOLIDS	1 EVERY 2 WEEKS	24 HOUR COMPOSITE	PRIOR TO DISCHARGE TO CITY SEWER

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

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 IAC 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. USEPA, Office of Water, Washington, D.C., EPA 821-R-02-012.
3. The diluted effluent sample must contain a minimum of 99.60 % effluent and no more than 0.40 % 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, USEPA, Office of Water, Washington, D.C., EPA 821-R-02-012.

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Design Capacity

Design: 2

The design capacity for the treatment works is specified in Construction Permit Number 2014-0010-S, issued Wednesday, July 10, 2013. The treatment plant is designed to treat:

- * An average dry weather (ADW) flow of 0.9680 Million Gallons Per Day (MGD).
- * An average wet weather (AWW) flow of 1.0710 Million Gallons Per Day (MGD).
- * A maximum wet weather (MWW) flow of 1.6930 Million Gallons Per Day (MGD).
- * A design 5-day biochemical oxygen demand (BOD5) load of 2465 lbs/day.
- * A design Total Kjeldahl Nitrogen (TKN) load of 317.00 lbs/day.
- * A design Total Suspended Solids (TSS) load of 2830 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: OSAGE CITY OF STP

Permit Number: 6663001

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: OSAGE CITY OF STP

Permit Number: 6663001

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

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

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 99.60 % effluent and no more than 0.40 % 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: OSAGE CITY OF STP

Permit Number: 6663001

Design Capacity

Design: 2

The design capacity for the treatment works is specified in Construction Permit Number 2014-0010-S, issued Wednesday, July 10, 2013.

The treatment plant is designed to treat:

- * An average dry weather (ADW) flow of 0.9680 Million Gallons Per Day (MGD).
- * An average wet weather (AWW) flow of 1.0710 Million Gallons Per Day (MGD).
- * A maximum wet weather (MWW) flow of 1.6930 Million Gallons Per Day (MGD).
- * A design 5-day biochemical oxygen demand (BOD5) load of 2465 lbs/day.
- * A design Total Kjeldahl Nitrogen (TKN) load of 317.00 lbs/day.
- * A design Total Suspended Solids (TSS) load of 2830 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: OSAGE CITY OF STP

Permit Number: 6663001

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: OSAGE CITY OF STP

Permit Number: 6663001

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

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Ammonia Nitrogen, Total Nitrogen and Dissolved Oxygen Compliance Schedule

1. The facility shall make necessary improvements to meet ammonia nitrogen, total nitrogen and dissolved oxygen limits according to the following schedule:
 - Submit a Work Record Request form to DNR's Wastewater Engineering Section at wastewater-engineering@dnr.iowa.gov by 8/1/2019. The forms and instructions are available on the DNR website at <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Wastewater-Construction/Construction-Permits>. Questions on the forms should be directed to either Terry Kirschenman at 515/725-8422 or Emy Liu at 515/725-8421.
 - Submit progress report by 8/1/2020. Progress report shall include specific information on the status of the project and future expected timelines for completing construction. Include status on an antidegradation analysis and progress, completion and submittal of the facility plan.
 - Submit progress report by 8/1/2021. Progress report shall include specific information on the status of the project and future expected timelines for completing construction. Include status on the approval of the facility plan and progress towards completion of final plans and specifications.
 - Submit progress report by 8/1/2022. Progress report shall include specific information on the status of the project and future expected timelines for completing construction. Include status on the final plans and specifications, construction permit, and awarding contracts for construction.
 - Complete construction of wastewater treatment improvements necessary to comply with the ammonia nitrogen, total nitrogen and dissolved oxygen limits by 8/1/2023.
 - Achieve compliance with all final ammonia nitrogen, total nitrogen and dissolved oxygen limits by 9/1/2023.

Within fourteen (14) days following all dates of compliance, the permittee shall provide written notice of compliance with the scheduled event. All written notices and progress reports shall be sent to the following address:

Iowa Department of Natural Resources
Environmental Services Division
Regional Office # 2
2300 15th Street SW
Mason City, IA 50401-5630

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Copper Compliance Schedule

2. The facility shall meet the final copper limits listed on the limits page of this permit according to the following schedule:
 - The facility shall submit a compliance strategy, by 11/1/2019. The compliance strategy must describe the steps the facility will take to comply with the copper effluent limits as soon as possible, but no later than 4/1/2024.
 - The facility shall submit progress reports every 12 months until compliance with final copper effluent limits is achieved, with the first progress report due 11/1/2020.
 - Achieve compliance with final effluent limits by 4/1/2024.

Within fourteen (14) days following all dates of compliance, the permittee shall provide written notice of compliance with the scheduled event. All written notices and progress reports shall be sent to the following address:

Iowa Department of Natural Resources
Environmental Services Division
Regional Office # 2
2300 15th Street SW
Mason City, IA 50401-5630

Facility Name: OSAGE CITY OF STP

Permit Number: 6663001

Nutrient Reduction Requirements

In support of the Iowa Nutrient Reduction Strategy you shall prepare and submit a report that evaluates the feasibility and reasonableness of reducing the amounts of nitrogen and phosphorus discharged into surface water. The report shall be submitted no later than **5/1/2021** and shall address the following:

- ⤴ A description of the existing treatment facility with particular emphasis on its capabilities for removing nitrogen and phosphorus. The description shall include monitoring data that define the current amounts of total nitrogen (TKN+nitrate+nitrite) and total phosphorus in both the raw wastewater and the final effluent.
- ⤴ A description and evaluation of operational changes to the existing treatment facility that could be implemented to reduce the amounts of total nitrogen and total phosphorus discharged in the final effluent and the feasibility and reasonableness of each. Your evaluation must discuss the projected degree of total nitrogen and total phosphorus reduction achievable for each operational change. When evaluating feasibility you must consider what, if any, effect operational changes would have on the removal of other pollutants (e.g. CBOD₅, TSS). When evaluating reasonableness you shall include estimates of the additional cost, if any, to implement such changes and for a publicly-owned treatment works the impact on user rates.
- ⤴ A description and evaluation of new or additional treatment technologies that would achieve significant reductions in the amounts of total nitrogen and total phosphorus discharged in the final effluent with a goal of achieving annual average concentrations of 10 mg/L total nitrogen and 1 mg/L total phosphorus for plants treating typical domestic strength sewage. For purposes of this evaluation typical domestic sewage is considered to contain approximately 25 – 35 mg/L total nitrogen and 4 - 8 mg/L total phosphorus. For plants treating wastewater with total nitrogen and/or total phosphorus concentrations greater than typical domestic strength sewage, the evaluation shall include the projected reductions in the total nitrogen and phosphorus effluent concentrations achievable with the application of feasible and reasonable treatment technology with a goal of achieving at least a 66 % reduction in nitrogen and 75% reduction in total phosphorus. For each treatment technology the report shall assess its feasibility, reasonableness, practicability, the availability of equipment, capital costs, annual operating costs, impact on user rates and any non-water quality environmental impacts (e.g. additional air pollution, increased sludge production, etc.).
- ⤴ Based on the evaluations of operational changes and new or additional treatment technologies the report must select the preferred method(s) for reducing total nitrogen and total phosphorus in the final effluent, the rationale for the selected method(s) and an estimate of the effluent quality achievable.
- ⤴ The report must include a schedule for making operational changes and/or installing new or additional treatment technologies to achieve the concentration and/or percentage removal goals listed above. Additional financial justification must be included in the report if no operational changes or treatment technologies are feasible or reasonable.

The schedule will be incorporated into the NPDES permit by amendment. Effluent discharge limits will be based on one full year of operating data after implementation of the operational changes or completion of plant modifications and a six month optimization period.

The report shall be sent to the following address:

Ryan Olive
NPDES Section
Iowa Department of Natural Resources
502 East 9th Street
Des Moines, IA 50319

Appendix G.2 - Treatment Agreement with Elma POTW



**IOWA DEPARTMENT OF NATURAL RESOURCES
TREATMENT AGREEMENT FORM**

DNR USE ONLY

NPDES NO. _____
IND. CONT. AGREEMENT NO. _____
REPLACES AGREEMENT NO. _____

NOTICE

A properly executed Treatment Agreement must be submitted by the industrial user not less than one hundred eighty (180) days before the new significant industrial user proposes to discharge into a wastewater disposal system. Any proposed expansion, production increase, or process modification that may result in any change to a previous Treatment Agreement requires execution of a new Treatment Agreement.

SIGNIFICANT INDUSTRIAL USER		SYSTEM RECEIVING WASTE	
NAME Floyd Mitchell Chickasaw Solid Waste Management Agency (FMC SWMA)		NAME City of Elma	
MAILING ADDRESS 3354 330th Street Elma, Iowa 50528		MAILING ADDRESS 319 Oak Street, PO Box 497 Elma, Iowa 50628	
AUTHORIZED REPRESENTATIVE Jerry Dunlay	PHONE NO. 6419824288	AUTHORIZED REPRESENTATIVE Dennis O'Brien	PHONE NO. 3193932543

CERTIFICATION OF INDUSTRIAL USER

I am the duly authorized representative for the significant industrial user identified above and state that the proposed discharge to the system receiving waste identified above shall not exceed the quantities listed on page two of this form after:

EFFECTIVE DATE
March 1, 2020

I further assure that notice of any anticipated increase in pollutants contributed shall be given to the owner of the system identified above sufficiently in advance of such increase to allow this contributor to submit a new treatment agreement to the Department of Natural Resources no later than sixty days in advance of the increase or change.

TYPED OR PRINTED NAME	TITLE	SIGNATURE	DATE
Jerry Dunlay	Chairman		3-13-2020

CERTIFICATION OF SYSTEM RECEIVING WASTE

I am the duly authorized representative for the facility owner named above and state that the owner agrees to accept the discharge described on page two from the contractor identified above, and accepts responsibility for providing treatment of the volume and quantities described on the reverse in accordance with the provisions of Chapter 455B, Code of Iowa, and the rules of the Department of Natural Resources. This agreement is conditioned on the industrial contributor complying with all applicable standards and requirements of the Department of Natural Resources and the United State Environmental Protection Agency. This agreement is entered for the purpose of identifying pollutants contributed and limiting the quantity contributed, and shall not otherwise be construed to affect local ordinances, sewer service agreements or fee systems entered into between the parties.

This agreement may be modified or terminated by the owner of the disposal system if additional pollutants or additional quantities or volumes of pollutants are contributed other than identified on the reverse, or because of any condition that requires either a temporary or permanent reduction or elimination of the accepted contribution.

TYPED OR PRINTED NAME	TITLE	SIGNATURE	DATE
Jerry Stevens	Mayor		3/16/2020



TREATMENT AGREEMENT FORM

1. PROCESS DESCRIPTION

SPECIFIC MANUFACTURING PROCESS Fermentation facility producing biological based pesticides, plant growth regulators, public health and forestry		SIC CODES 4953	
CONSUMPTION		PRODUCTION	
PRINCIPAL RAW MATERIAL	AMOUNT CONSUMED PER DAY	PRINCIPAL PRODUCTS	AMOUNT PRODUCED PER DAY
Municipal Solid Waste (MSW)	30,000 Tons/Year MSW	SLF Leachate)	Average 2500 gpd Peak 32000 gpd
2. HOURLY MAXIMUM FLOW CONTRIBUTION	3. DAYS OF OPERATION PER WEEK	4. HOURS OF OPERATION DURING PEAK DAY OF OPERATION	5. RANGE OF pH LEVEL IN CONTRIBUTION
N/A	5.5	8	MINIMUM 6.5 MAXIMUM 9.0

6. DESCRIPTION OF PRETREATMENT PROVIDED

None
Leachate is stored in a 1 million gallon lagoon

7. DESCRIPTION OF ANY BATCH OR PERIODIC DISCHARGES

All leachate will be transported in tanker trucks not exceed 9,500 gallons per load
Testing fo pH, BOD5, TSS, Ammonia, and oil and grease will be performed quarterly by FMC SWMA

8. COMPATIBLE WASTE IN CONTRIBUTION

WASTEWATER PARAMETER	AVERAGE	MAXIMUM	WASTEWATER PARAMETER	AVERAGE	MAXIMUM
Flow (MGD)	0.008	0.015	Ammonia Nitrogen (lbs/day)	20	35
BOD5 (lbs/day)	50	75	Oil and Grease (mg/l)	25	100
Total Suspended Solids (lbs/day)	5	10			

9. INCOMPATIBLE WASTE IN CONTRIBUTION

WASTEWATER PARAMETER	AVERAGE		MAXIMUM	
	mg/l	lbs/day	mg/l	lbs/day
None				



AMENDMENT TO NPDES PERMIT

Iowa NPDES Permit Number: 4525001
EPA Number: IA0021075

Date of Permit Issuance: June 1, 2019
Date of Permit Expiration: May 31 2024
Date of this Amendment: May 1, 2020

Name and Mailing Address of Applicant:

CITY OF ELMA
CITY HALL, P.O. BOX 497
ELMA, IA 50628-0497

Identity and Location of Facility:

ELMA CITY OF STP
0.1 MILES W OF THE 9TH ST AND Section 1, T97N, R14W
MAPLE ST INTERSECTION Howard County
ELMA, IA 50628

Pursuant to the authority of 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 being amended to add the Floyd-Mitchell-Chickasaw Solid Waste Management Agency as a Significant Industrial User. Monitoring requirements for the landfill leachate are included. The amendment also adds iron monitoring for the POTW's effluent. Please remove all the pages of your permit (except for the original signed cover page) and replace them with the enclosed pages.

For the Department of Natural Resources:

By Julie M Faas
Julie Faas
NPDES Section
ENVIRONMENTAL SERVICES DIVISION

IOWA DEPARTMENT OF NATURAL RESOURCES
National Pollutant Discharge Elimination System (NPDES) Permit

OWNER NAME & ADDRESS

CITY OF ELMA
CITY HALL, P.O. BOX 497
ELMA, IA 50628-0497

FACILITY NAME & ADDRESS

ELMA CITY OF STP
0.1 MILES W OF THE 9TH ST &
MAPLE ST INTERSECTION
ELMA, IA 50628

Section 1, T97N, R14W
Howard County

IOWA NPDES PERMIT NUMBER: 4525001
DATE OF ISSUANCE: 06/01/2019
DATE OF EXPIRATION: 05/31/2024

**YOU ARE REQUIRED TO FILE FOR RENEWAL
OF THIS PERMIT BY:** 12/03/2023
EPA NUMBER: IA0021075

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 _____

Ann Seda
NPDES Section
ENVIRONMENTAL SERVICES DIVISION

Facility Name: ELMA CITY OF STP

Permit Number: 4525001

Outfall No.: 001 DISCHARGE FROM ACTIVATED SLUDGE WATEWATER TREATMENT PLANT

Receiving Stream: LITTLE WAPSIPINICON RIVER

Route of Flow: LITTLE WAPSIPINICON RIVER

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: ELMA CITY OF STP

Permit Number: 4525001

Effluent Limitations:

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

001 DISCHARGE FROM ACTIVATED SLUDGE WATSEWER TREATMENT PLANT

<i>Outfall: 001 Effective Dates: 06/01/2019 to 05/31/2024</i>			
<u>Parameter</u>	<u>Season</u>	<u>Limit Type</u>	<u>Limits</u>
CBOD5		85% Removal Required	
	Yearly	7 Day Average	40 MG/L 133 LBS/DAY
	Yearly	30 Day Average	25 MG/L 83 LBS/DAY
TOTAL SUSPENDED SOLIDS		85% Removal Required	
	Yearly	7 Day Average	45 MG/L 150 LBS/DAY
	Yearly	30 Day Average	30 MG/L 100 LBS/DAY
AMMONIA NITROGEN (N)			
	JAN	30 Day Average	15.3 MG/L 26.8 LBS/DAY
	JAN	Daily Maximum	17.4 MG/L 53.6 LBS/DAY
	FEB	30 Day Average	16.6 MG/L 30.8 LBS/DAY
	FEB	Daily Maximum	16.6 MG/L 50.5 LBS/DAY
	MAR	30 Day Average	14.9 MG/L 26.3 LBS/DAY
	MAR	Daily Maximum	16.8 MG/L 51.8 LBS/DAY
	APR	30 Day Average	6.8 MG/L 11.9 LBS/DAY
	APR	Daily Maximum	17.5 MG/L 54.8 LBS/DAY
	MAY	30 Day Average	6.4 MG/L 12.1 LBS/DAY
	MAY	Daily Maximum	17.1 MG/L 53.3 LBS/DAY
	JUN	30 Day Average	4.3 MG/L 8.3 LBS/DAY

Facility Name: ELMA CITY OF STP

Permit Number: 4525001

Outfall: 001 Effective Dates: 06/01/2019 to 05/31/2024			
Parameter	Season	Limit Type	Limits
AMMONIA NITROGEN (N)			
	JUN	Daily Maximum	16.3 MG/L 50.7 LBS/DAY
	JUL	30 Day Average	4.5 MG/L 7.8 LBS/DAY
	JUL	Daily Maximum	19.7 MG/L 61.6 LBS/DAY
	AUG	30 Day Average	4.2 MG/L 7.4 LBS/DAY
	AUG	Daily Maximum	18.2 MG/L 56.7 LBS/DAY
	SEP	30 Day Average	4.7 MG/L 8.2 LBS/DAY
	SEP	Daily Maximum	18.4 MG/L 57.5 LBS/DAY
	OCT	30 Day Average	6.9 MG/L 12.2 LBS/DAY
	OCT	Daily Maximum	17.5 MG/L 54.8 LBS/DAY
	NOV	30 Day Average	10.4 MG/L 18.2 LBS/DAY
	NOV	Daily Maximum	16.4 MG/L 51.3 LBS/DAY
	DEC	30 Day Average	11.0 MG/L 19.4 LBS/DAY
	DEC	Daily Maximum	17.8 MG/L 55.7 LBS/DAY
DISSOLVED OXYGEN			
	Yearly	Daily Minimum	2.7 MG/L
PH			
	Yearly	Daily Maximum	9.0 STD UNITS
	Yearly	Daily Minimum	6.5 STD UNITS
E. COLI			
	MAR	30 Day Average	682 #/100 ML
	APR	30 Day Average	682 #/100 ML
	MAY	30 Day Average	682 #/100 ML
	JUN	30 Day Average	682 #/100 ML
	JUL	30 Day Average	682 #/100 ML
	AUG	30 Day Average	682 #/100 ML
	SEP	30 Day Average	682 #/100 ML
	OCT	30 Day Average	682 #/100 ML
	NOV	30 Day Average	682 #/100 ML

Facility Name: ELMA CITY OF STP

Permit Number: 4525001

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. All effluent samples for which a limit applies must be analyzed using sufficiently sensitive methods (i.e. testing procedures) approved under 567 IAC Chapter 63 and 40 CFR Part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter I, subchapter N or O.

For the purposes of this paragraph, an approved method is "sufficiently sensitive" when:

- (1) the method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or
- (2) the method has the lowest ML of the approved analytical methods for the measured pollutant or pollutant parameter.

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, 30-day averages 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) 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.
- (e) Results of all monitoring shall be recorded on forms provided by, or approved by, the department, and submitted to 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.
- (f) Operational performance monitoring for treatment unit process control shall be conducted to ensure that the facility is properly operated in accordance with its design. The results of any operational performance monitoring need not be reported to the department, but shall be maintained in accordance with rule 567 IAC 63.2 (455B). The results of any operational performance monitoring specified in this permit shall be submitted to the department in accordance with these reporting requirements.
- (g) Chapter 63 of the Iowa Administrative Code contains further explanation of these monitoring requirements.

Facility Name: ELMA CITY OF STP

Permit Number: 4525001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from 06/01/2019 to 05/31/2024				
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE
001	PH	1 TIME PER WEEK	GRAB	RAW WASTE
001	TEMPERATURE	1 TIME PER WEEK	GRAB	RAW WASTE
001	TOTAL SUSPENDED SOLIDS	1 EVERY 2 WEEKS	24 HOUR COMPOSITE	RAW WASTE
001	CBOD5	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	TOTAL SUSPENDED SOLIDS	1 EVERY 2 WEEKS	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	AMMONIA NITROGEN (N)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	COPPER, TOTAL (AS CU)	1 EVERY MONTH	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	DISSOLVED OXYGEN	1 TIME PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	E. COLI	GEO. MEAN 1/3 MONTHS	GRAB	EFFLUENT AFTER DISINFECTION
001	PH	1 TIME PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	TEMPERATURE	1 TIME PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	IRON, TOTAL (AS FE)	1 EVERY MONTH	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION

Facility Name: ELMA CITY OF STP

Permit Number: 4525001

Special Monitoring Requirements

Outfall # Description

001 E. COLI

The limit for E. coli of 682 org/100 ml specified on page x of this permit 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: ELMA CITY OF STP

Permit Number: 4525001

Significant Industrial User Discharges:

Significant Industrial User: FLOYD-MITCHELL-CHICKASAW SOLID WASTE MANAGEMENT AG

Outfall # Outfall Description

001 PRIOR TO DISCHARGE TO CITY SEWER

Significant Industrial User Effluent Limitations

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

FLOYD-MITCHELL-CHICKASAW SOLID WASTE MANAGEMENT AG			
Outfall: 001 Effective Dates: 05/01/2020 to 05/31/2024			
<u>Parameter</u>	<u>Season</u>	<u>Limit Type</u>	<u>Limit Values</u>
FLOW			
	Yearly	30 Day Average	0.008 MGD
	Yearly	DAILY MAXIMUM	0.015 MGD
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	30 Day Average	50 LBS/DAY
	Yearly	DAILY MAXIMUM	75 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	30 Day Average	5 LBS/DAY
	Yearly	DAILY MAXIMUM	10 LBS/DAY
AMMONIA NITROGEN (N)			
	Yearly	30 Day Average	20 LBS/DAY
	Yearly	DAILY MAXIMUM	35 LBS/DAY
OIL AND GREASE			
	Yearly	30 Day Average	25 MG/L
	Yearly	DAILY MAXIMUM	100 MG/L

Facility Name: ELMA CITY OF STP

Permit Number: 4525001

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. All effluent samples for which a limit applies must be analyzed using sufficiently sensitive methods (i.e. testing procedures) approved under 567 IAC Chapter 63 and 40 CFR Part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter I, subchapter N or O.

For the purposes of this paragraph, an approved method is "sufficiently sensitive" when:

- (1) the method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or
- (2) the method has the lowest ML of the approved analytical methods for the measured pollutant or pollutant parameter.

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, 30-day averages 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) 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.
- (e) Results of all monitoring shall be recorded on forms provided by, or approved by, the department, and submitted to 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.
- (f) Operational performance monitoring for treatment unit process control shall be conducted to ensure that the facility is properly operated in accordance with its design. The results of any operational performance monitoring need not be reported to the department, but shall be maintained in accordance with rule 567 IAC 63.2 (455B). The results of any operational performance monitoring specified in this permit shall be submitted to the department in accordance with these reporting requirements.
- (g) Chapter 63 of the Iowa Administrative Code contains further explanation of these monitoring requirements.

Facility Name: ELMA CITY OF STP

Permit Number: 4525001

FLOYD-MITCHELL-CHICKASAW SOLID WASTE MANAGEMENT AG				
Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
001	AMMONIA NITROGEN (N)	1/WEEK DURING DRAWDOWN	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	1/WEEK DURING DRAWDOWN	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	FLOW	DAILY DURING DRAWDOWN	24 HOUR TOTAL	PRIOR TO DISCHARGE TO CITY SEWER
001	IRON, TOTAL (AS FE)	1 EVERY MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	OIL AND GREASE	1/WEEK DURING DRAWDOWN	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/WEEK DURING DRAWDOWN	GRAB	PRIOR TO DISCHARGE TO CITY SEWER

FLOYD-MITCHELL-CHICKASAW SOLID WASTE MANAGEMENT AG Special Monitoring Requirements

Outfall # Description

001 SANITARY LANDFILL LEACHATE

PLEASE REFER TO PAGES 11 AND 12 LISTING ADDITIONAL LEACHATE MONITORING REQUIREMENTS.

Facility Name: ELMA CITY OF STP

Permit Number: 4525001

ADDITIONAL MONITORING REQUIREMENTS

FLOYD-MITCHELL-CHICKASAW SOLID WASTE MANAGEMENT AGENCY

The permittee shall analyze a representative sample of the landfill leachate discharge from Floyd-Mitchell-Chickasaw Solid Waste Management Agency at least annually for each of the pollutants listed below. Also, the permittee shall monitor the volume of waste discharged and BOD5, TSS, Ammonia Nitrogen, Oil and Grease at the frequencies specified on page 10 of this permit.

Conventional Pollutants and Metals

Biochemical Oxygen Demand (BOD5)
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)

Volatile Compounds

Method of Analysis: EPA Methods 624 or 1624

Chloromethane (methyl chloride)
Bromomethane (methyl bromide)
Vinyl Chloride
Chloroethane (ethyl chloride)
Methylene chloride (dichloromethane)
1,1-Dichloroethane
1,1-Dichloroethene (1,1-dichloroethylene)
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-Dichloropropane
Trichloroethene
Dibromochloromethane

1,1,2-Trichloroethane
Benzene
2-Chloroethyl vinyl ether
Bromoform
Tetrachloroethene
Toluene
Chlorobenzene
Ethylbenzene

Acid Extractable Compounds

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
2,6-Dinitro-2-methylphenol
Pentachlorophenol

Facility Name: ELMA CITY OF STP

Permit Number: 4525001

Chlorinated Hydrocarbon Insecticides

Methods of Analysis: EPA Methods 608 or 625

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

Polychlorinated Biphenyls

Methods of Analysis: EPA Methods 608 or 625

Arochlor-1016
Arochlor-1221
Arochlor-1232

Arochlor-1242
Arochlor-1248
Arochlor-1254

Arochlor-1260

Base/Neutral Compounds

Methods of Analysis: EPA Methods 625 or 1625

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
Buthyl 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
Indendo (1,2,3-cd) pyrene
Dibenzo (a,h) anthracene
Benzo (g,h,i) perylene

Facility Name: ELMA CITY OF STP

Permit Number: 4525001

Design Capacity

Design: 1

The design capacity for the treatment works is specified in Construction Permit Number 2007-0132-S, issued Tuesday, September 11, 2007. The treatment plant is designed to treat:

- * An average dry weather (ADW) flow of 0.0780 Million Gallons Per Day (MGD).
- * An average wet weather (AWW) flow of 0.4000 Million Gallons Per Day (MGD).
- * A maximum wet weather (MWW) flow of 0.7500 Million Gallons Per Day (MGD).
- * A design 5-day biochemical oxygen demand (BOD5) load of 325 lbs/day.
- * A design Total Kjeldahl Nitrogen (TKN) load of 23.00 lbs/day.

Operator Certification Type/Grade: WW/II

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: ELMA CITY OF STP

Permit Number: 4525001

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: ELMA CITY OF STP

Permit Number: 4525001

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(j)(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(7)“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(7)“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)“i”}*

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 recurrence 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 system, or wastewater backups into buildings that are caused in the building lateral or private sewer line.
- (b) Prohibitions.
 - i. Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited.
 - ii. 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:
 - (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
 - (2) 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
 - (3) The permittee submitted notices as required by paragraph (d) of this section.
- (c) 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).
- (d) 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:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated;
 - iii. The permittee submitted notice of the upset to the Department in accordance with 567 IAC 63.6(3); and
 - iv. 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.3 - Treatment Agreement with Mason City POTW



WATER RECLAMATION FACILITY
10 FIRST ST. NW
MASON CITY, IA 50401
PHONE (641)421-3682 / FAX (641)421-3634

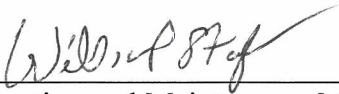
Tim Zoll
Chairman
Floyd Mitchell Chickasaw County Solid Waste Management Agency
3354 330th Street
Elma, IA 50628

RE: Issuance of Industrial User Permit to Central Disposal by the City of Mason City.
Permit No. **FMC2225**

Dear Mr. Zoll:

The enclosed Industrial User Permit **FMC2225** covers the Floyd Mitchell Chickasaw (FMC) Sanitary Landfill wastewater trucked from the facility located at 3354 330th Street, Elma, IA 50628 into the City of Mason City's Water Reclamation Facility. All discharges from this facility and actions and reports relating thereto shall be in accordance with the terms and conditions of this permit.

If you wish to appeal or challenge any conditions imposed in this permit, a petition shall be filed for modification or reissuance of this permit within 30 days of your receipt of this correspondence, in accordance with the requirements of Section 6-2-24 of the City of Mason City's City Code. Pursuant to 6-2-24, failure to petition for reconsideration of the permit within the allotted time is deemed a waiver by the permittee of his right to challenge the terms of this permit.

Signature 
Operation and Maintenance Manager

Date 4/5/2022

Signature 
Pretreatment & Operations Coordinator

Date 4-5-2022

INDUSTRIAL USER PERMIT

MASON CITY WASTEWATER POLLUTION CONTROL PERMIT AND AUTHORIZATION TO DISCHARGE INDUSTRIAL WASTES TO A PUBLICALLY OWNED TREATMENT WORKS (POTW) UNDER THE PROVISION OF THE CLEAN WATER ACT.

CITY OF MASON CITY WRF

10-1ST St. N.W., Mason City, IA 50401

Phone: (641) 421-3682

Fax: (641)-421-3634

Pursuant to the provisions of Iowa Water Quality Standards, Chapter 61, the Federal Water Pollution Control Act as amended (33 U.S.C. 1251), U.S. Environmental Protection Agency Pretreatment Regulations 40 CFR 403 and Iowa Administrative Code 567 IAC Chapter 60-67.

Owner/ Facility Name: **Floyd Mitchell Chickasaw Sanitary Landfill**

Facility Address: **3354 330th Street
Elma, IA 50628**

POTW Receiving Wastes: **Water Reclamation Facility,
2950 S. Birch Dr., Mason City, IA**

POTW's Iowa Permit Number: **1750001**

Floyd Mitchell Chickasaw Sanitary Landfill is hereby authorized to haul industrial waste from the above identified facility into the City of Mason City's Water Reclamation Facility in accordance with the conditions set forth in this permit. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all applicable pretreatment regulations, standards or requirements under local, State, and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

Permit No. **FMC2225**

Reapplication for Permit Due Date: **January 6, 2025**

Permit effective Date: **April 6, 2022**

Permit Expiration Date: **April 6, 2025**

Chairman: **Tim Zoll**

Designated Control Authority and facility Contact: **Christian Fox**

FACILITY DESCRIPTION: Non-Significant Industrial User, Hauled Waste

FMC Sanitary Landfill: FMC Sanitary Landfill is a non-hazardous landfill operation.

Permit No. **FMC2225**

INDUSTRIAL USER PERMIT

In accordance with the provisions of 6-2-17

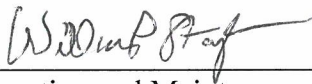
**Floyd Mitchell Chickasaw (FMC) Sanitary Landfill
3354 330th Street
Elma, IA 50628**

is hereby authorized to haul landfill leachate from the above identified facility to the City of Mason City's Water Reclamation Facility in accordance with the conditions set forth in this permit. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all applicable pretreatment regulations, standards or requirements under local, State, and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

Noncompliance with any term or condition of this permit shall constitute a violation of the City of Mason City's sewer use ordinance.

This permit shall become effective on April 6, 2022, and shall expire at midnight on April 6, 2025.

If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a renewal permit in accordance with the requirements of 6-2-28, a minimum of 90 days prior to the expiration date.

Signature 
Operation and Maintenance Manager

Date 4/5/2022

Signature 
Pretreatment & Operations Coordinator

Date 4-5-2022

PART 1 - EFFLUENT LIMITATIONS

- A. The permittee is authorized to discharge hauled landfill leachate into the City of Mason City's POTW from the effective dates listed above.
- B. All wastewater hauled to the POTW shall comply with all other applicable laws, regulations, standards, and requirements contained in 6-2-9 and any applicable State and Federal pretreatment laws, regulations, standards, and requirements including any such laws, regulations, standards, or requirements that may become effective during the term of this permit.
- C. The following are the effluent limits that will be used as a guide to determine if wastewater will be accepted from your facility. Results over these limits may be accepted at the discretion of the City of Mason City's Water Reclamation Facility on a case by case basis.

Biannual Pollutant	Daily Maximum (mg/l)
Arsenic-T	0.04
Cadmium-T	0.26
Chromium-T	1.71
Chromium VI	1.28
Copper-T	2.07
Cyanide-T	0.65
Lead-T	0.43
Mercury-T	0.003
Molybdenum-T	0.025
Nickel-T	2.38
Selenium-T	0.045
Silver-T	0.24
Zinc-T	1.48

* All other pollutants are evaluated on a per sample basis and do not have set effluent limits.

*pH of the discharge shall be between 5.5 - 9.5.

PART 2 - MONITORING REQUIREMENTS

A. The permittee shall monitor leachate for the following parameters, at the indicated frequency:

<u>Sample Parameter (units)</u>	<u>Measurement Location</u>	<u>Frequency</u>	<u>Sample Type</u>
Flow (gpd)	See note A-1, 4	per discharge Wastewater	Hauled WW
Conventional Pollutants And Metals	See note A-2	1/Quarter	Grab
All Pollutants	See note A-3	2x/year	Grab

1. All Samples shall be representative of the leachate delivered to the City of Mason City WRF.
2. The “Conventional Pollutants and Metals” (page 17) shall be performed once each quarter (Jan., Apr., Jul., Oct.) prior to discharge. Permission must be granted prior to dumping at the City of Mason City’s Water Reclamation Facility after the Pretreatment & Operations Coordinator has examined the parameters per quarter. The time span to collect a sample shall not exceed three months.
3. All pollutants (pages 17-18) shall be performed two times per year, parallel to quarterly pollutants. Permission must be granted prior to dumping at the City of Mason City’s Water Reclamation Facility after the Pretreatment & Operations Coordinator has examined the parameters. The time span to collect a sample shall not exceed six months.
4. Wastewater volume will be limited to **24,000 gallons per day**, hauled to the POTW, unless special permission is given.

B. All handling and preservation of collected samples and laboratory analyses of samples shall be performed in accordance with 40 CFR Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this permit.

PART 3 - REPORTING REQUIREMENTS

A. Monitoring Reports

Monitoring results obtained shall be reported to the City of Mason City and be approved prior to hauling waste to the POTW. The report shall indicate the nature and concentration of all required pollutants in the waste water.

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR Part 136 or amendments thereto, or otherwise approved by EPA or as specified in this permit, the results of such monitoring shall be included in any calculations of actual daily maximum or monthly average pollutant discharge and results shall be reported in the quarterly report submitted to the City of Mason City.

B. Automatic Re-sampling

If the result of the permittee's wastewater analysis indicates that a violation of this permit has occurred, the permittee must:

1. Inform the City of Mason City of the violation within 24 hours; and
2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days of the first violation.

PART 4 SPECIAL CONDITIONS

Section 1 Additional/Special Monitoring Requirements

- A. The City of Mason has the right to refuse any hauled waste load.**
- B. Discharge of hazardous waste into the Mason City Water Reclamation Facility is prohibited.**

Section 2 Reopener Clause

- A. This permit may be reopened and modified to incorporate any new or revised requirements resulting from the City of Mason City's reevaluation of its local limit for any metals.
- B. This permit may be reopened and modified to incorporate any new or revised requirements developed by the City of Mason City as are necessary to ensure POTW compliance with applicable sludge management requirements promulgated by EPA (40 CFR 503).

PART 5 - STANDARD CONDITIONS

SECTION A. GENERAL CONDITIONS AND DEFINITIONS

1. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

2. Duty to Comply

The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action, or enforcement proceedings including civil or criminal penalties, injunctive relief, and summary abatements.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact to the public treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

4. Permit Modification

This permit may be modified for good causes including, but not limited to, the following:

- a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements

- b. Material or substantial alterations or additions to the discharger's operation processes, or discharge volume or character which were not considered in drafting the effective permit
- c. A change in any condition in either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge
- d. Information indicating that the permitted discharge poses a threat to the Control Authority's collection and treatment systems, POTW personnel or the receiving waters
- e. Violation of any terms or conditions of the permit
- f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting
- g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR 403.13; or
- h. To correct typographical or other errors in the permit
- i. To reflect transfer of the facility ownership and/or operation to a new owner/operator
- j. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5. Permit Termination

This permit may be terminated for the following reasons:

- a. Falsifying self-monitoring reports
- b. Tampering with monitoring equipment
- c. Refusing to allow timely access to the facility premises and records
- d. Failure to meet effluent limitations
- e. Failure to pay fines
- f. Failure to pay sewer charges
- g. Failure to meet compliance schedules.

6. Permit Appeals

The permittee may petition to appeal the terms of this permit within thirty (30) days of the notice.

This petition must be in writing; failure to submit a petition for review shall be deemed to be a waiver of the appeal. In its petition, the permittee must indicate the permit provisions objected to, the reasons for this objection, and the alternative condition, if any, it seeks to be placed in the permit.

The effectiveness of this permit shall not be stayed pending a reconsideration by the City Council. If, after considering the petition and any arguments put forth by the Superintendent, the City Council determines that reconsideration is proper, it shall remand the permit back to the Superintendent for reissuance. Those permit provisions being reconsidered by the Superintendent shall be stayed pending reissuance.

The City Councils' decision not to reconsider a final permit shall be considered final administrative action for purposes of judicial review. The permittee seeking judicial review of the City Councils' final action must do so by filing a complaint with the Iowa District Court for Cerro Gordo County within 30 days after final administrative action.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of Federal, State, or local laws or regulations.

8. Limitation on Permit Transfer

Permits may be reassigned or transferred to a new owner and/or operator with prior approval of the Superintendent:

- a. The permittee must give at least ninety (90) days advance notice to the Superintendent or designee.
- b. The notice must include a written certification by the new owner which:
 - (i) States that the new owner has no immediate intent to change the facility's operations and processes
 - (ii) Identifies the specific date on which the transfer is to occur
 - (iii) Acknowledges full responsibility for complying with the existing permit.

9. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must submit an application for a new permit at least 90 days before the expiration date of this permit.

10. Continuation of Expired Permits

An expired permit will continue to be effective and enforceable until the permit is reissued if:

- a. The permittee has submitted a complete permit application at least ninety (90) days prior to the expiration date of the user's existing permit.
- b. The failure to reissue the permit, prior to expiration of the previous permit, is not due to any act or failure to act on the part of the permittee.

11. Dilution

The permittee shall not increase the use of potable or process water or, in anyway, attempt to dilute a tank as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

12. Definitions

- a. Daily Maximum - the maximum allowable discharge of pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.
- b. Composite Sample - A sample that is collected over time, formed either by continuous sampling or by mixing discrete samples. The sample may be composited either as a time composite sample: composed of discrete sample aliquots collected in one container at constant time intervals providing representative samples irrespective of stream flow; or as a flow proportional composite sample: collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots.
- c. Grab Sample - an individual sample collected in less than 15 minutes, without regard for flow or time.
- d. Instantaneous Maximum Concentration - the maximum concentration allowed in any single grab sample.
- e. Cooling Water
 - (1) Uncontaminated: Water used for cooling purposes only which has no direct contact with any raw material, intermediate, or final product and which does not contain a level of contaminants detectably higher than that of the intake water.
 - (2) Contaminated: Water used for cooling purposes only which may become contaminated either through the use of water treatment chemicals used for corrosion inhibitors or biocides, or by direct contact with process materials and/or wastewater.
- f. Monthly Average - The arithmetic mean of the values for effluent samples collected during a calendar month or specified 30-day period (as opposed to a rolling 30-day window).
- g. Weekly Average - The arithmetic mean of the values for effluent samples collected over a period of seven consecutive days.
- h. Bi-Weekly - Once every other week.
- i. Bi-Monthly - Once every other month.
- j. 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, excluding

such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.

- k. Bypass - Means the intentional diversion of wastes from any portion of a treatment facility.

12. General Prohibitive Standards

The permittee shall comply with all the general prohibitive discharge standards in 6-2-9. Namely, the industrial user shall not discharge wastewater to the POTW:

- a. Having a temperature higher than 150 degrees F (65 degrees C);
- b. Containing more than 200 ppm by weight of fats, oils, and grease;
- c. Containing any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquids, solids or gases; and in no case pollutants with a closed cup flashpoint of less than one hundred forty (140) degrees Fahrenheit (60° C), or pollutants which cause an exceedance of 10 percent of the Lower Explosive Limit (LEL) at any point within the POTW.
- d. Containing any garbage that has not been ground by household type or other suitable garbage grinders;
- e. Containing any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch, manure, or any other solids or viscous substances capable of causing obstructions or other interferences with proper operation of the POTW;
- f. Having a pH lower than 5.5 or higher than 9.5, or having any other corrosive property capable of causing damage or hazards to structures, equipment or personnel of the POTW;
- g. Containing toxic or poisonous substances in sufficient quantity to injure or interfere with any wastewater treatment process, to constitute hazards to humans or animals, or to create any hazard in waters. Toxic wastes shall include, but are not limited to wastes containing cyanide, chromium, cadmium, mercury, copper, and nickel ions;
- h. Containing noxious or malodorous gases or substances capable of creating a public nuisance; including pollutants which result in the presence of toxic gases, vapors, or fumes:
- i. Containing solids of such character and quantity that special and unusual attention is required for their handling;
- j. Containing any substance which may affect the treatment plant's effluent and cause violation of the NPDES permit requirements;
- k. Containing any substance which would cause the treatment plant to be in noncompliance with sludge use, recycle or disposal criteria pursuant to guidelines or regulations developed under section 405 of the Federal Act, the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act or other regulations or criteria for sludge management and disposal as required by the State;
- l. Containing color which is not removed in the treatment processes;
- m. Containing any radioactive wastes or isotopes; or

- n. Containing any pollutant, including BOD pollutants, released at a flow rate and/or pollutant concentration, which would cause interference with the treatment plant.

13. Compliance with Applicable Pretreatment Standards and Requirements

Compliance with this permit does not relieve the permittee from its obligations regarding compliance with any and all applicable local, State and Federal pretreatment standards and requirements including any such standards or requirements that may become effective during the term of this permit

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes but is not limited to: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation, or loss or failure of all or part of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control its production or discharges (or both) until operation of the treatment facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced. 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.

3. Bypass of Treatment Facilities

- a) Bypass is prohibited unless it is unavoidable to prevent loss of life, personal injury, or severe property damage or no feasible alternatives exist
- b) The permittee may allow bypass to occur which does not cause effluent limitations to be exceeded, but only if it is also for essential maintenance to assure efficient operation.
- c) Notification of bypass:
 - (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, at least ten days before the date of the bypass, to the City of Mason City.
 - (2) Unanticipated bypass. The permittee shall immediately notify the City of Mason City and submit a written notice to the POTW within 5 days. This report shall specify:
 - (i) A description of the bypass, and its cause, including its duration:
 - (ii) Whether the bypass has been corrected; and

- (iii) The steps being taken or to be taken to reduce, eliminate and prevent a reoccurrence of the bypass.

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in accordance with section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act and Section 6-2-9 of the Sewer Use Ordinance.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and. If applicable, all equipment used for sampling and analysis must be routinely calibrated, inspected and maintained to ensure their accuracy. Monitoring points shall not be changed without notification to and the approval of the City of Mason City.

2. Flow Measurements

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. If applicable, the devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Analytical Methods to Demonstrate Continued Compliance

All sampling and analysis required by this permit shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, otherwise approved by EPA, or as specified in this permit.

4. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures identified in Section C.3, the results of this monitoring shall be included in the permittee's self-monitoring reports.

5. Inspection and Entry

The permittee shall allow the City of Mason City, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the 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 (including monitoring and control equipment), practices, or operations regulated or required under this permit;
- d) Sample or monitor, for the purposes of assuring permit compliance, any substances or parameters at any location; and
- e) Inspect any production, manufacturing, fabricating, or storage area where pollutants, regulated under the permit, could originate, be stored, or be hauled to the POTW.

6. Retention of Records

- a) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application.

This period may be extended by request of the City of Mason City at any time.

- b) All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the City of Mason City shall be retained and preserved by the permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

7. Record Contents

Records of sampling and analyses shall include:

- a) The date, exact place, time, and methods of sampling or measurements, and sample preservation techniques or procedures;
- b) Who performed the sampling or measurements;
- c) The date(s) analyses were performed;
- d) Who performed the analyses;
- e) The analytical techniques or methods used; and
- f) The results of such analyses.

8. Falsifying Information

Knowingly making any false statement on any report or other document required by this permit or knowingly rendering any monitoring device or method inaccurate is a crime and may result in the imposition of criminal sanctions and/or civil penalties.

SECTION D. ADDITIONAL REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice to the City of Mason City, 90 days prior to any facility expansion, production increase, or process modifications, which results in new or change in the nature of the wastewater.

2. Anticipated Noncompliance

The permittee shall give advance notice to the City of Mason City of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

3. Automatic Resampling

If the results of the permittees' wastewater analysis indicate a violation has occurred, the permittee must notify the City of Mason City within 24 hours of becoming aware of the violation and will not be allowed to haul to the POTW.

4. Duty to Provide Information

The permittee shall furnish to the City of Mason City, within **10 calendar days** any information which the City of Mason City may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also, upon request, furnish to the City of Mason City within 10 calendar days, copies of any records required to be kept by this point.

5. Signatory Requirements

All applications, reports, or information submitted to the City of Mason City must contain the following certification statement and be signed as required in Sections (a), (b), (c) or (d) below:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. It is non-hazardous wastewater. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- a) By a responsible corporate officer, if the Industrial User submitting the reports is a corporation. For the purpose of this paragraph, a responsible corporate officer means:
 - (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or;
 - (ii) The manager of one or more manufacturing, production, or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b) By a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship respectively.

- c) The principal executive officer or director having responsibility for the overall operation of the discharging facility if the Industrial User submitting the reports is a Federal, State, or local governmental entity, or their agents.
- d) By a duly authorized representative of the individual designated in paragraph (a), (b), or (c) of this section if:
 - i. The authorization is made in writing by the individual described in paragraph (a), (b), or (c);
 - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, operator of a well, or a well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and
 - iii. The written authorization is submitted to the City.
- e) If an authorization under paragraph (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for the environmental matters for the company, a new authorization satisfying the requirements of paragraph (d) of this section must be submitted to the City prior to or together with any reports to be signed by an authorized representative.

6. Operating Upsets

Any permittee that experiences an upset in operations that places the permittee in a temporary state of noncompliance with the provisions of either this permit or with any section of the City Code shall inform the City of Mason City within 24 hours of becoming aware of the upset at 421-3682. The wastewater may not be dumped at the POTW if it is in non-compliance with the City Code or set limits.

7. Annual Publication

A list of all industries in significant non-compliance, which were subject to enforcement proceedings during the twelve (12) previous months, shall be annually published in the largest daily newspaper within its service area. Accordingly, the permittee is apprised that significant noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this section.

8. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance under 6-2-38 to 6-2-42 or State or Federal laws or regulations.

9. Penalties for Violations of Permit Conditions

Continuously violating the permit that causes a Significant Non-Compliance (SNC) violation will cause the industry to be placed on a 90-day compliance schedule that includes mile stone requirements and in many cases, additional testing paid by the industry. The City of Mason City provides that any person who violates a permit condition is subject to a civil penalty up to \$1000 per day of such violation. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of a fine of up to \$100

per day of violation, or by imprisonment for 30 day(s), or both. The permittee may also be subject to sanctions under State and/or Federal law.

10. Recovery of Costs Incurred

In addition to civil and criminal liability, the permittee violating any of the provisions of this permit or Section 6-2-9 of the Sewer Use Ordinance or causing damage to or otherwise inhibiting the City of Mason City wastewater disposal system shall be liable to the City of Mason City for any expense, loss, or damage caused by such violation or discharge. The City of Mason City shall bill the permittee for the costs incurred by the City of Mason City for any cleaning, repair, or replacement work caused by the violation or discharge. Refusal to pay the assessed costs shall constitute a separate violation of Section 6-2-39 of the Sewer Use Ordinance.

MONITORING REQUIREMENTS – FMC Sanitary Landfill

The permittee shall analyze a representative sample of the leachate hauled from the Central Disposal, per the monitoring requirements listed in Part 2, for each of the pollutants listed below.

<p><u>Conventional Pollutants and Metals</u> Biochemical Oxygen Demand (BOD₅) Total Suspended Solids Ammonia Nitrogen pH Total Nitrogen Kjeldahl N Total Phosphorous Fats, Oils and Grease Arsenic, Total (as As) Cadmium, Total (as Cd) Chromium, Total (as Cr) Chromium VI (as Cr(VI)) Copper, Total (as Cu) Cyanide, Total (as Cn) Lead, Total (as Pb) Mercury, Total (as Hg) Molybdenum, Total (as Mo) Nickel, Total (as Ni) Selenium, Total (as Se) Silver, Total (as Ag) Zinc, Total (as Zn)</p> <p><u>Volatile Compounds</u></p> <p><u>Method of Analysis:</u> EPA Methods 624 or 1624</p> <p>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</p>	<p>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</p> <p><u>Acid Extractable Compounds</u></p> <p><u>Method of Analysis:</u> EPA Methods 625 or 1625</p> <p>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</p>
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Chlorinated Hydrocarbon Insecticides

Methods of Analysis: EPA Methods 608 or 625

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

Polychlorinated Biphenyls

Methods of Analysis: EPA Methods 608 or 625

Arochlor-1016
Arochlor-1221
Arochlor-1232
Arochlor-1242
Arochlor-1248
Arochlor-1254
Arochlor-1260

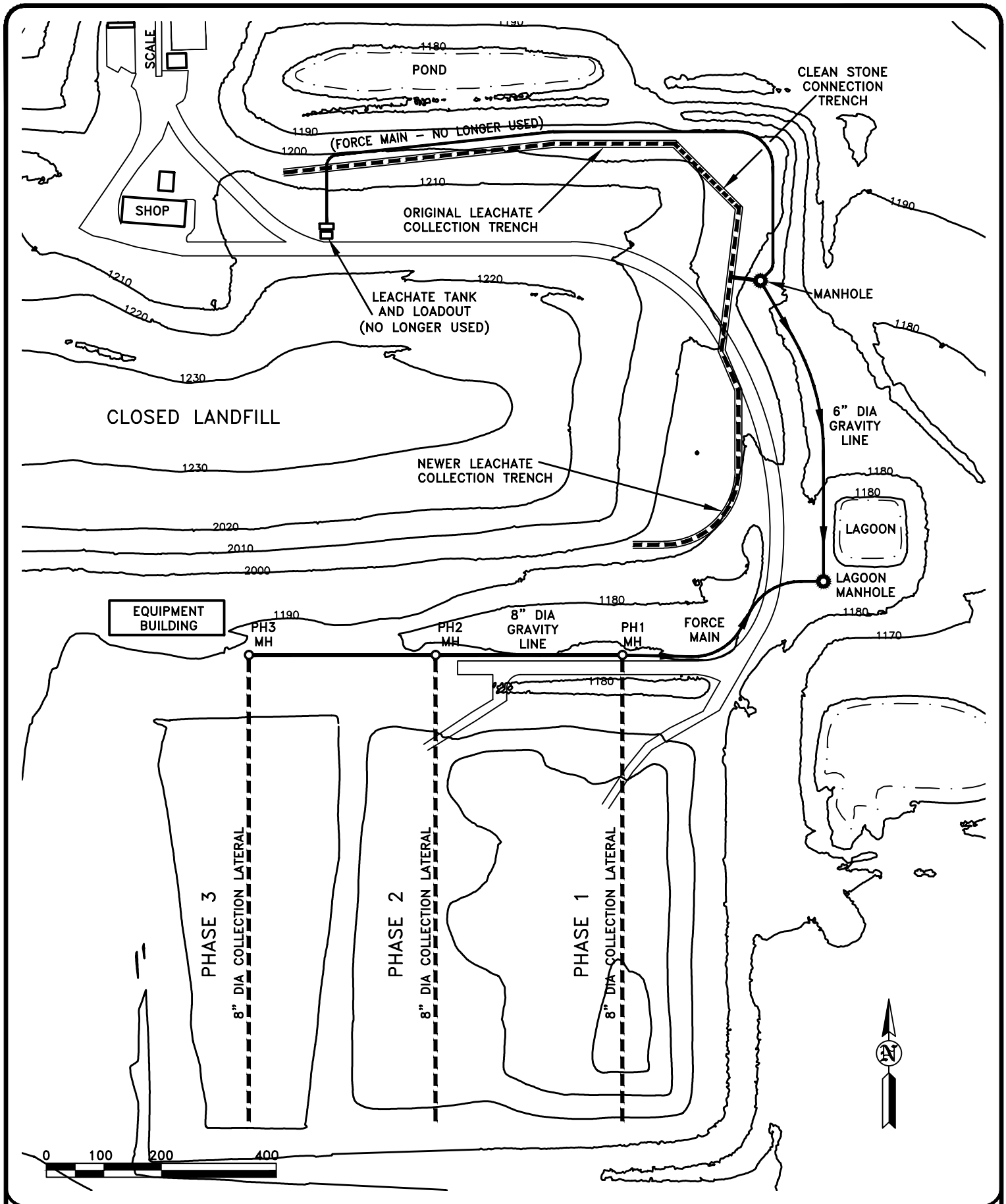
Base/Neutral Compounds

Methods of Analysis: EPA Methods 625 or 1625

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
Dibenz (a,h) anthracene
Benzo (g,h,i) perylene

Appendix G.4 – Leachate Treatment System Map – Closed Original Landfill



LEACHATE COLLECTION SYSTEM
 FLOYD-MITCHELL-CHICKASAW SANITARY LANDFILL
 ELMA, IOWA

FIGURE:		1
REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6028	DATE 12-25-24

Appendix G.5 – Daily Leachate Recirculation Logs

Smith Emptied lagoon

Floyd-Mitchell-Chickasaw (FMC) Landfill - Daily Leachate Recirculation Log

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Date		9/9/24	9/10/24				
Liquid Levels (not to exceed 12-inches)							
Phase 1		cl	cl				
Phase 2 East		cl	cl				
Phase 2 West		cl	cl				
Phase 3		cl	cl				
Spray Irrigation Time							
Start Time		8:00	8:00				
End Time		12:00	11:00				
Spray Irrigation Gallons		48,000	36,000				
To Phase 1		24,000					
To Phase 2		24,000					
To Phase 3			36,000				
Trench Gallons							
To Phase 1							
Applied on Surface by Transport Tank							
To Phase 1							
To Phase 2							
To Phase 3							
Leachate Treatment							
Leachate to POTW - Gal.							
Weather		Sunny	Sunny				
Windspeed/ Cloud Cover		6mph	8mph				
Rainfall (in.)		-	-				

Floyd-Mitchell-Chickasaw (FMC) Landfill - Daily Leachate Recirculation Log

Date	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Liquid Levels (not to exceed 12-inches)						10-4-24	
Phase 1							
Phase 2 East						<1'	
Phase 2 West						<1'	
Phase 3						<1'	
Spray Irrigation Time							
Start Time							
End Time						7:30 am 2:45 p-	
Spray Irrigation Gallons							
To Phase 1							
To Phase 2							
To Phase 3							
Trench Gallons							
To Phase 1							
Applied on Surface by Transport Tank							
To Phase 1							
To Phase 2						20675	
To Phase 3							
Leachate Treatment							
Leachate to POTW - Gal.							
Weather							
Windspeed/ Cloud Cover						16 mph Sunny	
Rainfall (in.)						0"	

Appendix G.6 - Leachate Testing Results



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Project Description

6028

For:

Todd Whipple

HLW Engineering

PO Box 314

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Thursday, May 2, 2024

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.

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



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

HLW Engineering

Todd Whipple
PO Box 314
Story City, IA 50248

Project Name: 6028

Project / PO Number: N/A
Received: 04/12/2024
Reported: 05/02/2024

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>
_____	1HD1047-01	Aqueous	GRAB		04/11/24 09:20	04/12/24 12:02



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Analytical Testing Parameters

Client Sample ID:	_____	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 9:20
Lab Sample ID:	1HD1047-01		

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Dichlorodifluoromethane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Chloromethane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Vinyl Chloride	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Bromomethane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Chloroethane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
1,1-Dichloroethylene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Methylene Chloride	<25.0	25.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
trans-1,2-Dichloroethylene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
1,1-Dichloroethane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
cis-1,2-Dichloroethylene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Chloroform	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
1,1,1-Trichloroethane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Carbon Tetrachloride	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Benzene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
1,2-Dichloroethane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Trichloroethylene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
1,2-Dichloropropane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Bromodichloromethane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
2-Chloroethylvinyl ether	<50.0	50.0	ug/L	5	C-07, R-04	04/25/24 0000	04/25/24 1708	LJS
cis-1,3-Dichloropropene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Toluene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
trans-1,3-Dichloropropene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
1,1,2-Trichloroethane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Tetrachloroethylene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Chlorobenzene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Ethylbenzene	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Bromoform	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
1,1,2,2-Tetrachloroethane	<5.0	5.0	ug/L	5	R-04	04/23/24 0000	04/23/24 1343	LJS
Surrogate: Dibromofluoromethane	99.6	Limit: 79-129	% Rec	5		04/23/24 0000	04/23/24 1343	LJS
Surrogate: Dibromofluoromethane	91.6	Limit: 79-129	% Rec	5		04/25/24 0000	04/25/24 1708	LJS
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 66-134	% Rec	5		04/23/24 0000	04/23/24 1343	LJS
Surrogate: 1,2-Dichloroethane-d4	97.4	Limit: 66-134	% Rec	5		04/25/24 0000	04/25/24 1708	LJS
Surrogate: Toluene-d8	99.0	Limit: 91-113	% Rec	5		04/23/24 0000	04/23/24 1343	LJS
Surrogate: Toluene-d8	97.7	Limit: 91-113	% Rec	5		04/25/24 0000	04/25/24 1708	LJS
Surrogate: 4-Bromofluorobenzene	97.1	Limit: 83-112	% Rec	5		04/23/24 0000	04/23/24 1343	LJS
Surrogate: 4-Bromofluorobenzene	99.3	Limit: 83-112	% Rec	5		04/25/24 0000	04/25/24 1708	LJS

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
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EPA 625



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Client Sample ID:		Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 9:20
Lab Sample ID:	1HD1047-01		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bis(2-Chloroethyl) Ether	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
2-Chlorophenol	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
1,3-Dichlorobenzene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
1,4-Dichlorobenzene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Benzyl Alcohol	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
1,2-Dichlorobenzene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Bis[2-Chloroisopropyl]ether	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
n-Nitroso-di-n-propylamine	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Hexachloroethane	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Nitrobenzene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Isophorone	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
2-Nitrophenol	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
2,4-Dimethylphenol	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Bis (2-Chloroethoxy) Methane	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Benzoic acid	<50	50	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
2,4-Dichlorophenol	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
1,2,4-Trichlorobenzene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Naphthalene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Hexachlorobutadiene	<20	20	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
4-Chloro-3-methylphenol	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Hexachlorocyclopentadiene	<20	20	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
2,4,6-Trichlorophenol	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
2,4,5-Trichlorophenol	<50	50	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
2-Chloronaphthalene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Dimethylphthalate	<15	15	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Acenaphthylene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
2,6-Dinitrotoluene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Acenaphthene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
2,4-Dinitrophenol	<20	20	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Dibenzofuran	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
2,4-Dinitrotoluene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
4-Nitrophenol	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Diethyl Phthalate	<30	30	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Fluorene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
4-Chlorophenyl Phenyl Ether	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
4,6-Dinitro-2-methylphenol	<20	20	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
N-Nitrosodiphenylamine	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
4-Bromophenyl Phenyl Ether	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Hexachlorobenzene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Pentachlorophenol	<20	20	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Phenanthrene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Anthracene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Di-n-butyl Phthalate	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Client Sample ID:		Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 9:20
Lab Sample ID:	1HD1047-01		

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Fluoranthene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Pyrene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Butyl Benzyl Phthalate	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Benzo(a)anthracene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Chrysene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Bis(2-Ethylhexyl) Phthalate	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Di-n-octyl Phthalate	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Indeno(1,2,3-cd)Pyrene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
3,3'-Dichlorobenzidine	<20	20	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Benzo(b)Fluoranthene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Benzo(k)Fluoranthene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Benzo(a)Pyrene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Dibenzo(a,h)anthracene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Benzo(g,h,i)perylene	<10	10	ug/L	1		04/15/24 1354	04/18/24 0041	EPP
Surrogate: 2-Fluorophenol	79.1	Limit: 19-139	% Rec	1		04/15/24 1354	04/18/24 0041	EPP
Surrogate: Phenol-d6	78.9	Limit: 14-154	% Rec	1		04/15/24 1354	04/18/24 0041	EPP
Surrogate: Nitrobenzene-d5	76.4	Limit: 17-146	% Rec	1		04/15/24 1354	04/18/24 0041	EPP
Surrogate: 2-Fluorobiphenyl	62.7	Limit: 18-122	% Rec	1		04/15/24 1354	04/18/24 0041	EPP
Surrogate: 2,4,6-Tribromophenol	54.4	Limit: 21-151	% Rec	1		04/15/24 1354	04/18/24 0041	EPP
Surrogate: Terphenyl-dl4	92.8	Limit: 27-131	% Rec	1		04/15/24 1354	04/18/24 0041	EPP

Determination of Organochlorine Insecticides & PCBs	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 608								
Gamma-BHC [Lindane]	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Beta-BHC	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Heptachlor	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Delta-BHC	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Aldrin	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Heptachlor Epoxide	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Endosulfan I	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
4,4'-DDE	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Dieldrin	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Endrin	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
4,4'-DDD	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Endosulfan II	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
4,4'-DDT	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Endrin Aldehyde	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Endosulfan Sulfate	<0.25	0.25	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Chlordane	<0.50	0.50	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Toxaphene	<1.00	1.00	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Arochlor 1016	<1.00	1.00	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Arochlor 1221	<1.00	1.00	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Arochlor 1232	<1.00	1.00	ug/L	1		04/16/24 1515	05/01/24 1112	EPP



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Client Sample ID:		Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 9:20
Lab Sample ID:	1HD1047-01		

Determination of Organochlorine Insecticides & PCBs	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Arochlor 1242	<1.00	1.00	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Arochlor 1248	<1.00	1.00	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Arochlor 1254	<1.00	1.00	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Arochlor 1260	<1.00	1.00	ug/L	1		04/16/24 1515	05/01/24 1112	EPP
Surrogate: Decachlorobiphenyl	58.7	Limit: 19-120	% Rec	1		04/16/24 1515	05/01/24 1112	EPP
Surrogate: Tetrachloro-m-xylene	88.1	Limit: 30-119	% Rec	1		04/16/24 1515	05/01/24 1112	EPP

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
5310B								
Total Organic Carbon	406	25.0	mg/L	50		04/17/24 0000	04/17/24 1141	CSM
EPA 1664A								
Oil and Grease	5	4	mg/L	1		04/18/24 1038	04/19/24 1530	CCB
EPA 351.2								
Nitrogen, Kjeldahl, total	713	6.25	mg/L	1			04/22/24 1600	AKK
EPA 353.2								
Nitrogen, Nitrate+Nitrite	0.22	0.10	mg/L	1		04/22/24 0906	04/25/24 1544	CHP
SM 4500 H+ B								
pH	8.4	0.5	pH	1	I-03	04/15/24 1631	04/15/24 1642	BSS
SM 5210 B								
BOD (5 day)	28	6	mg/L	3		04/12/24 1607	04/12/24 1807	MND
TIMBERLINE								
Nitrogen, Ammonia	517	100	mg/L	1,000		04/17/24 0841	04/18/24 0939	KAJ
TKN+NOX								
Nitrogen, total	713	0.100	mg/L	1		04/22/24 1600	04/25/24 1544	CHP
USGS I-1750-85								
Total Dissolved Solids (TDS)	4820	5	mg/L	1		04/16/24 0928	04/17/24 0745	MEAH
USGS I-3765-85								
Total Suspended Solids (TSS)	82	1	mg/L	1		04/18/24 0735	04/18/24 1035	MEAH

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
200.7								
Iron, total	11.1	0.100	mg/L	1		04/15/24 1346	04/16/24 2359	JAR
245.1								
Mercury, total	<0.00050	0.00050	mg/L	1		04/16/24 1340	04/17/24 1705	JAR
EPA 200.8								
Arsenic, total	0.0634	0.0020	mg/L	4		04/18/24 0819	04/19/24 1009	JAR
Barium, total	0.406	0.0020	mg/L	4		04/18/24 0819	04/19/24 1009	JAR
Cadmium, total	<0.0002	0.0002	mg/L	4		04/18/24 0819	04/19/24 1009	JAR
Chromium, total	0.131	0.0020	mg/L	4		04/18/24 0819	04/19/24 1009	JAR
Copper, total	0.0027	0.0020	mg/L	4		04/18/24 0819	04/19/24 1009	JAR
Lead, total	0.0018	0.0008	mg/L	4		04/18/24 0819	04/19/24 1009	JAR



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Client Sample ID:		Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/11/2024 9:20
Lab Sample ID:	1HD1047-01		

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Nickel, total	0.187	0.0040	mg/L	4		04/18/24 0819	04/19/24 1009	JAR
Selenium, total	<0.0040	0.0040	mg/L	4		04/18/24 0819	04/19/24 1009	JAR
Silver, total	<0.0020	0.0020	mg/L	4		04/18/24 0819	04/19/24 1009	JAR
Zinc, total	0.0615	0.0200	mg/L	4		04/18/24 0819	04/19/24 1009	JAR



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 5210 B	1HD0826	1HD0826-BLK1	
		1HD0826-SRM1	
		1HD1047-01	
		1HD0826-DUP1	1HD1035-01
Method	Batch	Laboratory ID	Client / Source ID
200.7	1HD0907	1HD0907-BLK1	
		1HD0907-BS1	
		1HD1047-01	
		1HD0907-MS1	1HD1047-01
		1HD0907-MSD1	1HD1047-01
		1HD0907-PS1	1HD1047-01
Method	Batch	Laboratory ID	Client / Source ID
EPA 625	1HD0910	1HD0910-BLK1	
		1HD0910-BSD1	
		1HD1047-01	
		1HD0910-BS1	
Method	Batch	Laboratory ID	Client / Source ID
SM 4500 H+ B	1HD0931	1HD1047-01	
		1HD0931-DUP1	1HD1047-01
		1HD0931-SRM1	
		1HD0931-SRM2	
Method	Batch	Laboratory ID	Client / Source ID
USGS I-1750-85	1HD0966	1HD0966-BS1	
		1HD0966-DUP1	1HD1092-01
		1HD0966-BLK1	
		1HD1047-01	
Method	Batch	Laboratory ID	Client / Source ID
245.1	1HD0991	1HD0991-BLK1	
		1HD0991-BS1	
		1HD0991-MS1	1HD0953-07
		1HD0991-MSD1	1HD0953-07
		1HD1047-01	
Method	Batch	Laboratory ID	Client / Source ID
EPA 608	1HD1004	1HD1004-BLK1	
		1HD1004-BS1	



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

EPA 608	1HD1004	1HD1047-01	_____
Method	Batch	Laboratory ID	Client / Source ID
TIMBERLINE	1HD1041	1HD1041-BLK1 1HD1041-BS1 1HD1041-MS1 1HD1041-MSD1 1HD1047-01	1HD1004-02 1HD1004-02 _____
Method	Batch	Laboratory ID	Client / Source ID
5310B	1HD1101	1HD1101-BS1 1HD1101-BSD1 1HD1101-BLK1 1HD1047-01 1HD1101-MS1 1HD1101-MSD1	1HD0920-01 1HD0920-01 _____
Method	Batch	Laboratory ID	Client / Source ID
USGS I-3765-85	1HD1134	1HD1134-BS1 1HD1047-01 1HD1134-BLK1 1HD1134-DUP1	1HD1005-01 _____
Method	Batch	Laboratory ID	Client / Source ID
EPA 200.8	1HD1136	1HD1136-BLK1 1HD1136-BS1 1HD1136-MS1 1HD1136-MSD1 1HD1136-PS1 1HD1047-01	1HD1047-01 1HD1047-01 1HD1047-01 _____
Method	Batch	Laboratory ID	Client / Source ID
EPA 1664A	1HD1163	1HD1047-01 1HD1163-BLK1 1HD1163-BS1 1HD1163-MS1 1HD1163-MSD1	1HD0914-02 1HD0914-02 _____
Method	Batch	Laboratory ID	Client / Source ID
EPA 353.2	1HD1288	1HD1047-01 1HD1288-BS1 1HD1288-BLK1 1HD1288-MS1 1HD1288-MSD1	1HD0980-01 1HD0980-01 _____



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.2	1HD1334	1HD1334-MS1	1HD1005-02
		1HD1334-BS1	
		1HD1334-BLK1	
		1HD1334-MSD1	1HD1005-02
		1HD1047-01	

Method	Batch	Laboratory ID	Client / Source ID
EPA 624	1HD1408	1HD1408-BS1	
		1HD1408-BSD1	
		1HD1408-BLK1	
		1HD1047-01	
		1HD1408-MS1	1HD1532-04
		1HD1408-MSD1	1HD1532-04

Method	Batch	Laboratory ID	Client / Source ID
EPA 624	1HD1572	1HD1572-BS1	
		1HD1572-BSD1	
		1HD1572-BLK1	
		1HD1047-01RE1	
		1HD1572-MS1	1HD1698-01
		1HD1572-MSD1	1HD1698-01

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 1HD1408 - EPA 5030B - EPA 624										
Blank (1HD1408-BLK1) Prepared: 04/23/24 00:00 Analyzed: 04/23/24 10:46										
Dichlorodifluoromethane	<1.0	1.0	ug/L							
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							



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1408 - EPA 5030B - EPA 624										
Blank (1HD1408-BLK1)										
Prepared: 04/23/24 00:00 Analyzed: 04/23/24 10:46										
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							
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							
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							
<i>Surrogate: Dibromofluoromethane</i>	50.8		ug/L	50.2		101	79-129			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	51.8		ug/L	50.1		103	66-134			
<i>Surrogate: Toluene-d8</i>	49.7		ug/L	50.4		98.7	91-113			
<i>Surrogate: 4-Bromofluorobenzene</i>	48.6		ug/L	50.1		96.9	83-112			
LCS (1HD1408-BS1)										
Prepared: 04/23/24 00:00 Analyzed: 04/23/24 09:38										
Dichlorodifluoromethane	37.88	1.0	ug/L	31.6		120	39-143			
Chloromethane	35.96	1.0	ug/L	30.6		117	63-145			
Vinyl Chloride	35.51	1.0	ug/L	30.2		117	68-145			
Bromomethane	30.25	1.0	ug/L	28.8		105	69-150			
Chloroethane	38.95	1.0	ug/L	31.6		123	74-134			
1,1-Dichloroethylene	54.20	1.0	ug/L	50.0		108	76-139			
Methylene Chloride	51.84	5.0	ug/L	50.0		104	67-141			
trans-1,2-Dichloroethylene	53.70	1.0	ug/L	50.0		107	71-137			
1,1-Dichloroethane	51.84	1.0	ug/L	50.0		104	72-130			
cis-1,2-Dichloroethylene	50.21	1.0	ug/L	50.0		100	81-134			
2-Butanone (MEK)	91.25	10.0	ug/L	102		89.6	44-158			
Chloroform	50.51	1.0	ug/L	50.0		101	76-132			
1,1,1-Trichloroethane	49.46	1.0	ug/L	50.0		98.9	65-122			
Carbon Tetrachloride	52.74	1.0	ug/L	50.0		105	66-132			
Benzene	50.94	1.0	ug/L	50.0		102	77-130			
1,2-Dichloroethane	48.82	1.0	ug/L	50.0		97.6	75-124			
Trichloroethylene	50.80	1.0	ug/L	50.0		102	79-126			
1,2-Dichloropropane	50.57	1.0	ug/L	50.0		101	79-128			
Dibromomethane	51.42	1.0	ug/L	50.0		103	71-139			
Bromodichloromethane	49.96	1.0	ug/L	50.0		99.9	76-122			
cis-1,3-Dichloropropene	49.40	1.0	ug/L	50.0		98.8	74-122			
Toluene	48.89	1.0	ug/L	50.0		97.8	76-128			
trans-1,3-Dichloropropene	50.85	1.0	ug/L	50.0		102	73-125			
1,1,2-Trichloroethane	50.24	1.0	ug/L	50.0		100	74-126			
Tetrachloroethylene	50.30	1.0	ug/L	50.0		101	68-124			



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1408 - EPA 5030B - EPA 624										
LCS (1HD1408-BS1)										
				Prepared: 04/23/24 00:00 Analyzed: 04/23/24 09:38						
Chlorobenzene	50.14	1.0	ug/L	50.0		100	77-120			
Ethylbenzene	51.98	1.0	ug/L	50.0		104	76-118			
Xylenes, total	157.3	2.0	ug/L	150		105	74-121			
Bromoform	48.10	1.0	ug/L	50.0		96.2	68-128			
1,1,2,2-Tetrachloroethane	48.77	1.0	ug/L	50.0		97.5	62-128			
1,3-Dichlorobenzene	51.26	1.0	ug/L	50.0		103	72-123			
1,4-Dichlorobenzene	49.35	1.0	ug/L	50.0		98.7	75-120			
1,2-Dichlorobenzene	50.94	1.0	ug/L	50.0		102	72-121			
Surrogate: Dibromofluoromethane	50.9		ug/L	50.2		102	79-129			
Surrogate: 1,2-Dichloroethane-d4	50.6		ug/L	50.1		101	66-134			
Surrogate: Toluene-d8	50.3		ug/L	50.4		99.8	91-113			
Surrogate: 4-Bromofluorobenzene	50.4		ug/L	50.1		101	83-112			
LCS Dup (1HD1408-BSD1)										
				Prepared: 04/23/24 00:00 Analyzed: 04/23/24 10:01						
Dichlorodifluoromethane	35.70	1.0	ug/L	31.6		113	39-143	5.93	30	
Chloromethane	34.15	1.0	ug/L	30.6		111	63-145	5.16	27	
Vinyl Chloride	33.22	1.0	ug/L	30.2		110	68-145	6.66	30	
Bromomethane	30.50	1.0	ug/L	28.8		106	69-150	0.823	30	
Chloroethane	37.41	1.0	ug/L	31.6		118	74-134	4.03	29	
1,1-Dichloroethylene	51.03	1.0	ug/L	50.0		102	76-139	6.02	30	
Methylene Chloride	50.42	5.0	ug/L	50.0		101	67-141	2.78	25	
trans-1,2-Dichloroethylene	50.79	1.0	ug/L	50.0		102	71-137	5.57	29	
1,1-Dichloroethane	48.98	1.0	ug/L	50.0		98.0	72-130	5.67	27	
cis-1,2-Dichloroethylene	47.83	1.0	ug/L	50.0		95.7	81-134	4.86	23	
2-Butanone (MEK)	79.76	10.0	ug/L	102		78.3	44-158	13.4	25	
Chloroform	48.30	1.0	ug/L	50.0		96.6	76-132	4.47	26	
1,1,1-Trichloroethane	46.64	1.0	ug/L	50.0		93.3	65-122	5.87	29	
Carbon Tetrachloride	49.78	1.0	ug/L	50.0		99.6	66-132	5.77	30	
Benzene	48.87	1.0	ug/L	50.0		97.7	77-130	4.15	27	
1,2-Dichloroethane	47.62	1.0	ug/L	50.0		95.2	75-124	2.49	25	
Trichloroethylene	49.00	1.0	ug/L	50.0		98.0	79-126	3.61	28	
1,2-Dichloropropane	49.30	1.0	ug/L	50.0		98.6	79-128	2.54	26	
Dibromomethane	50.60	1.0	ug/L	50.0		101	71-139	1.61	27	
Bromodichloromethane	48.54	1.0	ug/L	50.0		97.1	76-122	2.88	24	
cis-1,3-Dichloropropene	48.22	1.0	ug/L	50.0		96.4	74-122	2.42	27	
Toluene	47.13	1.0	ug/L	50.0		94.3	76-128	3.67	28	
trans-1,3-Dichloropropene	49.94	1.0	ug/L	50.0		99.9	73-125	1.81	27	
1,1,2-Trichloroethane	49.57	1.0	ug/L	50.0		99.1	74-126	1.34	26	
Tetrachloroethylene	48.32	1.0	ug/L	50.0		96.6	68-124	4.02	28	
Chlorobenzene	48.76	1.0	ug/L	50.0		97.5	77-120	2.79	27	
Ethylbenzene	49.99	1.0	ug/L	50.0		100	76-118	3.90	27	
Xylenes, total	151.5	2.0	ug/L	150		101	74-121	3.78	27	
Bromoform	47.28	1.0	ug/L	50.0		94.6	68-128	1.72	25	



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1408 - EPA 5030B - EPA 624										
LCS Dup (1HD1408-BSD1)				Prepared: 04/23/24 00:00 Analyzed: 04/23/24 10:01						
1,1,2,2-Tetrachloroethane	48.79	1.0	ug/L	50.0		97.6	62-128	0.0410	28	
1,3-Dichlorobenzene	49.76	1.0	ug/L	50.0		99.6	72-123	2.97	29	
1,4-Dichlorobenzene	47.97	1.0	ug/L	50.0		95.9	75-120	2.84	26	
1,2-Dichlorobenzene	50.06	1.0	ug/L	50.0		100	72-121	1.74	30	
Surrogate: Dibromofluoromethane	50.9		ug/L	50.2		102	79-129			
Surrogate: 1,2-Dichloroethane-d4	49.9		ug/L	50.1		99.6	66-134			
Surrogate: Toluene-d8	50.3		ug/L	50.4		99.8	91-113			
Surrogate: 4-Bromofluorobenzene	50.3		ug/L	50.1		100	83-112			
Matrix Spike (1HD1408-MS1)				Source: 1HD1532-04 Prepared: 04/23/24 00:00 Analyzed: 04/23/24 19:51						
Dichlorodifluoromethane	343.3	10.0	ug/L	316	ND	109	46-151			
Chloromethane	321.3	10.0	ug/L	306	ND	105	50-155			
Vinyl Chloride	319.2	10.0	ug/L	302	ND	106	64-148			
Bromomethane	222.6	10.0	ug/L	288	ND	77.3	50-159			
Chloroethane	351.5	10.0	ug/L	316	ND	111	65-144			
1,1-Dichloroethylene	470.3	10.0	ug/L	500	ND	94.1	78-139			
Methylene Chloride	464.0	50.0	ug/L	500	ND	92.8	65-144			
trans-1,2-Dichloroethylene	473.0	10.0	ug/L	500	ND	94.6	67-142			
1,1-Dichloroethane	465.8	10.0	ug/L	500	ND	93.2	71-133			
cis-1,2-Dichloroethylene	541.4	10.0	ug/L	500	ND	108	76-142			
2-Butanone (MEK)	982.2	100	ug/L	1020	ND	96.5	48-169			
Chloroform	452.5	10.0	ug/L	500	ND	90.5	75-133			
1,1,1-Trichloroethane	439.5	10.0	ug/L	500	ND	87.9	66-120			
Carbon Tetrachloride	431.3	10.0	ug/L	500	ND	86.3	67-132			
Benzene	485.0	10.0	ug/L	500	ND	97.0	79-128			
1,2-Dichloroethane	475.0	10.0	ug/L	500	ND	95.0	74-124			
Trichloroethylene	480.4	10.0	ug/L	500	ND	96.1	82-122			
1,2-Dichloropropane	487.6	10.0	ug/L	500	ND	97.5	80-126			
Dibromomethane	503.7	10.0	ug/L	500	ND	101	62-141			
Bromodichloromethane	469.7	10.0	ug/L	500	ND	93.9	77-119			
cis-1,3-Dichloropropene	458.1	10.0	ug/L	500	ND	91.6	69-120			
Toluene	468.3	10.0	ug/L	500	ND	93.7	80-125			
trans-1,3-Dichloropropene	480.0	10.0	ug/L	500	ND	96.0	70-122			
1,1,2-Trichloroethane	494.9	10.0	ug/L	500	ND	99.0	73-127			
Tetrachloroethylene	482.8	10.0	ug/L	500	ND	96.6	70-122			
Chlorobenzene	487.5	10.0	ug/L	500	ND	97.5	81-114			
Ethylbenzene	501.3	10.0	ug/L	500	ND	100	79-113			
Xylenes, total	1511	20.0	ug/L	1500	ND	101	79-114			
Bromoform	468.8	10.0	ug/L	500	ND	93.8	66-126			
1,1,2,2-Tetrachloroethane	499.7	10.0	ug/L	500	ND	99.9	56-132			
1,3-Dichlorobenzene	497.1	10.0	ug/L	500	ND	99.5	69-125			
1,4-Dichlorobenzene	481.2	10.0	ug/L	500	ND	96.2	73-119			
1,2-Dichlorobenzene	500.8	10.0	ug/L	500	ND	100	71-117			



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1408 - EPA 5030B - EPA 624										
Matrix Spike (1HD1408-MS1)	Source: 1HD1532-04			Prepared: 04/23/24 00:00 Analyzed: 04/23/24 19:51						
Surrogate: Dibromofluoromethane	472		ug/L	502		94.1	79-129			
Surrogate: 1,2-Dichloroethane-d4	471		ug/L	501		94.0	66-134			
Surrogate: Toluene-d8	499		ug/L	504		99.0	91-113			
Surrogate: 4-Bromofluorobenzene	499		ug/L	501		99.5	83-112			
Matrix Spike Dup (1HD1408-MSD1)	Source: 1HD1532-04			Prepared: 04/23/24 00:00 Analyzed: 04/23/24 20:14						
Dichlorodifluoromethane	326.3	10.0	ug/L	316	ND	103	46-151	5.08	30	
Chloromethane	302.2	10.0	ug/L	306	ND	98.6	50-155	6.13	19	
Vinyl Chloride	300.5	10.0	ug/L	302	ND	99.4	64-148	6.04	24	
Bromomethane	229.6	10.0	ug/L	288	ND	79.7	50-159	3.10	17	
Chloroethane	336.9	10.0	ug/L	316	ND	106	65-144	4.24	28	
1,1-Dichloroethylene	448.3	10.0	ug/L	500	ND	89.7	78-139	4.79	20	
Methylene Chloride	447.2	50.0	ug/L	500	ND	89.4	65-144	3.69	16	
trans-1,2-Dichloroethylene	450.8	10.0	ug/L	500	ND	90.2	67-142	4.81	18	
1,1-Dichloroethane	444.2	10.0	ug/L	500	ND	88.8	71-133	4.75	16	
cis-1,2-Dichloroethylene	520.3	10.0	ug/L	500	ND	104	76-142	3.97	17	
2-Butanone (MEK)	963.8	100	ug/L	1020	ND	94.7	48-169	1.89	17	
Chloroform	435.1	10.0	ug/L	500	ND	87.0	75-133	3.92	16	
1,1,1-Trichloroethane	423.1	10.0	ug/L	500	ND	84.6	66-120	3.80	15	
Carbon Tetrachloride	436.9	10.0	ug/L	500	ND	87.4	67-132	1.29	15	
Benzene	469.9	10.0	ug/L	500	ND	94.0	79-128	3.16	12	
1,2-Dichloroethane	459.9	10.0	ug/L	500	ND	92.0	74-124	3.23	12	
Trichloroethylene	462.8	10.0	ug/L	500	ND	92.6	82-122	3.73	13	
1,2-Dichloropropane	469.6	10.0	ug/L	500	ND	93.9	80-126	3.76	10	
Dibromomethane	488.3	10.0	ug/L	500	ND	97.7	62-141	3.10	11	
Bromodichloromethane	458.7	10.0	ug/L	500	ND	91.7	77-119	2.37	10	
cis-1,3-Dichloropropene	443.2	10.0	ug/L	500	ND	88.6	69-120	3.31	10	
Toluene	454.6	10.0	ug/L	500	ND	90.9	80-125	2.97	12	
trans-1,3-Dichloropropene	463.1	10.0	ug/L	500	ND	92.6	70-122	3.58	10	
1,1,2-Trichloroethane	483.8	10.0	ug/L	500	ND	96.8	73-127	2.27	10	
Tetrachloroethylene	475.0	10.0	ug/L	500	ND	95.0	70-122	1.63	15	
Chlorobenzene	472.5	10.0	ug/L	500	ND	94.5	81-114	3.12	12	
Ethylbenzene	489.5	10.0	ug/L	500	ND	97.9	79-113	2.38	13	
Xylenes, total	1481	20.0	ug/L	1500	ND	98.7	79-114	1.99	12	
Bromoform	468.7	10.0	ug/L	500	ND	93.7	66-126	0.0213	16	
1,1,2,2-Tetrachloroethane	491.2	10.0	ug/L	500	ND	98.2	56-132	1.72	29	
1,3-Dichlorobenzene	480.9	10.0	ug/L	500	ND	96.3	69-125	3.31	18	
1,4-Dichlorobenzene	465.2	10.0	ug/L	500	ND	93.0	73-119	3.38	21	
1,2-Dichlorobenzene	484.4	10.0	ug/L	500	ND	96.9	71-117	3.33	23	
Surrogate: Dibromofluoromethane	469		ug/L	502		93.5	79-129			
Surrogate: 1,2-Dichloroethane-d4	464		ug/L	501		92.7	66-134			
Surrogate: Toluene-d8	497		ug/L	504		98.7	91-113			
Surrogate: 4-Bromofluorobenzene	499		ug/L	501		99.5	83-112			

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CERTIFICATE OF ANALYSIS

1HD1047

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 624										
Blank (1HD1572-BLK1)										
Prepared: 04/25/24 00:00 Analyzed: 04/25/24 10:53										
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							
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							
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: Dibromofluoromethane										
	45.9		ug/L	50.2		91.4	79-129			
Surrogate: 1,2-Dichloroethane-d4										
	47.5		ug/L	50.1		94.9	66-134			
Surrogate: Toluene-d8										
	49.0		ug/L	50.4		97.2	91-113			
Surrogate: 4-Bromofluorobenzene										
	48.4		ug/L	50.1		96.6	83-112			
LCS (1HD1572-BS1)										
Prepared: 04/25/24 00:00 Analyzed: 04/25/24 09:45										
Surrogate: Dibromofluoromethane										
	46.3		ug/L	50.2		92.2	79-129			
Surrogate: 1,2-Dichloroethane-d4										
	46.8		ug/L	50.1		93.5	66-134			
Surrogate: Toluene-d8										
	49.6		ug/L	50.4		98.3	91-113			
Surrogate: 4-Bromofluorobenzene										
	50.0		ug/L	50.1		99.8	83-112			
LCS Dup (1HD1572-BSD1)										
Prepared: 04/25/24 00:00 Analyzed: 04/25/24 10:07										
Surrogate: Dibromofluoromethane										
	46.2		ug/L	50.2		92.2	79-129			
Surrogate: 1,2-Dichloroethane-d4										
	46.2		ug/L	50.1		92.2	66-134			
Surrogate: Toluene-d8										
	49.4		ug/L	50.4		98.0	91-113			
Surrogate: 4-Bromofluorobenzene										
	50.3		ug/L	50.1		100	83-112			

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CERTIFICATE OF ANALYSIS

1HD1047

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD1572 - EPA 5030B - EPA 624

Matrix Spike (1HD1572-MS1)		Source: 1HD1698-01		Prepared: 04/25/24 00:00 Analyzed: 04/25/24 19:02						
2-Chloroethylvinyl ether	1013	100	ug/L	1000	ND	101	10-157			
Surrogate: Dibromofluoromethane	467		ug/L	502		93.2	79-129			
Surrogate: 1,2-Dichloroethane-d4	474		ug/L	501		94.7	66-134			
Surrogate: Toluene-d8	499		ug/L	504		99.0	91-113			
Surrogate: 4-Bromofluorobenzene	500		ug/L	501		99.6	83-112			
Matrix Spike Dup (1HD1572-MSD1)		Source: 1HD1698-01		Prepared: 04/25/24 00:00 Analyzed: 04/25/24 19:25						
2-Chloroethylvinyl ether	1000	100	ug/L	1000	ND	99.8	10-157	1.29	30	
Surrogate: Dibromofluoromethane	471		ug/L	502		93.8	79-129			
Surrogate: 1,2-Dichloroethane-d4	473		ug/L	501		94.4	66-134			
Surrogate: Toluene-d8	498		ug/L	504		98.8	91-113			
Surrogate: 4-Bromofluorobenzene	500		ug/L	501		99.8	83-112			

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0910 - EPA 625 BNA - EPA 625

Blank (1HD0910-BLK1)		Prepared: 04/15/24 13:54 Analyzed: 04/17/24 16:55								
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							

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1HD1047

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1HD0910 - EPA 625 BNA - EPA 625

Blank (1HD0910-BLK1)

Prepared: 04/15/24 13:54 Analyzed: 04/17/24 16:55

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							
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	26.9		ug/L	29.6		90.8	19-139
Surrogate: Phenol-d6	27.3		ug/L	30.5		89.4	14-154
Surrogate: Nitrobenzene-d5	30.8		ug/L	30.0		102	17-146
Surrogate: 2-Fluorobiphenyl	26.4		ug/L	28.8		91.6	18-122
Surrogate: 2,4,6-Tribromophenol	26.6		ug/L	29.7		89.4	21-151
Surrogate: Terphenyl-d14	27.6		ug/L	28.8		95.6	27-131

LCS (1HD0910-BS1)

Prepared: 04/15/24 13:54 Analyzed: 04/18/24 13:55

Bis(2-Chloroethyl) Ether	15.1	10	ug/L	25.0		60.3	35-150
2-Chlorophenol	23.1	10	ug/L	25.0		92.6	51-117

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CERTIFICATE OF ANALYSIS

1HD1047

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0910 - EPA 625 BNA - EPA 625										
LCS (1HD0910-BS1)										
				Prepared: 04/15/24 13:54 Analyzed: 04/18/24 13:55						
1,3-Dichlorobenzene	17.1	10	ug/L	25.0		68.4	27-91.3			
1,4-Dichlorobenzene	18.1	10	ug/L	25.0		72.3	28-92.6			
Benzyl Alcohol	20.8	10	ug/L	25.0		83.2	22-147			
1,2-Dichlorobenzene	18.6	10	ug/L	25.0		74.2	32-94.8			
Bis[2-Chloroisopropyl]ether	22.4	10	ug/L	25.0		89.8	40-125			
n-Nitroso-di-n-propylamine	24.3	10	ug/L	25.0		97.2	47-136			
Hexachloroethane	17.5	10	ug/L	25.0		70.0	13-110			
Nitrobenzene	25.1	10	ug/L	25.0		100	46-133			
Isophorone	22.4	10	ug/L	25.0		89.8	48-130			
2-Nitrophenol	20.8	10	ug/L	25.0		83.0	54-116			
2,4-Dimethylphenol	25.8	10	ug/L	25.0		103	47-121			
Bis (2-Chloroethoxy) Methane	19.2	10	ug/L	25.0		76.8	25-110			
2,4-Dichlorophenol	22.2	10	ug/L	25.0		88.8	50-118			
1,2,4-Trichlorobenzene	16.5	10	ug/L	25.0		66.0	27-95.5			
Naphthalene	18.2	10	ug/L	25.0		72.8	42-107			
Hexachlorobutadiene	<20	20	ug/L	25.0		54.6	10-110			
4-Chloro-3-methylphenol	25.6	10	ug/L	25.0		102	54-138			
Hexachlorocyclopentadiene	<20	20	ug/L	25.0		26.7	10-110			
2,4,6-Trichlorophenol	24.6	10	ug/L	25.0		98.3	46-127			
2,4,5-Trichlorophenol	<50	50	ug/L	25.0		102	62-119			
2-Chloronaphthalene	18.0	10	ug/L	25.0		71.9	38-118			
Dimethylphthalate	25.1	15	ug/L	25.0		100	58-125			
Acenaphthylene	21.2	10	ug/L	25.0		84.9	41-116			
2,6-Dinitrotoluene	25.1	10	ug/L	25.0		100	58-126			
Acenaphthene	21.8	10	ug/L	25.0		87.3	45-117			
2,4-Dinitrophenol	27.6	20	ug/L	25.0		110	21-138			
Dibenzofuran	21.6	10	ug/L	25.0		86.4	51-126			
2,4-Dinitrotoluene	24.0	10	ug/L	25.0		96.2	52-134			
4-Nitrophenol	32.4	10	ug/L	25.0		129	41-149			
Diethyl Phthalate	<30	30	ug/L	25.0		114	53-132			
Fluorene	21.6	10	ug/L	25.0		86.5	47-126			
4-Chlorophenyl Phenyl Ether	20.6	10	ug/L	25.0		82.4	47-124			
4,6-Dinitro-2-methylphenol	23.5	20	ug/L	25.0		94.1	50-139			
N-Nitrosodiphenylamine	21.8	10	ug/L	25.0		87.2	29-129			
4-Bromophenyl Phenyl Ether	20.1	10	ug/L	25.0		80.2	48-125			
Hexachlorobenzene	19.2	10	ug/L	25.0		77.0	29-137			
Pentachlorophenol	<20	20	ug/L	25.0		79.5	15-154			
Phenanthrene	21.9	10	ug/L	25.0		87.4	45-136			
Anthracene	21.5	10	ug/L	25.0		85.9	43-135			
Di-n-butyl Phthalate	27.1	10	ug/L	25.0		108	42-153			
Fluoranthene	22.0	10	ug/L	25.0		88.2	42-143			
Pyrene	22.4	10	ug/L	25.0		89.8	40-146			

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CERTIFICATE OF ANALYSIS

1HD1047

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Base/Neutral/Acid Extractable Compounds										
Batch 1HD0910 - EPA 625 BNA - EPA 625										
LCS (1HD0910-BS1)										
				Prepared: 04/15/24 13:54 Analyzed: 04/18/24 13:55						
Butyl Benzyl Phthalate	26.8	10	ug/L	25.0		107	40-151			
Benzo(a)anthracene	21.3	10	ug/L	25.0		85.1	48-136			
Chrysene	21.3	10	ug/L	25.0		85.2	50-136			
Bis(2-Ethylhexyl) Phthalate	29.5	10	ug/L	25.0		118	34-180			
Di-n-octyl Phthalate	29.5	10	ug/L	25.0		118	40-165			
Indeno(1,2,3-cd)Pyrene	24.0	10	ug/L	25.0		95.9	39-152			
Benzo(b)Fluoranthene	21.0	10	ug/L	25.0		83.9	52-140			
Benzo(k)Fluoranthene	23.6	10	ug/L	25.0		94.5	47-147			
Benzo(a)Pyrene	22.4	10	ug/L	25.0		89.6	38-142			
Dibenzo(a,h)anthracene	23.7	10	ug/L	25.0		94.7	37-153			
Benzo(g,h,i)perylene	24.3	10	ug/L	25.0		97.1	39-157			
<i>Surrogate: 2-Fluorophenol</i>	29.2		ug/L	29.6		98.7	19-139			
<i>Surrogate: Phenol-d6</i>	29.8		ug/L	30.5		97.8	14-154			
<i>Surrogate: Nitrobenzene-d5</i>	29.1		ug/L	30.0		96.9	17-146			
<i>Surrogate: 2-Fluorobiphenyl</i>	26.1		ug/L	28.8		90.7	18-122			
<i>Surrogate: 2,4,6-Tribromophenol</i>	28.3		ug/L	29.7		95.2	21-151			
<i>Surrogate: Terphenyl-d14</i>	27.5		ug/L	28.8		95.3	27-131			
LCS Dup (1HD0910-BSD1)										
				Prepared: 04/15/24 13:54 Analyzed: 04/17/24 17:44						
Bis(2-Chloroethyl) Ether	14.6	10	ug/L	25.0		58.6	35-150	2.96	30	
2-Chlorophenol	21.6	10	ug/L	25.0		86.6	51-117	6.70	27	
1,3-Dichlorobenzene	16.3	10	ug/L	25.0		65.2	27-91.3	4.79	30	
1,4-Dichlorobenzene	19.9	10	ug/L	25.0		79.6	28-92.6	9.58	30	
Benzyl Alcohol	19.7	10	ug/L	25.0		78.8	22-147	5.43	30	
1,2-Dichlorobenzene	19.6	10	ug/L	25.0		78.3	32-94.8	5.35	30	
Bis[2-Chloroisopropyl]ether	22.7	10	ug/L	25.0		90.6	40-125	0.931	26	
n-Nitroso-di-n-propylamine	22.0	10	ug/L	25.0		88.0	47-136	9.98	29	
Hexachloroethane	18.6	10	ug/L	25.0		74.3	13-110	5.93	30	
Nitrobenzene	26.6	10	ug/L	25.0		107	46-133	5.95	19	
Isophorone	23.6	10	ug/L	25.0		94.4	48-130	5.00	23	
2-Nitrophenol	23.9	10	ug/L	25.0		95.6	54-116	14.1	25	
2,4-Dimethylphenol	24.0	10	ug/L	25.0		95.9	47-121	7.39	29	
Bis (2-Chloroethoxy) Methane	21.0	10	ug/L	25.0		83.9	25-110	8.81	30	
2,4-Dichlorophenol	20.6	10	ug/L	25.0		82.6	50-118	7.19	21	
1,2,4-Trichlorobenzene	19.1	10	ug/L	25.0		76.6	27-95.5	14.8	30	
Naphthalene	20.6	10	ug/L	25.0		82.2	42-107	12.1	26	
Hexachlorobutadiene	<20	20	ug/L	25.0		59.0	10-110	7.82	30	
4-Chloro-3-methylphenol	21.8	10	ug/L	25.0		87.3	54-138	15.8	12	QR-02
2,4,6-Trichlorophenol	24.6	10	ug/L	25.0		98.3	46-127	0.0407	21	QR-02
2,4,5-Trichlorophenol	<50	50	ug/L	25.0		98.6	62-119	3.07	15	
2-Chloronaphthalene	20.8	10	ug/L	25.0		83.3	38-118	14.6	24	
Dimethylphthalate	26.1	15	ug/L	25.0		104	58-125	3.94	20	
Acenaphthylene	23.4	10	ug/L	25.0		93.7	41-116	9.81	30	

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1HD1047

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Base/Neutral/Acid Extractable Compounds										
Batch 1HD0910 - EPA 625 BNA - EPA 625										
LCS Dup (1HD0910-BSD1)										
Prepared: 04/15/24 13:54 Analyzed: 04/17/24 17:44										
2,6-Dinitrotoluene	25.7	10	ug/L	25.0		103	58-126	2.40	20	
Acenaphthene	24.5	10	ug/L	25.0		98.0	45-117	11.5	27	
2,4-Dinitrophenol	22.2	20	ug/L	25.0		89.0	21-138	21.3	22	
Dibenzofuran	23.3	10	ug/L	25.0		93.2	51-126	7.62	15	
2,4-Dinitrotoluene	23.5	10	ug/L	25.0		93.9	52-134	2.40	22	
4-Nitrophenol	27.7	10	ug/L	25.0		111	41-149	15.4	28	
Diethyl Phthalate	<30	30	ug/L	25.0		113	53-132	0.528	22	
Fluorene	22.5	10	ug/L	25.0		90.0	47-126	3.94	27	
4-Chlorophenyl Phenyl Ether	22.0	10	ug/L	25.0		88.0	47-124	6.52	20	
4,6-Dinitro-2-methylphenol	24.4	20	ug/L	25.0		97.5	50-139	3.55	25	
N-Nitrosodiphenylamine	23.8	10	ug/L	25.0		95.4	29-129	8.94	30	
4-Bromophenyl Phenyl Ether	22.8	10	ug/L	25.0		91.1	48-125	12.7	18	
Hexachlorobenzene	22.8	10	ug/L	25.0		91.3	29-137	17.0	30	
Pentachlorophenol	<20	20	ug/L	25.0		64.0	15-154	21.6	29	
Phenanthrene	23.5	10	ug/L	25.0		94.1	45-136	7.36	27	
Anthracene	23.6	10	ug/L	25.0		94.6	43-135	9.62	28	
Di-n-butyl Phthalate	28.4	10	ug/L	25.0		114	42-153	4.72	29	
Fluoranthene	23.7	10	ug/L	25.0		94.9	42-143	7.38	30	
Pyrene	24.1	10	ug/L	25.0		96.2	40-146	6.92	25	
Butyl Benzyl Phthalate	29.1	10	ug/L	25.0		117	40-151	8.29	29	
Benzo(a)anthracene	23.5	10	ug/L	25.0		94.0	48-136	10.0	30	
Chrysene	23.8	10	ug/L	25.0		95.3	50-136	11.2	30	
Bis(2-Ethylhexyl) Phthalate	30.6	10	ug/L	25.0		122	34-180	3.60	30	
Di-n-octyl Phthalate	31.9	10	ug/L	25.0		127	40-165	7.79	30	
Indeno(1,2,3-cd)Pyrene	24.2	10	ug/L	25.0		97.0	39-152	1.08	30	
Benzo(b)Fluoranthene	22.6	10	ug/L	25.0		90.6	52-140	7.70	30	
Benzo(k)Fluoranthene	24.6	10	ug/L	25.0		98.5	47-147	4.15	30	
Benzo(a)Pyrene	24.1	10	ug/L	25.0		96.2	38-142	7.19	30	
Dibenzo(a,h)anthracene	24.7	10	ug/L	25.0		98.9	37-153	4.30	30	
Benzo(g,h,i)perylene	23.9	10	ug/L	25.0		95.5	39-157	1.62	30	
Surrogate: 2-Fluorophenol	27.8		ug/L	29.6		93.9	19-139			
Surrogate: Phenol-d6	26.6		ug/L	30.5		87.4	14-154			
Surrogate: Nitrobenzene-d5	31.0		ug/L	30.0		103	17-146			
Surrogate: 2-Fluorobiphenyl	28.5		ug/L	28.8		98.9	18-122			
Surrogate: 2,4,6-Tribromophenol	27.1		ug/L	29.7		91.2	21-151			
Surrogate: Terphenyl-d14	29.9		ug/L	28.8		104	27-131			

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Organochlorine Insecticides & PCBs										
Batch 1HD1004 - EPA 608 OC/PCB - EPA 608										



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Determination of	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Determination of Organochlorine Insecticides & PCBs									
Batch 1HD1004 - EPA 608 OC/PCB - EPA 608									
Blank (1HD1004-BLK1)									
Prepared: 04/16/24 15:15 Analyzed: 04/30/24 16:15									
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- <i>m</i> -xylene	0.550		ug/L	0.600		91.7		30-119	
Surrogate: Decachlorobiphenyl	0.328		ug/L	0.600		54.7		19-120	
LCS (1HD1004-BS1)									
Prepared: 04/16/24 15:15 Analyzed: 04/30/24 16:30									
Gamma-BHC [Lindane]	0.211	0.05	ug/L	0.250		84.4		37-127	
Beta-BHC	0.212	0.05	ug/L	0.250		84.9		36-131	
Heptachlor	0.246	0.05	ug/L	0.250		98.4		36-128	
Delta-BHC	0.265	0.05	ug/L	0.250		106		29-147	
Aldrin	0.208	0.05	ug/L	0.250		83.4		41-120	
Heptachlor Epoxide	0.217	0.05	ug/L	0.250		86.7		50-132	
Endosulfan I	0.238	0.05	ug/L	0.250		95.3		50-133	
4,4'-DDE	0.221	0.05	ug/L	0.250		88.3		46-140	
Dieldrin	0.216	0.05	ug/L	0.250		86.4		41-138	
Endrin	0.313	0.05	ug/L	0.250		125		32-152	
4,4'-DDD	0.225	0.05	ug/L	0.250		90.0		44-150	
Endosulfan II	0.237	0.05	ug/L	0.250		94.6		45-141	
4,4'-DDT	0.280	0.05	ug/L	0.250		112		46-145	
Endrin Aldehyde	0.213	0.05	ug/L	0.250		85.2		33-145	



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Organochlorine Insecticides & PCBs										
Batch 1HD1004 - EPA 608 OC/PCB - EPA 608										

LCS (1HD1004-BS1)										
				Prepared: 04/16/24 15:15 Analyzed: 04/30/24 16:30						
Endosulfan Sulfate	0.238	0.05	ug/L	0.250		95.4	52-133			
Surrogate: Tetrachloro-m-xylene	0.565		ug/L	0.600		94.1	30-119			
Surrogate: Decachlorobiphenyl	0.436		ug/L	0.600		72.6	19-120			

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Conventional Chemistry Parameters										
Batch 1HD0826 - General Prep Micro - SM 5210 B										

Blank (1HD0826-BLK1)										
				Prepared: 04/12/24 16:07 Analyzed: 04/12/24 17:17						
BOD (5 day)	<2	2	mg/L							
Duplicate (1HD0826-DUP1)										
				Source: 1HD1035-01 Prepared: 04/12/24 16:07 Analyzed: 04/12/24 18:09						
BOD (5 day)	68.4	24	mg/L		65.0			5.13	29	
Reference (1HD0826-SRM1)										
				Prepared: 04/12/24 16:07 Analyzed: 04/12/24 17:28						
BOD (5 day)	189	100	mg/L	198		95.3	84.6-115.4			

Batch 1HD0931 - Wet Chem Preparation - SM 4500 H+ B										
Duplicate (1HD0931-DUP1)										
				Source: 1HD1047-01 Prepared: 04/15/24 16:31 Analyzed: 04/15/24 16:42						
pH	8.4	0.5	pH		8.4			0.0831	10	
Reference (1HD0931-SRM1)										
				Prepared: 04/15/24 16:31 Analyzed: 04/15/24 16:42						
pH	7.0	0.5	pH	7.00		99.7	90-110			
Reference (1HD0931-SRM2)										
				Prepared: 04/15/24 16:31 Analyzed: 04/15/24 16:42						
pH	7.0	0.5	pH	7.00		100	90-110			

Batch 1HD0966 - Wet Chem Preparation - USGS I-1750-85										
Blank (1HD0966-BLK1)										
				Prepared: 04/16/24 09:28 Analyzed: 04/17/24 07:45						
Total Dissolved Solids (TDS)	<5	5	mg/L							
LCS (1HD0966-BS1)										
				Prepared: 04/16/24 09:28 Analyzed: 04/17/24 07:45						
Total Dissolved Solids (TDS)	96	5	mg/L	100		95.8	71-114			
Duplicate (1HD0966-DUP1)										
				Source: 1HD1092-01 Prepared: 04/16/24 09:28 Analyzed: 04/17/24 07:45						
Total Dissolved Solids (TDS)	1800	5	mg/L		1770			1.57	30	

Batch 1HD1041 - General Prep HPLC/IC - TIMBERLINE										
Blank (1HD1041-BLK1)										
				Prepared: 04/17/24 08:41 Analyzed: 04/18/24 09:12						
Nitrogen, Ammonia	<0.10	0.10	mg/L							
LCS (1HD1041-BS1)										
				Prepared: 04/17/24 08:41 Analyzed: 04/18/24 09:13						
Nitrogen, Ammonia	4.66	0.10	mg/L	5.00		93.3	90-114			



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CERTIFICATE OF ANALYSIS

1HD1047

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1041 - General Prep HPLC/IC - TIMBERLINE										
Matrix Spike (1HD1041-MS1)	Source: 1HD1004-02		Prepared: 04/17/24 08:41 Analyzed: 04/18/24 09:15							
Nitrogen, Ammonia	4.90	0.10	mg/L	5.00	0.0979	96.1	84-115			
Matrix Spike Dup (1HD1041-MSD1)	Source: 1HD1004-02		Prepared: 04/17/24 08:41 Analyzed: 04/18/24 09:16							
Nitrogen, Ammonia	4.81	0.10	mg/L	5.00	0.0979	94.2	84-115	1.96	20	
Batch 1HD1101 - TOC/DOC - 5310B										
Blank (1HD1101-BLK1)	Prepared: 04/17/24 00:00 Analyzed: 04/17/24 11:16									
Total Organic Carbon	<0.50	0.50	mg/L							
LCS (1HD1101-BS1)	Prepared: 04/17/24 00:00 Analyzed: 04/17/24 10:46									
Total Organic Carbon	5.33	0.50	mg/L	5.00		107	86-120			
LCS Dup (1HD1101-BSD1)	Prepared: 04/17/24 00:00 Analyzed: 04/17/24 11:02									
Total Organic Carbon	5.24	0.50	mg/L	5.00		105	86-120	1.84	10	
Matrix Spike (1HD1101-MS1)	Source: 1HD0920-01		Prepared: 04/17/24 00:00 Analyzed: 04/17/24 13:40							
Total Organic Carbon	13.02	0.50	mg/L	5.00	7.88	103	81-128			
Matrix Spike Dup (1HD1101-MSD1)	Source: 1HD0920-01		Prepared: 04/17/24 00:00 Analyzed: 04/17/24 13:56							
Total Organic Carbon	13.53	0.50	mg/L	5.00	7.88	113	81-128	3.84	10	
Batch 1HD1134 - Wet Chem Preparation - USGS I-3765-85										
Blank (1HD1134-BLK1)	Prepared: 04/18/24 07:35 Analyzed: 04/18/24 10:35									
Total Suspended Solids (TSS)	<1	1	mg/L							
LCS (1HD1134-BS1)	Prepared: 04/18/24 07:35 Analyzed: 04/18/24 10:35									
Total Suspended Solids (TSS)	15.1	1	mg/L	15.0		101	74-114			
Duplicate (1HD1134-DUP1)	Source: 1HD1005-01		Prepared: 04/18/24 07:35 Analyzed: 04/18/24 10:35							
Total Suspended Solids (TSS)	73.3	1	mg/L		79.3			7.86	30	
Batch 1HD1163 - Wet Chem Preparation - EPA 1664A										
Blank (1HD1163-BLK1)	Prepared: 04/18/24 10:38 Analyzed: 04/19/24 15:30									
Oil and Grease	<4	4	mg/L							
LCS (1HD1163-BS1)	Prepared: 04/18/24 10:38 Analyzed: 04/19/24 15:30									
Oil and Grease	40.2	4	mg/L	40.0		100	78-114			
Matrix Spike (1HD1163-MS1)	Source: 1HD0914-02		Prepared: 04/18/24 10:38 Analyzed: 04/19/24 15:30							
Oil and Grease	53.0	4	mg/L	40.0	ND	133	78-114			PH-3, QM-07
Matrix Spike Dup (1HD1163-MSD1)	Source: 1HD0914-02		Prepared: 04/18/24 10:38 Analyzed: 04/19/24 15:30							
Oil and Grease	60.0	4	mg/L	40.0	ND	150	78-114	12.3	18	PH-3, QM-07
Batch 1HD1288 - Wet Chem Preparation - EPA 353.2										
Blank (1HD1288-BLK1)	Prepared: 04/22/24 09:06 Analyzed: 04/25/24 15:44									



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Determination of	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Determination of Conventional Chemistry Parameters										
Batch 1HD1288 - Wet Chem Preparation - EPA 353.2										
Blank (1HD1288-BLK1) Prepared: 04/22/24 09:06 Analyzed: 04/25/24 15:44										
Nitrogen, Nitrate+Nitrite	<0.10	0.10	mg/L							
LCS (1HD1288-BS1) Prepared: 04/22/24 09:06 Analyzed: 04/25/24 15:44										
Nitrogen, Nitrate+Nitrite	2.32	0.10	mg/L	2.50		92.7	90-110			
Matrix Spike (1HD1288-MS1) Source: 1HD0980-01 Prepared: 04/22/24 09:06 Analyzed: 04/25/24 15:44										
Nitrogen, Nitrate+Nitrite	4.56	0.20	mg/L	5.00	0.22	86.8	90-110			QM-13
Matrix Spike Dup (1HD1288-MSD1) Source: 1HD0980-01 Prepared: 04/22/24 09:06 Analyzed: 04/25/24 15:44										
Nitrogen, Nitrate+Nitrite	5.02	0.20	mg/L	5.00	0.22	96.0	90-110	9.68	20	
Batch 1HD1334 - Wet Chem Preparation - EPA 351.2										
Blank (1HD1334-BLK1) Prepared & Analyzed: 04/22/24 16:00										
Nitrogen, Kjeldahl, total	<0.50	0.50	mg/L							
LCS (1HD1334-BS1) Prepared & Analyzed: 04/22/24 16:00										
Nitrogen, Kjeldahl, total	20.0	0.50	mg/L	20.0		100	90-110			
Matrix Spike (1HD1334-MS1) Source: 1HD1005-02 Prepared & Analyzed: 04/22/24 16:00										
Nitrogen, Kjeldahl, total	49.4	1.25	mg/L	50.0	ND	98.7	90-110			
Matrix Spike Dup (1HD1334-MSD1) Source: 1HD1005-02 Prepared & Analyzed: 04/22/24 16:00										
Nitrogen, Kjeldahl, total	55.8	1.25	mg/L	50.0	ND	112	90-110	12.2	10	QM-07
Determination of Total Metals										
Batch 1HD0907 - EPA 200.2 Total ICP-OES (200.7) - 200.7										
Blank (1HD0907-BLK1) Prepared: 04/15/24 13:46 Analyzed: 04/16/24 23:46										
Iron, total	<0.100	0.100	mg/L							
LCS (1HD0907-BS1) Prepared: 04/15/24 13:46 Analyzed: 04/16/24 23:53										
Iron, total	2.28	0.100	mg/L	2.20		104	85-115			
Matrix Spike (1HD0907-MS1) Source: 1HD1047-01 Prepared: 04/15/24 13:46 Analyzed: 04/17/24 00:09										
Iron, total	13.0	0.100	mg/L	2.20	11.1	86.8	70-130			
Matrix Spike Dup (1HD0907-MSD1) Source: 1HD1047-01 Prepared: 04/15/24 13:46 Analyzed: 04/17/24 00:19										
Iron, total	12.7	0.100	mg/L	2.20	11.1	74.3	70-130	2.14	20	
Post Spike (1HD0907-PS1) Source: 1HD1047-01 Prepared: 04/15/24 13:46 Analyzed: 04/17/24 00:28										
Iron, total	19.6		mg/L	8.80	11.1	96.8	85-115			
Batch 1HD0991 - EPA 7470A Hg Water - 245.1										
Blank (1HD0991-BLK1) Prepared: 04/16/24 13:40 Analyzed: 04/17/24 16:17										
Mercury, total	<0.00050	0.00050	mg/L							
LCS (1HD0991-BS1) Prepared: 04/16/24 13:40 Analyzed: 04/17/24 16:19										
Mercury, total	0.00247	0.00050	mg/L	0.00250		98.7	85-115			



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0991 - EPA 7470A Hg Water - 245.1										
Matrix Spike (1HD0991-MS1) Source: 1HD0953-07 Prepared: 04/16/24 13:40 Analyzed: 04/17/24 16:23										
Mercury, total	0.00248	0.00050	mg/L	0.00250	ND	99.2	70-130			
Matrix Spike Dup (1HD0991-MSD1) Source: 1HD0953-07 Prepared: 04/16/24 13:40 Analyzed: 04/17/24 16:26										
Mercury, total	0.00243	0.00050	mg/L	0.00250	ND	97.3	70-130	1.96	10	
Batch 1HD1136 - EPA 200.2 Total ICP-MS - EPA 200.8										
Blank (1HD1136-BLK1) Prepared: 04/18/24 08:19 Analyzed: 04/19/24 02:48										
Arsenic, total	<0.0020	0.0020	mg/L							
Barium, total	<0.0020	0.0020	mg/L							
Cadmium, total	<0.0002	0.0002	mg/L							
Chromium, total	<0.0020	0.0020	mg/L							
Copper, total	<0.0020	0.0020	mg/L							
Lead, total	<0.0008	0.0008	mg/L							
Nickel, total	<0.0040	0.0040	mg/L							
Selenium, total	<0.0040	0.0040	mg/L							
Silver, total	<0.0020	0.0020	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1HD1136-BS1) Prepared: 04/18/24 08:19 Analyzed: 04/19/24 02:54										
Arsenic, total	0.0950	0.0020	mg/L	0.100		95.0	85-115			
Barium, total	0.104	0.0020	mg/L	0.100		104	85-115			
Cadmium, total	0.0952	0.0002	mg/L	0.100		95.2	85-115			
Chromium, total	0.0956	0.0020	mg/L	0.100		95.6	85-115			
Copper, total	0.0970	0.0020	mg/L	0.100		97.0	85-115			
Lead, total	0.101	0.0008	mg/L	0.100		101	85-115			
Nickel, total	0.0957	0.0040	mg/L	0.100		95.7	85-115			
Selenium, total	0.0903	0.0040	mg/L	0.100		90.3	85-115			
Silver, total	0.0974	0.0020	mg/L	0.100		97.4	85-115			
Zinc, total	0.0934	0.0200	mg/L	0.100		93.4	85-115			
Matrix Spike (1HD1136-MS1) Source: 1HD1047-01 Prepared: 04/18/24 08:19 Analyzed: 04/19/24 03:31										
Arsenic, total	0.165	0.0020	mg/L	0.100	0.0634	101	70-130			
Barium, total	0.564	0.0020	mg/L	0.100	0.406	158	70-130			QM-4X
Cadmium, total	0.0833	0.0002	mg/L	0.100	0.00008	83.3	70-130			
Chromium, total	0.230	0.0020	mg/L	0.100	0.131	98.4	70-130			
Copper, total	0.0837	0.0020	mg/L	0.100	0.0027	81.0	70-130			
Lead, total	0.0921	0.0008	mg/L	0.100	0.0018	90.3	70-130			
Nickel, total	0.268	0.0040	mg/L	0.100	0.187	81.1	70-130			
Selenium, total	0.0867	0.0040	mg/L	0.100	0.0020	84.6	70-130			
Silver, total	0.0861	0.0020	mg/L	0.100	ND	86.1	70-130			
Zinc, total	0.134	0.0200	mg/L	0.100	0.0615	72.2	70-130			
Matrix Spike Dup (1HD1136-MSD1) Source: 1HD1047-01 Prepared: 04/18/24 08:19 Analyzed: 04/19/24 03:37										
Arsenic, total	0.168	0.0020	mg/L	0.100	0.0634	105	70-130	2.14	20	
Barium, total	0.590	0.0020	mg/L	0.100	0.406	185	70-130	4.59	20	QM-4X
Cadmium, total	0.0838	0.0002	mg/L	0.100	0.00008	83.8	70-130	0.566	20	



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

Table with columns: Determination of Total Metals, Result, RL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes. Includes sections for Matrix Spike Dup (1HD1136-MSD1) and Post Spike (1HD1136-PS1).

Definitions

- C-07: Sample received in an inappropriate container for this analysis.
I-03: Analyte required to be analyzed within 15 minutes of sampling.
PH-3: Insufficient preservative to adjust the sample pH to less than 2, value measured at 6 pH units.
PS-4X: The spike recovery was outside of QC acceptance limits for the Post Spike due to analyte concentration at 4 times or greater the spike concentration.
QM-07: The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD.
QM-13: The spike recovery was outside acceptance limits for the MS and/or MSD.
QM-4X: The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration.
QR-02: The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable.
R-04: The Reporting Limits for this analysis are elevated due to sample foaming.
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 0.0°C

Cooler Inspection Checklist

Table with 4 columns: Item, Status, Description, Status. Includes rows for Custody Seals, COC/Labels Agree, and Received On Ice.



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1047

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:

A rectangular box containing a handwritten signature in black ink that reads "Heather Murphy".

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
05/02/24 15:51



SITE INFORMATION

Sampler: TODD WHIPPLE

Project: FMC SLF - Leachate
6026

REPORT TO

Todd Whipple
HLW Engineering
PO Box 314
Story City, IA 50248

INVOICE TO

Christian Fox
Floyd Mitchell SWMA
3354 330th St
Elma, IA 50628

SPECIAL INSTRUCTIONS

None

Turn Around Time
 Standard RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HD1047

Temperature 0.0/0.0/1.8

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		Water	GRAB	<u>4/11/24</u>	<u>9:20</u>	<u>13</u>	608-107 624-105 ag-t-200.8 ba-t-200.8 cd-t-200.8 cu-t-200.8 hg-t-245.1 ni-t-200.8 og-t-1664 ph-4500 tds-i-1750-85 toc-5310b zn-t-200.8	624@dichlorodifluorome thane 625-116 as-t-200.8 bod-5210 cr-t-200.8 fe-t-200.7 nh3-timberline nitrogen-total pb-t-200.8 se-t-200.8 tkn-351.2 tss-i-3765-85	<u>01</u>

Relinquished By Todd Whipple Date/Time 4/12/24

Relinquished By _____ Date/Time _____
Received for Lab By Schoka Date/Time 4/12/24 12:02

Received By _____ Date/Time _____

Remarks:



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI0653

Floyd Mitchell SWMA

Project Name: Water Analysis

Lori King
3354 330th St
Elma, IA 50628

Project / PO Number: N/A
Received: 09/11/2024
Reported: 09/18/2024

Analytical Testing Parameters

Client Sample ID:	_____ (W)	Collected By:	Fox.C
Sample Matrix:	Aqueous	Collection Date:	09/10/2024 13:00
Lab Sample ID:	1HI0653-01		

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 150.1								
pH	8.2	0.5	pH	1	H4	09/12/24 1022	09/12/24 1702	BSS
SM 5210 B								
BOD (5 day)	48	6	mg/L	3		09/11/24 1449	09/11/24 1651	MND
USGS I-3765-85								
Total Suspended Solids (TSS)	192	1	mg/L	1		09/12/24 0942	09/12/24 1308	MEAH

Definitions

- H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
- RL: Reporting Limit

Report Comments

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Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
09/18/24 10:47



Floyd Mitchell SWMA
PM: Heather Murphy

SITE INFORMATION
 Sampler: C. Fox
 Project: Leachate Sampling
Water Analysis

REPORT TO
 Lori King
 Floyd Mitchell SWMA
 3354 330th St
 Elma, IA 50628

REPORT TO
 Lori King
 Floyd Mitchell SWMA
 3354 330th St
 Elma, IA 50628

SPECIAL INSTRUCTIONS
 None
 Turn Around Time
 Standard RUSH, need by ___/___/___

LAB USE ONLY
 Work Order 1HI0653
 Temperature 6.3
 Turn-Cooler: Yes
 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	_____ (W)	Water	GRAB	<u>9/10/24</u>	<u>1300</u>	<u>1</u>	bod-5210 nh3-timberline ph-150.1 tss-i-3765-85	dilution og-t-1664 tkn-351.2
-001	_____ (M)	Water	GRAB	<u>/ /</u>			fe-t-200.7	

C. Fox 10 : 1300
 Relinquished By Date/Time

Penny Hochstetler 9/11/24 10:30
 Relinquished By Date/Time

Received By Date/Time

Received for Lab By Date/Time

Remarks: