2024 ANNUAL GROUNDWATER QUALITY REPORT

FOR THE

TAMA COUNTY SANITARY LANDFILL

86-SDP-01-72P
TAMA COUNTY, IOWA

by:

HLW Engineering Group

204 West Broad Street

P.O. Box 314

Story City, Iowa 50248

(515) 733-4144

January, 2025

6029-23A.320

Table of Contents

Certification

Prepared by: ________________________________ Date: 1-17-2025

Printed: Todd Whipple, CPG

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 report in the IDNR format per Special Provision 4.i. of the Revised Permit, dated May 20, 2024 (Doc #110109).

1.2 Report Priority

Review of this report is considered to be a low priority, as no requests are made of the Department. Continued semi-annual monitoring is recommended in 2025 according to IAC 567, Chapter 113.10(5) and (6), Table 1, and Table 2.

1.3 Period of Report Coverage

Water quality data evaluation is based on a running compilation of data beginning in March 26, 2008. Statistical evaluations herein are based on the 2024 water quality data collected March 5, 2024 and September 30, 2024.

1.4 Current Site Map

Figure 1 illustrates the current site features, water quality monitoring locations, and boundary locations.

1.5 Site Status and Applicable Rules

Site Location

The Tama County Sanitary Landfill is located in the NW¼ of the SW¼ and portions of the NE¼ of the SW¼ of Section 2, T83N, R15W, Tama County, Iowa. The site encompasses approximately 81 acres. The facility operates under the Iowa Department of Natural Resources (IDNR) Permit Number 86-SDP-01-72P.

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 southwest along the natural topographic surface.

The facility includes a closed landfill and the RCRA Subtitle D Expansion Areas designated Phase 1 through Phase 7. Phase 1, Phase 2, and Phase 3 are constructed and are actively receiving waste from the planning area.

Applicable Rules

Iowa Administrative Code (IAC) 567-113 is applicable to the site due to the contiguous nature of the Closed Landfill and the active areas.

1.6 Summary of Hydrologic Monitoring System Plan (HMSP)

The HMSP includes twelve (12) monitoring wells and one (1) groundwater tile outlet. MW-20, MW-26, MW-33, and MW-37 are the designated background wells for the facility. The Site Plan and the approved monitoring network are illustrated on Figure 1. 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. The monitoring wells included in the HMSP were installed at various times between 1990 and 2019.

High & Low Water Levels
Current water elevation data is included on Table 4. Historic water elevation data (2012 – 2024) is included in the Table 4A. This data is collected semi-annually at a minimum and demonstrates the recorded high and low water levels during this period. Review of the 2024 data does not indicate excessive variability compared to historic water elevation data. A Water Table Contour Map (Figure 2) dated September 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 September 30, 2024. Review of the well depth data included on Table 4 indicates that well sedimentation is estimated to be less than one (1) foot at all site monitoring wells.

Well Recharge Rates & Chemistry
Monitoring well recharge reevaluation is due biennially according to 113.10(2)f. The recorded field data on IDNR Form 542-1322 for the March 5, 2024 (Appendix A) sampling episode indicates that water levels within each well recover to approximately 90% in 8 hours at all wells except MW-20, MW-27, MW-35, MW-36, and MW-37. Full recovery at MW-20, MW-27, MW-35, MW-36, and MW-37 has historically required more than 24 hours.

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

Field sampling information for March 5, 2024, and September 30, 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 March 26, 2008, and September 30, 2024, is included in Table 9.

2.1 Current Detection Monitoring Activities

Background wells are currently MW-20, MW-26, MW-33, and MW-37.

Downgradient monitoring wells for the site include MW-3A, MW-8, MW-10, PZ-11, MW-27, MW-34, MW-35, MW-36, and SW-3. Of the downgradient points, only SW-3 remains in detection monitoring.

2.2 Current Assessment Monitoring Activities

Assessment monitoring is on-going at MW-3A, MW-8, MW-10, MW-27, MW-34, MW-35, and MW-36. The full Appendix II sample collection events are summarized in the last column of Table 1. Four (4) full episodes of Appendix II sampling are complete at MW-8, MW-10, MW-34, and MW-35. Three (3) full episodes of Appendix II sampling are complete at MW-3A, MW-27, and MW-36. Compounds detected to date beyond the Appendix I list are limited to bis(2-ethylhexyl)phthalate at MW-3A, MW-8, MW-27, MW-34, and MW-35; dichlorodifluoromethane at MW-34 (in 2012) and MW-35; and cyanide at MW-35. Any supplemental sample collection episodes for the additional compounds at MW-3A, MW-8, MW-10, MW-27, MW-34, MW-35, and MW-36 are summarized in Appendix B.

Special Provision 4.f. of the Permit approves a reduced frequency of full Appendix II sampling (reduced to a five (5) year frequency) after two (2) annual sampling episodes have been completed.

2.3 Current Corrective Action Activities

There are no known Corrective Actions in place at this facility. The cobalt detected at MW-10 will be remedied by the construction of the Phase 4 Expansion Area. Corrective actions, along with further delineation or Assessment of Corrective Measures (ACM) Evaluations related to MW-10 are deferred until May 10, 2027, or until the plans and specifications for Phase 4 are submitted, whichever comes first. Four (4) full episodes of Appendix II sampling are complete at MW-10. No compounds beyond the Appendix I list have been detected at MW-10. PZ-11 was added to the HMSP in order to evaluate whether vertical migration of cobalt is detected.

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 Tama County Sanitary Landfill, First Semi-Annual Monitoring Event in 2024, dated April 2024 is included in Appendix C.1. The Groundwater Statistics Report for the Tama County Sanitary Landfill, Second Semi-Annual Monitoring Event in 2024, dated October, 2024 is included in Appendix C.2.

The Keystone Analytical Reports for the laboratory testing of March 5, 2024, and September 30, 2024 sampling episodes are included in Appendix D.

QUALITY ASSURANCE/QUALITY CONTROL

A blind duplicate sample was collected at MW-8 during the March 5, 2024 sampling episode. A blind duplicate was collected at MW-8 during the September 30, 2024sampling 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 March 5, 2024, and September 30, 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 # 80721). A TSS and Field Turbidity Evaluation Report was prepared and submitted on March 20, 2015 (Doc# 82761), and was approved by IDNR on October 9, 2015 (Doc #84378). The IDNR Letter dated October 14, 2016 (Doc #87401) required that all data collected prior to the onset of “No Purge” sampling (prior to September 15, 2014) be excluded from use in the background data pool.

Both of the 2024 Groundwater Statistics Reports for the Tama County Sanitary Landfill in Appendix C include the background data utilized for the site. Upgradient Data, Table 1, Attachment B, to the Statistical Evaluation Report (Appendix C.1 and C.2) includes a summary of the background data.

A summary of the field turbidity measurements is included in Appendix E.

The calculated Prediction Limits are summarized on Table 5.

SITE SPECIFIC GWPS

The Statewide Standards for Protected Groundwater as published in IAC 567, Chapter 137, are utilized as the Groundwater Protection Standards (GWPS) for all compounds. There are currently no compounds where the calculated prediction limit exceeds the Statewide GWPS.

Table 5 summarizes the published IAC 567, Chapter 137 Statewide Standard:

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.

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 more than 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 F.

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).

A minimum of two (2) full rounds of Appendix II assessment monitoring have been completed at MW-3A (3/23/2023), MW-8 (3/2/22), MW-10 (3/2/22), MW-27 (3/23/2023), MW-34 (3/23/2023), MW-35 (3/23/2023), and MW-36 (3/23/2023). The most recent full Appendix II sampling episode at each well is listed in parenthesis above. The full Appendix II sampling events are highlighted in green in the Tables in Appendix B.

Compounds detected to date beyond the Appendix I list are limited to bis(2-ethylhexyl)phthalate at MW-3A, MW-8, MW-27, MW-34, and MW-35; dichlorodifluoromethane at MW-34 (October 30, 2012 only), and MW-35; and cyanide at MW-35. These additional compounds were included in the semi-annual assessment monitoring at MW-3A, MW-8, MW-27, MW-34, and MW-35 for numerous episodes.

Semi-annual bis(2-ethylhexyl)phthalate sampling has been discontinued at all assessment monitoring wells. It is deemed appropriate to analyze for bis(2-ethylhexyl)phthalate on a five (5) year frequency to coincide with the full Appendix II sample collection frequency employed at the site.

Cyanide sampling was discontinued at MW-35 since it remained undetected (see Appendix B). It is deemed appropriate to analyze for cyanide on a five (5) year frequency to coincide with the full Appendix II sample collection frequency employed at the site.

Dichlorofluoromethane sampling was discontinued at all wells, except MW-35 (see Appendix B). Dichlorofluoromethane sampling continues at MW-35 on a semi-annual frequency.

Assessment monitoring is required to be repeated annually per IAC 567-113.10(6)b. However, Special Provision 4.f. of the Permit allows a reduced five (5) year frequency of full Appendix II sampling after two (2) annual sampling episodes had been completed. The next full Appendix II sampling episodes at MW-8 and MW-10 are scheduled for March of 2027. The next full annual Appendix II sampling episodes at MW-3A, MW-27, MW-34, MW-35, and MW-36 are scheduled for March of 2028.

STATISTICALLY SIGNIFICANT LEVELS

The 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 confidence 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 require 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 is highlighted in yellow in Table 7, any 95% UCL value that exceeds a GWPS is highlighted in green in Table 8 and Table 10, while the SSI are highlighted in light brown on Table 7, 8, and 10.

Review of the Confidence Limit Exceedances indicates that cobalt at MW-10 is the only compound that demonstrates a 95% LCL that exceeds a GWPS. Based on these findings, MW-3A, MW-8, MW-27, MW-34, MW-35, and MW-36 remain in Assessment Monitoring.

DELINEATION & ASSESSMENT OF CORRECTIVE MEASURES (ACM)

MW-10 is classified as a Point of Compliance Corrective Action Monitoring Well in the shallow till soils. Based on the recorded SSL for cobalt at MW-10, delineation of the cobalt impact is required by rule. Further, Assessment of Corrective Measures (ACM) is also required by rule to address the SSL at MW-10.

The delineation and ACM have been deferred until May 10, 2027, or until the plans and specifications for the Phase 4 Expansion project are submitted to IDNR, whichever comes first (Doc # 89475). The deferral is based on the fact that MW-10 is an interim monitoring point located within the boundaries of the Phase 4 Expansion Area. The current soil borrowing activities in the Phase 4 Expansion Area have removed the shallow till soils and control the potential for horizontal migration of cobalt impact. PZ-11, a deeper well clustered with MW-10, does not indicate cobalt impact exceeding the GWPS and defined the vertical limits of impact. PZ-11 has been included in the HMSP as a Corrective Measures Monitoring Point. Detected cobalt concentrations at PZ-11 are summarized in the Table below.

Continued soil borrowing will further reduce the potential impact in the horizontal direction. The design of the future Phase 4 groundwater underdrain system will include remedy for any remaining impact, if any, at that time.

Monitoring Well	Compound	Date	Result (ug/L)	GWPS (ug/L)
PZ-11	Cobalt	8/24/2017	<0.8	2.8
PZ-11	Cobalt	2/26/2018	**2.0**	2.1
PZ-11	Cobalt	8/29/2018	<0.8	2.1
PZ-11	Cobalt	3/18/2019	<0.8	2.1
PZ-11	Cobalt	9/10/2019	<0.8	2.1
PZ-11	Cobalt	3/25/2020	**1.4**	2.1
PZ-11	Cobalt	9/4/2020	<0.4	2.1
PZ-11	Cobalt	9/2/2021	**2.6**	**2.6**
PZ-11	Cobalt	3/2/2022	<0.4	**2.6**
PZ-11	Cobalt	8/29/2022	<0.4	**2.6**
PZ-11	Cobalt	3/23/2023	<0.4	**2.6**
PZ-11	Cobalt	9/25/2023	<0.4	**2.6**
PZ-11	Cobalt	3/5/2024	<0.4	2.1
PZ-11	Cobalt	9/30/2024	<0.4	2.1

CORRECTIVE MEASURES MONITORING SUMMARY

The Corrective Action Monitoring System includes MW-10 (semi-annual sampling) and PZ-11 (annual sampling). A summary of the Upper Confidence Intervals for MW-10 and PZ-11 are provided below. See also Tables 8 and 10.

Upper Confidence Limit Evaluation (exceedances in green)

Monitoring Well	Compound	Date	95% LCL (ug/L)	95% UCL (ug/L)	GWPS (ug/L)
MW 10	Cobalt	3/1/2016	4.890	8.110	2.8
MW 10	Cobalt	9/9/2016	4.982	7.768	2.8
MW 10	Cobalt	3/22/2017	5.253	8.497	2.8
MW 10	Cobalt	8/24/2017	5.179	8.421	2.8
MW 10	Cobalt	2/26/2018	6.804	8.596	2.8
MW 10	Cobalt	8/29/2018	6.859	9.341	2.1
MW 10	Cobalt	3/18/2019	4.294	9.856	2.1
MW 10	Cobalt	9/10/2019	4.435	9.965	2.1
MW 10	Cobalt	3/25/2020	4.439	10.061	2.1
MW 10	Cobalt	9/4/2020	4.358	10.542	2.1
MW 10	Cobalt	3/2/2021	6.796	9.854	2.1
MW 10	Cobalt	9/2/2021	7.561	10.489	**2.6**
MW 10	Cobalt	3/2/2022	3.316	11.634	**2.6**
MW 10	Cobalt	8/29/2022	2.632	10.068	**2.6**
MW 10	Cobalt	3/23/2023	0.505	9.345	**2.6**
MW 10	Cobalt	9/25/2023	1.221	7.179	**2.6**
MW 10	Cobalt	3/5/2024	2.280	7.720	2.1
MW 10	Cobalt	9/30/2024	2.311	7.789	2.1

Upper Confidence Limit Evaluation (exceedances in green) - continued

Monitoring Well	Compound	Date	95% LCL (ug/L)	95% UCL (ug/L)	GWPS (ug/L)
PZ-11	Cobalt	8/24/2017	---	---	2.8
PZ-11	Cobalt	2/26/2018	---	---	2.1
PZ-11	Cobalt	8/29/2018	---	---	2.1
PZ-11	Cobalt	3/18/2019	0.107	1.493	2.1
PZ-11	Cobalt	9/10/2019	0.107	1.493	2.1
PZ-11	Cobalt	3/25/2020	0.217	1.083	2.1
PZ-11	Cobalt	9/4/2020	0.131	0.069	2.1
PZ-11	Cobalt	9/2/2021	0.197	2.103	**2.6**
PZ-11	Cobalt	3/2/2022	0.105	2.095	**2.6**
PZ-11	Cobalt	8/29/2022	0.000	1.839	**2.6**
PZ-11	Cobalt	3/23/2023	0.000	2.095	**2.6**
PZ-11	Cobalt	9/25/2023	0.200	0.200	**2.6**
PZ-11	Cobalt	3/5/2024	0.200	0.200	2.1
PZ-11	Cobalt	9/30/2024	0.200	0.200	2.1

The findings indicate that the 95% Upper Confidence Limit for cobalt at MW-10 remains above the GWPS and therefore, MW-10 should remain in the Corrective Action Monitoring System. Since MW-10 is a point of compliance well, the requirement to collect the full Appendix II sample on a five (5) year frequency applies to this well. The next full Appendix II sample collection event is required March, 2027.

Cobalt has remained below the GWPS at PZ-11. The 95% Upper Confidence Limit for cobalt at PZ-11 also remains below the GWPS.

Section 4.0 Leachate Collection System Performance Evaluation

Leachate accumulating in the existing leachate storage facilities on-site is recirculated in the Phase 2 and Phase 3 disposal areas in accordance with Special Provision X.5 of the SDP Permit or is hauled to the City of Toledo Publicly Owned Treatment Works (POTW) for treatment and disposal. The Leachate Treatment Agreement with the City of Toledo, with an effective date of May 1, 2023, is included in Appendix G.1. A total of 868,909 gallons of leachate were hauled to Toledo for treatment and disposal in 2024 (Appendix G.2). Laboratory testing results for the leachate in 2024 are included in Appendix G.3.

Leachate System Performance

<u>Closed Original Landfill</u> – The original landfill (Closed) is exempt from installing a leachate collection system based on the 1995 Risk Assessment as per the September 26, 1995 letter from IDNR.

A leachate cutoff tile was installed in conjunction with the Phase 1 expansion in 2007 and in conjunction with the Phase 2 expansion in 2010. The leachate cutoff consisted of the installation of geonet drainage composite and collection tile under the liner in the abutment areas constructed in 2007 and 2010. Approximately 250 feet of east-west trending cutoff tile and approximately 250 feet of north-south cutoff tile was installed north and east of Phase 1. Approximately 230 feet of east-west cutoff tile was installed north of Phase 2. The cutoff tile drains to the Phase 1 manhole and there is combined with flow from the leachate and groundwater collection systems in Phases 1, 2, and 3 and pumped to the leachate storage lagoon.

Operating Landfill – Phase 1 is a Subtitle D compliant alternative lined area constructed in 2007. Phase 2 and Phase 3 are Subtitle D compliant composite lined areas constructed in 2010 and 2017 respectively. Leachate collected from Phases 1, 2, and 3 is stored in a 1 million gallon FML lined storage lagoon. The leachate storage lagoon was constructed with a 4' low hydraulic conductivity compacted clay liner overlain by a 60 mil HDPE FML.

The groundwater diversion system under Phase 1 and Phase 2 was connected to the leachate storage system in 2012. A pump station was installed to pump the groundwater to the Phase 1 Manhole, where it is combined with leachate and pumped to the leachate storage lagoon. The installation of the groundwater pump station was incorporated into the permit in Permit Amendment #1 dated September 11, 2012. As a result of this project, monitoring points SW-102 and SW-103 no longer exist and have been removed from the HMSP. The groundwater diversion system under Phase 3, installed in 2017, has also been connected to the groundwater pump station so no groundwater diversion system outlet was installed during the Phase 3 Expansion project.

The leachate lagoon underdrain was connected to the leachate storage system in 2016. A pump station was installed to pump the groundwater from the leachate lagoon underdrain to the leachate storage lagoon. The system was operational on July 21, 2016. Construction documentation certifying the connection was submitted to IDNR on August 25, 2016 (Doc# 87055) and was approved by IDNR in Special Provision X.3.f of the SDP Permit dated March 13, 2017. As a result of this project, monitoring point SW-101 no longer exists and has been removed from the HMSP.

Two methods of leachate recirculation are available at the Tama County SLF: a leachate transport tank to spread the leachate on the waste mass or two 4" diameter recirculation lines buried in the waste mass in Phase 2. Leachate is recirculated in Phases 2 and 3 and is not applied to frozen cover. In 2024, approximately 226,800 gallons of leachate were recirculated in Phases 2 and 3 via transport tank. No leachate was recirculated in Phase 2 via the buried leachate recirculation pipes. Dates and approximate volumes of leachate recirculation are included on the table in Appendix G.4.

As per the SDP Permit, leachate recirculation is not allowed when "head levels in the Phase 2 cell exceed 8 inches". Based on the data provided in Table 12 no leachate was recirculated when head levels in Phase 2 exceeded 8 inches.

Leachate Head Monitoring Points

One leachate head monitoring point was installed above the liner near the lowest point in Phase 1 (LPZ-102). Two leachate head monitoring points were installed in Phase 2, one near the lowest point in Phase 2 outside of the leachate pipe trench (Phase 2 East, LPZ-104) and the other in the leachate pipe trench at the elevation of the leachate collection piping (Phase 2 West, LPZ-105). Two leachate head monitoring points were installed in Phase 3, one near the lowest point in Phase

3 outside of the leachate pipe trench (Phase 3 West, LPZ-108) and the other in the leachate pipe trench at the elevation of the leachate collection piping (Phase 3 East, LPZ-107).

LPZ-102, LPZ-104, and LPZ-108 measure leachate levels directly on the liner (as opposed to in the leachate pipe trench) and are measured monthly in accordance with the SDP Permit. Leachate head measurements are included in Table 12. All readings from LPZ-102, LPZ-104, and LPZ-108 were recorded at less than 1’ in 2024.

Based on the leachate head data for 2024, no changes are recommended.

Groundwater Separation

Separation of the base of waste and the groundwater table is evaluated through observation of groundwater elevation measurements collected from groundwater piezometers UD-2 (Phase 1), UD-3 (Phase 2), and UD-4/LPZ-106 (Phase 3). Groundwater head measurements are required semiannually in accordance with the SDP Permit with the measurements included on Table 12A. Based on the groundwater head data presented on Table 12A, separation is maintained between the base of the solid waste and the groundwater surface. No changes are recommended.

Leachate Line Cleaning

IAC 567-113.7(5)b(5) requires that the leachate system be cleaned every three (3) years at a minimum. Leachate lines were cleaned on November 8, 2023. The leachate lines should be cleaned again in 2026 in accordance with IDNR regulations.

Performance Evaluation

One valve in the leachate pump station was replaced in 2024, additional valving in the pump station will be replaced in 2025. No other modifications to the leachate collection system are recommended for 2025.

Section 5.0 Gas Monitoring

Explosive gas monitoring per 113.9(2) and the approved GMSP was conducted during the 2024 reporting period. The following buildings, subsurface tiles, and subsurface monitoring points are included in the GMSP, as illustrated on the figure in Appendix H.

GMSP Points

Location	Description	Formatiom/Facility Monitored
Scale House -	site structure	indoor air
Scale Pit -	site structure	indoor air
Recycling Building -	site structure	indoor air
Shop Building -	site structure	indoor air
Storage Building -	site structure	indoor air
GP-1 -	dedicated probe	subsurface/vadose zone
GP-2 -	dedicated probe	subsurface/vadose zone

GP-3 -	dedicated probe	subsurface/vadose zone
GP-4 -	dedicated probe	subsurface/vadose zone
GP-5 -	dedicated probe	subsurface/vadose zone
GP-6 -	dedicated probe	subsurface/vadose zone
UD-1/SW-101 Manhole -	lagoon underdrain	subsurface/vadose zone
UD-2 -	Phase 1 GW Piezometer	subsurface/vadose zone
UD-3 -	Phase 2 GW Piezometer	subsurface/vadose zone
UD-4 (LW-106) -	Phase 3 GW Piezometer	subsurface/vadose zone
UD-5 (future) -	Phase 4 GW Piezometer	subsurface/vadose zone
SW-3/TL-1 -	North Groundwater Tile Outlet	subsurface/vadose zone
GU Manhole -	SW-102 through SW-105 Outlets	subsurface/vadose zone

The points listed above currently exist at the site with the exception of UD-5, which will be constructed as part of the Phase 4 Expansion.

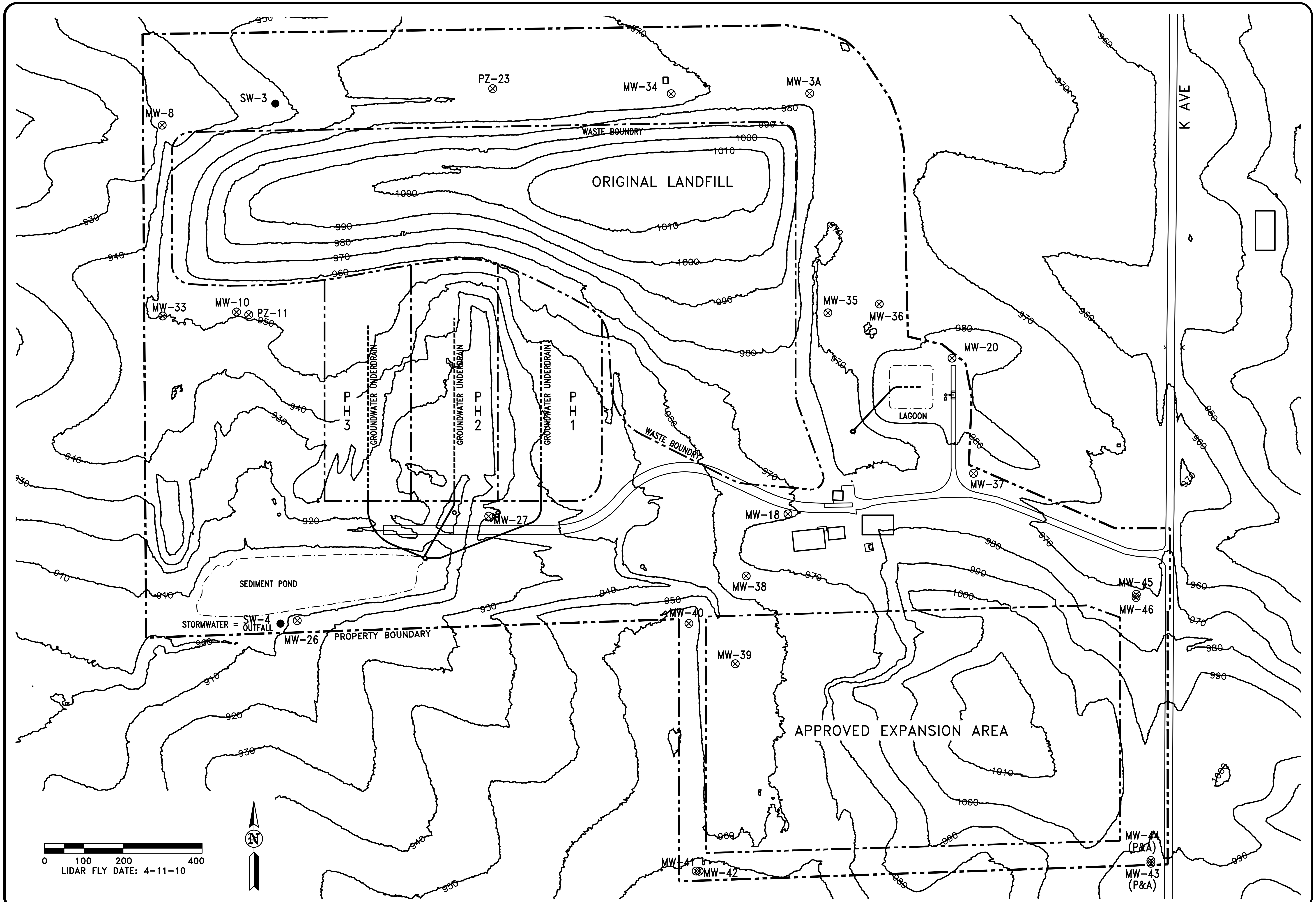
Explosive gas concentrations were undetected or below actionable levels during the monitoring episodes in 2024. Summary tables of gas monitoring are included in Table 13.

Section 6.0 Recommendations/Requests

Continued monitoring in accordance with IAC 567, Chapter 113.10 is recommended for this facility.

1) Continue Detection Monitoring at SW-3.
2) Continue Assessment Monitoring at MW-3A, MW-8, MW-27, MW-34, MW-35, and MW-36 according to the approved Permit Amendments.
3) Continue Corrective Action Monitoring at MW-10 (semi-annually) and at PZ-11 (annually) according to the approved Permit Amendments.

Figures



SITE PLAN

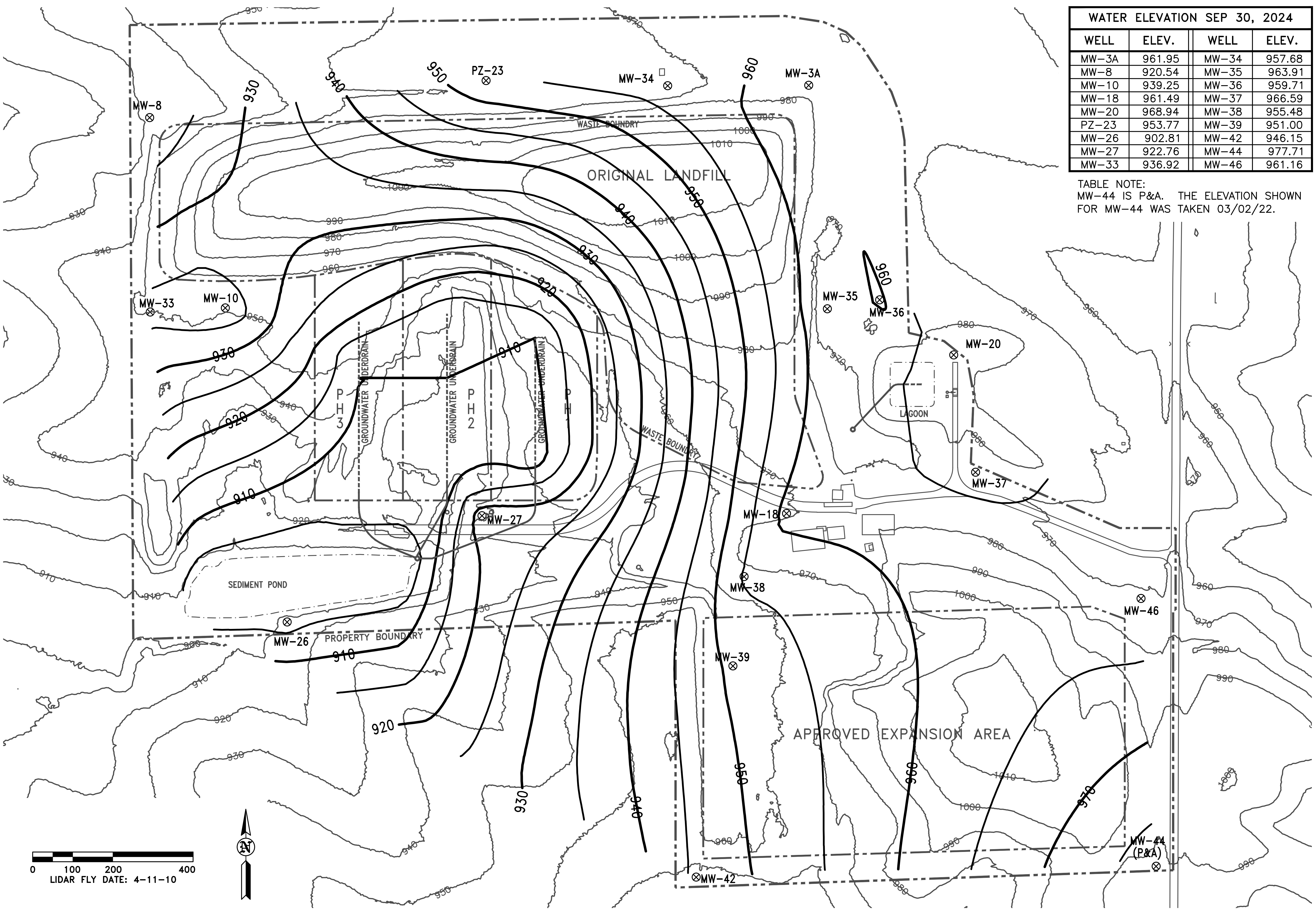
TAMA COUNTY SANITARY LANDFILL
TOLEDO, IOWA

HLW Engineering Group
204 West Broad Street, P.O. Box 314
Story City, Iowa 50248
Phone: (515) 733-4144
FAX: (515) 733-4146

HLW Engineering Group

FIGURE: 1

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6000	DATE 12-21-24



WATER ELEVATION SEP 30, 2024			
WELL	ELEV.	WELL	ELEV.
MW-3A	961.95	MW-34	957.68
MW-8	920.54	MW-35	963.91
MW-10	939.25	MW-36	959.71
MW-18	961.49	MW-37	966.59
MW-20	968.94	MW-38	955.48
PZ-23	953.77	MW-39	951.00
MW-26	902.81	MW-42	946.15
MW-27	922.76	MW-44	977.71
MW-33	936.92	MW-46	961.16

TABLE NOTE:
MW-44 IS P&A. THE ELEVATION SHOWN FOR MW-44 WAS TAKEN 03/02/22.

FIGURE: 2

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6000	DATE 12-21-24

GROUNDWATER CONTOURS

TAMA COUNTY SANITARY LANDFILL
TOLEDO, IOWA

HLW Engineering Group
204 West Broad Street, P.O. Box 314
Story City, Iowa 50248
Phone: (515) 733-4144
FAX: (515) 733-4146

HLW Engineering Group

Tables
(in IDNR Format)

Table 1 – Monitoring Program Summary

Table 1
Monitoring Program Summary
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

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 March 20, 2014		
										Detection	Assessment	Corrective Action
MW-20(up)	Glacial Till	Background	NC	None	None	None	None	None	None	23	0	0
MW-26(up)	Glacial Till	Background	NC	None	None	None	None	None	None	23	0	0
MW-37(up)	Glacial Till	Background	NC	None	None	None	None	None	None	21	0	0
MW-33 (up)	Glacial Till	Background	NC	None	None	None	None	None	None	23	0	0
MW-3A	Glacial Till	Assessment	NC	**arsenic, barium, cobalt, nickel, bis(2EH)P**	**nickel**	**arsenic**	None	None	None	0	19	0
MW-8	Glacial Till	Assessment	NC	**barium, cobalt, nickel, zinc, bis(2EH)P**	**nickel**	**cobalt, nickel**	None	None	None	0	18	0
MW-10	Glacial Till	Assessment	NC	**arsenic, barium, cadmium, cobalt, copper, nickel, zinc, 1,4-dichlorobenzene, chlorobenzene**	**barium, cobalt, nickel, 1,4-dichlorobenzene**	**barium, cobalt, nickel, 1,4-dichlorobenzene, chlorobenzene**	**Cobalt**	**Cobalt**	None	0	18	0
PZ-11	Glacial Till	Step-Out to MW-10	NC	None	None	None	None	None	None	0	14	0
MW-27	Glacial Till	Assessment	NC	None	None	None	None	None	None	0	19	0
MW-34	Glacial Till	Assessment	NC	**arsenic, barium, cobalt, nickel, bis(2EH)P, 1,4-dichlorobenzene, benzene, chlorobenzene, chloroethane**	**nickel**	**arsenic, cobalt, nickel, 1,4-dichlorobenzene**	None	None	None	0	19	0
MW-35	Glacial Till	Assessment	NC	**barium, cobalt, nickel, dichlorodiflluoromethane, 1,1-dichloroethane, bis(2EH)P**	**barium, dichlorodiflluoromethane**	**barium, dichlorodiflluoromethane**	None	None	None	0	18	0
MW-36	Glacial Till	Assessment	NC	**barium, cadmium, cobalt, copper, TCE**	**barium**	**barium**	None	None	None	0	19	0
SW-3	Glacial Till	Detection	NC	None	None	None	None	None	None	7	0	0

bis(2EH)P = bis(2-ethylhexyl)phthalate

= ACM is deferred until May, 2027 (doc #89475)

Table 2 – Monitoring Program Implementation Schedule

Table 2
Monitoring Program Implementation Schedule
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

Monitoring Well	Recent Sampling Dates and Constituents	Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
		March, 2025	September, 2025	Previously Collected	Next Event
MW-20(up)		Appendix I	Appendix I		N/A
MW-26(up)		Appendix I	Appendix I		N/A
MW-37(up)		Appendix I	Appendix I		N/A
MW-33 (up)		Appendix I	Appendix I		N/A
MW-3A		Appendix I	Appendix I	3/22/17, 2/26/18, 3/23/23	3/2028
MW-8	See Table 2A	Appendix I	Appendix I	3/29/11, 3/8/12, 3/22/17, 3/2/22	3/2027
MW-10		Appendix I	Appendix I	7/26/10, 3/8/12, 3/22/17, 3/2/22	3/2027
MW-11		cobalt	cobalt		
MW-27		Appendix I	Appendix I	3/22/17, 2/26/18, 3/23/23	3/2028
MW-34		Appendix I	Appendix I	10/3/12, 3/26/13, 2/26/18, 3/23/23	3/2028
MW-35		Appendix I(2)	Appendix I(2)	10/3/12, 3/26/13, 2/26/18, 3/23/23	3/2028
MW-36		Appendix I	Appendix I	3/22/17, 2/26/18, 3/23/23	3/2028
SW-3		Appendix I	Appendix I		N/A

(1) = bis(2-ethylhexyl)phthalate
(2) =dichlorodifluoromethane

Table 2A – Summary of Monitoring to Date

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

WELL	3/26/08	5/6/08	7/23/08	9/30/08	12/2/08
MW-20 (b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-26 (b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-3A					
MW-8	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-10	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-27					
MW-33					
MW-34					
MW-35					
MW-36					
SW-3	Appendix I	Appendix I	Appendix I	Dry	Dry
SW-101	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I

WELL	3/5/09	9/1/09	3/23/10	7/26/10	9/9/10
MW-20 (b)	Appendix I	Appendix I	Appendix I		Appendix I
MW-26 (b)	Appendix I	Appendix I	Appendix I		Appendix I
MW-3A					
MW-8	Appendix I	Appendix I	Appendix I		Appendix I
MW-10	Appendix I	Appendix I	Appendix I	**Appendix II**	Appendix I
MW-27					
MW-33					
MW-34					
MW-35					
MW-36					
SW-3	Dry	Appendix I	Appendix I		Appendix I
SW-101	Appendix I	Appendix I	Appendix I		Appendix I

WELL	3/29/11	5/4/11	5/11/11	9/13/11	3/8/12
MW-20 (b)	Appendix I			Appendix I	Appendix I
MW-26 (b)	Appendix I			Appendix I	Appendix I
MW-3A	Appendix I			Appendix I	Appendix I
MW-8	**Appendix II**			Appendix I	**Appendix II**
MW-10	Appendix I			Appendix I	**Appendix II**
MW-27	Appendix I			Appendix I	Appendix I
MW-33	Appendix I			Appendix I	Appendix I
MW-34	Appendix I	Verification		Appendix I	Appendix I
MW-35	Appendix I	Verification		Appendix I	Appendix I
MW-36			Appendix I	Appendix I	Appendix I
SW-3	Appendix I	Verification		Dry	Dry
SW-101	Appendix I	Verification		Appendix I	Appendix I

WELL	**7/5/12**	**9/11/12**	**10/30/12**	**3/26/13**	**5/17/13**
MW-20 (b)		Appendix I		Dry	
MW-26 (b)		Appendix I		Appendix I	
MW-3A	Appendix I	Dry		Appendix I	
MW-8		Appendix I		Appendix I[1]	Note[1]
MW-10		Appendix I		Appendix I[3]	
MW-27	Appendix I	Appendix I		Appendix I	
MW-33	Appendix I	Appendix I		Appendix I	
MW-34	Appendix I	Appendix I	**Appendix II**	**Appendix II**	
MW-35	Appendix I	Appendix I	**Appendix II**	**Appendix II**	Note[1,2]
MW-36		Appendix I		Appendix I	
SW-3		Dry		Appendix I	
SW-101		Appendix I		Dry	
Duplicate		At MW-10		At SW-3	

WELL	**7/9/13**	**9/25/13**	**11/27/13**	**3/19/14**	**4/9/14**
MW-20 (b)		Appendix I		Appendix I	
MW-26 (b)		Appendix I		Appendix I	
MW-37 (b)		Appendix I		Appendix I	
MW-3A		Appendix I	Verification*	Verification	Appendix I
MW-8		Appendix I[1]		Appendix I[1]	
MW-10		Appendix I[3]		Appendix I[3]	
MW-27		Appendix I		Appendix I	
MW-33		Appendix I		Appendix I	
MW-34		Appendix I[1,2]		Appendix I[1,2]	
MW-35	Note[1,2]	Appendix I[1,2]		Appendix I[1,2]	
MW-36		Appendix I		Appendix I	
SW-3		Dry		Appendix I	
SW-101		Appendix I		Appendix I	
Duplicate		At MW-36		AT MW-34	

(1) = bis(2-ethylhexyl)phthalate
(2) = dichlorodifluoromethane
(3) = no compounds beyond Appendix I list
* = well was dry during verification re-sample attempt. See 12-4-13 email.

WELL	8/20/14	9/15/14	1/14/15	3/6/15	6/16/15	8/24/15
MW-20 (b)		Appendix I + TSS	Appendix I	Appendix I	Appendix I	Appendix I
MW-26 (b)		Appendix I + TSS	Appendix I	Appendix I	Appendix I	Appendix I
MW-37 (b)		Appendix I + TSS	Appendix I	Appendix I	Appendix I	Appendix I
MW-3A		Appendix I + TSS		Appendix I		Appendix I
MW-8		Appendix I(1) + TSS		Appendix I(1)		Appendix I(1)
MW-10		Appendix I(3) + TSS		Appendix I(3)		Appendix I(3)
MW-27		Appendix I + TSS		Appendix I		Appendix I
MW-33		Appendix I + TSS		Appendix I		Appendix I
MW-34	(1,2)	Appendix I(1,2) +TSS		Appendix I(1,2)		Appendix I(1,2)
MW-35		Appendix I(1,2) +TSS		Appendix I(1,2)		Appendix I(1,2)
MW-36		Appendix I + TSS	(R)- cd	Appendix I		Appendix I
SW-3		Appendix I + TSS		Appendix I		Appendix I
SW-101		Appendix I + TSS	(R) - co + ni	Appendix I		Appendix I
Duplicate		At MW-33		At MW-26		At MW-33

WELL	3/1/16	9/9/16	10/31/16	1/27/17
MW-20 (b)	Appendix I	Appendix I		
MW-26 (b)	Appendix I	Appendix I		
MW-37 (b)	Appendix I	Appendix I		
MW-3A	Appendix I	Appendix I	(R) - As + Ba	
MW-8	Appendix I(1)	Appendix I(1)	(R) - Co + Ni	
MW-10	Appendix I(3)	Appendix I(3)		
MW-27	Appendix I	Appendix I		(R) - Ba
MW-33	Appendix I	Appendix I		
MW-34	Appendix I(1,2)	Appendix I(1,2)		
MW-35	Appendix I(1,2)	Appendix I(1,2)		
MW-36	Appendix I	Appendix I		(R) - Ba
SW-3	Appendix I	Appendix I		
Duplicate	At MW-20	At MW-33		

(1) = bis(2-ethylhexyl)phthalate
(2) = dichlorodifluoromethane
(3) = no compounds beyond Appendix I list
(R) = Resample

``	3/22/17	6/7/17	8/24/17	11/15/17
MW-20 (b)	Appendix I		Appendix I	
MW-26 (b)	Appendix I		Appendix I	
MW-37 (b)	Appendix I		Appendix I	
MW-33 (b)	Appendix I	(R) - Ba	Appendix I	
MW-3A	**Appendix II**		Appendix I[3]	(R) – As+Ba
MW-8	**Appendix II**		Appendix I[1]	
MW-10	**Appendix II**		Appendix I[3]	
MW-11	N/A		Cobalt	
MW-27	**Appendix II**		Appendix I[3]	
MW-34	Appendix I[1,2]		Appendix I[1,2]	(R) - Co
MW-35	Appendix I[1,2]		Appendix I[1,2]	
MW-36	**Appendix II**		Appendix I[3]	
SW-3	Appendix I		Appendix I	
Duplicate	At MW-36		At MW-37	

WELL	2/26/18	8/29/2018	3/18/2019	9/10/2019
MW-20 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-26 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-37 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-33 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-3A	**Appendix II**	Appendix I[1]	Appendix I[1]	Appendix I[1]
MW-8	Appendix I[1]	Appendix I[1]	Appendix I[1]	Appendix I[1]
MW-10	Appendix I	Appendix I[3]	Appendix I[3]	Appendix I[3]
MW-11	Cobalt	Cobalt	Cobalt	Cobalt
MW-27	**Appendix II**	Appendix I[1]	Appendix I[1]	Appendix I[1]
MW-34	**Appendix II**	Appendix I[1,2]	Appendix I[1,2]	Appendix I[1,2]
MW-35	**Appendix II**	Appendix I[1,2,4]	Appendix I[1,2,4]	Appendix I[1,2,4]
MW-36	**Appendix II**	Appendix I[3]	Appendix I[3]	Appendix I[3]
SW-3	Appendix I	Appendix I	Appendix I	Appendix I
Duplicate	At MW-8	At MW-20	At MW-37	At MW-20

(1) = bis(2-ethylhexyl)phthalate
(2) = dichlorodifluoromethane
(3) = no compounds beyond Appendix I list
(4) = cyanide
(R) = Resample

WELL	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022	8/29/22
MW-20 (b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-26 (b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-37 (b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-33 (b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-3A	Appendix I(1)	Appendix I(1)	Appendix I(1)	Appendix I	Appendix I(1)	Appendix I
MW-8	Appendix I(1)	Appendix I(1)	Appendix I(1)	Appendix I	**Appendix II**	Appendix I
MW-10	Appendix I(3)	Appendix I(3)	Appendix I(3)	Appendix I	**Appendix II**	Appendix I
MW-11	Cobalt	Cobalt	NT	Cobalt	Cobalt	Cobalt
MW-27	Appendix I(1)	Appendix I(1)	Appendix I(1)	Appendix I	Appendix I(1)	Appendix I
MW-34	Appendix I(1)	Appendix I(1)	Appendix I(1)	Appendix I	Appendix I(1)	Appendix I(1)
MW-35	Appendix I(1,2,4)	Appendix I(1,2,4)	Appendix I(1,2,4)	Appendix I(2)	Appendix I(1,2,4)	Appendix I(2)
MW-36	Appendix I(3)	Appendix I(3)	Appendix I(3)	Appendix I	Appendix I	Appendix I
SW-3	Appendix I	Appendix I	Dry	Dry	Dry	Dry
Duplicate	At MW-33	At MW-10	At MW-8	At MW-36	At MW-37	At MW-36

WELL	3/23/2023	9/25/2023	3/5/2024	9/30/2024
MW-20 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-26 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-37 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-33 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-3A	**Appendix II**	Appendix I(1)	Appendix I(1)	Appendix I
MW-8	Appendix I	Appendix I	Appendix I	Appendix I
MW-10	Appendix I	Appendix I	Appendix I	Appendix I
MW-11	Cobalt	Cobalt	Cobalt	Cobalt
MW-27	**Appendix II**	Appendix I(3)	Appendix I	Appendix I
MW-34	**Appendix II**	Appendix I(3)	Appendix I	Appendix I
MW-35	**Appendix II**	Appendix I(2)	Appendix I(2)	Appendix I(2)
MW-36	**Appendix II**	Appendix I(3)	Appendix I	Appendix I
SW-3	Appendix I	Appendix I	Appendix I	Appendix I
Duplicate	At MW-33	At MW-36	At MW-8	At MW-8

(1) = bis(2-ethylhexyl)phthalate
(2) = dichlorodifluoromethane
(3) = no compounds beyond Appendix I list
(4) = cyanide
(R) = Resample

Table 3 – Monitoring Well Maintenance Performance Reevaluation Schedule

Table 3
Monitoring Well Maintenance and Performance Revaluation Schedule
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No.86-SDP-01-72P

Compliance with:	Monitoring Calendar Years									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
567 IAC 113.10(2)"f"(1) high and low water levels (biennial)	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
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
Waste separation from ground water 113.6(2)"I"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Compliance with:	Monitoring Calendar Years									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	
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	
Waste separation from ground water 113.6(2)"I"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Compliance with:	Monitoring Calendar Years									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
567 IAC 113.10(2)"f"(1) high and low water levels (biennial)	X	P	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	P	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)"I"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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
Tama County Sanitary Landfill
Permit No.86-SDP-01-72P

Well	Top of casing	Top of Screen	Total Depth		Date of Measurements 3/5/2024	9/30/2024	Maximum Depth Discrepancy (ft)	Hydraulic Cond. (cm/sec)/date	Most Recent Recharge Rate **3/5/2024**	Change
MW-20	987.91	971.94	25.97	Groundwater Level (ft)	23.68	18.97	0.07	0.000004 1991	Too Dry	None perceived
				Groundwater Elevation (Ft MSL)	964.23	968.94				
				Measured Well Depth (ft)	25.9	25.9				
				Submerged (+) or Exposed screen (-)	-7.71	-3				
MW-26	914.95	904.61	20.34	Groundwater Level (ft)	11.68	12.14	0.44	0.00001 2005	Full recovery in 6 hour	None perceived
				Groundwater Elevation (Ft MSL)	903.27	902.81				
				Measured Well Depth (ft)	19.9	19.9				
				Submerged (+) or Exposed screen (-)	-1.34	-1.8				
MW-37	978.74	968.09	20.65	Groundwater Level (ft)	14.47	12.15	0.45	0.0000112 2013	Full recovery in 24 hour	None percieved
				Groundwater Elevation (Ft MSL)	964.27	966.59				
				Measured Well Depth (ft)	20.2	20.2				
				Submerged (+) or Exposed screen (-)	-3.82	-1.5				
MW-33	950.02	937.15	22.27	Groundwater Level (ft)	10.56	13.1	0.67	pending	Full recovery in 4 hour	None perceived
				Groundwater Elevation (Ft MSL)	939.46	936.92				
				Measured Well Depth (ft)	21.6	21.6				
				Submerged (+) or Exposed screen (-)	2.31	-0.23				
MW-3A	976	968.44	17.56	Groundwater Level (ft)	15.1	14.05	0.16	pending	Full recovery in 8 hour	None perceived
				Groundwater Elevation (Ft MSL)	960.9	961.95				
				Measured Well Depth (ft)	17.4	17.4				
				Submerged (+) or Exposed screen (-)	-7.54	-6.49				
MW-8	932.21	922.2	20.01	Groundwater Level (ft)	12.49	11.67	0.11	0.00006 1991	Full recovery in 8 hour	None perceived
				Groundwater Elevation (Ft MSL)	919.72	920.54				
				Measured Well Depth (ft)	19.9	19.9				
				Submerged (+) or Exposed screen (-)	-2.48	-1.66				
MW-10	952.96	943.04	19.92	Groundwater Level (ft)	10.95	13.71	0.02	0.0005 1991	Full recovery in 8 hour	None perceived
				Groundwater Elevation (Ft MSL)	942.01	939.25				
				Measured Well Depth (ft)	19.9	19.9				
				Submerged (+) or Exposed screen (-)	-1.03	-3.79				
MW-27	932.89	915.2	27.69	Groundwater Level (ft)	13.06	10.13	0.19	pending	Full recovery in 24 hour	None perceived
				Groundwater Elevation (Ft MSL)	919.83	922.76				
				Measured Well Depth (ft)	27.5	27.5				
				Submerged (+) or Exposed screen (-)	4.63	7.56				
MW-34	969.61	961.92	17.69	Groundwater Level (ft)	11.15	11.93	0.29	pending	Full recovery in 8 hour	None perceived
				Groundwater Elevation (Ft MSL)	958.46	957.68				
				Measured Well Depth (ft)	17.4	17.4				
				Submerged (+) or Exposed screen (-)	-3.46	-4.24				
MW-35	974.02	961.03	22.99	Groundwater Level (ft)	8.21	10.11	0.49	pending	Full recovery in 24 hour	None perceived
				Groundwater Elevation (Ft MSL)	965.81	963.91				
				Measured Well Depth (ft)	22.5	22.5				
				Submerged (+) or Exposed screen (-)	4.78	2.88				
MW-36	977.15	959.26	27.89	Groundwater Level (ft)	16.21	17.44	0.74	pending	Full recovery in 24 hour	None perceived
				Groundwater Elevation (Ft MSL)	960.94	959.71				
				Measured Well Depth (ft)	27.15	27.15				
				Submerged (+) or Exposed screen (-)	1.68	0.45				

Groundwater Underdrain Piezometer

Well		Date of Measurements	
	Not Applicable		

Table 4A – Historic Water Elevation Monitoring Summary

Table 4A
Water Elevation Data
Tama County Sanitary Landfill
86-SDP-1-72P

Well/TOC	MW-3A	976	MW-8	932.21	MW-10	952.96	MW-18	967.69	MW-20	987.91	PZ-23	963.9
	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation
03/28/12	11.93	964.07	8.40	923.81	7.79	945.17	6.91	960.78	8.65	979.26	6.68	957.22
07/05/12	12.86	963.14	10.44	921.77	12.87	940.09	7.25	960.44	19.03	968.88	11.21	952.69
09/11/12			13.50	918.71	15.75	937.21	8.72	958.97	23.56	964.35	13.85	950.05
10/30/12			14.38	917.83	17.21	935.75	9.98	957.71	24.01	963.90	14.51	949.39
03/26/13	10.35	965.65	5.60	926.61	13.30	939.66			25.97	961.94	4.65	959.25
05/17/13			3.50	928.71								
07/09/13			8.40	923.81								
09/25/13	15.42	960.58	13.15	919.06	13.60	939.36	7.75	959.94	19.50	968.41	12.90	951.00
11/26/13	16.50	959.50										
03/19/14	10.80	965.20	11.10	921.11	14.20	938.76		967.69	23.90	964.01	6.60	957.30
09/15/14	4.15	971.85	4.10	928.11	9.05	943.91	5.15	962.54	15.30	972.61	4.15	959.75
03/06/15	6.80	969.20	9.25	922.96	11.70	941.26	7.30	960.39	19.95	967.96	4.30	959.60
08/24/15	6.73	969.27	7.86	924.35	9.90	943.06	5.70	961.99	15.20	972.71	4.50	959.40
03/01/16	4.15	971.85	4.00	928.21	9.92	943.04	5.31	962.38	16.57	971.34	4.27	959.63
09/09/16	12.13	963.87	13.30	918.91	14.70	938.26	7.15	960.54	19.95	967.96	9.80	954.10
03/22/17	6.82	969.18	4.85	927.36	10.40	942.56	6.35	961.34	18.90	969.01	4.60	959.30
08/24/17	13.07	962.93	13.26	918.95	14.10	938.86	7.41	960.28	20.00	967.91	11.33	952.57
02/26/18	10.86	965.14	10.65	921.56	13.80	939.16	8.28	959.41	23.55	964.36	9.73	954.17
08/29/18	12.96	963.04	11.28	920.93	11.76	941.20	6.73	960.96	18.00	969.91	8.50	955.40
03/18/19	2.95	973.05	3.35	928.86	5.57	947.39	5.40	962.29	14.88	973.03	3.19	960.71
09/10/19	10.05	965.95	11.80	920.41	12.61	940.35	6.70	960.99	18.28	969.63	8.75	955.15
03/25/20	3.45	972.55	3.45	928.76	6.53	946.43	4.80	962.89	15.02	972.89	4.13	959.77
09/04/20	10.17	965.83	11.90	920.31	12.71	940.25	6.25	961.44	19.00	968.91	8.52	955.38
03/02/21	8.00	968.00	7.26	924.95	8.60	944.36	6.15	961.54	19.68	968.23	4.69	959.21
09/02/21	10.84	965.16	13.00	919.21	13.83	939.13	6.70	960.99	20.72	967.19	9.40	954.50
03/02/22	10.79	965.21	10.58	921.63	13.82	939.14	7.70	959.99	23.00	964.91	8.77	955.13
08/29/22	11.42	964.58	12.62	919.59	12.75	940.21	6.61	961.08	19.87	968.04	10.25	953.65
03/23/23	9.26	966.74	7.01	925.20	9.60	943.36	5.61	962.08	21.68	966.23	5.40	958.50
09/25/23	16.83	959.17	14.38	917.83	15.27	937.69	7.70	959.99	23.48	964.43	13.69	950.21
03/05/24	15.10	960.90	12.49	919.72	10.95	942.01			23.68	964.23		
09/30/24	14.05	961.95	11.67	920.54	13.71	939.25	6.20	961.49	18.97	968.94	10.13	953.77
minimum	2.95	959.17	3.35	917.83	5.57	935.75	4.80	957.71	8.65	961.94	3.19	949.39
maximum	16.83	973.05	14.38	928.86	17.21	947.39	9.98	967.69	25.97	979.26	14.51	960.71

Table 4A
Water Elevation Da
Tama County Sanit
86-SDP-1-72P

Well/TOC	MW-26	914.95	MW-27	932.89	MW-33	950.02	MW-34	969.61	MW-35	974.02	MW-36	977.15
	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation
03/28/12	8.65	906.30	14.89	918.00	10.19	939.83	6.44	963.17	12.21	961.81	15.05	962.10
07/05/12	9.52	905.43	11.53	921.36	13.18	936.84	11.20	958.41	13.21	960.81	16.62	960.53
09/11/12	13.88	901.07	10.48	922.41	15.41	934.61	13.98	955.63	16.32	957.70	19.28	957.87
10/30/12	14.52	900.43	10.85	922.04	15.99	934.03	15.03	954.58	18.32	955.70	19.71	957.44
03/26/13	7.60	907.35	14.25	918.64	7.90	942.12	8.50	961.11	8.50	965.52	18.45	958.70
05/17/13									6.10	967.92		
07/09/13									8.40	965.62		
09/25/13	13.40	901.55	10.58	922.31	14.50	935.52	15.40	954.21	15.40	958.62	17.75	959.40
11/26/13												
03/19/14	10.10	904.85	15.20	917.69	9.60	940.42	6.30	963.31	11.50	962.52	18.40	958.75
09/15/14	6.70	908.25	11.70	921.19	7.25	942.77	4.20	965.41	7.30	966.72	11.10	966.05
03/06/15	10.60	904.35	15.90	916.99	12.90	937.12	7.05	962.56	10.30	963.72	12.80	964.35
08/24/15	8.94	906.01	10.25	922.64	10.15	939.87	6.25	963.36	8.20	965.82	11.13	966.02
03/01/16	9.20	905.75	13.30	919.59	8.51	941.51	4.45	965.16	6.50	967.52	8.35	968.80
09/09/16	10.55	904.40	9.80	923.09	15.53	934.49	9.20	960.41	13.93	960.09	17.65	959.50
03/22/17	9.63	905.32	13.55	919.34	13.31	936.71	5.90	963.71	7.55	966.47	13.70	963.45
08/24/17	11.96	902.99	9.75	923.14	15.25	934.77	12.42	957.19	15.25	958.77	18.42	958.73
02/26/18	9.67	905.28	14.46	918.43	14.81	935.21	9.42	960.19	9.42	964.60	17.73	959.42
08/29/18	10.25	904.70	10.45	922.44	13.00	937.02	8.02	961.59	12.75	961.27	18.67	958.48
03/18/19	8.05	906.90	13.26	919.63	4.34	945.68	3.18	966.43	5.76	968.26	6.93	970.22
09/10/19	10.65	904.30	9.85	923.04	14.15	935.87	10.46	959.15	12.93	961.09	16.60	960.55
03/25/20	8.30	906.65	12.07	920.82	6.70	943.32	3.34	966.27	5.84	968.18	7.33	969.82
09/04/20	11.65	903.30	9.59	923.30	14.40	935.62	10.79	958.82	10.00	964.02	15.22	961.93
03/02/21	9.23	905.72	12.48	920.41	11.61	938.41	6.87	962.74	5.83	968.19	12.08	965.07
09/02/21	11.35	903.60	9.88	923.01	15.14	934.88	11.66	957.95	9.54	964.48	16.01	961.14
03/02/22	9.95	905.00	13.64	919.25	15.26	934.76	10.52	959.09	10.68	963.34	15.05	962.10
08/29/22	12.05	902.90	10.02	922.87	14.04	935.98	11.89	957.72	10.60	963.42	17.06	960.09
03/23/23	9.20	905.75	13.21	919.68	10.00	940.02	5.72	963.89	7.12	966.90	13.94	963.21
09/25/23	14.10	900.85	10.28	922.61	15.15	934.87	14.25	955.36	10.61	963.41	18.99	958.16
03/05/24	11.68	903.27	13.06	919.83	10.56	939.46	11.15	958.46	8.21	965.81	16.21	960.94
09/30/24	12.14	902.81	10.13	922.76	13.10	936.92	11.93	957.68	10.11	963.91	17.44	959.71
minimum	6.70	900.43	9.59	916.99	4.34	934.03	3.18	954.21	5.76	955.70	6.93	957.44
maximum	14.52	908.25	15.90	923.30	15.99	945.68	15.40	966.43	18.32	968.26	19.71	970.22

Table 4A
Water Elevation Da
Tama County Sanit
86-SDP-1-72P

Well/TOC	MW-37	978.74	MW-38	969.16	MW-39	957.1	MW-40	965.18	MW-41	961.66	MW-42	961.65
	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation
03/28/12												
07/05/12												
09/11/12												
10/30/12												
03/26/13												
05/17/13												
07/09/13												
09/25/13												
11/26/13	16.75	961.99	14.80	954.36	13.85	943.25						
03/19/14	14.40	964.34	17.45	951.71	16.80	940.30						
09/15/14	8.35	970.39	7.50	961.66	6.60	950.50						
03/06/15	12.65	966.09	13.20	955.96	12.75	944.35						
08/24/15	9.15	969.59	8.38	960.78	4.89	952.21						
03/01/16	9.42	969.32	9.10	960.06	7.64	949.46						
09/09/16	12.70	966.04	12.11	957.05	6.96	950.14						
03/22/17	11.90	966.84	10.75	958.41	8.98	948.12						
08/24/17	12.55	966.19	12.03	957.13	7.10	950.00						
02/26/18	14.12	964.62	13.63	955.53	11.34	945.76						
08/29/18	10.97	967.77	9.93	959.23	5.15	951.95						
03/18/19	7.78	970.96	10.30	958.86	8.67	948.43	40.81	924.37	37.10	924.56	13.05	948.60
09/10/19	11.32	967.42	10.53	958.63	5.13	951.97	41.35	923.83	36.57	925.09	15.22	946.43
03/25/20	8.78	969.96	7.11	962.05	7.25	949.85						
09/04/20	11.66	967.08	10.62	958.54	5.65	951.45	41.67	923.51	36.72	924.94	15.65	946.00
03/02/21	10.50	968.24	8.65	960.51	7.95	949.15	42.12	923.06	37.05	924.61	14.70	946.95
09/02/21	12.84	965.90	10.95	958.21	4.81	952.29	42.04	923.14	37.44	924.22	15.79	945.86
03/02/22	14.25	964.49	13.20	955.96	10.00	947.10	42.68	922.50	38.15	923.51	16.81	944.84
08/29/22	12.29	966.45	12.05	957.11	5.26	951.84	42.31	922.87	37.63	924.03	15.40	946.25
03/23/23	12.63	966.11	9.98	959.18	8.20	948.90	43.35	921.83	38.15	923.51	15.63	946.02
09/25/23	14.88	963.86	14.04	955.12	6.61	950.49	43.56	921.62	39.12	922.54	17.57	944.08
03/05/24	14.47	964.27										
09/30/24	12.15	966.59	13.68	955.48	6.10	951.00	42.84	922.34	37.95	923.71	15.50	946.15
minimum	7.78	961.99	7.11	951.71	4.81	940.30	40.81	921.62	36.57	922.54	13.05	944.08
maximum	16.75	970.96	17.45	962.05	16.80	952.29	43.56	924.37	39.12	925.09	17.57	948.60

Table 4A
Water Elevation Da
Tama County Sanit
86-SDP-1-72P

Well/TOC	MW-45	975.38	MW-46	976.00
	Water Depth	Water Elevation	Water Depth	Water Elevation
03/28/12				
07/05/12				
09/11/12				
10/30/12				
03/26/13				
05/17/13				
07/09/13				
09/25/13				
11/26/13				
03/19/14				
09/15/14				
03/06/15				
08/24/15				
03/01/16				
09/09/16				
03/22/17				
08/24/17				
02/26/18				
08/29/18				
03/18/19	76.70	898.68	9.32	966.68
09/10/19	57.42	917.96	12.58	963.42
03/25/20				
09/04/20	18.80	956.58	12.62	963.38
03/02/21	18.75	956.63	11.78	964.22
09/02/21	18.57	956.81	14.05	961.95
03/02/22	19.95	955.43	14.86	961.14
08/29/22	18.89	956.49	13.17	962.83
03/23/23	20.33	955.05	11.95	964.05
09/25/23	19.93	955.45	15.50	960.50
03/05/24				
09/30/24	20.21	955.17	14.84	961.16
minimum	18.57	898.68	9.32	960.50
maximum	76.70	956.81	15.50	966.68

Table 5 – Background and GWPS Summary

Table 5
Background and GWPS Summary
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

Interwell Background Wells (MW-20, MW-26, MW-33 and MW-37)

Inorganics - Appendix I										
Constituent	**Units**	**Model Type**	**Samples - N**	**Detections**	**Mean**	**SD**	**Prediction Limit**	**Confidence**	**GWPS**	**Source**
Antimony (Sb)	µg/l	nonparametric	90	0			2.0000	0.99	6	SS
Arsenic (As)	µg/l	nonparametric	90	0			4.0000	0.99	10	SS
Barium (Ba)	µg/l	normal	91	**91**	141.3890	57.881	279.2306		2000	SS
Beryllium (Be)	µg/l	nonparametric	90	0			4.0000	0.99	4	SS
Cadmium (Cd)	µg/l	nonparametric	90	2			0.8000	0.99	5	SS
Chromium (Cr)	µg/l	nonparametric	90	0			8.0000	0.99	100	SS
Cobalt (Co)	µg/l	nonparametric	89	10			1.8000	0.99	2.1	SS
Copper (Cu)	µg/l	nonparametric	90	1			8.4000	0.99	1300	SS
Lead (Pb)	µg/l	nonparametric	90	0			4.0000	0.99	15	SS
Nickel (Ni)	µg/l	nonparametric	90	0			4.0000	0.99	100	SS
Selenium (Se)	µg/l	nonparametric	90	34			23.1000	0.99	50	SS
Silver (Ag)	µg/l	nonparametric	90	0			4.0000	0.99	100	SS
Thallium (Tl)	µg/l	nonparametric	89	0			2.0000	0.99	2	SS
Vanadium (V)	µg/l	nonparametric	90	0			20.0000	0.99	35	SS
Zinc (Zn)	µg/l	nonparametric	89	14			49.4000	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	90	0	<1	<1	<1	<1	various	SS

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

Table 6 – Summary of Current Year SSI

Table 6
Summary of Well/Detected Constituent Pairs that Exceed the Background Standard
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

2024

Interwell Statistics

Well	System	Constituent	Date	Units	Result	Prediction Limit	GWPS
MW-3A	Till	arsenic	9/30/2024	ug/L	10.1	4.0	10
MW-3A	Till	nickel	3/5/2024	ug/L	12.6	4.0	100
MW-8	Till	cobalt	9/30/2024	ug/L	3.1	1.8	2.1
MW-8	Till	nickel	3/5/2024	ug/L	5.5	4.0	100
MW-8	Till	nickel	9/30/2024	ug/L	13.3	4.0	100
MW-10	Till	barium	3/5/2024	ug/L	440.0	279.54	2000
MW-10	Till	barium	9/30/2024	ug/L	533.0	279.23	2000
MW-10	Till	cobalt	3/5/2024	ug/L	5.7	1.8	2.1
MW-10	Till	cobalt	9/30/2024	ug/L	5.7	1.8	2.1
MW-10	Till	nickel	3/5/2024	ug/L	11.1	4.0	100
MW-10	Till	nickel	9/30/2024	ug/L	13.5	4.0	100
MW-10	Till	1,4-dichlorobenzene	3/5/2024	ug/L	1.5	1.0	75
MW-10	Till	1,4-dichlorobenzene	9/30/2024	ug/L	2.5	1.0	75
MW-10	Till	chlorobenzene	9/30/2024	ug/L	1.5	1.0	100
MW34	Till	arsenic	9/30/2024	ug/L	4.2	4.0	10
MW34	Till	cobalt	9/30/2024	ug/L	5.4	1.8	**2.1**
MW34	Till	nickel	3/5/2024	ug/L	7.6	4.0	100
MW34	Till	nickel	9/30/2024	ug/L	15.9	4.0	100
MW34	Till	1,4-dichlorobenzene	9/30/2024	ug/L	1.4	1.0	75
MW-35	Till	barium	3/5/2024	ug/L	460.0	279.54	2000
MW-35	Till	barium	9/30/2024	ug/L	448.0	279.23	2000
MW-35	Till	dichlorofluoromethane	3/5/2024	ug/L	1.2	1.0	1000
MW-35	Till	dichlorofluoromethane	9/30/2024	ug/L	1.2	1.0	1000
MW-36	Till	barium	3/5/2024	ug/L	315.0	279.54	2000
MW-36	Till	barium	9/30/2024	ug/L	292.0	279.23	2000

Table 7 – Summary of Ongoing and Newly Identified SSI

Table 7

KEY:	SSI	SSL LCL>GWPS

Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

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 3A	Arsenic	3/1/2016	<4.0	4.0	---	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	9/9/2016	6.1	4.0	---	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	10/31/2016	4.7	4.0	---	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	3/22/2017	<4.0	4.0	---	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	8/24/2017	4.5	4.0	2.319	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	11/15/2017	9.4	4.0	2.319	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	2/26/2018	<4.0	4.0	0.372	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	8/29/2018	5.6	4.0	1.755	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	3/18/2019	<4.0	4.0	0.593	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	9/10/2019	<4.0	4.0	0.783	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	3/25/2020	<4.0	4.0	0.783	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	9/4/2020	<4.0	4.0	2.000	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	3/2/2021	<4.0	4.0	2.000	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	9/2/2021	4.1	4.0	1.290	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	3/2/2022	<4.0	4.0	1.290	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	8/29/2022	<4.0	4.00	1.290	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	3/23/2023	<4.0	4.00	1.290	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	9/25/2023	Dry	4.00	1.290	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	3/5/2024	<4.0	4.00	2.000	10	9/9/2016	N/A	8/24/2017
MW 3A	Arsenic	9/30/2024	10.10	4.00	0.000	10	9/9/2016	N/A	8/24/2017

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 3A	Barium	3/1/2016	102.0	273.70	---	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	9/9/2016	369.0	273.70	---	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	10/31/2016	308.0	273.70	---	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	3/22/2017	140.0	273.70	---	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	8/24/2017	535.0	273.70	146.064	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	11/15/2017	516.0	273.70	146.064	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	2/26/2018	154.0	273.70	78.949	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	8/29/2018	379.0	273.70	189.368	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	3/18/2019	72.3	283.71	40.685	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	9/10/2019	195.0	283.54	47.476	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	3/25/2020	86.4	285.69	16.621	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	9/4/2020	210.0	283.11	56.708	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	3/2/2021	176.0	282.21	101.674	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	9/2/2021	264.0	283.45	96.427	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	3/2/2022	387.0	284.60	150.380	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	8/29/2022	378.0	282.69	182.998	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	3/23/2023	333.0	282.91	274.387	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	9/25/2023	Dry	282.91	274.387	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	3/5/2024	153.0	279.54	184.431	2,000.00	9/9/2016	N/A	8/24/2017
MW 3A	Barium	9/30/2024	97.8	279.23	80.483	2,000.00	9/9/2016	N/A	8/24/2017

Table 7

Summary of Ongoing & Newly Identified SSI

Annual Water Quality Report

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 3A	Cobalt	3/1/2016	<0.8	0.8	---	2.8	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	9/9/2016	0.80	0.8	---	2.8	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	3/22/2017	<0.8	0.8	---	2.8	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	8/24/2017	<0.8	0.8	0.994	2.8	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	11/15/2017	4.9	0.8	0.994	2.8	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	2/26/2018	<0.8	0.8	1.019	2.1	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	8/29/2018	<0.8	0.8	1.019	2.1	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	3/18/2019	1.10	0.8	0.553	2.1	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	9/10/2019	1.60	0.8	1.172	2.1	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	3/25/2020	0.90	0.8	0.816	2.1	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	9/4/2020	0.90	0.8	0.736	2.1	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	3/2/2021	2.50	1.0	0.582	2.1	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	9/2/2021	1.70	2.6	0.599	**2.6**	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	3/2/2022	0.80	2.6	0.542	**2.6**	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	8/29/2022	<0.4	2.6	0.910	**2.6**	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	3/23/2023	<0.4	2.6	0.538	**2.6**	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	9/25/2023	Dry	2.6	0.538	**2.6**	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	3/5/2024	1.10	1.8	0.454	2.1	11/15/2017	N/A	8/24/2017
MW 3A	Cobalt	9/30/2024	1.50	1.8	0.671	2.1	11/15/2017	N/A	8/24/2017

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 3A	Nickel	3/1/2016	7.9	4.0	---	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	9/9/2016	<4.0	4.0	---	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	3/22/2017	<4.0	4.0	---	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	8/24/2017	<4.0	4.0	0.005	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	2/26/2018	4.7	4.0	1.087	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	8/29/2018	<8.0	4.0	1.087	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	3/18/2019	4.8	4.0	1.507	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	9/10/2019	4.3	4.0	2.400	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	3/25/2020	4.5	4.0	2.391	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	9/4/2020	<4.0	4.0	2.391	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	3/2/2021	<4.0	4.0	1.567	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	9/2/2021	<4.0	4.0	1.155	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	3/2/2022	<4.0	4.0	2.000	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	8/29/2022	<4.0	4.0	2.000	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	3/23/2023	<4.0	4.0	2.000	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	9/25/2023	Dry	4.0	2.000	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	3/5/2024	12.60	4.0	0.000	100	3/1/2016	N/A	8/24/2017
MW 3A	Nickel	9/30/2024	<4.0	4.0	0.000	100	3/1/2016	N/A	8/24/2017

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 3A	Zinc	3/1/2016	<8.0	49.4	---	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	9/9/2016	8.90	49.4	---	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	3/22/2017	<8.0	49.4	---	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	8/24/2017	<8.0	49.4	---	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	2/26/2018	<8.0	49.4	---	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	8/29/2018	71.80	49.4	0.000	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	3/18/2019	<20	49.4	0.000	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	9/10/2019	14.70	49.4	0.000	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	3/25/2020	<20	49.4	0.000	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	9/4/2020	<20	49.4	0.382	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	3/2/2021	<20	49.4	0.382	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	9/2/2021	<20	49.4	4.000	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	3/2/2022	<20	49.4	4.000	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	8/29/2022	<20	49.4	4.000	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	3/23/2023	<20	49.4	4.000	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	9/25/2023	Dry	49.4	4.000	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	3/5/2024	<20	49.4	4.000	2,000.00	8/29/2018	N/A	8/24/2017
MW 3A	Zinc	9/30/2024	<20	49.4	4.000	2,000.00	8/29/2018	N/A	8/24/2017

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 3A	Bis(2-ethylhexyl)phthalate	3/1/2016	NT	6.0	---	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	9/9/2016	NT	6.0	---	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	3/22/2017	<8.0	6.0	---	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	8/24/2017	NT	6.0	---	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	2/26/2018	193.0	6.0	---	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	8/29/2018	<6	6.0	---	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	3/18/2019	<6	6.0	0.000	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	9/10/2019	<6	6.0	0.000	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	3/25/2020	<6	6.0	3.000	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	9/4/2020	<6	6.0	3.000	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	3/2/2021	<6	6.0	3.000	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	9/2/2021	NT	6.0	3.000	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	3/2/2022	<6	6.0	3.000	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	8/29/2022	NT	6.0	3.000	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	3/23/2023	8.0	6.0	1.309	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	9/25/2023	Dry	6.0	1.309	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	3/5/2024	<6	6.0	1.309	6	2/26/2018	N/A	8/24/2017
MW 3A	Bis(2-ethylhexyl)phthalate	9/30/2024	NT	6.0	1.309	6	2/26/2018	N/A	8/24/2017

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
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 8	Barium	3/1/2016	112.0	273.7	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	9/9/2016	206.0	273.7	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	3/22/2017	160.0	273.7	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	8/24/2017	155.0	273.7	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	2/26/2018	158.0	273.7	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	8/29/2018	198.0	273.7	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	3/18/2019	119.0	283.7	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	9/10/2019	180.0	283.5	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	3/25/2020	121.0	285.7	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	9/4/2020	169.0	283.1	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	3/2/2021	260.0	282.2	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	9/2/2021	208.0	283.5	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	3/2/2022	179.0	284.6	---	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	8/29/2022	300.0	282.7	173.395	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	3/23/2023	177.0	282.9	148.053	2000	8/29/2022	N/A	2/26/2018
MW 8	Barium	9/25/2023	198.0	280.68	144.760	2,000	8/29/2022	N/A	2/26/2018
MW 8	Barium	3/5/2024	201.0	279.54	154.251	2,000	8/29/2022	N/A	2/26/2018
MW 8	Barium	9/30/2024	264.0	279.23	165.830	2,000	8/29/2022	N/A	2/26/2018

KEY:	SSI	SSL LCL>GWPS

Note: The absence of shading indicates that the condition does not exist.

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

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 8	Cobalt	3/1/2016	1.2	0.8	0.585	2.8	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	9/9/2016	4.3	0.8	0.000	2.8	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	3/22/2017	<0.8	0.8	0.29	2.8	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	8/24/2017	<0.8	0.8	0.802	2.8	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	2/26/2018	<0.8	0.8	0	2.8	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	8/29/2018	1.6	0.8	0	2.1	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	3/18/2019	<0.8	0.8	0	2.1	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	9/10/2019	1.0	0.8	0.174	2.1	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	3/25/2020	<0.8	0.8	0.174	2.1	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	9/4/2020	0.5	0.8	0.237	2.1	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	3/2/2021	2.1	1.0	0.084	2.1	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	9/2/2021	1.4	2.6	0.154	**2.6**	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	3/2/2022	0.6	2.6	0.267	**2.6**	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	8/29/2022	2.1	2.6	0.710	**2.6**	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	3/23/2023	0.7	2.6	0.207	**2.6**	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	9/25/2023	0.6	2.6	0.000	**2.6**	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	3/5/2024	0.6	1.8	0.000	2.1	3/1/2016	N/A	2/26/2018
MW 8	Cobalt	9/30/2024	3.1	1.8	0.000	2.1	3/1/2016	N/A	2/26/2018

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

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

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 8	Nickel	3/1/2016	5.4	4.0	2.410	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	9/9/2016	17.4	4.0	1.766	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	10/31/2016	9.8	4.0	1.766	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	3/22/2017	5.5	4.0	2.895	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	8/24/2017	13.7	4.0	5.583	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	2/26/2018	7.6	4.0	5.027	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	8/29/2018	11.8	4.0	5.225	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	3/18/2019	4.7	4.0	4.669	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	9/10/2019	14.9	4.0	4.452	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	3/25/2020	<4.0	4.0	1.278	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	9/4/2020	9.2	4.0	1.06	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	3/2/2021	6.0	4.0	1.616	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	9/2/2021	13.2	4.0	2.006	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	3/2/2022	4.2	4.0	3.503	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	8/29/2022	13.5	4.0	3.554	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	3/23/2023	<4.0	4.0	1.183	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	9/25/2023	15.2	4.0	0.969	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	3/5/2024	5.5	4.0	1.613	100	3/1/2016	N/A	2/26/2018
MW 8	Nickel	9/30/2024	13.3	4.0	1.617	100	3/1/2016	N/A	2/26/2018

Table 7

KEY:	SSI	SSL LCL>GWPS

Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

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 8	Zinc	3/1/2016	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	9/9/2016	9.2	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	3/22/2017	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	8/24/2017	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	2/26/2018	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	8/29/2018	56.3	49.4	0.000	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	3/18/2019	<20.	49.4	0.000	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	9/10/2019	9.2	49.4	0.000	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	3/25/2020	<20.	49.4	0.000	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	9/4/2020	<20.	49.4	2.242	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	3/2/2021	<20.	49.4	2.242	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	9/2/2021	<20.	49.4	4.000	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	3/2/2022	<20.	49.4	4.000	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	8/29/2022	<20	49.4	4.000	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	3/23/2023	<20	49.4	4.000	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	9/25/2023	<20	49.4	4.000	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	3/5/2024	<20	49.4	4.000	2,000	8/29/2018	N/A	2/26/2018
MW 8	Zinc	9/30/2024	<20	49.4	4.000	2,000	8/29/2018	N/A	2/26/2018

Table 7

Summary of Ongoing & Newly Identified SSI

Annual Water Quality Report

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 8	bis(2-ethylhexyl)phthalate	3/1/2016	<10	6.0	0.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	9/9/2016	<10	6.0	0.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	3/22/2017	<8	6.0	5.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	8/24/2017	35.0	6.0	0.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	2/26/2018	262.0	6.0	0.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	8/29/2018	24.0	6.0	0.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	3/18/2019	<6	6.0	0.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	9/10/2019	<6	6.0	0.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	3/25/2020	<6	6.0	0.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	9/4/2020	<6	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	3/2/2021	<6	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	9/2/2021	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	3/2/2022	<6	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	8/29/2022	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	3/23/2023	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	9/25/2023	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	3/5/2024	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 8	bis(2-ethylhexyl)phthalate	9/30/2024	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018

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	KEY:	SSI	SSL LCL>GWPS

Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

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 10	Arsenic	3/1/2016	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	9/9/2016	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	3/22/2017	12.5	4.0	0.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	8/24/2017	4.9	4.0	0.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	2/26/2018	11.2	4.0	1.745	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	8/29/2018	9.7	4.0	5.670	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	3/18/2019	<4.0	4.0	1.944	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	9/10/2019	<4.0	4.0	0.441	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	3/25/2020	<4.0	4.0	0.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	9/4/2020	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	3/2/2021	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	9/2/2021	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	3/2/2022	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	8/29/2022	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	3/23/2023	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	9/25/2023	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	3/5/2024	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018
MW 10	Arsenic	9/30/2024	<4.0	4.0	2.000	10	3/22/2017	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 10	Barium	3/1/2016	405.00	273.70	428.896	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	9/9/2016	623.00	273.70	428.683	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	3/22/2017	676.0	273.70	439.705	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	8/24/2017	519.0	273.70	414.826	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	2/26/2018	589.0	273.70	524.392	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	8/29/2018	592.0	273.70	518.442	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	3/18/2019	213.0	283.71	266.493	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	9/10/2019	377.0	283.54	227.162	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	3/25/2020	412.0	285.69	215.642	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	9/4/2020	408.0	283.11	241.569	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	3/2/2021	413.0	282.21	382.342	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	9/2/2021	458.0	283.45	394.991	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	3/2/2022	394.0	284.60	385.670	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	8/29/2022	395.0	282.69	379.751	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	3/23/2023	354.0	282.91	349.698	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	9/25/2023	376.0	280.68	357.096	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	3/5/2024	440.0	279.54	348.240	2,000	3/1/2016	N/A	2/26/2018
MW 10	Barium	9/30/2024	533.0	279.23	331.332	2,000	3/1/2016	N/A	2/26/2018

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

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

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 10	Cadmium	3/1/2016	<0.8	0.8	---	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	9/9/2016	<0.8	0.8	---	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	3/22/2017	<0.8	0.8	---	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	8/24/2017	<0.8	0.8	0.400	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	2/26/2018	<0.8	0.8	0.400	**5**	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	8/29/2018	<0.8	0.8	0.400	**5**	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	3/18/2019	<0.8	0.8	0.400	**5**	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	9/10/2019	<0.8	0.8	0.400	**5**	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	3/25/2020	<0.8	0.8	0.400	**5**	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	9/4/2020	3.2	0.8	0.000	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	3/2/2021	<0.8	0.8	0.000	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	9/2/2021	<0.8	0.8	0.000	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	3/2/2022	<0.8	0.8	0.000	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	8/29/2022	<0.8	0.8	0.400	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	3/23/2023	<0.8	0.8	0.400	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	9/25/2023	<0.8	0.8	0.400	5	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	3/5/2024	<0.8	0.8	0.400	**5**	9/4/2020	N/A	2/26/2018
MW 10	Cadmium	9/30/2024	<0.8	0.8	0.400	**5**	9/4/2020	N/A	2/26/2018

Table 7

Summary of Ongoing & Newly Identified SSI

Annual Water Quality Report

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 10	Cobalt	3/1/2016	4.9	0.8	4.890	2.8	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	9/9/2016	7.6	0.8	4.982	2.8	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	3/22/2017	8.0	0.8	5.253	2.8	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	8/24/2017	6.7	0.8	5.179	2.8	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	2/26/2018	8.5	0.8	6.804	2.8	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	8/29/2018	9.2	0.8	6.859	2.1	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	3/18/2019	3.9	0.8	4.294	2.1	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	9/10/2019	7.2	0.8	4.435	2.1	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	3/25/2020	8.7	0.8	4.439	2.1	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	9/4/2020	10.0	0.8	4.358	2.1	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	3/2/2021	7.4	1.0	6.796	2.1	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	9/2/2021	10.0	2.6	7.561	**2.6**	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	3/2/2022	2.5	2.6	3.316	**2.6**	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	8/29/2022	5.5	2.6	2.632	**2.6**	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	3/23/2023	1.7	2.6	0.505	**2.6**	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	9/25/2023	7.1	2.6	1.221	**2.6**	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	3/5/2024	5.7	1.8	2.280	2.1	3/1/2016	N/A	2/26/2018
MW 10	Cobalt	9/30/2024	5.7	1.8	2.311	2.1	3/1/2016	N/A	2/26/2018

Table 7

Summary of Ongoing & Newly Identified SSI

Annual Water Quality Report

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 10	Nickel	3/1/2016	24.9	4.0	13.248	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	9/9/2016	17.6	4.0	14.372	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	3/22/2017	15.1	4.0	13.295	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	8/24/2017	12.6	4.0	11.306	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	2/26/2018	13.1	4.0	11.926	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	8/29/2018	16.3	4.0	12.241	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	3/18/2019	8.6	4.0	8.935	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	9/10/2019	9.2	4.0	7.562	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	3/25/2020	14.4	4.0	7.641	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	9/4/2020	15.8	4.0	7.726	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	3/2/2021	10.6	4.0	8.843	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	9/2/2021	12.6	4.0	10.700	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	3/2/2022	13.0	4.0	10.481	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	8/29/2022	12.8	4.0	10.942	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	3/23/2023	8.3	4.0	9.021	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	9/25/2023	15.4	4.0	8.890	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	3/5/2024	11.1	4.0	8.393	100	3/1/2016	N/A	2/26/2018
MW 10	Nickel	9/30/2024	13.5	4.0	8.463	100	3/1/2016	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 10	Zinc	3/1/2016	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 10	Zinc	9/9/2016	17.8	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 10	Zinc	3/22/2017	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 10	Zinc	8/24/2017	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 10	Zinc	2/26/2018	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 10	Zinc	8/29/2018	77.2	49.4	0.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	3/18/2019	25.1	49.4	0.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	9/10/2019	11.0	49.4	0.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	3/25/2020	<20.	49.4	0.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	9/4/2020	<20.	49.4	0.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	3/2/2021	<20.	49.4	1.633	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	9/2/2021	22.1.	49.4	0.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	3/2/2022	<20.	49.4	0.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	8/29/2022	<20.	49.4	0.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	3/23/2023	<20.	49.4	0.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	9/25/2023	<20.	49.4	10.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	3/5/2024	<20.	49.4	10.000	2,000	2/26/2018	N/A	2/26/2018
MW 10	Zinc	9/30/2024	<20.	49.4	10.000	2,000	2/26/2018	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 10	1,4-dichlorobenzene	3/1/2016	<1.0	1.0	0.229	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	9/9/2016	1.1	1.0	0.365	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	3/22/2017	2.4	1.0	0.392	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	8/24/2017	2.3	1.0	0.483	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	2/26/2018	2.7	1.0	1.297	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	8/29/2018	3.0	1.0	2.228	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	3/18/2019	<1.0	1.0	0.807	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	9/10/2019	<1.0	1.0	0.073	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	3/25/2020	<1.0	1.0	0.000	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	9/4/2020	3.2	1.0	0.000	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	3/2/2021	2.3	1.0	0.037	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	9/2/2021	2.8	1.0	0.797	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	3/2/2022	<1.0	1.0	0.798	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	8/29/2022	2.0	1.0	0.736	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	3/23/2023	2.0	1.0	0.104	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	9/25/2023	1.9	1.0	0.239	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	3/5/2024	1.5	1.0	0.669	75	9/9/2016	N/A	2/26/2018
MW 10	1,4-dichlorobenzene	9/30/2024	2.5	1.0	0.611	75	9/9/2016	N/A	2/26/2018

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

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

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 10	Chlorobenzene	3/1/2016	<1.0	1.0	0.348	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	9/9/2016	1.1	1.0	0.346	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	3/22/2017	2.3	1.0	0.443	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	8/24/2017	2.3	1.0	0.491	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	2/26/2018	2.4	1.0	1.298	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	8/29/2018	2.6	1.0	2.234	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	3/18/2019	1.0	1.0	1.219	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	9/10/2019	2.4	1.0	1.230	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	3/25/2020	1.1	1.0	0.784	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	9/4/2020	2.5	1.0	1.223	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	3/2/2021	1.9	1.0	1.204	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	9/2/2021	2.7	1.0	0.798	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	3/2/2022	<1.0	1.0	0.732	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	8/29/2022	1.7	1.0	0.631	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	3/23/2023	<1.0	1.0	0.100	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	9/25/2023	1.7	1.0	0.285	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	3/5/2024	<1.0	1.0	0.285	100	9/9/2016	N/A	2/26/2018
MW 10	Chlorobenzene	9/30/2024	1.5	1.0	0.297	100	9/9/2016	N/A	2/26/2018

Table 7	KEY:	SSI	SSL LCL>GWPS

Note: *The absence of shading indicates that the condition does not exist.*

Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

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 10	Chloroethane	3/1/2016	<1.0	1.0	0.500	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	9/9/2016	<1.0	1.0	0.500	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	3/22/2017	1.0	1.0	0.331	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	8/24/2017	<1.0	1.0	0.331	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	2/26/2018	<1.0	1.0	0.331	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	8/29/2018	1.0	1.0	0.410	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	3/18/2019	<1.0	1.0	0.331	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	9/10/2019	<1.0	1.0	0.331	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	3/25/2020	<1.0	1.0	0.331	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	9/4/2020	<1.0	1.0	0.500	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	3/2/2021	<1.0	1.0	0.500	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	9/2/2021	<1.0	1.0	0.500	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	3/2/2022	<1.0	1.0	0.500	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	8/29/2022	1.6	1.0	0.128	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	3/23/2023	<1.0	1.0	0.128	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	9/25/2023	<1.0	1.0	0.128	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	3/5/2024	<1.0	1.0	0.128	2,800	3/22/2017	N/A	2/26/2018
MW 10	Chloroethane	9/30/2024	<1.0	1.0	0.500	2,800	3/22/2017	N/A	2/26/2018

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

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

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

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 27	Barium	3/1/2016	303.0	273.70	---	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	9/9/2016	293.0	273.70	---	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	1/26/2017	310.0	273.70	---	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	3/22/2017	301.0	273.70	293.523	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	8/24/2017	333.0	273.70	288.913	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	2/26/2018	306.0	273.70	295.851	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	8/29/2018	320.0	273.70	298.008	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	3/18/2019	330.0	283.71	307.928	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	9/10/2019	346.0	283.54	305.688	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	3/25/2020	329.0	285.69	318.531	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	9/4/2020	348.0	283.11	326.317	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	3/2/2021	312.0	282.21	313.965	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	9/2/2021	310.0	283.45	303.942	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	3/2/2022	287.0	284.60	284.610	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	8/29/2022	249.0	282.69	255.051	2000	3/1/2016	N/A	8/24/2017
MW 27	Barium	3/23/2023	234.0	282.69	229.105	2,000	3/1/2016	N/A	8/24/2017
MW 27	Barium	9/25/2023	204.0	280.68	202.905	2,000	3/1/2016	N/A	8/24/2017
MW 27	Barium	3/5/2024	194.0	279.54	190.117	2,000	3/1/2016	N/A	8/24/2017
MW 27	Barium	9/30/2024	200.0	279.23	187.046	2,000	3/1/2016	N/A	8/24/2017

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 27	Bis(2-ethylhexyl)phthalate	3/1/2016	NT	6.0	---	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	9/9/2016	NT	6.0	---	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	3/22/2017	<8	6.0	---	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	8/24/2017	NT	6.0	---	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	2/26/2018	71.0	6.0	---	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	8/29/2018	<6	6.0	---	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	3/18/2019	13.0	6.0	0.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	9/10/2019	<6	6.0	0.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	3/25/2020	<6	6.0	0.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	9/4/2020	<6	6.0	0.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	3/2/2021	<6	6.0	3.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	9/2/2021	NT	6.0	3.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	3/2/2022	<6	6.0	3.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	8/29/2022	NT	6.0	3.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	3/23/2023	<6	6.0	3.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	9/25/2023	NT	6.0	3.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	3/5/2024	NT	6.0	3.000	6	2/26/2018	N/A	9/10/2019
MW 27	Bis(2-ethylhexyl)phthalate	9/30/2024	NT	6.0	3.000	6	2/26/2018	N/A	9/10/2019

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

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

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

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 34	Arsenic	3/1/2016	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	9/9/2016	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	3/22/2017	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	8/24/2017	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	11/15/2017	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	2/26/2018	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	8/29/2018	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	3/18/2019	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	9/10/2019	4.4	4.0	1.188	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	3/25/2020	<4.0	4.0	1.188	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	9/4/2020	<4.0	4.0	1.188	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	3/2/2021	<4.0	4.0	1.188	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	9/2/2021	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	3/2/2022	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	8/29/2022	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	3/23/2023	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	9/25/2023	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	3/5/2024	<4.0	4.0	2.000	10	9/10/2019	N/A	2/26/2018
MW 34	Arsenic	9/30/2024	4.2	4.0	1.256	10	9/10/2019	N/A	2/26/2018

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

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

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 34	Cobalt	3/1/2016	0.8	0.8	0.998	2.8	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	9/9/2016	0.8	0.8	0.575	2.8	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	3/22/2017	<0.8	0.8	0.575	2.8	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	8/24/2017	3.2	0.8	0.349	2.8	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	11/15/2017	<0.8	0.8	0.349	2.8	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	2/26/2018	<0.8	0.8	0	2.8	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	8/29/2018	<0.8	0.8	0	2.1	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	3/18/2019	1.9	0.8	0	2.1	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	9/10/2019	2.9	0.8	0	2.1	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	3/25/2020	2.0	0.8	0.581	2.1	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	9/4/2020	1.7	0.8	1.5	2.1	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	3/2/2021	2.3	1.0	1.622	2.1	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	9/2/2021	5.6	2.6	0.763	**2.6**	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	3/2/2022	0.5	2.6	0.000	**2.6**	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	8/29/2022	1.3	2.6	0.000	**2.6**	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	3/23/2023	<0.4	2.6	0.000	**2.6**	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	9/25/2023	1.6	2.6	0.254	**2.6**	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	3/5/2024	0.5	1.8	0.254	2.1	8/24/2017	N/A	2/26/2018
MW 34	Cobalt	9/30/2024	5.4	1.8	0.000	2.1	8/24/2017	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 34	Nickel	3/1/2016	9.6	4.0	1.518	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	9/9/2016	7.9	4.0	4.840	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	3/22/2017	5.0	4.0	4.512	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	8/24/2017	14.7	4.0	4.512	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	2/26/2018	8.2	4.0	4.132	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	8/29/2018	4.3	4.0	2.466	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	3/18/2019	9.2	4.0	4.053	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	9/10/2019	12.0	4.0	4.678	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	3/25/2020	5.4	4.0	3.561	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	9/4/2020	11.3	4.0	5.986	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	3/2/2021	8.9	4.0	5.896	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	9/2/2021	13.9	4.0	5.623	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	3/2/2022	<4	4.0	3.015	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	8/29/2022	9.0	4.0	2.695	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	3/23/2023	<4	4.0	0.000	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	9/25/2023	10.0	4.0	0.634	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	3/5/2024	7.6	4.0	2.949	100	3/1/2016	N/A	2/26/2018
MW 34	Nickel	9/30/2024	15.9	4.0	2.100	100	3/1/2016	N/A	2/26/2018

Table 7

KEY:	SSI	SSL LCL>GWPS

Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

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 34	1,4-dichlorobenzene	3/1/2016	8.8	1.0	0.000	**75**	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	9/9/2016	8.7	1.0	1.374	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	3/22/2017	4.9	1.0	4.700	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	8/24/2017	7.9	1.0	5.424	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	2/26/2018	2.1	1.0	2.353	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	8/29/2018	2.6	1.0	1.261	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	3/18/2019	<1.0	1.0	0.000	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	9/10/2019	<1.0	1.0	0.146	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	3/25/2020	<1.0	1.0	0.000	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	9/4/2020	7.0	1.0	0.000	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	3/2/2021	10.6	1.0	0.000	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	9/2/2021	7.9	1.0	1.463	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	3/2/2022	1.5	1.0	2.257	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	8/29/2022	3.9	1.0	1.200	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	3/23/2023	1.1	1.0	0.000	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	9/25/2023	9.4	1.0	0.000	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	3/5/2024	<1.0	1.0	0.000	75	3/1/2016	N/A	2/26/2018
MW 34	1,4-dichlorobenzene	9/30/2024	1.4	1.0	0.000	75	3/1/2016	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 34	Benzene	3/1/2016	<1.0	1.0	0.196	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	9/9/2016	<1.0	1.0	0.196	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	3/22/2017	1.2	1.0	0.348	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	8/24/2017	1.3	1.0	0.363	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	2/26/2018	<1.0	1.0	0.363	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	8/29/2018	<1.0	1.0	0.363	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	3/18/2019	<1.0	1.0	0.229	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	9/10/2019	<1.0	1.0	0.500	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	3/25/2020	<1.0	1.0	0.500	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	9/4/2020	<1.0	1.0	0.500	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	3/2/2021	1.8	1.0	0.060	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	9/2/2021	<1.0	1.0	0.060	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	3/2/2022	<1.0	1.0	0.060	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	8/29/2022	<1.0	1.0	0.060	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	3/23/2023	<1.0	1.0	0.500	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	9/25/2023	<1.0	1.0	0.500	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	3/5/2024	<1.0	1.0	0.500	5	3/22/2017	N/A	2/26/2018
MW 34	Benzene	9/30/2024	<1.0	1.0	0.500	5	3/22/2017	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 34	Bis(2-ethylhexyl)phthalate	3/1/2016	<10	6.0	---	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	9/9/2016	<10	6.0	---	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	3/22/2017	<10	6.0	---	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	8/24/2017	<6	6.0	5.000	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	2/26/2018	145.0	6.0	0.000	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	8/29/2018	<6	6.0	0.000	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	3/18/2019	<6	6.0	0.000	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	9/10/2019	46.0	6.0	0.000	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	3/25/2020	<6	6.0	0.000	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	9/4/2020	<6	6.0	0.000	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	3/2/2021	<6	6.0	0.000	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	9/2/2021	NT	6.0	0.000	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	3/2/2022	8.0	6.0	1.309	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	8/29/2022	<6	6.0	1.309	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	3/23/2023	<6	6.0	1.309	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	9/25/2023	NT	6.0	1.309	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	3/5/2024	NT	6.0	1.309	6	2/26/2018	N/A	2/26/2018
MW 34	Bis(2-ethylhexyl)phthalate	9/30/2024	NT	6.0	1.309	6	2/26/2018	N/A	2/26/2018

KEY:	SSI	SSL LCL>GWPS

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

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 34	Chlorobenzene	3/1/2016	2.8	1.0	0.104	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	9/9/2016	2.7	1.0	0.751	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	3/22/2017	2.0	1.0	1.863	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	8/24/2017	3.0	1.0	2.113	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	2/26/2018	<1.0	1.0	0.738	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	8/29/2018	<1.0	1.0	0.059	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	3/18/2019	1.2	1.0	0.000	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	9/10/2019	1.8	1.0	0.262	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	3/25/2020	<1.0	1.0	0.262	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	9/4/2020	2.6	1.0	0.476	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	3/2/2021	4.1	1.0	0.478	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	9/2/2021	3.4	1.0	0.816	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	3/2/2022	<1.0	1.0	0.816	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	8/29/2022	1.7	1.0	0.506	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	3/23/2023	<1.0	1.0	0.000	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	9/25/2023	1.8	1.0	0.275	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	3/5/2024	<1.0	1.0	0.275	100	3/1/2016	N/A	2/26/2018
MW 34	Chlorobenzene	9/30/2024	<1.0	1.0	0.060	100	3/1/2016	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 34	Chloroethane	3/1/2016	2.6	1.0	---	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	9/9/2016	<1.0	1.0	0.128	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	3/22/2017	<1.0	1.0	0.128	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	8/24/2017	<1.0	1.0	0.128	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	2/26/2018	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	8/29/2018	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	3/18/2019	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	9/10/2019	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	3/25/2020	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	9/4/2020	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	3/2/2021	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	9/2/2021	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	3/2/2022	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	8/29/2022	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	3/23/2023	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	9/25/2023	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	3/5/2024	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018
MW 34	Chloroethane	9/30/2024	<1.0	1.0	0.500	2,800	3/1/2016	N/A	2/26/2018

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

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 35	Barium	3/1/2016	676.0	273.70	656.848	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	9/9/2016	664.0	273.70	654.497	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	3/22/2017	629.0	273.70	633.331	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	8/24/2017	667.0	273.70	634.722	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	2/26/2018	637.0	273.70	626.800	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	8/29/2018	580.0	273.70	585.802	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	3/18/2019	1230.0	283.71	421.902	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	9/10/2019	387.0	283.54	280.621	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	3/25/2020	543.0	285.69	246.438	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	9/4/2020	268.0	283.11	100.810	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	3/2/2021	481.0	282.21	278.853	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	9/2/2021	248.0	283.45	289.687	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	3/2/2022	483.0	284.60	217.569	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	8/29/2022	372.0	282.69	264.884	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	3/23/2023	451.0	282.91	265.412	2000	3/1/2016	N/A	2/26/2018
MW 35	Barium	9/25/2023	378.0	280.68	356.594	2,000	3/1/2016	N/A	2/26/2018
MW 35	Barium	3/5/2024	460.0	279.54	360.334	2,000	3/1/2016	N/A	2/26/2018
MW 35	Barium	9/30/2024	448.0	279.23	389.733	2,000	3/1/2016	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 35	Cobalt	3/1/2016	<0.8	0.8	0.400	2.8	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	9/9/2016	<0.8	0.8	0.400	2.8	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	3/22/2017	<0.8	0.8	0.400	2.8	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	8/24/2017	<0.8	0.8	0.400	2.8	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	2/26/2018	<0.8	0.8	0.400	2.1	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	8/29/2018	<0.8	0.8	0.400	2.1	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	3/18/2019	<0.8	0.8	0.400	2.1	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	9/10/2019	4.4	0.8	0.000	2.1	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	3/25/2020	<0.8	0.8	0.000	2.1	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	9/4/2020	0.4	0.8	0.000	2.1	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	3/2/2021	1.5	1.0	0.000	2.1	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	9/2/2021	8.1	2.6	0.000	**2.6**	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	3/2/2022	1.5	2.6	0.000	**2.6**	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	8/29/2022	<0.4	2.6	0.000	**2.6**	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	3/23/2023	<0.4	2.6	0.000	**2.6**	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	9/25/2023	<0.4	2.6	0.028	**2.6**	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	3/5/2024	<0.4	1.8	0.200	2.1	9/10/2019	N/A	2/26/2018
MW 35	Cobalt	9/30/2024	<0.4	1.8	0.200	2.1	9/10/2019	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 35	Nickel	3/1/2016	<4.0	4.0	2.000	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	9/9/2016	<4.0	4.0	2.000	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	3/22/2017	<4.0	4.0	2.000	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	8/24/2017	<4.0	4.0	2.000	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	2/26/2018	<4.0	4.0	2.000	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	8/29/2018	<4.0	4.0	2.000	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	3/18/2019	<4.0	4.0	2.000	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	9/10/2019	6.7	4.0	0.411	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	3/25/2020	<4.0	4.0	0.411	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	9/4/2020	<4.0	4.0	0.411	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	3/2/2021	<4.0	4.0	0.411	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	9/2/2021	4.4	4.0	1.188	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	3/2/2022	<4.0	4.0	1.188	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	8/29/2022	<4.0	4.0	1.188	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	3/23/2023	<4.0	4.0	1.188	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	9/25/2023	<4.0	4.0	2.000	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	3/5/2024	<4.0	4.0	2.000	100	9/10/2019	N/A	2/26/2018
MW 35	Nickel	9/30/2024	<4.0	4.0	2.000	100	9/10/2019	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 35	Zinc	3/1/2016	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	9/9/2016	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	3/22/2017	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	8/24/2017	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	2/26/2018	<8.0	49.4	---	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	8/29/2018	68.4	49.4	0.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	3/18/2019	46.7	49.4	0.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	9/10/2019	9.0	49.4	0.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	3/25/2020	<20.	49.4	0.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	9/4/2020	<20.	49.4	0.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	3/2/2021	<20.	49.4	2.309	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	9/2/2021	<20.	49.4	10.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	3/2/2022	<20.	49.4	10.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	8/29/2022	<20.	49.4	10.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	8/29/2022	<20.	49.4	10.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	8/29/2022	<20.	49.4	10.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	3/5/2024	<20.	49.4	10.000	2,000	8/29/2018	N/A	2/26/2018
MW 35	Zinc	9/30/2024	<20.	49.4	10.000	2,000	8/29/2018	N/A	2/26/2018

Table 7

Summary of Ongoing & Newly Identified SSI

Annual Water Quality Report

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 35	dichlorodifluoromethane	3/1/2016	5.9	1.0	0.349	1000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	9/9/2016	4.3	1.0	1.082	1000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	3/22/2017	3.4	1.0	0.859	1000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	8/24/2017	3.1	1.0	2.695	1000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	2/26/2018	2.1	1.0	2.158	1000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	8/29/2018	1.8	1.0	1.694	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	3/18/2019	1.1	1.0	1.048	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	9/10/2019	1.5	1.0	1.122	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	3/25/2020	2.1	1.0	1.122	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	9/4/2020	<1.0	1.0	0.508	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	3/2/2021	<1.0	1.0	0.221	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	9/2/2021	<1.0	1.0	0.000	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	3/2/2022	1.5	1.0	0.162	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	8/29/2022	1.5	1.0	0.321	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	3/23/2023	<1.0	1.0	0.321	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	9/25/2023	<1.0	1.0	0.321	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	3/5/2024	1.2	1.0	0.330	1,000	3/1/2016	N/A	2/26/2018
MW 35	dichlorodifluoromethane	9/30/2024	1.2	1.0	0.375	1,000	3/1/2016	N/A	2/26/2018

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 35	1,1-dichloroethane	3/1/2016	2.2	1.0	0.000	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	9/9/2016	1.9	1.0	0.213	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	3/22/2017	1.7	1.0	0.698	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	8/24/2017	<1.0	1.0	0.698	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	2/26/2018	1.9	1.0	0.708	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	8/29/2018	1.5	1.0	0.669	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	3/18/2019	1.2	1.0	0.580	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	9/10/2019	1.3	1.0	1.111	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	3/25/2020	1.0	1.0	1.005	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	9/4/2020	<1.0	1.0	0.581	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	3/2/2021	<1.0	1.0	0.361	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	9/2/2021	<1.0	1.0	0.331	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	3/2/2022	<1.0	1.0	0.500	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	8/29/2022	<1.0	1.0	0.500	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	3/23/2023	<1.0	1.0	0.500	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	9/25/2023	<1.0	1.0	0.500	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	3/5/2024	<1.0	1.0	0.500	140	3/1/2016	N/A	2/26/2018
MW 35	1,1-dichloroethane	9/30/2024	<1.0	1.0	0.500	140	3/1/2016	N/A	2/26/2018

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

Tama County Sanitary Landfill

Permit No. 86-SDP-01-72P

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 35	bis(2-ethylhexyl)phthalate	3/1/2016	<10	6.0	2.247	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	9/9/2016	<10	6.0	2.295	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	3/22/2017	<10	6.0	2.295	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	8/24/2017	15.0	6.0	1.619	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	2/26/2018	<6	6.0	1.619	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	8/29/2018	7.0	6.0	2.400	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	3/18/2019	<6	6.0	2.400	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	9/10/2019	<6	6.0	4.234	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	3/25/2020	<6	6.0	4.324	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	9/4/2020	<6	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	3/2/2021	<6	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	9/2/2021	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	3/2/2022	<6	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	8/29/2022	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	3/23/2023	<6	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	9/25/2023	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	3/5/2024	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018
MW 35	bis(2-ethylhexyl)phthalate	9/30/2024	NT	6.0	3.000	6	8/24/2017	N/A	2/26/2018

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
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 36	Barium	3/1/2016	347.0	273.70	304.013	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	9/9/2016	345.0	273.70	325.698	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	1/26/2017	337.0	273.70	325.698	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	3/22/2017	327.0	273.70	328.305	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	8/24/2017	357.0	273.70	326.575	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	2/26/2018	341.0	273.70	325.824	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	8/29/2018	341.0	273.70	327.077	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	3/18/2019	348.0	283.71	337.824	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	9/10/2019	336.0	283.54	335.698	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	3/25/2020	346.0	285.69	336.425	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	9/4/2020	353.0	283.11	337.356	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	3/2/2021	331.0	282.21	329.875	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	9/2/2021	336.0	283.45	329.875	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	3/2/2022	309.0	284.60	310.917	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	8/29/2022	314.0	282.69	307.178	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	3/23/2023	301.0	282.91	297.369	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	9/25/2023	289.0	280.68	290.423	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	3/5/2024	315.0	279.54	290.300	2000	8/24/2017	N/A	8/24/2017
MW 36	Barium	9/30/2024	292.0	279.23	285.520	2000	8/24/2017	N/A	8/24/2017

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS

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 36	Cadmium	3/1/2016	<0.8	0.8	---	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	9/9/2016	<0.8	0.8	---	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	3/22/2017	0.9	0.8	0.231	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	8/24/2017	<0.8	0.8	0.231	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	2/26/2018	<0.8	0.8	0.231	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	8/29/2018	<0.8	0.8	0.231	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	3/18/2019	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	9/10/2019	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	3/25/2020	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	9/4/2020	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	3/2/2021	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	9/2/2021	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	3/2/2022	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	8/29/2022	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	3/23/2023	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	9/25/2023	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	3/5/2024	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019
MW 36	Cadmium	9/30/2024	<0.8	0.8	0.400	5	2/26/2018	N/A	9/10/2019

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 – ***MW-10***

	KEY:	SSI	SSL UCL>GWPS

Table 8
Summary of Ongoing & Newly Identified SSL
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	95% UCL (ug/L)	GWPS Limit (ug/L)	SSL Initial Exceedance	Compliance Date 1st Occurrence	Compliance Date Most Recent	Compliance Date Duration (years)
MW 10	Cobalt	3/1/2016	4.9	8.110	2.8	N/A	N/A	N/A	N/A
MW 10	Cobalt	9/9/2016	7.6	7.768	2.8	N/A	N/A	N/A	N/A
MW 10	Cobalt	3/22/2017	8.0	8.497	2.8	N/A	N/A	N/A	N/A
MW 10	Cobalt	8/24/2017	6.7	8.421	2.8	N/A	N/A	N/A	N/A
MW 10	Cobalt	2/26/2018	8.5	8.596	2.8	N/A	N/A	N/A	N/A
MW 10	Cobalt	8/29/2018	9.2	9.341	2.1	N/A	N/A	N/A	N/A
MW 10	Cobalt	3/18/2019	3.9	9.856	2.1	N/A	N/A	N/A	N/A
MW 10	Cobalt	9/10/2019	7.2	9.965	2.1	N/A	N/A	N/A	N/A
MW 10	Cobalt	3/25/2020	8.7	10.061	2.1	N/A	N/A	N/A	N/A
MW 10	Cobalt	9/4/2020	10.0	10.542	2.1	N/A	N/A	N/A	N/A
MW 10	Cobalt	3/2/2021	7.4	9.854	2.1	N/A	N/A	N/A	N/A
MW 10	Cobalt	9/2/2021	10.0	10.489	**2.6**	N/A	N/A	N/A	N/A
MW 10	Cobalt	3/2/2022	2.5	11.634	**2.6**	N/A	N/A	N/A	N/A
MW 10	Cobalt	8/29/2022	5.5	10.068	**2.6**	N/A	N/A	N/A	N/A
MW 10	Cobalt	3/23/2023	1.7	9.345	**2.6**	N/A	N/A	N/A	N/A
MW 10	Cobalt	9/25/2023	7.1	7.179	**2.6**	N/A	N/A	N/A	N/A
MW 10	Cobalt	3/5/2024	5.7	7.720	2.1	N/A	N/A	N/A	N/A
MW 10	Cobalt	9/30/2024	5.7	7.789	2.1	N/A	N/A	N/A	N/A

Table 9 – Analytical Data Summary

Table 1

Analytical Data Summary for MW-10

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017	8/24/2017	2/26/2018
(3 4)-methylphenol	ug/L							<8		
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<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	<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	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L							<8		
1,3,5-trinitrobenzene	ug/L							<8		
1,3-dichlorobenzene	ug/L							<1		
1,3-dichloropropane	ug/L							<1		
1,3-dinitrobenzene	ug/L							<8		
1,4-dichlorobenzene	ug/L	<1.0	<1.0	<1.0	1.3	<1.0	1.1	2.4	2.3	2.7
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	<5	<5
2-chloronaphthalene	ug/L							<8		
2-chlorophenol	ug/L							<8		
2-hexanone (mbk)	ug/L	<5	<5	<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	<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	<10	<10
Acetonitrile	ug/L							<10		
Acetophenone	ug/L							<8		
Acrolein	ug/L							<10		
Acrylonitrile	ug/L	<5	<5	<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 1

Analytical Data Summary for MW-10

Constituents	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022	8/29/2022
(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	<1	<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	3.0	<1.0	<1.0	<1.0	3.2	2.3	2.8	<1.0	2.0
1,4-naphthoquinone								<8	
1,4-phenylenediamine								<8	
1-naphthylamine								<8	
2,2-dichloropropane								<1	
2,3,4,6-tetrachlorophenol								<8	
2,4,5-t								<.5	
2,4,5-tp (silvex)								<.5	
2,4,5-trichlorophenol								<8	
2,4,6-trichlorophenol								<8	
2,4-d								<2	
2,4-dichlorophenol								<8	
2,4-dimethylphenol								<8	
2,4-dinitrophenol								<8	
2,4-dinitrotoluene								<8	
2,6-dichlorophenol								<8	
2,6-dinitrotoluene								<8	
2-acetylaminofluorene								<8	
2-butanone (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 1

Analytical Data Summary for MW-10

Constituents	3/23/2023	9/25/2023	3/5/2024	9/30/2024
(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	<1.0	1.9	1.5	2.5
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 1

Analytical Data Summary for MW-10

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017	8/24/2017	2/26/2018
Antimony, total	ug/L	<2	<2	<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	6.2	<4.0	<4.0	<4.0	<4.0	<4.0	12.5	4.9	11.2
Azobenzene	ug/L							<8		
Barium, total	ug/L	606	601	547	620	405	623	676	519	589
Benzene	ug/L	<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
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
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L							<8		
Cadmium, total	ug/L	1.3	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L							<.1		
Chlorobenzene	ug/L	1.1	1.2	<1.0	1.4	<1.0	1.1	2.3	2.3	2.4
Chlorobenzilate	ug/L							<8		
Chloroethane	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	<1.0	<1.0
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<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
Chrysene	ug/L							<8		
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	11.0	8.1	6.0	7.0	4.9	7.6	8.0	6.7	8.5
Copper, total	ug/L	9	<4	<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	<1	<1
Dibromomethane	ug/L	<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
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 MW-10

Constituents	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022	8/29/2022
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	9.7	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene								<8	
Barium, total	592	213	377	412	408	413	458	394	395
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	<.8	3.2	<.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
Chlordane								<.1	
Chlorobenzene	2.6	1.0	2.4	1.1	2.5	1.9	2.7	<1.0	1.7
Chlorobenzilate								<8	
Chloroethane	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.6
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	9.2	3.9	7.2	8.7	10.0	7.4	10.0	2.5	5.5
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 1

Analytical Data Summary for MW-10

Constituents	3/23/2023	9/25/2023	3/5/2024	9/30/2024
Antimony, total	<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	<4.0
Azobenzene				
Barium, total	354	376	440	533
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				
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	<1.0	1.7	<1.0	1.5
Chlorobenzilate				
Chloroethane	<1.0	<1.0	<1.0	<1.0
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	1.7	7.1	5.7	5.7
Copper, total	<4	<4	<4	<4
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 1

Analytical Data Summary for MW-10

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017	8/24/2017	2/26/2018
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	ug/L							<1000		
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	<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	<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
Naphthalene	ug/L							<8		
Nickel, total	ug/L	27.4	15.2	17.3	16.3	24.9	17.6	15.1	12.6	13.1
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
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L		41	20						
Styrene	ug/L	<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
Thallium, total	ug/L	<4	<4	<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	<1	<1
Toxaphene	ug/L							<.2		
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	74.8	17.8	<8.0	<8.0	<8.0	17.8	<8.0	<8.0	<8.0

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

Table 1

Analytical Data Summary for MW-10

Constituents	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022	8/29/2022
Hexachlorobutadiene								<8	
Hexachlorocyclopentadiene								<8	
Hexachloroethane								<8	
Hexachloropropene								<8	
Indeno(1,2,3-cd)pyrene								<8	
Isobutanol								<1000	
Isodrin								<8	
Isophorone								<8	
Isosafrole								<8	
Kepone								<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	<2	<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	16.3	8.6	9.2	14.4	15.8	10.6	12.6	13.0	12.8
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	<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	77.2	25.1	11.0	<20.0	<20.0	<20.0	22.1	<20.0	<20.0

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

Table 1

Analytical Data Summary for MW-10

Constituents	3/23/2023	9/25/2023	3/5/2024	9/30/2024
Hexachlorobutadiene				
Hexachlorocyclopentadiene				
Hexachloroethane				
Hexachloropropene				
Indeno(1,2,3-cd)pyrene				
Isobutanol				
Isodrin				
Isophorone				
Isosafrole				
Kepone				
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	8.3	15.4	11.1	13.5
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
Silver, total	<4	<4	<4	<4
Solids, total suspended				
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 2

Analytical Data Summary for MW-20

Constituents	Units	3/20/2014	9/15/2014	1/14/2015	3/6/2015	6/16/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	ug/L	259	177	208	219	221	171	162	209	222
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<4.0	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L		9		4					
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	10.9	8.3	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0

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

Table 2

Analytical Data Summary for MW-20

Constituents	8/24/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	239	239	201	193	142	184	167	217	210	236
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	.8	.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	.8	<.8	<.8	<.8	<.8	<.4	1.0	1.1	.8
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	<4	<4	<8	<4	<4	<4	<4	<4	<4	<4
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<8	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended										
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<4	<2	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	11.4	49.4	23.9	<8.0	<20.0	<20.0	<20.0	44.5	<20.0

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

Table 2

Analytical Data Summary for MW-20

Constituents	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
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
1,2,3-trichloropropane	<1	<1	<1	<1	<1
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
1,4-dichlorobenzene	<1	<1	<1	<1	<1
2-butanone (mek)	<10	<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4
Barium, total	152	231	185	201	194
Benzene	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	<.4	<.4	<.4	.4	<.4
Copper, total	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5
Nickel, total	<4	<4	<4	<4	<4
Selenium, total	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					
Styrene	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1
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 3

Analytical Data Summary for MW-26

Constituents	Units	3/20/2014	9/15/2014	1/14/2015	3/6/2015	6/16/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	ug/L	116	141	118	106	121	156	120	116	123
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<4.0	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Selenium, total	ug/L	<4.0	4.9	<4.0	<4.0	6.3	4.9	4.8	<4.0	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L		8		3					
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	26.3	9.2	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0

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

Table 3

Analytical Data Summary for MW-26

Constituents	8/24/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	<2	<5	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4	<10	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	128	119	117	147	178	199	189	157	179	126
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<10	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<2.0	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<20	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<2.0	<.8	<.8	<.8	<.8	<.4	.9	<.4	.7
Copper, total	<4.0	<10.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	<4	<10	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	<4	<10	<8	<4	<4	<4	<4	<4	<4	<4
Selenium, total	<4.0	10.7	<4.0	<4.0	<4.0	6.1	<4.0	10.8	<4.0	10.5
Silver, total	<4	<10	<8	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended										
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<10	<4	<2	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<50	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	<20.0	182.0	<20.0	<8.0	38.0	<20.0	<20.0	<20.0	<20.0

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

Table 3

Analytical Data Summary for MW-26

Constituents	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
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
1,2,3-trichloropropane	<1	<1	<1	<1	<1
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
1,4-dichlorobenzene	<1	<1	<1	<1	<1
2-butanone (mek)	<10	<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4
Barium, total	142	112	116	118	153
Benzene	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	<.4	<.4	<.4	<.4	<.4
Copper, total	<4.0	<4.0	8.4	<4.0	<4.0
Dibromochloromethane	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5
Nickel, total	<4	<4	<4	<4	<4
Selenium, total	4.1	10.2	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					
Styrene	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1
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 4

Analytical Data Summary for MW-27

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	1/26/2017	3/22/2017	8/24/2017
(3 4)-methylphenol	ug/L								<8	
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	
1,2,3-trichloropropane	ug/L	<1	<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
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								<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
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	<5
2-chloronaphthalene	ug/L								<8	
2-chlorophenol	ug/L								<8	
2-hexanone (mbk)	ug/L	<5	<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	<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	<10
Acetonitrile	ug/L								<10	
Acetophenone	ug/L								<8	
Acrolein	ug/L								<10	
Acrylonitrile	ug/L	<5	<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 4

Analytical Data Summary for MW-27

Constituents	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022
(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 4

Analytical Data Summary for MW-27

Constituents	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
(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 4

Analytical Data Summary for MW-27

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	1/26/2017	3/22/2017	8/24/2017
Antimony, total	ug/L	<2	<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	<4
Azobenzene	ug/L								<8	
Barium, total	ug/L	310	296	299	277	303	293	310	301	333
Benzene	ug/L	<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
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
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								<8	
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								<.1	
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1		<1	<1
Chlorobenzilate	ug/L								<8	
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								<1	
Chromium, total	ug/L	<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
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	ug/L	<4.0	<.8	<.8	<.8	<.8	<.8		<.8	<.8
Copper, total	ug/L	<4	<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	<1
Dibromomethane	ug/L	<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
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 4

Analytical Data Summary for MW-27

Constituents	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022
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	306	320	330	346	329	348	312	310	287
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	71	<6	13	<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	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	<.1								
Chlorobenzene	<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	<.8	<.4	.8	.6	<.4
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 4

Analytical Data Summary for MW-27

Constituents	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
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	249	234	204	194	200
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	<.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 4

Analytical Data Summary for MW-27

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	1/26/2017	3/22/2017	8/24/2017
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	ug/L								<1000	
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	<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	<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
Naphthalene	ug/L								<8	
Nickel, total	ug/L	<4	<4	<4	<4	<4	<4		<4	<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	
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
Silver, total	ug/L	<4	<4	<4	<4	<4	<4		<4	<4
Solids, total suspended	mg/L		21	4						
Styrene	ug/L	<1	<1	<1	<1	<1	<1		<1	<1
Sulfide, total	mg/L								<.1	
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								<.4	
Tin, total	ug/L								<20	
Toluene	ug/L	<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
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	10.7	<8.0	<8.0	<8.0	<8.0	<8.0		<8.0	<8.0

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

Table 4

Analytical Data Summary for MW-27

Constituents	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022
Hexachlorobutadiene	<8								
Hexachlorocyclopentadiene	<8								
Hexachloroethane	<8								
Hexachloropropene	<8								
Indeno(1,2,3-cd)pyrene	<8								
Isobutanol	<1000								
Isodrin	<8								
Isophorone	<8								
Isosafrole	<8								
Kepone	<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	<4	<4	<4	<4	<4	<4	<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	<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	46.3	<20.0	16.2	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 4

Analytical Data Summary for MW-27

Constituents	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
Hexachlorobutadiene		<8			
Hexachlorocyclopentadiene		<8			
Hexachloroethane		<8			
Hexachloropropene		<8			
Indeno(1,2,3-cd)pyrene		<8			
Isobutanol		<1000			
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	<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	<4	<4	<4	<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					
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 5

Analytical Data Summary for MW-33

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017	6/7/2017	8/24/2017
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	<10	<10	<10	<10	<10	<10		<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5		<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2		<2
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4		<4
Barium, total	ug/L	70.8	122.0	112.0	131.0	98.9	158.0	274.0	129.0	163.0
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	<4.0	<.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	<4.0	<4.0	<4.0	<4.0	4.7		<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4		<4
Solids, total suspended	mg/L		33	20						
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	8.3	12.9	<8.0	19.1	<8.0	9.8	<8.0		<8.0

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

Table 5

Analytical Data Summary for MW-33

Constituents	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022	8/29/2022
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	171.0	162.0	282.0	214.0	144.0	209.0	115.0	194.0	189.0	174.0
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<.8	<.8	<.8	<.8	<.4	.9	2.6	<.4	<.4
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	<4	<8	<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	<4.0
Silver, total	<4	<8	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended										
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<2	<2	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	40.8	30.2	<8.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 5

Analytical Data Summary for MW-33

Constituents	3/23/2023	9/25/2023	3/5/2024	9/30/2024
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
1,2,3-trichloropropane	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1
2-butanone (mek)	<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5
Acetone	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4
Barium, total	82.7	147.0	77.3	167.0
Benzene	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<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
Dibromochloromethane	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5
Nickel, total	<4	<4	<4	<4
Selenium, total	<4.0	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4
Solids, total suspended				
Styrene	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2
Toluene	<1	<1	<1	<1
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 6

Analytical Data Summary for MW-34

Constituents	Units	3/20/2014	8/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017	8/24/2017
(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	<1.0		<1.0	<1.0	5.8	8.8	8.7	4.9	7.9
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 6

Analytical Data Summary for MW-34

Constituents	11/15/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021
(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	<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							
1,3,5-trinitrobenzene		<8							
1,3-dichlorobenzene		<1							
1,3-dichloropropane		<1							
1,3-dinitrobenzene		<8							
1,4-dichlorobenzene		2.1	2.6	<1.0	<1.0	<1.0	7.0	10.6	7.9
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 6

Analytical Data Summary for MW-34

Constituents	3/2/2022	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
(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	<1	<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
1,2-dinitrobenzene			<8			
1,3,5-trinitrobenzene			<8			
1,3-dichlorobenzene			<1			
1,3-dichloropropane			<1			
1,3-dinitrobenzene			<8			
1,4-dichlorobenzene	1.5	3.9	1.1	9.4	<1.0	1.4
1,4-naphthoquinone			<8			
1,4-phenylenediamine			<8			
1-naphthylamine			<8			
2,2-dichloropropane			<1			
2,3,4,6-tetrachlorophenol			<8			
2,4,5-t			<.5			
2,4,5-tp (silvex)			<.5			
2,4,5-trichlorophenol			<8			
2,4,6-trichlorophenol			<8			
2,4-d			<2			
2,4-dichlorophenol			<8			
2,4-dimethylphenol			<8			
2,4-dinitrophenol			<8			
2,4-dinitrotoluene			<8			
2,6-dichlorophenol			<8			
2,6-dinitrotoluene			<8			
2-acetylaminofluorene			<8			
2-butanone (mek)	<10	<10	<5	<10	<10	<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 6

Analytical Data Summary for MW-34

Constituents	Units	3/20/2014	8/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017	8/24/2017
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	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene	ug/L									
Barium, total	ug/L	217		124	161	193	130	135	101	195
Benzene	ug/L	<1.0		<1.0	<1.0	1.4	<1.0	<1.0	1.2	1.3
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	14	36	<10	13	<10	<10	<10	<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	<1.0		<1.0	<1.0	2.0	2.8	2.7	2.0	3.0
Chlorobenzilate	ug/L									
Chloroethane	ug/L	<1.0		<1.0	<1.0	<1.0	1.6	<1.0	<1.0	<1.0
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	<4.0		<.8	<.8	2.1	.8	.8	<.8	3.2
Copper, total	ug/L	6.9		<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	<1	<1	<1	<1	<1	<1	<1	<1	<1
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 6

Analytical Data Summary for MW-34

Constituents	11/15/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021
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	<2.0	<4.0	<4.0	<4.0	4.4	<4.0	<4.0	<4.0	<4.0
Azobenzene		<8							
Barium, total	157	159	136	117	190	158	185	200	247
Benzene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0
Benzo(a)anthracene		<8							
Benzo(a)pyrene		<8							
Benzo(b)fluoranthene		<8							
Benzo(g,h,i)perylene		<8							
Benzo(k)fluoranthene		<8							
Benzyl alcohol		<8							
Beryllium, total		<4	<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		145	<6	<6	46	<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		<1.0	<1.0	1.2	1.8	<1.0	2.6	4.1	3.4
Chlorobenzilate		<8							
Chloroethane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform		<1	<1	<1	<1	<1	<1	<1	<1
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	1.9	2.9	2.0	1.7	2.3	5.6
Copper, total		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total		<.005							
Delta-bhc		<.05							
Diallate		<8							
Dibenzo(a,h)anthracene		<8							
Dibenzofuran		<8							
Dibromochloromethane		<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane		<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane		<1	<1	<1	<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 6

Analytical Data Summary for MW-34

Constituents	3/2/2022	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
Antimony, total	<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	4.2
Azobenzene			<8			
Barium, total	106	206	114	200	192	207
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)anthracene			<8			
Benzo(a)pyrene			<8			
Benzo(b)fluoranthene			<8			
Benzo(g,h,i)perylene			<8			
Benzo(k)fluoranthene			<8			
Benzyl alcohol			<8			
Beryllium, total	<4	<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	<6	<6			
Bromochloromethane	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate			<8			
Cadmium, total	<.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	<1.0	1.7	<1.0	1.8	<1.0	<1.0
Chlorobenzilate			<8			
Chloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
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	.5	1.3	<.4	1.6	.5	5.4
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total			<.005			
Delta-bhc			<.05			
Diallate			<8			
Dibenzo(a,h)anthracene			<8			
Dibenzofuran			<8			
Dibromochloromethane	<1	<1	<1	<1	<1	<1
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 6

Analytical Data Summary for MW-34

Constituents	Units	3/20/2014	8/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017	8/24/2017
Hexachlorobutadiene	ug/L									
Hexachlorocyclopentadiene	ug/L									
Hexachloroethane	ug/L									
Hexachloropropene	ug/L									
Indeno(1,2,3-cd)pyrene	ug/L									
Isobutanol	ug/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	4.4		<4.0	5.5	14.7	9.6	7.9	5.0	14.7
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			95	29					
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	31.2	<8.0	<8.0	<8.0	<8.0

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

Table 6

Analytical Data Summary for MW-34

Constituents	11/15/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021
Hexachlorobutadiene		<8							
Hexachlorocyclopentadiene		<8							
Hexachloroethane		<8							
Hexachloropropene		<8							
Indeno(1,2,3-cd)pyrene		<8							
Isobutanol		<1000							
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		8.2	4.3	9.2	12.0	5.4	11.3	8.9	13.9
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	<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	<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	45.2	28.8	10.5	<20.0	<20.0	<20.0	<20.0

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

Table 6

Analytical Data Summary for MW-34

Constituents	3/2/2022	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
Hexachlorobutadiene			<8			
Hexachlorocyclopentadiene			<8			
Hexachloroethane			<8			
Hexachloropropene			<8			
Indeno(1,2,3-cd)pyrene			<8			
Isobutanol			<1000			
Isodrin			<8			
Isophorone			<8			
Isosafrole			<8			
Kepone			<8			
Lead, total	<4	<4	<4	<4	<4	<4
Mercury, total			<.5			
Methacrylonitrile			<1			
Methapyrilene			<8			
Methoxychlor			<.05			
Methyl iodide	<1	<1	<2	<1	<1	<1
Methyl methacrylate			<1			
Methyl methanesulfonate			<8			
Methyl parathion			<.4			
Methylene chloride	<5	<5	<5	<5	<5	<5
Naphthalene			<8			
Nickel, total	<4.0	9.0	<4.0	10.0	7.6	15.9
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	<4
Silver, total	<4	<4	<4	<4	<4	<4
Solids, total suspended						
Styrene	<1	<1	<1	<1	<1	<1
Sulfide, total			<.1			
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 7

Analytical Data Summary for MW-35

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017	8/24/2017	2/26/2018
(3 4)-methylphenol	ug/L									<8
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	3.1	<1.0	<1.0	<1.0	2.2	1.9	1.7	<1.0	1.9
1,1-dichloroethylene	ug/L	<1	<1	<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	<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	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-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	<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	<5	<5
2-chloronaphthalene	ug/L									<8
2-chlorophenol	ug/L									<8
2-hexanone (mbk)	ug/L	<5	<5	<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	<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	<10	<10
Acetonitrile	ug/L									<10
Acetophenone	ug/L									<8
Acrolein	ug/L									<10
Acrylonitrile	ug/L	<5	<5	<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 7

Analytical Data Summary for MW-35

Constituents	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022	8/29/2022
(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	1.5	1.2	1.3	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
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	<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									
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	<10	<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 7

Analytical Data Summary for MW-35

Constituents	3/23/2023	9/25/2023	3/5/2024	9/30/2024
(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	<1.0	<1.0	<1.0	<1.0
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	<1	<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	<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)	<5	<10	<10	<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	<10	<10	<10
Acetonitrile	<10			
Acetophenone	<8			
Acrolein	<10			
Acrylonitrile	<5	<5	<5	<5
Aldrin	<.05			
Allyl chloride	<1			
Alpha-bhc	<.05			
Anthracene	<8			

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

Table 7

Analytical Data Summary for MW-35

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017	8/24/2017	2/26/2018
Antimony, total	ug/L	<2	<2	<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	<4	<4
Azobenzene	ug/L									<8
Barium, total	ug/L	772	668	740	695	676	664	629	667	637
Benzene	ug/L	<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
Beta-bhc	ug/L									<.05
Bis (2-chloroethoxy) methane	ug/L									<8
Bis(2-chloroethyl) ether	ug/L									<8
Bis(2-chloroisopropyl) ether	ug/L									<8
Bis(2-ethylhexyl) phthalate	ug/L	<10	20	<10	13	<10	<10	<10	15	<6
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L									<8
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L									<.1
Chlorobenzene	ug/L	<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
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<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
Chrysene	ug/L									<8
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<4.0	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cyanide, total	mg/L									.012
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
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	3.5	2.3	7.0	<1.0	5.9	4.3	3.4	3.1	2.1
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
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 7

Analytical Data Summary for MW-35

Constituents	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022	8/29/2022
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	580	1230	387	543	268	481	248	483	372
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	7	<6	<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									
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	4.4	<.8	.4	1.5	8.1	1.5	<.4
Copper, total	<4	<4	<4	<4	<4	<4	5	<4	<4
Cyanide, total	.008	<.005	<.005	<.005	<.005	<.005		<.005	
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	1.8	1.1	1.5	2.1	<1.0	<1.0	<1.0	1.5	1.5
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 7

Analytical Data Summary for MW-35

Constituents	3/23/2023	9/25/2023	3/5/2024	9/30/2024
Antimony, total	<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
Azobenzene	<8			
Barium, total	451	378	460	448
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	<.8	<.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	<1.0	<1.0	1.2	1.2
Dieldrin	<.05			
Diethyl phthalate	<8			
Dimethoate	<.4			
Dimethylphthalate	<8			
Di-n-butyl phthalate	<8			
Di-n-octyl phthalate	<8			
Dinoseb	<.5			
Diphenylamine	<8			
Disulfoton	<.4			
Endosulfan i	<.05			
Endosulfan ii	<.05			
Endosulfan sulfate	<.05			
Endrin	<.05			
Endrin aldehyde	<.05			
Ethyl methacrylate	<10			
Ethyl methanesulfonate	<8			
Ethylbenzene	<1	<1	<1	<1
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 7

Analytical Data Summary for MW-35

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017	8/24/2017	2/26/2018
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	ug/L									<1000
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	<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	<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
Naphthalene	ug/L									<8
Nickel, total	ug/L	<4.0	<4.0	<4.0	<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									<.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
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L		113	10						
Styrene	ug/L	<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
Thallium, total	ug/L	<4	<4	<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	<1	<1
Toxaphene	ug/L									<.2
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0

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

Table 7

Analytical Data Summary for MW-35

Constituents	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022	8/29/2022
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
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	<4.0	6.7	<4.0	<4.0	<4.0	4.4	<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	<2	<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	68.4	46.7	9.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 7

Analytical Data Summary for MW-35

Constituents	3/23/2023	9/25/2023	3/5/2024	9/30/2024
Hexachlorobutadiene	<8			
Hexachlorocyclopentadiene	<8			
Hexachloroethane	<8			
Hexachloropropene	<8			
Indeno(1,2,3-cd)pyrene	<8			
Isobutanol	<1000			
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	<2	<1	<1	<1
Methyl methacrylate	<1			
Methyl methanesulfonate	<8			
Methyl parathion	<.4			
Methylene chloride	<5	<5	<5	<5
Naphthalene	<8			
Nickel, total	<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
Silver, total	<4	<4	<4	<4
Solids, total suspended				
Styrene	<1	<1	<1	<1
Sulfide, total	<.1			
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 8

Analytical Data Summary for MW-36

Constituents	Units	3/20/2014	9/15/2014	1/14/2015	3/6/2015	8/24/2015	3/1/2016	9/9/2016	1/26/2017	3/22/2017
(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 8

Analytical Data Summary for MW-36

Constituents	8/24/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021
(3 4)-methylphenol		<8							
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-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	<1	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene		<8							
1,3,5-trinitrobenzene		<8							
1,3-dichlorobenzene		<1							
1,3-dichloropropane		<1							
1,3-dinitrobenzene		<8							
1,4-dichlorobenzene	<1	<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	<5
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 8

Analytical Data Summary for MW-36

Constituents	3/2/2022	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
(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	<1	<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
1,2-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	<5	<10	<10	<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 8

Analytical Data Summary for MW-36

Constituents	Units	3/20/2014	9/15/2014	1/14/2015	3/6/2015	8/24/2015	3/1/2016	9/9/2016	1/26/2017	3/22/2017
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	293	302		344	322	347	345	337	327
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	5.9	<.8	<.8	<.8	<.8	<.8		.9
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	<4.0	<.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
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 8

Analytical Data Summary for MW-36

Constituents	8/24/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016		<.1							
Arochlor 1221		<.2							
Arochlor 1232		<.2							
Arochlor 1242		<.2							
Arochlor 1248		<.2							
Arochlor 1254		<.1							
Arochlor 1260		<.1							
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Azobenzene		<8							
Barium, total	357	341	341	348	336	346	353	331	336
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	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane		<.1							
Chlorobenzene	<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	<.8	<.8	<.4	1.5	<.4
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 8

Analytical Data Summary for MW-36

Constituents	3/2/2022	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
Antimony, total	<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
Azobenzene			<8			
Barium, total	309	314	301	289	315	292
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	<.4	<.4	<.4	<.4	<.4
Copper, total	<4	<4	<4	<4	<4	12
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 8

Analytical Data Summary for MW-36

Constituents	Units	3/20/2014	9/15/2014	1/14/2015	3/6/2015	8/24/2015	3/1/2016	9/9/2016	1/26/2017	3/22/2017
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	ug/L									<1000
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	<4	<4		<4	<4	<4	<4		<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
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		18		3					
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	<1.0	<1.0		<1.0	<1.0	<1.0	<1.0		<1.0
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	12.2		<8.0	9.8	<8.0	<8.0		<8.0

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

Table 8

Analytical Data Summary for MW-36

Constituents	8/24/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021
Hexachlorobutadiene		<8							
Hexachlorocyclopentadiene		<8							
Hexachloroethane		<8							
Hexachloropropene		<8							
Indeno(1,2,3-cd)pyrene		<8							
Isobutanol		<1000							
Isodrin		<8							
Isophorone		<8							
Isosafrole		<8							
Kepone		<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	<4	<4	<4	<4	<4	<4	<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	<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	<4	<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	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
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	8.2	<8.0	40.3	<20.0	<8.0	<20.0	<20.0	<20.0	<20.0

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

Table 8

Analytical Data Summary for MW-36

Constituents	3/2/2022	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
Hexachlorobutadiene			<8			
Hexachlorocyclopentadiene			<8			
Hexachloroethane			<8			
Hexachloropropene			<8			
Indeno(1,2,3-cd)pyrene			<8			
Isobutanol			<1000			
Isodrin			<8			
Isophorone			<8			
Isosafrole			<8			
Kepone			<8			
Lead, total	<4	<4	<4	<4	<4	<4
Mercury, total			<.5			
Methacrylonitrile			<1			
Methapyrilene			<8			
Methoxychlor			<.05			
Methyl iodide	<1	<1	<2	<1	<1	<1
Methyl methacrylate			<1			
Methyl methanesulfonate			<8			
Methyl parathion			<.4			
Methylene chloride	<5	<5	<5	<5	<5	<5
Naphthalene			<8			
Nickel, total	<4	<4	<4	<4	<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	<4
Silver, total	<4	<4	<4	<4	<4	<4
Solids, total suspended						
Styrene	<1	<1	<1	<1	<1	<1
Sulfide, total			<.1			
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	<1.0	<1.0	3.5	<1.0	<1.0	<1.0
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-37

Constituents	Units	3/20/2014	9/15/2014	1/14/2015	3/6/2015	6/16/2015	8/24/2015	3/1/2016	9/9/2016	3/22/2017
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	ug/L	131.0	95.3	89.2	82.1	85.0	69.1	67.7	77.6	77.4
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	8.8	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	4.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	5.2	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	5.8	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Selenium, total	ug/L	11.3	9.3	6.0	6.7	6.3	5.5	4.4	4.7	4.1
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L		32		36					
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	15.6	11.2	<8.0	<8.0	<8.0	<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-37

Constituents	8/24/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	82.3	78.9	59.2	61.3	60.1	69.1	58.6	64.5	61.8	71.0
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<.8	<.8	<.8	<.8	<.8	<.4	1.0	1.8	<.4
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	<4.0	<4.0	<8.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Selenium, total	7.1	5.8	11.6	14.6	20.2	17.6	14.7	18.9	17.4	20.0
Silver, total	<4	<4	<8	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended										
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<4	<2	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	<8.0	28.7	<20.0	<8.0	<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-37

Constituents	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
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
1,2,3-trichloropropane	<1	<1	<1	<1	<1
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
1,4-dichlorobenzene	<1	<1	<1	<1	<1
2-butanone (mek)	<10	<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4
Barium, total	46.2	60.7	66.9	61.8	43.7
Benzene	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1
Chromium, total	<8.0	<8.0	<8.0	<8.0	<8.0
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	<.4	<.4	<.4	<.4	<.4
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0
Dibromochloromethane	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0
Selenium, total	23.1	16.4	14.5	16.5	10.2
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					
Styrene	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1
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 10

Analytical Data Summary for MW-3A

Constituents	Units	3/20/2014	4/9/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	10/31/2016	3/22/2017
(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 10

Analytical Data Summary for MW-3A

Constituents	8/24/2017	11/15/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021
(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 10

Analytical Data Summary for MW-3A

Constituents	9/2/2021	3/2/2022	8/29/2022	3/23/2023	3/5/2024	9/30/2024
(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	<1	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene				<8		
1,3,5-trinitrobenzene				<8		
1,3-dichlorobenzene				<1		
1,3-dichloropropane				<1		
1,3-dinitrobenzene				<8		
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone				<8		
1,4-phenylenediamine				<8		
1-naphthylamine				<8		
2,2-dichloropropane				<1		
2,3,4,6-tetrachlorophenol				<8		
2,4,5-t				<.5		
2,4,5-tp (silvex)				<.5		
2,4,5-trichlorophenol				<8		
2,4,6-trichlorophenol				<8		
2,4-d				<2		
2,4-dichlorophenol				<8		
2,4-dimethylphenol				<8		
2,4-dinitrophenol				<8		
2,4-dinitrotoluene				<8		
2,6-dichlorophenol				<8		
2,6-dinitrotoluene				<8		
2-acetylaminofluorene				<8		
2-butanone (mek)	<5	<10	<10	<5	<10	<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 10

Analytical Data Summary for MW-3A

Constituents	Units	3/20/2014	4/9/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	10/31/2016	3/22/2017
Antimony, total	ug/L		<2	<2	<2	<2	<2	<2		<2
Arochlor 1016	ug/L									<.1
Arochlor 1221	ug/L									<.2
Arochlor 1232	ug/L									<.2
Arochlor 1242	ug/L									<.2
Arochlor 1248	ug/L									<.2
Arochlor 1254	ug/L									<.1
Arochlor 1260	ug/L									<.1
Arsenic, total	ug/L		<4.0	<4.0	<4.0	<4.0	<4.0	6.1	4.7	<4.0
Azobenzene	ug/L									<8
Barium, total	ug/L	308.0	178.0	102.0	115.0	125.0	102.0	369.0	308.0	140.0
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	<4.0	<4.0	1.0	1.5	.9	<.8	.8		<.8
Copper, total	ug/L		6.2	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0
Cyanide, total	mg/L									<.005
Delta-bhc	ug/L									<.05
Diallate	ug/L									<8
Dibenzo(a,h)anthracene	ug/L									<8
Dibenzofuran	ug/L									<8
Dibromochloromethane	ug/L		<1	<1	<1	<1	<1	<1		<1
Dibromomethane	ug/L		<1	<1	<1	<1	<1	<1		<1
Dichlorodifluoromethane	ug/L									<1
Dieldrin	ug/L									<.05
Diethyl phthalate	ug/L									<8
Dimethoate	ug/L									<.4
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 10

Analytical Data Summary for MW-3A

Constituents	8/24/2017	11/15/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021
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	4.5	9.4	<4.0	5.6	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene			<8						
Barium, total	535.0	516.0	154.0	379.0	72.3	195.0	86.4	210.0	176.0
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			193	<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		<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	4.9	<.8	<.8	1.1	1.6	.9	.9	2.5
Copper, total	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total			<.005						
Delta-bhc			<.05						
Diallate			<8						
Dibenzo(a,h)anthracene			<8						
Dibenzofuran			<8						
Dibromochloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1		<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane			<1						
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 10

Analytical Data Summary for MW-3A

Constituents	9/2/2021	3/2/2022	8/29/2022	3/23/2023	3/5/2024	9/30/2024
Antimony, total	<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	4.1	<4.0	<4.0	<4.0	<4.0	10.1
Azobenzene				<8		
Barium, total	264.0	387.0	378.0	333.0	153.0	97.8
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		8	<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	1.7	.8	<.4	.7	1.1	1.5
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total				<.005		
Delta-bhc				<.05		
Diallate				<8		
Dibenzo(a,h)anthracene				<8		
Dibenzofuran				<8		
Dibromochloromethane	<1	<1	<1	<1	<1	<1
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 10

Analytical Data Summary for MW-3A

Constituents	Units	3/20/2014	4/9/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	10/31/2016	3/22/2017
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	ug/L									<1000
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		<4.0	<4.0	5.0	7.1	7.9	<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			48	52					
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		<20.0	<8.0	<8.0	<8.0	<8.0	8.9		<8.0

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

Table 10

Analytical Data Summary for MW-3A

Constituents	8/24/2017	11/15/2017	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021
Hexachlorobutadiene			<8						
Hexachlorocyclopentadiene			<8						
Hexachloroethane			<8						
Hexachloropropene			<8						
Indeno(1,2,3-cd)pyrene			<8						
Isobutanol			<1000						
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		4.7	<8.0	4.8	4.3	4.5	<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	<4	<4	<4	<4
Silver, total	<4		<4	<8	<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		<8.0	71.8	<20.0	14.7	<20.0	<20.0	<20.0

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

Table 10

Analytical Data Summary for MW-3A

Constituents	9/2/2021	3/2/2022	8/29/2022	3/23/2023	3/5/2024	9/30/2024
Hexachlorobutadiene				<8		
Hexachlorocyclopentadiene				<8		
Hexachloroethane				<8		
Hexachloropropene				<8		
Indeno(1,2,3-cd)pyrene				<8		
Isobutanol				<1000		
Isodrin				<8		
Isophorone				<8		
Isosafrole				<8		
Kepone				<8		
Lead, total	<4	<4	<4	<4	<4	<4
Mercury, total				<.5		
Methacrylonitrile				<1		
Methapyrilene				<8		
Methoxychlor				<.05		
Methyl iodide	<1	<1	<1	<2	<1	<1
Methyl methacrylate				<1		
Methyl methanesulfonate				<8		
Methyl parathion				<.4		
Methylene chloride	<5	<5	<5	<5	<5	<5
Naphthalene				<8		
Nickel, total	<4.0	<4.0	<4.0	<4.0	12.6	<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				<.1		
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 11

Analytical Data Summary for MW-8

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	10/31/2016	3/22/2017	8/24/2017
(3 4)-methylphenol	ug/L								<8	
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	
1,2,3-trichloropropane	ug/L	<1	<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
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								<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
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	<5
2-chloronaphthalene	ug/L								<8	
2-chlorophenol	ug/L								<8	
2-hexanone (mbk)	ug/L	<5	<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	<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	<10
Acetonitrile	ug/L								<10	
Acetophenone	ug/L								<8	
Acrolein	ug/L								<10	
Acrylonitrile	ug/L	<5	<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 11

Analytical Data Summary for MW-8

Constituents	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022
(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	<1
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	<5
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 11

Analytical Data Summary for MW-8

Constituents	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
(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 11

Analytical Data Summary for MW-8

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	10/31/2016	3/22/2017	8/24/2017
Antimony, total	ug/L	<2	<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	5.5	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0
Azobenzene	ug/L								<8	
Barium, total	ug/L	298	81	148	150	112	206		160	155
Benzene	ug/L	<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
Beta-bhc	ug/L								<.05	
Bis (2-chloroethoxy) methane	ug/L								<8	
Bis(2-chloroethyl) ether	ug/L								<8	
Bis(2-chloroisopropyl) ether	ug/L								<8	
Bis(2-ethylhexyl) phthalate	ug/L	<10	<10	25	<10	<10	<10		<8	35
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								<8	
Cadmium, total	ug/L	1.0	<.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								<.1	
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1		<1	<1
Chlorobenzilate	ug/L								<8	
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								<1	
Chromium, total	ug/L	<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
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	ug/L	17.3	<.8	.8	.9	1.2	4.3		<.8	<.8
Copper, total	ug/L	21.1	<4.0	4.1	<4.0	<4.0	<4.0		<4.0	<4.0
Cyanide, total	mg/L								<.005	
Delta-bhc	ug/L								<.05	
Diallate	ug/L								<8	
Dibenzo(a,h)anthracene	ug/L								<8	
Dibenzofuran	ug/L								<8	
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1		<1	<1
Dibromomethane	ug/L	<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
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 11

Analytical Data Summary for MW-8

Constituents	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022
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	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene									<8
Barium, total	158	198	119	180	121	169	260	208	179
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	262	24	<6	<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	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane									<.1
Chlorobenzene	<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	1.6	<.8	1.0	<.8	.5	2.1	1.4	.6
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total									<.005
Delta-bhc									<.05
Diallate									<8
Dibenzo(a,h)anthracene									<8
Dibenzofuran									<8
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<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 11

Analytical Data Summary for MW-8

Constituents	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
Antimony, total	<2	<2	<2	<2	<2
Arochlor 1016					
Arochlor 1221					
Arochlor 1232					
Arochlor 1242					
Arochlor 1248					
Arochlor 1254					
Arochlor 1260					
Arsenic, total	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene					
Barium, total	300	177	198	201	264
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	<.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	2.1	<.4	.6	.6	3.1
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 11

Analytical Data Summary for MW-8

Constituents	Units	3/20/2014	9/15/2014	3/6/2015	8/24/2015	3/1/2016	9/9/2016	10/31/2016	3/22/2017	8/24/2017
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	ug/L								<1000	
Isodrin	ug/L								<8	
Isophorone	ug/L								<8	
Isosafrole	ug/L								<8	
Kepone	ug/L								<8	
Lead, total	ug/L	<4.0	<4.0	4.4	<4.0	<4.0	<4.0		<4.0	<4.0
Mercury, total	ug/L								<.5	
Methacrylonitrile	ug/L								<1	
Methapyrilene	ug/L								<8	
Methoxychlor	ug/L								<.05	
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1		<1	<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
Naphthalene	ug/L								<8	
Nickel, total	ug/L	30.3	<4.0	5.0	6.9	5.4	17.4	9.8	5.5	13.7
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	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4		<4	<4
Solids, total suspended	mg/L		22	19						
Styrene	ug/L	<1	<1	<1	<1	<1	<1		<1	<1
Sulfide, total	mg/L								<.1	
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								<.4	
Tin, total	ug/L								<20	
Toluene	ug/L	<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
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	21.5	13.4	<8.0	<8.0	<8.0	9.2		<8.0	<8.0

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

Table 11

Analytical Data Summary for MW-8

Constituents	2/26/2018	8/29/2018	3/18/2019	9/10/2019	3/25/2020	9/4/2020	3/2/2021	9/2/2021	3/2/2022
Hexachlorobutadiene									<8
Hexachlorocyclopentadiene									<8
Hexachloroethane									<8
Hexachloropropene									<8
Indeno(1,2,3-cd)pyrene									<8
Isobutanol									<1000
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	<4.0
Mercury, total									<.5
Methacrylonitrile									<1
Methapyrilene									<8
Methoxychlor									<.05
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<2
Methyl methacrylate									<1
Methyl methanesulfonate									<8
Methyl parathion									<.4
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene									<8
Nickel, total	7.6	11.8	4.7	14.9	<4.0	9.2	6.0	13.2	4.2
Nitrobenzene									<8
N-nitrosodiethylamine									<8
N-nitrosodimethylamine									<8
N-nitrosodi-n-butylamine									<8
N-nitroso-di-n-propylamine									<8
N-nitrosodiphenylamine									<8
N-nitrosomethylethylamine									<8
N-nitrosopiperidine									<8
N-nitrosopyrrolidine									<8
O,o,o-triethyl phosphorothioate									<.4
O-toluidine									<8
Parathion									<.4
P-dimethylaminoazobenzene									<8
Pentachlorobenzene									<8
Pentachloronitrobenzene (pcnb)									<8
Pentachlorophenol									<8
Phenacetin									<8
Phenanthrene									<8
Phenol									<8
Phorate									<.4
Pronamide									<8
Propionitrile									<10
Pyrene									<8
Safrole									<8
Selenium, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	<4	<8	<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	56.3	<20.0	9.2	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 11

Analytical Data Summary for MW-8

Constituents	8/29/2022	3/23/2023	9/25/2023	3/5/2024	9/30/2024
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
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	13.5	<4.0	15.2	5.5	13.3
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	<4.0	8.5	<4.0	<4.0	<4.0
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 12

Analytical Data Summary for SW-101

Constituents	Units	9/16/2014	1/14/2015	8/24/2015	3/1/2016
1,1,1,2-tetrachloroethane	ug/L	<1		<1	<1
1,1,1-trichloroethane	ug/L	<1		<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1		<1	<1
1,1,2-trichloroethane	ug/L	<1		<1	<1
1,1-dichloroethane	ug/L	<1		<1	<1
1,1-dichloroethylene	ug/L	<1		<1	<1
1,2,3-trichloropropane	ug/L	<1		<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1		<1	<1
1,2-dibromoethane	ug/L	<1		<1	<1
1,2-dichlorobenzene	ug/L	<1		<1	<1
1,2-dichloroethane	ug/L	<1		<1	<1
1,2-dichloropropane	ug/L	<1		<1	<1
1,4-dichlorobenzene	ug/L	<1		<1	<1
2-butanone (mek)	ug/L	<5		<5	<5
2-hexanone (mbk)	ug/L	<5		<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5		<5	<5
Acetone	ug/L	<10		<10	<10
Acrylonitrile	ug/L	<5		<5	<5
Antimony, total	ug/L	<2		<2	<2
Arsenic, total	ug/L	<4		<4	<4
Barium, total	ug/L	79.4		120.0	173.0
Benzene	ug/L	<1		<1	<1
Beryllium, total	ug/L	<4		<4	<4
Bromochloromethane	ug/L	<1		<1	<1
Bromodichloromethane	ug/L	<1		<1	<1
Bromoform	ug/L	<1		<1	<1
Bromomethane	ug/L	<1		<1	<1
Cadmium, total	ug/L	<.8		<.8	<.8
Carbon disulfide	ug/L	<1		<1	<1
Carbon tetrachloride	ug/L	<1		<1	<1
Chlorobenzene	ug/L	<1		<1	<1
Chloroethane	ug/L	<1		<1	<1
Chloroform	ug/L	<1		<1	<1
Chloromethane	ug/L	<1		<1	<1
Chromium, total	ug/L	<8		<8	<8
Cis-1,2-dichloroethylene	ug/L	<1		<1	<1
Cis-1,3-dichloropropene	ug/L	<1		<1	<1
Cobalt, total	ug/L	10.2	5.8	5.0	1.8
Copper, total	ug/L	<4		<4	<4
Dibromochloromethane	ug/L	<1		<1	<1
Dibromomethane	ug/L	<1		<1	<1
Ethylbenzene	ug/L	<1		<1	<1
Lead, total	ug/L	<4		<4	<4
Methyl iodide	ug/L	<1		<1	<1
Methylene chloride	ug/L	<5		<5	<5
Nickel, total	ug/L	13.4	15.5	9.6	<4.0
Selenium, total	ug/L	<4		<4	<4
Silver, total	ug/L	<4		<4	<4
Solids, total suspended	mg/L	12			
Styrene	ug/L	<1		<1	<1
Tetrachloroethylene	ug/L	<1		<1	<1
Thallium, total	ug/L	<4		<4	<4
Toluene	ug/L	<1		<1	<1
Trans-1,2-dichloroethylene	ug/L	<1		<1	<1
Trans-1,3-dichloropropene	ug/L	<1		<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5		<5	<5
Trichloroethylene	ug/L	<1		<1	<1
Trichlorofluoromethane	ug/L	<1		<1	<1
Vanadium, total	ug/L	<20		<20	<20
Vinyl acetate	ug/L	<5		<5	<5
Vinyl chloride	ug/L	<1		<1	<1
Xylenes, total	ug/L	<2		<2	<2
Zinc, total	ug/L	<8		<8	<8

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

Table 13

Analytical Data Summary for SW-3

Constituents	Units	3/20/2014	9/15/2014	8/24/2015	3/1/2016	3/22/2017	3/18/2019	3/25/2020
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	<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
1,4-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	<10	<10	<10	<10	<10	<10
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	65.8	204.0	137.0	126.0	188.0	190.0	174.0
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	<4.0	<.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	4.9	<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		<3 *					
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	<2	<2
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	<8	<8	<8	<8	<20	<20

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

Table 10 – Historic SSI and SSL – ***MW-10***

Table 10
Historic SSI & SSL
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

KEY:	SSI	SSL LCL>GWPS	SSL UCL>GWPS

Note: The absence of shading indicates that the condition does not ex

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	95% LCL (ug/L)	95% UCL (ug/L)
MW 10	Cobalt	3/1/2016	4.9	4.890	8.110
MW 10	Cobalt	9/9/2016	7.6	4.982	7.768
MW 10	Cobalt	3/22/2017	8.0	5.253	8.497
MW 10	Cobalt	8/24/2017	6.7	5.179	8.421
MW 10	Cobalt	2/26/2018	8.5	6.804	8.596
MW 10	Cobalt	8/29/2018	9.2	6.859	9.341
MW 10	Cobalt	3/18/2019	3.9	4.294	9.856
MW 10	Cobalt	9/10/2019	7.2	4.435	9.965
MW 10	Cobalt	3/25/2020	8.7	4.439	10.061
MW 10	Cobalt	9/4/2020	10.0	4.358	10.542
MW 10	Cobalt	3/2/2021	7.4	6.796	9.854
MW 10	Cobalt	9/2/2021	10.0	7.561	10.489
MW 10	Cobalt	3/2/2022	2.5	3.316	11.634
MW 10	Cobalt	8/29/2022	5.5	2.632	10.068
MW 10	Cobalt	3/23/2023	1.7	0.505	9.345
MW 10	Cobalt	9/25/2023	7.1	1.221	7.179
MW 10	Cobalt	3/5/2024	5.7	2.280	7.720
MW 10	Cobalt	9/30/2024	5.7	2.311	7.789

Table 11 – Corrective Action Trend Analysis – ***MW-10***

Table 11
Corrective Action Trend Analysis
Annual Water Quality Report
Tama County Sanitary Landfill
Permit No. 86-SDP-01-72P

Monitoring Well	Compound	Sample Date	Current Condition	Trend	N	Projected Year to Completion (IAC 113.10(9)"e"
MW 10	Cobalt	3/1/2016	SSI	decreasing	1	2027 - Phase 4 Cell Development
MW 10	Cobalt	9/9/2016	SSI	decreasing	2	2027 - Phase 4 Cell Development
MW 10	Cobalt	3/22/2017	SSI	decreasing	3	2027 - Phase 4 Cell Development
MW 10	Cobalt	8/24/2017	SSI	decreasing	4	2027 - Phase 4 Cell Development
MW 10	Cobalt	2/26/2018	SSI	decreasing	5	2027 - Phase 4 Cell Development
MW 10	Cobalt	8/29/2018	SSI	decreasing	6	2027 - Phase 4 Cell Development
MW 10	Cobalt	3/18/2019	SSI	decreasing	7	2027 - Phase 4 Cell Development
MW 10	Cobalt	9/10/2019	SSI	decreasing	8	2027 - Phase 4 Cell Development
MW 10	Cobalt	3/25/2020	SSI	decreasing	9	2027 - Phase 4 Cell Development
MW 10	Cobalt	9/4/2020	SSI	decreasing	10	2027 - Phase 4 Cell Development
MW 10	Cobalt	3/2/2021	SSI	decreasing	11	2027 - Phase 4 Cell Development
MW 10	Cobalt	9/2/2021	SSI	decreasing	12	2027 - Phase 4 Cell Development
MW 10	Cobalt	3/2/2022	No-SSI	decreasing	13	2027 - Phase 4 Cell Development
MW 10	Cobalt	8/29/2022	SSI	decreasing	14	2027 - Phase 4 Cell Development
MW 10	Cobalt	3/23/2023	No-SSI	static	15	2027 - Phase 4 Cell Development
MW 10	Cobalt	9/25/2023	SSI	static	16	2027 - Phase 4 Cell Development
MW 10	Cobalt	3/5/2024	SSI	static	17	2027 - Phase 4 Cell Development
MW 10	Cobalt	9/30/2024	SSI	static	18	2027 - Phase 4 Cell Development

Table 12 – Leachate Thickness Summary

Table 12
Leachate Level Summary
Tama County Sanitary Landfill
2024

Date/Location	Phase 1 (LPZ-102)	Phase 2 East (LPZ-104)	Phase 3 West (LPZ-108)
January	3”	4”	6”
February	1”	2”	6.6”
3/5/2024	0”	0”	7.2”
April	0”	0”	6.6”
May	1”	2”	9”
June	1”	2”	7.2”
July	3”	2”	4”
August	2”	2”	6”
9/30/2024	3”	3”	7”
October	3”	2”	5”
November	2”	3”	3”
December	2”	2”	4”

Table 12A – Groundwater Separation Summary

Table 12A
Groundwater Separation - Active Area
Tama County Sanitary Landfill

Groundwater Underdrain Piezometer

Well		Date of Measurements	
		3/5/2024	9/30/2024
UD-2	bottom of waste (feet MSL)	916	916
(Phase 1)	FL UD-2 (feet MSL)	910	910
	Measured water level (feet)	0.17	0.42
	Elevation water in GPZ (feet MSL)	910.17	910.42
	Minimum Separation (ft)	5.83	5.58

Groundwater Underdrain Piezometer

Well		Date of Measurements	
		3/5/2024	9/30/2024
UD-3	bottom of waste (feet MSL)	917	917
(Phase 2)	FL UD-3 (feet MSL)	912	912
	Measured water level (feet)	0.42	0.42
	Elevation water in GPZ (feet MSL)	912.42	912.42
	Minimum Separation (ft)	4.58	4.58

Groundwater Underdrain Piezometer

Well		Date of Measurements	
		4/2/2024	10/10/2024
UD-4	bottom of waste (feet MSL)	914.4	914.4
(Phase 3)	FL UD-4 (feet MSL)	909.15	909.15
	Measured water level (feet)	1.3	0.3
	Elevation water in GPZ (feet MSL)	910.45	909.45
	Minimum Separation (ft)	3.95	4.95

Table 13 – Gas Monitoring Summary

Table 13
Annual Methane Gas Evaluation Report
Tama County Sanitary Landfill
2024

Readings are % LEL

Location/Date	3/5/24	June, 24	9/30/24	Dec., 24
A-1*	0	0	0	0
A-2*	0	0	0	0
A-3*	0	0	0	0
A-4*	0	0	0	0
A-5*	0	0	0	0
A-6*	0	0	0	0
A-7*	0	0	0	0
A-8*	0	0	0	0
GP-1	0	0	0	0
GP-2	0	0	broken	0
GP-3	0	0	0	0
GP-4	0	0	0	0
GP-5	0	0	0	0
GP-6	0	0	0	0
TL-1 (North Tile)	0	0	0	0
UD-1 (SW-101 Manhole)	0	0	0	0
UD-2 (Phase 1 Piezometer)	**27.9**	0	**91.3**	**21**
UD-3 (Phase 2 Piezometer)	0	**17**	**80.8**	**63**
UD-4 (Phase 3 Piezometer)	0	0	0	0
GU Manhole	0	0	**17.5**	0
SCALEHOUSE	0	0	0	0
SCALE PIT	0	0	0	0
RECYCLING BUILDING	0	0	0	0
SHOP BUILDING	0	0	0	0
STORAGE BUILDING	0	0	0	0

*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

Monitoring Activities Information (Field Forms)

Tama County Sanitary Landfill
PERMIT # 86-SDP-01-72P

3/5/2024 Sampled by: Glenn Hunter Weather conditions:Sunny, calm, 35-50 degrees

IDNR Form 542-1322

Monitoring Well: MW-3A(dg)

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

GENERAL INFORMATION

TOC	976.00
Well Depth	17.56
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	976.00
Well Depth	17.56
Top Screen	968.44
Bottom Screen	958.44
Bottom Well	958.44
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	13.00
Top sample	963.00
Bottom sample	959.00
Turbidity(NTU)	6.11

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	12:17	15.10	960.90	

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		6.11
Appendix I	Metals	150	150		6.11
Appendix I	VOC	240	240		6.11
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2-EHP)				
Supplemental					
Total			400	0	

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

TOC	976.00
Well Depth	17.56

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/5/2024	12:17	15.10	960.90	1	2.5	yes
After purging				976.00			
Top of Screen after construction				968.44			
				7.56	feet above (+) or below (-) top screen		
Bottom of Well after construction				958.44			
Bottom of Well	3/5/2024		17.40	958.60			
				0.16	feet sedimentation		
Before Sampling				976.00			
Recovery	3/5/2024	12:19	16.60	959.40			
Recovery	3/5/2024	14:48	16.35	959.65			
Recovery				976.00			
Recovery				976.00			

IDNR Form 542-1322

Monitoring Well: MW-8B(dg)

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

GENERAL INFORMATION

TOC	932.21
Well Depth	20.01
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	932.21
Well Depth	20.01
Top Screen	922.20
Bottom Screen	912.20
Bottom Well	912.20
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	918.21
Bottom sample	914.21
Turbidity(NTU)	2.20

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	10:37	12.49	919.72	

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		2.20
Appendix I	Metals	150	150		2.20
Appendix I	VOC	240	240		2.20
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	932.21
Well Depth	20.01

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/5/2024	10:37	12.49	919.72	3	2.4	no
After purging				932.21			
Top of Screen after construction				922.20			
				10.01	feet above (+) or below (-) top screen		
Bottom of Well after construction				912.20			
Bottom of Well	3/5/2024		19.90	912.31			
				0.11	feet sedimentation		
Before Sampling				932.21			
Recovery	3/5/2024	10:41	18.00	914.21			
Recovery	3/5/2024	14:33	14.95	917.26			
Recovery				932.21			
Recovery				932.21			

IDNR Form 542-1322

Monitoring Well: MW-10(dg)

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

GENERAL INFORMATION

TOC	952.96
Well Depth	19.92
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	952.96
Well Depth	19.92
Top Screen	943.04
Bottom Screen	933.04
Bottom Well	933.04
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	938.96
Bottom sample	934.96
Turbidity(NTU)	13.50

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	10:58	10.95	942.01	

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		13.50
Appendix I	Metals	150	150		13.50
Appendix I	VOC	240	240		13.50
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	952.96
Well Depth	19.92

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/5/2024	10:58	10.95	942.01	3	2.1	no
After purging				952.96			
Top of Screen after construction				943.04			
				9.92	feet above (+) or below (-) top screen		
Bottom of Well after construction				933.04			
Bottom of Well	3/5/2024		19.90	933.06			
				0.02	feet sedimentation		
Before Sampling				952.96			
Recovery	3/5/2024	11:02	17.56	935.40			
Recovery	3/5/2024	14:36	13.45	939.51			
Recovery				952.96			
Recovery				952.96			

IDNR Form 542-1322

Monitoring Well: MW-20(ug)

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

GENERAL INFORMATION

TOC	987.91
Well Depth	25.97
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	987.91
Well Depth	25.97
Top Screen	971.94
Bottom Screen	961.94
Bottom Well	961.94
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	22.00
Top sample	965.91
Bottom sample	961.91
Turbidity(NTU)	3.88

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	10:01	23.68	964.23	

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		3.88
Appendix I	Metals	150	150		3.88
Appendix I	VOC	240	240		3.88
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	987.91
Well Depth	25.97

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/5/2024	10:01	23.68	964.23	0	0.0	yes
After purging				987.91			
Top of Screen after construction				971.94			
				15.97	feet above (+) or below (-) top screen		
Bottom of Well after construction				961.94			
Bottom of Well	3/5/2024		25.9	962.01			
				0.07	feet sedimentation		
Before Sampling				987.91			
Recovery				987.91			
Recovery				987.91			
Recovery				987.91			
Recovery				987.91			

IDNR Form 542-1322

Monitoring Well: MW-26(ug)

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

GENERAL INFORMATION

TOC	914.95
Well Depth	20.34
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	914.95
Well Depth	20.34
Top Screen	904.61
Bottom Screen	894.61
Bottom Well	894.61
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	13.00
Top sample	901.95
Bottom sample	897.95
Turbidity(NTU)	2.37

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	9:25	11.68	903.27	

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	bis(2)				
Supplemental					
Total			400	0	

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

TOC	914.95
Well Depth	20.34

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/5/2024	9:25	11.68	903.27	2	1.4	no
After purging				914.95			
Top of Screen after construction				904.61			
				10.34	feet above (+) or below (-) top screen		
Bottom of Well after construction				894.61			
Bottom of Well	3/5/2024		19.90	895.05			
				0.44	feet sedimentation		
Before Sampling				914.95			
Recovery	3/5/2024	9:27	17.30	897.65			
Recovery	3/5/2024	14:28	12.35	902.60			
Recovery				914.95			
Recovery				914.95			

IDNR Form 542-1322

Monitoring Well: MW-27 (dg)

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

GENERAL INFORMATION

TOC	932.89
Well Depth	27.69
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	932.89
Well Depth	27.69
Top Screen	915.20
Bottom Screen	905.20
Bottom Well	905.20
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	21.00
Top sample	911.89
Bottom sample	907.89
Turbidity(NTU)	0.49

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	11:25	13.06	919.83	

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		0.49
Appendix I	Metals	150	150		0.49
Appendix I	VOC	240	240		0.49
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	932.89
Well Depth	27.69

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/5/2024	11:25	13.06	919.83	3	1.3	no
After purging				932.89			
Top of Screen after construction				915.20			
				17.69	feet above (+) or below (-) top screen		
Bottom of Well after construction				905.20			
Bottom of Well	3/5/2024		27.50	905.39			
				0.19	feet sedimentation		
Before Sampling				932.89			
Recovery	3/5/2024	11:28	22	910.89			
Recovery	3/5/2024	14:39	16.32	916.57			
Recovery				932.89			
Recovery				932.89			

IDNR Form 542-1322

Monitoring Well: MW-33 (dg)

Primary Sampling Method: No-Purge for Appendix I

Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	950.02
Well Depth	22.27
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	950.02
Well Depth	22.27
Top Screen	937.75
Bottom Screen	927.75
Bottom Well	927.75
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	15.00
Top sample	935.02
Bottom sample	931.02
Turbidity(NTU)	0.97

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	10:14	10.56	939.46	

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		0.97
Appendix I	Metals	150	150		0.97
Appendix I	VOC	240	240		0.97
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	950.02
Well Depth	22.27

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/5/2024	10:14	10.56	939.46	3	1.6	no
After purging				950.02			
Top of Screen after construction				937.75			
				12.27	feet above (+) or below (-) top screen		
Bottom of Well after construction				927.75			
Bottom of Well	3/5/2024		21.60	928.42			
				0.67	feet sedimentation		
Before Sampling				950.02			
Recovery	3/5/2024	10:17	16.10	933.92			
Recovery	3/5/2024	14:31	10.59	939.43			
Recovery				950.02			
Recovery				950.02			

IDNR Form 542-1322

Monitoring Well: MW-34 (dg)

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

GENERAL INFORMATION

TOC	969.61
Well Depth	17.69
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	969.61
Well Depth	17.69
Top Screen	961.92
Bottom Screen	951.92
Bottom Well	951.92
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	12.00
Top sample	957.61
Bottom sample	953.61
Turbidity(NTU)	13.80

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	12:43	11.15	958.46	

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		13.80
Appendix I	Metals	150	150		13.80
Appendix I	VOC	240	240		13.80
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	969.61	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	17.69	Before purging	3/5/2024	12:43	11.15	958.46	2	1.9	no
		After purging				969.61			
		Top of Screen after construction				961.92			
						7.69	feet above (+) or below (-) top screen		
		Bottom of Well after construction				951.92			
		Bottom of Well	3/5/2024		17.40	952.21			
						0.29	feet sedimentation		
		Before Sampling				969.61			
		Recovery	3/5/2024	12:46	14.92	954.69			
		Recovery	3/5/2024	14:50	13.63	955.98			
		Recovery				969.61			
		Recovery				969.61			

IDNR Form 542-1322

Monitoring Well: MW-35 (dg)

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

GENERAL INFORMATION

TOC	974.02
Well Depth	22.99
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	974.02
Well Depth	22.99
Top Screen	961.03
Bottom Screen	951.03
Bottom Well	951.03
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.00
Top sample	958.02
Bottom sample	954.02
Turbidity(NTU)	1.28

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	11:41	8.21	965.81	

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		1.28
Appendix I	Metals	150	150		1.28
Appendix I	VOC	240	240		1.28
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental	cyanide				
Total			400	0	

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

		2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
TOC	974.02								
Well Depth	22.99	Before purging	3/5/2024	11:41	8.21	965.81	3	1.2	no
		After purging				974.02			
		Top of Screen after construction				961.03			
						12.99	feet above (+) or below (-) top screen		
		Bottom of Well after construction				951.03			
		Bottom of Well	3/5/2024		22.50	951.52			
						0.49	feet sedimentation		
		Before Sampling				974.02			
		Recovery	3/5/2024	11:45	16.43	957.59			
		Recovery	3/5/2024	14:41	14.45	959.57			
		Recovery				974.02			
		Recovery				974.02			

IDNR Form 542-1322

Monitoring Well: MW-36 (dg)

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

GENERAL INFORMATION

TOC	977.15
Well Depth	27.89
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	977.15
Well Depth	27.89
Top Screen	959.26
Bottom Screen	949.26
Bottom Well	949.26
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	21.00
Top sample	956.15
Bottom sample	952.15
Turbidity(NTU)	1.07

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	11:58	16.21	960.94	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		1.07
Appendix I	Metals	150	150		1.07
Appendix I	VOC	240	240		1.07
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	977.15
Well Depth	27.89

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/5/2024	11:58	16.21	960.94	3	1.6	no
After purging				977.15			
Top of Screen after construction				959.26			
				17.89	feet above (+) or below (-) top screen		
Bottom of Well after construction				949.26			
Bottom of Well	3/5/2024		27.15	950.00			
				0.74	feet sedimentation		
Before Sampling				977.15			
Recovery	3/5/2024	12:02	24.85	952.30			
Recovery	3/5/2024	14:45	20.46	956.69			
Recovery				977.15			
Recovery				977.15			

IDNR Form 542-1322

Monitoring Well: MW-37 (ug)

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

GENERAL INFORMATION

TOC	978.74
Well Depth	20.65
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	978.74
Well Depth	20.65
Top Screen	968.09
Bottom Screen	958.09
Bottom Well	958.09
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	964.74
Bottom sample	960.74
Turbidity(NTU)	0.78

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	9:41	14.47	964.27	

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		0.78
Appendix I	Metals	150	150		0.78
Appendix I	VOC	240	240		0.78
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	978.74	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	20.65	Before purging	3/5/2024	9:41	14.47	962.68	2	2.0	no
		After purging				977.15			
		Top of Screen after construction				968.09			
						9.06	feet above (+) or below (-) top screen		
		Bottom of Well after construction				958.09			
		Bottom of Well	3/5/2024		20.20	958.54			
						0.45	feet sedimentation		
		Before Sampling				977.15			
		Recovery	3/5/2024	9:42	18.15	959.00			
		Recovery	3/5/2024	14:41	15.58	961.57			
		Recovery				977.15			
		Recovery				977.15			

IDNR Form 542-1322

Monitoring Well: PZ-11(dg)

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

GENERAL INFORMATION

TOC	952.92
Well Depth	45.50
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	952.92
Well Depth	45.25
Top Screen	912.42
Bottom Screen	907.42
Bottom Well	907.42
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	36.00
Top sample	916.92
Bottom sample	912.92
Turbidity(NTU)	1.19

Date	Time	Water Level	Water Elevation	Notes
3/5/2024	11:11	34.4	918.52	

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		1.19
Appendix I	Metals	150	150		1.19
Appendix I	VOC	240	240		1.19
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental					
Supplemental					
Total			400	0	

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

TOC	952.92	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	45.50	Before purging	3/5/2024	11:11	34.4	918.52		0.0	
		After purging				952.96			
		Top of Screen after construction				912.42			
						40.54	feet above (+) or below (-) top screen		
		Bottom of Well after construction				907.42			
		Bottom of Well	3/5/2024		45.25	907.71			
						0.29	feet sedimentation		
		Before Sampling				952.96			
		Recovery	3/5/2024			952.96			
		Recovery	3/5/2024			952.96			
		Recovery				952.96			
		Recovery				952.96			

Tama County Sanitary Landfill
PERMIT # 86-SDP-01-72P

3/5/2024 Sampled by: Glenn Hunter Weather conditions:Sunny, calm, 35-50 degrees

IDNR Form 542-1324

	Date	Time	Type	Flowing	Quantity			Discolored	Odor	Litter
SW-3 (dg)	3/5/2024		Open tile	Dry	Dry			No	No	No
										Turbidity(NTU)

Tama County Sanitary Landfill
PERMIT # 86-SDP-01-72P

9/30/2024 Sampled by: Glenn Hunter Weather conditions:Sunny, calm, 65-80 degrees

IDNR Form 542-1322

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

Monitoring Well: MW-3A(dg)

GENERAL INFORMATION

TOC	976.00
Well Depth	17.56
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	976.00
Well Depth	17.56
Top Screen	968.44
Bottom Screen	958.44
Bottom Well	958.44
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	13.00
Top sample	963.00
Bottom sample	959.00
Turbidity(NTU)	128.00

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	11:23	14.05	961.95	

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		128.00
Appendix I	Metals	150	150		128.00
Appendix I	VOC	240	240		128.00
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2-EHP)				
Supplemental					
Total			400	0	

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

TOC	976.00
Well Depth	17.56

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/30/2024	11:23	14.05	961.95		0.0	
After purging				976.00			
Top of Screen after construction				968.44			
				7.56	feet above (+) or below (-) top screen		
Bottom of Well after construction				958.44			
Bottom of Well	9/30/2024		17.40	958.60			
				0.16	feet sedimentation		
Before Sampling				976.00			
Recovery				976.00			
Recovery				976.00			
Recovery				976.00			
Recovery				976.00			

IDNR Form 542-1322

Monitoring Well: MW-8B(dg)

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

GENERAL INFORMATION

TOC	932.21
Well Depth	20.01
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	932.21
Well Depth	20.01
Top Screen	922.20
Bottom Screen	912.20
Bottom Well	912.20
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	918.21
Bottom sample	914.21
Turbidity(NTU)	8.45

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	10:09	11.67	920.54	

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		8.45
Appendix I	Metals	150	150		8.45
Appendix I	VOC	240	240		8.45
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	932.21	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	20.01	Before purging	9/30/2024	10:09	11.67	920.54		0.0	
		After purging				932.21			
		Top of Screen after construction				922.20			
						10.01	feet above (+) or below (-) top screen		
		Bottom of Well after construction				912.20			
		Bottom of Well	9/30/2024		19.90	912.31			
						0.11	feet sedimentation		
		Before Sampling				932.21			
		Recovery				932.21			
		Recovery				932.21			
		Recovery				932.21			
		Recovery				932.21			

IDNR Form 542-1322

Primary Sampling Method: No-Purge for Appendix I

Monitoring Well: MW-10(dg)

Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	952.96
Well Depth	19.92
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	952.96
Well Depth	19.92
Top Screen	943.04
Bottom Screen	933.04
Bottom Well	933.04
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	938.96
Bottom sample	934.96
Turbidity(NTU)	2.82

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	10:22	13.71	939.25	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.82
Appendix I	Metals	150	150		2.82
Appendix I	VOC	240	240		2.82
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	952.96
Well Depth	19.92

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/30/2024	10:22	13.71	939.25		0.0	
After purging				952.96			
Top of Screen after construction				943.04			
				9.92	feet above (+) or below (-) top screen		
Bottom of Well after construction				933.04			
Bottom of Well	9/30/2024		19.90	933.06			
				0.02	feet sedimentation		
Before Sampling				952.96			
Recovery				952.96			
Recovery				952.96			
Recovery				952.96			
Recovery				952.96			

IDNR Form 542-1322

Monitoring Well: MW-20(ug)

Primary Sampling Method: No-Purge for Appendix I

Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	987.91
Well Depth	25.97
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	987.91
Well Depth	25.97
Top Screen	971.94
Bottom Screen	961.94
Bottom Well	961.94
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	20.00
Top sample	967.91
Bottom sample	963.91
Turbidity(NTU)	0.77

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	9:11	18.97	968.94	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		0.77
Appendix I	Metals	150	150		0.77
Appendix I	VOC	240	240		0.77
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	987.91
Well Depth	25.97

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/30/2024	9:11	18.97	968.94		0.0	
After purging				987.91			
Top of Screen after construction				971.94			
				15.97	feet above (+) or below (-) top screen		
Bottom of Well after construction				961.94			
Bottom of Well	9/30/2024		25.9	962.01			
				0.07	feet sedimentation		
Before Sampling				987.91			
Recovery				987.91			
Recovery				987.91			
Recovery				987.91			
Recovery				987.91			

IDNR Form 542-1322

Monitoring Well: MW-26(ug)

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

GENERAL INFORMATION

TOC	914.95
Well Depth	20.34
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	914.95
Well Depth	20.34
Top Screen	904.61
Bottom Screen	894.61
Bottom Well	894.61
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	900.95
Bottom sample	896.95
Turbidity(NTU)	0.88

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	9:35	12.14	902.81	

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		0.88
Appendix I	Metals	150	150		0.88
Appendix I	VOC	240	240		0.88
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	914.95
Well Depth	20.34

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/30/2024	9:35	12.14	902.81		0.0	
After purging				914.95			
Top of Screen after construction				904.61			
				10.34	feet above (+) or below (-) top screen		
Bottom of Well after construction				894.61			
Bottom of Well	9/30/2024		19.90	895.05			
				0.44	feet sedimentation		
Before Sampling				914.95			
Recovery				914.95			
Recovery				914.95			
Recovery				914.95			
Recovery				914.95			

IDNR Form 542-1322

Monitoring Well: MW-27 (dg)

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

GENERAL INFORMATION

TOC	932.89
Well Depth	27.69
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	932.89
Well Depth	27.69
Top Screen	915.20
Bottom Screen	905.20
Bottom Well	905.20
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	21.00
Top sample	911.89
Bottom sample	907.89
Turbidity(NTU)	1.39

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	10:44	10.13	922.76	

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		1.39
Appendix I	Metals	150	150		1.39
Appendix I	VOC	240	240		1.39
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	932.89
Well Depth	27.69

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/30/2024	10:44	10.13	922.76		0.0	
After purging				932.89			
Top of Screen after construction				915.20			
				17.69	feet above (+) or below (-) top screen		
Bottom of Well after construction				905.20			
Bottom of Well	9/30/2024		27.50	905.39			
				0.19	feet sedimentation		
Before Sampling				932.89			
Recovery				932.89			
Recovery				932.89			
Recovery				932.89			
Recovery				932.89			

IDNR Form 542-1322

Monitoring Well: MW-33 (dg)

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

GENERAL INFORMATION

TOC	950.02
Well Depth	22.27
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	950.02
Well Depth	22.27
Top Screen	937.75
Bottom Screen	927.75
Bottom Well	927.75
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	15.00
Top sample	935.02
Bottom sample	931.02
Turbidity(NTU)	1.50

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	9:48	13.1	936.92	

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		1.50
Appendix I	Metals	150	150		1.50
Appendix I	VOC	240	240		1.50
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	950.02
Well Depth	22.27

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/30/2024	9:48	13.1	936.92		0.0	
After purging				950.02			
Top of Screen after construction				937.75			
				12.27	feet above (+) or below (-) top screen		
Bottom of Well after construction				927.75			
Bottom of Well	9/30/2024		21.60	928.42			
				0.67	feet sedimentation		
Before Sampling				950.02			
Recovery				950.02			
Recovery				950.02			
Recovery				950.02			
Recovery				950.02			

IDNR Form 542-1322

Monitoring Well: MW-34 (dg)

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

GENERAL INFORMATION

TOC	969.61
Well Depth	17.69
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	969.61
Well Depth	17.69
Top Screen	961.92
Bottom Screen	951.92
Bottom Well	951.92
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	12.00
Top sample	957.61
Bottom sample	953.61
Turbidity(NTU)	1.35

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	11:09	11.93	957.68	

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		1.35
Appendix I	Metals	150	150		1.35
Appendix I	VOC	240	240		1.35
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	969.61
Well Depth	17.69

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/30/2024	11:09	11.93	957.68		0.0	
After purging				969.61			
Top of Screen after construction				961.92			
				7.69	feet above (+) or below (-) top screen		
Bottom of Well after construction				951.92			
Bottom of Well	9/30/2024		17.40	952.21			
				0.29	feet sedimentation		
Before Sampling				969.61			
Recovery				969.61			
Recovery				969.61			
Recovery				969.61			
Recovery				969.61			

IDNR Form 542-1322

Monitoring Well: MW-35 (dg)

Primary Sampling Method: No-Purge for Appendix I

Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	974.02
Well Depth	22.99
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	974.02
Well Depth	22.99
Top Screen	961.03
Bottom Screen	951.03
Bottom Well	951.03
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.00
Top sample	958.02
Bottom sample	954.02
Turbidity(NTU)	3.40

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	11:34	10.11	963.91	

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		3.40
Appendix I	Metals	150	150		3.40
Appendix I	VOC	240	240		3.40
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental	cyanide				
Total			400	0	

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

TOC	974.02
Well Depth	22.99

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/30/2024	11:34	10.11	963.91		0.0	
After purging				974.02			
Top of Screen after construction				961.03			
				12.99	feet above (+) or below (-) top screen		
Bottom of Well after construction				951.03			
Bottom of Well	9/30/2024		22.50	951.52			
				0.49	feet sedimentation		
Before Sampling				974.02			
Recovery				974.02			
Recovery				974.02			
Recovery				974.02			
Recovery				974.02			

IDNR Form 542-1322

Primary Sampling Method: No-Purge for Appendix I

Monitoring Well: MW-36 (dg)

Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	977.15
Well Depth	27.89
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	977.15
Well Depth	27.89
Top Screen	959.26
Bottom Screen	949.26
Bottom Well	949.26
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	21.00
Top sample	956.15
Bottom sample	952.15
Turbidity(NTU)	1.29

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	11:45	17.44	959.71	

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		1.29
Appendix I	Metals	150	150		1.29
Appendix I	VOC	240	240		1.29
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	977.15	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	27.89	Before purging	9/30/2024	11:45	17.44	959.71		0.0	
		After purging				977.15			
		Top of Screen after construction				959.26			
						17.89	feet above (+) or below (-) top screen		
		Bottom of Well after construction				949.26			
		Bottom of Well	9/30/2024		27.15	950.00			
						0.74	feet sedimentation		
		Before Sampling				977.15			
		Recovery				977.15			
		Recovery				977.15			
		Recovery				977.15			
		Recovery				977.15			

IDNR Form 542-1322

Monitoring Well: MW-37 (ug)

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

GENERAL INFORMATION

TOC	978.74
Well Depth	20.65
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	978.74
Well Depth	20.65
Top Screen	968.09
Bottom Screen	958.09
Bottom Well	958.09
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	964.74
Bottom sample	960.74
Turbidity(NTU)	1.21

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	9:21	12.15	966.59	

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		1.21
Appendix I	Metals	150	150		1.21
Appendix I	VOC	240	240		1.21
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis(2)				
Supplemental					
Total			400	0	

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

TOC	978.74
Well Depth	20.65

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/30/2024	9:21	12.15	965.00		0.0	
After purging				977.15			
Top of Screen after construction				968.09			
				9.06	feet above (+) or below (-) top screen		
Bottom of Well after construction				958.09			
Bottom of Well	9/30/2024		20.20	958.54			
				0.45	feet sedimentation		
Before Sampling				977.15			
Recovery				977.15			
Recovery				977.15			
Recovery				977.15			
Recovery				977.15			

IDNR Form 542-1322

Monitoring Well: PZ-11(dg)

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

GENERAL INFORMATION

TOC	952.92
Well Depth	45.50
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	952.92
Well Depth	45.25
Top Screen	912.42
Bottom Screen	907.42
Bottom Well	907.42
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	37.00
Top sample	915.92
Bottom sample	911.92
Turbidity(NTU)	1.41

Date	Time	Water Level	Water Elevation	Notes
9/30/2024	10:26	36.71	916.21	

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		1.41
Appendix I	Metals	150	150		1.41
Appendix I	VOC	240	240		1.41
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental					
Supplemental					
Total			400	0	

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

TOC	952.92
Well Depth	45.50

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/30/2024	10:26	36.71	916.21		0.0	
After purging				952.96			
Top of Screen after construction				912.42			
				40.54	feet above (+) or below (-) top screen		
Bottom of Well after construction				907.42			
Bottom of Well	9/30/2024		45.25	907.71			
				0.29	feet sedimentation		
Before Sampling				952.96			
Recovery	3/5/2024			952.96			
Recovery	3/5/2024			952.96			
Recovery				952.96			
Recovery				952.96			

Tama County Sanitary Landfill
PERMIT # 86-SDP-01-72P

9/30/2024 Sampled by: Glenn Hunter Weather conditions:Sunny, calm, 65-80 degrees

IDNR Form 542-1324

	Date	Time	Type	Flowing	Quantity			Discolored	Odor	Litter
SW-3 (dg)	9/30/2024		Open tile	Dry	Dry			No	No	No
										Turbidity(NTU)

Appendix B

Assessment Monitoring Detection Summary Tables

Assessment Monitoring Compound Detections

Date	bis(2-ethylhexyl)phthalate (ug/L)						
	MW-3A	MW-8	MW-10	MW-27	MW-34	MW-35	MW-36
7/26/10	NT	NT	<8	NT	NT	NT	NT
3/29/11	NT	<8	NT	NT	NT	NT	NT
3/8/12	NT	**25.0**	<8	NT	NT	NT	NT
10/30/12	NT	<8	NT	NT	**24.0**	<8	NT
3/26/13	NT	<10	NT	NT	<8	<8	NT
5/17/13	NT	<10	NT	NT	NT	<10	NT
7/9/13	NT	NT	NT	NT	NT	**36.0**	NT
9/25/13	NT	**10.0**	NT	NT	NT	<10	NT
3/19/14	NT	<10	NT	NT	<10	<10	NT
8/20/14	NT	NT	NT	NT	**14.0**	NT	NT
9/15/14	NT	<10	NT	NT	**36.0**	**20.0**	NT
3/6/15	NT	**25.0**	NT	NT	<10	<10	NT
8/24/15	NT	<10	NT	NT	**13.0**	**13.0**	NT
3/1/16	NT	<10	NT	NT	<10	<10	NT
9/9/16	NT	<10	NT	NT	<10	<10	NT
3/22/17	<8	<8	<8	<8	<10	<10	<8
8/24/17	NT	**35.0**	NT	NT	<6	**15.0**	NT
2/26/18	**193**	**262**	NT	**71.0**	**145**	<6	<6
8/29/18	<6	**24**	NT	<6	<6	**7.0**	NT
3/18/19	<6	<6	NT	**13.0**	<6	<6	NT
9/10/19	<6	<6	NT	<6	**46.0**	<6	NT
3/25/20	<6	<6	NT	<6	<6	<6	NT
9/4/20	<6	<6	NT	<6	<6	<6	NT
3/2/21	<6	<6	NT	<6	<6	<6	NT
9/2/21	NT	NT	NT	NT	NT	NT	NT
3/2/22	<6	<6	<6	<6	**8.0**	<6	NT
8/29/22	NT	NT	NT	NT	<6	NT	NT
3/23/23	**8.0**	NT	NT	<6	<6	<6	<6
9/25/23	Dry	NT	NT	NT	NT	NT	NT
3/5/24	<6	NT	NT	NT	NT	NT	NT
9/30/24	NT	NT	NT	NT	NT	NT	NT

Date	Dichlorodifluoromethane (ug/L)						
	MW-3A	**MW-8**	**MW-10**	**MW-27**	**MW-34**	**MW-35**	**MW-36**
7/26/10	NT	NT	<1.0	NT	NT	NT	NT
3/29/11	NT	<1.0	NT	NT	NT	NT	NT
3/8/12	NT	<1.0	<1.0	NT	NT	NT	NT
10/30/12	NT	NT	NT	NT	**3.7**	<1.0	NT
3/26/13	NT	NT	NT	NT	<1.0	**1.7**	NT
5/17/13	NT	NT	NT	NT	NT	**2.0**	NT
7/9/13	NT	NT	NT	NT	NT	**1.5**	NT
9/25/13	NT	NT	NT	NT	NT	**7.4**	NT
3/19/14	NT	NT	NT	NT	<1.0	**3.5**	NT
8/20/14	NT	NT	NT	NT	<1.0	NT	NT
9/15/14	NT	NT	NT	NT	<1.0	**2.3**	NT
3/6/15	NT	NT	NT	NT	<1.0	**7.0**	NT
8/24/15	NT	NT	NT	NT	<1.0	<1.0	NT
3/1/16	NT	NT	NT	NT	<1.0	**5.9**	NT
9/9/16	NT	NT	NT	NT	<1.0	**4.3**	NT
3/22/17	<1.0	<1.0	<1.0	<1.0	<1.0	**3.4**	<1.0
8/24/17	NT	NT	NT	NT	<1.0	**3.1**	NT
2/26/18	<1.0	NT	NT	<1.0	<1.0	**2.1**	<1.0
8/29/18	NT	NT	NT	NT	<1.0	**1.8**	NT
3/18/19	NT	NT	NT	NT	<1.0	**1.1**	NT
9/10/19	NT	NT	NT	NT	<1.0	**1.5**	NT
3/25/20	NT	NT	NT	NT	NT	**2.1**	NT
9/4/20	NT	NT	NT	NT	NT	<1.0	NT
3/2/21	NT	NT	NT	NT	NT	<1.0	NT
9/2/21	NT	NT	NT	NT	NT	<1.0	NT
3/2/22	NT	<1.0	<1.0	NT	NT	**1.5**	NT
8/29/22	NT	NT	NT	NT	NT	**1.5**	NT
3/23/23	<1.0	NT	NT	<1.0	<1.0	<1.0	<1.0
9/25/23	Dry	NT	NT	NT	NT	NT	NT
3/5/24	NT	NT	NT	NT	NT	**1.2**	NT
9/30/24	NT	NT	NT	NT	NT	**1.2**	NT

Date	Cyanide (ug/L)						
	MW-3A	**MW-8**	**MW-10**	**MW-27**	**MW-34**	**MW-35**	**MW-36**
7/26/10	NT	NT	<7	NT	NT	NT	NT
3/29/11	NT	<7	NT	NT	NT	NT	NT
3/8/12	NT	<7	<7	NT	NT	NT	NT
10/30/12	NT	NT	NT	NT	<7	<7	NT
3/26/13	NT	NT	NT	NT	<7	<7	NT
5/17/13	NT	NT	NT	NT	NT	NT	NT
7/9/13	NT	NT	NT	NT	NT	NT	NT
9/25/13	NT	NT	NT	NT	NT	NT	NT
3/19/14	NT	NT	NT	NT	NT	NT	NT
8/20/14	NT	NT	NT	NT	NT	NT	NT
9/15/14	NT	NT	NT	NT	NT	NT	NT
3/6/15	NT	NT	NT	NT	NT	NT	NT
8/24/15	NT	NT	NT	NT	NT	NT	NT
3/1/16	NT	NT	NT	NT	NT	NT	NT
9/9/16	NT	NT	NT	NT	NT	NT	NT
3/22/17	<5	<5	<5	<5	NT	NT	<5
8/24/17	NT	NT	NT	NT	NT	NT	NT
2/26/18	<5	NT	NT	<5	<5	**12.0**	<5
8/29/18	NT	NT	NT	NT	NT	**9.0**	NT
3/18/19	NT	NT	NT	NT	NT	<5	NT
9/10/19	NT	NT	NT	NT	NT	<5	NT
3/25/20	NT	NT	NT	NT	NT	<5	NT
9/4/20	NT	NT	NT	NT	NT	<5	NT
3/2/21	NT	NT	NT	NT	NT	<5	NT
9/2/21	NT	NT	NT	NT	NT	NT	NT
3/2/22	NT	<5	<5	NT	NT	<5	NT
8/29/22	NT	NT	NT	NT	NT	NT	NT
3/23/23	<5	NT	NT	<5	<5	<5	<5
9/25/23	Dry	NT	NT	NT	NT	NT	NT
3/5/24	NT	NT	NT	NT	NT	NT	NT
9/30/24	NT	NT	NT	NT	NT	NT	NT

Appendix C

Statistical Report

Appendix C.1 –Spring Statistical Evaluation

GROUND WATER STATISTICS

FOR THE

TAMA COUNTY SANITARY LANDFILL

First Semi-Annual Monitoring Event in 2024

Prepared for:
Tama County Sanitary Landfill
2872 K Avenue
Toledo, Tama County, IA

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

April 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 Tama County Sanitary Landfill in Toledo, Tama 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 Tama County Sanitary Landfill. The statistical plan conforms with IAC 567, Chapter 113.10, USEPA Guidance document ("*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance*", March 2009), and the American Society for Testing and Materials (ASTM) standard D6312-98, *Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*.

Ground Water Monitoring Program

The groundwater monitoring network for Tama County Sanitary Landfill includes sample points MW-10, MW-20 (upgradient), MW-26 (upgradient), MW-27, MW-33, MW-34 MW-35, MW-36, MW-37 (upgradient), MW-3A, MW-8, SW-101, SW-102, and SW-3. 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	*trans*-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	*cis*-1,2-Dichloroethene	1,1,2,2-Tetrachloroethane
Bromoform	*trans*-1,2-Dichloroethene	Tetrachloroethene
Carbon disulfide	1,2-Dichloropropane	Toluene
Carbon tetrachloride	*cis*-1,3-Dichloropropene	1,1,1-Trichloroethane
Chlorobenzene	*trans*-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. Interwell statistics were applied to the Tama County Landfill data using the DUMPStat® statistical program. Ground water statistics are to be done on the inorganic constituents listed. The organic constituents are compared to maximum contaminant levels (MCLs) or practical quantitation limits (PQLs), in lieu of statistical comparisons to historical concentrations.

Interwell Statistics: Upgradient versus Downgradient Comparisons

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

<u>Results of the Interwell Statistics</u>

The background data used in this statistical analysis includes the ground water data collected from sample points MW-20, MW-26, MW-33, and MW-37 during the period from September 2014 through the current data. A summary of the background data from monitoring wells MW-20, MW-26, MW-33, and MW-37, 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 most current data from downgradient wells MW-10, MW-27, MW-34, MW-35, MW-36, MW-3A, and MW-8 compared to the site prediction limits. Prediction limit exceedances are flagged with asterisks. For the most current data, the site prediction limit exceedances detected are summarized in the Table below.

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

Well	Trace Metal	Result, µg/L	Prediction Limit	Prediction Limit Type	Verified or Awaiting Verification
MW-10	Barium	440	279.5428	Normal	Verified
	Cobalt	5.7	1.8000	Nonparametric	Verified
	Nickel	11.1	4.0000	Nonparametric	Verified
MW-34	Nickel	7.6	4.0000	Nonparametric	Verified
MW-35	Barium	460	279.5428	Normal	Verified
MW-36	Barium	315	279.5428	Normal	Verified
MW-3A	Nickel	12.6	4.0000	Nonparametric	Awaiting verification
MW-8	Nickel	5.5	4.0000	Nonparametric	Verified

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. Table 4 summarizes the results of the Shapiro-Wilk test. Table 5 is a summary of the statistics and prediction limits determined for the metals. Time series graphs of each of the parameters at each well with the corresponding prediction limits are attached.

A statistical power curve indicates the expected false assessments for the site as a whole. The false positive rate for interwell analyses is the percentage of failures when the upgradient versus downgradient true mean difference equals zero. False negative rate indicates the chance of missing contamination at a single well for a single constituent. The statistical power is a function of the number of wells included, the number of constituents compared, the detection frequencies, and the data distributions involved. For interwell analysis, the site-wide false positive rate is 1% and the test becomes sensitive to 3 standard deviation unit increases over background.

The past and current verified metals exceedances were evaluated against the ground water protection standards (GWPS) using confidence limits calculated in accordance with the Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance, USEPA, March 2009 (Attachment C). The analysis was conducted to evaluate whether verified concentrations are significantly above the water quality standard. The 95% lower confidence limit (LCL) for the mean of the historical data was used to evaluate whether the regulated unit is in compliance with the ground-water protection standards under 40 CFR 264 (e.g. whether the verified constituent is detected at a significant level above the GWPS). An exceedance is verified if the LCL is above the Regulatory GWPS.

The 95% LCL for cobalt at MW-10 (2.280 µg/L) exceeded the GWPS of 2.1 µg/L. The calculated 95% LCLs for the remainder of the metals tested are below GWPS.

Volatile Organic Compounds

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

VOCs detected in the ground water at Tama County Landfill during the first semi-annual monitoring event in 2024 are summarized below.

VOCs detected during the first semi-annual monitoring period in 2024

Well	VOC Detected	Result, µg/L	Reporting Limit, µg/L	Verified/ Awaiting verification	Water Quality Standard
MW-10	1,4-Dichlorobenzene	1.5	1	Verified	75[a]
MW-35	Dichlorodifluoromethane	1.2	1	Awaiting verification	1000[b]

a - USEPA MCL
b- Iowa Statewide Standard for a protected groundwater source

Dichlorodifluoromethane has been detected multiple times at MW-35 but was last detected at MW-35 in August 2022. Historical VOC detections in the ground water are summarized in Attachment D. The verified VOC detections were evaluated against the GWPS using confidence limits (Attachment E). The calculated LCLs are below GWPS.

CONCLUSIONS

This report summarizes the statistical analyses used to evaluate the ground water data obtained during the first semi-annual monitoring event in 2024 at Tama County Sanitary Landfill. There are verified site prediction limit exceedances for barium, cobalt, and nickel at MW-10, nickel at MW-34, barium at MW-35, barium at MW-36, and nickel at MW-8. Organic compounds detected in the ground water at Tama County Landfill during the first semi-annual monitoring event in 2024 include 1,4-dichlorobenzene at MW-10 and dichlorodifluoromethane at MW-35. The VOCs detections did not statistically exceed GWPS.

Attachment A

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

Table 1

Analytical Data Summary for 3/5/2024

Constituents	Units	MW-10	MW-20	MW-26	MW-27	MW-33	MW-34	MW-35	MW-36	MW-37	MW-3A	MW-8
1,1,1,2-tetrachloroethane	ug/L	<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
1,1,2,2-tetrachloroethane	ug/L	<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-dichloroethane	ug/L	<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
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<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
1,2-dichlorobenzene	ug/L	<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
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-butanone (mek)	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	ug/L	440.0	201.0	118.0	194.0	77.3	192.0	460.0	315.0	61.8	153.0	201.0
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bis(2-ethylhexyl) phthalate	ug/L										<6	
Bromochloromethane	ug/L	<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
Bromoform	ug/L	<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
Cadmium, total	ug/L	<.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
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<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
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	ug/L	<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
Cobalt, total	ug/L	5.7	.4	<.4	<.4	<.4	.5	<.4	<.4	<.4	1.1	.6
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	ug/L	<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
Dichlorodifluoromethane	ug/L							1.2				
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	11.1	<4.0	<4.0	<4.0	<4.0	7.6	<4.0	<4.0	<4.0	12.6	5.5
Selenium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	16.5	<4.0	<4.0
Silver, total	ug/L	<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
Tetrachloroethylene	ug/L	<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
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	ug/L	<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
Trans-1,4-dichloro-2-butene	ug/L	<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
Trichlorofluoromethane	ug/L	<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
Vinyl acetate	ug/L	<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
Xylenes, total	ug/L	<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

* - 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-20	09/15/2014	ND	2.0000		
Antimony, total	ug/L	MW-20	01/14/2015	ND	2.0000		
Antimony, total	ug/L	MW-20	03/06/2015	ND	2.0000		
Antimony, total	ug/L	MW-20	06/16/2015	ND	2.0000		
Antimony, total	ug/L	MW-20	08/24/2015	ND	2.0000		
Antimony, total	ug/L	MW-20	03/01/2016	ND	2.0000		
Antimony, total	ug/L	MW-20	09/09/2016	ND	2.0000		
Antimony, total	ug/L	MW-20	03/22/2017	ND	2.0000		
Antimony, total	ug/L	MW-20	08/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-20	02/26/2018	ND	2.0000		
Antimony, total	ug/L	MW-20	08/29/2018	ND	2.0000		
Antimony, total	ug/L	MW-20	03/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-20	09/10/2019	ND	2.0000		
Antimony, total	ug/L	MW-20	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-20	09/04/2020	ND	2.0000		
Antimony, total	ug/L	MW-20	03/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-20	09/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-20	03/02/2022	ND	2.0000		
Antimony, total	ug/L	MW-20	08/29/2022	ND	2.0000		
Antimony, total	ug/L	MW-20	03/23/2023	ND	2.0000		
Antimony, total	ug/L	MW-20	09/25/2023	ND	2.0000		
Antimony, total	ug/L	MW-20	03/05/2024	ND	2.0000		
Arsenic, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Arsenic, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Arsenic, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Arsenic, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Arsenic, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Arsenic, total	ug/L	MW-20	08/29/2018	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Arsenic, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Barium, total	ug/L	MW-20	09/15/2014		177.0000		
Barium, total	ug/L	MW-20	01/14/2015		208.0000		
Barium, total	ug/L	MW-20	03/06/2015		219.0000		
Barium, total	ug/L	MW-20	06/16/2015		221.0000		
Barium, total	ug/L	MW-20	08/24/2015		171.0000		
Barium, total	ug/L	MW-20	03/01/2016		162.0000		
Barium, total	ug/L	MW-20	09/09/2016		209.0000		
Barium, total	ug/L	MW-20	03/22/2017		222.0000		
Barium, total	ug/L	MW-20	08/24/2017		239.0000		
Barium, total	ug/L	MW-20	02/26/2018		239.0000		
Barium, total	ug/L	MW-20	08/29/2018		201.0000		
Barium, total	ug/L	MW-20	03/18/2019		193.0000		
Barium, total	ug/L	MW-20	09/10/2019		142.0000		
Barium, total	ug/L	MW-20	03/25/2020		184.0000		
Barium, total	ug/L	MW-20	09/04/2020		167.0000		
Barium, total	ug/L	MW-20	03/02/2021		217.0000		
Barium, total	ug/L	MW-20	09/02/2021		210.0000		
Barium, total	ug/L	MW-20	03/02/2022		236.0000		
Barium, total	ug/L	MW-20	08/29/2022		152.0000		
Barium, total	ug/L	MW-20	03/23/2023		231.0000		
Barium, total	ug/L	MW-20	09/25/2023		185.0000		
Barium, total	ug/L	MW-20	03/05/2024		201.0000		
Beryllium, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Beryllium, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Beryllium, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Beryllium, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/22/2017	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-20	08/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Beryllium, total	ug/L	MW-20	08/29/2018	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Beryllium, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Cadmium, total	ug/L	MW-20	09/15/2014	ND	0.8000		
Cadmium, total	ug/L	MW-20	01/14/2015	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/06/2015	ND	0.8000		
Cadmium, total	ug/L	MW-20	06/16/2015	ND	0.8000		
Cadmium, total	ug/L	MW-20	08/24/2015	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/01/2016	ND	0.8000		
Cadmium, total	ug/L	MW-20	09/09/2016	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/22/2017	ND	0.8000		
Cadmium, total	ug/L	MW-20	08/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-20	02/26/2018	ND	0.8000		
Cadmium, total	ug/L	MW-20	08/29/2018	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-20	09/10/2019	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-20	09/04/2020	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/02/2021		0.8000		
Cadmium, total	ug/L	MW-20	09/02/2021		0.8000		
Cadmium, total	ug/L	MW-20	03/02/2022	ND	0.8000		
Cadmium, total	ug/L	MW-20	08/29/2022	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/23/2023	ND	0.8000		
Cadmium, total	ug/L	MW-20	09/25/2023	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/05/2024	ND	0.8000		
Chromium, total	ug/L	MW-20	09/15/2014	ND	8.0000		
Chromium, total	ug/L	MW-20	01/14/2015	ND	8.0000		
Chromium, total	ug/L	MW-20	03/06/2015	ND	8.0000		
Chromium, total	ug/L	MW-20	06/16/2015	ND	8.0000		
Chromium, total	ug/L	MW-20	08/24/2015	ND	8.0000		
Chromium, total	ug/L	MW-20	03/01/2016	ND	8.0000		
Chromium, total	ug/L	MW-20	09/09/2016	ND	8.0000		
Chromium, total	ug/L	MW-20	03/22/2017	ND	8.0000		
Chromium, total	ug/L	MW-20	08/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-20	02/26/2018	ND	8.0000		
Chromium, total	ug/L	MW-20	08/29/2018	ND	8.0000		
Chromium, total	ug/L	MW-20	03/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-20	09/10/2019	ND	8.0000		
Chromium, total	ug/L	MW-20	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-20	09/04/2020	ND	8.0000		
Chromium, total	ug/L	MW-20	03/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-20	09/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-20	03/02/2022	ND	8.0000		
Chromium, total	ug/L	MW-20	08/29/2022	ND	8.0000		
Chromium, total	ug/L	MW-20	03/23/2023	ND	8.0000		
Chromium, total	ug/L	MW-20	09/25/2023	ND	8.0000		
Chromium, total	ug/L	MW-20	03/05/2024	ND	8.0000		
Cobalt, total	ug/L	MW-20	09/15/2014	ND	0.8000		
Cobalt, total	ug/L	MW-20	01/14/2015	ND	0.8000		
Cobalt, total	ug/L	MW-20	03/06/2015	ND	0.8000		
Cobalt, total	ug/L	MW-20	06/16/2015	ND	0.8000		
Cobalt, total	ug/L	MW-20	08/24/2015	ND	0.8000		
Cobalt, total	ug/L	MW-20	03/01/2016	ND	0.8000		
Cobalt, total	ug/L	MW-20	09/09/2016	ND	0.8000		
Cobalt, total	ug/L	MW-20	03/22/2017	ND	0.8000		
Cobalt, total	ug/L	MW-20	08/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-20	02/26/2018		0.8000		
Cobalt, total	ug/L	MW-20	08/29/2018	ND	0.8000		
Cobalt, total	ug/L	MW-20	03/18/2019	ND	0.8000		
Cobalt, total	ug/L	MW-20	09/10/2019	ND	0.8000		
Cobalt, total	ug/L	MW-20	03/25/2020	ND	0.8000		
Cobalt, total	ug/L	MW-20	09/04/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-20	03/02/2021		1.0000		

* - 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	
Cobalt, total	ug/L	MW-20	09/02/2021		1.1000		
Cobalt, total	ug/L	MW-20	03/02/2022		0.8000		
Cobalt, total	ug/L	MW-20	08/29/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-20	03/23/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-20	09/25/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-20	03/05/2024		0.4000		
Copper, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Copper, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Copper, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Copper, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Copper, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Copper, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Copper, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Copper, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Copper, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Copper, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Copper, total	ug/L	MW-20	08/29/2018	ND	4.0000		
Copper, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Copper, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Copper, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Copper, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Copper, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Copper, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Copper, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Copper, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Copper, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Copper, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Lead, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Lead, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Lead, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Lead, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Lead, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Lead, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Lead, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Lead, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Lead, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Lead, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Lead, total	ug/L	MW-20	08/29/2018	ND	4.0000		
Lead, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Lead, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Lead, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Lead, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Lead, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Lead, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Lead, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Lead, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Lead, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Lead, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Nickel, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Nickel, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Nickel, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Nickel, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Nickel, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Nickel, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Nickel, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Nickel, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Nickel, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Nickel, total	ug/L	MW-20	08/29/2018	ND	8.0000	4.0000	**
Nickel, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Nickel, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Nickel, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Nickel, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Nickel, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Nickel, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Nickel, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Nickel, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Selenium, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Selenium, total	ug/L	MW-20	01/14/2015	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	
Selenium, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Selenium, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Selenium, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Selenium, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Selenium, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Selenium, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Selenium, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Selenium, total	ug/L	MW-20	08/29/2018	ND	4.0000		
Selenium, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Selenium, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Selenium, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Selenium, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Selenium, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Selenium, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Selenium, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Selenium, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Selenium, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Silver, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Silver, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Silver, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Silver, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Silver, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Silver, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Silver, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Silver, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Silver, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Silver, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Silver, total	ug/L	MW-20	08/29/2018	ND	8.0000	4.0000	**
Silver, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Silver, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Silver, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Silver, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Silver, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Silver, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Silver, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Silver, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Silver, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Silver, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Thallium, total	ug/L	MW-20	09/15/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	01/14/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	03/06/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	06/16/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	08/24/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	03/01/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	09/09/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	03/22/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	08/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	02/26/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	08/29/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	03/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-20	09/10/2019	ND	2.0000		
Thallium, total	ug/L	MW-20	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-20	09/04/2020	ND	2.0000		
Thallium, total	ug/L	MW-20	03/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-20	09/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-20	03/02/2022	ND	2.0000		
Thallium, total	ug/L	MW-20	08/29/2022	ND	2.0000		
Thallium, total	ug/L	MW-20	03/23/2023	ND	2.0000		
Thallium, total	ug/L	MW-20	09/25/2023	ND	2.0000		
Thallium, total	ug/L	MW-20	03/05/2024	ND	2.0000		
Vanadium, total	ug/L	MW-20	09/15/2014	ND	20.0000		
Vanadium, total	ug/L	MW-20	01/14/2015	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/06/2015	ND	20.0000		
Vanadium, total	ug/L	MW-20	06/16/2015	ND	20.0000		
Vanadium, total	ug/L	MW-20	08/24/2015	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/01/2016	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/09/2016	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/22/2017	ND	20.0000		
Vanadium, total	ug/L	MW-20	08/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-20	02/26/2018	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-20	08/29/2018	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/10/2019	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/04/2020	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/02/2022	ND	20.0000		
Vanadium, total	ug/L	MW-20	08/29/2022	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/23/2023	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/25/2023	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/05/2024	ND	20.0000		
Zinc, total	ug/L	MW-20	09/15/2014		8.3000		
Zinc, total	ug/L	MW-20	01/14/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	03/06/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	06/16/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	08/24/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	03/01/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	09/09/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	03/22/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	08/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	02/26/2018		11.4000		
Zinc, total	ug/L	MW-20	08/29/2018		49.4000		
Zinc, total	ug/L	MW-20	03/18/2019		23.9000		
Zinc, total	ug/L	MW-20	09/10/2019	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-20	09/04/2020	ND	20.0000		
Zinc, total	ug/L	MW-20	03/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-20	09/02/2021		44.5000		
Zinc, total	ug/L	MW-20	03/02/2022	ND	20.0000		
Zinc, total	ug/L	MW-20	08/29/2022	ND	20.0000		
Zinc, total	ug/L	MW-20	03/23/2023	ND	20.0000		
Zinc, total	ug/L	MW-20	09/25/2023	ND	20.0000		
Zinc, total	ug/L	MW-20	03/05/2024	ND	20.0000		
Antimony, total	ug/L	MW-26	09/15/2014	ND	2.0000		
Antimony, total	ug/L	MW-26	01/14/2015	ND	2.0000		
Antimony, total	ug/L	MW-26	03/06/2015	ND	2.0000		
Antimony, total	ug/L	MW-26	06/16/2015	ND	2.0000		
Antimony, total	ug/L	MW-26	08/24/2015	ND	2.0000		
Antimony, total	ug/L	MW-26	03/01/2016	ND	2.0000		
Antimony, total	ug/L	MW-26	09/09/2016	ND	2.0000		
Antimony, total	ug/L	MW-26	03/22/2017	ND	2.0000		
Antimony, total	ug/L	MW-26	08/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-26	02/26/2018	ND	5.0000	2.0000	**
Antimony, total	ug/L	MW-26	08/29/2018	ND	2.0000		
Antimony, total	ug/L	MW-26	03/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-26	09/10/2019	ND	2.0000		
Antimony, total	ug/L	MW-26	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-26	09/04/2020	ND	2.0000		
Antimony, total	ug/L	MW-26	03/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-26	09/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-26	03/02/2022	ND	2.0000		
Antimony, total	ug/L	MW-26	08/29/2022	ND	2.0000		
Antimony, total	ug/L	MW-26	03/23/2023	ND	2.0000		
Antimony, total	ug/L	MW-26	09/25/2023	ND	2.0000		
Antimony, total	ug/L	MW-26	03/05/2024	ND	2.0000		
Arsenic, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Arsenic, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Arsenic, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Arsenic, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Arsenic, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Arsenic, total	ug/L	MW-26	08/29/2018	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/02/2022	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-26	08/29/2022	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Barium, total	ug/L	MW-26	09/15/2014		141.0000		
Barium, total	ug/L	MW-26	01/14/2015		118.0000		
Barium, total	ug/L	MW-26	03/06/2015		106.0000		
Barium, total	ug/L	MW-26	06/16/2015		121.0000		
Barium, total	ug/L	MW-26	08/24/2015		156.0000		
Barium, total	ug/L	MW-26	03/01/2016		120.0000		
Barium, total	ug/L	MW-26	09/09/2016		116.0000		
Barium, total	ug/L	MW-26	03/22/2017		123.0000		
Barium, total	ug/L	MW-26	08/24/2017		128.0000		
Barium, total	ug/L	MW-26	02/26/2018		119.0000		
Barium, total	ug/L	MW-26	08/29/2018		117.0000		
Barium, total	ug/L	MW-26	03/18/2019		147.0000		
Barium, total	ug/L	MW-26	09/10/2019		178.0000		
Barium, total	ug/L	MW-26	03/25/2020		199.0000		
Barium, total	ug/L	MW-26	09/04/2020		189.0000		
Barium, total	ug/L	MW-26	03/02/2021		157.0000		
Barium, total	ug/L	MW-26	09/02/2021		179.0000		
Barium, total	ug/L	MW-26	03/02/2022		126.0000		
Barium, total	ug/L	MW-26	08/29/2022		142.0000		
Barium, total	ug/L	MW-26	03/23/2023		112.0000		
Barium, total	ug/L	MW-26	09/25/2023		116.0000		
Barium, total	ug/L	MW-26	03/05/2024		118.0000		
Beryllium, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Beryllium, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Beryllium, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Beryllium, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Beryllium, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Beryllium, total	ug/L	MW-26	08/29/2018	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Beryllium, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Cadmium, total	ug/L	MW-26	09/15/2014	ND	0.8000		
Cadmium, total	ug/L	MW-26	01/14/2015	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/06/2015	ND	0.8000		
Cadmium, total	ug/L	MW-26	06/16/2015	ND	0.8000		
Cadmium, total	ug/L	MW-26	08/24/2015	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/01/2016	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/09/2016	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/22/2017	ND	0.8000		
Cadmium, total	ug/L	MW-26	08/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-26	02/26/2018	ND	2.0000	0.8000	**
Cadmium, total	ug/L	MW-26	08/29/2018	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/10/2019	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/04/2020	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/02/2022	ND	0.8000		
Cadmium, total	ug/L	MW-26	08/29/2022	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/23/2023	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/25/2023	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/05/2024	ND	0.8000		
Chromium, total	ug/L	MW-26	09/15/2014	ND	8.0000		
Chromium, total	ug/L	MW-26	01/14/2015	ND	8.0000		
Chromium, total	ug/L	MW-26	03/06/2015	ND	8.0000		
Chromium, total	ug/L	MW-26	06/16/2015	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-26	08/24/2015	ND	8.0000		
Chromium, total	ug/L	MW-26	03/01/2016	ND	8.0000		
Chromium, total	ug/L	MW-26	09/09/2016	ND	8.0000		
Chromium, total	ug/L	MW-26	03/22/2017	ND	8.0000		
Chromium, total	ug/L	MW-26	08/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-26	02/26/2018	ND	20.0000	8.0000	**
Chromium, total	ug/L	MW-26	08/29/2018	ND	8.0000		
Chromium, total	ug/L	MW-26	03/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-26	09/10/2019	ND	8.0000		
Chromium, total	ug/L	MW-26	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-26	09/04/2020	ND	8.0000		
Chromium, total	ug/L	MW-26	03/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-26	09/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-26	03/02/2022	ND	8.0000		
Chromium, total	ug/L	MW-26	08/29/2022	ND	8.0000		
Chromium, total	ug/L	MW-26	03/23/2023	ND	8.0000		
Chromium, total	ug/L	MW-26	09/25/2023	ND	8.0000		
Chromium, total	ug/L	MW-26	03/05/2024	ND	8.0000		
Cobalt, total	ug/L	MW-26	09/15/2014	ND	0.8000		
Cobalt, total	ug/L	MW-26	01/14/2015	ND	0.8000		
Cobalt, total	ug/L	MW-26	03/06/2015	ND	0.8000		
Cobalt, total	ug/L	MW-26	06/16/2015	ND	0.8000		
Cobalt, total	ug/L	MW-26	08/24/2015	ND	0.8000		
Cobalt, total	ug/L	MW-26	03/01/2016	ND	0.8000		
Cobalt, total	ug/L	MW-26	09/09/2016	ND	0.8000		
Cobalt, total	ug/L	MW-26	03/22/2017	ND	0.8000		
Cobalt, total	ug/L	MW-26	08/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-26	02/26/2018	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-26	08/29/2018	ND	0.8000		
Cobalt, total	ug/L	MW-26	03/18/2019	ND	0.8000		
Cobalt, total	ug/L	MW-26	09/10/2019	ND	0.8000		
Cobalt, total	ug/L	MW-26	03/25/2020	ND	0.8000		
Cobalt, total	ug/L	MW-26	09/04/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	03/02/2021		0.9000		
Cobalt, total	ug/L	MW-26	09/02/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	03/02/2022		0.7000		
Cobalt, total	ug/L	MW-26	08/29/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	03/23/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	09/25/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	03/05/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Copper, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Copper, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Copper, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Copper, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Copper, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Copper, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Copper, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Copper, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Copper, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Copper, total	ug/L	MW-26	08/29/2018	ND	4.0000		
Copper, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Copper, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Copper, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Copper, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Copper, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Copper, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Copper, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Copper, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Copper, total	ug/L	MW-26	09/25/2023		8.4000		
Copper, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Lead, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Lead, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Lead, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Lead, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Lead, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Lead, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Lead, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Lead, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Lead, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Lead, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Lead, total	ug/L	MW-26	08/29/2018	ND	4.0000		
Lead, total	ug/L	MW-26	03/18/2019	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Lead, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Lead, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Lead, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Lead, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Lead, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Lead, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Lead, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Lead, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Lead, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Nickel, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Nickel, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Nickel, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Nickel, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Nickel, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Nickel, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Nickel, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Nickel, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Nickel, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Nickel, total	ug/L	MW-26	08/29/2018	ND	8.0000	4.0000	**
Nickel, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Nickel, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Nickel, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Nickel, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Nickel, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Nickel, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Nickel, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Nickel, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Selenium, total	ug/L	MW-26	09/15/2014		4.9000		
Selenium, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Selenium, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Selenium, total	ug/L	MW-26	06/16/2015		6.3000		
Selenium, total	ug/L	MW-26	08/24/2015		4.9000		
Selenium, total	ug/L	MW-26	03/01/2016		4.8000		
Selenium, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Selenium, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Selenium, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-26	02/26/2018		10.7000		
Selenium, total	ug/L	MW-26	08/29/2018	ND	4.0000		
Selenium, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Selenium, total	ug/L	MW-26	03/25/2020		6.1000		
Selenium, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Selenium, total	ug/L	MW-26	03/02/2021		10.8000		
Selenium, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Selenium, total	ug/L	MW-26	03/02/2022		10.5000		
Selenium, total	ug/L	MW-26	08/29/2022		4.1000		
Selenium, total	ug/L	MW-26	03/23/2023		10.2000		
Selenium, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Selenium, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Silver, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Silver, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Silver, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Silver, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Silver, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Silver, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Silver, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Silver, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Silver, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Silver, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Silver, total	ug/L	MW-26	08/29/2018	ND	8.0000	4.0000	**
Silver, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Silver, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Silver, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Silver, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Silver, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Silver, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Silver, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Silver, total	ug/L	MW-26	03/23/2023	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	
Silver, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Silver, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Thallium, total	ug/L	MW-26	09/15/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	01/14/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	03/06/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	06/16/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	08/24/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	03/01/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	09/09/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	03/22/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	08/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	02/26/2018	ND	10.0000		*
Thallium, total	ug/L	MW-26	08/29/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	03/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-26	09/10/2019	ND	2.0000		
Thallium, total	ug/L	MW-26	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-26	09/04/2020	ND	2.0000		
Thallium, total	ug/L	MW-26	03/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-26	09/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-26	03/02/2022	ND	2.0000		
Thallium, total	ug/L	MW-26	08/29/2022	ND	2.0000		
Thallium, total	ug/L	MW-26	03/23/2023	ND	2.0000		
Thallium, total	ug/L	MW-26	09/25/2023	ND	2.0000		
Thallium, total	ug/L	MW-26	03/05/2024	ND	2.0000		
Vanadium, total	ug/L	MW-26	09/15/2014	ND	20.0000		
Vanadium, total	ug/L	MW-26	01/14/2015	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/06/2015	ND	20.0000		
Vanadium, total	ug/L	MW-26	06/16/2015	ND	20.0000		
Vanadium, total	ug/L	MW-26	08/24/2015	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/01/2016	ND	20.0000		
Vanadium, total	ug/L	MW-26	09/09/2016	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/22/2017	ND	20.0000		
Vanadium, total	ug/L	MW-26	08/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-26	02/26/2018	ND	50.0000	20.0000	**
Vanadium, total	ug/L	MW-26	08/29/2018	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-26	09/10/2019	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-26	09/04/2020	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-26	09/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/02/2022	ND	20.0000		
Vanadium, total	ug/L	MW-26	08/29/2022	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/23/2023	ND	20.0000		
Vanadium, total	ug/L	MW-26	09/25/2023	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/05/2024	ND	20.0000		
Zinc, total	ug/L	MW-26	09/15/2014		9.2000		
Zinc, total	ug/L	MW-26	01/14/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	03/06/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	06/16/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	08/24/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	03/01/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	09/09/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	03/22/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	08/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	02/26/2018	ND	20.0000		
Zinc, total	ug/L	MW-26	08/29/2018		182.0000		*
Zinc, total	ug/L	MW-26	03/18/2019	ND	20.0000		
Zinc, total	ug/L	MW-26	09/10/2019	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	03/25/2020		38.0000		
Zinc, total	ug/L	MW-26	09/04/2020	ND	20.0000		
Zinc, total	ug/L	MW-26	03/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-26	09/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-26	03/02/2022	ND	20.0000		
Zinc, total	ug/L	MW-26	08/29/2022	ND	20.0000		
Zinc, total	ug/L	MW-26	03/23/2023	ND	20.0000		
Zinc, total	ug/L	MW-26	09/25/2023	ND	20.0000		
Zinc, total	ug/L	MW-26	03/05/2024	ND	20.0000		
Antimony, total	ug/L	MW-33	09/15/2014	ND	2.0000		
Antimony, total	ug/L	MW-33	03/06/2015	ND	2.0000		
Antimony, total	ug/L	MW-33	08/24/2015	ND	2.0000		
Antimony, total	ug/L	MW-33	03/01/2016	ND	2.0000		
Antimony, total	ug/L	MW-33	09/09/2016	ND	2.0000		
Antimony, total	ug/L	MW-33	03/22/2017	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-33	08/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-33	02/26/2018	ND	2.0000		
Antimony, total	ug/L	MW-33	08/29/2018	ND	2.0000		
Antimony, total	ug/L	MW-33	03/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-33	09/10/2019	ND	2.0000		
Antimony, total	ug/L	MW-33	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-33	09/04/2020	ND	2.0000		
Antimony, total	ug/L	MW-33	03/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-33	09/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-33	03/02/2022	ND	2.0000		
Antimony, total	ug/L	MW-33	08/29/2022	ND	2.0000		
Antimony, total	ug/L	MW-33	03/23/2023	ND	2.0000		
Antimony, total	ug/L	MW-33	09/25/2023	ND	2.0000		
Antimony, total	ug/L	MW-33	03/05/2024	ND	2.0000		
Arsenic, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Arsenic, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Arsenic, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Arsenic, total	ug/L	MW-33	08/29/2018	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Arsenic, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Barium, total	ug/L	MW-33	09/15/2014		122.0000		
Barium, total	ug/L	MW-33	03/06/2015		112.0000		
Barium, total	ug/L	MW-33	08/24/2015		131.0000		
Barium, total	ug/L	MW-33	03/01/2016		98.9000		
Barium, total	ug/L	MW-33	09/09/2016		158.0000		
Barium, total	ug/L	MW-33	03/22/2017		274.0000		
Barium, total	ug/L	MW-33	06/07/2017		129.0000		
Barium, total	ug/L	MW-33	08/24/2017		163.0000		
Barium, total	ug/L	MW-33	02/26/2018		171.0000		
Barium, total	ug/L	MW-33	08/29/2018		162.0000		
Barium, total	ug/L	MW-33	03/18/2019		282.0000		
Barium, total	ug/L	MW-33	09/10/2019		214.0000		
Barium, total	ug/L	MW-33	03/25/2020		144.0000		
Barium, total	ug/L	MW-33	09/04/2020		209.0000		
Barium, total	ug/L	MW-33	03/02/2021		115.0000		
Barium, total	ug/L	MW-33	09/02/2021		194.0000		
Barium, total	ug/L	MW-33	03/02/2022		189.0000		
Barium, total	ug/L	MW-33	08/29/2022		174.0000		
Barium, total	ug/L	MW-33	03/23/2023		82.7000		
Barium, total	ug/L	MW-33	09/25/2023		147.0000		
Barium, total	ug/L	MW-33	03/05/2024		77.3000		
Beryllium, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Beryllium, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Beryllium, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Beryllium, total	ug/L	MW-33	08/29/2018	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Beryllium, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/25/2023	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	
Beryllium, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Cadmium, total	ug/L	MW-33	09/15/2014	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/06/2015	ND	0.8000		
Cadmium, total	ug/L	MW-33	08/24/2015	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/01/2016	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/09/2016	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/22/2017	ND	0.8000		
Cadmium, total	ug/L	MW-33	08/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-33	02/26/2018	ND	0.8000		
Cadmium, total	ug/L	MW-33	08/29/2018	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/10/2019	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/04/2020	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/02/2022	ND	0.8000		
Cadmium, total	ug/L	MW-33	08/29/2022	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/23/2023	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/25/2023	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/05/2024	ND	0.8000		
Chromium, total	ug/L	MW-33	09/15/2014	ND	8.0000		
Chromium, total	ug/L	MW-33	03/06/2015	ND	8.0000		
Chromium, total	ug/L	MW-33	08/24/2015	ND	8.0000		
Chromium, total	ug/L	MW-33	03/01/2016	ND	8.0000		
Chromium, total	ug/L	MW-33	09/09/2016	ND	8.0000		
Chromium, total	ug/L	MW-33	03/22/2017	ND	8.0000		
Chromium, total	ug/L	MW-33	08/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-33	02/26/2018	ND	8.0000		
Chromium, total	ug/L	MW-33	08/29/2018	ND	8.0000		
Chromium, total	ug/L	MW-33	03/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-33	09/10/2019	ND	8.0000		
Chromium, total	ug/L	MW-33	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-33	09/04/2020	ND	8.0000		
Chromium, total	ug/L	MW-33	03/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-33	09/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-33	03/02/2022	ND	8.0000		
Chromium, total	ug/L	MW-33	08/29/2022	ND	8.0000		
Chromium, total	ug/L	MW-33	03/23/2023	ND	8.0000		
Chromium, total	ug/L	MW-33	09/25/2023	ND	8.0000		
Chromium, total	ug/L	MW-33	03/05/2024	ND	8.0000		
Cobalt, total	ug/L	MW-33	09/15/2014	ND	0.8000		
Cobalt, total	ug/L	MW-33	03/06/2015	ND	0.8000		
Cobalt, total	ug/L	MW-33	08/24/2015	ND	0.8000		
Cobalt, total	ug/L	MW-33	03/01/2016	ND	0.8000		
Cobalt, total	ug/L	MW-33	09/09/2016	ND	0.8000		
Cobalt, total	ug/L	MW-33	03/22/2017	ND	0.8000		
Cobalt, total	ug/L	MW-33	08/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-33	02/26/2018	ND	0.8000		
Cobalt, total	ug/L	MW-33	08/29/2018	ND	0.8000		
Cobalt, total	ug/L	MW-33	03/18/2019	ND	0.8000		
Cobalt, total	ug/L	MW-33	09/10/2019	ND	0.8000		
Cobalt, total	ug/L	MW-33	03/25/2020	ND	0.8000		
Cobalt, total	ug/L	MW-33	09/04/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	03/02/2021		0.9000		
Cobalt, total	ug/L	MW-33	09/02/2021		2.6000		*
Cobalt, total	ug/L	MW-33	03/02/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	08/29/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	03/23/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	09/25/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	03/05/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Copper, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Copper, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Copper, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Copper, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Copper, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Copper, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Copper, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Copper, total	ug/L	MW-33	08/29/2018	ND	4.0000		
Copper, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Copper, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Copper, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-33	09/04/2020	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-33	03/02/2021	ND	4.0000		
Copper, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Copper, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Copper, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Copper, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Copper, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Copper, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Lead, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Lead, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Lead, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Lead, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Lead, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Lead, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Lead, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Lead, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Lead, total	ug/L	MW-33	08/29/2018	ND	4.0000		
Lead, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Lead, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Lead, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Lead, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Lead, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Lead, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Lead, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Lead, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Lead, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Lead, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Nickel, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Nickel, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Nickel, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Nickel, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Nickel, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Nickel, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Nickel, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Nickel, total	ug/L	MW-33	08/29/2018	ND	8.0000	4.0000	**
Nickel, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Nickel, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Nickel, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Nickel, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Nickel, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Nickel, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Nickel, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Nickel, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Selenium, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Selenium, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Selenium, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Selenium, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Selenium, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Selenium, total	ug/L	MW-33	03/22/2017		4.7000		
Selenium, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Selenium, total	ug/L	MW-33	08/29/2018	ND	4.0000		
Selenium, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Selenium, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Selenium, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Selenium, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Selenium, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Selenium, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Selenium, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Selenium, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Selenium, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Silver, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Silver, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Silver, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Silver, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Silver, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Silver, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Silver, total	ug/L	MW-33	08/24/2017	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-33	02/26/2018	ND	4.0000		
Silver, total	ug/L	MW-33	08/29/2018	ND	8.0000	4.0000	**
Silver, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Silver, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Silver, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Silver, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Silver, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Silver, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Silver, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Silver, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Silver, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Silver, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Thallium, total	ug/L	MW-33	09/15/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	03/06/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	08/24/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	03/01/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	09/09/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	03/22/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	08/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	02/26/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	08/29/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	03/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-33	09/10/2019	ND	2.0000		
Thallium, total	ug/L	MW-33	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-33	09/04/2020	ND	2.0000		
Thallium, total	ug/L	MW-33	03/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-33	09/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-33	03/02/2022	ND	2.0000		
Thallium, total	ug/L	MW-33	08/29/2022	ND	2.0000		
Thallium, total	ug/L	MW-33	03/23/2023	ND	2.0000		
Thallium, total	ug/L	MW-33	09/25/2023	ND	2.0000		
Thallium, total	ug/L	MW-33	03/05/2024	ND	2.0000		
Vanadium, total	ug/L	MW-33	09/15/2014	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/06/2015	ND	20.0000		
Vanadium, total	ug/L	MW-33	08/24/2015	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/01/2016	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/09/2016	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/22/2017	ND	20.0000		
Vanadium, total	ug/L	MW-33	08/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-33	02/26/2018	ND	20.0000		
Vanadium, total	ug/L	MW-33	08/29/2018	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/10/2019	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/04/2020	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/02/2022	ND	20.0000		
Vanadium, total	ug/L	MW-33	08/29/2022	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/23/2023	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/25/2023	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/05/2024	ND	20.0000		
Zinc, total	ug/L	MW-33	09/15/2014		12.9000		
Zinc, total	ug/L	MW-33	03/06/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	08/24/2015		19.1000		
Zinc, total	ug/L	MW-33	03/01/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	09/09/2016		9.8000		
Zinc, total	ug/L	MW-33	03/22/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	08/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	02/26/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	08/29/2018		40.8000		
Zinc, total	ug/L	MW-33	03/18/2019		30.2000		
Zinc, total	ug/L	MW-33	09/10/2019	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-33	09/04/2020	ND	20.0000		
Zinc, total	ug/L	MW-33	03/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-33	09/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-33	03/02/2022	ND	20.0000		
Zinc, total	ug/L	MW-33	08/29/2022	ND	20.0000		
Zinc, total	ug/L	MW-33	03/23/2023	ND	20.0000		
Zinc, total	ug/L	MW-33	09/25/2023	ND	20.0000		
Zinc, total	ug/L	MW-33	03/05/2024	ND	20.0000		
Antimony, total	ug/L	MW-37	09/15/2014	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-37	01/14/2015	ND	2.0000		
Antimony, total	ug/L	MW-37	03/06/2015	ND	2.0000		
Antimony, total	ug/L	MW-37	06/16/2015	ND	2.0000		
Antimony, total	ug/L	MW-37	08/24/2015	ND	2.0000		
Antimony, total	ug/L	MW-37	03/01/2016	ND	2.0000		
Antimony, total	ug/L	MW-37	09/09/2016	ND	2.0000		
Antimony, total	ug/L	MW-37	03/22/2017	ND	2.0000		
Antimony, total	ug/L	MW-37	08/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-37	02/26/2018	ND	2.0000		
Antimony, total	ug/L	MW-37	08/29/2018	ND	2.0000		
Antimony, total	ug/L	MW-37	03/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-37	09/10/2019	ND	2.0000		
Antimony, total	ug/L	MW-37	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-37	09/04/2020	ND	2.0000		
Antimony, total	ug/L	MW-37	03/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-37	09/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-37	03/02/2022	ND	2.0000		
Antimony, total	ug/L	MW-37	08/29/2022	ND	2.0000		
Antimony, total	ug/L	MW-37	03/23/2023	ND	2.0000		
Antimony, total	ug/L	MW-37	09/25/2023	ND	2.0000		
Antimony, total	ug/L	MW-37	03/05/2024	ND	2.0000		
Arsenic, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Arsenic, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Arsenic, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Arsenic, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Arsenic, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Arsenic, total	ug/L	MW-37	08/29/2018	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Arsenic, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Barium, total	ug/L	MW-37	09/15/2014		95.3000		
Barium, total	ug/L	MW-37	01/14/2015		89.2000		
Barium, total	ug/L	MW-37	03/06/2015		82.1000		
Barium, total	ug/L	MW-37	06/16/2015		85.0000		
Barium, total	ug/L	MW-37	08/24/2015		69.1000		
Barium, total	ug/L	MW-37	03/01/2016		67.7000		
Barium, total	ug/L	MW-37	09/09/2016		77.6000		
Barium, total	ug/L	MW-37	03/22/2017		77.4000		
Barium, total	ug/L	MW-37	08/24/2017		82.3000		
Barium, total	ug/L	MW-37	02/26/2018		78.9000		
Barium, total	ug/L	MW-37	08/29/2018		59.2000		
Barium, total	ug/L	MW-37	03/18/2019		61.3000		
Barium, total	ug/L	MW-37	09/10/2019		60.1000		
Barium, total	ug/L	MW-37	03/25/2020		69.1000		
Barium, total	ug/L	MW-37	09/04/2020		58.6000		
Barium, total	ug/L	MW-37	03/02/2021		64.5000		
Barium, total	ug/L	MW-37	09/02/2021		61.8000		
Barium, total	ug/L	MW-37	03/02/2022		71.0000		
Barium, total	ug/L	MW-37	08/29/2022		46.2000		
Barium, total	ug/L	MW-37	03/23/2023		60.7000		
Barium, total	ug/L	MW-37	09/25/2023		66.9000		
Barium, total	ug/L	MW-37	03/05/2024		61.8000		
Beryllium, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Beryllium, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Beryllium, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Beryllium, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Beryllium, total	ug/L	MW-37	08/24/2017	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-37	02/26/2018	ND	4.0000		
Beryllium, total	ug/L	MW-37	08/29/2018	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Beryllium, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Cadmium, total	ug/L	MW-37	09/15/2014	ND	0.8000		
Cadmium, total	ug/L	MW-37	01/14/2015	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/06/2015	ND	0.8000		
Cadmium, total	ug/L	MW-37	06/16/2015	ND	0.8000		
Cadmium, total	ug/L	MW-37	08/24/2015	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/01/2016	ND	0.8000		
Cadmium, total	ug/L	MW-37	09/09/2016	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/22/2017	ND	0.8000		
Cadmium, total	ug/L	MW-37	08/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-37	02/26/2018	ND	0.8000		
Cadmium, total	ug/L	MW-37	08/29/2018	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-37	09/10/2019	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-37	09/04/2020	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-37	09/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/02/2022	ND	0.8000		
Cadmium, total	ug/L	MW-37	08/29/2022	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/23/2023	ND	0.8000		
Cadmium, total	ug/L	MW-37	09/25/2023	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/05/2024	ND	0.8000		
Chromium, total	ug/L	MW-37	09/15/2014	ND	8.0000		
Chromium, total	ug/L	MW-37	01/14/2015	ND	8.0000		
Chromium, total	ug/L	MW-37	03/06/2015	ND	8.0000		
Chromium, total	ug/L	MW-37	06/16/2015	ND	8.0000		
Chromium, total	ug/L	MW-37	08/24/2015	ND	8.0000		
Chromium, total	ug/L	MW-37	03/01/2016	ND	8.0000		
Chromium, total	ug/L	MW-37	09/09/2016	ND	8.0000		
Chromium, total	ug/L	MW-37	03/22/2017	ND	8.0000		
Chromium, total	ug/L	MW-37	08/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-37	02/26/2018	ND	8.0000		
Chromium, total	ug/L	MW-37	08/29/2018	ND	8.0000		
Chromium, total	ug/L	MW-37	03/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-37	09/10/2019	ND	8.0000		
Chromium, total	ug/L	MW-37	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-37	09/04/2020	ND	8.0000		
Chromium, total	ug/L	MW-37	03/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-37	09/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-37	03/02/2022	ND	8.0000		
Chromium, total	ug/L	MW-37	08/29/2022	ND	8.0000		
Chromium, total	ug/L	MW-37	03/23/2023	ND	8.0000		
Chromium, total	ug/L	MW-37	09/25/2023	ND	8.0000		
Chromium, total	ug/L	MW-37	03/05/2024	ND	8.0000		
Cobalt, total	ug/L	MW-37	09/15/2014	ND	0.8000		
Cobalt, total	ug/L	MW-37	01/14/2015	ND	0.8000		
Cobalt, total	ug/L	MW-37	03/06/2015	ND	0.8000		
Cobalt, total	ug/L	MW-37	06/16/2015	ND	0.8000		
Cobalt, total	ug/L	MW-37	08/24/2015	ND	0.8000		
Cobalt, total	ug/L	MW-37	03/01/2016	ND	0.8000		
Cobalt, total	ug/L	MW-37	09/09/2016	ND	0.8000		
Cobalt, total	ug/L	MW-37	03/22/2017	ND	0.8000		
Cobalt, total	ug/L	MW-37	08/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-37	02/26/2018	ND	0.8000		
Cobalt, total	ug/L	MW-37	08/29/2018	ND	0.8000		
Cobalt, total	ug/L	MW-37	03/18/2019	ND	0.8000		
Cobalt, total	ug/L	MW-37	09/10/2019	ND	0.8000		
Cobalt, total	ug/L	MW-37	03/25/2020	ND	0.8000		
Cobalt, total	ug/L	MW-37	09/04/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	03/02/2021		1.0000		
Cobalt, total	ug/L	MW-37	09/02/2021		1.8000		

*   - 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-37	03/02/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	08/29/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	03/23/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	09/25/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	03/05/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Copper, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Copper, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Copper, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Copper, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Copper, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Copper, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Copper, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Copper, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Copper, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Copper, total	ug/L	MW-37	08/29/2018	ND	4.0000		
Copper, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Copper, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Copper, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Copper, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Copper, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Copper, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Copper, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Copper, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Copper, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Copper, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Lead, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Lead, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Lead, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Lead, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Lead, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Lead, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Lead, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Lead, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Lead, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Lead, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Lead, total	ug/L	MW-37	08/29/2018	ND	4.0000		
Lead, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Lead, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Lead, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Lead, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Lead, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Lead, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Lead, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Lead, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Lead, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Lead, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Nickel, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Nickel, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Nickel, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Nickel, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Nickel, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Nickel, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Nickel, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Nickel, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Nickel, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Nickel, total	ug/L	MW-37	08/29/2018	ND	8.0000	4.0000	**
Nickel, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Nickel, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Nickel, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Nickel, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Nickel, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Nickel, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Nickel, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Nickel, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Selenium, total	ug/L	MW-37	09/15/2014		9.3000		
Selenium, total	ug/L	MW-37	01/14/2015		6.0000		
Selenium, total	ug/L	MW-37	03/06/2015		6.7000		

* - 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-37	06/16/2015		6.3000		
Selenium, total	ug/L	MW-37	08/24/2015		5.5000		
Selenium, total	ug/L	MW-37	03/01/2016		4.4000		
Selenium, total	ug/L	MW-37	09/09/2016		4.7000		
Selenium, total	ug/L	MW-37	03/22/2017		4.1000		
Selenium, total	ug/L	MW-37	08/24/2017		7.1000		
Selenium, total	ug/L	MW-37	02/26/2018		5.8000		
Selenium, total	ug/L	MW-37	08/29/2018		11.6000		
Selenium, total	ug/L	MW-37	03/18/2019		14.6000		
Selenium, total	ug/L	MW-37	09/10/2019		20.2000		
Selenium, total	ug/L	MW-37	03/25/2020		17.6000		
Selenium, total	ug/L	MW-37	09/04/2020		14.7000		
Selenium, total	ug/L	MW-37	03/02/2021		18.9000		
Selenium, total	ug/L	MW-37	09/02/2021		17.4000		
Selenium, total	ug/L	MW-37	03/02/2022		20.0000		
Selenium, total	ug/L	MW-37	08/29/2022		23.1000		
Selenium, total	ug/L	MW-37	03/23/2023		16.4000		
Selenium, total	ug/L	MW-37	09/25/2023		14.5000		
Selenium, total	ug/L	MW-37	03/05/2024		16.5000		
Silver, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Silver, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Silver, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Silver, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Silver, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Silver, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Silver, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Silver, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Silver, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Silver, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Silver, total	ug/L	MW-37	08/29/2018	ND	8.0000	4.0000	**
Silver, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Silver, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Silver, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Silver, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Silver, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Silver, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Silver, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Silver, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Silver, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Silver, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Thallium, total	ug/L	MW-37	09/15/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	01/14/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	03/06/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	06/16/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	08/24/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	03/01/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	09/09/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	03/22/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	08/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	02/26/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	08/29/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	03/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-37	09/10/2019	ND	2.0000		
Thallium, total	ug/L	MW-37	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-37	09/04/2020	ND	2.0000		
Thallium, total	ug/L	MW-37	03/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-37	09/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-37	03/02/2022	ND	2.0000		
Thallium, total	ug/L	MW-37	08/29/2022	ND	2.0000		
Thallium, total	ug/L	MW-37	03/23/2023	ND	2.0000		
Thallium, total	ug/L	MW-37	09/25/2023	ND	2.0000		
Thallium, total	ug/L	MW-37	03/05/2024	ND	2.0000		
Vanadium, total	ug/L	MW-37	09/15/2014	ND	20.0000		
Vanadium, total	ug/L	MW-37	01/14/2015	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/06/2015	ND	20.0000		
Vanadium, total	ug/L	MW-37	06/16/2015	ND	20.0000		
Vanadium, total	ug/L	MW-37	08/24/2015	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/01/2016	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/09/2016	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/22/2017	ND	20.0000		
Vanadium, total	ug/L	MW-37	08/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-37	02/26/2018	ND	20.0000		
Vanadium, total	ug/L	MW-37	08/29/2018	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-37	03/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/10/2019	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/04/2020	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/02/2022	ND	20.0000		
Vanadium, total	ug/L	MW-37	08/29/2022	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/23/2023	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/25/2023	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/05/2024	ND	20.0000		
Zinc, total	ug/L	MW-37	09/15/2014		11.2000		
Zinc, total	ug/L	MW-37	01/14/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	03/06/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	06/16/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	08/24/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	03/01/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	09/09/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	03/22/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	08/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	02/26/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	08/29/2018		28.7000		
Zinc, total	ug/L	MW-37	03/18/2019	ND	20.0000		
Zinc, total	ug/L	MW-37	09/10/2019	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-37	09/04/2020	ND	20.0000		
Zinc, total	ug/L	MW-37	03/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-37	09/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-37	03/02/2022	ND	20.0000		
Zinc, total	ug/L	MW-37	08/29/2022	ND	20.0000		
Zinc, total	ug/L	MW-37	03/23/2023	ND	20.0000		
Zinc, total	ug/L	MW-37	09/25/2023	ND	20.0000		
Zinc, total	ug/L	MW-37	03/05/2024	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-10	03/05/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-10	03/05/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-10	03/05/2024		440.0000	***	279.5428
Beryllium, total	ug/L	MW-10	03/05/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-10	03/05/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-10	03/05/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-10	03/05/2024		5.7000	***	1.8000
Copper, total	ug/L	MW-10	03/05/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-10	03/05/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-10	03/05/2024		11.1000	***	4.0000
Selenium, total	ug/L	MW-10	03/05/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-10	03/05/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-10	03/05/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-10	03/05/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-10	03/05/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-27	03/05/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-27	03/05/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-27	03/05/2024		194.0000		279.5428
Beryllium, total	ug/L	MW-27	03/05/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-27	03/05/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-27	03/05/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-27	03/05/2024	ND	0.4000		1.8000
Copper, total	ug/L	MW-27	03/05/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-27	03/05/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-27	03/05/2024	ND	4.0000		4.0000
Selenium, total	ug/L	MW-27	03/05/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-27	03/05/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-27	03/05/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-27	03/05/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-27	03/05/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-34	03/05/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-34	03/05/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-34	03/05/2024		192.0000		279.5428
Beryllium, total	ug/L	MW-34	03/05/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-34	03/05/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-34	03/05/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-34	03/05/2024		0.5000		1.8000
Copper, total	ug/L	MW-34	03/05/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-34	03/05/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-34	03/05/2024		7.6000	***	4.0000
Selenium, total	ug/L	MW-34	03/05/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-34	03/05/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-34	03/05/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-34	03/05/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-34	03/05/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-35	03/05/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-35	03/05/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-35	03/05/2024		460.0000	***	279.5428
Beryllium, total	ug/L	MW-35	03/05/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-35	03/05/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-35	03/05/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-35	03/05/2024	ND	0.4000		1.8000
Copper, total	ug/L	MW-35	03/05/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-35	03/05/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-35	03/05/2024	ND	4.0000		4.0000
Selenium, total	ug/L	MW-35	03/05/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-35	03/05/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-35	03/05/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-35	03/05/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-35	03/05/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-36	03/05/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-36	03/05/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-36	03/05/2024		315.0000	***	279.5428
Beryllium, total	ug/L	MW-36	03/05/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-36	03/05/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-36	03/05/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-36	03/05/2024	ND	0.4000		1.8000
Copper, total	ug/L	MW-36	03/05/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-36	03/05/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-36	03/05/2024	ND	4.0000		4.0000
Selenium, total	ug/L	MW-36	03/05/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-36	03/05/2024	ND	4.0000		4.0000

* - 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 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Thallium, total	ug/L	MW-36	03/05/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-36	03/05/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-36	03/05/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-3A	03/05/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-3A	03/05/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-3A	03/05/2024		153.0000	**	279.5428
Beryllium, total	ug/L	MW-3A	03/05/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-3A	03/05/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-3A	03/05/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-3A	03/05/2024		1.1000		1.8000
Copper, total	ug/L	MW-3A	03/05/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-3A	03/05/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/05/2024		12.6000	*	4.0000
Selenium, total	ug/L	MW-3A	03/05/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-3A	03/05/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-3A	03/05/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-3A	03/05/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-3A	03/05/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-8	03/05/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-8	03/05/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-8	03/05/2024		201.0000		279.5428
Beryllium, total	ug/L	MW-8	03/05/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-8	03/05/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-8	03/05/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-8	03/05/2024		0.6000		1.8000
Copper, total	ug/L	MW-8	03/05/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-8	03/05/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-8	03/05/2024		5.5000	***	4.0000
Selenium, total	ug/L	MW-8	03/05/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-8	03/05/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-8	03/05/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-8	03/05/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-8	03/05/2024	ND	20.0000		49.4000

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

Table 3

Detection Frequencies in Upgradient and Downgradient Wells

Constituent	Upgradient			Downgradient		
	Detect	N	Proportion	Detect	N	Proportion
Antimony, total	0	86	0.000	0	212	0.000
Arsenic, total	0	86	0.000	48	215	0.223
Barium, total	87	87	1.000	220	220	1.000
Beryllium, total	0	86	0.000	0	212	0.000
Cadmium, total	2	86	0.023	19	213	0.089
Chromium, total	0	86	0.000	13	212	0.061
Cobalt, total	10	85	0.118	107	215	0.498
Copper, total	1	86	0.012	54	212	0.255
Lead, total	0	86	0.000	26	212	0.123
Nickel, total	0	86	0.000	134	215	0.623
Selenium, total	33	86	0.384	4	212	0.019
Silver, total	0	86	0.000	0	212	0.000
Thallium, total	0	85	0.000	1	212	0.005
Vanadium, total	0	86	0.000	13	215	0.060
Zinc, total	14	85	0.165	84	212	0.396

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	0	86	0.000									nonpar
Arsenic, total	0	86	0.000									nonpar
Barium, total	87	87	1.000	1.666	0.687					2.326	normal	normal
Beryllium, total	0	86	0.000									nonpar
Cadmium, total	2	86	0.023									nonpar
Chromium, total	0	86	0.000									nonpar
Cobalt, total	10	85	0.118	0.003	0.974					2.326	normal	nonpar
Copper, total	1	86	0.012									nonpar
Lead, total	0	86	0.000									nonpar
Nickel, total	0	86	0.000									nonpar
Selenium, total	33	86	0.384	2.795	2.666					2.326	non-norm	nonpar
Silver, total	0	86	0.000									nonpar
Thallium, total	0	85	0.000									nonpar
Vanadium, total	0	86	0.000									nonpar
Zinc, total	14	85	0.165	0.126	0.525					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	0	86					2.0000	nonpar	***	0.99
Arsenic, total	ug/L	0	86					4.0000	nonpar	***	0.99
Barium, total	ug/L	87	87	141.4793	57.9109	0.0100	2.3841	279.5428	normal		
Beryllium, total	ug/L	0	86					4.0000	nonpar	***	0.99
Cadmium, total	ug/L	2	86					0.8000	nonpar	***	0.99
Chromium, total	ug/L	0	86					8.0000	nonpar	***	0.99
Cobalt, total	ug/L	10	85					1.8000	nonpar		0.99
Copper, total	ug/L	1	86					8.4000	nonpar		0.99
Lead, total	ug/L	0	86					4.0000	nonpar	***	0.99
Nickel, total	ug/L	0	86					4.0000	nonpar	***	0.99
Selenium, total	ug/L	33	86					23.1000	nonpar		0.99
Silver, total	ug/L	0	86					4.0000	nonpar	***	0.99
Thallium, total	ug/L	0	85					2.0000	nonpar	***	0.99
Vanadium, total	ug/L	0	86					20.0000	nonpar	***	0.99
Zinc, total	ug/L	14	85					49.4000	nonpar		0.99

Conf = confidence level for passing initial test or one verification resample at all downgradient wells for a single constituent (nonparametric test only).
* - Insufficient Data.
** - Calculated limit raised to Manual Reporting Limit.
*** - Nonparametric limit based on ND value.
For transformed data, mean and SD in transformed units and prediction limit in original units.
All sample sizes and statistics are based on outlier free data.
For nonparametric limits, median reporting limits are substituted for extreme reporting limit values.

Table 6

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Thallium, total	ug/L	MW-26	02/26/2018	10.0000	< 10.0000	09/15/2014-03/05/2024	22	0.5162
Cobalt, total	ug/L	MW-33	09/02/2021	2.6000		09/15/2014-03/05/2024	20	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
Barium, total	ug/L	MW-10	03/26/2008		234.0000		279.5428
Barium, total	ug/L	MW-10	05/06/2008		190.0000		279.5428
Barium, total	ug/L	MW-10	07/23/2008		179.0000		279.5428
Barium, total	ug/L	MW-10	09/30/2008		491.0000	*	279.5428
Barium, total	ug/L	MW-10	12/02/2008		579.0000	*	279.5428
Barium, total	ug/L	MW-10	03/05/2009		611.0000	*	279.5428
Barium, total	ug/L	MW-10	09/01/2009		405.0000	*	279.5428
Barium, total	ug/L	MW-10	03/23/2010		204.0000		279.5428
Barium, total	ug/L	MW-10	07/26/2010		382.0000	*	279.5428
Barium, total	ug/L	MW-10	09/09/2010		530.0000	*	279.5428
Barium, total	ug/L	MW-10	03/29/2011		499.0000	*	279.5428
Barium, total	ug/L	MW-10	09/13/2011		616.0000	*	279.5428
Barium, total	ug/L	MW-10	03/28/2012		341.0000	*	279.5428
Barium, total	ug/L	MW-10	09/11/2012		638.0000	*	279.5428
Barium, total	ug/L	MW-10	03/26/2013		454.0000	*	279.5428
Barium, total	ug/L	MW-10	09/25/2013		615.0000	*	279.5428
Barium, total	ug/L	MW-10	03/20/2014		606.0000	*	279.5428
Barium, total	ug/L	MW-10	09/15/2014		601.0000	*	279.5428
Barium, total	ug/L	MW-10	03/06/2015		547.0000	*	279.5428
Barium, total	ug/L	MW-10	08/24/2015		620.0000	*	279.5428
Barium, total	ug/L	MW-10	03/01/2016		405.0000	*	279.5428
Barium, total	ug/L	MW-10	09/09/2016		623.0000	*	279.5428
Barium, total	ug/L	MW-10	03/22/2017		676.0000	*	279.5428
Barium, total	ug/L	MW-10	08/24/2017		519.0000	*	279.5428
Barium, total	ug/L	MW-10	02/26/2018		589.0000	*	279.5428
Barium, total	ug/L	MW-10	08/29/2018		592.0000	*	279.5428
Barium, total	ug/L	MW-10	03/18/2019		213.0000		279.5428
Barium, total	ug/L	MW-10	09/10/2019		377.0000	*	279.5428
Barium, total	ug/L	MW-10	03/25/2020		412.0000	*	279.5428
Barium, total	ug/L	MW-10	09/04/2020		408.0000	*	279.5428
Barium, total	ug/L	MW-10	03/02/2021		413.0000	*	279.5428
Barium, total	ug/L	MW-10	09/02/2021		458.0000	*	279.5428
Barium, total	ug/L	MW-10	03/02/2022		394.0000	*	279.5428
Barium, total	ug/L	MW-10	08/29/2022		395.0000	*	279.5428
Barium, total	ug/L	MW-10	03/23/2023		354.0000	*	279.5428
Barium, total	ug/L	MW-10	09/25/2023		376.0000	*	279.5428
Barium, total	ug/L	MW-10	03/05/2024		440.0000	*	279.5428
Cobalt, total	ug/L	MW-10	03/26/2008		20.0000	*	1.8000
Cobalt, total	ug/L	MW-10	05/06/2008		18.0000	*	1.8000
Cobalt, total	ug/L	MW-10	07/23/2008	ND	10.0000		1.8000
Cobalt, total	ug/L	MW-10	09/30/2008		11.5000	*	1.8000
Cobalt, total	ug/L	MW-10	12/02/2008		12.1000	*	1.8000
Cobalt, total	ug/L	MW-10	03/05/2009		10.4000	*	1.8000
Cobalt, total	ug/L	MW-10	09/01/2009		12.2000	*	1.8000
Cobalt, total	ug/L	MW-10	03/23/2010		6.1000	*	1.8000
Cobalt, total	ug/L	MW-10	07/26/2010		11.9000	*	1.8000
Cobalt, total	ug/L	MW-10	09/09/2010		9.2000	*	1.8000
Cobalt, total	ug/L	MW-10	03/29/2011		8.5000	*	1.8000
Cobalt, total	ug/L	MW-10	09/13/2011		5.2000	*	1.8000
Cobalt, total	ug/L	MW-10	03/28/2012		4.5000	*	1.8000
Cobalt, total	ug/L	MW-10	09/11/2012		7.7000	*	1.8000
Cobalt, total	ug/L	MW-10	03/26/2013		8.3000	*	1.8000
Cobalt, total	ug/L	MW-10	09/25/2013		9.3000	*	1.8000
Cobalt, total	ug/L	MW-10	03/20/2014		11.0000	*	1.8000
Cobalt, total	ug/L	MW-10	09/15/2014		8.1000	*	1.8000
Cobalt, total	ug/L	MW-10	03/06/2015		6.0000	*	1.8000
Cobalt, total	ug/L	MW-10	08/24/2015		7.0000	*	1.8000
Cobalt, total	ug/L	MW-10	03/01/2016		4.9000	*	1.8000
Cobalt, total	ug/L	MW-10	09/09/2016		7.6000	*	1.8000
Cobalt, total	ug/L	MW-10	03/22/2017		8.0000	*	1.8000
Cobalt, total	ug/L	MW-10	08/24/2017		6.7000	*	1.8000
Cobalt, total	ug/L	MW-10	02/26/2018		8.5000	*	1.8000
Cobalt, total	ug/L	MW-10	08/29/2018		9.2000	*	1.8000
Cobalt, total	ug/L	MW-10	03/18/2019		3.9000	*	1.8000
Cobalt, total	ug/L	MW-10	09/10/2019		7.2000	*	1.8000
Cobalt, total	ug/L	MW-10	03/25/2020		8.7000	*	1.8000
Cobalt, total	ug/L	MW-10	09/04/2020		10.0000	*	1.8000
Cobalt, total	ug/L	MW-10	03/02/2021		7.4000	*	1.8000
Cobalt, total	ug/L	MW-10	09/02/2021		10.0000	*	1.8000
Cobalt, total	ug/L	MW-10	03/02/2022		2.5000	*	1.8000
Cobalt, total	ug/L	MW-10	08/29/2022		5.5000	*	1.8000

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Cobalt, total	ug/L	MW-10	03/23/2023		1.7000		1.8000
Cobalt, total	ug/L	MW-10	09/25/2023		7.1000	*	1.8000
Cobalt, total	ug/L	MW-10	03/05/2024		5.7000	*	1.8000
Nickel, total	ug/L	MW-10	03/26/2008		61.0000	*	4.0000
Nickel, total	ug/L	MW-10	05/06/2008		36.0000	*	4.0000
Nickel, total	ug/L	MW-10	07/23/2008		17.0000	*	4.0000
Nickel, total	ug/L	MW-10	09/30/2008		24.7000	*	4.0000
Nickel, total	ug/L	MW-10	12/02/2008		26.7000	*	4.0000
Nickel, total	ug/L	MW-10	03/05/2009		26.8000	*	4.0000
Nickel, total	ug/L	MW-10	09/01/2009		39.0000	*	4.0000
Nickel, total	ug/L	MW-10	03/23/2010		19.6000	*	4.0000
Nickel, total	ug/L	MW-10	07/26/2010		21.8000	*	4.0000
Nickel, total	ug/L	MW-10	09/09/2010		20.9000	*	4.0000
Nickel, total	ug/L	MW-10	03/29/2011		35.2000	*	4.0000
Nickel, total	ug/L	MW-10	09/13/2011		18.2000	*	4.0000
Nickel, total	ug/L	MW-10	03/28/2012		21.1000	*	4.0000
Nickel, total	ug/L	MW-10	09/11/2012		18.8000	*	4.0000
Nickel, total	ug/L	MW-10	03/26/2013		24.9000	*	4.0000
Nickel, total	ug/L	MW-10	09/25/2013		23.3000	*	4.0000
Nickel, total	ug/L	MW-10	03/20/2014		27.4000	*	4.0000
Nickel, total	ug/L	MW-10	09/15/2014		15.2000	*	4.0000
Nickel, total	ug/L	MW-10	03/06/2015		17.3000	*	4.0000
Nickel, total	ug/L	MW-10	08/24/2015		16.3000	*	4.0000
Nickel, total	ug/L	MW-10	03/01/2016		24.9000	*	4.0000
Nickel, total	ug/L	MW-10	09/09/2016		17.6000	*	4.0000
Nickel, total	ug/L	MW-10	03/22/2017		15.1000	*	4.0000
Nickel, total	ug/L	MW-10	08/24/2017		12.6000	*	4.0000
Nickel, total	ug/L	MW-10	02/26/2018		13.1000	*	4.0000
Nickel, total	ug/L	MW-10	08/29/2018		16.3000	*	4.0000
Nickel, total	ug/L	MW-10	03/18/2019		8.6000	*	4.0000
Nickel, total	ug/L	MW-10	09/10/2019		9.2000	*	4.0000
Nickel, total	ug/L	MW-10	03/25/2020		14.4000	*	4.0000
Nickel, total	ug/L	MW-10	09/04/2020		15.8000	*	4.0000
Nickel, total	ug/L	MW-10	03/02/2021		10.6000	*	4.0000
Nickel, total	ug/L	MW-10	09/02/2021		12.6000	*	4.0000
Nickel, total	ug/L	MW-10	03/02/2022		13.0000	*	4.0000
Nickel, total	ug/L	MW-10	08/29/2022		12.8000	*	4.0000
Nickel, total	ug/L	MW-10	03/23/2023		8.3000	*	4.0000
Nickel, total	ug/L	MW-10	09/25/2023		15.4000	*	4.0000
Nickel, total	ug/L	MW-10	03/05/2024		11.1000	*	4.0000
Nickel, total	ug/L	MW-34	03/29/2011		22.1000	*	4.0000
Nickel, total	ug/L	MW-34	05/04/2011		21.0000	*	4.0000
Nickel, total	ug/L	MW-34	09/13/2011		35.7000	*	4.0000
Nickel, total	ug/L	MW-34	03/28/2012		14.2000	*	4.0000
Nickel, total	ug/L	MW-34	07/05/2012		20.2000	*	4.0000
Nickel, total	ug/L	MW-34	09/11/2012		19.4000	*	4.0000
Nickel, total	ug/L	MW-34	10/30/2012		24.0000	*	4.0000
Nickel, total	ug/L	MW-34	03/26/2013		9.4000	*	4.0000
Nickel, total	ug/L	MW-34	09/25/2013		10.7000	*	4.0000
Nickel, total	ug/L	MW-34	03/20/2014		4.4000	*	4.0000
Nickel, total	ug/L	MW-34	09/15/2014	ND	4.0000		4.0000
Nickel, total	ug/L	MW-34	03/06/2015		5.5000	*	4.0000
Nickel, total	ug/L	MW-34	08/24/2015		14.7000	*	4.0000
Nickel, total	ug/L	MW-34	03/01/2016		9.6000	*	4.0000
Nickel, total	ug/L	MW-34	09/09/2016		7.9000	*	4.0000
Nickel, total	ug/L	MW-34	03/22/2017		5.0000	*	4.0000
Nickel, total	ug/L	MW-34	08/24/2017		14.7000	*	4.0000
Nickel, total	ug/L	MW-34	02/26/2018		8.2000	*	4.0000
Nickel, total	ug/L	MW-34	08/29/2018		4.3000	*	4.0000
Nickel, total	ug/L	MW-34	03/18/2019		9.2000	*	4.0000
Nickel, total	ug/L	MW-34	09/10/2019		12.0000	*	4.0000
Nickel, total	ug/L	MW-34	03/25/2020		5.4000	*	4.0000
Nickel, total	ug/L	MW-34	09/04/2020		11.3000	*	4.0000
Nickel, total	ug/L	MW-34	03/02/2021		8.9000	*	4.0000
Nickel, total	ug/L	MW-34	09/02/2021		13.9000	*	4.0000
Nickel, total	ug/L	MW-34	03/02/2022	ND	4.0000		4.0000
Nickel, total	ug/L	MW-34	08/29/2022		9.0000	*	4.0000
Nickel, total	ug/L	MW-34	03/23/2023	ND	4.0000		4.0000
Nickel, total	ug/L	MW-34	09/25/2023		10.0000	*	4.0000
Nickel, total	ug/L	MW-34	03/05/2024		7.6000	*	4.0000
Barium, total	ug/L	MW-35	03/29/2011		363.0000	*	279.5428

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Barium, total	ug/L	MW-35	05/04/2011		267.0000		279.5428
Barium, total	ug/L	MW-35	09/13/2011		495.0000	*	279.5428
Barium, total	ug/L	MW-35	03/28/2012		757.0000	*	279.5428
Barium, total	ug/L	MW-35	07/05/2012		730.0000	*	279.5428
Barium, total	ug/L	MW-35	09/11/2012		864.0000	*	279.5428
Barium, total	ug/L	MW-35	10/30/2012		494.0000	*	279.5428
Barium, total	ug/L	MW-35	03/26/2013		697.0000	*	279.5428
Barium, total	ug/L	MW-35	09/25/2013		795.0000	*	279.5428
Barium, total	ug/L	MW-35	03/20/2014		772.0000	*	279.5428
Barium, total	ug/L	MW-35	09/15/2014		668.0000	*	279.5428
Barium, total	ug/L	MW-35	03/06/2015		740.0000	*	279.5428
Barium, total	ug/L	MW-35	08/24/2015		695.0000	*	279.5428
Barium, total	ug/L	MW-35	03/01/2016		676.0000	*	279.5428
Barium, total	ug/L	MW-35	09/09/2016		664.0000	*	279.5428
Barium, total	ug/L	MW-35	03/22/2017		629.0000	*	279.5428
Barium, total	ug/L	MW-35	08/24/2017		667.0000	*	279.5428
Barium, total	ug/L	MW-35	02/26/2018		637.0000	*	279.5428
Barium, total	ug/L	MW-35	08/29/2018		580.0000	*	279.5428
Barium, total	ug/L	MW-35	03/18/2019		1230.0000	*	279.5428
Barium, total	ug/L	MW-35	09/10/2019		387.0000	*	279.5428
Barium, total	ug/L	MW-35	03/25/2020		543.0000	*	279.5428
Barium, total	ug/L	MW-35	09/04/2020		268.0000		279.5428
Barium, total	ug/L	MW-35	03/02/2021		481.0000	*	279.5428
Barium, total	ug/L	MW-35	09/02/2021		248.0000		279.5428
Barium, total	ug/L	MW-35	03/02/2022		483.0000	*	279.5428
Barium, total	ug/L	MW-35	08/29/2022		372.0000	*	279.5428
Barium, total	ug/L	MW-35	03/23/2023		451.0000	*	279.5428
Barium, total	ug/L	MW-35	09/25/2023		378.0000	*	279.5428
Barium, total	ug/L	MW-35	03/05/2024		460.0000	*	279.5428
Barium, total	ug/L	MW-36	05/11/2011		391.0000	*	279.5428
Barium, total	ug/L	MW-36	09/13/2011		513.0000	*	279.5428
Barium, total	ug/L	MW-36	03/28/2012		382.0000	*	279.5428
Barium, total	ug/L	MW-36	09/11/2012		282.0000	*	279.5428
Barium, total	ug/L	MW-36	03/26/2013		223.0000		279.5428
Barium, total	ug/L	MW-36	09/25/2013		299.0000	*	279.5428
Barium, total	ug/L	MW-36	03/20/2014		293.0000	*	279.5428
Barium, total	ug/L	MW-36	09/15/2014		302.0000	*	279.5428
Barium, total	ug/L	MW-36	03/06/2015		344.0000	*	279.5428
Barium, total	ug/L	MW-36	08/24/2015		322.0000	*	279.5428
Barium, total	ug/L	MW-36	03/01/2016		347.0000	*	279.5428
Barium, total	ug/L	MW-36	09/09/2016		345.0000	*	279.5428
Barium, total	ug/L	MW-36	01/26/2017		337.0000	*	279.5428
Barium, total	ug/L	MW-36	03/22/2017		327.0000	*	279.5428
Barium, total	ug/L	MW-36	08/24/2017		357.0000	*	279.5428
Barium, total	ug/L	MW-36	02/26/2018		341.0000	*	279.5428
Barium, total	ug/L	MW-36	08/29/2018		341.0000	*	279.5428
Barium, total	ug/L	MW-36	03/18/2019		348.0000	*	279.5428
Barium, total	ug/L	MW-36	09/10/2019		336.0000	*	279.5428
Barium, total	ug/L	MW-36	03/25/2020		346.0000	*	279.5428
Barium, total	ug/L	MW-36	09/04/2020		353.0000	*	279.5428
Barium, total	ug/L	MW-36	03/02/2021		331.0000	*	279.5428
Barium, total	ug/L	MW-36	09/02/2021		336.0000	*	279.5428
Barium, total	ug/L	MW-36	03/02/2022		309.0000	*	279.5428
Barium, total	ug/L	MW-36	08/29/2022		314.0000	*	279.5428
Barium, total	ug/L	MW-36	03/23/2023		301.0000	*	279.5428
Barium, total	ug/L	MW-36	09/25/2023		289.0000	*	279.5428
Barium, total	ug/L	MW-36	03/05/2024		315.0000	*	279.5428
Barium, total	ug/L	MW-3A	03/29/2011		185.0000		279.5428
Barium, total	ug/L	MW-3A	09/13/2011		206.0000		279.5428
Barium, total	ug/L	MW-3A	03/28/2012		240.0000		279.5428
Barium, total	ug/L	MW-3A	07/05/2012		189.0000		279.5428
Barium, total	ug/L	MW-3A	03/26/2013		174.0000		279.5428
Barium, total	ug/L	MW-3A	09/25/2013		438.0000	*	279.5428
Barium, total	ug/L	MW-3A	03/20/2014		308.0000	*	279.5428
Barium, total	ug/L	MW-3A	04/09/2014		178.0000		279.5428
Barium, total	ug/L	MW-3A	09/15/2014		102.0000		279.5428
Barium, total	ug/L	MW-3A	03/06/2015		115.0000		279.5428
Barium, total	ug/L	MW-3A	08/24/2015		125.0000		279.5428
Barium, total	ug/L	MW-3A	03/01/2016		102.0000		279.5428
Barium, total	ug/L	MW-3A	09/09/2016		369.0000	*	279.5428
Barium, total	ug/L	MW-3A	10/31/2016		308.0000	*	279.5428

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Barium, total	ug/L	MW-3A	03/22/2017		140.0000		279.5428
Barium, total	ug/L	MW-3A	08/24/2017		535.0000	*	279.5428
Barium, total	ug/L	MW-3A	11/15/2017		516.0000	*	279.5428
Barium, total	ug/L	MW-3A	02/26/2018		154.0000		279.5428
Barium, total	ug/L	MW-3A	08/29/2018		379.0000	*	279.5428
Barium, total	ug/L	MW-3A	03/18/2019		72.3000		279.5428
Barium, total	ug/L	MW-3A	09/10/2019		195.0000		279.5428
Barium, total	ug/L	MW-3A	03/25/2020		86.4000		279.5428
Barium, total	ug/L	MW-3A	09/04/2020		210.0000		279.5428
Barium, total	ug/L	MW-3A	03/02/2021		176.0000		279.5428
Barium, total	ug/L	MW-3A	09/02/2021		264.0000		279.5428
Barium, total	ug/L	MW-3A	03/02/2022		387.0000	*	279.5428
Barium, total	ug/L	MW-3A	08/29/2022		378.0000	*	279.5428
Barium, total	ug/L	MW-3A	03/23/2023		333.0000	*	279.5428
Barium, total	ug/L	MW-3A	03/05/2024		153.0000		279.5428
Nickel, total	ug/L	MW-3A	03/29/2011		8.3000	*	4.0000
Nickel, total	ug/L	MW-3A	09/13/2011		10.9000	*	4.0000
Nickel, total	ug/L	MW-3A	03/28/2012		7.5000	*	4.0000
Nickel, total	ug/L	MW-3A	07/05/2012		4.9000	*	4.0000
Nickel, total	ug/L	MW-3A	03/26/2013		4.5000	*	4.0000
Nickel, total	ug/L	MW-3A	09/25/2013		8.9000	*	4.0000
Nickel, total	ug/L	MW-3A	04/09/2014	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	09/15/2014	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/06/2015		5.0000	*	4.0000
Nickel, total	ug/L	MW-3A	08/24/2015		7.1000	*	4.0000
Nickel, total	ug/L	MW-3A	03/01/2016		7.9000	*	4.0000
Nickel, total	ug/L	MW-3A	09/09/2016	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/22/2017	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	08/24/2017	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	02/26/2018		4.7000	*	4.0000
Nickel, total	ug/L	MW-3A	08/29/2018	ND	8.0000		4.0000
Nickel, total	ug/L	MW-3A	03/18/2019		4.8000	*	4.0000
Nickel, total	ug/L	MW-3A	09/10/2019		4.3000	*	4.0000
Nickel, total	ug/L	MW-3A	03/25/2020		4.5000	*	4.0000
Nickel, total	ug/L	MW-3A	09/04/2020	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/02/2021	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	09/02/2021	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/02/2022	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	08/29/2022	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/23/2023	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/05/2024		12.6000	*	4.0000
Nickel, total	ug/L	MW-8	03/26/2008		9.0000	*	4.0000
Nickel, total	ug/L	MW-8	05/06/2008		5.0000	*	4.0000
Nickel, total	ug/L	MW-8	07/23/2008		20.0000	*	4.0000
Nickel, total	ug/L	MW-8	09/30/2008		25.7000	*	4.0000
Nickel, total	ug/L	MW-8	12/02/2008		30.3000	*	4.0000
Nickel, total	ug/L	MW-8	03/05/2009		15.4000	*	4.0000
Nickel, total	ug/L	MW-8	09/01/2009		21.2000	*	4.0000
Nickel, total	ug/L	MW-8	03/23/2010		16.8000	*	4.0000
Nickel, total	ug/L	MW-8	09/09/2010		19.6000	*	4.0000
Nickel, total	ug/L	MW-8	03/29/2011		20.2000	*	4.0000
Nickel, total	ug/L	MW-8	09/13/2011		19.8000	*	4.0000
Nickel, total	ug/L	MW-8	03/28/2012		14.9000	*	4.0000
Nickel, total	ug/L	MW-8	09/11/2012		23.3000	*	4.0000
Nickel, total	ug/L	MW-8	03/26/2013		10.2000	*	4.0000
Nickel, total	ug/L	MW-8	09/25/2013		10.6000	*	4.0000
Nickel, total	ug/L	MW-8	03/20/2014		30.3000	*	4.0000
Nickel, total	ug/L	MW-8	09/15/2014	ND	4.0000		4.0000
Nickel, total	ug/L	MW-8	03/06/2015		5.0000	*	4.0000
Nickel, total	ug/L	MW-8	08/24/2015		6.9000	*	4.0000
Nickel, total	ug/L	MW-8	03/01/2016		5.4000	*	4.0000
Nickel, total	ug/L	MW-8	09/09/2016		17.4000	*	4.0000
Nickel, total	ug/L	MW-8	10/31/2016		9.8000	*	4.0000
Nickel, total	ug/L	MW-8	03/22/2017		5.5000	*	4.0000
Nickel, total	ug/L	MW-8	08/24/2017		13.7000	*	4.0000
Nickel, total	ug/L	MW-8	02/26/2018		7.6000	*	4.0000
Nickel, total	ug/L	MW-8	08/29/2018		11.8000	*	4.0000
Nickel, total	ug/L	MW-8	03/18/2019		4.7000	*	4.0000
Nickel, total	ug/L	MW-8	09/10/2019		14.9000	*	4.0000
Nickel, total	ug/L	MW-8	03/25/2020	ND	4.0000		4.0000
Nickel, total	ug/L	MW-8	09/04/2020		9.2000	*	4.0000

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

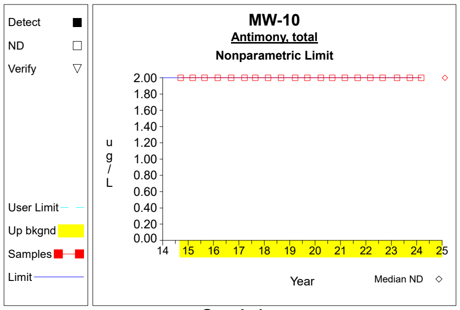
Table 8

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

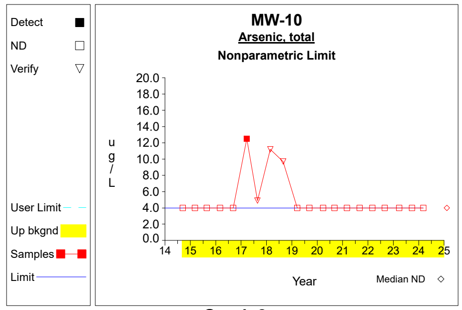
Constituent	Units	Well	Date		Result		Pred. Limit
Nickel, total	ug/L	MW-8	03/02/2021		6.0000	*	4.0000
Nickel, total	ug/L	MW-8	09/02/2021		13.2000	*	4.0000
Nickel, total	ug/L	MW-8	03/02/2022		4.2000	*	4.0000
Nickel, total	ug/L	MW-8	08/29/2022		13.5000	*	4.0000
Nickel, total	ug/L	MW-8	03/23/2023	ND	4.0000		4.0000
Nickel, total	ug/L	MW-8	09/25/2023		15.2000	*	4.0000
Nickel, total	ug/L	MW-8	03/05/2024		5.5000	*	4.0000

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

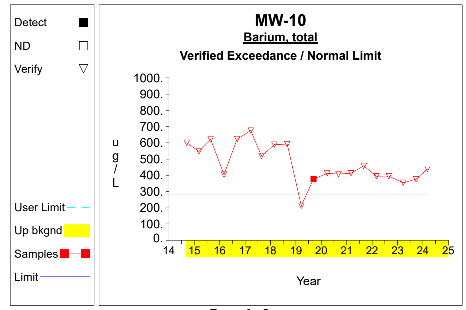
Up vs. Down Prediction Limits



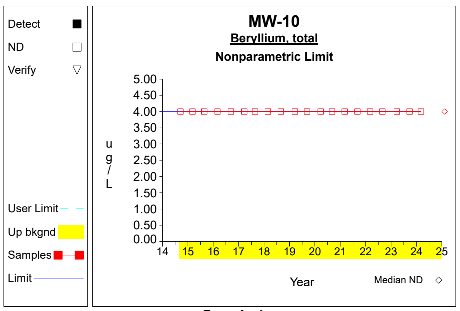
Graph 1



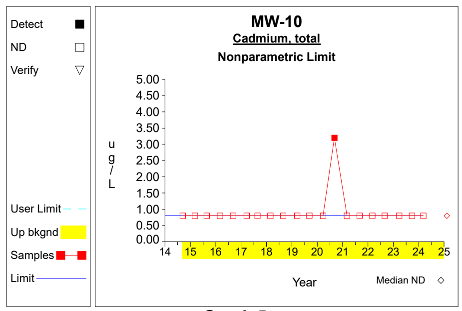
Graph 2



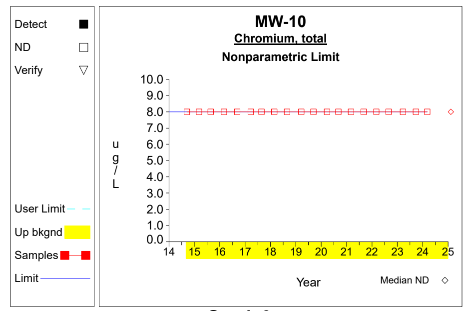
Graph 3



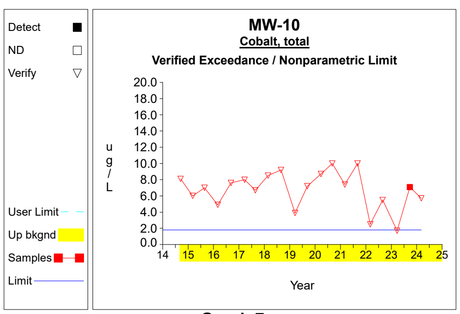
Graph 4



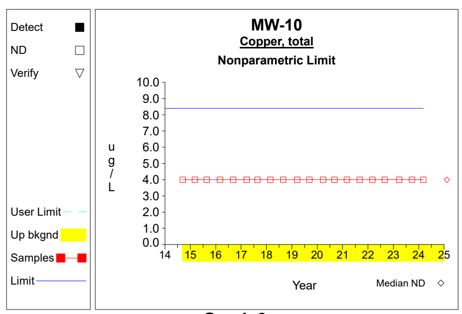
Graph 5



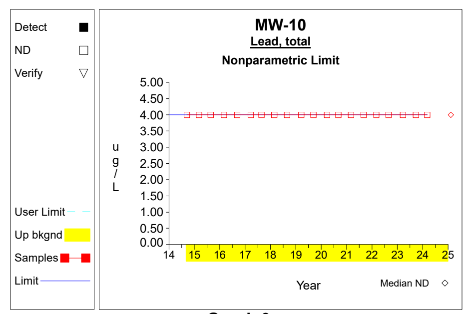
Graph 6



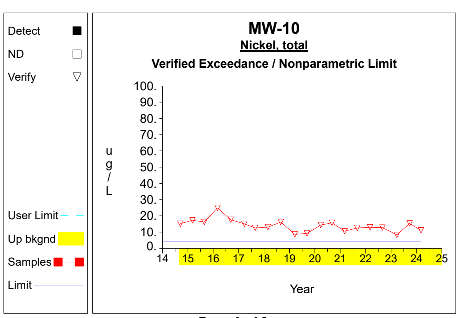
Graph 7



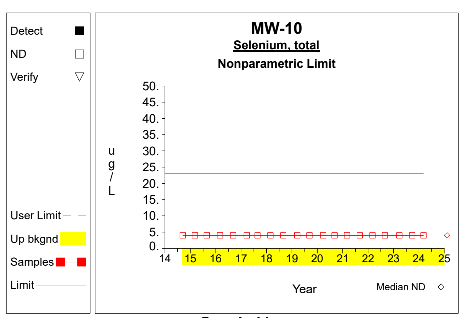
Graph 8



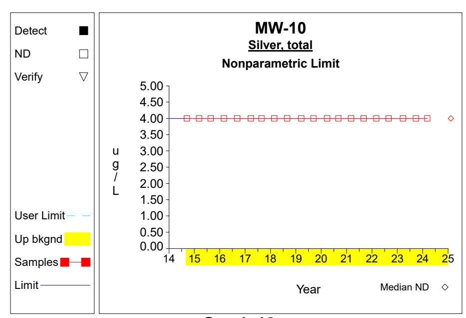
Graph 9



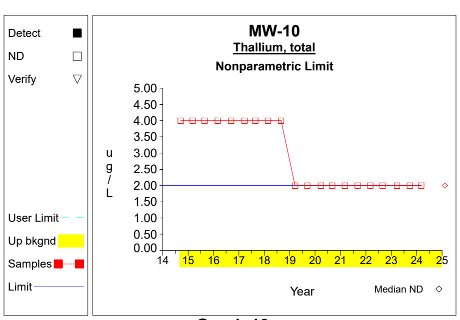
Graph 10



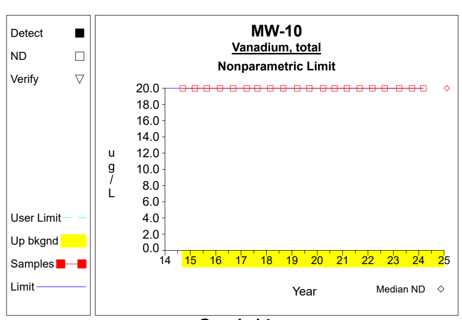
Graph 11



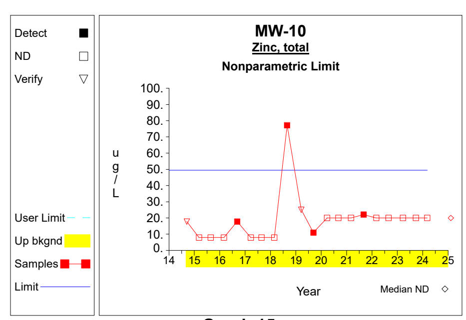
Graph 12



Graph 13

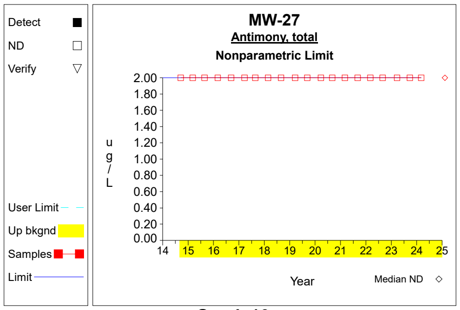


Graph 14

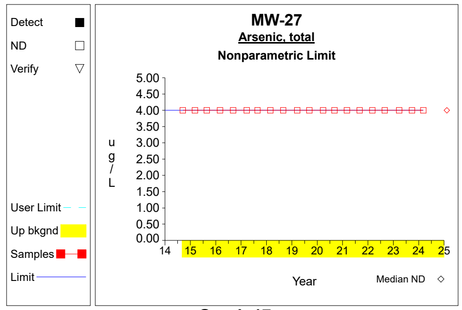


Graph 15

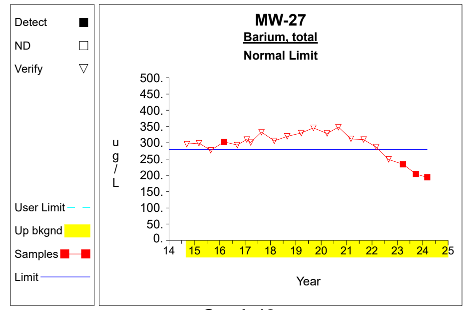
Up vs. Down Prediction Limits



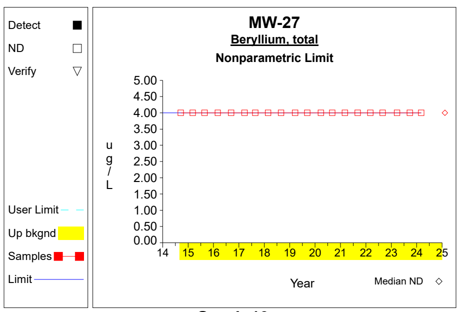
Graph 16



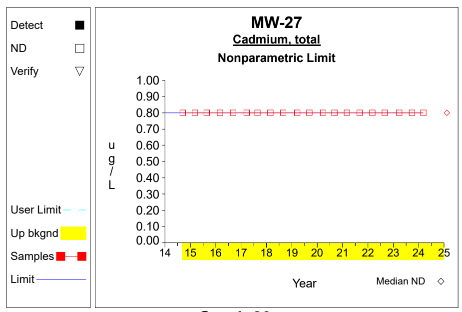
Graph 17



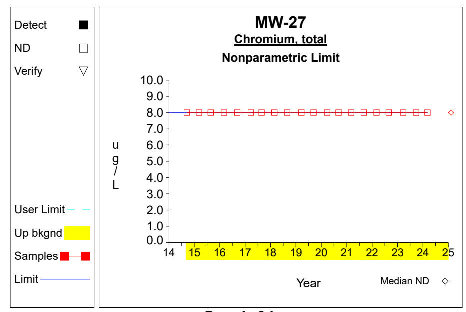
Graph 18



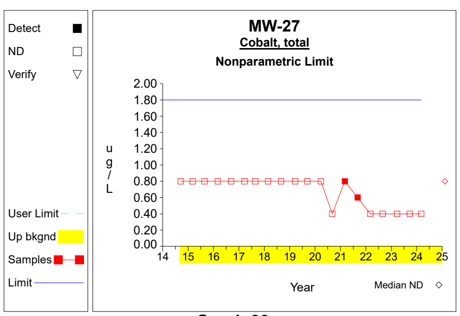
Graph 19



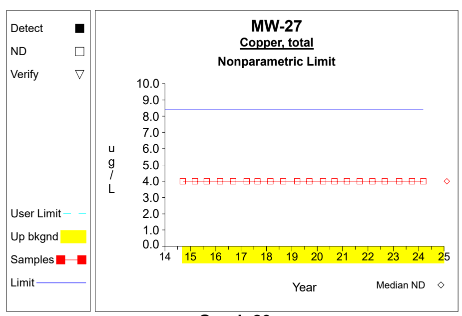
Graph 20



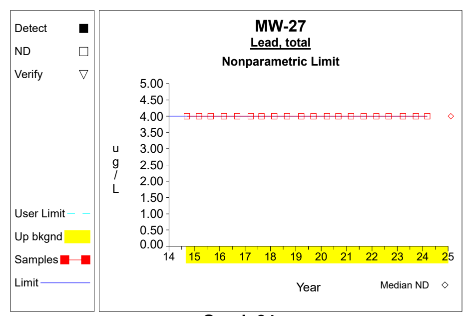
Graph 21



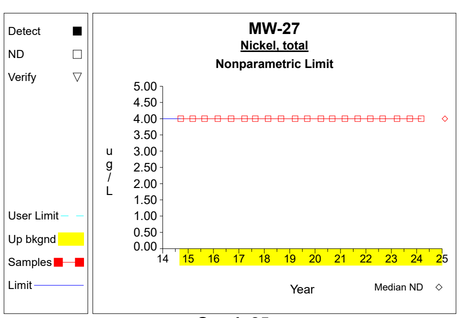
Graph 22



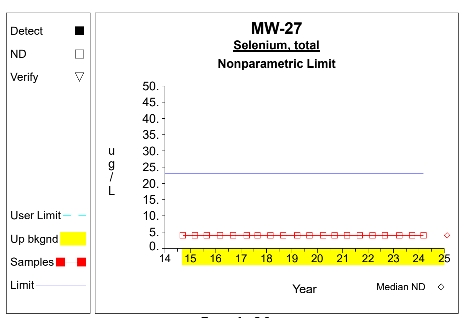
Graph 23



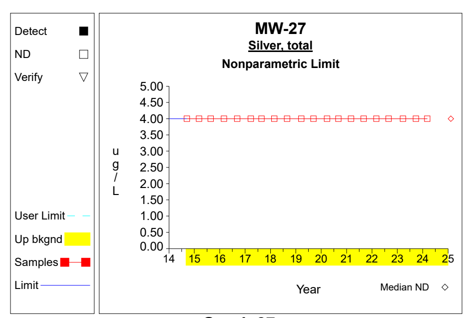
Graph 24



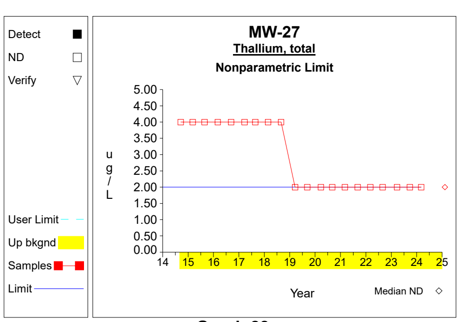
Graph 25



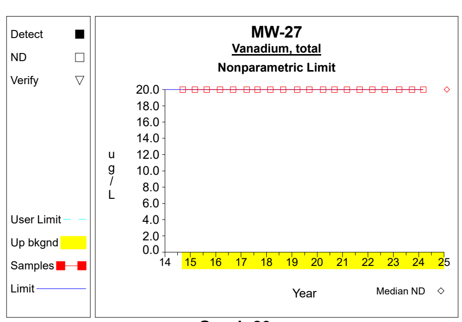
Graph 26



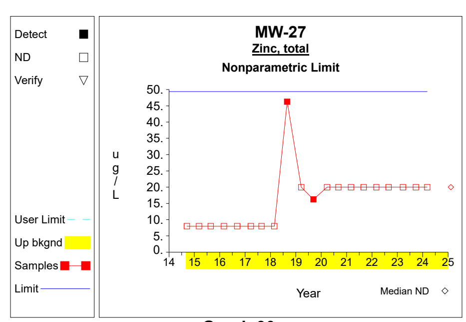
Graph 27



Graph 28

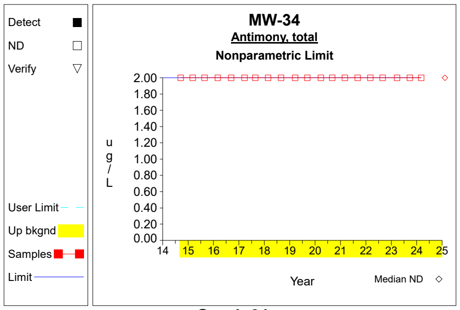


Graph 29

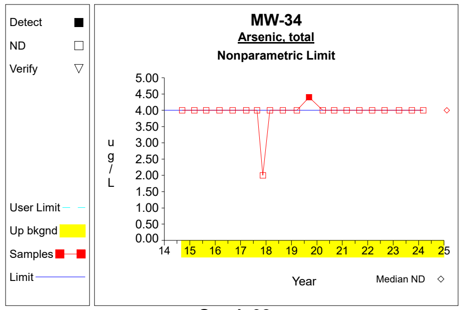


Graph 30

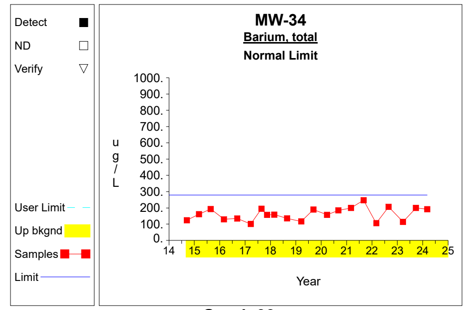
Up vs. Down Prediction Limits



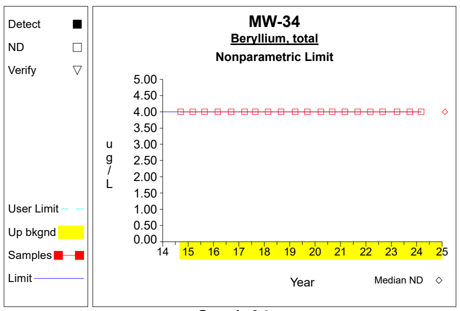
Graph 31



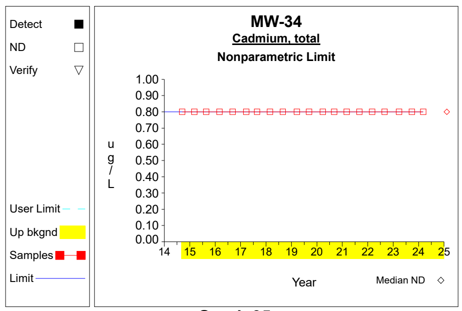
Graph 32



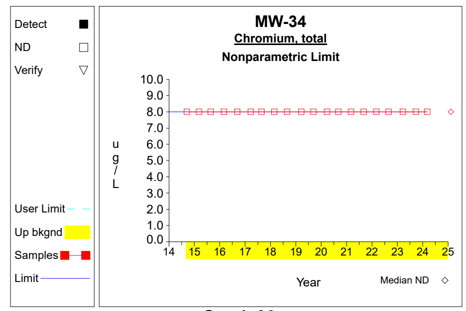
Graph 33



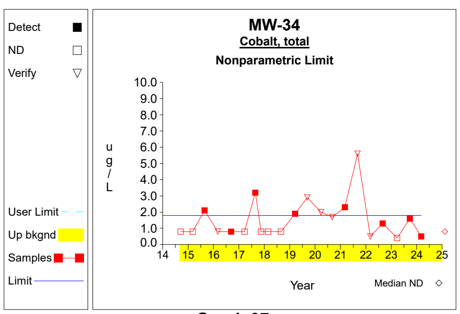
Graph 34



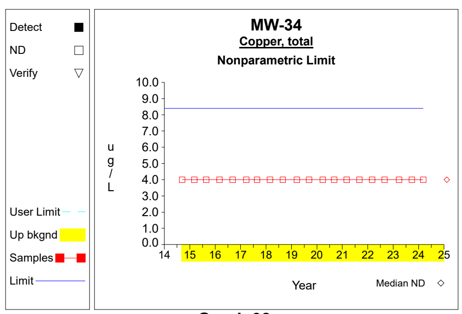
Graph 35



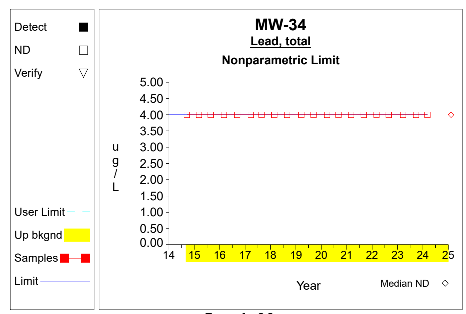
Graph 36



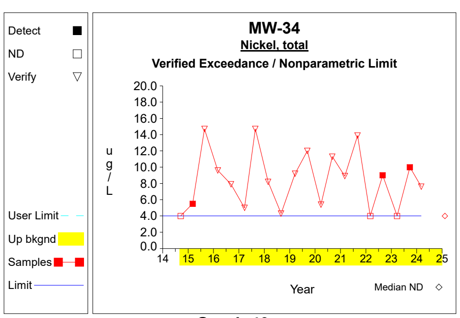
Graph 37



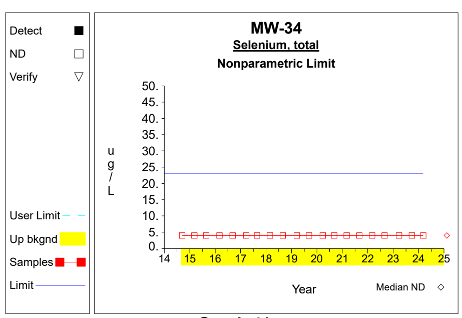
Graph 38



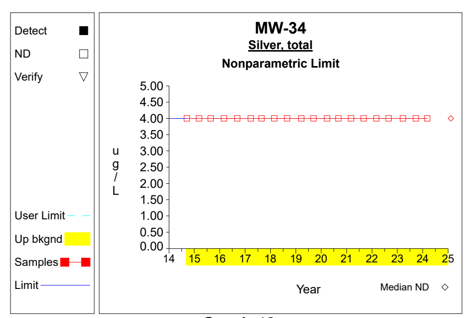
Graph 39



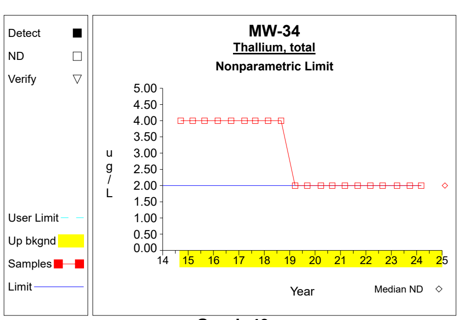
Graph 40



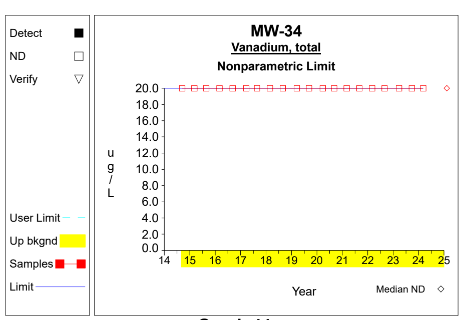
Graph 41



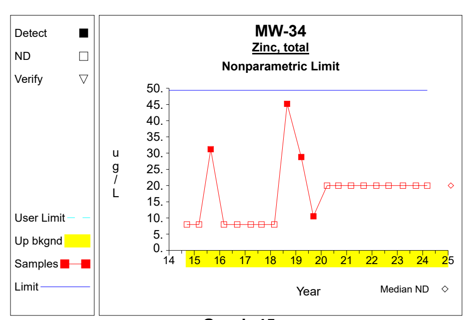
Graph 42



Graph 43

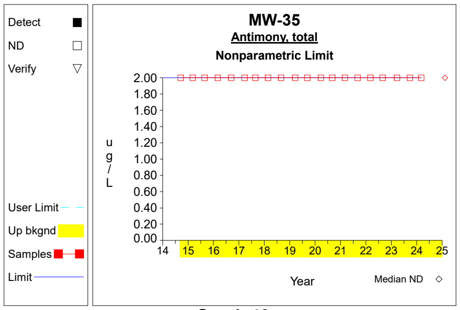


Graph 44

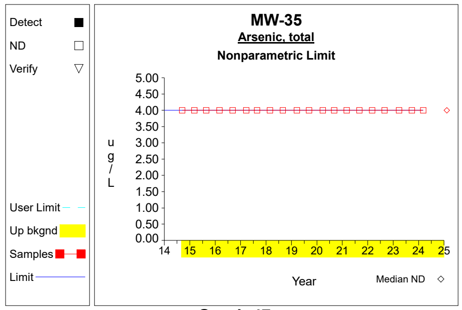


Graph 45

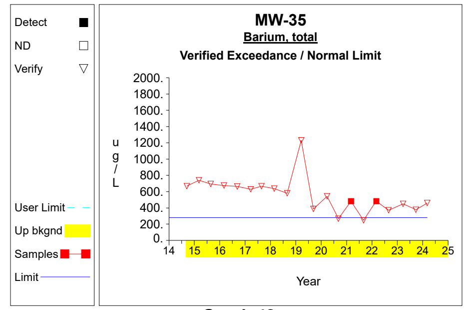
Up vs. Down Prediction Limits



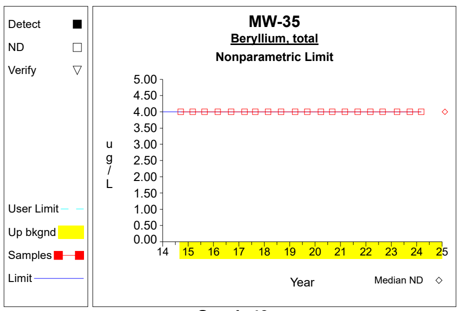
Graph 46



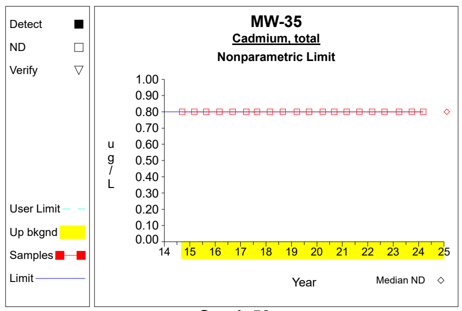
Graph 47



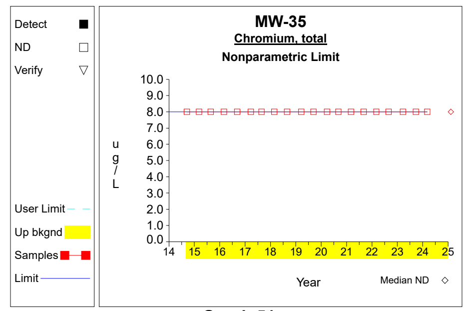
Graph 48



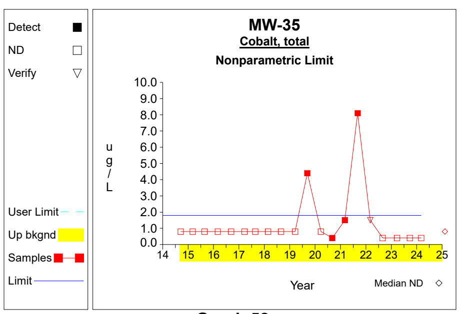
Graph 49



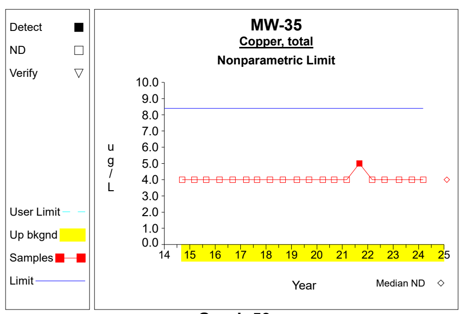
Graph 50



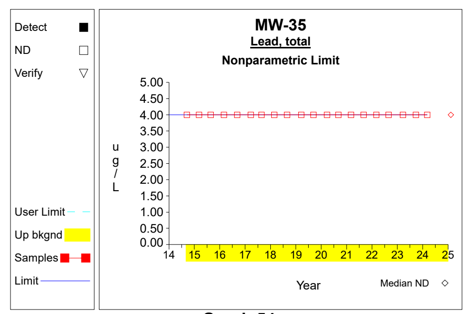
Graph 51



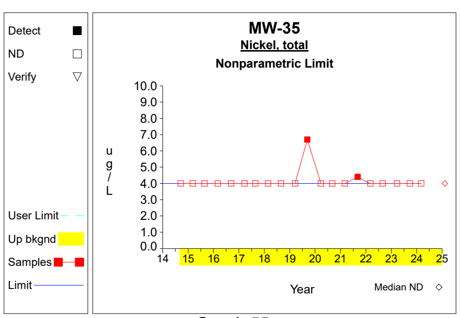
Graph 52



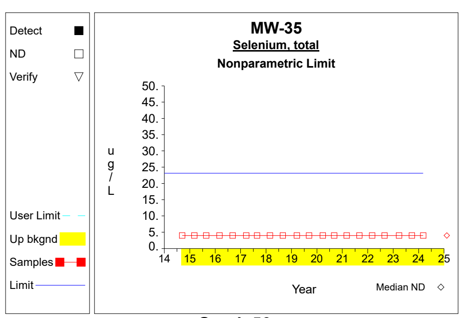
Graph 53



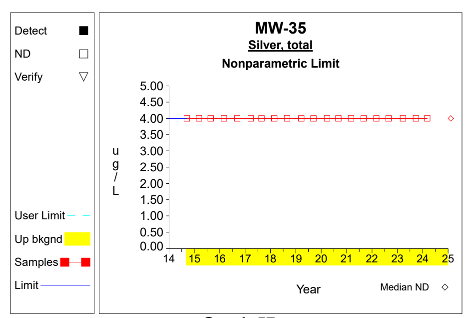
Graph 54



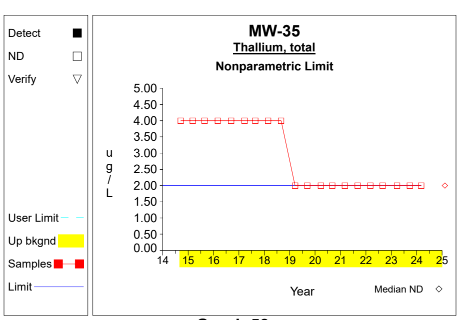
Graph 55



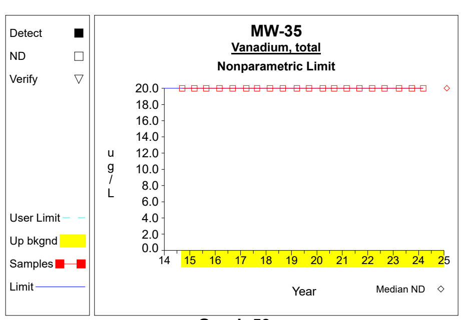
Graph 56



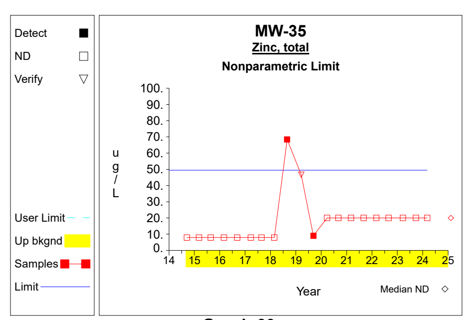
Graph 57



Graph 58



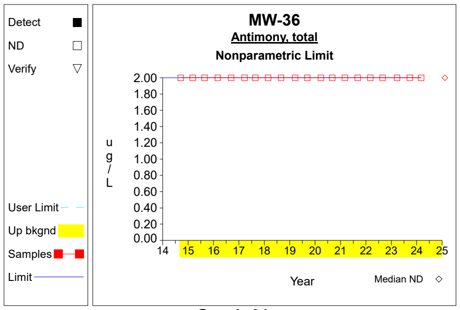
Graph 59



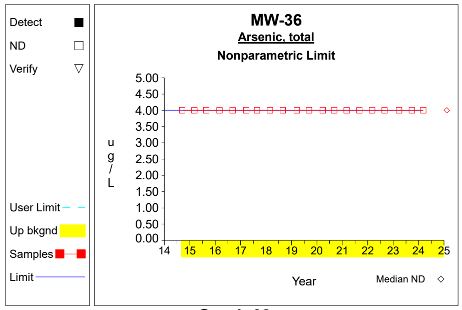
Graph 60

Prepared by: Otter Creek Environmental

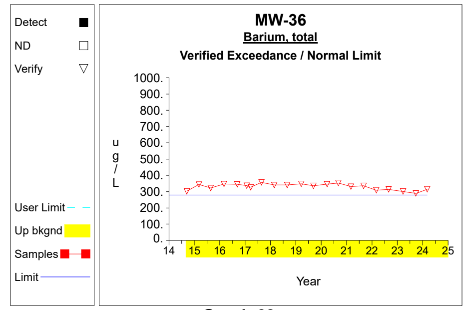
Up vs. Down Prediction Limits



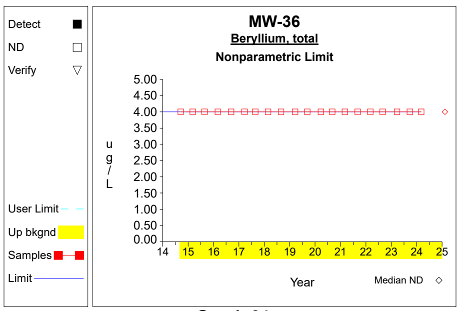
Graph 61



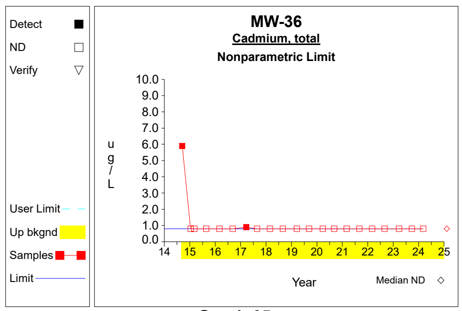
Graph 62



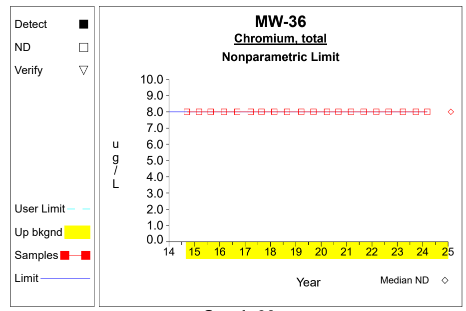
Graph 63



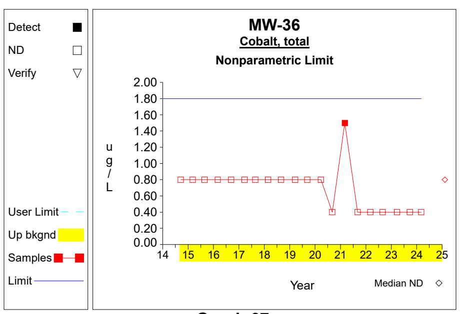
Graph 64



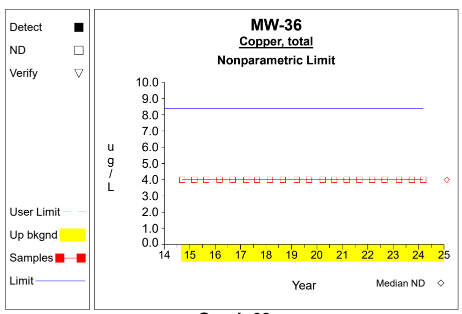
Graph 65



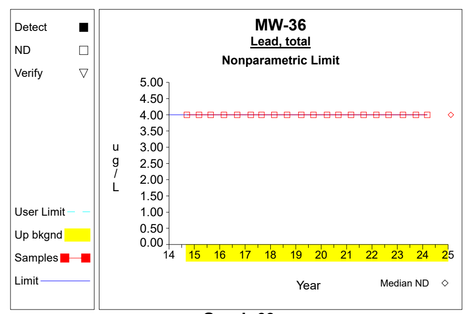
Graph 66



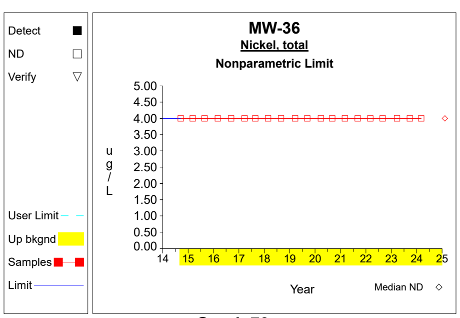
Graph 67



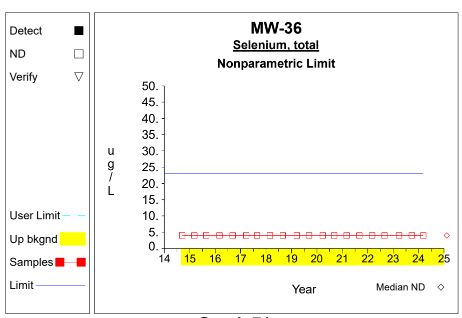
Graph 68



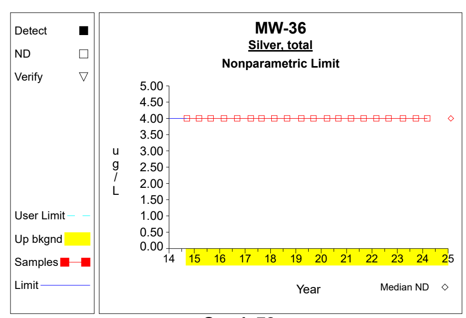
Graph 69



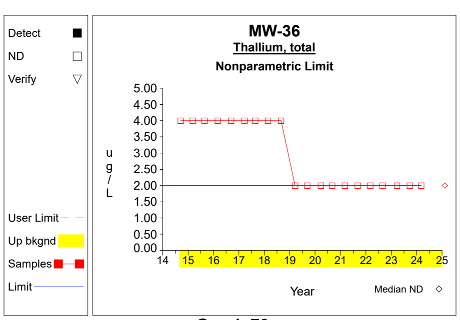
Graph 70



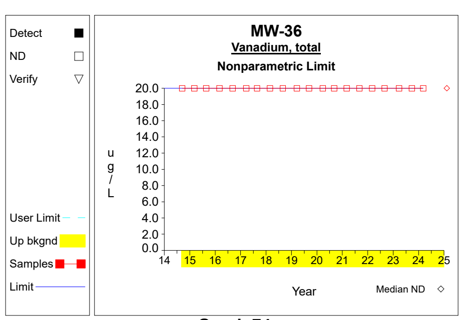
Graph 71



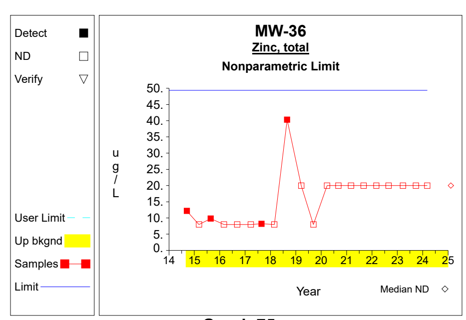
Graph 72



Graph 73

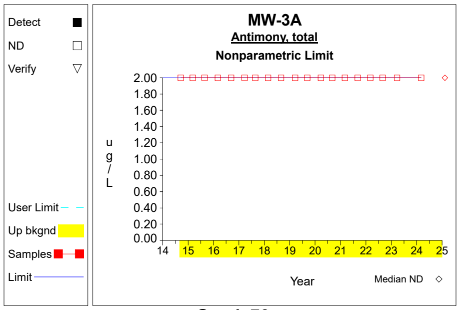


Graph 74

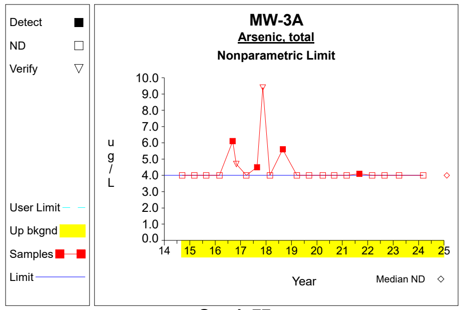


Graph 75

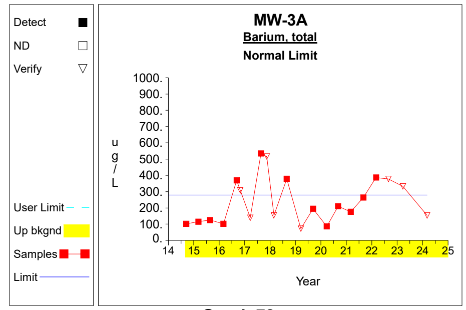
Up vs. Down Prediction Limits



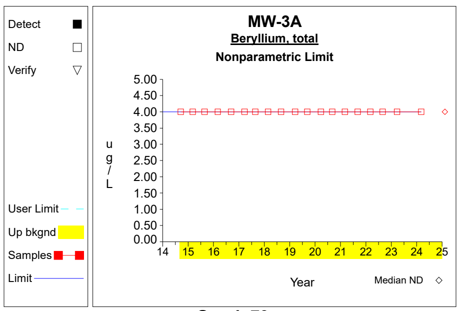
Graph 76



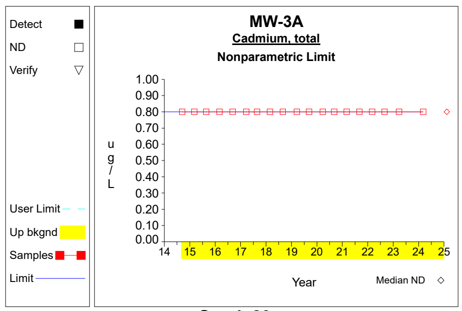
Graph 77



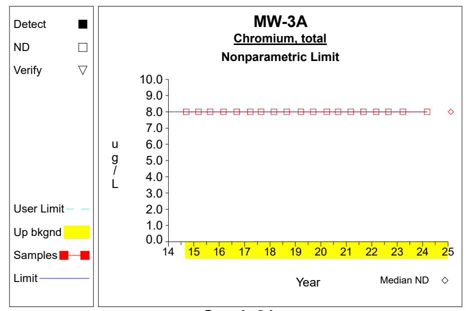
Graph 78



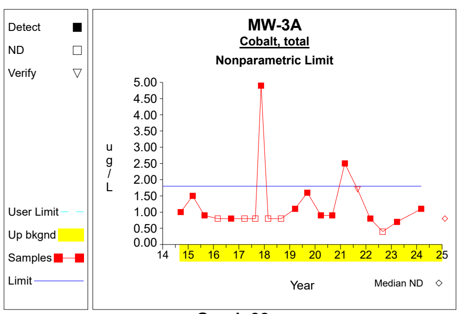
Graph 79



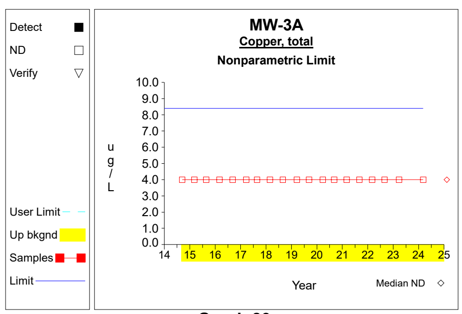
Graph 80



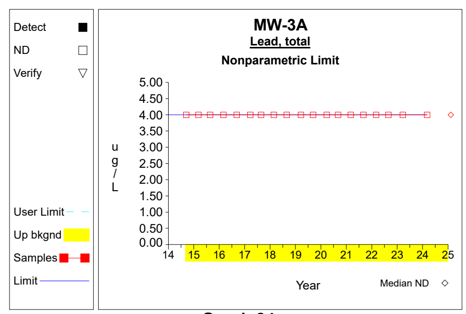
Graph 81



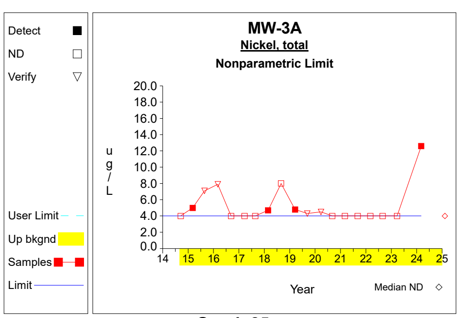
Graph 82



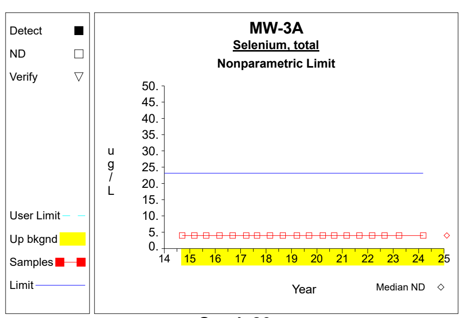
Graph 83



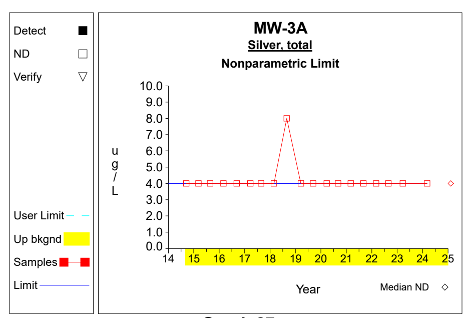
Graph 84



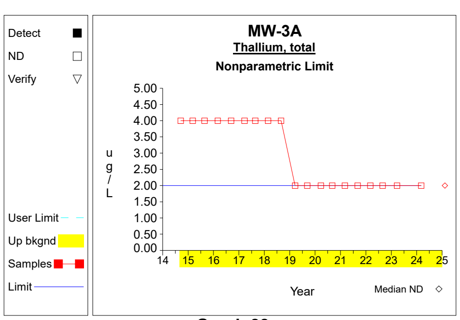
Graph 85



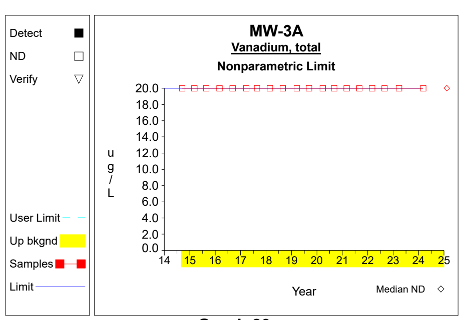
Graph 86



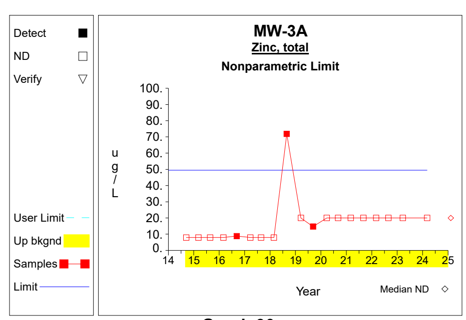
Graph 87



Graph 88

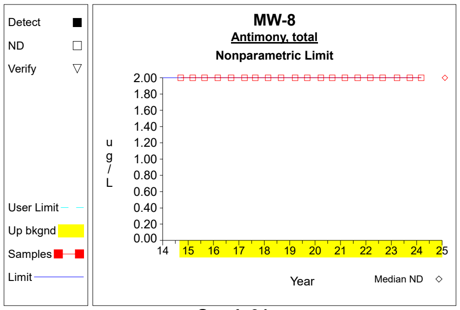


Graph 89

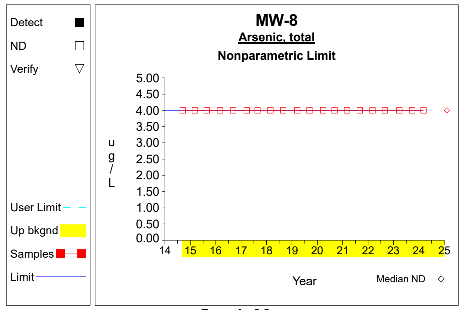


Graph 90

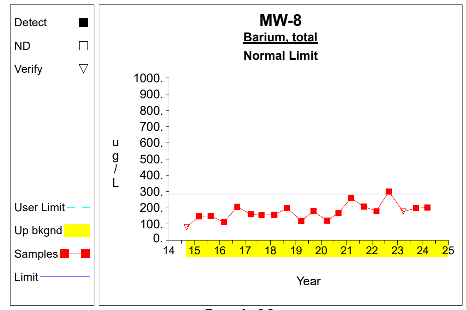
Up vs. Down Prediction Limits



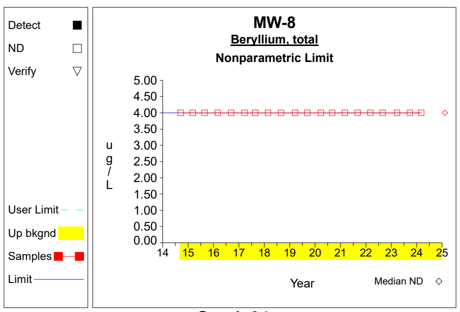
Graph 91



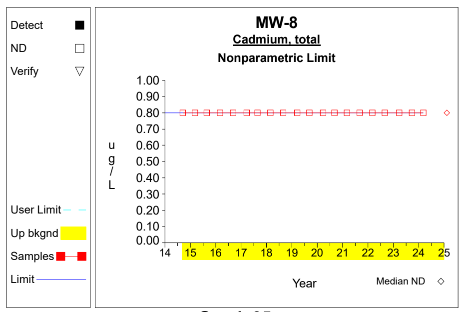
Graph 92



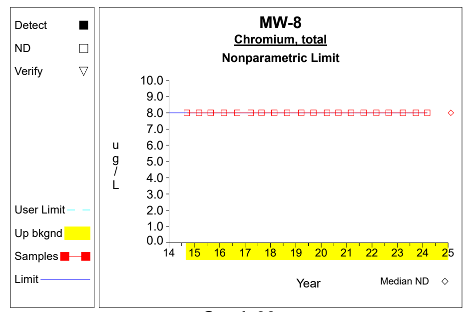
Graph 93



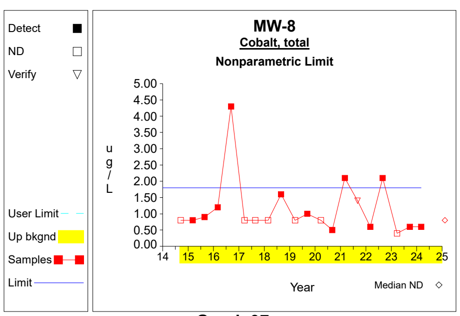
Graph 94



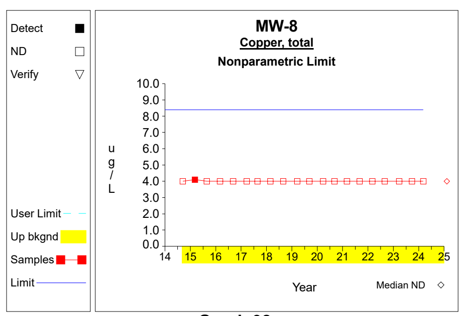
Graph 95



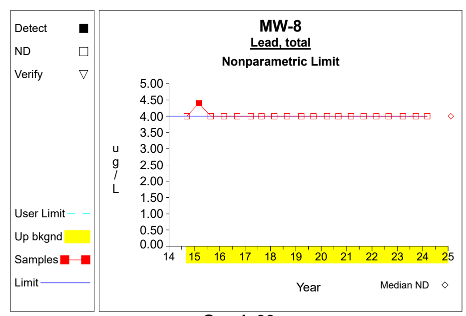
Graph 96



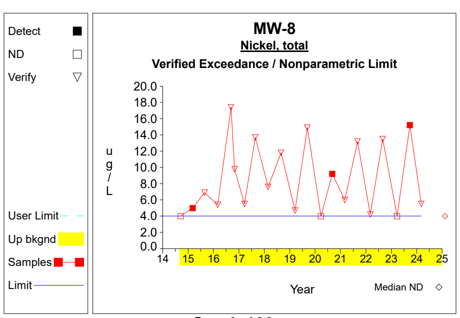
Graph 97



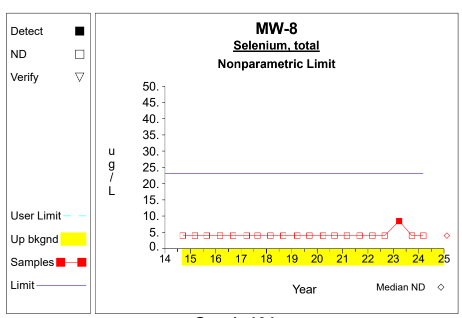
Graph 98



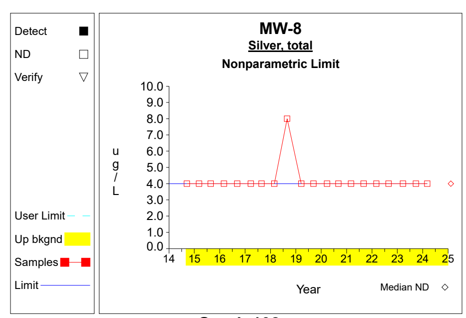
Graph 99



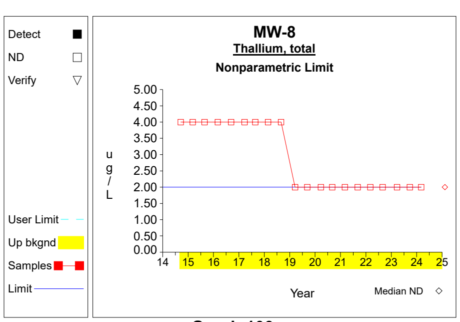
Graph 100



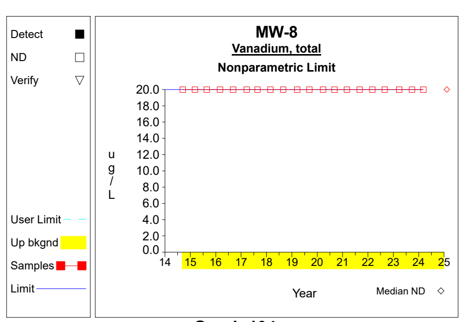
Graph 101



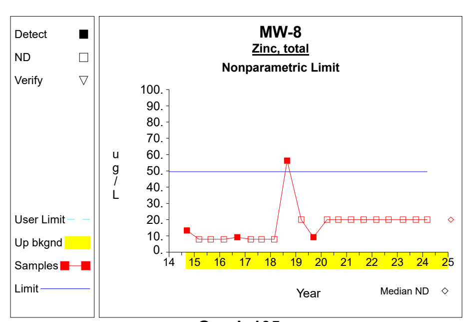
Graph 102



Graph 103

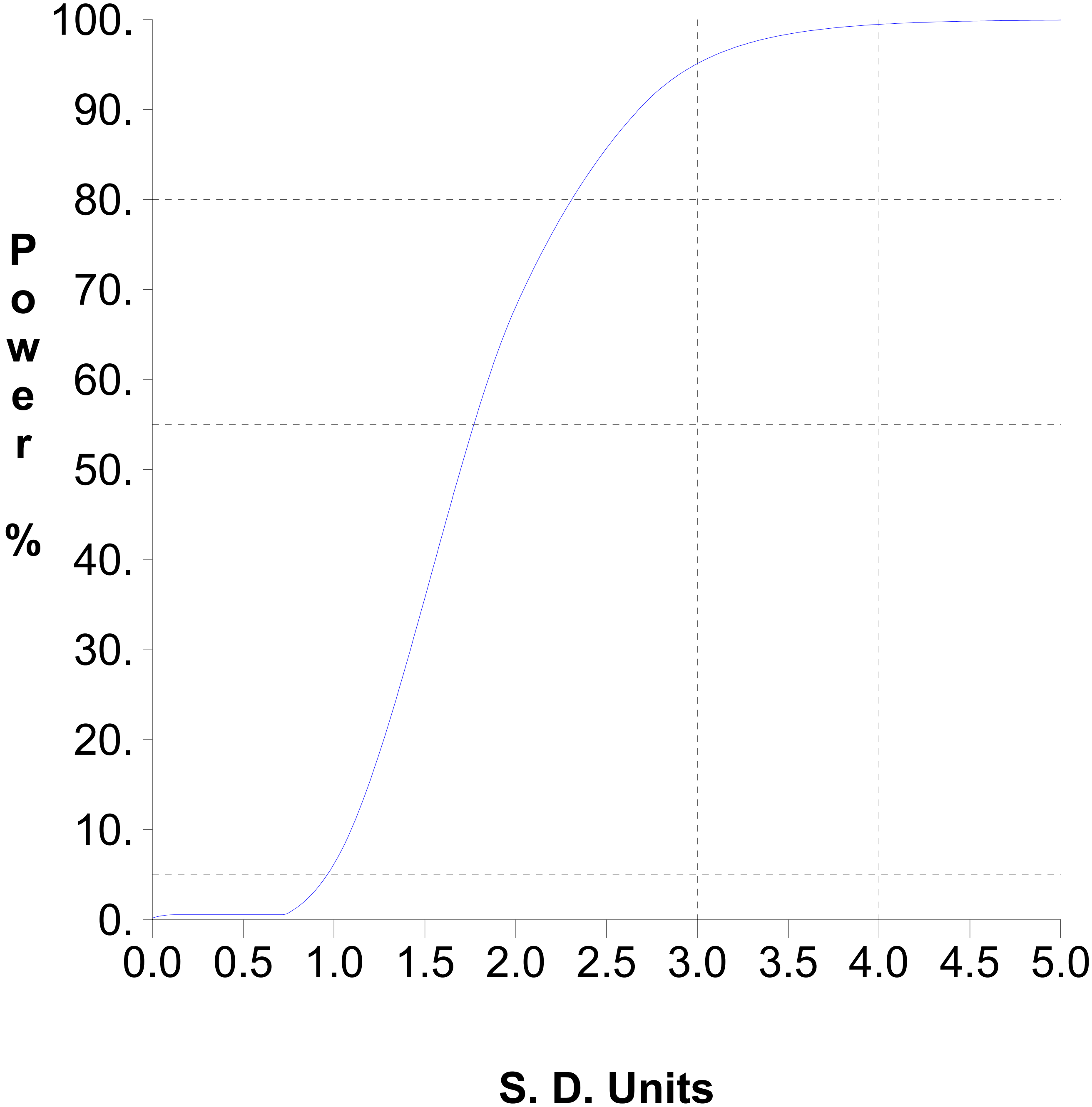


Graph 104



Graph 105

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



Attachment C

Assessment Statistics for Trace Metals

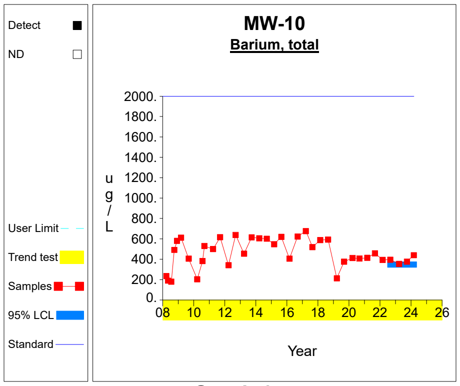
Table 1

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

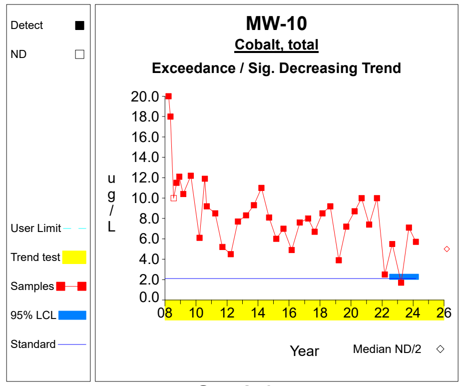
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Barium, total	ug/L	MW-10	4	391.250	36.564	1.176	348.240	434.260	2000.000		
Cobalt, total	ug/L	MW-10	4	5.000	2.312	1.176	2.280	7.720	2.100	dec	**
Nickel, total	ug/L	MW-10	4	11.900	2.981	1.176	8.393	15.407	100.000	dec	
Barium, total	ug/L	MW-27	4	220.250	25.617	1.176	190.117	250.383	2000.000		
Cobalt, total	ug/L	MW-27	4	0.400	0.000	1.176	0.400	0.400	2.100		
Nickel, total	ug/L	MW-27	4	2.000	0.000	1.176	2.000	2.000	100.000		
Barium, total	ug/L	MW-34	4	178.000	43.050	1.176	127.360	228.640	2000.000	dec	
Cobalt, total	ug/L	MW-34	4	0.950	0.592	1.176	0.254	1.646	2.100		
Nickel, total	ug/L	MW-34	4	7.150	3.572	1.176	2.949	11.351	100.000	dec	
Barium, total	ug/L	MW-35	4	415.250	46.686	1.176	360.334	470.166	2000.000	dec	
Cobalt, total	ug/L	MW-35	4	0.400	0.000	1.176	0.400	0.400	2.100		
Nickel, total	ug/L	MW-35	4	2.000	0.000	1.176	2.000	2.000	100.000		
Barium, total	ug/L	MW-36	4	304.750	12.285	1.176	290.300	319.200	2000.000		
Cobalt, total	ug/L	MW-36	4	0.400	0.000	1.176	0.400	0.400	2.100		
Nickel, total	ug/L	MW-36	4	2.000	0.000	1.176	2.000	2.000	100.000		
Barium, total	ug/L	MW-3A	4	312.750	109.088	1.176	184.431	441.069	2000.000		
Cobalt, total	ug/L	MW-3A	4	1.150	0.592	1.176	0.454	1.846	2.100		
Nickel, total	ug/L	MW-3A	4	4.650	5.300	1.176	0.000	10.884	100.000		
Barium, total	ug/L	MW-8	4	219.000	55.045	1.176	154.251	283.749	2000.000		
Cobalt, total	ug/L	MW-8	4	0.925	0.789	1.176	0.000	1.853	2.100		
Nickel, total	ug/L	MW-8	4	9.050	6.323	1.176	1.613	16.487	100.000	dec	

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

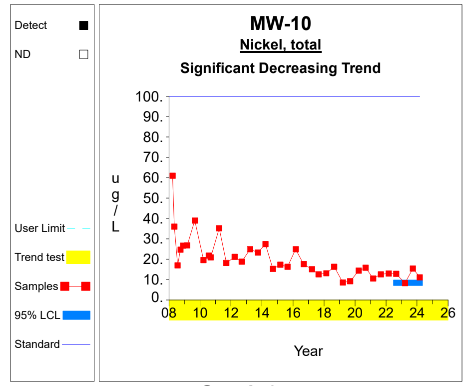
Confidence Limits (Assessment)



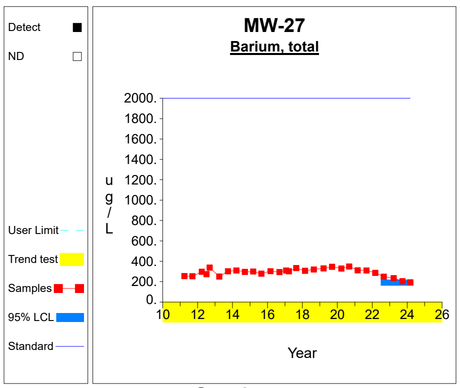
Graph 1



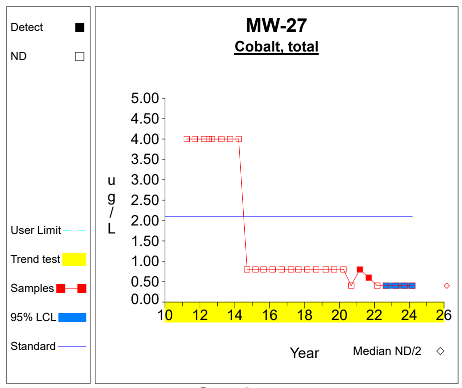
Graph 2



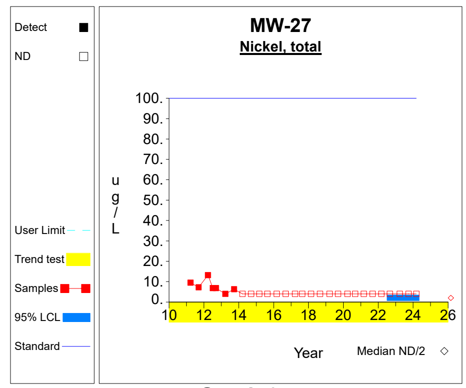
Graph 3



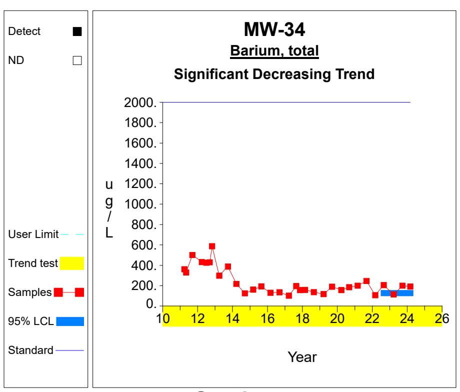
Graph 4



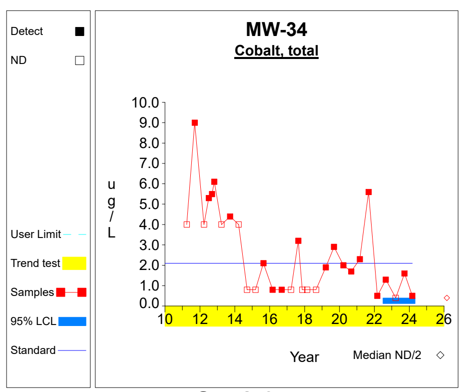
Graph 5



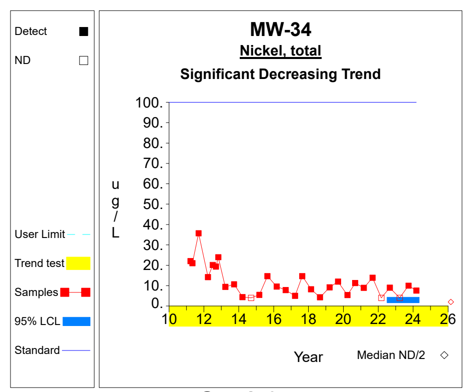
Graph 6



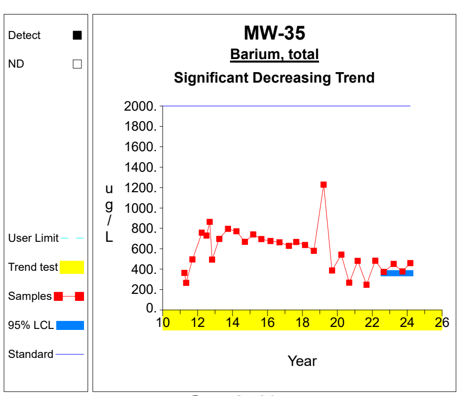
Graph 7



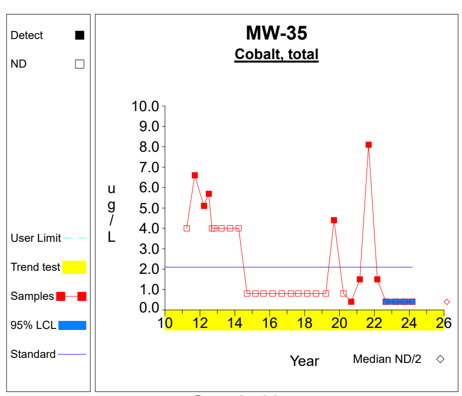
Graph 8



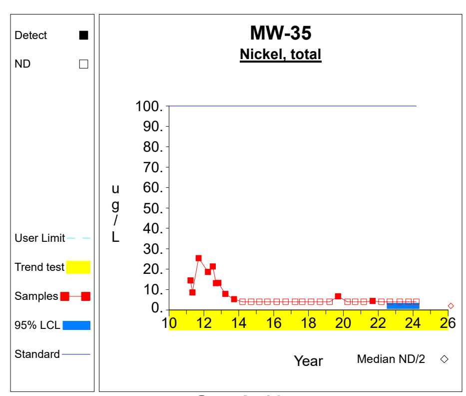
Graph 9



Graph 10



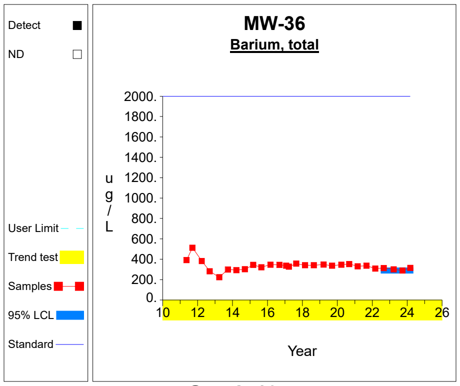
Graph 11



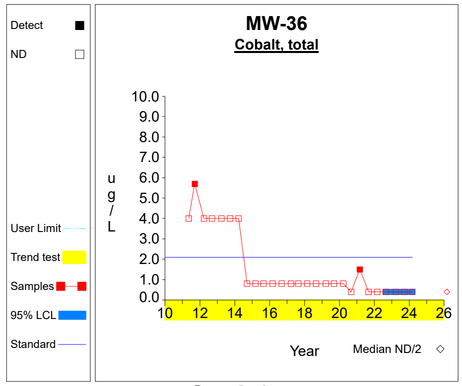
Graph 12

Prepared by: Otter Creek Environmental

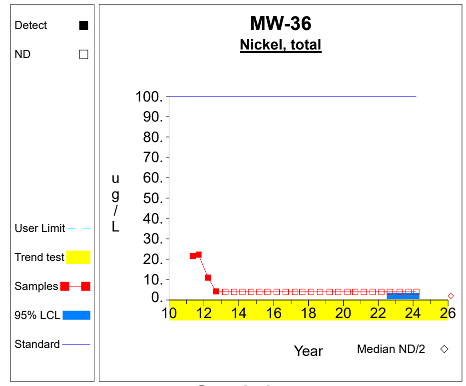
Confidence Limits (Assessment)



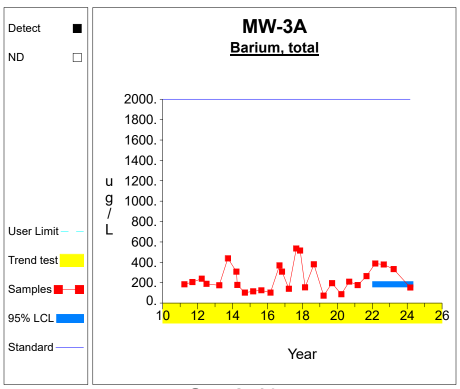
Graph 13



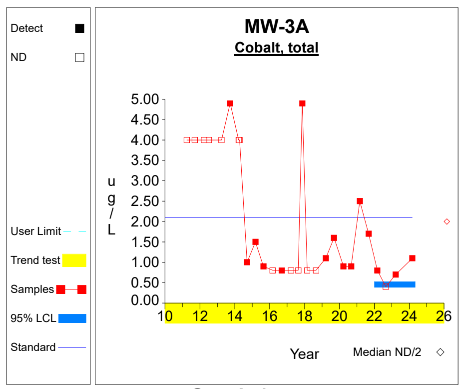
Graph 14



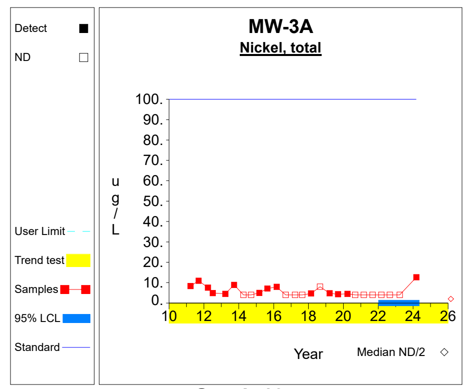
Graph 15



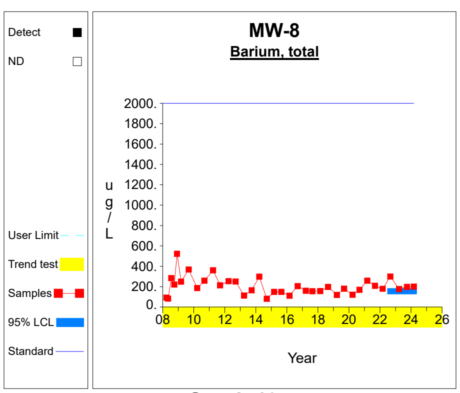
Graph 16



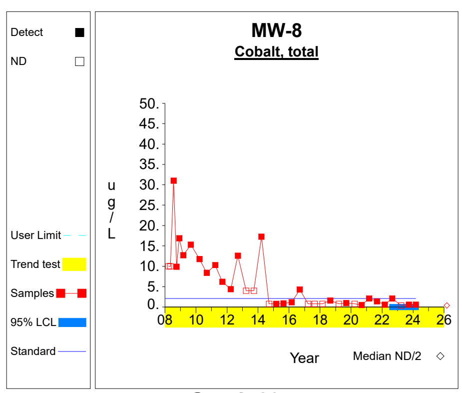
Graph 17



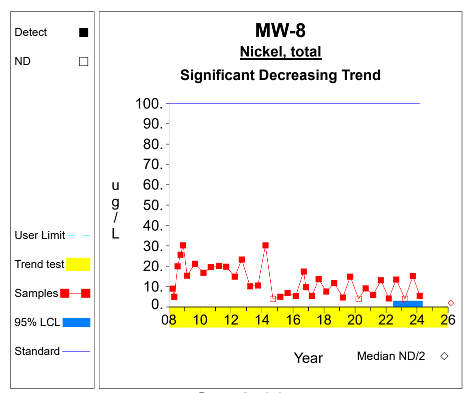
Graph 18



Graph 19



Graph 20



Graph 21

Attachment D

Summary of Historical VOC Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
1,2-dichloroethane	MW-10	7/23/1992		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-10	7/23/2008		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/30/2008		1.5	1.0	ug/L
1,4-dichlorobenzene	MW-10	12/02/2008		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/05/2009		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/01/2009		1.3	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/23/2010		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-10	7/26/2010		7.8	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/09/2010		3.8	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/29/2011		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/13/2011		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/28/2012		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/11/2012		1.8	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/26/2013		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-10	8/24/2015		1.3	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/09/2016		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/22/2017		2.4	1.0	ug/L
1,4-dichlorobenzene	MW-10	8/24/2017		2.3	1.0	ug/L
1,4-dichlorobenzene	MW-10	2/26/2018		2.7	1.0	ug/L
1,4-dichlorobenzene	MW-10	8/29/2018		3.0	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/04/2020		3.2	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/02/2021		2.3	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/02/2021		2.8	1.0	ug/L
1,4-dichlorobenzene	MW-10	8/29/2022		2.0	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/25/2023		1.9	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/05/2024		1.5	1.0	ug/L
Benzene	MW-10	7/23/1992		1.2	1.0	ug/L
Benzene	MW-10	7/23/2008		2.5	1.0	ug/L
Benzene	MW-10	9/30/2008		1.5	1.0	ug/L
Benzene	MW-10	12/02/2008		1.1	1.0	ug/L
Benzene	MW-10	9/01/2009		1.3	1.0	ug/L
Benzene	MW-10	7/26/2010		4.1	1.0	ug/L
Benzene	MW-10	9/09/2010		2.8	1.0	ug/L
Chlorobenzene	MW-10	3/26/2008		1.1	1.0	ug/L
Chlorobenzene	MW-10	7/23/2008		2.6	1.0	ug/L
Chlorobenzene	MW-10	9/30/2008		2.8	1.0	ug/L
Chlorobenzene	MW-10	12/02/2008		2.6	1.0	ug/L
Chlorobenzene	MW-10	3/05/2009		2.2	1.0	ug/L
Chlorobenzene	MW-10	9/01/2009		2.1	1.0	ug/L
Chlorobenzene	MW-10	3/23/2010		1.4	1.0	ug/L
Chlorobenzene	MW-10	7/26/2010		5.4	1.0	ug/L
Chlorobenzene	MW-10	9/09/2010		4.4	1.0	ug/L
Chlorobenzene	MW-10	3/29/2011		1.3	1.0	ug/L
Chlorobenzene	MW-10	9/13/2011		1.4	1.0	ug/L
Chlorobenzene	MW-10	3/28/2012		1.1	1.0	ug/L
Chlorobenzene	MW-10	9/11/2012		2.4	1.0	ug/L
Chlorobenzene	MW-10	3/26/2013		1.3	1.0	ug/L
Chlorobenzene	MW-10	9/25/2013		1.0	1.0	ug/L
Chlorobenzene	MW-10	3/20/2014		1.1	1.0	ug/L
Chlorobenzene	MW-10	9/15/2014		1.2	1.0	ug/L
Chlorobenzene	MW-10	8/24/2015		1.4	1.0	ug/L
Chlorobenzene	MW-10	9/09/2016		1.1	1.0	ug/L
Chlorobenzene	MW-10	3/22/2017		2.3	1.0	ug/L
Chlorobenzene	MW-10	8/24/2017		2.3	1.0	ug/L
Chlorobenzene	MW-10	2/26/2018		2.4	1.0	ug/L
Chlorobenzene	MW-10	8/29/2018		2.6	1.0	ug/L
Chlorobenzene	MW-10	3/18/2019		1.0	1.0	ug/L
Chlorobenzene	MW-10	9/10/2019		2.4	1.0	ug/L
Chlorobenzene	MW-10	3/25/2020		1.1	1.0	ug/L
Chlorobenzene	MW-10	9/04/2020		2.5	1.0	ug/L
Chlorobenzene	MW-10	3/02/2021		1.9	1.0	ug/L
Chlorobenzene	MW-10	9/02/2021		2.7	1.0	ug/L
Chlorobenzene	MW-10	8/29/2022		1.7	1.0	ug/L
Chlorobenzene	MW-10	9/25/2023		1.7	1.0	ug/L
Chloroethane	MW-10	7/23/2008		1.7	1.0	ug/L
Chloroethane	MW-10	9/30/2008		2.7	1.0	ug/L
Chloroethane	MW-10	12/02/2008		2.6	1.0	ug/L
Chloroethane	MW-10	3/05/2009		1.5	1.0	ug/L
Chloroethane	MW-10	9/01/2009		1.8	1.0	ug/L
Chloroethane	MW-10	7/26/2010		3.0	1.0	ug/L
Chloroethane	MW-10	9/09/2010		4.2	1.0	ug/L
Chloroethane	MW-10	9/13/2011		1.4	1.0	ug/L
Chloroethane	MW-10	9/11/2012		2.2	1.0	ug/L
Chloroethane	MW-10	3/22/2017		1.0	1.0	ug/L
Chloroethane	MW-10	8/29/2018		1.0	1.0	ug/L
Chloroethane	MW-10	8/29/2022		1.6	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Cis-1,2-dichloroethylene	MW-10	7/23/2008		1.0	1.0	ug/L
Cis-1,2-dichloroethylene	MW-10	9/30/2008		1.1	1.0	ug/L
Cis-1,2-dichloroethylene	MW-10	12/02/2008		1.0	1.0	ug/L
Cis-1,2-dichloroethylene	MW-10	9/09/2010		1.1	1.0	ug/L
Trichloroethylene	MW-10	10/13/1992		2.8	2.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-27	2/26/2018		71	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-27	3/18/2019		13	6	ug/L
1,1-dichloroethane	MW-34	10/30/2012		3.2	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/13/2011		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-34	8/24/2015		5.8	1.0	ug/L
1,4-dichlorobenzene	MW-34	3/01/2016		8.8	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/09/2016		8.7	1.0	ug/L
1,4-dichlorobenzene	MW-34	3/22/2017		4.9	1.0	ug/L
1,4-dichlorobenzene	MW-34	8/24/2017		7.9	1.0	ug/L
1,4-dichlorobenzene	MW-34	2/26/2018		2.1	1.0	ug/L
1,4-dichlorobenzene	MW-34	8/29/2018		2.6	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/04/2020		7.0	1.0	ug/L
1,4-dichlorobenzene	MW-34	3/02/2021		10.6	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/02/2021		7.9	1.0	ug/L
1,4-dichlorobenzene	MW-34	3/02/2022		1.5	1.0	ug/L
1,4-dichlorobenzene	MW-34	8/29/2022		3.9	1.0	ug/L
1,4-dichlorobenzene	MW-34	3/23/2023		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/25/2023		9.4	1.0	ug/L
Benzene	MW-34	9/13/2011		1.0	1.0	ug/L
Benzene	MW-34	8/24/2015		1.4	1.0	ug/L
Benzene	MW-34	3/22/2017		1.2	1.0	ug/L
Benzene	MW-34	8/24/2017		1.3	1.0	ug/L
Benzene	MW-34	3/02/2021		1.8	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	10/30/2012		24	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	8/20/2014		14	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	9/15/2014		36	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	8/24/2015		13	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	2/26/2018		145	30	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	9/10/2019		46	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	3/02/2022		8	6	ug/L
Chlorobenzene	MW-34	8/24/2015		2.0	1.0	ug/L
Chlorobenzene	MW-34	3/01/2016		2.8	1.0	ug/L
Chlorobenzene	MW-34	9/09/2016		2.7	1.0	ug/L
Chlorobenzene	MW-34	3/22/2017		2.0	1.0	ug/L
Chlorobenzene	MW-34	8/24/2017		3.0	1.0	ug/L
Chlorobenzene	MW-34	3/18/2019		1.2	1.0	ug/L
Chlorobenzene	MW-34	9/10/2019		1.8	1.0	ug/L
Chlorobenzene	MW-34	9/04/2020		2.6	1.0	ug/L
Chlorobenzene	MW-34	3/02/2021		4.1	1.0	ug/L
Chlorobenzene	MW-34	9/02/2021		3.4	1.0	ug/L
Chlorobenzene	MW-34	8/29/2022		1.7	1.0	ug/L
Chlorobenzene	MW-34	9/25/2023		1.8	1.0	ug/L
Chloroethane	MW-34	3/01/2016		1.6	1.0	ug/L
Dichlorodifluoromethane	MW-34	10/30/2012		3.7	1.0	ug/L
1,1-dichloroethane	MW-35	3/29/2011		1.0	1.0	ug/L
1,1-dichloroethane	MW-35	9/13/2011		6.0	1.0	ug/L
1,1-dichloroethane	MW-35	3/28/2012		4.0	1.0	ug/L
1,1-dichloroethane	MW-35	7/05/2012		4.4	1.0	ug/L
1,1-dichloroethane	MW-35	9/11/2012		4.3	1.0	ug/L
1,1-dichloroethane	MW-35	3/26/2013		2.4	1.0	ug/L
1,1-dichloroethane	MW-35	9/25/2013		3.0	1.0	ug/L
1,1-dichloroethane	MW-35	3/20/2014		3.1	1.0	ug/L
1,1-dichloroethane	MW-35	3/01/2016		2.2	1.0	ug/L
1,1-dichloroethane	MW-35	9/09/2016		1.9	1.0	ug/L
1,1-dichloroethane	MW-35	3/22/2017		1.7	1.0	ug/L
1,1-dichloroethane	MW-35	2/26/2018		1.9	1.0	ug/L
1,1-dichloroethane	MW-35	8/29/2018		1.5	1.0	ug/L
1,1-dichloroethane	MW-35	3/18/2019		1.2	1.0	ug/L
1,1-dichloroethane	MW-35	9/10/2019		1.3	1.0	ug/L
1,1-dichloroethane	MW-35	3/25/2020		1.0	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-35	7/09/2013		36	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-35	9/15/2014		20	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-35	8/24/2015		13	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-35	8/24/2017		15	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-35	8/29/2018		7	6	ug/L
Dichlorodifluoromethane	MW-35	3/26/2013		1.7	1.0	ug/L
Dichlorodifluoromethane	MW-35	5/17/2013		2.0	1.0	ug/L
Dichlorodifluoromethane	MW-35	7/09/2013		1.5	1.0	ug/L
Dichlorodifluoromethane	MW-35	9/25/2013		7.4	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/20/2014		3.5	1.0	ug/L
Dichlorodifluoromethane	MW-35	9/15/2014		2.3	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Dichlorodifluoromethane	MW-35	3/06/2015		7.0	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/01/2016		5.9	1.0	ug/L
Dichlorodifluoromethane	MW-35	9/09/2016		4.3	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/22/2017		3.4	1.0	ug/L
Dichlorodifluoromethane	MW-35	8/24/2017		3.1	1.0	ug/L
Dichlorodifluoromethane	MW-35	2/26/2018		2.1	1.0	ug/L
Dichlorodifluoromethane	MW-35	8/29/2018		1.8	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/18/2019		1.1	1.0	ug/L
Dichlorodifluoromethane	MW-35	9/10/2019		1.5	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/25/2020		2.1	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/02/2022		1.5	1.0	ug/L
Dichlorodifluoromethane	MW-35	8/29/2022		1.5	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/05/2024		1.2	1.0	ug/L
Trichloroethylene	MW-36	3/23/2023		3.5	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-3A	2/26/2018		193	30	ug/L
Bis(2-ethylhexyl) phthalate	MW-3A	3/23/2023		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	3/28/2012		25	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	9/25/2013		10	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	3/06/2015		25	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	8/24/2017		35	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	2/26/2018		262	30	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	8/29/2018		24	6	ug/L
2-butanone (mek)	SW-101	5/06/2008		284	5	ug/L
4-methyl-2-pentanone (mibk)	SW-101	5/06/2008		35.3	5.0	ug/L
Benzene	SW-101	5/06/2008		3.3	1.0	ug/L
Methylene chloride	SW-101	5/06/2008		6.3	5.0	ug/L
1,2-dichloroethane	SW-102	3/26/2008		1.1	1.0	ug/L
1,2-dichloroethane	SW-102	5/06/2008		1.0	1.0	ug/L
2-butanone (mek)	SW-102	3/26/2008		334	5	ug/L
2-butanone (mek)	SW-102	5/06/2008		489	25	ug/L
2-butanone (mek)	SW-102	5/06/2008		607	5	ug/L
2-butanone (mek)	SW-102	7/23/2008		1340	50	ug/L
2-butanone (mek)	SW-102	7/23/2008		1210	5	ug/L
4-methyl-2-pentanone (mibk)	SW-102	3/26/2008		233	5	ug/L
4-methyl-2-pentanone (mibk)	SW-102	5/06/2008		242	5	ug/L
4-methyl-2-pentanone (mibk)	SW-102	7/23/2008		1340	50	ug/L
4-methyl-2-pentanone (mibk)	SW-102	7/23/2008		1480	5	ug/L
4-methyl-2-pentanone (mibk)	SW-102	9/30/2008		510	25	ug/L
4-methyl-2-pentanone (mibk)	SW-102	9/30/2008		504	5	ug/L
Acetone	SW-102	3/26/2008		271	10	ug/L
Acetone	SW-102	7/23/2008		168	10	ug/L
Benzene	SW-102	3/26/2008		2.4	1.0	ug/L
Benzene	SW-102	5/06/2008		3.2	1.0	ug/L
Benzene	SW-102	7/23/2008		2.4	1.0	ug/L
Benzene	SW-102	9/30/2008		1.4	1.0	ug/L
Benzene	SW-102	12/02/2008		1.0	1.0	ug/L

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

Attachment E

Assessment Statistics for the Verified VOC Detections

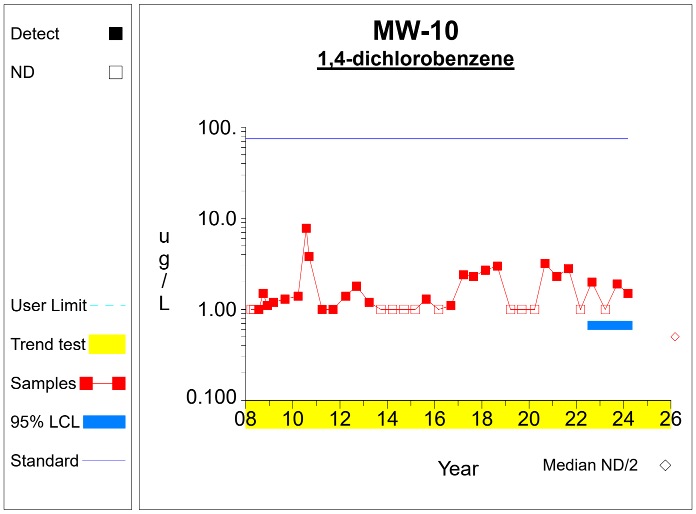
Table 1

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

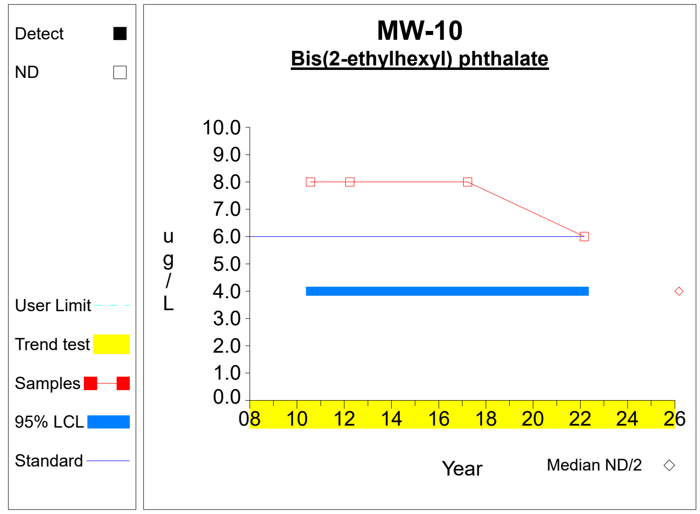
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
1,4-dichlorobenzene	ug/L	MW-10	4	1.475	0.685	1.176	0.669	2.281	75.000		
Bis(2-ethylhexyl) phthalate	ug/L	MW-10	4	4.000	0.000	1.176	4.000	4.000	6.000		
Chlorobenzene	ug/L	MW-10	4	1.100	0.693	1.176	0.285	1.915	100.000		
Chloroethane	ug/L	MW-10	4	0.775	0.550	1.176	0.128	1.422	2800.000		
Dichlorodifluoromethane	ug/L	MW-10	4	0.500	0.000	1.176	0.500	0.500	1000.000		
Trichloroethylene	ug/L	MW-10	4	0.500	0.000	1.176	0.500	0.500	5.000		
1,4-dichlorobenzene	ug/L	MW-34	4	3.725	4.063	1.176	0.000	8.504	75.000		
Bis(2-ethylhexyl) phthalate	ug/L	MW-34	4	4.250	2.500	1.176	1.309	7.191	6.000		
Chlorobenzene	ug/L	MW-34	4	1.125	0.723	1.176	0.275	1.975	100.000		
Chloroethane	ug/L	MW-34	4	0.500	0.000	1.176	0.500	0.500	2800.000		
Dichlorodifluoromethane	ug/L	MW-34	4	0.500	0.000	1.176	0.500	0.500	1000.000		
Trichloroethylene	ug/L	MW-34	4	0.500	0.000	1.176	0.500	0.500	5.000		
1,4-dichlorobenzene	ug/L	MW-35	4	0.500	0.000	1.176	0.500	0.500	75.000		
Bis(2-ethylhexyl) phthalate	ug/L	MW-35	4	4.000	0.000	1.176	4.000	4.000	6.000		
Chlorobenzene	ug/L	MW-35	4	0.500	0.000	1.176	0.500	0.500	100.000		
Chloroethane	ug/L	MW-35	4	0.500	0.000	1.176	0.500	0.500	2800.000		
Dichlorodifluoromethane	ug/L	MW-35	4	0.925	0.506	1.176	0.330	1.520	1000.000		
Trichloroethylene	ug/L	MW-35	4	0.500	0.000	1.176	0.500	0.500	5.000		
1,4-dichlorobenzene	ug/L	MW-36	4	0.500	0.000	1.176	0.500	0.500	75.000		
Bis(2-ethylhexyl) phthalate	ug/L	MW-36	3								*
Chlorobenzene	ug/L	MW-36	4	0.500	0.000	1.176	0.500	0.500	100.000		
Chloroethane	ug/L	MW-36	4	0.500	0.000	1.176	0.500	0.500	2800.000		
Dichlorodifluoromethane	ug/L	MW-36	3								*
Trichloroethylene	ug/L	MW-36	4	1.250	1.500	1.176	0.000	3.014	5.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

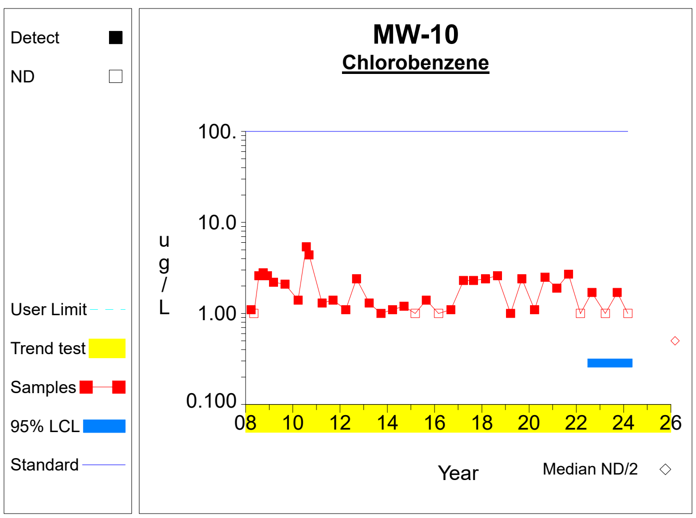
Confidence Limits (Assessment)



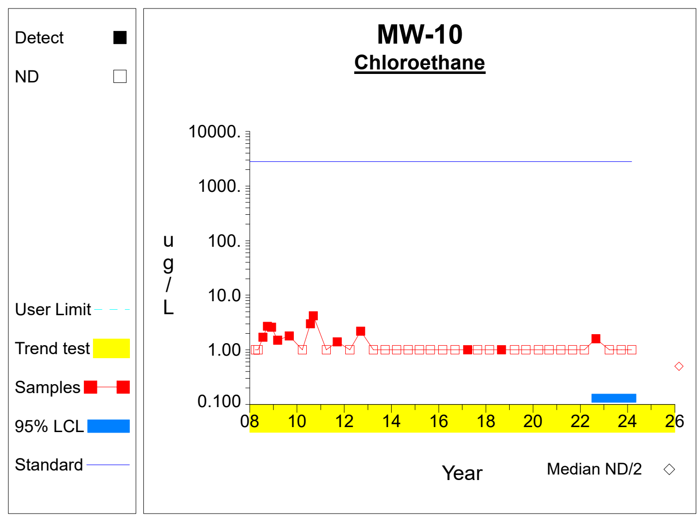
Graph 1



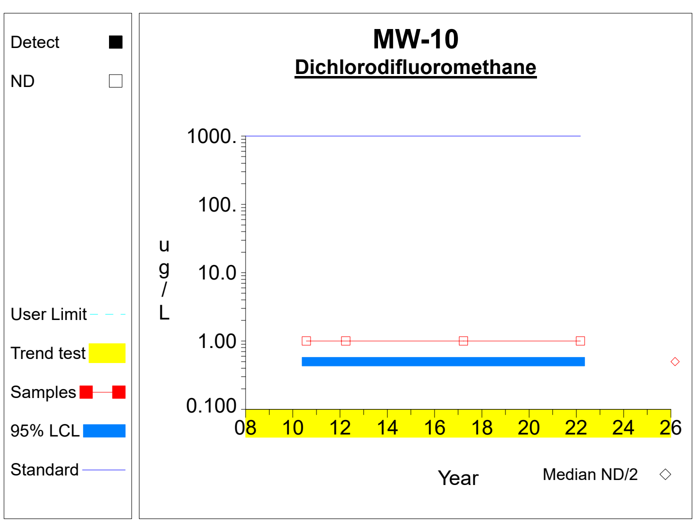
Graph 2



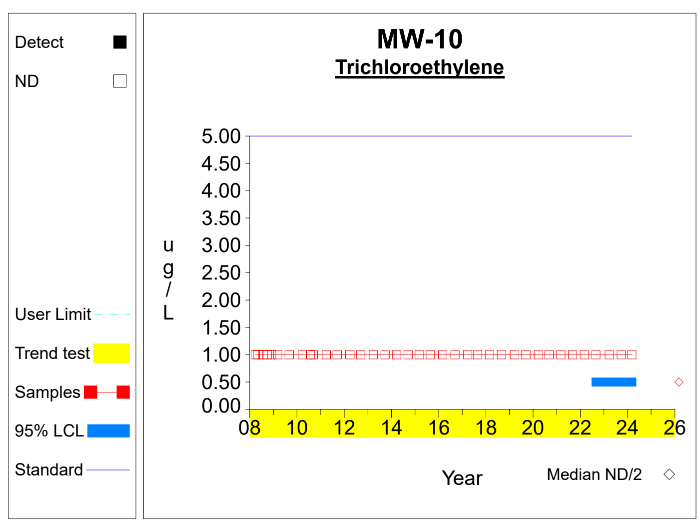
Graph 3



Graph 4

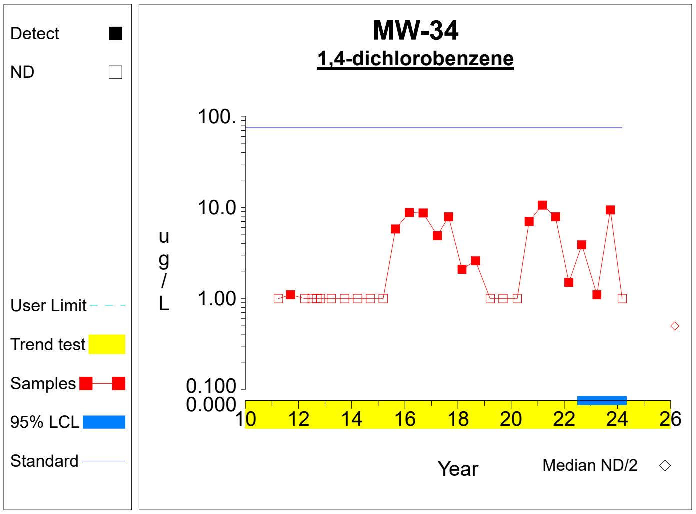


Graph 5

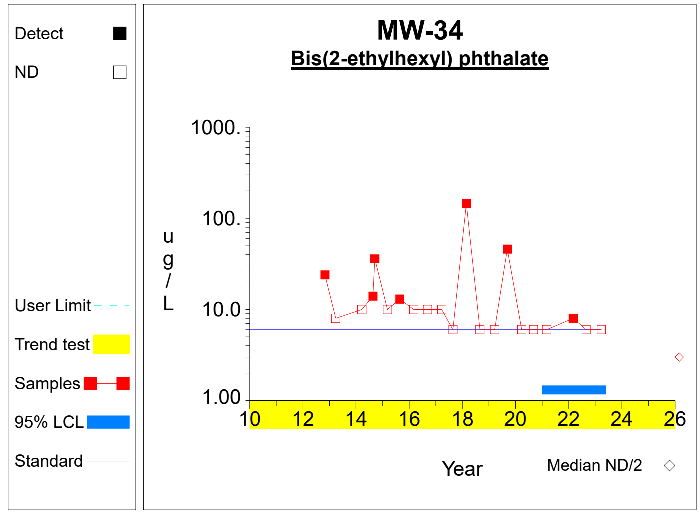


Graph 6

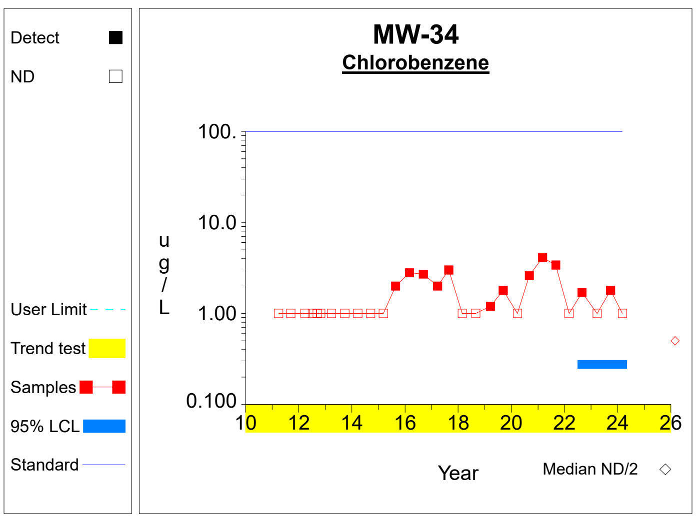
Confidence Limits (Assessment)



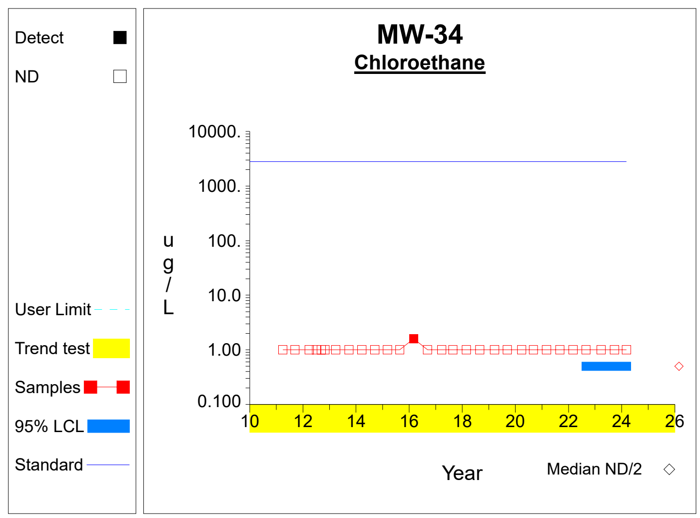
Graph 7



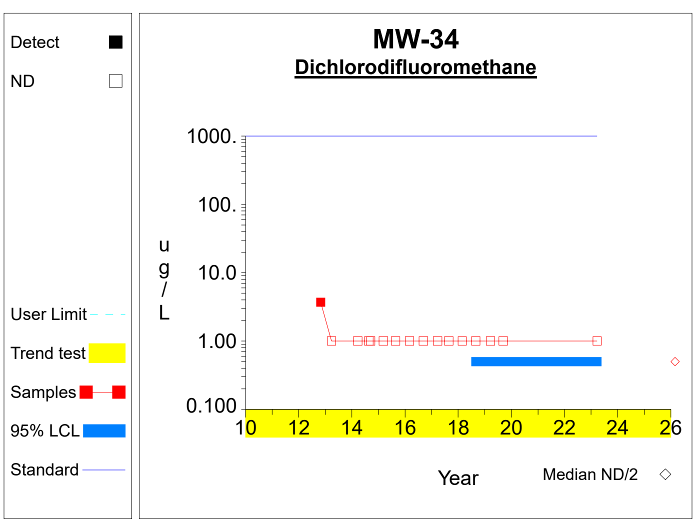
Graph 8



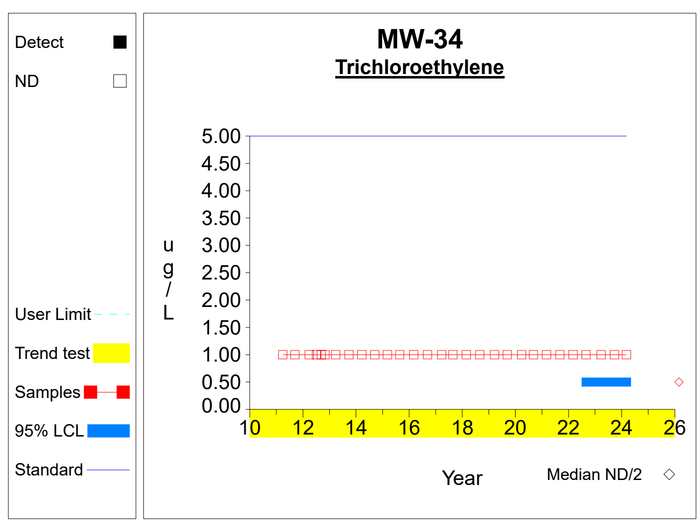
Graph 9



Graph 10



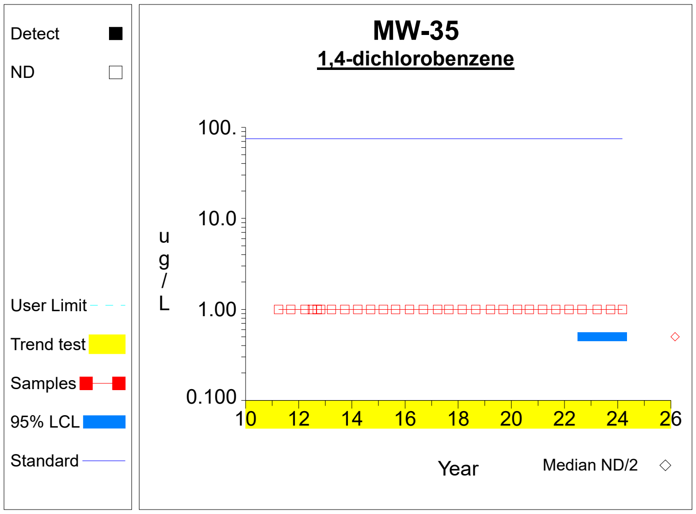
Graph 11



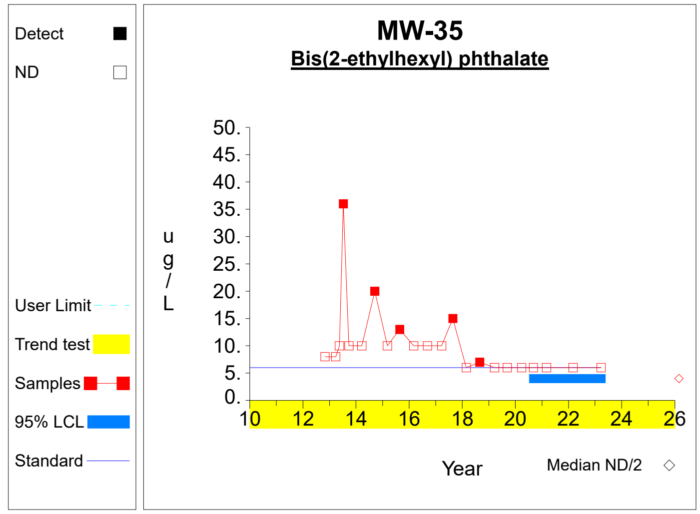
Graph 12

Prepared by: Otter Creek Environmental

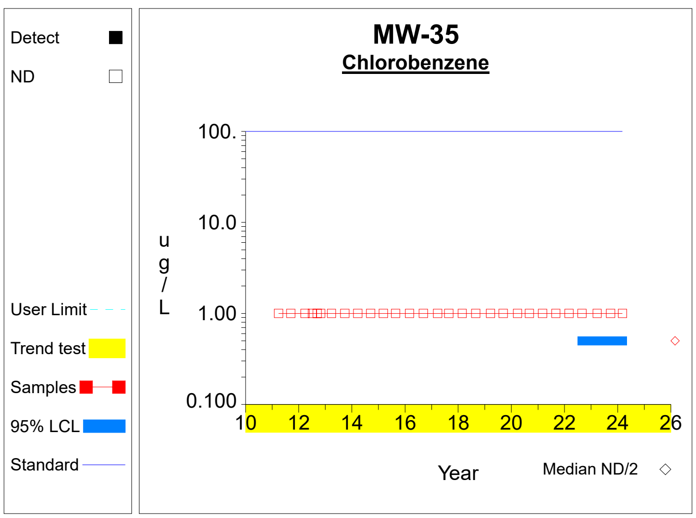
Confidence Limits (Assessment)



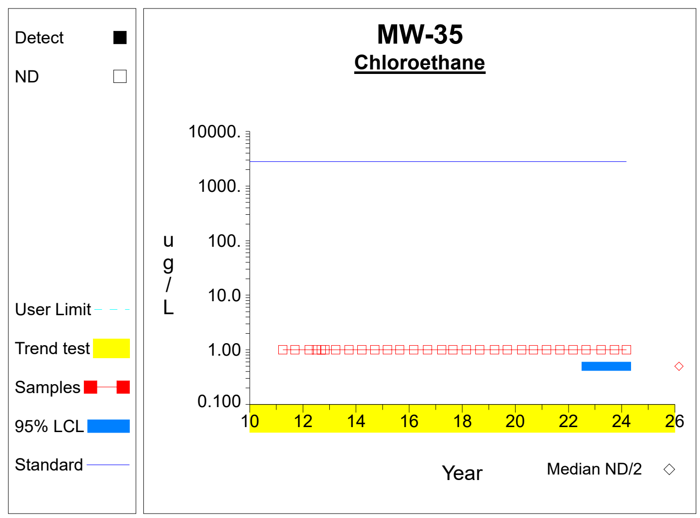
Graph 13



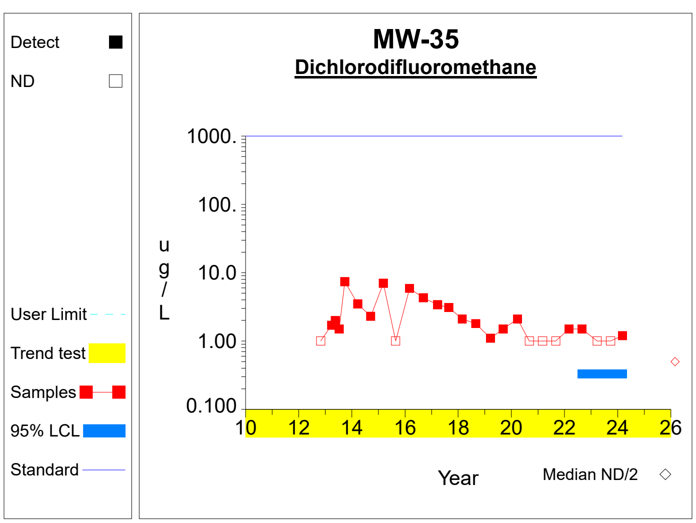
Graph 14



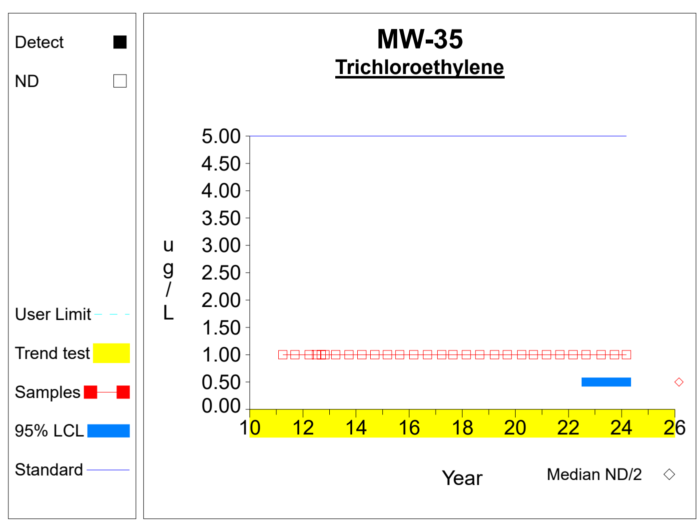
Graph 15



Graph 16

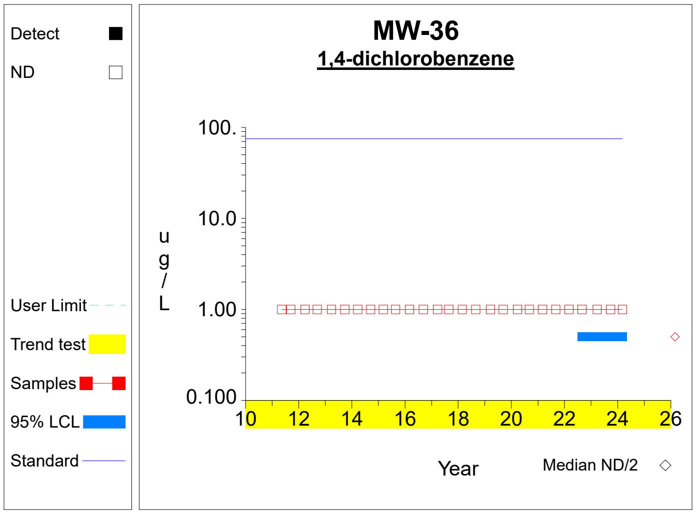


Graph 17

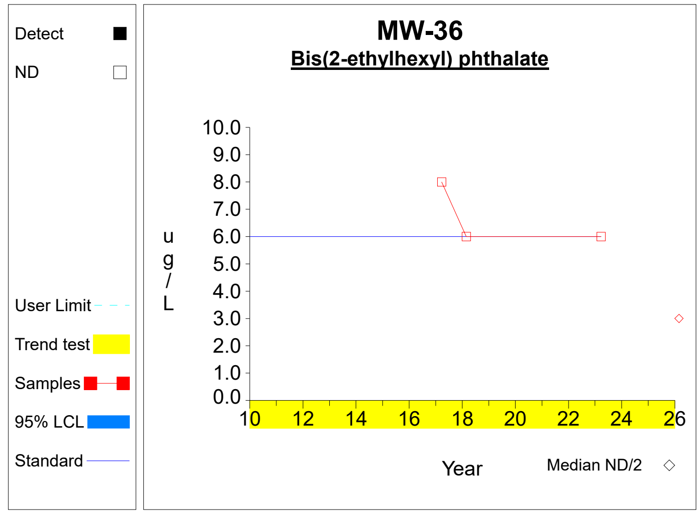


Graph 18

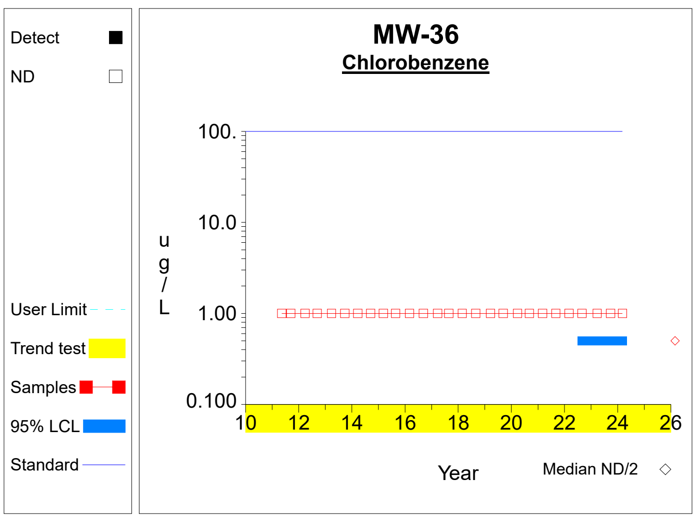
Confidence Limits (Assessment)



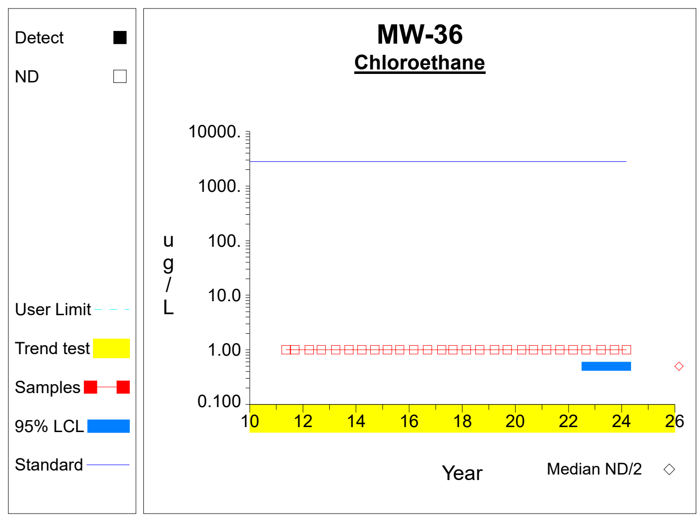
Graph 19



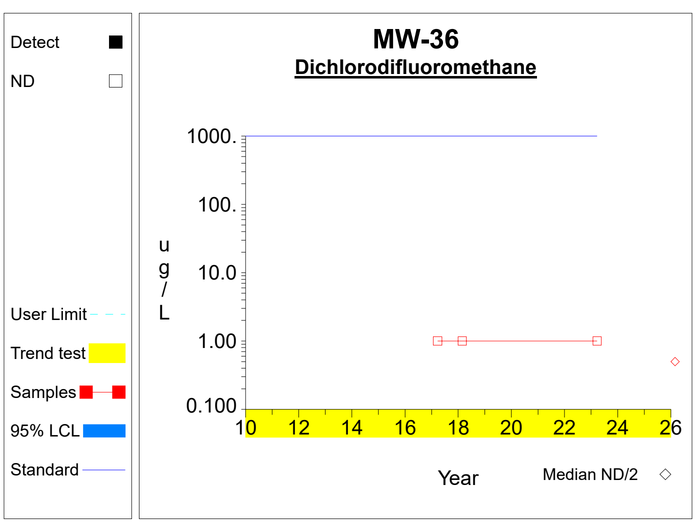
Graph 20



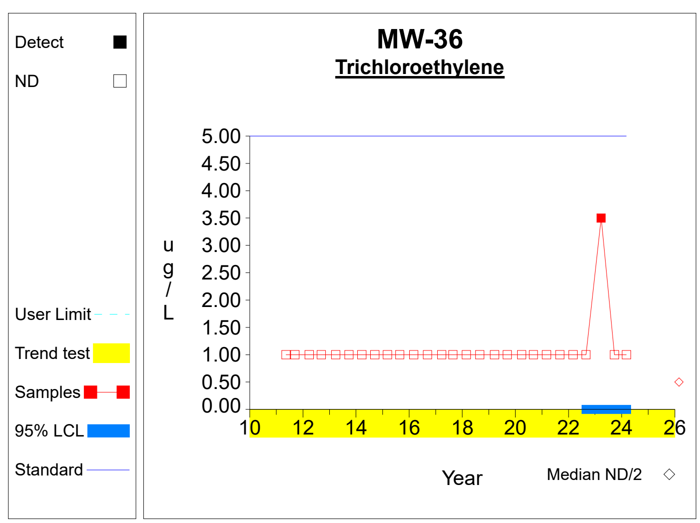
Graph 21



Graph 22



Graph 23



Graph 24

Appendix C.2 –Fall Statistical Evaluation

GROUND WATER STATISTICS

FOR THE

TAMA COUNTY SANITARY LANDFILL

Second Semi-Annual Monitoring Event in 2024

Prepared for:
Tama County Sanitary Landfill
2872 K Avenue
Toledo, Tama County, IA

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

October 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 Tama County Sanitary Landfill in Toledo, Tama 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 Tama County Sanitary Landfill. The statistical plan conforms with IAC 567, Chapter 113.10, USEPA Guidance document ("*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance*", March 2009), and the American Society for Testing and Materials (ASTM) standard D6312-98, *Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*.

Ground Water Monitoring Program

The groundwater monitoring network for Tama County Sanitary Landfill includes sample points MW-10, MW-20 (upgradient), MW-26 (upgradient), MW-27, MW-33, MW-34 MW-35, MW-36, MW-37 (upgradient), MW-3A, MW-8, SW-101, SW-102, and SW-3. 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	*trans*-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	*cis*-1,2-Dichloroethene	1,1,2,2-Tetrachloroethane
Bromoform	*trans*-1,2-Dichloroethene	Tetrachloroethene
Carbon disulfide	1,2-Dichloropropane	Toluene
Carbon tetrachloride	*cis*-1,3-Dichloropropene	1,1,1-Trichloroethane
Chlorobenzene	*trans*-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. Interwell statistics were applied to the Tama County Landfill data using the DUMPStat® statistical program. Ground water statistics are to be done on the inorganic constituents listed. The organic constituents are compared to maximum contaminant levels (MCLs) or practical quantitation limits (PQLs), in lieu of statistical comparisons to historical concentrations.

Interwell Statistics: Upgradient versus Downgradient Comparisons

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

Results of the Interwell Statistics

The background data used in this statistical analysis includes the ground water data collected from sample points MW-20, MW-26, MW-33, and MW-37 during the period from September 2014 through the current data. A summary of the background data from monitoring wells MW-20, MW-26, MW-33, and MW-37, 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 most current data from downgradient wells MW-10, MW-27, MW-34, MW-35, MW-36, MW-3A, and MW-8 compared to the site prediction limits. Prediction limit exceedances are flagged with asterisks. For the most current data, the site prediction limit exceedances detected are summarized in the Table below.

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

Well	Trace Metal	Result, µg/L	Prediction Limit	Prediction Limit Type	Verified or Awaiting Verification
MW-10	Barium	533	279.2306	Normal	Verified
	Cobalt	5.7	1.8000	Nonparametric	Verified
	Nickel	13.5	4.0000	Nonparametric	Verified
MW-34	Arsenic	4.2	4.0000	Nonparametric	Awaiting verification
	Cobalt	5.4	1.8000	Nonparametric	Awaiting verification
	Nickel	15.9	4.0000	Nonparametric	Verified
MW-35	Barium	448	279.2306	Normal	Verified
MW-36	Barium	292	279.2306	Normal	Verified
	Copper	12.0	8.4000	Nonparametric	Awaiting verification
MW-3A	Arsenic	10.1	4.0000	Nonparametric	Awaiting verification
MW-8	Cobalt	3.1	1.8000	Nonparametric	Awaiting verification
	Nickel	13.3	13.3000	Nonparametric	Verified

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. Table 4 summarizes the results of the Shapiro-Wilk test. Table 5 is a summary of the statistics and prediction limits determined for the metals. Time series graphs of each of the parameters at each well with the corresponding prediction limits are attached.

A statistical power curve indicates the expected false assessments for the site as a whole. The false positive rate for interwell analyses is the percentage of failures when the upgradient versus downgradient true mean difference equals zero. False negative rate indicates the chance of missing contamination at a single well for a single constituent. The statistical power is a function of the number of wells included, the number of constituents compared, the detection frequencies, and the data distributions involved. For interwell analysis, the site-wide false positive rate is 1% and the test becomes sensitive to 3 standard deviation unit increases over background.

The past and current verified metals exceedances were evaluated against the ground water protection standards (GWPS) using confidence limits calculated in accordance with the Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance, USEPA, March 2009 (Attachment C). The analysis was conducted to evaluate whether verified concentrations are significantly above the water quality standard. The 95% lower confidence limit (LCL) for the mean of the historical data was used to evaluate whether the regulated unit is in compliance with the ground-water protection standards under 40 CFR 264 (e.g. whether the verified constituent is detected at a significant level above the GWPS). An exceedance is verified if the LCL is above the Regulatory GWPS.

The 95% LCL for cobalt at MW-10 (2.311 µg/L) exceeded the GWPS of 2.1 µg/L. The calculated 95% LCLs for the remainder of the metals tested are below GWPS.

Volatile Organic Compounds

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

VOCs detected in the ground water at Tama County Landfill during the second semi-annual monitoring event in 2024 are summarized below.

VOCs detected during the second semi-annual monitoring period in 2024

Well	VOC Detected	Result, µg/L	Reporting Limit, µg/L	Verified/ Awaiting verification	Water Quality Standard
MW-10	1,4-Dichlorobenzene	2.5	1	Verified	75[a]
	Chlorobenzene	1.5	1	Awaiting verification	100[a]
MW-34	1,4-Dichlorobenzene	1.4	1	Awaiting verification	75[a]
MW-35	Dichlorodifluoromethane	1.2	1	Verified	1000[b]

a - USEPA MCL
b- Iowa Statewide Standard for a protected groundwater source

Chlorobenzene has been detected multiple times at MW-10 but was last detected at MW-10 in September 2023. 1,4-Dichlorobenzene has been detected multiple times at MW-34 but was last detected at MW-34 in September 2023. Historical VOC detections in the ground water are summarized in Attachment D. The verified VOC detections were evaluated against the GWPS using confidence limits (Attachment E). The calculated LCLs are below GWPS.

CONCLUSIONS

This report summarizes the statistical analyses used to evaluate the ground water data obtained during the second semi-annual monitoring event in 2024 at Tama County Sanitary Landfill. There are verified site prediction limit exceedances for barium, cobalt, and nickel at MW-10, nickel at MW-34, barium at MW-35, barium at MW-36, and nickel at MW-8. Organic compounds detected in the ground water at Tama County Landfill during the second semi-annual monitoring event in 2024 include 1,4-dichlorobenzene at MW-10 and dichlorodifluoromethane at MW-35. The VOCs detections did not statistically exceed GWPS.

Attachment A

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

Table 1

Analytical Data Summary for 9/30/2024

Constituents	Units	MW-10	MW-20	MW-26	MW-27	MW-33	MW-34	MW-35	MW-36	MW-37	MW-3A	MW-8
1,1,1,2-tetrachloroethane	ug/L	<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
1,1,2,2-tetrachloroethane	ug/L	<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-dichloroethane	ug/L	<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
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<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
1,2-dichlorobenzene	ug/L	<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
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	2.5	<1.0	<1.0	<1.0	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0
2-butanone (mek)	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	4.2	<4.0	<4.0	<4.0	10.1	<4.0
Barium, total	ug/L	533.0	194.0	153.0	200.0	167.0	207.0	448.0	292.0	43.7	97.8	264.0
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L	<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
Bromoform	ug/L	<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
Cadmium, total	ug/L	<.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
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	ug/L	<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
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	ug/L	<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
Cobalt, total	ug/L	5.7	<.4	<.4	<.4	<.4	5.4	<.4	<.4	<.4	1.5	3.1
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	12	<4	<4	<4
Dibromochloromethane	ug/L	<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
Dichlorodifluoromethane	ug/L							1.2				
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	13.5	<4.0	<4.0	<4.0	<4.0	15.9	<4.0	<4.0	<4.0	<4.0	13.3
Selenium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	10.2	<4.0	<4.0
Silver, total	ug/L	<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
Tetrachloroethylene	ug/L	<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
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	ug/L	<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
Trans-1,4-dichloro-2-butene	ug/L	<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
Trichlorofluoromethane	ug/L	<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
Vinyl acetate	ug/L	<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
Xylenes, total	ug/L	<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

* - 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-20	09/15/2014	ND	2.0000		
Antimony, total	ug/L	MW-20	01/14/2015	ND	2.0000		
Antimony, total	ug/L	MW-20	03/06/2015	ND	2.0000		
Antimony, total	ug/L	MW-20	06/16/2015	ND	2.0000		
Antimony, total	ug/L	MW-20	08/24/2015	ND	2.0000		
Antimony, total	ug/L	MW-20	03/01/2016	ND	2.0000		
Antimony, total	ug/L	MW-20	09/09/2016	ND	2.0000		
Antimony, total	ug/L	MW-20	03/22/2017	ND	2.0000		
Antimony, total	ug/L	MW-20	08/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-20	02/26/2018	ND	2.0000		
Antimony, total	ug/L	MW-20	08/29/2018	ND	2.0000		
Antimony, total	ug/L	MW-20	03/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-20	09/10/2019	ND	2.0000		
Antimony, total	ug/L	MW-20	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-20	09/04/2020	ND	2.0000		
Antimony, total	ug/L	MW-20	03/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-20	09/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-20	03/02/2022	ND	2.0000		
Antimony, total	ug/L	MW-20	08/29/2022	ND	2.0000		
Antimony, total	ug/L	MW-20	03/23/2023	ND	2.0000		
Antimony, total	ug/L	MW-20	09/25/2023	ND	2.0000		
Antimony, total	ug/L	MW-20	03/05/2024	ND	2.0000		
Antimony, total	ug/L	MW-20	09/30/2024	ND	2.0000		
Arsenic, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Arsenic, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Arsenic, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Arsenic, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Arsenic, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Arsenic, total	ug/L	MW-20	08/29/2018	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Arsenic, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Arsenic, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Arsenic, total	ug/L	MW-20	09/30/2024	ND	4.0000		
Barium, total	ug/L	MW-20	09/15/2014		177.0000		
Barium, total	ug/L	MW-20	01/14/2015		208.0000		
Barium, total	ug/L	MW-20	03/06/2015		219.0000		
Barium, total	ug/L	MW-20	06/16/2015		221.0000		
Barium, total	ug/L	MW-20	08/24/2015		171.0000		
Barium, total	ug/L	MW-20	03/01/2016		162.0000		
Barium, total	ug/L	MW-20	09/09/2016		209.0000		
Barium, total	ug/L	MW-20	03/22/2017		222.0000		
Barium, total	ug/L	MW-20	08/24/2017		239.0000		
Barium, total	ug/L	MW-20	02/26/2018		239.0000		
Barium, total	ug/L	MW-20	08/29/2018		201.0000		
Barium, total	ug/L	MW-20	03/18/2019		193.0000		
Barium, total	ug/L	MW-20	09/10/2019		142.0000		
Barium, total	ug/L	MW-20	03/25/2020		184.0000		
Barium, total	ug/L	MW-20	09/04/2020		167.0000		
Barium, total	ug/L	MW-20	03/02/2021		217.0000		
Barium, total	ug/L	MW-20	09/02/2021		210.0000		
Barium, total	ug/L	MW-20	03/02/2022		236.0000		
Barium, total	ug/L	MW-20	08/29/2022		152.0000		
Barium, total	ug/L	MW-20	03/23/2023		231.0000		
Barium, total	ug/L	MW-20	09/25/2023		185.0000		
Barium, total	ug/L	MW-20	03/05/2024		201.0000		
Barium, total	ug/L	MW-20	09/30/2024		194.0000		
Beryllium, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Beryllium, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Beryllium, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Beryllium, total	ug/L	MW-20	08/24/2015	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Beryllium, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Beryllium, total	ug/L	MW-20	08/29/2018	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Beryllium, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Beryllium, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Beryllium, total	ug/L	MW-20	09/30/2024	ND	4.0000		
Cadmium, total	ug/L	MW-20	09/15/2014	ND	0.8000		
Cadmium, total	ug/L	MW-20	01/14/2015	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/06/2015	ND	0.8000		
Cadmium, total	ug/L	MW-20	06/16/2015	ND	0.8000		
Cadmium, total	ug/L	MW-20	08/24/2015	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/01/2016	ND	0.8000		
Cadmium, total	ug/L	MW-20	09/09/2016	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/22/2017	ND	0.8000		
Cadmium, total	ug/L	MW-20	08/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-20	02/26/2018	ND	0.8000		
Cadmium, total	ug/L	MW-20	08/29/2018	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-20	09/10/2019	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-20	09/04/2020	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/02/2021		0.8000		
Cadmium, total	ug/L	MW-20	09/02/2021		0.8000		
Cadmium, total	ug/L	MW-20	03/02/2022	ND	0.8000		
Cadmium, total	ug/L	MW-20	08/29/2022	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/23/2023	ND	0.8000		
Cadmium, total	ug/L	MW-20	09/25/2023	ND	0.8000		
Cadmium, total	ug/L	MW-20	03/05/2024	ND	0.8000		
Cadmium, total	ug/L	MW-20	09/30/2024	ND	0.8000		
Chromium, total	ug/L	MW-20	09/15/2014	ND	8.0000		
Chromium, total	ug/L	MW-20	01/14/2015	ND	8.0000		
Chromium, total	ug/L	MW-20	03/06/2015	ND	8.0000		
Chromium, total	ug/L	MW-20	06/16/2015	ND	8.0000		
Chromium, total	ug/L	MW-20	08/24/2015	ND	8.0000		
Chromium, total	ug/L	MW-20	03/01/2016	ND	8.0000		
Chromium, total	ug/L	MW-20	09/09/2016	ND	8.0000		
Chromium, total	ug/L	MW-20	03/22/2017	ND	8.0000		
Chromium, total	ug/L	MW-20	08/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-20	02/26/2018	ND	8.0000		
Chromium, total	ug/L	MW-20	08/29/2018	ND	8.0000		
Chromium, total	ug/L	MW-20	03/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-20	09/10/2019	ND	8.0000		
Chromium, total	ug/L	MW-20	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-20	09/04/2020	ND	8.0000		
Chromium, total	ug/L	MW-20	03/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-20	09/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-20	03/02/2022	ND	8.0000		
Chromium, total	ug/L	MW-20	08/29/2022	ND	8.0000		
Chromium, total	ug/L	MW-20	03/23/2023	ND	8.0000		
Chromium, total	ug/L	MW-20	09/25/2023	ND	8.0000		
Chromium, total	ug/L	MW-20	03/05/2024	ND	8.0000		
Chromium, total	ug/L	MW-20	09/30/2024	ND	8.0000		
Cobalt, total	ug/L	MW-20	09/15/2014	ND	0.8000		
Cobalt, total	ug/L	MW-20	01/14/2015	ND	0.8000		
Cobalt, total	ug/L	MW-20	03/06/2015	ND	0.8000		
Cobalt, total	ug/L	MW-20	06/16/2015	ND	0.8000		
Cobalt, total	ug/L	MW-20	08/24/2015	ND	0.8000		
Cobalt, total	ug/L	MW-20	03/01/2016	ND	0.8000		
Cobalt, total	ug/L	MW-20	09/09/2016	ND	0.8000		
Cobalt, total	ug/L	MW-20	03/22/2017	ND	0.8000		
Cobalt, total	ug/L	MW-20	08/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-20	02/26/2018		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-20	08/29/2018	ND	0.8000		
Cobalt, total	ug/L	MW-20	03/18/2019	ND	0.8000		
Cobalt, total	ug/L	MW-20	09/10/2019	ND	0.8000		
Cobalt, total	ug/L	MW-20	03/25/2020	ND	0.8000		
Cobalt, total	ug/L	MW-20	09/04/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-20	03/02/2021		1.0000		
Cobalt, total	ug/L	MW-20	09/02/2021		1.1000		
Cobalt, total	ug/L	MW-20	03/02/2022		0.8000		
Cobalt, total	ug/L	MW-20	08/29/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-20	03/23/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-20	09/25/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-20	03/05/2024		0.4000		
Cobalt, total	ug/L	MW-20	09/30/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Copper, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Copper, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Copper, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Copper, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Copper, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Copper, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Copper, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Copper, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Copper, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Copper, total	ug/L	MW-20	08/29/2018	ND	4.0000		
Copper, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Copper, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Copper, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Copper, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Copper, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Copper, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Copper, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Copper, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Copper, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Copper, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Copper, total	ug/L	MW-20	09/30/2024	ND	4.0000		
Lead, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Lead, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Lead, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Lead, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Lead, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Lead, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Lead, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Lead, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Lead, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Lead, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Lead, total	ug/L	MW-20	08/29/2018	ND	4.0000		
Lead, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Lead, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Lead, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Lead, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Lead, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Lead, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Lead, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Lead, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Lead, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Lead, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Lead, total	ug/L	MW-20	09/30/2024	ND	4.0000		
Nickel, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Nickel, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Nickel, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Nickel, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Nickel, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Nickel, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Nickel, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Nickel, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Nickel, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Nickel, total	ug/L	MW-20	08/29/2018	ND	8.0000	4.0000	**
Nickel, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Nickel, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Nickel, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-20	09/04/2020	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	
Nickel, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Nickel, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Nickel, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Nickel, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Nickel, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Nickel, total	ug/L	MW-20	09/30/2024	ND	4.0000		
Selenium, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Selenium, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Selenium, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Selenium, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Selenium, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Selenium, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Selenium, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Selenium, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Selenium, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Selenium, total	ug/L	MW-20	08/29/2018	ND	4.0000		
Selenium, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Selenium, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Selenium, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Selenium, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Selenium, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Selenium, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Selenium, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Selenium, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Selenium, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Selenium, total	ug/L	MW-20	09/30/2024	ND	4.0000		
Silver, total	ug/L	MW-20	09/15/2014	ND	4.0000		
Silver, total	ug/L	MW-20	01/14/2015	ND	4.0000		
Silver, total	ug/L	MW-20	03/06/2015	ND	4.0000		
Silver, total	ug/L	MW-20	06/16/2015	ND	4.0000		
Silver, total	ug/L	MW-20	08/24/2015	ND	4.0000		
Silver, total	ug/L	MW-20	03/01/2016	ND	4.0000		
Silver, total	ug/L	MW-20	09/09/2016	ND	4.0000		
Silver, total	ug/L	MW-20	03/22/2017	ND	4.0000		
Silver, total	ug/L	MW-20	08/24/2017	ND	4.0000		
Silver, total	ug/L	MW-20	02/26/2018	ND	4.0000		
Silver, total	ug/L	MW-20	08/29/2018	ND	8.0000	4.0000	**
Silver, total	ug/L	MW-20	03/18/2019	ND	4.0000		
Silver, total	ug/L	MW-20	09/10/2019	ND	4.0000		
Silver, total	ug/L	MW-20	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-20	09/04/2020	ND	4.0000		
Silver, total	ug/L	MW-20	03/02/2021	ND	4.0000		
Silver, total	ug/L	MW-20	09/02/2021	ND	4.0000		
Silver, total	ug/L	MW-20	03/02/2022	ND	4.0000		
Silver, total	ug/L	MW-20	08/29/2022	ND	4.0000		
Silver, total	ug/L	MW-20	03/23/2023	ND	4.0000		
Silver, total	ug/L	MW-20	09/25/2023	ND	4.0000		
Silver, total	ug/L	MW-20	03/05/2024	ND	4.0000		
Silver, total	ug/L	MW-20	09/30/2024	ND	4.0000		
Thallium, total	ug/L	MW-20	09/15/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	01/14/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	03/06/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	06/16/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	08/24/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	03/01/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	09/09/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	03/22/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	08/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	02/26/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	08/29/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-20	03/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-20	09/10/2019	ND	2.0000		
Thallium, total	ug/L	MW-20	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-20	09/04/2020	ND	2.0000		
Thallium, total	ug/L	MW-20	03/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-20	09/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-20	03/02/2022	ND	2.0000		
Thallium, total	ug/L	MW-20	08/29/2022	ND	2.0000		
Thallium, total	ug/L	MW-20	03/23/2023	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	
Thallium, total	ug/L	MW-20	09/25/2023	ND	2.0000		
Thallium, total	ug/L	MW-20	03/05/2024	ND	2.0000		
Thallium, total	ug/L	MW-20	09/30/2024	ND	2.0000		
Vanadium, total	ug/L	MW-20	09/15/2014	ND	20.0000		
Vanadium, total	ug/L	MW-20	01/14/2015	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/06/2015	ND	20.0000		
Vanadium, total	ug/L	MW-20	06/16/2015	ND	20.0000		
Vanadium, total	ug/L	MW-20	08/24/2015	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/01/2016	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/09/2016	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/22/2017	ND	20.0000		
Vanadium, total	ug/L	MW-20	08/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-20	02/26/2018	ND	20.0000		
Vanadium, total	ug/L	MW-20	08/29/2018	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/10/2019	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/04/2020	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/02/2022	ND	20.0000		
Vanadium, total	ug/L	MW-20	08/29/2022	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/23/2023	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/25/2023	ND	20.0000		
Vanadium, total	ug/L	MW-20	03/05/2024	ND	20.0000		
Vanadium, total	ug/L	MW-20	09/30/2024	ND	20.0000		
Zinc, total	ug/L	MW-20	09/15/2014		8.3000		
Zinc, total	ug/L	MW-20	01/14/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	03/06/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	06/16/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	08/24/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	03/01/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	09/09/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	03/22/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	08/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	02/26/2018		11.4000		
Zinc, total	ug/L	MW-20	08/29/2018		49.4000		
Zinc, total	ug/L	MW-20	03/18/2019		23.9000		
Zinc, total	ug/L	MW-20	09/10/2019	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-20	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-20	09/04/2020	ND	20.0000		
Zinc, total	ug/L	MW-20	03/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-20	09/02/2021		44.5000		
Zinc, total	ug/L	MW-20	03/02/2022	ND	20.0000		
Zinc, total	ug/L	MW-20	08/29/2022	ND	20.0000		
Zinc, total	ug/L	MW-20	03/23/2023	ND	20.0000		
Zinc, total	ug/L	MW-20	09/25/2023	ND	20.0000		
Zinc, total	ug/L	MW-20	03/05/2024	ND	20.0000		
Zinc, total	ug/L	MW-20	09/30/2024	ND	20.0000		
Antimony, total	ug/L	MW-26	09/15/2014	ND	2.0000		
Antimony, total	ug/L	MW-26	01/14/2015	ND	2.0000		
Antimony, total	ug/L	MW-26	03/06/2015	ND	2.0000		
Antimony, total	ug/L	MW-26	06/16/2015	ND	2.0000		
Antimony, total	ug/L	MW-26	08/24/2015	ND	2.0000		
Antimony, total	ug/L	MW-26	03/01/2016	ND	2.0000		
Antimony, total	ug/L	MW-26	09/09/2016	ND	2.0000		
Antimony, total	ug/L	MW-26	03/22/2017	ND	2.0000		
Antimony, total	ug/L	MW-26	08/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-26	02/26/2018	ND	5.0000	2.0000	**
Antimony, total	ug/L	MW-26	08/29/2018	ND	2.0000		
Antimony, total	ug/L	MW-26	03/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-26	09/10/2019	ND	2.0000		
Antimony, total	ug/L	MW-26	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-26	09/04/2020	ND	2.0000		
Antimony, total	ug/L	MW-26	03/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-26	09/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-26	03/02/2022	ND	2.0000		
Antimony, total	ug/L	MW-26	08/29/2022	ND	2.0000		
Antimony, total	ug/L	MW-26	03/23/2023	ND	2.0000		
Antimony, total	ug/L	MW-26	09/25/2023	ND	2.0000		
Antimony, total	ug/L	MW-26	03/05/2024	ND	2.0000		
Antimony, total	ug/L	MW-26	09/30/2024	ND	2.0000		
Arsenic, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Arsenic, total	ug/L	MW-26	01/14/2015	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-26	03/06/2015	ND	4.0000		
Arsenic, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Arsenic, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Arsenic, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Arsenic, total	ug/L	MW-26	08/29/2018	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Arsenic, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Arsenic, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Arsenic, total	ug/L	MW-26	09/30/2024	ND	4.0000		
Barium, total	ug/L	MW-26	09/15/2014		141.0000		
Barium, total	ug/L	MW-26	01/14/2015		118.0000		
Barium, total	ug/L	MW-26	03/06/2015		106.0000		
Barium, total	ug/L	MW-26	06/16/2015		121.0000		
Barium, total	ug/L	MW-26	08/24/2015		156.0000		
Barium, total	ug/L	MW-26	03/01/2016		120.0000		
Barium, total	ug/L	MW-26	09/09/2016		116.0000		
Barium, total	ug/L	MW-26	03/22/2017		123.0000		
Barium, total	ug/L	MW-26	08/24/2017		128.0000		
Barium, total	ug/L	MW-26	02/26/2018		119.0000		
Barium, total	ug/L	MW-26	08/29/2018		117.0000		
Barium, total	ug/L	MW-26	03/18/2019		147.0000		
Barium, total	ug/L	MW-26	09/10/2019		178.0000		
Barium, total	ug/L	MW-26	03/25/2020		199.0000		
Barium, total	ug/L	MW-26	09/04/2020		189.0000		
Barium, total	ug/L	MW-26	03/02/2021		157.0000		
Barium, total	ug/L	MW-26	09/02/2021		179.0000		
Barium, total	ug/L	MW-26	03/02/2022		126.0000		
Barium, total	ug/L	MW-26	08/29/2022		142.0000		
Barium, total	ug/L	MW-26	03/23/2023		112.0000		
Barium, total	ug/L	MW-26	09/25/2023		116.0000		
Barium, total	ug/L	MW-26	03/05/2024		118.0000		
Barium, total	ug/L	MW-26	09/30/2024		153.0000		
Beryllium, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Beryllium, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Beryllium, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Beryllium, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Beryllium, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Beryllium, total	ug/L	MW-26	08/29/2018	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Beryllium, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Beryllium, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Beryllium, total	ug/L	MW-26	09/30/2024	ND	4.0000		
Cadmium, total	ug/L	MW-26	09/15/2014	ND	0.8000		
Cadmium, total	ug/L	MW-26	01/14/2015	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/06/2015	ND	0.8000		
Cadmium, total	ug/L	MW-26	06/16/2015	ND	0.8000		
Cadmium, total	ug/L	MW-26	08/24/2015	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/01/2016	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/09/2016	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-26	03/22/2017	ND	0.8000		
Cadmium, total	ug/L	MW-26	08/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-26	02/26/2018	ND	2.0000	0.8000	**
Cadmium, total	ug/L	MW-26	08/29/2018	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/10/2019	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/04/2020	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/02/2022	ND	0.8000		
Cadmium, total	ug/L	MW-26	08/29/2022	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/23/2023	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/25/2023	ND	0.8000		
Cadmium, total	ug/L	MW-26	03/05/2024	ND	0.8000		
Cadmium, total	ug/L	MW-26	09/30/2024	ND	0.8000		
Chromium, total	ug/L	MW-26	09/15/2014	ND	8.0000		
Chromium, total	ug/L	MW-26	01/14/2015	ND	8.0000		
Chromium, total	ug/L	MW-26	03/06/2015	ND	8.0000		
Chromium, total	ug/L	MW-26	06/16/2015	ND	8.0000		
Chromium, total	ug/L	MW-26	08/24/2015	ND	8.0000		
Chromium, total	ug/L	MW-26	03/01/2016	ND	8.0000		
Chromium, total	ug/L	MW-26	09/09/2016	ND	8.0000		
Chromium, total	ug/L	MW-26	03/22/2017	ND	8.0000		
Chromium, total	ug/L	MW-26	08/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-26	02/26/2018	ND	20.0000	8.0000	**
Chromium, total	ug/L	MW-26	08/29/2018	ND	8.0000		
Chromium, total	ug/L	MW-26	03/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-26	09/10/2019	ND	8.0000		
Chromium, total	ug/L	MW-26	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-26	09/04/2020	ND	8.0000		
Chromium, total	ug/L	MW-26	03/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-26	09/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-26	03/02/2022	ND	8.0000		
Chromium, total	ug/L	MW-26	08/29/2022	ND	8.0000		
Chromium, total	ug/L	MW-26	03/23/2023	ND	8.0000		
Chromium, total	ug/L	MW-26	09/25/2023	ND	8.0000		
Chromium, total	ug/L	MW-26	03/05/2024	ND	8.0000		
Chromium, total	ug/L	MW-26	09/30/2024	ND	8.0000		
Cobalt, total	ug/L	MW-26	09/15/2014	ND	0.8000		
Cobalt, total	ug/L	MW-26	01/14/2015	ND	0.8000		
Cobalt, total	ug/L	MW-26	03/06/2015	ND	0.8000		
Cobalt, total	ug/L	MW-26	06/16/2015	ND	0.8000		
Cobalt, total	ug/L	MW-26	08/24/2015	ND	0.8000		
Cobalt, total	ug/L	MW-26	03/01/2016	ND	0.8000		
Cobalt, total	ug/L	MW-26	09/09/2016	ND	0.8000		
Cobalt, total	ug/L	MW-26	03/22/2017	ND	0.8000		
Cobalt, total	ug/L	MW-26	08/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-26	02/26/2018	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-26	08/29/2018	ND	0.8000		
Cobalt, total	ug/L	MW-26	03/18/2019	ND	0.8000		
Cobalt, total	ug/L	MW-26	09/10/2019	ND	0.8000		
Cobalt, total	ug/L	MW-26	03/25/2020	ND	0.8000		
Cobalt, total	ug/L	MW-26	09/04/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	03/02/2021		0.9000		
Cobalt, total	ug/L	MW-26	09/02/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	03/02/2022		0.7000		
Cobalt, total	ug/L	MW-26	08/29/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	03/23/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	09/25/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	03/05/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-26	09/30/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Copper, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Copper, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Copper, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Copper, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Copper, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Copper, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Copper, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Copper, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Copper, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Copper, total	ug/L	MW-26	08/29/2018	ND	4.0000		
Copper, total	ug/L	MW-26	03/18/2019	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Copper, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Copper, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Copper, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Copper, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Copper, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Copper, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Copper, total	ug/L	MW-26	09/25/2023		8.4000		
Copper, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Copper, total	ug/L	MW-26	09/30/2024	ND	4.0000		
Lead, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Lead, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Lead, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Lead, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Lead, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Lead, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Lead, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Lead, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Lead, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Lead, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Lead, total	ug/L	MW-26	08/29/2018	ND	4.0000		
Lead, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Lead, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Lead, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Lead, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Lead, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Lead, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Lead, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Lead, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Lead, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Lead, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Lead, total	ug/L	MW-26	09/30/2024	ND	4.0000		
Nickel, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Nickel, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Nickel, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Nickel, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Nickel, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Nickel, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Nickel, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Nickel, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Nickel, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Nickel, total	ug/L	MW-26	08/29/2018	ND	8.0000	4.0000	**
Nickel, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Nickel, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Nickel, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Nickel, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Nickel, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Nickel, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Nickel, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Nickel, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Nickel, total	ug/L	MW-26	09/30/2024	ND	4.0000		
Selenium, total	ug/L	MW-26	09/15/2014		4.9000		
Selenium, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Selenium, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Selenium, total	ug/L	MW-26	06/16/2015		6.3000		
Selenium, total	ug/L	MW-26	08/24/2015		4.9000		
Selenium, total	ug/L	MW-26	03/01/2016		4.8000		
Selenium, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Selenium, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Selenium, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-26	02/26/2018		10.7000		
Selenium, total	ug/L	MW-26	08/29/2018	ND	4.0000		
Selenium, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Selenium, total	ug/L	MW-26	03/25/2020		6.1000		
Selenium, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Selenium, total	ug/L	MW-26	03/02/2021		10.8000		
Selenium, total	ug/L	MW-26	09/02/2021	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-26	03/02/2022		10.5000		
Selenium, total	ug/L	MW-26	08/29/2022		4.1000		
Selenium, total	ug/L	MW-26	03/23/2023		10.2000		
Selenium, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Selenium, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Selenium, total	ug/L	MW-26	09/30/2024	ND	4.0000		
Silver, total	ug/L	MW-26	09/15/2014	ND	4.0000		
Silver, total	ug/L	MW-26	01/14/2015	ND	4.0000		
Silver, total	ug/L	MW-26	03/06/2015	ND	4.0000		
Silver, total	ug/L	MW-26	06/16/2015	ND	4.0000		
Silver, total	ug/L	MW-26	08/24/2015	ND	4.0000		
Silver, total	ug/L	MW-26	03/01/2016	ND	4.0000		
Silver, total	ug/L	MW-26	09/09/2016	ND	4.0000		
Silver, total	ug/L	MW-26	03/22/2017	ND	4.0000		
Silver, total	ug/L	MW-26	08/24/2017	ND	4.0000		
Silver, total	ug/L	MW-26	02/26/2018	ND	10.0000	4.0000	**
Silver, total	ug/L	MW-26	08/29/2018	ND	8.0000	4.0000	**
Silver, total	ug/L	MW-26	03/18/2019	ND	4.0000		
Silver, total	ug/L	MW-26	09/10/2019	ND	4.0000		
Silver, total	ug/L	MW-26	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-26	09/04/2020	ND	4.0000		
Silver, total	ug/L	MW-26	03/02/2021	ND	4.0000		
Silver, total	ug/L	MW-26	09/02/2021	ND	4.0000		
Silver, total	ug/L	MW-26	03/02/2022	ND	4.0000		
Silver, total	ug/L	MW-26	08/29/2022	ND	4.0000		
Silver, total	ug/L	MW-26	03/23/2023	ND	4.0000		
Silver, total	ug/L	MW-26	09/25/2023	ND	4.0000		
Silver, total	ug/L	MW-26	03/05/2024	ND	4.0000		
Silver, total	ug/L	MW-26	09/30/2024	ND	4.0000		
Thallium, total	ug/L	MW-26	09/15/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	01/14/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	03/06/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	06/16/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	08/24/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	03/01/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	09/09/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	03/22/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	08/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	02/26/2018	ND	10.0000		*
Thallium, total	ug/L	MW-26	08/29/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-26	03/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-26	09/10/2019	ND	2.0000		
Thallium, total	ug/L	MW-26	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-26	09/04/2020	ND	2.0000		
Thallium, total	ug/L	MW-26	03/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-26	09/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-26	03/02/2022	ND	2.0000		
Thallium, total	ug/L	MW-26	08/29/2022	ND	2.0000		
Thallium, total	ug/L	MW-26	03/23/2023	ND	2.0000		
Thallium, total	ug/L	MW-26	09/25/2023	ND	2.0000		
Thallium, total	ug/L	MW-26	03/05/2024	ND	2.0000		
Thallium, total	ug/L	MW-26	09/30/2024	ND	2.0000		
Vanadium, total	ug/L	MW-26	09/15/2014	ND	20.0000		
Vanadium, total	ug/L	MW-26	01/14/2015	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/06/2015	ND	20.0000		
Vanadium, total	ug/L	MW-26	06/16/2015	ND	20.0000		
Vanadium, total	ug/L	MW-26	08/24/2015	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/01/2016	ND	20.0000		
Vanadium, total	ug/L	MW-26	09/09/2016	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/22/2017	ND	20.0000		
Vanadium, total	ug/L	MW-26	08/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-26	02/26/2018	ND	50.0000	20.0000	**
Vanadium, total	ug/L	MW-26	08/29/2018	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-26	09/10/2019	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-26	09/04/2020	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-26	09/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/02/2022	ND	20.0000		
Vanadium, total	ug/L	MW-26	08/29/2022	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/23/2023	ND	20.0000		
Vanadium, total	ug/L	MW-26	09/25/2023	ND	20.0000		
Vanadium, total	ug/L	MW-26	03/05/2024	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 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Vanadium, total	ug/L	MW-26	09/30/2024	ND	20.0000		
Zinc, total	ug/L	MW-26	09/15/2014		9.2000		
Zinc, total	ug/L	MW-26	01/14/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	03/06/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	06/16/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	08/24/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	03/01/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	09/09/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	03/22/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	08/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	02/26/2018	ND	20.0000		
Zinc, total	ug/L	MW-26	08/29/2018		182.0000		*
Zinc, total	ug/L	MW-26	03/18/2019	ND	20.0000		
Zinc, total	ug/L	MW-26	09/10/2019	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-26	03/25/2020		38.0000		
Zinc, total	ug/L	MW-26	09/04/2020	ND	20.0000		
Zinc, total	ug/L	MW-26	03/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-26	09/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-26	03/02/2022	ND	20.0000		
Zinc, total	ug/L	MW-26	08/29/2022	ND	20.0000		
Zinc, total	ug/L	MW-26	03/23/2023	ND	20.0000		
Zinc, total	ug/L	MW-26	09/25/2023	ND	20.0000		
Zinc, total	ug/L	MW-26	03/05/2024	ND	20.0000		
Zinc, total	ug/L	MW-26	09/30/2024	ND	20.0000		
Antimony, total	ug/L	MW-33	09/15/2014	ND	2.0000		
Antimony, total	ug/L	MW-33	03/06/2015	ND	2.0000		
Antimony, total	ug/L	MW-33	08/24/2015	ND	2.0000		
Antimony, total	ug/L	MW-33	03/01/2016	ND	2.0000		
Antimony, total	ug/L	MW-33	09/09/2016	ND	2.0000		
Antimony, total	ug/L	MW-33	03/22/2017	ND	2.0000		
Antimony, total	ug/L	MW-33	08/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-33	02/26/2018	ND	2.0000		
Antimony, total	ug/L	MW-33	08/29/2018	ND	2.0000		
Antimony, total	ug/L	MW-33	03/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-33	09/10/2019	ND	2.0000		
Antimony, total	ug/L	MW-33	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-33	09/04/2020	ND	2.0000		
Antimony, total	ug/L	MW-33	03/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-33	09/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-33	03/02/2022	ND	2.0000		
Antimony, total	ug/L	MW-33	08/29/2022	ND	2.0000		
Antimony, total	ug/L	MW-33	03/23/2023	ND	2.0000		
Antimony, total	ug/L	MW-33	09/25/2023	ND	2.0000		
Antimony, total	ug/L	MW-33	03/05/2024	ND	2.0000		
Antimony, total	ug/L	MW-33	09/30/2024	ND	2.0000		
Arsenic, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Arsenic, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Arsenic, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Arsenic, total	ug/L	MW-33	08/29/2018	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Arsenic, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Arsenic, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Arsenic, total	ug/L	MW-33	09/30/2024	ND	4.0000		
Barium, total	ug/L	MW-33	09/15/2014		122.0000		
Barium, total	ug/L	MW-33	03/06/2015		112.0000		
Barium, total	ug/L	MW-33	08/24/2015		131.0000		
Barium, total	ug/L	MW-33	03/01/2016		98.9000		
Barium, total	ug/L	MW-33	09/09/2016		158.0000		
Barium, total	ug/L	MW-33	03/22/2017		274.0000		
Barium, total	ug/L	MW-33	06/07/2017		129.0000		
Barium, total	ug/L	MW-33	08/24/2017		163.0000		

* - 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-33	02/26/2018		171.0000		
Barium, total	ug/L	MW-33	08/29/2018		162.0000		
Barium, total	ug/L	MW-33	03/18/2019		282.0000		
Barium, total	ug/L	MW-33	09/10/2019		214.0000		
Barium, total	ug/L	MW-33	03/25/2020		144.0000		
Barium, total	ug/L	MW-33	09/04/2020		209.0000		
Barium, total	ug/L	MW-33	03/02/2021		115.0000		
Barium, total	ug/L	MW-33	09/02/2021		194.0000		
Barium, total	ug/L	MW-33	03/02/2022		189.0000		
Barium, total	ug/L	MW-33	08/29/2022		174.0000		
Barium, total	ug/L	MW-33	03/23/2023		82.7000		
Barium, total	ug/L	MW-33	09/25/2023		147.0000		
Barium, total	ug/L	MW-33	03/05/2024		77.3000		
Barium, total	ug/L	MW-33	09/30/2024		167.0000		
Beryllium, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Beryllium, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Beryllium, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Beryllium, total	ug/L	MW-33	08/29/2018	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Beryllium, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Beryllium, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Beryllium, total	ug/L	MW-33	09/30/2024	ND	4.0000		
Cadmium, total	ug/L	MW-33	09/15/2014	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/06/2015	ND	0.8000		
Cadmium, total	ug/L	MW-33	08/24/2015	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/01/2016	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/09/2016	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/22/2017	ND	0.8000		
Cadmium, total	ug/L	MW-33	08/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-33	02/26/2018	ND	0.8000		
Cadmium, total	ug/L	MW-33	08/29/2018	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/10/2019	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/04/2020	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/02/2022	ND	0.8000		
Cadmium, total	ug/L	MW-33	08/29/2022	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/23/2023	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/25/2023	ND	0.8000		
Cadmium, total	ug/L	MW-33	03/05/2024	ND	0.8000		
Cadmium, total	ug/L	MW-33	09/30/2024	ND	0.8000		
Chromium, total	ug/L	MW-33	09/15/2014	ND	8.0000		
Chromium, total	ug/L	MW-33	03/06/2015	ND	8.0000		
Chromium, total	ug/L	MW-33	08/24/2015	ND	8.0000		
Chromium, total	ug/L	MW-33	03/01/2016	ND	8.0000		
Chromium, total	ug/L	MW-33	09/09/2016	ND	8.0000		
Chromium, total	ug/L	MW-33	03/22/2017	ND	8.0000		
Chromium, total	ug/L	MW-33	08/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-33	02/26/2018	ND	8.0000		
Chromium, total	ug/L	MW-33	08/29/2018	ND	8.0000		
Chromium, total	ug/L	MW-33	03/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-33	09/10/2019	ND	8.0000		
Chromium, total	ug/L	MW-33	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-33	09/04/2020	ND	8.0000		
Chromium, total	ug/L	MW-33	03/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-33	09/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-33	03/02/2022	ND	8.0000		
Chromium, total	ug/L	MW-33	08/29/2022	ND	8.0000		
Chromium, total	ug/L	MW-33	03/23/2023	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-33	09/25/2023	ND	8.0000		
Chromium, total	ug/L	MW-33	03/05/2024	ND	8.0000		
Chromium, total	ug/L	MW-33	09/30/2024	ND	8.0000		
Cobalt, total	ug/L	MW-33	09/15/2014	ND	0.8000		
Cobalt, total	ug/L	MW-33	03/06/2015	ND	0.8000		
Cobalt, total	ug/L	MW-33	08/24/2015	ND	0.8000		
Cobalt, total	ug/L	MW-33	03/01/2016	ND	0.8000		
Cobalt, total	ug/L	MW-33	09/09/2016	ND	0.8000		
Cobalt, total	ug/L	MW-33	03/22/2017	ND	0.8000		
Cobalt, total	ug/L	MW-33	08/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-33	02/26/2018	ND	0.8000		
Cobalt, total	ug/L	MW-33	08/29/2018	ND	0.8000		
Cobalt, total	ug/L	MW-33	03/18/2019	ND	0.8000		
Cobalt, total	ug/L	MW-33	09/10/2019	ND	0.8000		
Cobalt, total	ug/L	MW-33	03/25/2020	ND	0.8000		
Cobalt, total	ug/L	MW-33	09/04/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	03/02/2021		0.9000		
Cobalt, total	ug/L	MW-33	09/02/2021		2.6000		*
Cobalt, total	ug/L	MW-33	03/02/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	08/29/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	03/23/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	09/25/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	03/05/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-33	09/30/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Copper, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Copper, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Copper, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Copper, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Copper, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Copper, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Copper, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Copper, total	ug/L	MW-33	08/29/2018	ND	4.0000		
Copper, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Copper, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Copper, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Copper, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Copper, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Copper, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Copper, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Copper, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Copper, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Copper, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Copper, total	ug/L	MW-33	09/30/2024	ND	4.0000		
Lead, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Lead, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Lead, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Lead, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Lead, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Lead, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Lead, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Lead, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Lead, total	ug/L	MW-33	08/29/2018	ND	4.0000		
Lead, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Lead, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Lead, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Lead, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Lead, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Lead, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Lead, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Lead, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Lead, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Lead, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Lead, total	ug/L	MW-33	09/30/2024	ND	4.0000		
Nickel, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Nickel, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Nickel, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Nickel, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Nickel, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Nickel, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Nickel, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-33	02/26/2018	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	
Nickel, total	ug/L	MW-33	08/29/2018	ND	8.0000	4.0000	**
Nickel, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Nickel, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Nickel, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Nickel, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Nickel, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Nickel, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Nickel, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Nickel, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Nickel, total	ug/L	MW-33	09/30/2024	ND	4.0000		
Selenium, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Selenium, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Selenium, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Selenium, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Selenium, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Selenium, total	ug/L	MW-33	03/22/2017		4.7000		
Selenium, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Selenium, total	ug/L	MW-33	08/29/2018	ND	4.0000		
Selenium, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Selenium, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Selenium, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Selenium, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Selenium, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Selenium, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Selenium, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Selenium, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Selenium, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Selenium, total	ug/L	MW-33	09/30/2024	ND	4.0000		
Silver, total	ug/L	MW-33	09/15/2014	ND	4.0000		
Silver, total	ug/L	MW-33	03/06/2015	ND	4.0000		
Silver, total	ug/L	MW-33	08/24/2015	ND	4.0000		
Silver, total	ug/L	MW-33	03/01/2016	ND	4.0000		
Silver, total	ug/L	MW-33	09/09/2016	ND	4.0000		
Silver, total	ug/L	MW-33	03/22/2017	ND	4.0000		
Silver, total	ug/L	MW-33	08/24/2017	ND	4.0000		
Silver, total	ug/L	MW-33	02/26/2018	ND	4.0000		
Silver, total	ug/L	MW-33	08/29/2018	ND	8.0000	4.0000	**
Silver, total	ug/L	MW-33	03/18/2019	ND	4.0000		
Silver, total	ug/L	MW-33	09/10/2019	ND	4.0000		
Silver, total	ug/L	MW-33	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-33	09/04/2020	ND	4.0000		
Silver, total	ug/L	MW-33	03/02/2021	ND	4.0000		
Silver, total	ug/L	MW-33	09/02/2021	ND	4.0000		
Silver, total	ug/L	MW-33	03/02/2022	ND	4.0000		
Silver, total	ug/L	MW-33	08/29/2022	ND	4.0000		
Silver, total	ug/L	MW-33	03/23/2023	ND	4.0000		
Silver, total	ug/L	MW-33	09/25/2023	ND	4.0000		
Silver, total	ug/L	MW-33	03/05/2024	ND	4.0000		
Silver, total	ug/L	MW-33	09/30/2024	ND	4.0000		
Thallium, total	ug/L	MW-33	09/15/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	03/06/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	08/24/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	03/01/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	09/09/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	03/22/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	08/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	02/26/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	08/29/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-33	03/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-33	09/10/2019	ND	2.0000		
Thallium, total	ug/L	MW-33	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-33	09/04/2020	ND	2.0000		
Thallium, total	ug/L	MW-33	03/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-33	09/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-33	03/02/2022	ND	2.0000		
Thallium, total	ug/L	MW-33	08/29/2022	ND	2.0000		
Thallium, total	ug/L	MW-33	03/23/2023	ND	2.0000		
Thallium, total	ug/L	MW-33	09/25/2023	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	
Thallium, total	ug/L	MW-33	03/05/2024	ND	2.0000		
Thallium, total	ug/L	MW-33	09/30/2024	ND	2.0000		
Vanadium, total	ug/L	MW-33	09/15/2014	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/06/2015	ND	20.0000		
Vanadium, total	ug/L	MW-33	08/24/2015	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/01/2016	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/09/2016	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/22/2017	ND	20.0000		
Vanadium, total	ug/L	MW-33	08/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-33	02/26/2018	ND	20.0000		
Vanadium, total	ug/L	MW-33	08/29/2018	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/10/2019	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/04/2020	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/02/2022	ND	20.0000		
Vanadium, total	ug/L	MW-33	08/29/2022	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/23/2023	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/25/2023	ND	20.0000		
Vanadium, total	ug/L	MW-33	03/05/2024	ND	20.0000		
Vanadium, total	ug/L	MW-33	09/30/2024	ND	20.0000		
Zinc, total	ug/L	MW-33	09/15/2014		12.9000		
Zinc, total	ug/L	MW-33	03/06/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	08/24/2015		19.1000		
Zinc, total	ug/L	MW-33	03/01/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	09/09/2016		9.8000		
Zinc, total	ug/L	MW-33	03/22/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	08/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	02/26/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	08/29/2018		40.8000		
Zinc, total	ug/L	MW-33	03/18/2019		30.2000		
Zinc, total	ug/L	MW-33	09/10/2019	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-33	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-33	09/04/2020	ND	20.0000		
Zinc, total	ug/L	MW-33	03/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-33	09/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-33	03/02/2022	ND	20.0000		
Zinc, total	ug/L	MW-33	08/29/2022	ND	20.0000		
Zinc, total	ug/L	MW-33	03/23/2023	ND	20.0000		
Zinc, total	ug/L	MW-33	09/25/2023	ND	20.0000		
Zinc, total	ug/L	MW-33	03/05/2024	ND	20.0000		
Zinc, total	ug/L	MW-33	09/30/2024	ND	20.0000		
Antimony, total	ug/L	MW-37	09/15/2014	ND	2.0000		
Antimony, total	ug/L	MW-37	01/14/2015	ND	2.0000		
Antimony, total	ug/L	MW-37	03/06/2015	ND	2.0000		
Antimony, total	ug/L	MW-37	06/16/2015	ND	2.0000		
Antimony, total	ug/L	MW-37	08/24/2015	ND	2.0000		
Antimony, total	ug/L	MW-37	03/01/2016	ND	2.0000		
Antimony, total	ug/L	MW-37	09/09/2016	ND	2.0000		
Antimony, total	ug/L	MW-37	03/22/2017	ND	2.0000		
Antimony, total	ug/L	MW-37	08/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-37	02/26/2018	ND	2.0000		
Antimony, total	ug/L	MW-37	08/29/2018	ND	2.0000		
Antimony, total	ug/L	MW-37	03/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-37	09/10/2019	ND	2.0000		
Antimony, total	ug/L	MW-37	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-37	09/04/2020	ND	2.0000		
Antimony, total	ug/L	MW-37	03/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-37	09/02/2021	ND	2.0000		
Antimony, total	ug/L	MW-37	03/02/2022	ND	2.0000		
Antimony, total	ug/L	MW-37	08/29/2022	ND	2.0000		
Antimony, total	ug/L	MW-37	03/23/2023	ND	2.0000		
Antimony, total	ug/L	MW-37	09/25/2023	ND	2.0000		
Antimony, total	ug/L	MW-37	03/05/2024	ND	2.0000		
Antimony, total	ug/L	MW-37	09/30/2024	ND	2.0000		
Arsenic, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Arsenic, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Arsenic, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Arsenic, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/09/2016	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	
Arsenic, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Arsenic, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Arsenic, total	ug/L	MW-37	08/29/2018	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Arsenic, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Arsenic, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Arsenic, total	ug/L	MW-37	09/30/2024	ND	4.0000		
Barium, total	ug/L	MW-37	09/15/2014		95.3000		
Barium, total	ug/L	MW-37	01/14/2015		89.2000		
Barium, total	ug/L	MW-37	03/06/2015		82.1000		
Barium, total	ug/L	MW-37	06/16/2015		85.0000		
Barium, total	ug/L	MW-37	08/24/2015		69.1000		
Barium, total	ug/L	MW-37	03/01/2016		67.7000		
Barium, total	ug/L	MW-37	09/09/2016		77.6000		
Barium, total	ug/L	MW-37	03/22/2017		77.4000		
Barium, total	ug/L	MW-37	08/24/2017		82.3000		
Barium, total	ug/L	MW-37	02/26/2018		78.9000		
Barium, total	ug/L	MW-37	08/29/2018		59.2000		
Barium, total	ug/L	MW-37	03/18/2019		61.3000		
Barium, total	ug/L	MW-37	09/10/2019		60.1000		
Barium, total	ug/L	MW-37	03/25/2020		69.1000		
Barium, total	ug/L	MW-37	09/04/2020		58.6000		
Barium, total	ug/L	MW-37	03/02/2021		64.5000		
Barium, total	ug/L	MW-37	09/02/2021		61.8000		
Barium, total	ug/L	MW-37	03/02/2022		71.0000		
Barium, total	ug/L	MW-37	08/29/2022		46.2000		
Barium, total	ug/L	MW-37	03/23/2023		60.7000		
Barium, total	ug/L	MW-37	09/25/2023		66.9000		
Barium, total	ug/L	MW-37	03/05/2024		61.8000		
Barium, total	ug/L	MW-37	09/30/2024		43.7000		
Beryllium, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Beryllium, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Beryllium, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Beryllium, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Beryllium, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Beryllium, total	ug/L	MW-37	08/29/2018	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Beryllium, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Beryllium, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Beryllium, total	ug/L	MW-37	09/30/2024	ND	4.0000		
Cadmium, total	ug/L	MW-37	09/15/2014	ND	0.8000		
Cadmium, total	ug/L	MW-37	01/14/2015	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/06/2015	ND	0.8000		
Cadmium, total	ug/L	MW-37	06/16/2015	ND	0.8000		
Cadmium, total	ug/L	MW-37	08/24/2015	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/01/2016	ND	0.8000		
Cadmium, total	ug/L	MW-37	09/09/2016	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/22/2017	ND	0.8000		
Cadmium, total	ug/L	MW-37	08/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-37	02/26/2018	ND	0.8000		
Cadmium, total	ug/L	MW-37	08/29/2018	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/18/2019	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-37	09/10/2019	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-37	09/04/2020	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-37	09/02/2021	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/02/2022	ND	0.8000		
Cadmium, total	ug/L	MW-37	08/29/2022	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/23/2023	ND	0.8000		
Cadmium, total	ug/L	MW-37	09/25/2023	ND	0.8000		
Cadmium, total	ug/L	MW-37	03/05/2024	ND	0.8000		
Cadmium, total	ug/L	MW-37	09/30/2024	ND	0.8000		
Chromium, total	ug/L	MW-37	09/15/2014	ND	8.0000		
Chromium, total	ug/L	MW-37	01/14/2015	ND	8.0000		
Chromium, total	ug/L	MW-37	03/06/2015	ND	8.0000		
Chromium, total	ug/L	MW-37	06/16/2015	ND	8.0000		
Chromium, total	ug/L	MW-37	08/24/2015	ND	8.0000		
Chromium, total	ug/L	MW-37	03/01/2016	ND	8.0000		
Chromium, total	ug/L	MW-37	09/09/2016	ND	8.0000		
Chromium, total	ug/L	MW-37	03/22/2017	ND	8.0000		
Chromium, total	ug/L	MW-37	08/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-37	02/26/2018	ND	8.0000		
Chromium, total	ug/L	MW-37	08/29/2018	ND	8.0000		
Chromium, total	ug/L	MW-37	03/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-37	09/10/2019	ND	8.0000		
Chromium, total	ug/L	MW-37	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-37	09/04/2020	ND	8.0000		
Chromium, total	ug/L	MW-37	03/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-37	09/02/2021	ND	8.0000		
Chromium, total	ug/L	MW-37	03/02/2022	ND	8.0000		
Chromium, total	ug/L	MW-37	08/29/2022	ND	8.0000		
Chromium, total	ug/L	MW-37	03/23/2023	ND	8.0000		
Chromium, total	ug/L	MW-37	09/25/2023	ND	8.0000		
Chromium, total	ug/L	MW-37	03/05/2024	ND	8.0000		
Chromium, total	ug/L	MW-37	09/30/2024	ND	8.0000		
Cobalt, total	ug/L	MW-37	09/15/2014	ND	0.8000		
Cobalt, total	ug/L	MW-37	01/14/2015	ND	0.8000		
Cobalt, total	ug/L	MW-37	03/06/2015	ND	0.8000		
Cobalt, total	ug/L	MW-37	06/16/2015	ND	0.8000		
Cobalt, total	ug/L	MW-37	08/24/2015	ND	0.8000		
Cobalt, total	ug/L	MW-37	03/01/2016	ND	0.8000		
Cobalt, total	ug/L	MW-37	09/09/2016	ND	0.8000		
Cobalt, total	ug/L	MW-37	03/22/2017	ND	0.8000		
Cobalt, total	ug/L	MW-37	08/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-37	02/26/2018	ND	0.8000		
Cobalt, total	ug/L	MW-37	08/29/2018	ND	0.8000		
Cobalt, total	ug/L	MW-37	03/18/2019	ND	0.8000		
Cobalt, total	ug/L	MW-37	09/10/2019	ND	0.8000		
Cobalt, total	ug/L	MW-37	03/25/2020	ND	0.8000		
Cobalt, total	ug/L	MW-37	09/04/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	03/02/2021		1.0000		
Cobalt, total	ug/L	MW-37	09/02/2021		1.8000		
Cobalt, total	ug/L	MW-37	03/02/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	08/29/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	03/23/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	09/25/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	03/05/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-37	09/30/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Copper, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Copper, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Copper, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Copper, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Copper, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Copper, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Copper, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Copper, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Copper, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Copper, total	ug/L	MW-37	08/29/2018	ND	4.0000		
Copper, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Copper, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Copper, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Copper, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Copper, total	ug/L	MW-37	09/02/2021	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	
Copper, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Copper, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Copper, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Copper, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Copper, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Copper, total	ug/L	MW-37	09/30/2024	ND	4.0000		
Lead, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Lead, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Lead, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Lead, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Lead, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Lead, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Lead, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Lead, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Lead, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Lead, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Lead, total	ug/L	MW-37	08/29/2018	ND	4.0000		
Lead, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Lead, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Lead, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Lead, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Lead, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Lead, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Lead, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Lead, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Lead, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Lead, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Lead, total	ug/L	MW-37	09/30/2024	ND	4.0000		
Nickel, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Nickel, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Nickel, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Nickel, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Nickel, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Nickel, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Nickel, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Nickel, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Nickel, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Nickel, total	ug/L	MW-37	08/29/2018	ND	8.0000	4.0000	**
Nickel, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Nickel, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Nickel, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Nickel, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Nickel, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Nickel, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Nickel, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Nickel, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Nickel, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Nickel, total	ug/L	MW-37	09/30/2024	ND	4.0000		
Selenium, total	ug/L	MW-37	09/15/2014		9.3000		
Selenium, total	ug/L	MW-37	01/14/2015		6.0000		
Selenium, total	ug/L	MW-37	03/06/2015		6.7000		
Selenium, total	ug/L	MW-37	06/16/2015		6.3000		
Selenium, total	ug/L	MW-37	08/24/2015		5.5000		
Selenium, total	ug/L	MW-37	03/01/2016		4.4000		
Selenium, total	ug/L	MW-37	09/09/2016		4.7000		
Selenium, total	ug/L	MW-37	03/22/2017		4.1000		
Selenium, total	ug/L	MW-37	08/24/2017		7.1000		
Selenium, total	ug/L	MW-37	02/26/2018		5.8000		
Selenium, total	ug/L	MW-37	08/29/2018		11.6000		
Selenium, total	ug/L	MW-37	03/18/2019		14.6000		
Selenium, total	ug/L	MW-37	09/10/2019		20.2000		
Selenium, total	ug/L	MW-37	03/25/2020		17.6000		
Selenium, total	ug/L	MW-37	09/04/2020		14.7000		
Selenium, total	ug/L	MW-37	03/02/2021		18.9000		
Selenium, total	ug/L	MW-37	09/02/2021		17.4000		
Selenium, total	ug/L	MW-37	03/02/2022		20.0000		
Selenium, total	ug/L	MW-37	08/29/2022		23.1000		
Selenium, total	ug/L	MW-37	03/23/2023		16.4000		
Selenium, total	ug/L	MW-37	09/25/2023		14.5000		
Selenium, total	ug/L	MW-37	03/05/2024		16.5000		

* - 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-37	09/30/2024		10.2000		
Silver, total	ug/L	MW-37	09/15/2014	ND	4.0000		
Silver, total	ug/L	MW-37	01/14/2015	ND	4.0000		
Silver, total	ug/L	MW-37	03/06/2015	ND	4.0000		
Silver, total	ug/L	MW-37	06/16/2015	ND	4.0000		
Silver, total	ug/L	MW-37	08/24/2015	ND	4.0000		
Silver, total	ug/L	MW-37	03/01/2016	ND	4.0000		
Silver, total	ug/L	MW-37	09/09/2016	ND	4.0000		
Silver, total	ug/L	MW-37	03/22/2017	ND	4.0000		
Silver, total	ug/L	MW-37	08/24/2017	ND	4.0000		
Silver, total	ug/L	MW-37	02/26/2018	ND	4.0000		
Silver, total	ug/L	MW-37	08/29/2018	ND	8.0000	4.0000	**
Silver, total	ug/L	MW-37	03/18/2019	ND	4.0000		
Silver, total	ug/L	MW-37	09/10/2019	ND	4.0000		
Silver, total	ug/L	MW-37	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-37	09/04/2020	ND	4.0000		
Silver, total	ug/L	MW-37	03/02/2021	ND	4.0000		
Silver, total	ug/L	MW-37	09/02/2021	ND	4.0000		
Silver, total	ug/L	MW-37	03/02/2022	ND	4.0000		
Silver, total	ug/L	MW-37	08/29/2022	ND	4.0000		
Silver, total	ug/L	MW-37	03/23/2023	ND	4.0000		
Silver, total	ug/L	MW-37	09/25/2023	ND	4.0000		
Silver, total	ug/L	MW-37	03/05/2024	ND	4.0000		
Silver, total	ug/L	MW-37	09/30/2024	ND	4.0000		
Thallium, total	ug/L	MW-37	09/15/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	01/14/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	03/06/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	06/16/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	08/24/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	03/01/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	09/09/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	03/22/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	08/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	02/26/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	08/29/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-37	03/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-37	09/10/2019	ND	2.0000		
Thallium, total	ug/L	MW-37	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-37	09/04/2020	ND	2.0000		
Thallium, total	ug/L	MW-37	03/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-37	09/02/2021	ND	2.0000		
Thallium, total	ug/L	MW-37	03/02/2022	ND	2.0000		
Thallium, total	ug/L	MW-37	08/29/2022	ND	2.0000		
Thallium, total	ug/L	MW-37	03/23/2023	ND	2.0000		
Thallium, total	ug/L	MW-37	09/25/2023	ND	2.0000		
Thallium, total	ug/L	MW-37	03/05/2024	ND	2.0000		
Thallium, total	ug/L	MW-37	09/30/2024	ND	2.0000		
Vanadium, total	ug/L	MW-37	09/15/2014	ND	20.0000		
Vanadium, total	ug/L	MW-37	01/14/2015	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/06/2015	ND	20.0000		
Vanadium, total	ug/L	MW-37	06/16/2015	ND	20.0000		
Vanadium, total	ug/L	MW-37	08/24/2015	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/01/2016	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/09/2016	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/22/2017	ND	20.0000		
Vanadium, total	ug/L	MW-37	08/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-37	02/26/2018	ND	20.0000		
Vanadium, total	ug/L	MW-37	08/29/2018	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/10/2019	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/04/2020	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/02/2021	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/02/2022	ND	20.0000		
Vanadium, total	ug/L	MW-37	08/29/2022	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/23/2023	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/25/2023	ND	20.0000		
Vanadium, total	ug/L	MW-37	03/05/2024	ND	20.0000		
Vanadium, total	ug/L	MW-37	09/30/2024	ND	20.0000		
Zinc, total	ug/L	MW-37	09/15/2014		11.2000		
Zinc, total	ug/L	MW-37	01/14/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	03/06/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	06/16/2015	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-37	08/24/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	03/01/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	09/09/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	03/22/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	08/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	02/26/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	08/29/2018		28.7000		
Zinc, total	ug/L	MW-37	03/18/2019	ND	20.0000		
Zinc, total	ug/L	MW-37	09/10/2019	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-37	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-37	09/04/2020	ND	20.0000		
Zinc, total	ug/L	MW-37	03/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-37	09/02/2021	ND	20.0000		
Zinc, total	ug/L	MW-37	03/02/2022	ND	20.0000		
Zinc, total	ug/L	MW-37	08/29/2022	ND	20.0000		
Zinc, total	ug/L	MW-37	03/23/2023	ND	20.0000		
Zinc, total	ug/L	MW-37	09/25/2023	ND	20.0000		
Zinc, total	ug/L	MW-37	03/05/2024	ND	20.0000		
Zinc, total	ug/L	MW-37	09/30/2024	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-10	09/30/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-10	09/30/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-10	09/30/2024		533.0000	***	279.2306
Beryllium, total	ug/L	MW-10	09/30/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-10	09/30/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-10	09/30/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-10	09/30/2024		5.7000	***	1.8000
Copper, total	ug/L	MW-10	09/30/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-10	09/30/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-10	09/30/2024		13.5000	***	4.0000
Selenium, total	ug/L	MW-10	09/30/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-10	09/30/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-10	09/30/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-10	09/30/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-10	09/30/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-27	09/30/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-27	09/30/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-27	09/30/2024		200.0000		279.2306
Beryllium, total	ug/L	MW-27	09/30/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-27	09/30/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-27	09/30/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-27	09/30/2024	ND	0.4000		1.8000
Copper, total	ug/L	MW-27	09/30/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-27	09/30/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-27	09/30/2024	ND	4.0000		4.0000
Selenium, total	ug/L	MW-27	09/30/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-27	09/30/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-27	09/30/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-27	09/30/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-27	09/30/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-34	09/30/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-34	09/30/2024		4.2000	*	4.0000
Barium, total	ug/L	MW-34	09/30/2024		207.0000		279.2306
Beryllium, total	ug/L	MW-34	09/30/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-34	09/30/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-34	09/30/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-34	09/30/2024		5.4000	*	1.8000
Copper, total	ug/L	MW-34	09/30/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-34	09/30/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-34	09/30/2024		15.9000	***	4.0000
Selenium, total	ug/L	MW-34	09/30/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-34	09/30/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-34	09/30/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-34	09/30/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-34	09/30/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-35	09/30/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-35	09/30/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-35	09/30/2024		448.0000	***	279.2306
Beryllium, total	ug/L	MW-35	09/30/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-35	09/30/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-35	09/30/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-35	09/30/2024	ND	0.4000		1.8000
Copper, total	ug/L	MW-35	09/30/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-35	09/30/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-35	09/30/2024	ND	4.0000		4.0000
Selenium, total	ug/L	MW-35	09/30/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-35	09/30/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-35	09/30/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-35	09/30/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-35	09/30/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-36	09/30/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-36	09/30/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-36	09/30/2024		292.0000	***	279.2306
Beryllium, total	ug/L	MW-36	09/30/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-36	09/30/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-36	09/30/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-36	09/30/2024	ND	0.4000		1.8000
Copper, total	ug/L	MW-36	09/30/2024		12.0000	*	8.4000
Lead, total	ug/L	MW-36	09/30/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-36	09/30/2024	ND	4.0000		4.0000
Selenium, total	ug/L	MW-36	09/30/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-36	09/30/2024	ND	4.0000		4.0000

* - 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 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Thallium, total	ug/L	MW-36	09/30/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-36	09/30/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-36	09/30/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-3A	09/30/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-3A	09/30/2024		10.1000	*	4.0000
Barium, total	ug/L	MW-3A	09/30/2024		97.8000		279.2306
Beryllium, total	ug/L	MW-3A	09/30/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-3A	09/30/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-3A	09/30/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-3A	09/30/2024		1.5000		1.8000
Copper, total	ug/L	MW-3A	09/30/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-3A	09/30/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	09/30/2024	ND	4.0000	**	4.0000
Selenium, total	ug/L	MW-3A	09/30/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-3A	09/30/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-3A	09/30/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-3A	09/30/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-3A	09/30/2024	ND	20.0000		49.4000
Antimony, total	ug/L	MW-8	09/30/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-8	09/30/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW-8	09/30/2024		264.0000		279.2306
Beryllium, total	ug/L	MW-8	09/30/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-8	09/30/2024	ND	0.8000		0.8000
Chromium, total	ug/L	MW-8	09/30/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW-8	09/30/2024		3.1000	*	1.8000
Copper, total	ug/L	MW-8	09/30/2024	ND	4.0000		8.4000
Lead, total	ug/L	MW-8	09/30/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW-8	09/30/2024		13.3000	***	4.0000
Selenium, total	ug/L	MW-8	09/30/2024	ND	4.0000		23.1000
Silver, total	ug/L	MW-8	09/30/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-8	09/30/2024	ND	2.0000		2.0000
Vanadium, total	ug/L	MW-8	09/30/2024	ND	20.0000		20.0000
Zinc, total	ug/L	MW-8	09/30/2024	ND	20.0000		49.4000

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

Table 3

Detection Frequencies in Upgradient and Downgradient Wells

Constituent	Upgradient Detect	Upgradient N	Upgradient Proportion	Downgradient Detect	Downgradient N	Downgradient Proportion
Antimony, total	0	90	0.000	0	219	0.000
Arsenic, total	0	90	0.000	50	222	0.225
Barium, total	91	91	1.000	227	227	1.000
Beryllium, total	0	90	0.000	0	219	0.000
Cadmium, total	2	90	0.022	19	220	0.086
Chromium, total	0	90	0.000	13	219	0.059
Cobalt, total	10	89	0.112	111	222	0.500
Copper, total	1	90	0.011	55	219	0.251
Lead, total	0	90	0.000	26	219	0.119
Nickel, total	0	90	0.000	137	222	0.617
Selenium, total	34	90	0.378	4	219	0.018
Silver, total	0	90	0.000	0	219	0.000
Thallium, total	0	89	0.000	1	219	0.005
Vanadium, total	0	90	0.000	13	222	0.059
Zinc, total	14	89	0.157	84	219	0.384

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	0	90	0.000									nonpar
Arsenic, total	0	90	0.000									nonpar
Barium, total	91	91	1.000	1.271	0.841					2.326	normal	normal
Beryllium, total	0	90	0.000									nonpar
Cadmium, total	2	90	0.022									nonpar
Chromium, total	0	90	0.000									nonpar
Cobalt, total	10	89	0.112	0.003	0.974					2.326	normal	nonpar
Copper, total	1	90	0.011									nonpar
Lead, total	0	90	0.000									nonpar
Nickel, total	0	90	0.000									nonpar
Selenium, total	34	90	0.378	2.665	2.503					2.326	non-norm	nonpar
Silver, total	0	90	0.000									nonpar
Thallium, total	0	89	0.000									nonpar
Vanadium, total	0	90	0.000									nonpar
Zinc, total	14	89	0.157	0.126	0.525					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	0	90					2.0000	nonpar	***	0.99
Arsenic, total	ug/L	0	90					4.0000	nonpar	***	0.99
Barium, total	ug/L	91	91	141.3890	57.8810	0.0100	2.3815	279.2306	normal		
Beryllium, total	ug/L	0	90					4.0000	nonpar	***	0.99
Cadmium, total	ug/L	2	90					0.8000	nonpar	***	0.99
Chromium, total	ug/L	0	90					8.0000	nonpar	***	0.99
Cobalt, total	ug/L	10	89					1.8000	nonpar		0.99
Copper, total	ug/L	1	90					8.4000	nonpar		0.99
Lead, total	ug/L	0	90					4.0000	nonpar	***	0.99
Nickel, total	ug/L	0	90					4.0000	nonpar	***	0.99
Selenium, total	ug/L	34	90					23.1000	nonpar		0.99
Silver, total	ug/L	0	90					4.0000	nonpar	***	0.99
Thallium, total	ug/L	0	89					2.0000	nonpar	***	0.99
Vanadium, total	ug/L	0	90					20.0000	nonpar	***	0.99
Zinc, total	ug/L	14	89					49.4000	nonpar		0.99

Conf = confidence level for passing initial test or one verification resample at all downgradient wells for a single constituent (nonparametric test only).
* - Insufficient Data.
** - Calculated limit raised to Manual Reporting Limit.
*** - Nonparametric limit based on ND value.
For transformed data, mean and SD in transformed units and prediction limit in original units.
All sample sizes and statistics are based on outlier free data.
For nonparametric limits, median reporting limits are substituted for extreme reporting limit values.

Table 6

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Thallium, total	ug/L	MW-26	02/26/2018	10.0000	< 10.0000	09/15/2014-09/30/2024	23	0.5065
Cobalt, total	ug/L	MW-33	09/02/2021	2.6000		09/15/2014-09/30/2024	21	0.5263

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
Cobalt, total	ug/L	MW-10	03/25/2020		8.7000	*	1.8000
Cobalt, total	ug/L	MW-10	09/04/2020		10.0000	*	1.8000
Cobalt, total	ug/L	MW-10	03/02/2021		7.4000	*	1.8000
Cobalt, total	ug/L	MW-10	09/02/2021		10.0000	*	1.8000
Cobalt, total	ug/L	MW-10	03/02/2022		2.5000	*	1.8000
Cobalt, total	ug/L	MW-10	08/29/2022		5.5000	*	1.8000
Cobalt, total	ug/L	MW-10	03/23/2023		1.7000		1.8000
Cobalt, total	ug/L	MW-10	09/25/2023		7.1000	*	1.8000
Cobalt, total	ug/L	MW-10	03/05/2024		5.7000	*	1.8000
Cobalt, total	ug/L	MW-10	09/30/2024		5.7000	*	1.8000
Nickel, total	ug/L	MW-10	03/26/2008		61.0000	*	4.0000
Nickel, total	ug/L	MW-10	05/06/2008		36.0000	*	4.0000
Nickel, total	ug/L	MW-10	07/23/2008		17.0000	*	4.0000
Nickel, total	ug/L	MW-10	09/30/2008		24.7000	*	4.0000
Nickel, total	ug/L	MW-10	12/02/2008		26.7000	*	4.0000
Nickel, total	ug/L	MW-10	03/05/2009		26.8000	*	4.0000
Nickel, total	ug/L	MW-10	09/01/2009		39.0000	*	4.0000
Nickel, total	ug/L	MW-10	03/23/2010		19.6000	*	4.0000
Nickel, total	ug/L	MW-10	07/26/2010		21.8000	*	4.0000
Nickel, total	ug/L	MW-10	09/09/2010		20.9000	*	4.0000
Nickel, total	ug/L	MW-10	03/29/2011		35.2000	*	4.0000
Nickel, total	ug/L	MW-10	09/13/2011		18.2000	*	4.0000
Nickel, total	ug/L	MW-10	03/28/2012		21.1000	*	4.0000
Nickel, total	ug/L	MW-10	09/11/2012		18.8000	*	4.0000
Nickel, total	ug/L	MW-10	03/26/2013		24.9000	*	4.0000
Nickel, total	ug/L	MW-10	09/25/2013		23.3000	*	4.0000
Nickel, total	ug/L	MW-10	03/20/2014		27.4000	*	4.0000
Nickel, total	ug/L	MW-10	09/15/2014		15.2000	*	4.0000
Nickel, total	ug/L	MW-10	03/06/2015		17.3000	*	4.0000
Nickel, total	ug/L	MW-10	08/24/2015		16.3000	*	4.0000
Nickel, total	ug/L	MW-10	03/01/2016		24.9000	*	4.0000
Nickel, total	ug/L	MW-10	09/09/2016		17.6000	*	4.0000
Nickel, total	ug/L	MW-10	03/22/2017		15.1000	*	4.0000
Nickel, total	ug/L	MW-10	08/24/2017		12.6000	*	4.0000
Nickel, total	ug/L	MW-10	02/26/2018		13.1000	*	4.0000
Nickel, total	ug/L	MW-10	08/29/2018		16.3000	*	4.0000
Nickel, total	ug/L	MW-10	03/18/2019		8.6000	*	4.0000
Nickel, total	ug/L	MW-10	09/10/2019		9.2000	*	4.0000
Nickel, total	ug/L	MW-10	03/25/2020		14.4000	*	4.0000
Nickel, total	ug/L	MW-10	09/04/2020		15.8000	*	4.0000
Nickel, total	ug/L	MW-10	03/02/2021		10.6000	*	4.0000
Nickel, total	ug/L	MW-10	09/02/2021		12.6000	*	4.0000
Nickel, total	ug/L	MW-10	03/02/2022		13.0000	*	4.0000
Nickel, total	ug/L	MW-10	08/29/2022		12.8000	*	4.0000
Nickel, total	ug/L	MW-10	03/23/2023		8.3000	*	4.0000
Nickel, total	ug/L	MW-10	09/25/2023		15.4000	*	4.0000
Nickel, total	ug/L	MW-10	03/05/2024		11.1000	*	4.0000
Nickel, total	ug/L	MW-10	09/30/2024		13.5000	*	4.0000
Arsenic, total	ug/L	MW-34	03/29/2011	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	09/13/2011		8.9000	*	4.0000
Arsenic, total	ug/L	MW-34	03/28/2012		4.2000	*	4.0000
Arsenic, total	ug/L	MW-34	07/05/2012		8.8000	*	4.0000
Arsenic, total	ug/L	MW-34	09/11/2012	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	10/30/2012		8.2000	*	4.0000
Arsenic, total	ug/L	MW-34	03/26/2013	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	09/25/2013		4.7000	*	4.0000
Arsenic, total	ug/L	MW-34	03/20/2014	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	09/15/2014	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	03/06/2015	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	08/24/2015	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	03/01/2016	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	09/09/2016	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	03/22/2017	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	08/24/2017	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	11/15/2017	ND	2.0000		4.0000
Arsenic, total	ug/L	MW-34	02/26/2018	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	08/29/2018	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	03/18/2019	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	09/10/2019		4.4000	*	4.0000
Arsenic, total	ug/L	MW-34	03/25/2020	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	09/04/2020	ND	4.0000		4.0000

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Arsenic, total	ug/L	MW-34	03/02/2021	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	09/02/2021	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	03/02/2022	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	08/29/2022	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	03/23/2023	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	09/25/2023	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	03/05/2024	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-34	09/30/2024		4.2000	*	4.0000
Cobalt, total	ug/L	MW-34	03/29/2011	ND	4.0000		1.8000
Cobalt, total	ug/L	MW-34	09/13/2011		9.0000	*	1.8000
Cobalt, total	ug/L	MW-34	03/28/2012	ND	4.0000		1.8000
Cobalt, total	ug/L	MW-34	07/05/2012		5.3000	*	1.8000
Cobalt, total	ug/L	MW-34	09/11/2012		5.5000	*	1.8000
Cobalt, total	ug/L	MW-34	10/30/2012		6.1000	*	1.8000
Cobalt, total	ug/L	MW-34	03/26/2013	ND	4.0000		1.8000
Cobalt, total	ug/L	MW-34	09/25/2013		4.4000	*	1.8000
Cobalt, total	ug/L	MW-34	03/20/2014	ND	4.0000		1.8000
Cobalt, total	ug/L	MW-34	09/15/2014	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-34	03/06/2015	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-34	08/24/2015		2.1000	*	1.8000
Cobalt, total	ug/L	MW-34	03/01/2016		0.8000		1.8000
Cobalt, total	ug/L	MW-34	09/09/2016		0.8000		1.8000
Cobalt, total	ug/L	MW-34	03/22/2017	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-34	08/24/2017		3.2000	*	1.8000
Cobalt, total	ug/L	MW-34	11/15/2017	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-34	02/26/2018	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-34	08/29/2018	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-34	03/18/2019		1.9000	*	1.8000
Cobalt, total	ug/L	MW-34	09/10/2019		2.9000	*	1.8000
Cobalt, total	ug/L	MW-34	03/25/2020		2.0000	*	1.8000
Cobalt, total	ug/L	MW-34	09/04/2020		1.7000		1.8000
Cobalt, total	ug/L	MW-34	03/02/2021		2.3000	*	1.8000
Cobalt, total	ug/L	MW-34	09/02/2021		5.6000	*	1.8000
Cobalt, total	ug/L	MW-34	03/02/2022		0.5000		1.8000
Cobalt, total	ug/L	MW-34	08/29/2022		1.3000		1.8000
Cobalt, total	ug/L	MW-34	03/23/2023	ND	0.4000		1.8000
Cobalt, total	ug/L	MW-34	09/25/2023		1.6000		1.8000
Cobalt, total	ug/L	MW-34	03/05/2024		0.5000		1.8000
Cobalt, total	ug/L	MW-34	09/30/2024		5.4000	*	1.8000
Nickel, total	ug/L	MW-34	03/29/2011		22.1000	*	4.0000
Nickel, total	ug/L	MW-34	05/04/2011		21.0000	*	4.0000
Nickel, total	ug/L	MW-34	09/13/2011		35.7000	*	4.0000
Nickel, total	ug/L	MW-34	03/28/2012		14.2000	*	4.0000
Nickel, total	ug/L	MW-34	07/05/2012		20.2000	*	4.0000
Nickel, total	ug/L	MW-34	09/11/2012		19.4000	*	4.0000
Nickel, total	ug/L	MW-34	10/30/2012		24.0000	*	4.0000
Nickel, total	ug/L	MW-34	03/26/2013		9.4000	*	4.0000
Nickel, total	ug/L	MW-34	09/25/2013		10.7000	*	4.0000
Nickel, total	ug/L	MW-34	03/20/2014		4.4000	*	4.0000
Nickel, total	ug/L	MW-34	09/15/2014	ND	4.0000		4.0000
Nickel, total	ug/L	MW-34	03/06/2015		5.5000	*	4.0000
Nickel, total	ug/L	MW-34	08/24/2015		14.7000	*	4.0000
Nickel, total	ug/L	MW-34	03/01/2016		9.6000	*	4.0000
Nickel, total	ug/L	MW-34	09/09/2016		7.9000	*	4.0000
Nickel, total	ug/L	MW-34	03/22/2017		5.0000	*	4.0000
Nickel, total	ug/L	MW-34	08/24/2017		14.7000	*	4.0000
Nickel, total	ug/L	MW-34	02/26/2018		8.2000	*	4.0000
Nickel, total	ug/L	MW-34	08/29/2018		4.3000	*	4.0000
Nickel, total	ug/L	MW-34	03/18/2019		9.2000	*	4.0000
Nickel, total	ug/L	MW-34	09/10/2019		12.0000	*	4.0000
Nickel, total	ug/L	MW-34	03/25/2020		5.4000	*	4.0000
Nickel, total	ug/L	MW-34	09/04/2020		11.3000	*	4.0000
Nickel, total	ug/L	MW-34	03/02/2021		8.9000	*	4.0000
Nickel, total	ug/L	MW-34	09/02/2021		13.9000	*	4.0000
Nickel, total	ug/L	MW-34	03/02/2022	ND	4.0000		4.0000
Nickel, total	ug/L	MW-34	08/29/2022		9.0000	*	4.0000
Nickel, total	ug/L	MW-34	03/23/2023	ND	4.0000		4.0000
Nickel, total	ug/L	MW-34	09/25/2023		10.0000	*	4.0000
Nickel, total	ug/L	MW-34	03/05/2024		7.6000	*	4.0000
Nickel, total	ug/L	MW-34	09/30/2024		15.9000	*	4.0000
Barium, total	ug/L	MW-35	03/29/2011		363.0000	*	279.2306

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Barium, total	ug/L	MW-35	05/04/2011		267.0000		279.2306
Barium, total	ug/L	MW-35	09/13/2011		495.0000	*	279.2306
Barium, total	ug/L	MW-35	03/28/2012		757.0000	*	279.2306
Barium, total	ug/L	MW-35	07/05/2012		730.0000	*	279.2306
Barium, total	ug/L	MW-35	09/11/2012		864.0000	*	279.2306
Barium, total	ug/L	MW-35	10/30/2012		494.0000	*	279.2306
Barium, total	ug/L	MW-35	03/26/2013		697.0000	*	279.2306
Barium, total	ug/L	MW-35	09/25/2013		795.0000	*	279.2306
Barium, total	ug/L	MW-35	03/20/2014		772.0000	*	279.2306
Barium, total	ug/L	MW-35	09/15/2014		668.0000	*	279.2306
Barium, total	ug/L	MW-35	03/06/2015		740.0000	*	279.2306
Barium, total	ug/L	MW-35	08/24/2015		695.0000	*	279.2306
Barium, total	ug/L	MW-35	03/01/2016		676.0000	*	279.2306
Barium, total	ug/L	MW-35	09/09/2016		664.0000	*	279.2306
Barium, total	ug/L	MW-35	03/22/2017		629.0000	*	279.2306
Barium, total	ug/L	MW-35	08/24/2017		667.0000	*	279.2306
Barium, total	ug/L	MW-35	02/26/2018		637.0000	*	279.2306
Barium, total	ug/L	MW-35	08/29/2018		580.0000	*	279.2306
Barium, total	ug/L	MW-35	03/18/2019		1230.0000	*	279.2306
Barium, total	ug/L	MW-35	09/10/2019		387.0000	*	279.2306
Barium, total	ug/L	MW-35	03/25/2020		543.0000	*	279.2306
Barium, total	ug/L	MW-35	09/04/2020		268.0000		279.2306
Barium, total	ug/L	MW-35	03/02/2021		481.0000	*	279.2306
Barium, total	ug/L	MW-35	09/02/2021		248.0000		279.2306
Barium, total	ug/L	MW-35	03/02/2022		483.0000	*	279.2306
Barium, total	ug/L	MW-35	08/29/2022		372.0000	*	279.2306
Barium, total	ug/L	MW-35	03/23/2023		451.0000	*	279.2306
Barium, total	ug/L	MW-35	09/25/2023		378.0000	*	279.2306
Barium, total	ug/L	MW-35	03/05/2024		460.0000	*	279.2306
Barium, total	ug/L	MW-35	09/30/2024		448.0000	*	279.2306
Barium, total	ug/L	MW-36	05/11/2011		391.0000	*	279.2306
Barium, total	ug/L	MW-36	09/13/2011		513.0000	*	279.2306
Barium, total	ug/L	MW-36	03/28/2012		382.0000	*	279.2306
Barium, total	ug/L	MW-36	09/11/2012		282.0000	*	279.2306
Barium, total	ug/L	MW-36	03/26/2013		223.0000		279.2306
Barium, total	ug/L	MW-36	09/25/2013		299.0000	*	279.2306
Barium, total	ug/L	MW-36	03/20/2014		293.0000	*	279.2306
Barium, total	ug/L	MW-36	09/15/2014		302.0000	*	279.2306
Barium, total	ug/L	MW-36	03/06/2015		344.0000	*	279.2306
Barium, total	ug/L	MW-36	08/24/2015		322.0000	*	279.2306
Barium, total	ug/L	MW-36	03/01/2016		347.0000	*	279.2306
Barium, total	ug/L	MW-36	09/09/2016		345.0000	*	279.2306
Barium, total	ug/L	MW-36	01/26/2017		337.0000	*	279.2306
Barium, total	ug/L	MW-36	03/22/2017		327.0000	*	279.2306
Barium, total	ug/L	MW-36	08/24/2017		357.0000	*	279.2306
Barium, total	ug/L	MW-36	02/26/2018		341.0000	*	279.2306
Barium, total	ug/L	MW-36	08/29/2018		341.0000	*	279.2306
Barium, total	ug/L	MW-36	03/18/2019		348.0000	*	279.2306
Barium, total	ug/L	MW-36	09/10/2019		336.0000	*	279.2306
Barium, total	ug/L	MW-36	03/25/2020		346.0000	*	279.2306
Barium, total	ug/L	MW-36	09/04/2020		353.0000	*	279.2306
Barium, total	ug/L	MW-36	03/02/2021		331.0000	*	279.2306
Barium, total	ug/L	MW-36	09/02/2021		336.0000	*	279.2306
Barium, total	ug/L	MW-36	03/02/2022		309.0000	*	279.2306
Barium, total	ug/L	MW-36	08/29/2022		314.0000	*	279.2306
Barium, total	ug/L	MW-36	03/23/2023		301.0000	*	279.2306
Barium, total	ug/L	MW-36	09/25/2023		289.0000	*	279.2306
Barium, total	ug/L	MW-36	03/05/2024		315.0000	*	279.2306
Barium, total	ug/L	MW-36	09/30/2024		292.0000	*	279.2306
Copper, total	ug/L	MW-36	05/11/2011		18.7000	*	8.4000
Copper, total	ug/L	MW-36	09/13/2011		12.0000	*	8.4000
Copper, total	ug/L	MW-36	03/28/2012		7.9000		8.4000
Copper, total	ug/L	MW-36	09/11/2012		6.2000		8.4000
Copper, total	ug/L	MW-36	03/26/2013	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	09/25/2013	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	03/20/2014	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	09/15/2014	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	03/06/2015	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	08/24/2015	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	03/01/2016	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	09/09/2016	ND	4.0000		8.4000

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Copper, total	ug/L	MW-36	03/22/2017	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	08/24/2017	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	02/26/2018	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	08/29/2018	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	03/18/2019	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	09/10/2019	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	03/25/2020	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	09/04/2020	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	03/02/2021	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	09/02/2021	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	03/02/2022	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	08/29/2022	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	03/23/2023	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	09/25/2023	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	03/05/2024	ND	4.0000		8.4000
Copper, total	ug/L	MW-36	09/30/2024		12.0000	*	8.4000
Arsenic, total	ug/L	MW-3A	03/29/2011	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	09/13/2011	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	03/28/2012	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	07/05/2012	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	03/26/2013	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	09/25/2013		10.3000	*	4.0000
Arsenic, total	ug/L	MW-3A	04/09/2014	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	09/15/2014	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	03/06/2015	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	08/24/2015	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	03/01/2016	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	09/09/2016		6.1000	*	4.0000
Arsenic, total	ug/L	MW-3A	10/31/2016		4.7000	*	4.0000
Arsenic, total	ug/L	MW-3A	03/22/2017	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	08/24/2017		4.5000	*	4.0000
Arsenic, total	ug/L	MW-3A	11/15/2017		9.4000	*	4.0000
Arsenic, total	ug/L	MW-3A	02/26/2018	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	08/29/2018		5.6000	*	4.0000
Arsenic, total	ug/L	MW-3A	03/18/2019	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	09/10/2019	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	03/25/2020	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	09/04/2020	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	03/02/2021	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	09/02/2021		4.1000	*	4.0000
Arsenic, total	ug/L	MW-3A	03/02/2022	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	08/29/2022	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	03/23/2023	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	03/05/2024	ND	4.0000		4.0000
Arsenic, total	ug/L	MW-3A	09/30/2024		10.1000	*	4.0000
Nickel, total	ug/L	MW-3A	03/29/2011		8.3000	*	4.0000
Nickel, total	ug/L	MW-3A	09/13/2011		10.9000	*	4.0000
Nickel, total	ug/L	MW-3A	03/28/2012		7.5000	*	4.0000
Nickel, total	ug/L	MW-3A	07/05/2012		4.9000	*	4.0000
Nickel, total	ug/L	MW-3A	03/26/2013		4.5000	*	4.0000
Nickel, total	ug/L	MW-3A	09/25/2013		8.9000	*	4.0000
Nickel, total	ug/L	MW-3A	04/09/2014	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	09/15/2014	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/06/2015		5.0000	*	4.0000
Nickel, total	ug/L	MW-3A	08/24/2015		7.1000	*	4.0000
Nickel, total	ug/L	MW-3A	03/01/2016		7.9000	*	4.0000
Nickel, total	ug/L	MW-3A	09/09/2016	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/22/2017	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	08/24/2017	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	02/26/2018		4.7000	*	4.0000
Nickel, total	ug/L	MW-3A	08/29/2018	ND	8.0000		4.0000
Nickel, total	ug/L	MW-3A	03/18/2019		4.8000	*	4.0000
Nickel, total	ug/L	MW-3A	09/10/2019		4.3000	*	4.0000
Nickel, total	ug/L	MW-3A	03/25/2020		4.5000	*	4.0000
Nickel, total	ug/L	MW-3A	09/04/2020	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/02/2021	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	09/02/2021	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/02/2022	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	08/29/2022	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/23/2023	ND	4.0000		4.0000
Nickel, total	ug/L	MW-3A	03/05/2024		12.6000	*	4.0000

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Nickel, total	ug/L	MW-3A	09/30/2024	ND	4.0000		4.0000
Cobalt, total	ug/L	MW-8	03/26/2008	ND	10.0000		1.8000
Cobalt, total	ug/L	MW-8	05/06/2008	ND	10.0000		1.8000
Cobalt, total	ug/L	MW-8	07/23/2008		31.0000	*	1.8000
Cobalt, total	ug/L	MW-8	09/30/2008		9.9000	*	1.8000
Cobalt, total	ug/L	MW-8	12/02/2008		16.9000	*	1.8000
Cobalt, total	ug/L	MW-8	03/05/2009		12.7000	*	1.8000
Cobalt, total	ug/L	MW-8	09/01/2009		15.3000	*	1.8000
Cobalt, total	ug/L	MW-8	03/23/2010		11.8000	*	1.8000
Cobalt, total	ug/L	MW-8	09/09/2010		8.4000	*	1.8000
Cobalt, total	ug/L	MW-8	03/29/2011		10.3000	*	1.8000
Cobalt, total	ug/L	MW-8	09/13/2011		6.2000	*	1.8000
Cobalt, total	ug/L	MW-8	03/28/2012		4.4000	*	1.8000
Cobalt, total	ug/L	MW-8	09/11/2012		12.6000	*	1.8000
Cobalt, total	ug/L	MW-8	03/26/2013	ND	4.0000		1.8000
Cobalt, total	ug/L	MW-8	09/25/2013	ND	4.0000		1.8000
Cobalt, total	ug/L	MW-8	03/20/2014		17.3000	*	1.8000
Cobalt, total	ug/L	MW-8	09/15/2014	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-8	03/06/2015		0.8000		1.8000
Cobalt, total	ug/L	MW-8	08/24/2015		0.9000		1.8000
Cobalt, total	ug/L	MW-8	03/01/2016		1.2000		1.8000
Cobalt, total	ug/L	MW-8	09/09/2016		4.3000	*	1.8000
Cobalt, total	ug/L	MW-8	03/22/2017	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-8	08/24/2017	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-8	02/26/2018	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-8	08/29/2018		1.6000		1.8000
Cobalt, total	ug/L	MW-8	03/18/2019	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-8	09/10/2019		1.0000		1.8000
Cobalt, total	ug/L	MW-8	03/25/2020	ND	0.8000		1.8000
Cobalt, total	ug/L	MW-8	09/04/2020		0.5000		1.8000
Cobalt, total	ug/L	MW-8	03/02/2021		2.1000	*	1.8000
Cobalt, total	ug/L	MW-8	09/02/2021		1.4000		1.8000
Cobalt, total	ug/L	MW-8	03/02/2022		0.6000		1.8000
Cobalt, total	ug/L	MW-8	08/29/2022		2.1000	*	1.8000
Cobalt, total	ug/L	MW-8	03/23/2023	ND	0.4000		1.8000
Cobalt, total	ug/L	MW-8	09/25/2023		0.6000		1.8000
Cobalt, total	ug/L	MW-8	03/05/2024		0.6000		1.8000
Cobalt, total	ug/L	MW-8	09/30/2024		3.1000	*	1.8000
Nickel, total	ug/L	MW-8	03/26/2008		9.0000	*	4.0000
Nickel, total	ug/L	MW-8	05/06/2008		5.0000	*	4.0000
Nickel, total	ug/L	MW-8	07/23/2008		20.0000	*	4.0000
Nickel, total	ug/L	MW-8	09/30/2008		25.7000	*	4.0000
Nickel, total	ug/L	MW-8	12/02/2008		30.3000	*	4.0000
Nickel, total	ug/L	MW-8	03/05/2009		15.4000	*	4.0000
Nickel, total	ug/L	MW-8	09/01/2009		21.2000	*	4.0000
Nickel, total	ug/L	MW-8	03/23/2010		16.8000	*	4.0000
Nickel, total	ug/L	MW-8	09/09/2010		19.6000	*	4.0000
Nickel, total	ug/L	MW-8	03/29/2011		20.2000	*	4.0000
Nickel, total	ug/L	MW-8	09/13/2011		19.8000	*	4.0000
Nickel, total	ug/L	MW-8	03/28/2012		14.9000	*	4.0000
Barium, total	ug/L	MW-10	03/26/2008		234.0000		279.2306
Barium, total	ug/L	MW-10	05/06/2008		190.0000		279.2306
Barium, total	ug/L	MW-10	07/23/2008		179.0000		279.2306
Barium, total	ug/L	MW-10	09/30/2008		491.0000	*	279.2306
Barium, total	ug/L	MW-10	12/02/2008		579.0000	*	279.2306
Barium, total	ug/L	MW-10	03/05/2009		611.0000	*	279.2306
Barium, total	ug/L	MW-10	09/01/2009		405.0000	*	279.2306
Barium, total	ug/L	MW-10	03/23/2010		204.0000		279.2306
Barium, total	ug/L	MW-10	07/26/2010		382.0000	*	279.2306
Barium, total	ug/L	MW-10	09/09/2010		530.0000	*	279.2306
Barium, total	ug/L	MW-10	03/29/2011		499.0000	*	279.2306
Barium, total	ug/L	MW-10	09/13/2011		616.0000	*	279.2306
Barium, total	ug/L	MW-10	03/28/2012		341.0000	*	279.2306
Barium, total	ug/L	MW-10	09/11/2012		638.0000	*	279.2306
Barium, total	ug/L	MW-10	03/26/2013		454.0000	*	279.2306
Barium, total	ug/L	MW-10	09/25/2013		615.0000	*	279.2306
Barium, total	ug/L	MW-10	03/20/2014		606.0000	*	279.2306
Barium, total	ug/L	MW-10	09/15/2014		601.0000	*	279.2306
Barium, total	ug/L	MW-10	03/06/2015		547.0000	*	279.2306
Barium, total	ug/L	MW-10	08/24/2015		620.0000	*	279.2306
Barium, total	ug/L	MW-10	03/01/2016		405.0000	*	279.2306

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

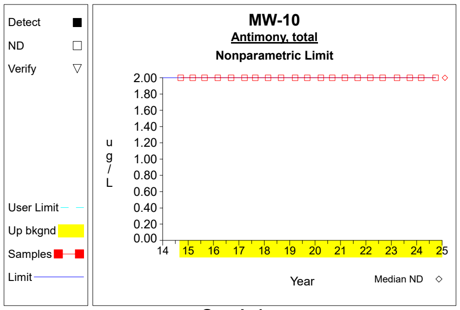
Table 8

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

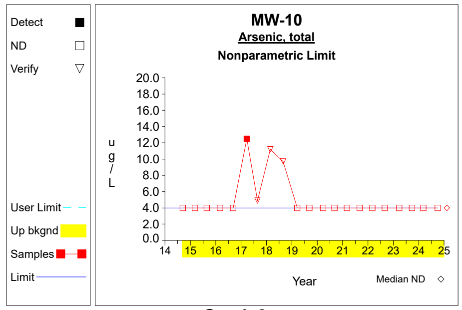
Constituent	Units	Well	Date		Result		Pred. Limit
Barium, total	ug/L	MW-10	09/09/2016		623.0000	*	279.2306
Barium, total	ug/L	MW-10	03/22/2017		676.0000	*	279.2306
Barium, total	ug/L	MW-10	08/24/2017		519.0000	*	279.2306
Barium, total	ug/L	MW-10	02/26/2018		589.0000	*	279.2306
Barium, total	ug/L	MW-10	08/29/2018		592.0000	*	279.2306
Barium, total	ug/L	MW-10	03/18/2019		213.0000		279.2306
Barium, total	ug/L	MW-10	09/10/2019		377.0000	*	279.2306
Barium, total	ug/L	MW-10	03/25/2020		412.0000	*	279.2306
Barium, total	ug/L	MW-10	09/04/2020		408.0000	*	279.2306
Barium, total	ug/L	MW-10	03/02/2021		413.0000	*	279.2306
Barium, total	ug/L	MW-10	09/02/2021		458.0000	*	279.2306
Barium, total	ug/L	MW-10	03/02/2022		394.0000	*	279.2306
Barium, total	ug/L	MW-10	08/29/2022		395.0000	*	279.2306
Barium, total	ug/L	MW-10	03/23/2023		354.0000	*	279.2306
Barium, total	ug/L	MW-10	09/25/2023		376.0000	*	279.2306
Barium, total	ug/L	MW-10	03/05/2024		440.0000	*	279.2306
Barium, total	ug/L	MW-10	09/30/2024		533.0000	*	279.2306
Cobalt, total	ug/L	MW-10	03/26/2008		20.0000	*	1.8000
Cobalt, total	ug/L	MW-10	05/06/2008		18.0000	*	1.8000
Cobalt, total	ug/L	MW-10	07/23/2008	ND	10.0000		1.8000
Cobalt, total	ug/L	MW-10	09/30/2008		11.5000	*	1.8000
Cobalt, total	ug/L	MW-10	12/02/2008		12.1000	*	1.8000
Cobalt, total	ug/L	MW-10	03/05/2009		10.4000	*	1.8000
Cobalt, total	ug/L	MW-10	09/01/2009		12.2000	*	1.8000
Cobalt, total	ug/L	MW-10	03/23/2010		6.1000	*	1.8000
Cobalt, total	ug/L	MW-10	07/26/2010		11.9000	*	1.8000
Cobalt, total	ug/L	MW-10	09/09/2010		9.2000	*	1.8000
Cobalt, total	ug/L	MW-10	03/29/2011		8.5000	*	1.8000
Cobalt, total	ug/L	MW-10	09/13/2011		5.2000	*	1.8000
Cobalt, total	ug/L	MW-10	03/28/2012		4.5000	*	1.8000
Cobalt, total	ug/L	MW-10	09/11/2012		7.7000	*	1.8000
Cobalt, total	ug/L	MW-10	03/26/2013		8.3000	*	1.8000
Cobalt, total	ug/L	MW-10	09/25/2013		9.3000	*	1.8000
Cobalt, total	ug/L	MW-10	03/20/2014		11.0000	*	1.8000
Cobalt, total	ug/L	MW-10	09/15/2014		8.1000	*	1.8000
Cobalt, total	ug/L	MW-10	03/06/2015		6.0000	*	1.8000
Cobalt, total	ug/L	MW-10	08/24/2015		7.0000	*	1.8000
Cobalt, total	ug/L	MW-10	03/01/2016		4.9000	*	1.8000
Cobalt, total	ug/L	MW-10	09/09/2016		7.6000	*	1.8000
Cobalt, total	ug/L	MW-10	03/22/2017		8.0000	*	1.8000
Cobalt, total	ug/L	MW-10	08/24/2017		6.7000	*	1.8000
Cobalt, total	ug/L	MW-10	02/26/2018		8.5000	*	1.8000
Cobalt, total	ug/L	MW-10	08/29/2018		9.2000	*	1.8000
Cobalt, total	ug/L	MW-10	03/18/2019		3.9000	*	1.8000
Cobalt, total	ug/L	MW-10	09/10/2019		7.2000	*	1.8000
Nickel, total	ug/L	MW-8	09/11/2012		23.3000	*	4.0000
Nickel, total	ug/L	MW-8	03/26/2013		10.2000	*	4.0000
Nickel, total	ug/L	MW-8	09/25/2013		10.6000	*	4.0000
Nickel, total	ug/L	MW-8	03/20/2014		30.3000	*	4.0000
Nickel, total	ug/L	MW-8	09/15/2014	ND	4.0000		4.0000
Nickel, total	ug/L	MW-8	03/06/2015		5.0000	*	4.0000
Nickel, total	ug/L	MW-8	08/24/2015		6.9000	*	4.0000
Nickel, total	ug/L	MW-8	03/01/2016		5.4000	*	4.0000
Nickel, total	ug/L	MW-8	09/09/2016		17.4000	*	4.0000
Nickel, total	ug/L	MW-8	10/31/2016		9.8000	*	4.0000
Nickel, total	ug/L	MW-8	03/22/2017		5.5000	*	4.0000
Nickel, total	ug/L	MW-8	08/24/2017		13.7000	*	4.0000
Nickel, total	ug/L	MW-8	02/26/2018		7.6000	*	4.0000
Nickel, total	ug/L	MW-8	08/29/2018		11.8000	*	4.0000
Nickel, total	ug/L	MW-8	03/18/2019		4.7000	*	4.0000
Nickel, total	ug/L	MW-8	09/10/2019		14.9000	*	4.0000
Nickel, total	ug/L	MW-8	03/25/2020	ND	4.0000		4.0000
Nickel, total	ug/L	MW-8	09/04/2020		9.2000	*	4.0000
Nickel, total	ug/L	MW-8	03/02/2021		6.0000	*	4.0000
Nickel, total	ug/L	MW-8	09/02/2021		13.2000	*	4.0000
Nickel, total	ug/L	MW-8	03/02/2022		4.2000	*	4.0000
Nickel, total	ug/L	MW-8	08/29/2022		13.5000	*	4.0000
Nickel, total	ug/L	MW-8	03/23/2023	ND	4.0000		4.0000
Nickel, total	ug/L	MW-8	09/25/2023		15.2000	*	4.0000
Nickel, total	ug/L	MW-8	03/05/2024		5.5000	*	4.0000
Nickel, total	ug/L	MW-8	09/30/2024		13.3000	*	4.0000

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

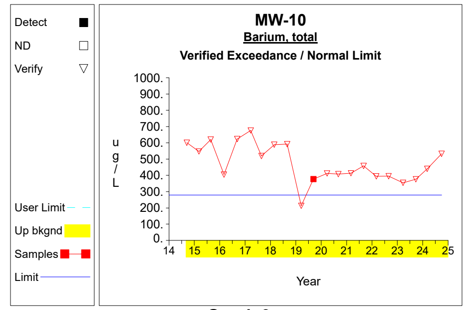
Up vs. Down Prediction Limits



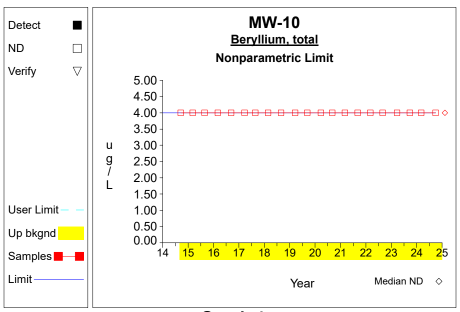
Graph 1



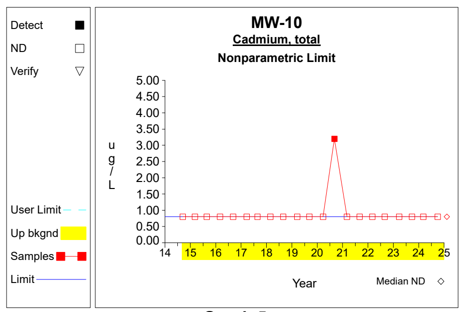
Graph 2



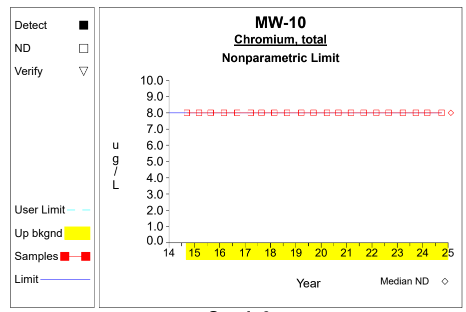
Graph 3



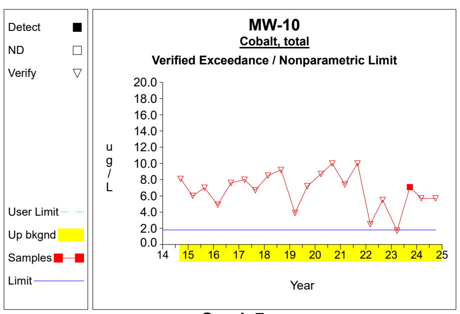
Graph 4



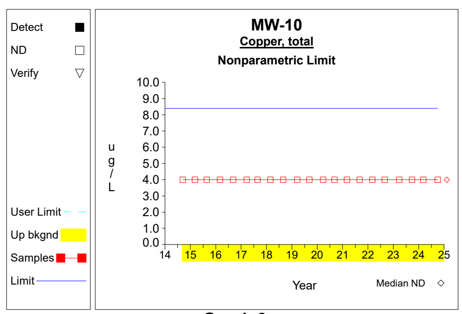
Graph 5



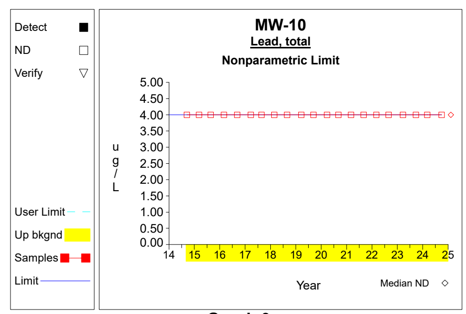
Graph 6



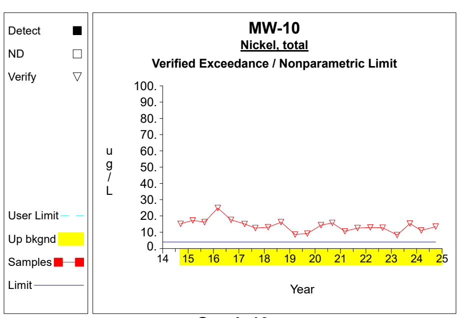
Graph 7



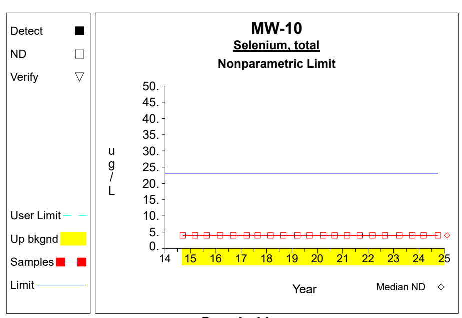
Graph 8



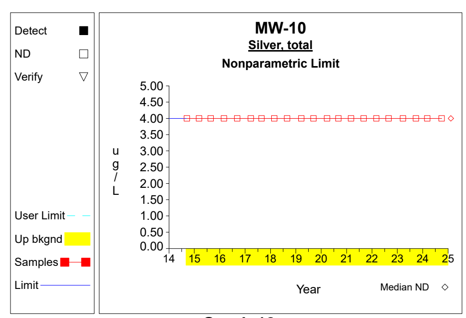
Graph 9



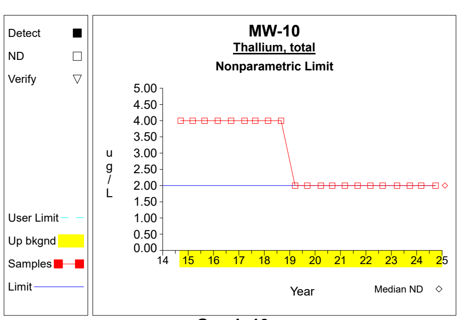
Graph 10



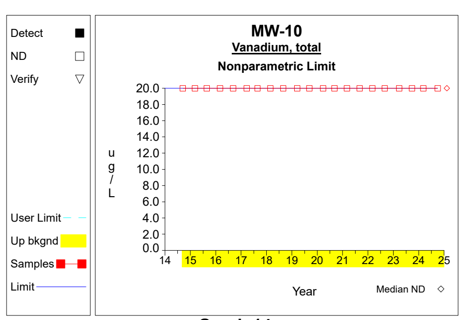
Graph 11



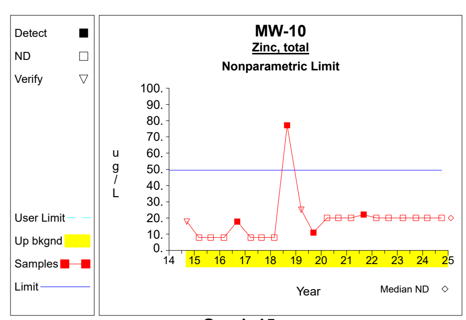
Graph 12



Graph 13

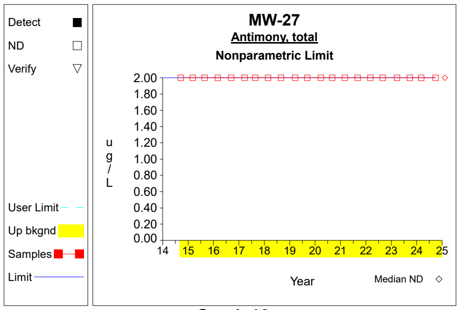


Graph 14

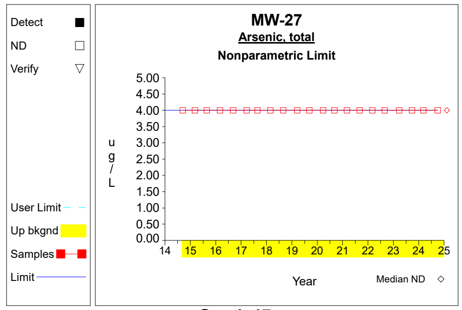


Graph 15

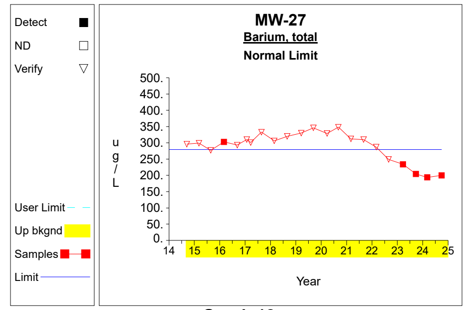
Up vs. Down Prediction Limits



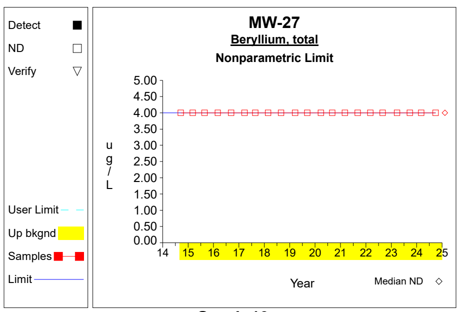
Graph 16



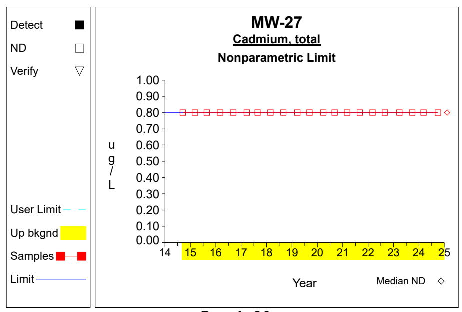
Graph 17



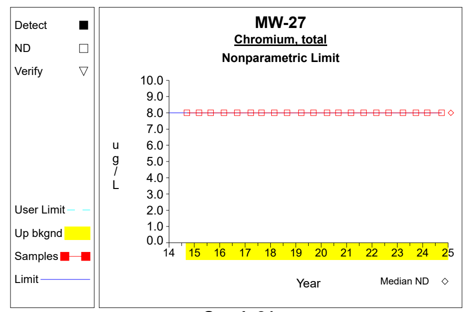
Graph 18



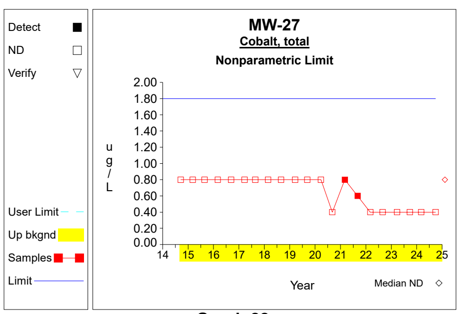
Graph 19



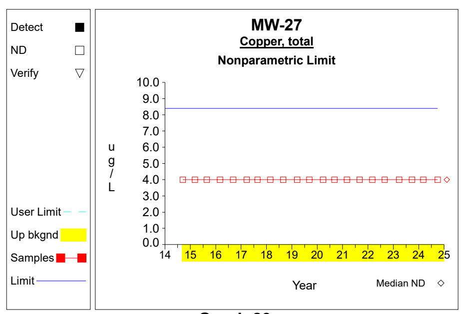
Graph 20



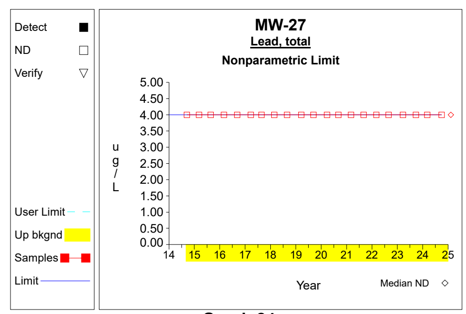
Graph 21



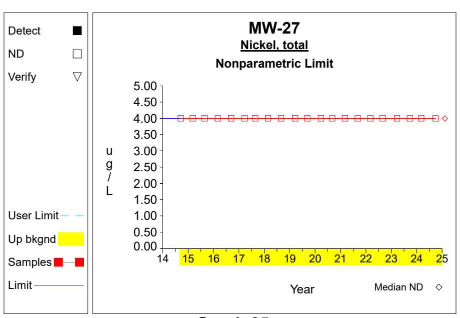
Graph 22



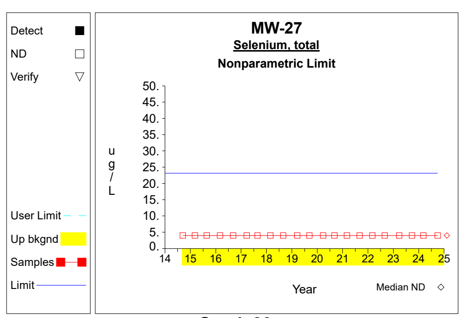
Graph 23



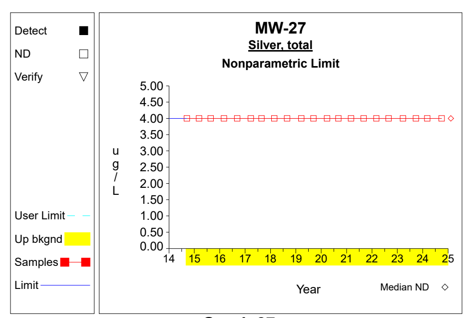
Graph 24



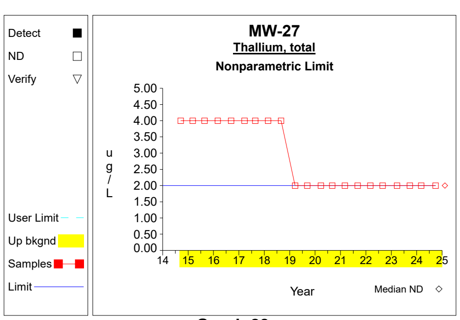
Graph 25



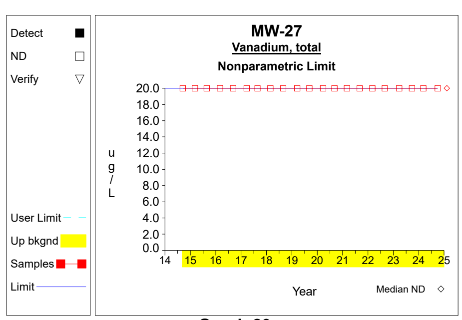
Graph 26



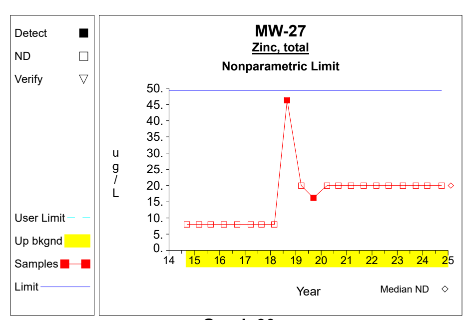
Graph 27



Graph 28

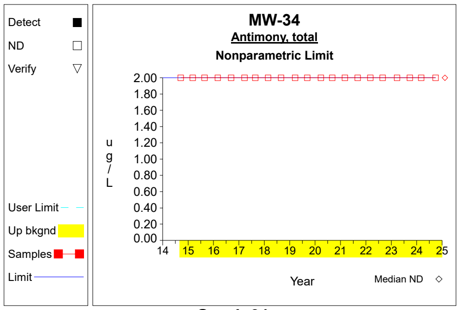


Graph 29

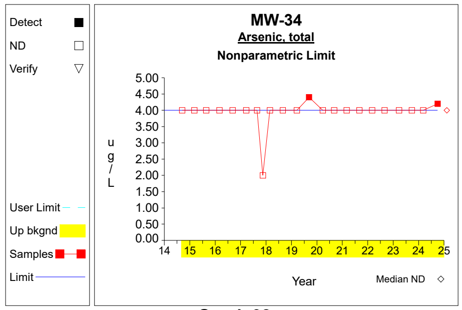


Graph 30

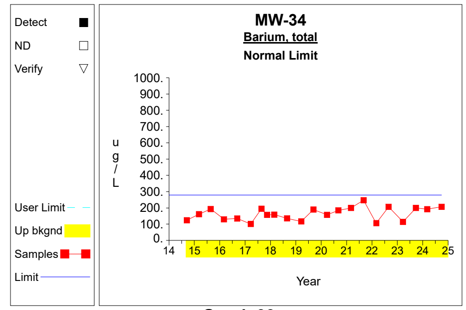
Up vs. Down Prediction Limits



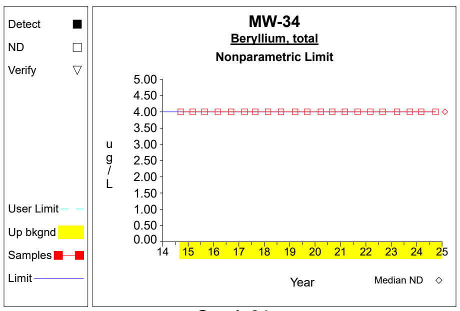
Graph 31



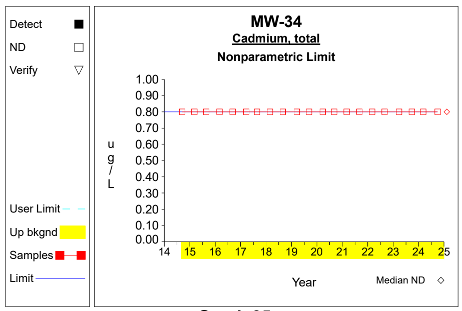
Graph 32



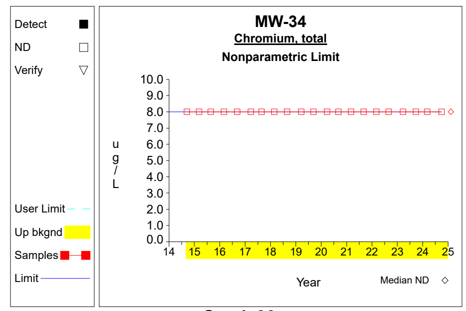
Graph 33



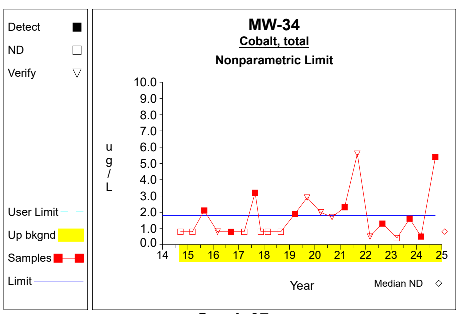
Graph 34



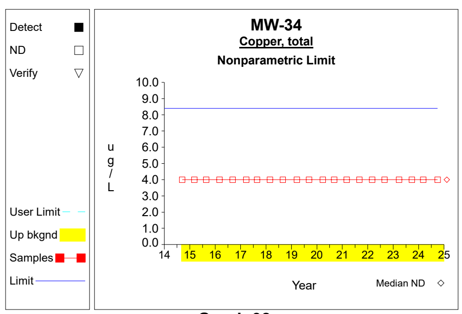
Graph 35



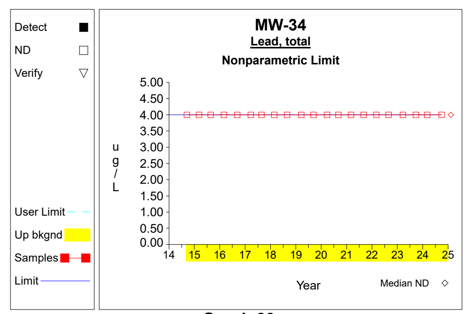
Graph 36



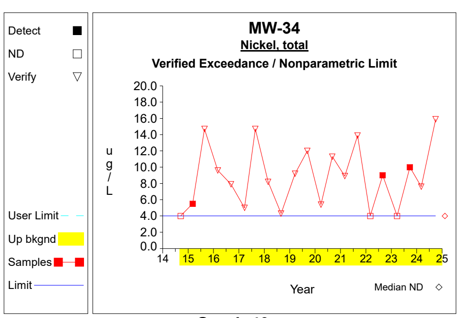
Graph 37



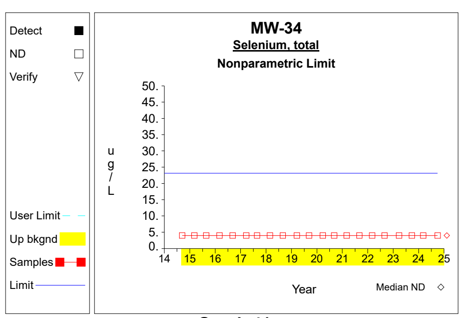
Graph 38



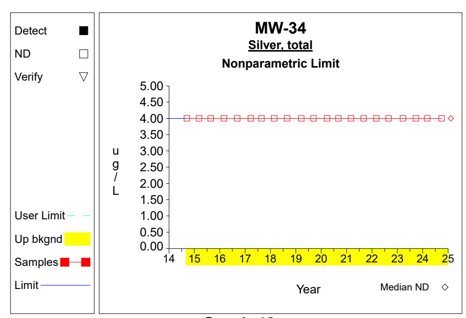
Graph 39



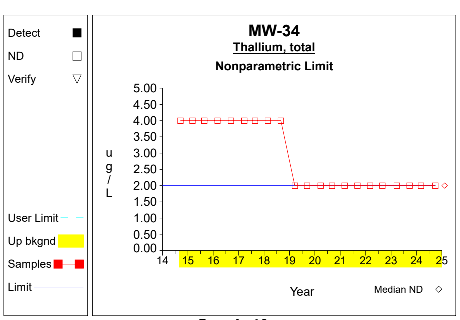
Graph 40



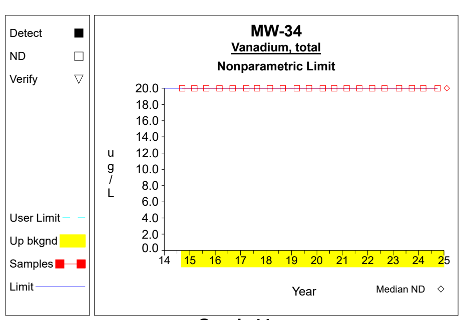
Graph 41



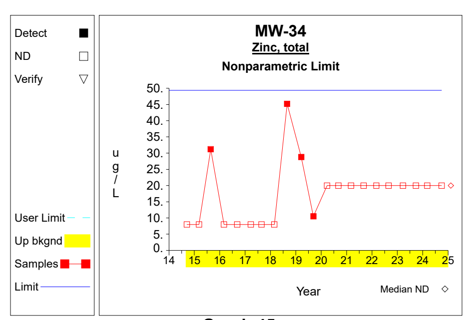
Graph 42



Graph 43



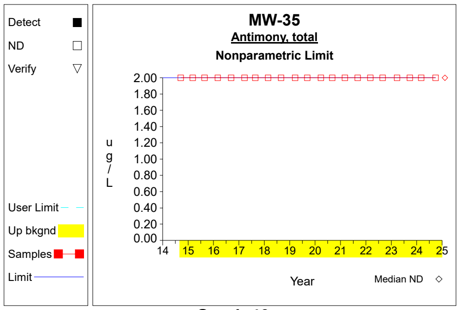
Graph 44



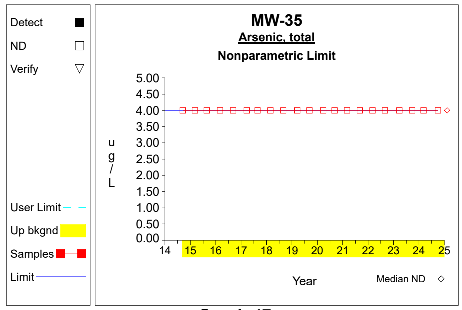
Graph 45

Tama County [GW] October 2024

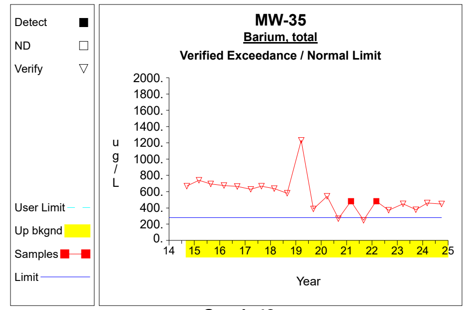
Up vs. Down Prediction Limits



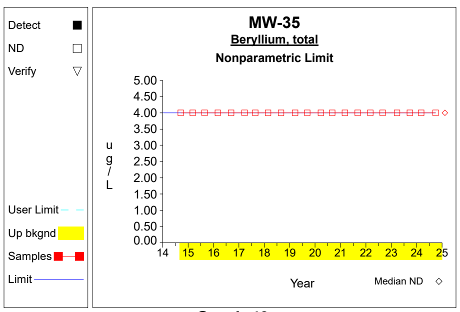
Graph 46



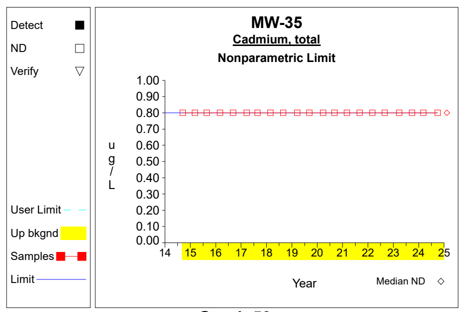
Graph 47



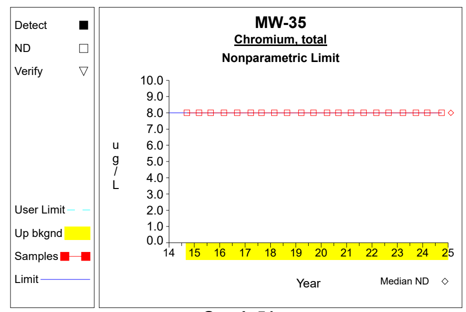
Graph 48



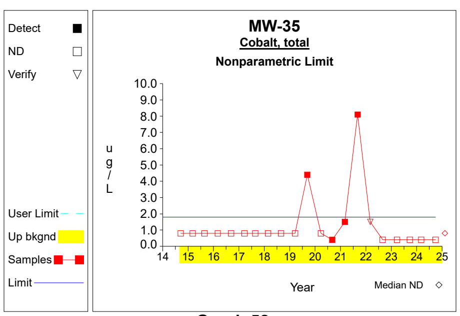
Graph 49



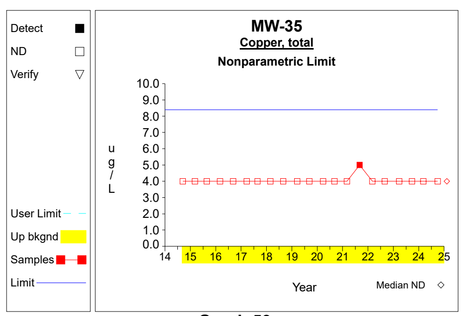
Graph 50



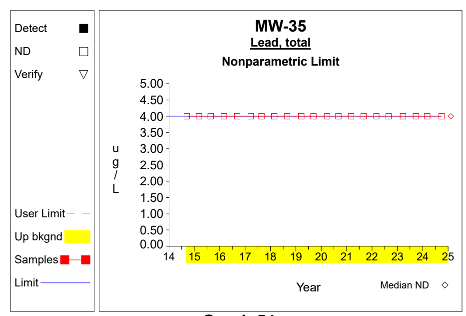
Graph 51



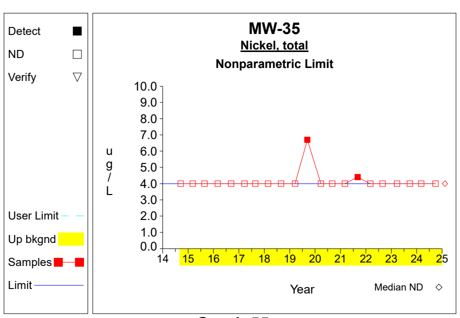
Graph 52



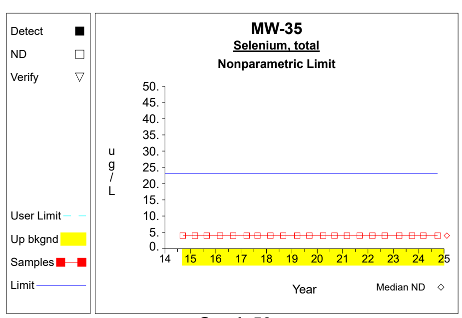
Graph 53



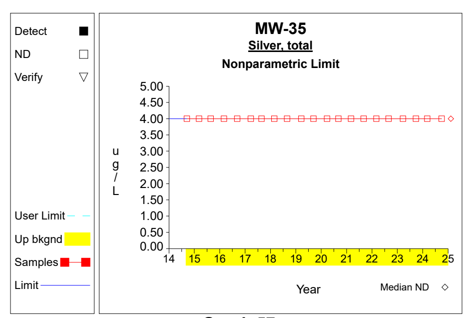
Graph 54



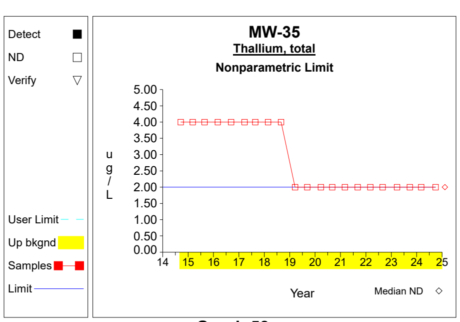
Graph 55



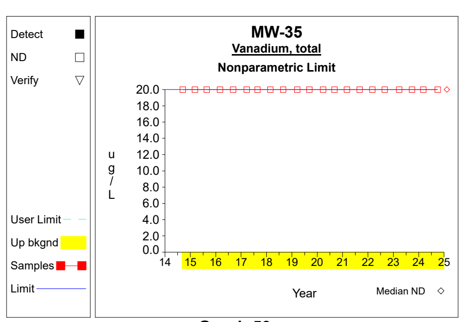
Graph 56



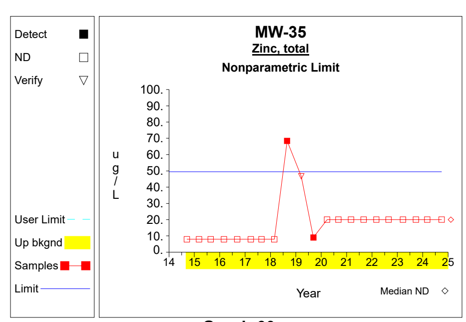
Graph 57



Graph 58



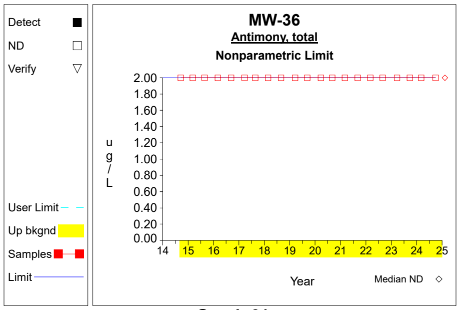
Graph 59



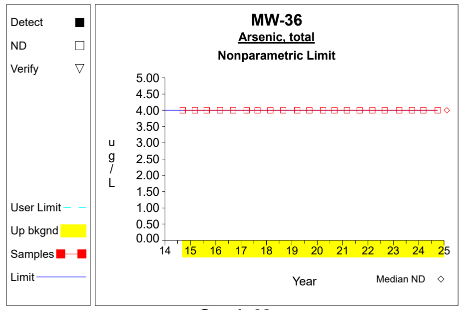
Graph 60

Prepared by: Otter Creek Environmental

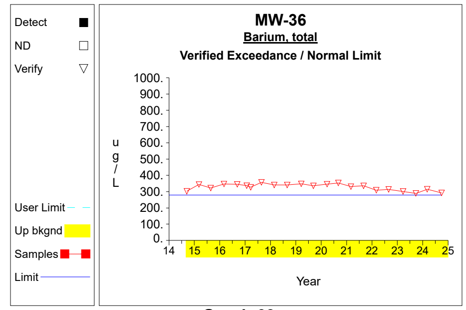
Up vs. Down Prediction Limits



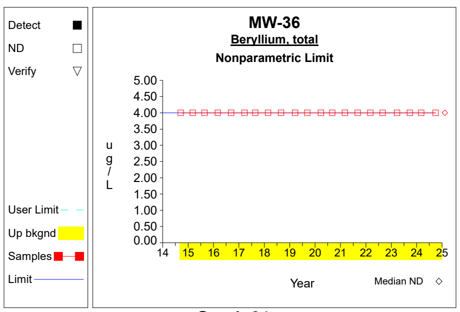
Graph 61



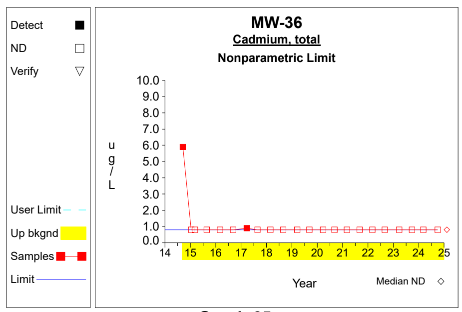
Graph 62



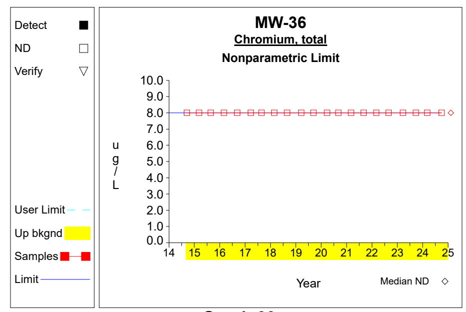
Graph 63



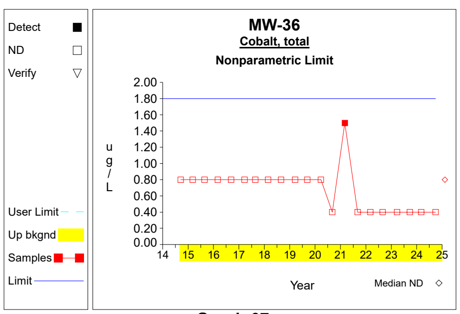
Graph 64



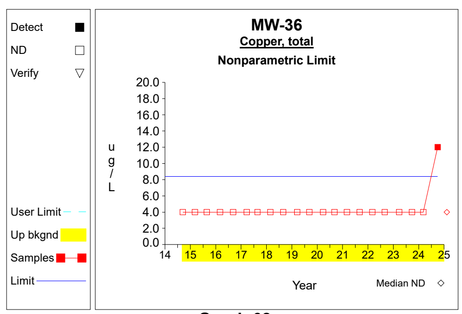
Graph 65



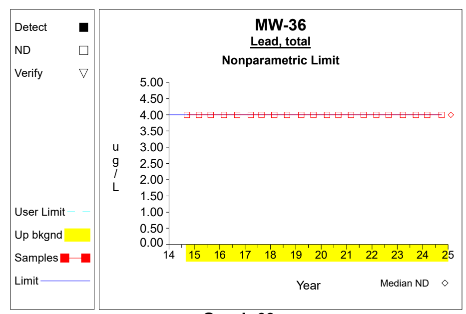
Graph 66



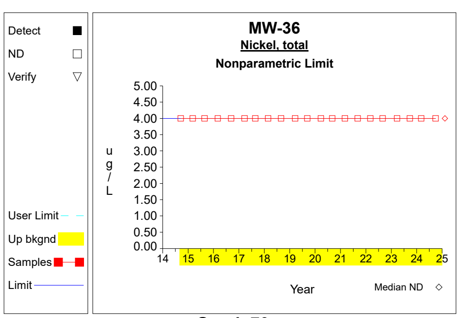
Graph 67



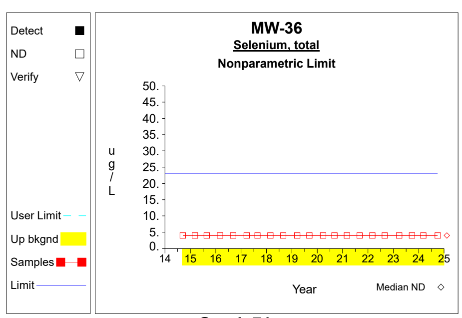
Graph 68



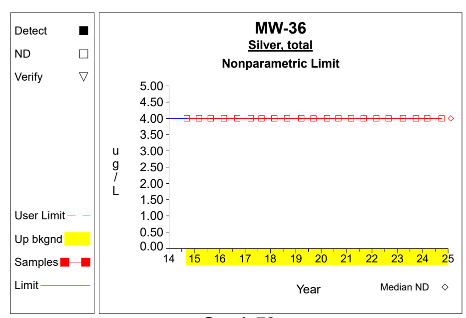
Graph 69



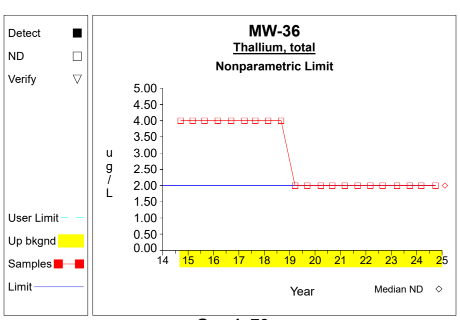
Graph 70



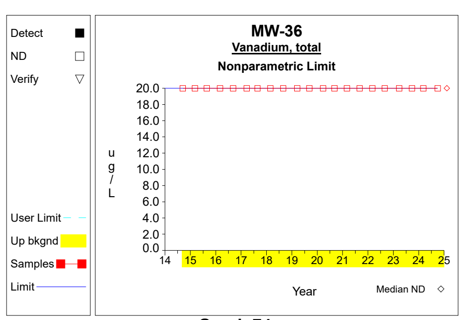
Graph 71



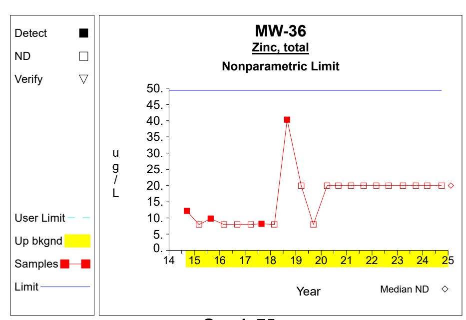
Graph 72



Graph 73

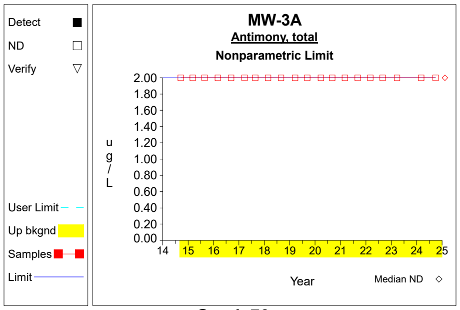


Graph 74

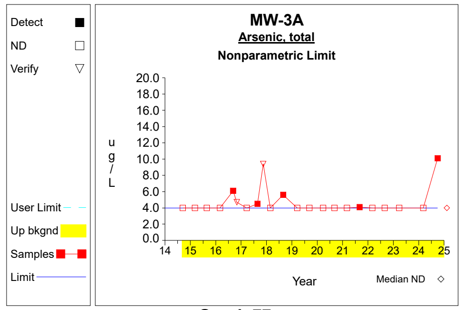


Graph 75

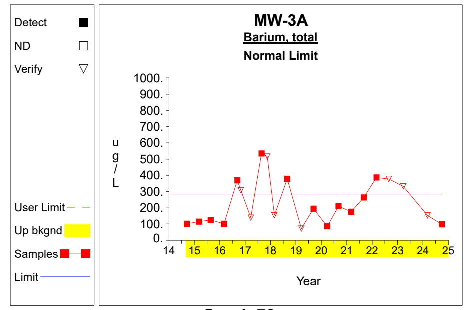
Up vs. Down Prediction Limits



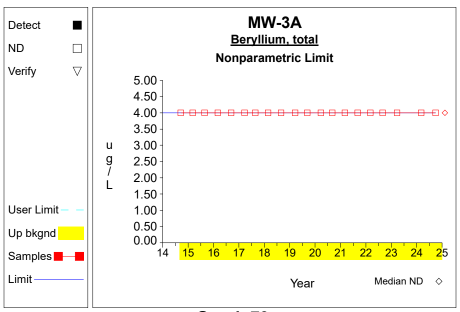
Graph 76



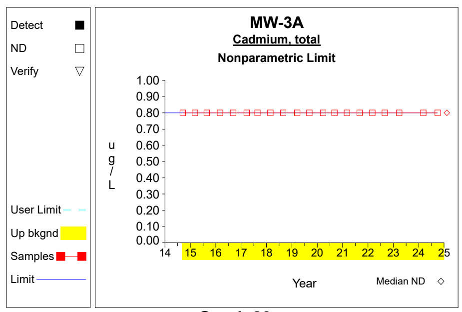
Graph 77



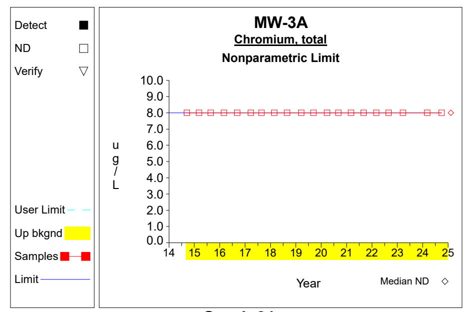
Graph 78



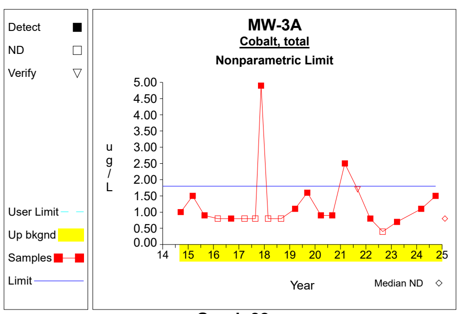
Graph 79



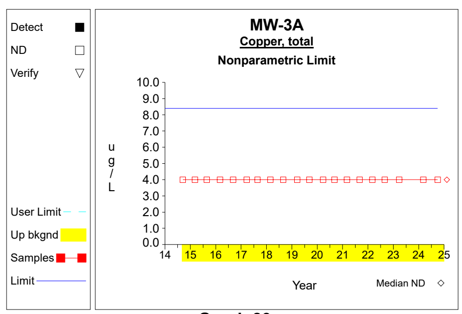
Graph 80



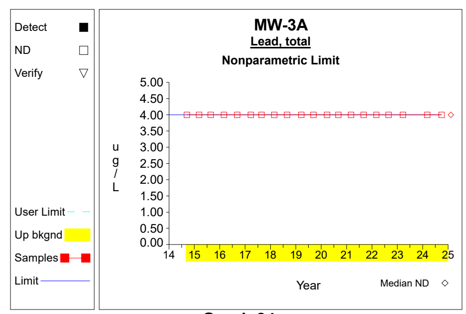
Graph 81



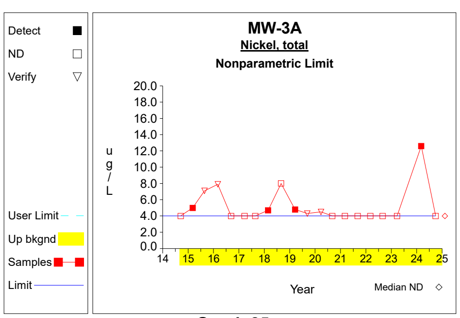
Graph 82



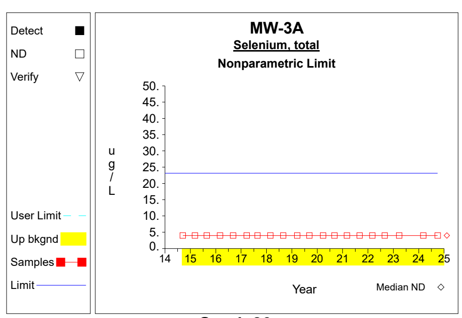
Graph 83



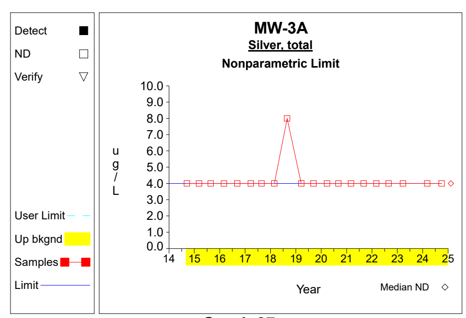
Graph 84



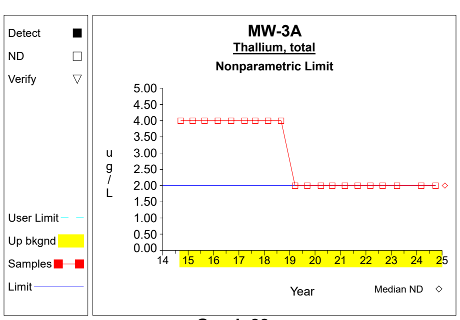
Graph 85



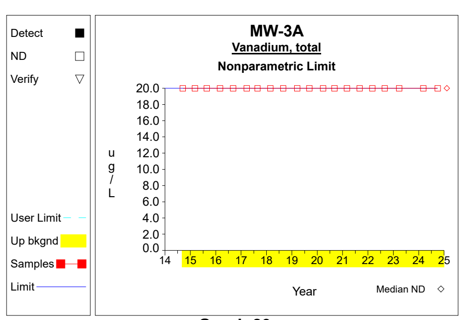
Graph 86



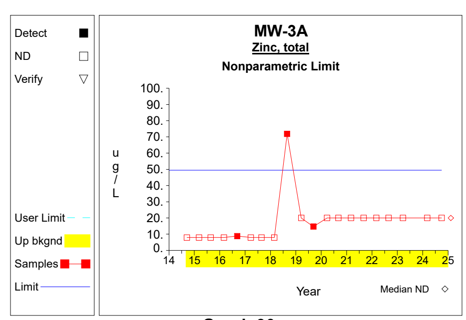
Graph 87



Graph 88



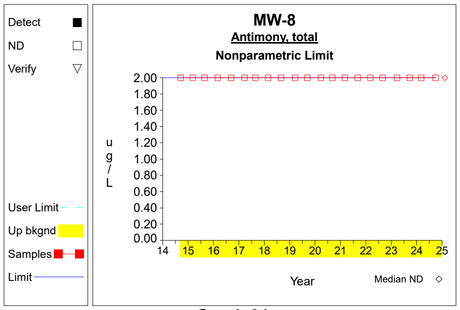
Graph 89



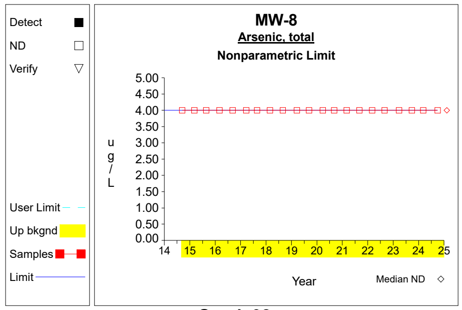
Graph 90

Tama County [GW] October 2024

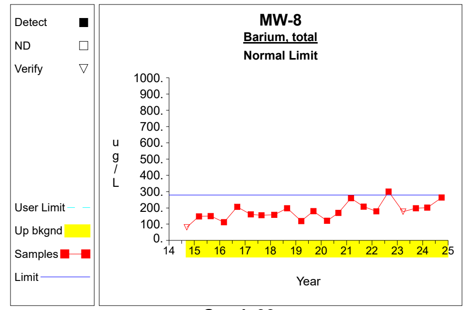
Up vs. Down Prediction Limits



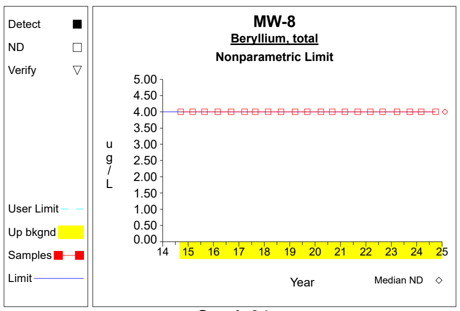
Graph 91



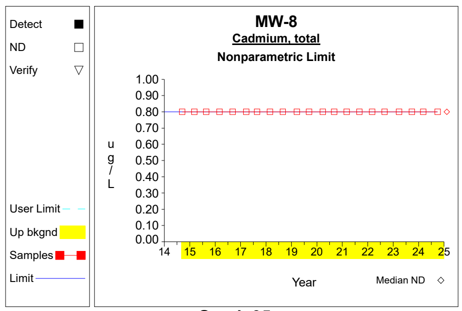
Graph 92



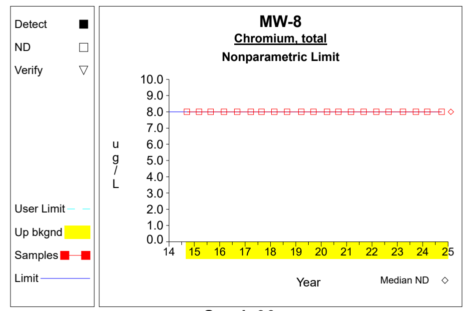
Graph 93



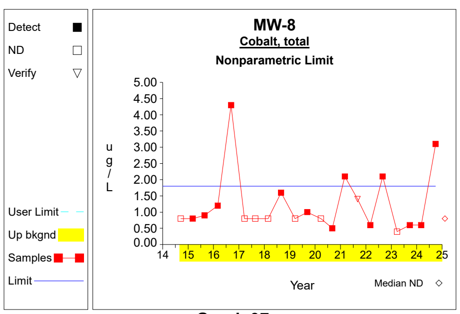
Graph 94



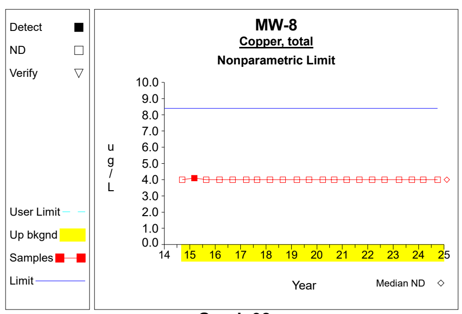
Graph 95



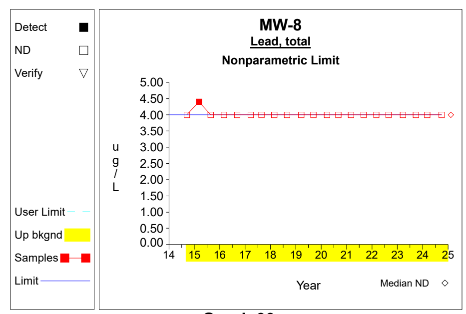
Graph 96



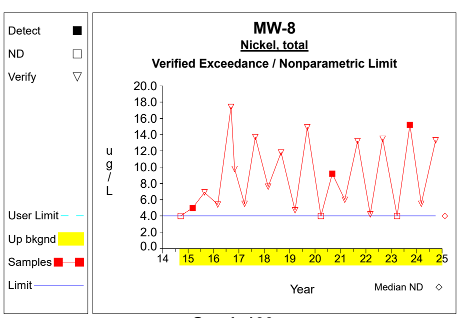
Graph 97



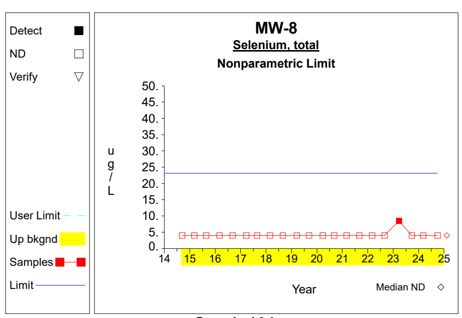
Graph 98



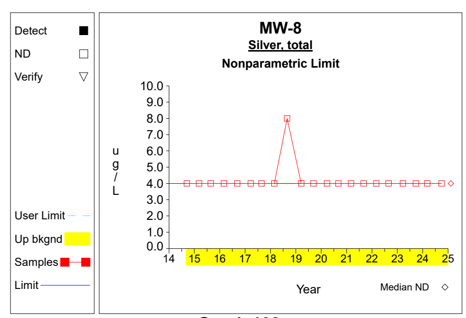
Graph 99



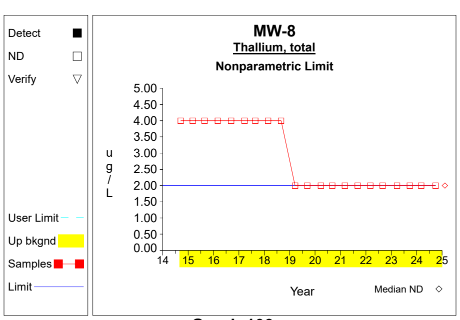
Graph 100



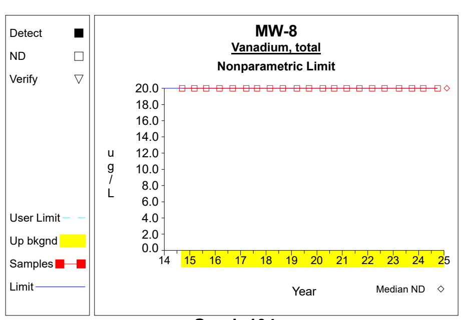
Graph 101



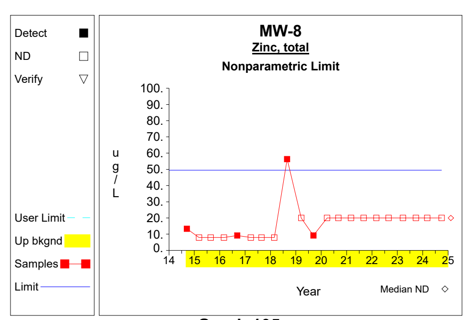
Graph 102



Graph 103



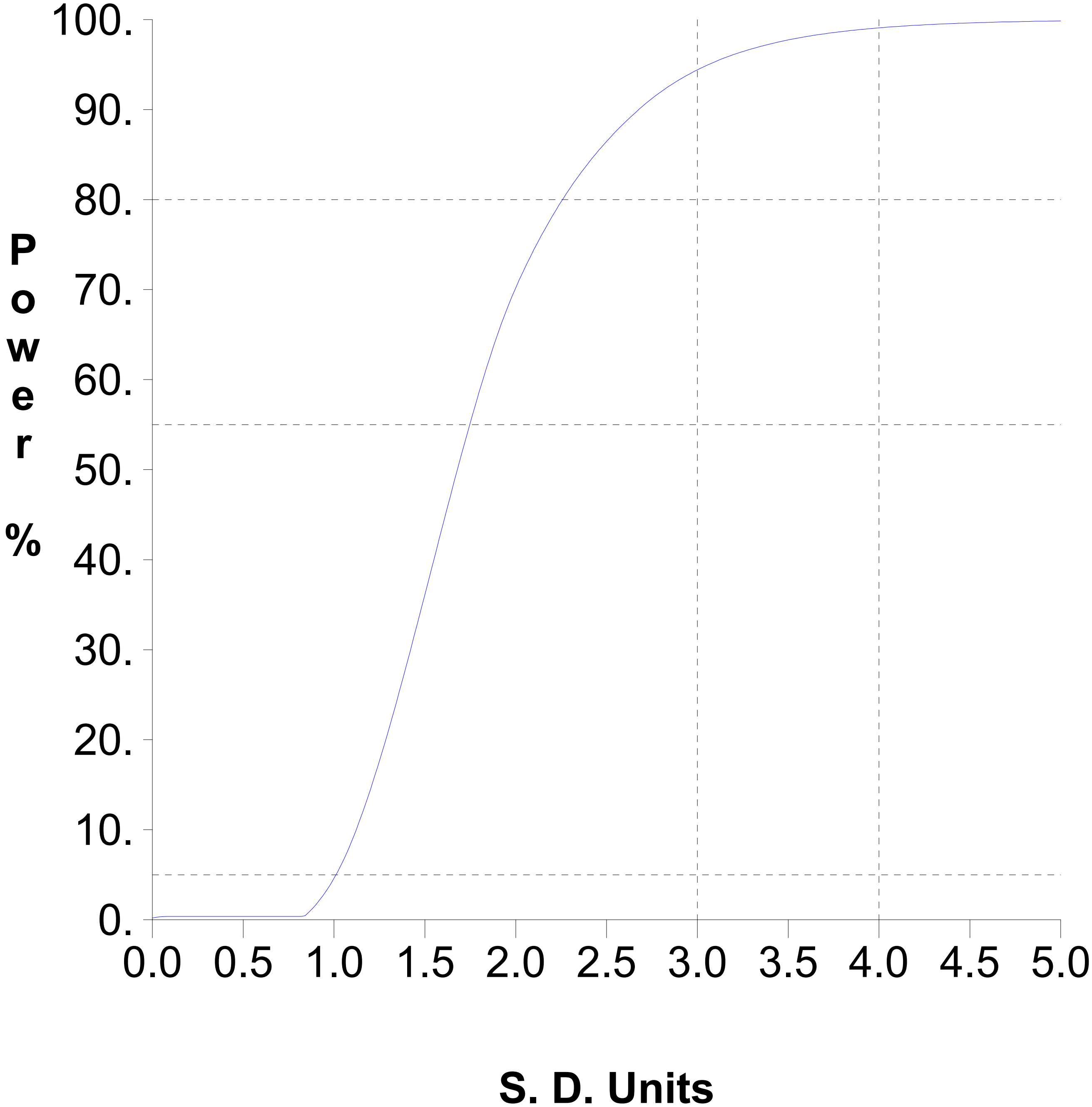
Graph 104



Graph 105

Prepared by: Otter Creek Environmental

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

Step	Equation	Description
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
Arsenic, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
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
Barium, total (ug/L)
Normal Prediction Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{12866.4} / \mathbf{91}$ $= \mathbf{141.389}$	Compute upgradient mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{2.12}\times\mathbf{10^6} - \mathbf{1.66}\times\mathbf{10^8}/\mathbf{91}) / (\mathbf{91}-1))^{½}$ $= \mathbf{57.881}$	Compute upgradient sd.
3	alpha = $\min[(1-.95^{1/\mathbf{K}})^{½}, .01]$ $= \min[(1-.95^{1/\mathbf{105}})^{½}, .01]$ $= \mathbf{0.01}$	Adjusted per comparison false positive rate. Pass initial or 1 resample.
4	$PL = \bar{\mathbf{X}} + \mathbf{tS}(1+1/\mathbf{N})^{½}$ $= \mathbf{141.389}$ $+ (\mathbf{2.368}*\mathbf{57.881})(1+1/\mathbf{91})^{½}$ $= \mathbf{279.231}$	One-sided normal 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

Step	Equation	Description
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

Step	Equation	Description
1	PL = max(X) = **0.8**	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
Chromium, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	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
Cobalt, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.8**	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
Copper, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **8.4**	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

Step	Equation	Description
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
Nickel, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
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
Selenium, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **23.1**	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
Silver, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
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

Step	Equation	Description
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

Step	Equation	Description
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

Step	Equation	Description
1	PL = max(X) = **49.4**	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

Assessment Statistics for Trace Metals

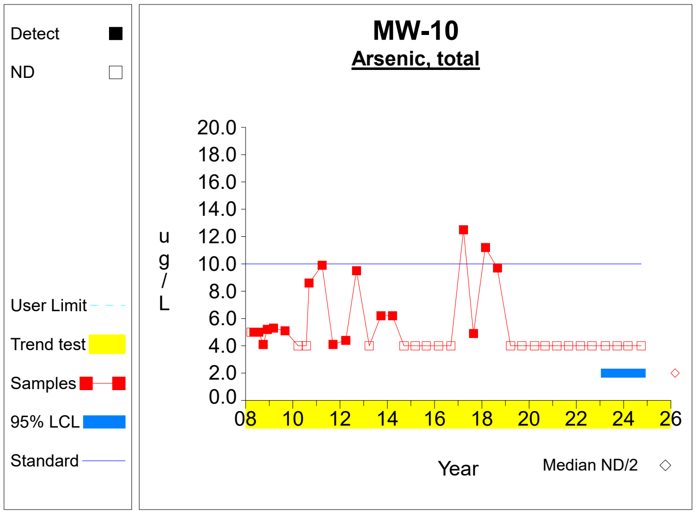
Table 1

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

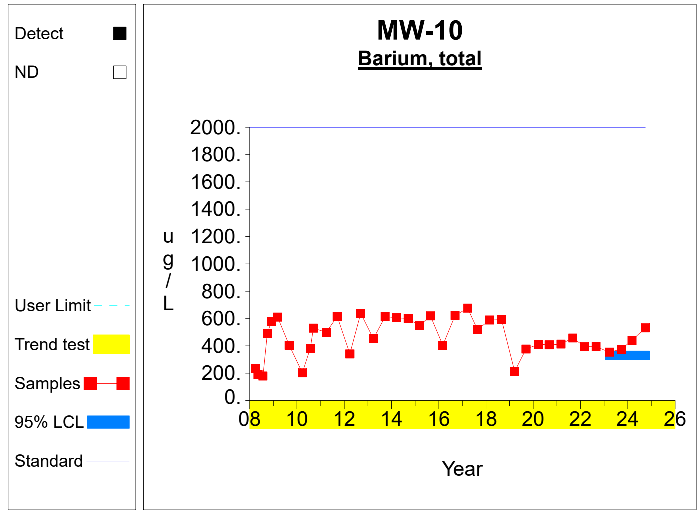
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Arsenic, total	ug/L	MW-10	4	2.000	0.000	1.176	2.000	2.000	10.000		
Barium, total	ug/L	MW-10	4	425.750	80.268	1.176	331.332	520.168	2000.000		
Cobalt, total	ug/L	MW-10	4	5.050	2.329	1.176	2.311	7.789	2.100	dec	**
Copper, total	ug/L	MW-10	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-10	4	12.075	3.071	1.176	8.463	15.687	100.000	dec	
Arsenic, total	ug/L	MW-27	4	2.000	0.000	1.176	2.000	2.000	10.000		
Barium, total	ug/L	MW-27	4	208.000	17.814	1.176	187.046	228.954	2000.000		
Cobalt, total	ug/L	MW-27	4	0.400	0.000	1.176	0.400	0.400	2.100		
Copper, total	ug/L	MW-27	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-27	4	2.000	0.000	1.176	2.000	2.000	100.000		
Arsenic, total	ug/L	MW-34	4	2.550	1.100	1.176	1.256	3.844	10.000		
Barium, total	ug/L	MW-34	4	178.250	43.270	1.176	127.353	229.147	2000.000		
Cobalt, total	ug/L	MW-34	4	1.975	2.347	1.176	0.000	4.736	2.100		
Copper, total	ug/L	MW-34	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-34	4	8.875	5.759	1.176	2.100	15.650	100.000		
Arsenic, total	ug/L	MW-35	4	2.000	0.000	1.176	2.000	2.000	10.000		
Barium, total	ug/L	MW-35	4	434.250	37.845	1.176	389.733	478.767	2000.000	dec	
Cobalt, total	ug/L	MW-35	4	0.400	0.000	1.176	0.400	0.400	2.100		
Copper, total	ug/L	MW-35	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-35	4	2.000	0.000	1.176	2.000	2.000	100.000		
Arsenic, total	ug/L	MW-36	4	2.000	0.000	1.176	2.000	2.000	10.000		
Barium, total	ug/L	MW-36	4	299.250	11.673	1.176	285.520	312.980	2000.000		
Cobalt, total	ug/L	MW-36	4	0.400	0.000	1.176	0.400	0.400	2.100		
Copper, total	ug/L	MW-36	4	4.500	5.000	1.176	0.000	10.381	1300.000		
Nickel, total	ug/L	MW-36	4	2.000	0.000	1.176	2.000	2.000	100.000		
Arsenic, total	ug/L	MW-3A	4	4.025	4.050	1.176	0.000	8.789	10.000		
Barium, total	ug/L	MW-3A	4	240.450	135.993	1.176	80.483	400.417	2000.000		
Cobalt, total	ug/L	MW-3A	4	1.325	0.556	1.176	0.671	1.979	2.100		
Copper, total	ug/L	MW-3A	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-3A	4	4.650	5.300	1.176	0.000	10.884	100.000		
Arsenic, total	ug/L	MW-8	4	2.000	0.000	1.176	2.000	2.000	10.000		
Barium, total	ug/L	MW-8	4	210.000	37.550	1.176	165.830	254.170	2000.000		
Cobalt, total	ug/L	MW-8	4	1.175	1.287	1.176	0.000	2.689	2.100		
Copper, total	ug/L	MW-8	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-8	4	9.000	6.276	1.176	1.617	16.383	100.000	dec	

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

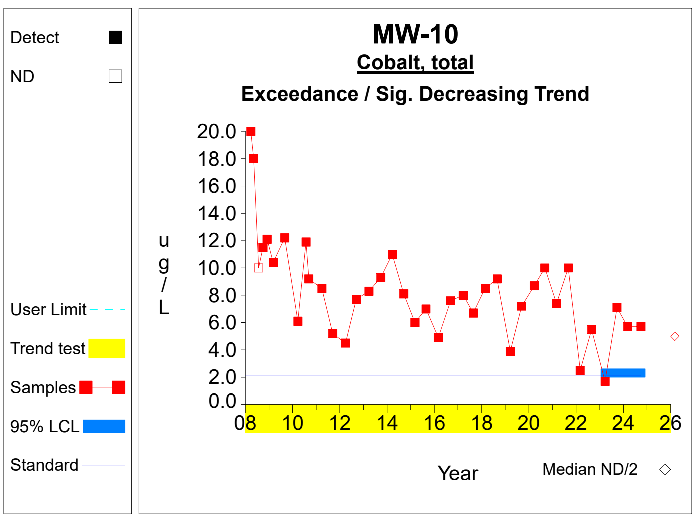
Confidence Limits (Assessment)



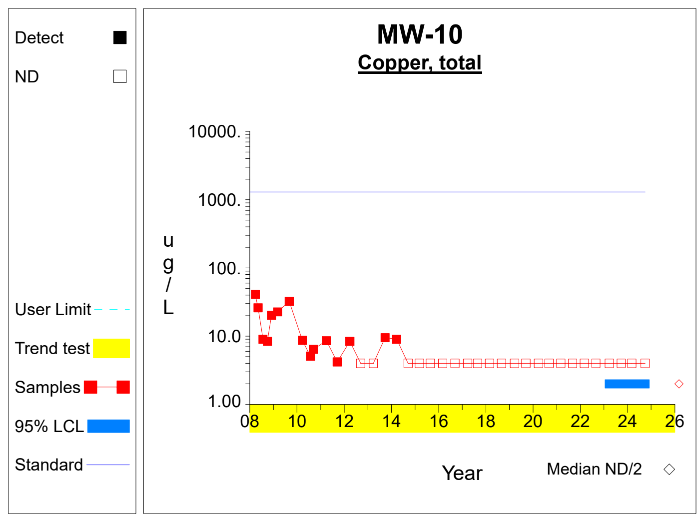
Graph 1



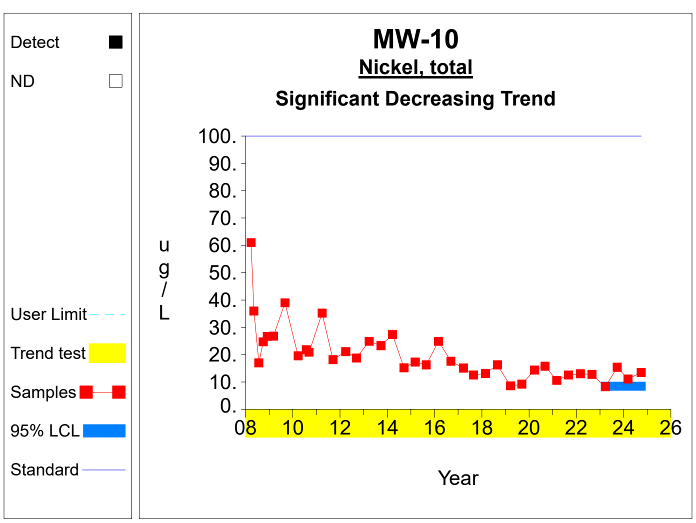
Graph 2



Graph 3

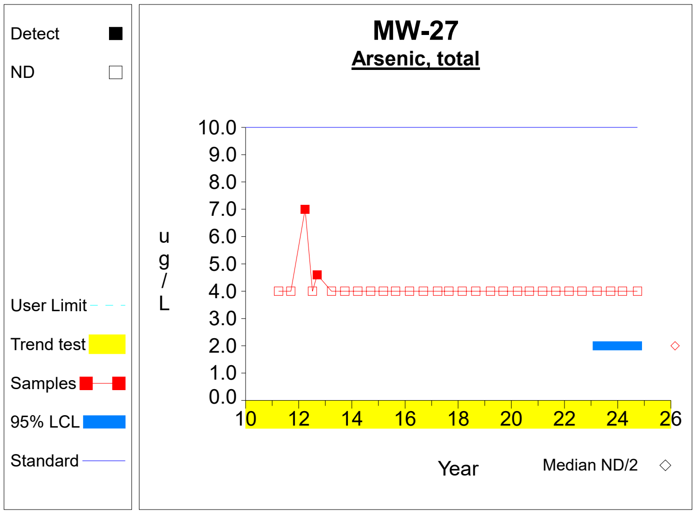


Graph 4

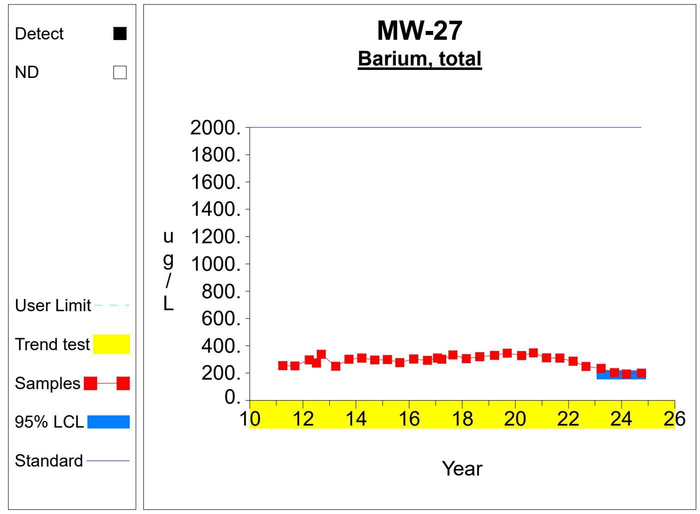


Graph 5

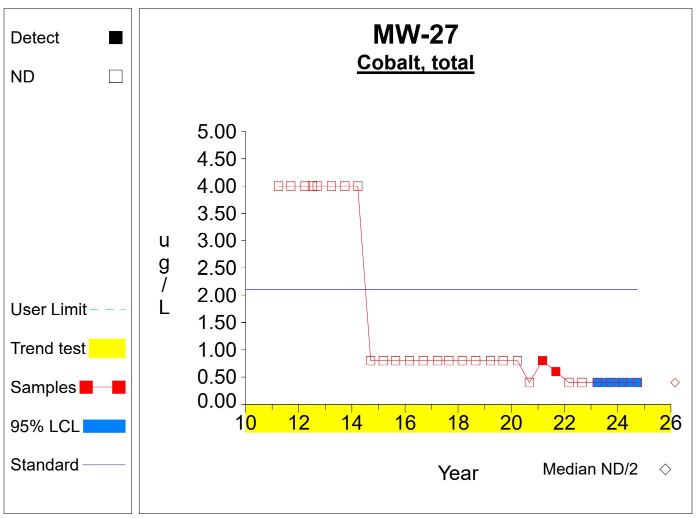
Confidence Limits (Assessment)



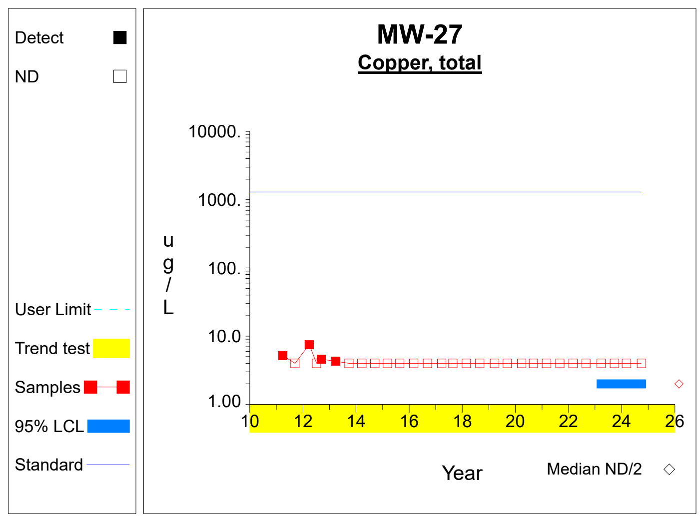
Graph 6



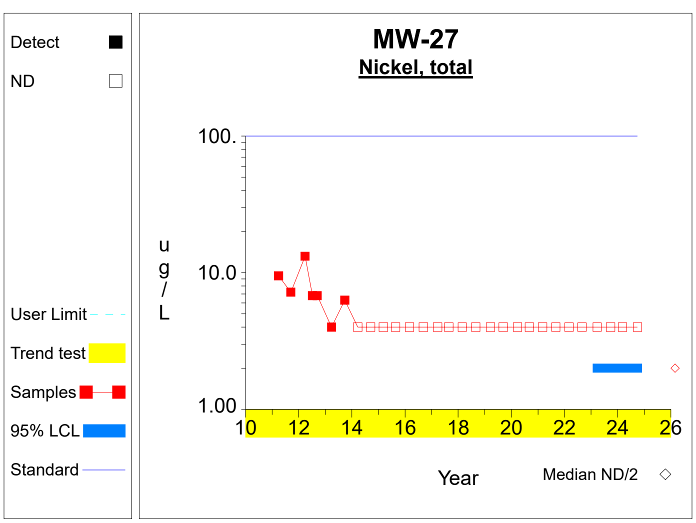
Graph 7



Graph 8

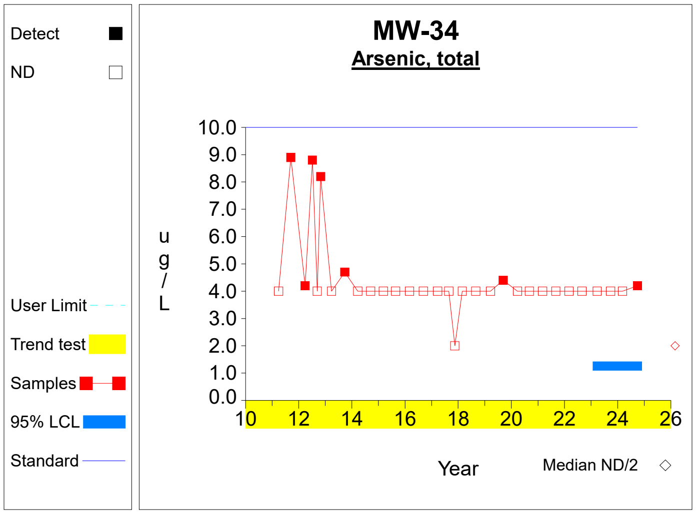


Graph 9

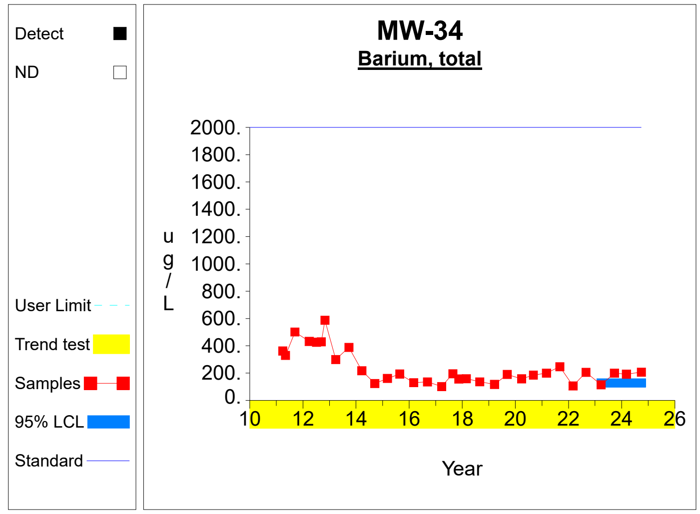


Graph 10

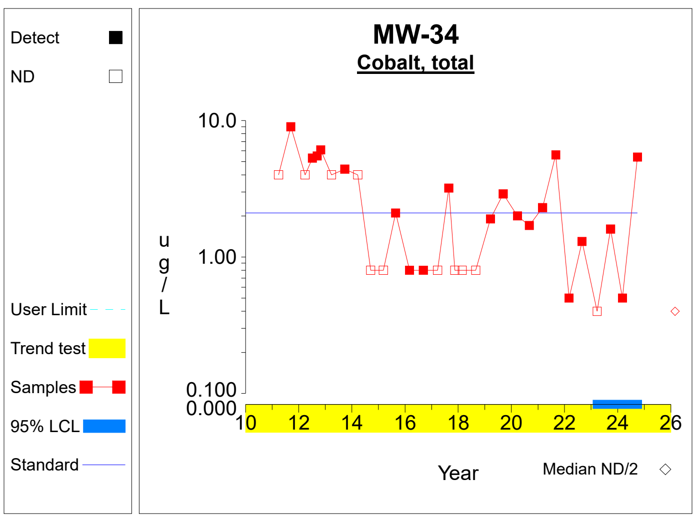
Confidence Limits (Assessment)



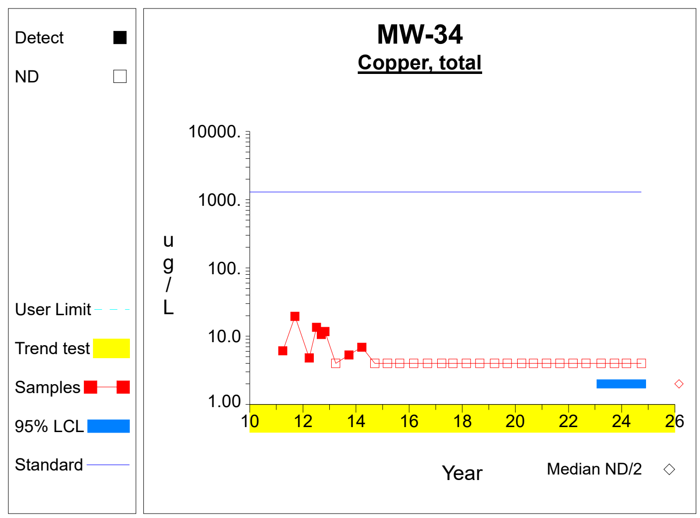
Graph 11



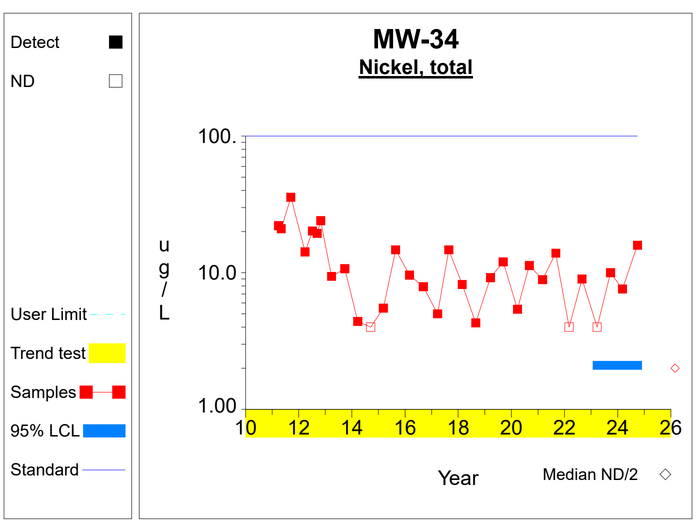
Graph 12



Graph 13

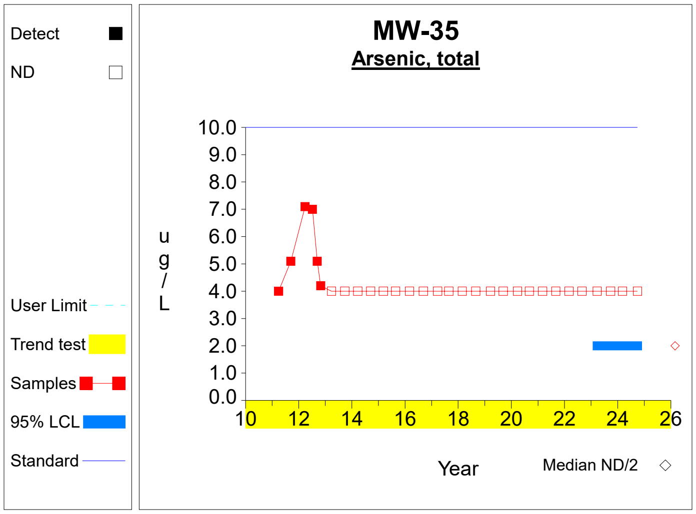


Graph 14

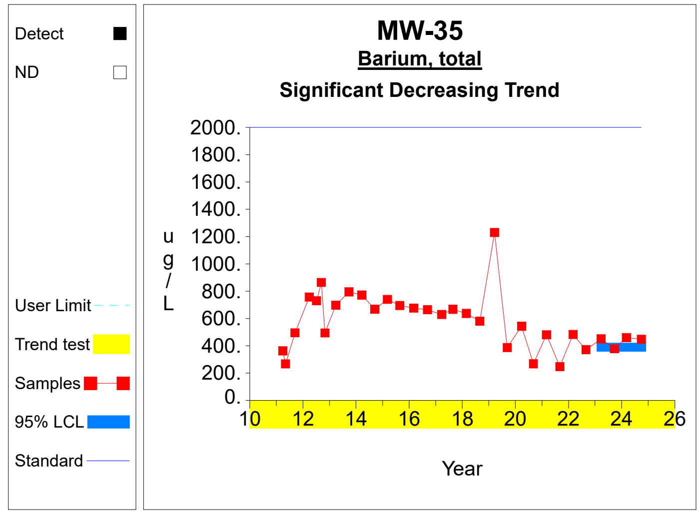


Graph 15

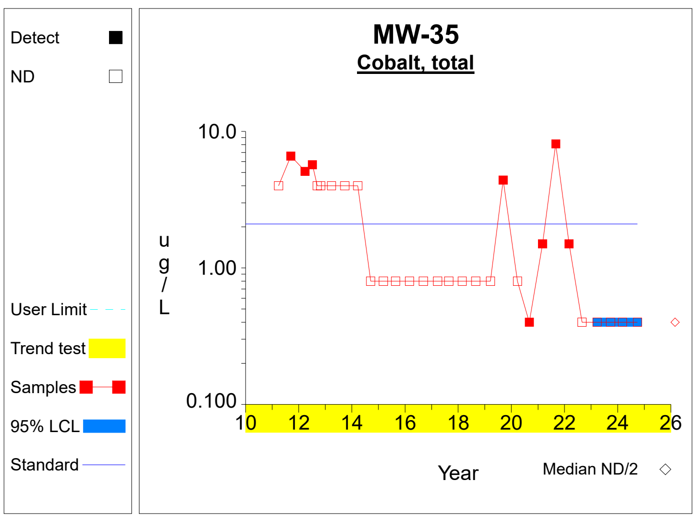
Confidence Limits (Assessment)



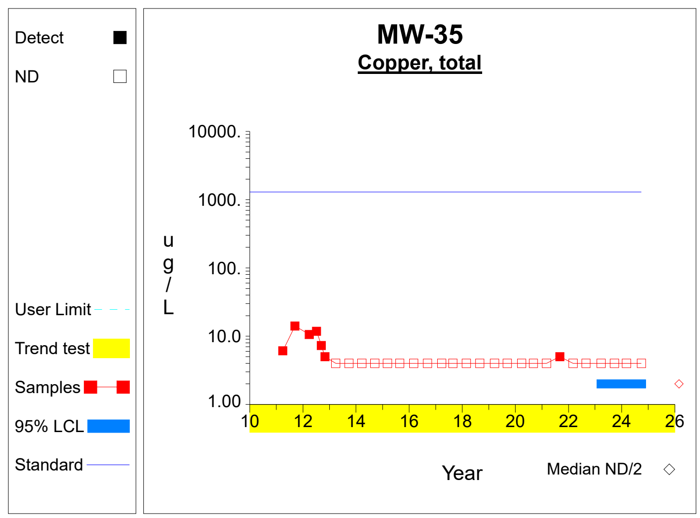
Graph 16



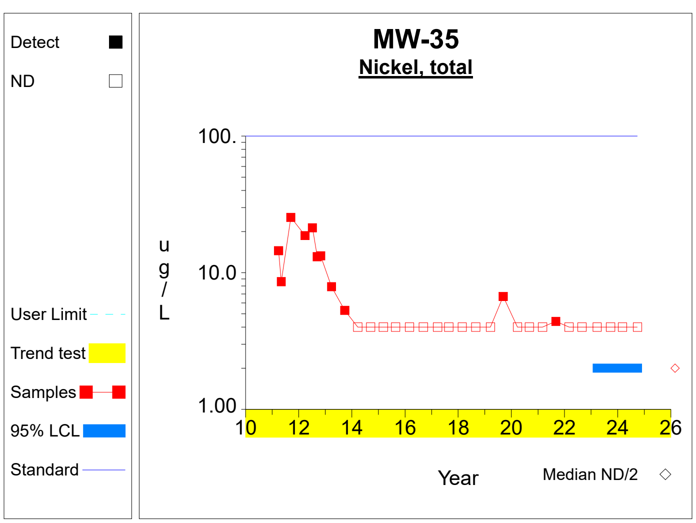
Graph 17



Graph 18

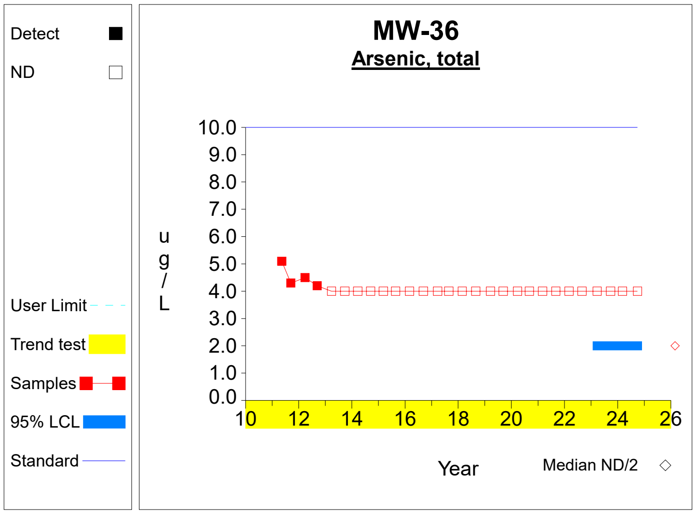


Graph 19

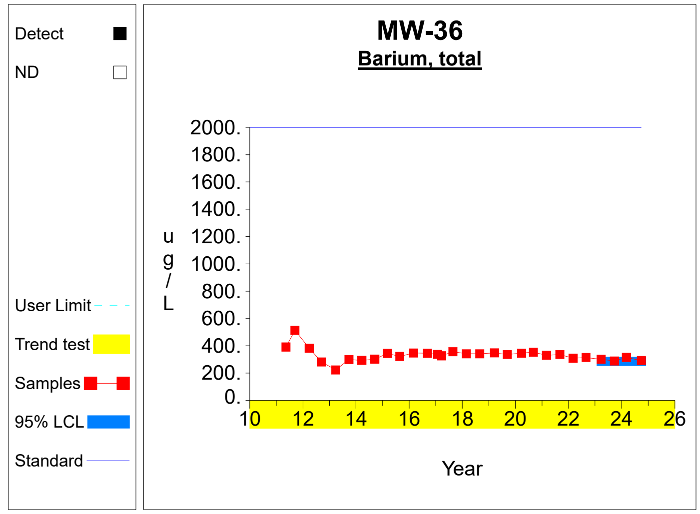


Graph 20

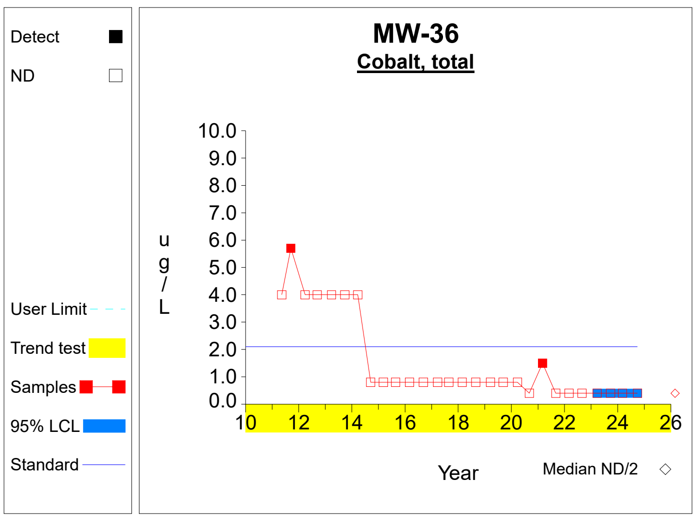
Confidence Limits (Assessment)



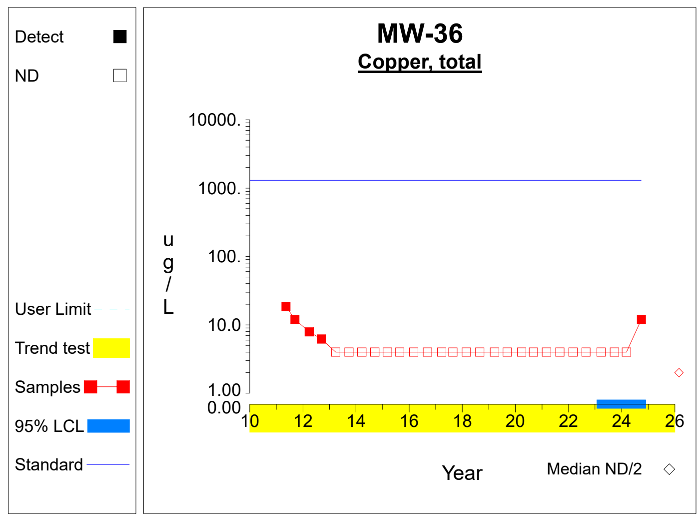
Graph 21



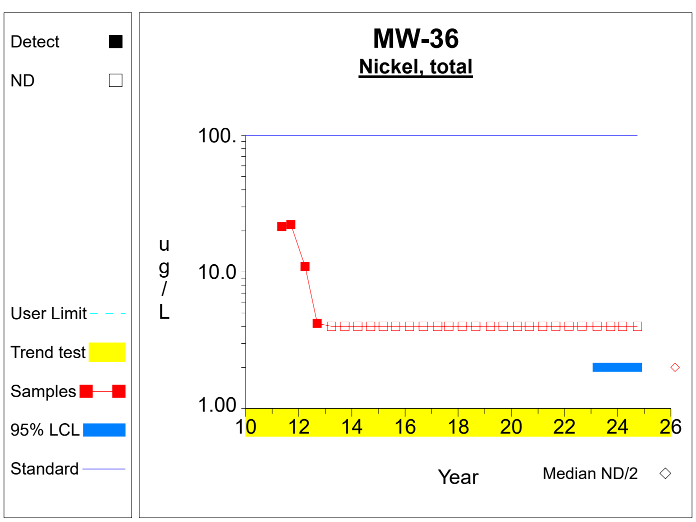
Graph 22



Graph 23



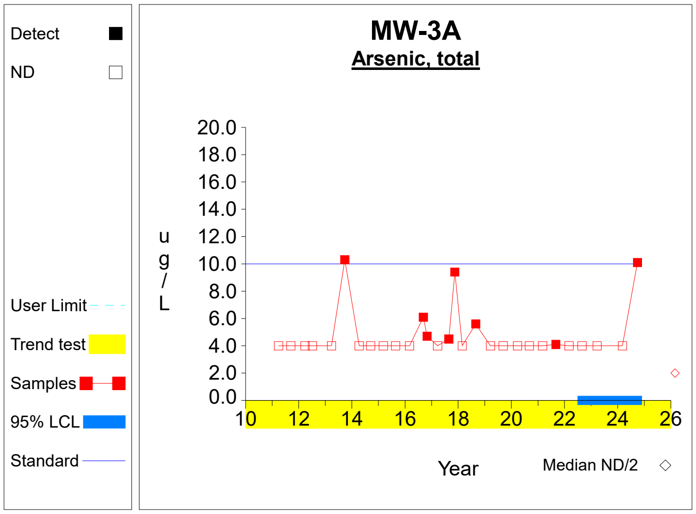
Graph 24



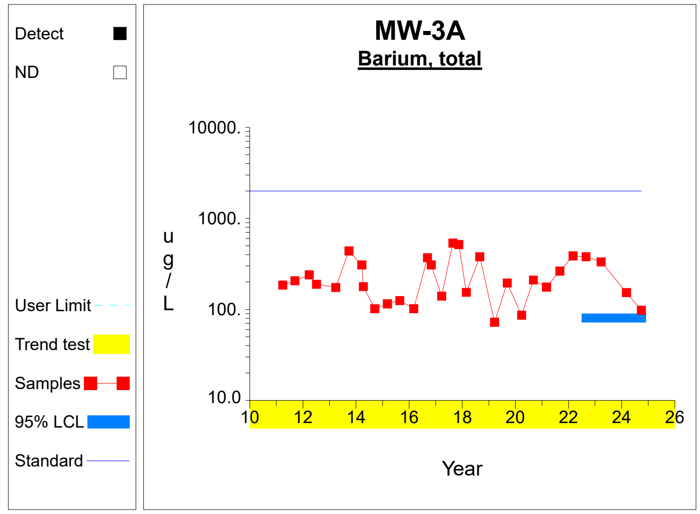
Graph 25

Prepared by: Otter Creek Environmental

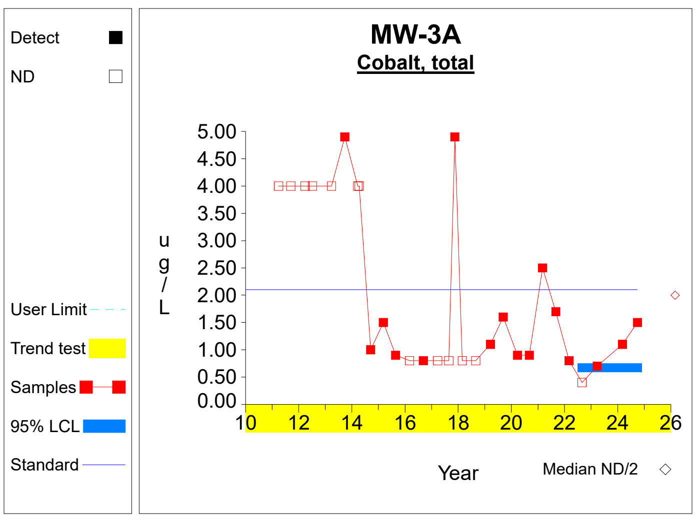
Confidence Limits (Assessment)



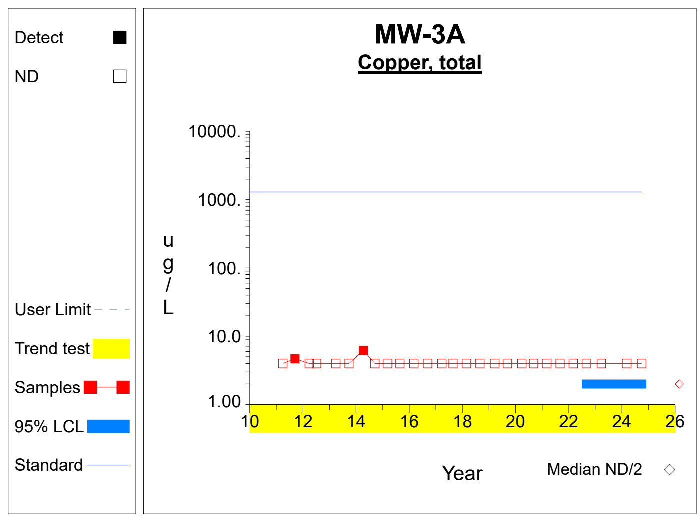
Graph 26



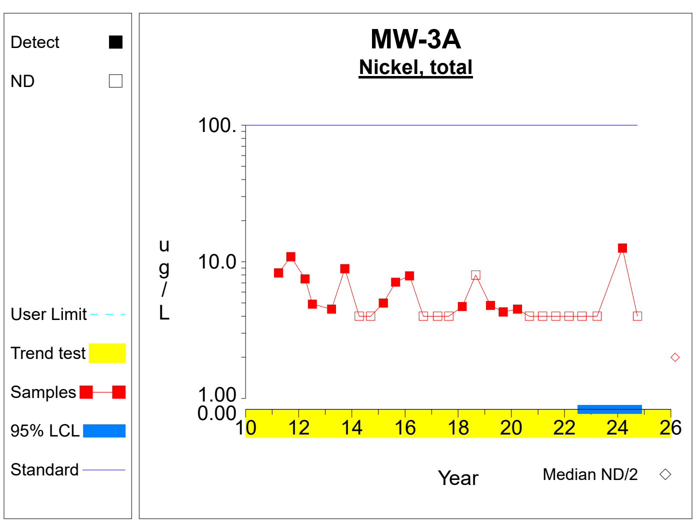
Graph 27



Graph 28

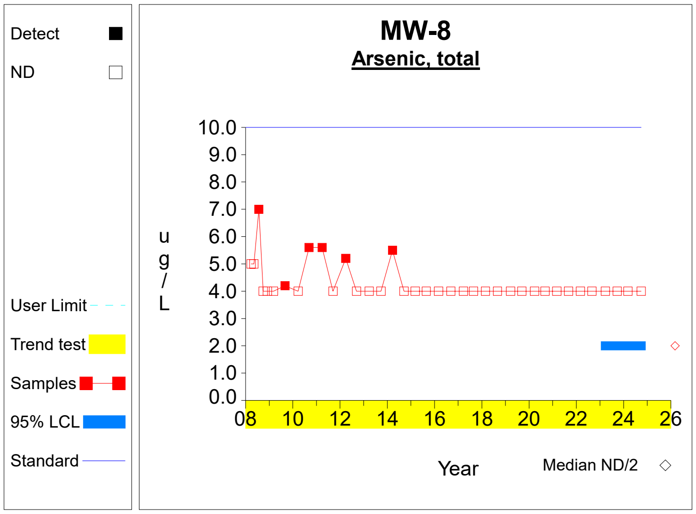


Graph 29

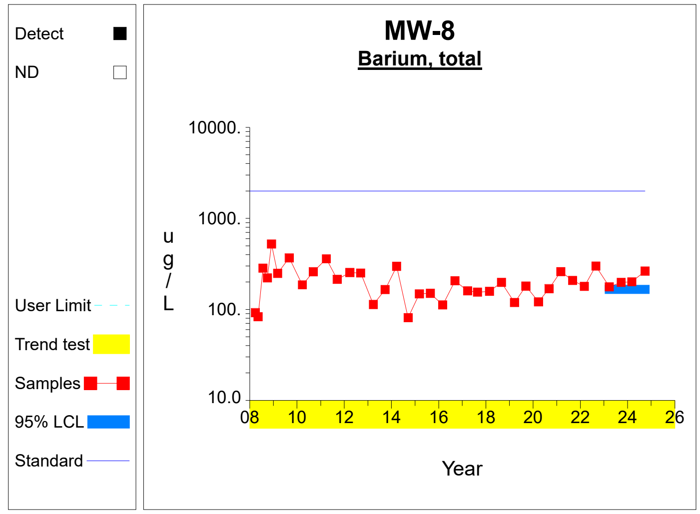


Graph 30

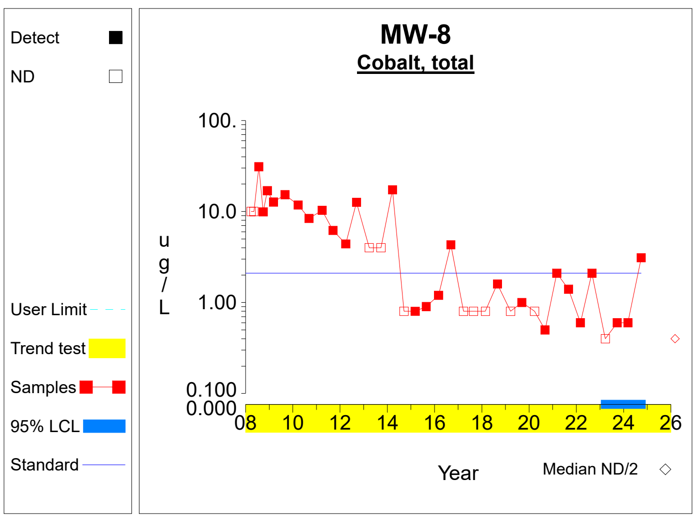
Confidence Limits (Assessment)



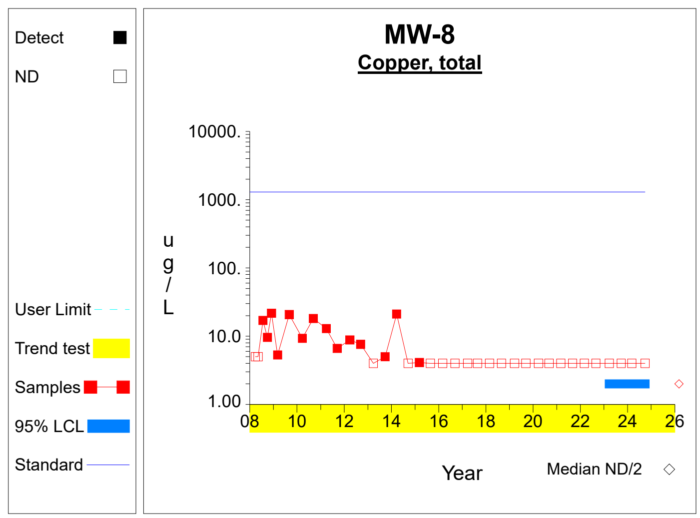
Graph 31



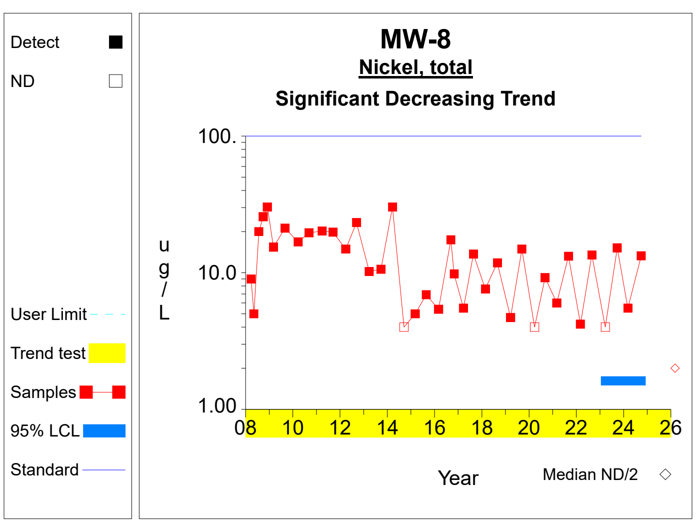
Graph 32



Graph 33



Graph 34



Graph 35

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-10

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{8.0} / \textbf{4}$ $= \textbf{2.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{16.0} - \textbf{64.0}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{2.0} - \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{2.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{2.0} + \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{2.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{38} * (\textbf{38}-1) / 2$ $= \textbf{703}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{5227.333}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{703} \pm \textbf{2.576} * \textbf{5227.333}^{1/2}) / 2$ $= [\ \textbf{258.377}, \textbf{444.623}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{-0.252}, \textbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-10

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1703.0** / **4** = **425.75**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**744381.0** - **2.90**x**10^6**/**4**) / (**4**-1))^{½} = **80.268**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **425.75** - **2.353** * **80.268**/**4**^{½} = **331.332**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **425.75** + **2.353** * **80.268**/**4**^{½} = **520.168**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **38** * (**38**-1) / 2 = **703**	Number of sample pairs during trend detection period.
6	S = **0.213**	Sen's estimator of trend.
7	var(S) = **6326.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**703** ± **2.576** * **6326.0**^{½}) / 2 = [**249.057**, **453.943**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-11.887**, **14.045**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-10

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **20.2** / **4** = **5.05**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**118.28** - **408.04/4**) / (**4**-1))$^{1/2}$ = **2.329**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**$^{1/2}$ = **5.05** - **2.353** * **2.329/4**$^{1/2}$ = **2.311**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**$^{1/2}$ = **5.05** + **2.353** * **2.329/4**$^{1/2}$ = **7.789**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **38** * (**38**-1) / 2 = **703**	Number of sample pairs during trend detection period.
6	S = **-0.318**	Sen's estimator of trend.
7	var(S) = **6323.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**703** ± **2.576** * **6323.0**$^{1/2}$) / 2 = [**249.082**, **453.918**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.609**, **-0.087**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-10

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**16.0** - **64.0/4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**$^{1/2}$ = **2.0** - **2.353** * **0.0/4**$^{1/2}$ = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**$^{1/2}$ = **2.0** + **2.353** * **0.0/4**$^{1/2}$ = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **38** * (**38**-1) / 2 = **703**	Number of sample pairs during trend detection period.
6	S = **-0.477**	Sen's estimator of trend.
7	var(S) = **4891.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**703** ± **2.576** * **4891.333**$^{1/2}$) / 2 = [**261.42**, **441.58**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.885**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-10

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **48.3** / **4** = **12.075**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**611.51** - **2332.89/4**) / (**4**-1))$^{1/2}$ = **3.071**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$ = **12.075 - 2.353 * 3.071/4**$^{1/2}$ = **8.463**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**$^{1/2}$ = **12.075 + 2.353 * 3.071/4**$^{1/2}$ = **15.687**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **38** * (**38**-1) / 2 = **703**	Number of sample pairs during trend detection period.
6	S = **-1.045**	Sen's estimator of trend.
7	var(S) = **6324.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**703** ± **2.576** * **6324.0**$^{1/2}$) / 2 = [**249.074**, **453.926**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.585**, **-0.612**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-27

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**16.0** - **64.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **2.0** - **2.353** * **0.0**/**4**^{½} = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **2.0** + **2.353** * **0.0**/**4**^{½} = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **29** * (**29**-1) / 2 = **406**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **541.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**406** ± **2.576** * **541.0**^{½}) / 2 = [**173.042**, **232.958**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-27

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{832.0} / \mathbf{4}$ $= \mathbf{208.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{174008.0} - \mathbf{692224.0/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{17.814}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{208.0} - \mathbf{2.353} * \mathbf{17.814/4}^{1/2}$ $= \mathbf{187.046}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{208.0} + \mathbf{2.353} * \mathbf{17.814/4}^{1/2}$ $= \mathbf{228.954}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{30} * (\mathbf{30}-1) / 2$ $= \mathbf{435}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{3137.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{435} \pm \mathbf{2.576} * \mathbf{3137.0}^{1/2}) / 2$ $= [\ \mathbf{145.361}, \mathbf{289.639}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{-6.991}, \mathbf{5.93}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-27

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1.6** / **4** = **0.4**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**0.64** - **2.56/4**) / (**4**-1))^{½} = **4.21**x**10^{-9}**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**^{½} = **0.4** - **2.353** * **4.21**x**10^{-9}/4**^{½} = **0.4**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**^{½} = **0.4** + **2.353** * **4.21**x**10^{-9}/4**^{½} = **0.4**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **29** * (**29**-1) / 2 = **406**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **541.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**406** ± **2.576** * **541.0**^{½}) / 2 = [**173.042**, **232.958**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-27

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**16.0** - **64.0**/**4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$ = **2.0** - **2.353** * **0.0**/**4**$^{1/2}$ = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$ = **2.0** + **2.353** * **0.0**/**4**$^{1/2}$ = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **29** * (**29**-1) / 2 = **406**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1008.667**	Variance estimate for slope.
8	M(S) = (**N'** ± $Z_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**406** ± **2.576** * **1008.667**$^{1/2}$) / 2 = [**162.094**, **243.906**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-27

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{8.0} / \mathbf{4}$ $= \mathbf{2.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{16.0} - \mathbf{64.0/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{X} - tS/N^{1/2}$ $= \mathbf{2.0} - \mathbf{2.353} * \mathbf{0.0/4}^{1/2}$ $= \mathbf{2.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{X} + tS/N^{1/2}$ $= \mathbf{2.0} + \mathbf{2.353} * \mathbf{0.0/4}^{1/2}$ $= \mathbf{2.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{29} * (\mathbf{29}-1) / 2$ $= \mathbf{406}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{1583.333}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{406} \pm \mathbf{2.576} * \mathbf{1583.333}^{1/2}) / 2$ $= [\ \mathbf{151.749}, \mathbf{254.251}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{-0.409}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-34

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **10.2** / **4** = **2.55**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**29.64** - **104.04**/**4**) / (**4**-1))^{½} = **1.1**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**^{½} = **2.55** - **2.353** * **1.1**/**4**^{½} = **1.256**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**^{½} = **2.55** + **2.353** * **1.1**/**4**^{½} = **3.844**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **31** * (**31**-1) / 2 = **465**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1835.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**465** ± **2.576** * **1835.333**^{½}) / 2 = [**177.321**, **287.679**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-34

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **713.0** / **4** = **178.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**132709.0** - **508369.0**/**4**) / (**4**-1))^{½} = **43.27**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **178.25** - **2.353** * **43.27**/**4**^{½} = **127.353**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **178.25** + **2.353** * **43.27**/**4**^{½} = **229.147**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **32** * (**32**-1) / 2 = **496**	Number of sample pairs during trend detection period.
6	S = **-16.348**	Sen's estimator of trend.
7	var(S) = **3801.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**496** ± **2.576** * **3801.667**^{½}) / 2 = [**168.585**, **327.415**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-30.204**, **0.176**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-34

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **7.9** / **4** = **1.975**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**32.13** - **62.41/4**) / (**4**-1))$^{1/2}$ = **2.347**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$ = **1.975** - **2.353** * **2.347/4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**$^{1/2}$ = **1.975** + **2.353** * **2.347/4**$^{1/2}$ = **4.736**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **31** * (**31**-1) / 2 = **465**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **3294.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**$^{1/2}$) / 2 = (**465** ± **2.576** * **3294.667**$^{1/2}$) / 2 = [**158.57**, **306.43**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.339**, **0.129**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-34

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{16.0} - \mathbf{64.0}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{2.0} - \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{1/2}$ = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{2.0} + \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{1/2}$ = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1884.0**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{435} \pm \mathbf{2.576} * \mathbf{1884.0}^{1/2}) / 2$ = [**161.594**, **273.406**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.435**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-34

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **35.5** / **4** = **8.875**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**414.57** - **1260.25**/**4**) / (**4**-1))$^{1/2}$ = **5.759**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**$^{1/2}$ = **8.875** - **2.353** * **5.759**/**4**$^{1/2}$ = **2.1**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**$^{1/2}$ = **8.875** + **2.353** * **5.759**/**4**$^{1/2}$ = **15.65**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **31** * (**31**-1) / 2 = **465**	Number of sample pairs during trend detection period.
6	S = **-0.887**	Sen's estimator of trend.
7	var(S) = **3457.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**465** ± **2.576** * **3457.0**$^{1/2}$) / 2 = [**156.77**, **308.23**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.649**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-35

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**16.0** - **64.0**/**4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$ = **2.0** - **2.353** * **0.0**/**4**$^{1/2}$ = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$ = **2.0** + **2.353** * **0.0**/**4**$^{1/2}$ = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1515.333**	Variance estimate for slope.
8	M(S) = (**N'** ± $Z_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**435** ± **2.576** * **1515.333**$^{1/2}$) / 2 = [**167.362**, **267.638**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-35

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1737.0** / **4** = **434.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**758589.0 - 3.02**x**10^6/4**) / (**4**-1))^{½} = **37.845**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**^{½} = **434.25 - 2.353 * 37.845/4**^{½} = **389.733**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**^{½} = **434.25 + 2.353 * 37.845/4**^{½} = **478.767**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **31** * (**31**-1) / 2 = **465**	Number of sample pairs during trend detection period.
6	S = **-26.041**	Sen's estimator of trend.
7	var(S) = **3461.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**465** ± **2.576** * **3461.667**^{½}) / 2 = [**156.719**, **308.281**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-38.225**, **-3.432**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-35

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1.6** / **4** = **0.4**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{0.64} - \mathbf{2.56/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{4.21 \times 10^{-9}}$	Compute sd of the last 4 measurements.
3	$LCL = \mathbf{\overline{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{0.4} - \mathbf{2.353} * \mathbf{4.21 \times 10^{-9}}/\mathbf{4}^{1/2}$ $= \mathbf{0.4}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \mathbf{\overline{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{0.4} + \mathbf{2.353} * \mathbf{4.21 \times 10^{-9}}/\mathbf{4}^{1/2}$ $= \mathbf{0.4}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1707.0**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{435} \pm \mathbf{2.576} * \mathbf{1707.0}^{1/2}) / 2$ = [**164.285**, **270.715**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-35

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{16.0} - \mathbf{64.0/4}) / (\mathbf{4}-1))^{½}$ = **0.0**	Compute sd of the last 4 measurements.
3	$LCL = \mathbf{\overline{X}} - \mathbf{tS/N}^{½}$ $= \mathbf{2.0} - \mathbf{2.353} * \mathbf{0.0/4}^{½}$ = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \mathbf{\overline{X}} + \mathbf{tS/N}^{½}$ $= \mathbf{2.0} + \mathbf{2.353} * \mathbf{0.0/4}^{½}$ = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1707.0**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{435} \pm \mathbf{2.576} * \mathbf{1707.0}^{½}) / 2$ = [**164.285**, **270.715**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-35

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**16.0** - **64.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **2.0** - **2.353** * **0.0**/**4**^{½} = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **2.0** + **2.353** * **0.0**/**4**^{½} = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **31** * (**31**-1) / 2 = **465**	Number of sample pairs during trend detection period.
6	S = **-0.348**	Sen's estimator of trend.
7	var(S) = **2511.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**^{½}) / 2 = (**465** ± **2.576** * **2511.667**^{½}) / 2 = [**167.95**, **297.05**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.123**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-36

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{8.0} / \textbf{4}$ $= \textbf{2.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{16.0} - \textbf{64.0}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{2.0} - \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{2.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{2.0} + \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{2.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{28} * (\textbf{28}-1) / 2$ $= \textbf{378}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{936.667}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{378} \pm \textbf{2.576} * \textbf{936.667}^{1/2}) / 2$ $= [\ \textbf{149.581}, \textbf{228.419}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{0.0}, \textbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-36

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1197.0** / **4** = **299.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**358611.0** - **1.43**x**10^6**/**4**) / (**4**-1))^{½} = **11.673**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **299.25** - **2.353** * **11.673**/**4**^{½} = **285.52**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **299.25** + **2.353** * **11.673**/**4**^{½} = **312.98**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **29** * (**29**-1) / 2 = **406**	Number of sample pairs during trend detection period.
6	S = **-3.164**	Sen's estimator of trend.
7	var(S) = **2840.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**406** ± **2.576** * **2840.0**^{½}) / 2 = [**134.36**, **271.64**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-6.943**, **2.728**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-36

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1.6** / **4** = **0.4**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**0.64** - **2.56/4**) / (**4**-1))^{½} = **4.21**x**10^{-9}**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS/N**^{½} = **0.4** - **2.353** * **4.21**x**10^{-9}/4**^{½} = **0.4**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS/N**^{½} = **0.4** + **2.353** * **4.21**x**10^{-9}/4**^{½} = **0.4**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **28** * (**28**-1) / 2 = **378**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **503.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**378** ± **2.576** * **503.667**^{½}) / 2 = [**160.094**, **217.906**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-36

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **18.0** / **4** = **4.5**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{156.0} - \mathbf{324.0/4}) / (\mathbf{4}-1))^{1/2}$ = **5.0**	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{4.5} - \mathbf{2.353} * \mathbf{5.0/4}^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{4.5} + \mathbf{2.353} * \mathbf{5.0/4}^{1/2}$ = **10.381**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **28** * (**28**-1) / 2 = **378**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1127.333**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{378} \pm \mathbf{2.576} * \mathbf{1127.333}^{1/2}) / 2$ = [**145.754**, **232.246**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-36

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{8.0} / \mathbf{4}$ $= \mathbf{2.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{16.0} - \mathbf{64.0/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{2.0} - \mathbf{2.353} * \mathbf{0.0/4}^{1/2}$ $= \mathbf{2.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{2.0} + \mathbf{2.353} * \mathbf{0.0/4}^{1/2}$ $= \mathbf{2.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{28} * (\mathbf{28}-1) / 2$ $= \mathbf{378}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{936.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{378} \pm \mathbf{2.576} * \mathbf{936.667}^{1/2}) / 2$ $= [\ \mathbf{149.581}, \mathbf{228.419}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-3A

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **16.1** / **4** = **4.025**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**114.01** - **259.21/4**) / (**4**-1))$^{1/2}$ = **4.05**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**$^{1/2}$ = **4.025 - 2.353 * 4.05/4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**$^{1/2}$ = **4.025 + 2.353 * 4.05/4**$^{1/2}$ = **8.789**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **29** * (**29**-1) / 2 = **406**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1745.333**	Variance estimate for slope.
8	M(S) = (**N' ± $Z_{.995}$ * var(S)**$^{1/2}$) / 2 = (**406** ± **2.576** * **1745.333**$^{1/2}$) / 2 = [**149.191**, **256.809**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-3A

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **961.8** / **4** = **240.45**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**286746.84** - **925059.24**/**4**) / (**4**-1))$^{1/2}$ = **135.993**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$ = **240.45** - **2.353** * **135.993**/**4**$^{1/2}$ = **80.483**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$ = **240.45** + **2.353** * **135.993**/**4**$^{1/2}$ = **400.417**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **3139.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**435** ± **2.576** * **3139.667**$^{1/2}$) / 2 = [**145.33**, **289.67**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-15.496**, **18.578**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-3A

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **5.3** / **4** = **1.325**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**7.95** - **28.09**/**4**) / (**4**-1))$^{1/2}$ = **0.556**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **1.325** - **2.353** * **0.556**/**4**$^{1/2}$ = **0.671**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **1.325** + **2.353** * **0.556**/**4**$^{1/2}$ = **1.979**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **29** * (**29**-1) / 2 = **406**	Number of sample pairs during trend detection period.
6	S = **-0.039**	Sen's estimator of trend.
7	var(S) = **2565.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**406** ± **2.576** * **2565.667**$^{1/2}$) / 2 = [**137.76**, **268.24**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.129**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-3A

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**16.0** - **64.0**/**4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**$^{1/2}$ = **2.0** - **2.353** * **0.0**/**4**$^{1/2}$ = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**$^{1/2}$ = **2.0** + **2.353** * **0.0**/**4**$^{1/2}$ = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **27** * (**27**-1) / 2 = **351**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **467.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**$^{1/2}$) / 2 = (**351** ± **2.576** * **467.667**$^{1/2}$) / 2 = [**147.646**, **203.354**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-3A

Step	Equation	Description
1	$\bar{X}$ = **sum[X] / N** = **18.6 / 4** = **4.65**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**170.76 - 345.96/4**) / (**4**-1))$^{1/2}$ = **5.3**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$ = **4.65 - 2.353 * 5.3/4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**$^{1/2}$ = **4.65 + 2.353 * 5.3/4**$^{1/2}$ = **10.884**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **27** * (**27**-1) / 2 = **351**	Number of sample pairs during trend detection period.
6	S = **-0.3**	Sen's estimator of trend.
7	var(S) = **2031.333**	Variance estimate for slope.
8	M(S) = (**N' ± $Z_{.995}$ * var(S)**$^{1/2}$) / 2 = (**351 ± 2.576 * 2031.333**$^{1/2}$) / 2 = [**117.449**, **233.551**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.685**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-8

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{16.0} - \mathbf{64.0/4}) / (\mathbf{4}-1))^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	$LCL = \mathbf{\overline{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{2.0} - \mathbf{2.353} * \mathbf{0.0/4}^{1/2}$ = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \mathbf{\overline{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{2.0} + \mathbf{2.353} * \mathbf{0.0/4}^{1/2}$ = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **37** * (**37**-1) / 2 = **666**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **2383.333**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{666} \pm \mathbf{2.576} * \mathbf{2383.333}^{1/2}) / 2$ = [**270.121**, **395.879**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-8

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **840.0** / **4** = **210.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**180630.0** - **705600.0**/**4**) / (**4**-1))$^{1/2}$ = **37.55**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **210.0** - **2.353** * **37.55**/**4**$^{1/2}$ = **165.83**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **210.0** + **2.353** * **37.55**/**4**$^{1/2}$ = **254.17**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **37** * (**37**-1) / 2 = **666**	Number of sample pairs during trend detection period.
6	S = **-1.186**	Sen's estimator of trend.
7	var(S) = **5845.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**666** ± **2.576** * **5845.0**$^{1/2}$) / 2 = [**234.529**, **431.471**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-8.858**, **6.215**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-8

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **4.7** / **4** = **1.175**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**10.49 - 22.09/4**) / (**4**-1))^{½} = **1.287**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N^{½}** = **1.175 - 2.353 * 1.287/4^{½}** = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N^{½}** = **1.175 + 2.353 * 1.287/4^{½}** = **2.689**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **37** * (**37**-1) / 2 = **666**	Number of sample pairs during trend detection period.
6	S = **-0.435**	Sen's estimator of trend.
7	var(S) = **5676.333**	Variance estimate for slope.
8	M(S) = (**N' ± $Z_{.995}$ * var(S)^{½}**) / 2 = (**666** ± **2.576** * **5676.333**^{½}) / 2 = [**235.96**, **430.04**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.016**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-8

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**16.0** - **64.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **2.0** - **2.353** * **0.0**/**4**^{½} = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **2.0** + **2.353** * **0.0**/**4**^{½} = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **37** * (**37**-1) / 2 = **666**	Number of sample pairs during trend detection period.
6	S = **-0.278**	Sen's estimator of trend.
7	var(S) = **4412.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**666** ± **2.576** * **4412.333**^{½}) / 2 = [**247.444**, **418.556**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.709**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-8

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **36.0** / **4** = **9.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**442.18 - 1296.0/4**) / (**4**-1))^{½} = **6.276**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**^{½} = **9.0** - **2.353** * **6.276/4**^{½} = **1.617**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**^{½} = **9.0** + **2.353** * **6.276/4**^{½} = **16.383**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **38** * (**38**-1) / 2 = **703**	Number of sample pairs during trend detection period.
6	S = **-0.653**	Sen's estimator of trend.
7	var(S) = **6319.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**703** ± **2.576** * **6319.333**^{½}) / 2 = [**249.111**, **453.889**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.339**, **-0.056**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Attachment D

Summary of Historical VOC Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
1,2-dichloroethane	MW-10	7/23/1992		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-10	7/23/2008		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/30/2008		1.5	1.0	ug/L
1,4-dichlorobenzene	MW-10	12/02/2008		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/05/2009		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/01/2009		1.3	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/23/2010		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-10	7/26/2010		7.8	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/09/2010		3.8	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/29/2011		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/13/2011		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/28/2012		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/11/2012		1.8	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/26/2013		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-10	8/24/2015		1.3	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/09/2016		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/22/2017		2.4	1.0	ug/L
1,4-dichlorobenzene	MW-10	8/24/2017		2.3	1.0	ug/L
1,4-dichlorobenzene	MW-10	2/26/2018		2.7	1.0	ug/L
1,4-dichlorobenzene	MW-10	8/29/2018		3.0	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/04/2020		3.2	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/02/2021		2.3	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/02/2021		2.8	1.0	ug/L
1,4-dichlorobenzene	MW-10	8/29/2022		2.0	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/25/2023		1.9	1.0	ug/L
1,4-dichlorobenzene	MW-10	3/05/2024		1.5	1.0	ug/L
1,4-dichlorobenzene	MW-10	9/30/2024		2.5	1.0	ug/L
Benzene	MW-10	7/23/1992		1.2	1.0	ug/L
Benzene	MW-10	7/23/2008		2.5	1.0	ug/L
Benzene	MW-10	9/30/2008		1.5	1.0	ug/L
Benzene	MW-10	12/02/2008		1.1	1.0	ug/L
Benzene	MW-10	9/01/2009		1.3	1.0	ug/L
Benzene	MW-10	7/26/2010		4.1	1.0	ug/L
Benzene	MW-10	9/09/2010		2.8	1.0	ug/L
Chlorobenzene	MW-10	3/26/2008		1.1	1.0	ug/L
Chlorobenzene	MW-10	7/23/2008		2.6	1.0	ug/L
Chlorobenzene	MW-10	9/30/2008		2.8	1.0	ug/L
Chlorobenzene	MW-10	12/02/2008		2.6	1.0	ug/L
Chlorobenzene	MW-10	3/05/2009		2.2	1.0	ug/L
Chlorobenzene	MW-10	9/01/2009		2.1	1.0	ug/L
Chlorobenzene	MW-10	3/23/2010		1.4	1.0	ug/L
Chlorobenzene	MW-10	7/26/2010		5.4	1.0	ug/L
Chlorobenzene	MW-10	9/09/2010		4.4	1.0	ug/L
Chlorobenzene	MW-10	3/29/2011		1.3	1.0	ug/L
Chlorobenzene	MW-10	9/13/2011		1.4	1.0	ug/L
Chlorobenzene	MW-10	3/28/2012		1.1	1.0	ug/L
Chlorobenzene	MW-10	9/11/2012		2.4	1.0	ug/L
Chlorobenzene	MW-10	3/26/2013		1.3	1.0	ug/L
Chlorobenzene	MW-10	9/25/2013		1.0	1.0	ug/L
Chlorobenzene	MW-10	3/20/2014		1.1	1.0	ug/L
Chlorobenzene	MW-10	9/15/2014		1.2	1.0	ug/L
Chlorobenzene	MW-10	8/24/2015		1.4	1.0	ug/L
Chlorobenzene	MW-10	9/09/2016		1.1	1.0	ug/L
Chlorobenzene	MW-10	3/22/2017		2.3	1.0	ug/L
Chlorobenzene	MW-10	8/24/2017		2.3	1.0	ug/L
Chlorobenzene	MW-10	2/26/2018		2.4	1.0	ug/L
Chlorobenzene	MW-10	8/29/2018		2.6	1.0	ug/L
Chlorobenzene	MW-10	3/18/2019		1.0	1.0	ug/L
Chlorobenzene	MW-10	9/10/2019		2.4	1.0	ug/L
Chlorobenzene	MW-10	3/25/2020		1.1	1.0	ug/L
Chlorobenzene	MW-10	9/04/2020		2.5	1.0	ug/L
Chlorobenzene	MW-10	3/02/2021		1.9	1.0	ug/L
Chlorobenzene	MW-10	9/02/2021		2.7	1.0	ug/L
Chlorobenzene	MW-10	8/29/2022		1.7	1.0	ug/L
Chlorobenzene	MW-10	9/25/2023		1.7	1.0	ug/L
Chlorobenzene	MW-10	9/30/2024		1.5	1.0	ug/L
Chloroethane	MW-10	7/23/2008		1.7	1.0	ug/L
Chloroethane	MW-10	9/30/2008		2.7	1.0	ug/L
Chloroethane	MW-10	12/02/2008		2.6	1.0	ug/L
Chloroethane	MW-10	3/05/2009		1.5	1.0	ug/L
Chloroethane	MW-10	9/01/2009		1.8	1.0	ug/L
Chloroethane	MW-10	7/26/2010		3.0	1.0	ug/L
Chloroethane	MW-10	9/09/2010		4.2	1.0	ug/L
Chloroethane	MW-10	9/13/2011		1.4	1.0	ug/L
Chloroethane	MW-10	9/11/2012		2.2	1.0	ug/L
Chloroethane	MW-10	3/22/2017		1.0	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Chloroethane	MW-10	8/29/2018		1.0	1.0	ug/L
Chloroethane	MW-10	8/29/2022		1.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-10	7/23/2008		1.0	1.0	ug/L
Cis-1,2-dichloroethylene	MW-10	9/30/2008		1.1	1.0	ug/L
Cis-1,2-dichloroethylene	MW-10	12/02/2008		1.0	1.0	ug/L
Cis-1,2-dichloroethylene	MW-10	9/09/2010		1.1	1.0	ug/L
Trichloroethylene	MW-10	10/13/1992		2.8	2.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-27	2/26/2018		71	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-27	3/18/2019		13	6	ug/L
1,1-dichloroethane	MW-34	10/30/2012		3.2	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/13/2011		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-34	8/24/2015		5.8	1.0	ug/L
1,4-dichlorobenzene	MW-34	3/01/2016		8.8	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/09/2016		8.7	1.0	ug/L
1,4-dichlorobenzene	MW-34	3/22/2017		4.9	1.0	ug/L
1,4-dichlorobenzene	MW-34	8/24/2017		7.9	1.0	ug/L
1,4-dichlorobenzene	MW-34	2/26/2018		2.1	1.0	ug/L
1,4-dichlorobenzene	MW-34	8/29/2018		2.6	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/04/2020		7.0	1.0	ug/L
1,4-dichlorobenzene	MW-34	3/02/2021		10.6	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/02/2021		7.9	1.0	ug/L
1,4-dichlorobenzene	MW-34	3/02/2022		1.5	1.0	ug/L
1,4-dichlorobenzene	MW-34	8/29/2022		3.9	1.0	ug/L
1,4-dichlorobenzene	MW-34	3/23/2023		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/25/2023		9.4	1.0	ug/L
1,4-dichlorobenzene	MW-34	9/30/2024		1.4	1.0	ug/L
Benzene	MW-34	9/13/2011		1.0	1.0	ug/L
Benzene	MW-34	8/24/2015		1.4	1.0	ug/L
Benzene	MW-34	3/22/2017		1.2	1.0	ug/L
Benzene	MW-34	8/24/2017		1.3	1.0	ug/L
Benzene	MW-34	3/02/2021		1.8	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	10/30/2012		24	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	8/20/2014		14	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	9/15/2014		36	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	8/24/2015		13	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	2/26/2018		145	30	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	9/10/2019		46	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-34	3/02/2022		8	6	ug/L
Chlorobenzene	MW-34	8/24/2015		2.0	1.0	ug/L
Chlorobenzene	MW-34	3/01/2016		2.8	1.0	ug/L
Chlorobenzene	MW-34	9/09/2016		2.7	1.0	ug/L
Chlorobenzene	MW-34	3/22/2017		2.0	1.0	ug/L
Chlorobenzene	MW-34	8/24/2017		3.0	1.0	ug/L
Chlorobenzene	MW-34	3/18/2019		1.2	1.0	ug/L
Chlorobenzene	MW-34	9/10/2019		1.8	1.0	ug/L
Chlorobenzene	MW-34	9/04/2020		2.6	1.0	ug/L
Chlorobenzene	MW-34	3/02/2021		4.1	1.0	ug/L
Chlorobenzene	MW-34	9/02/2021		3.4	1.0	ug/L
Chlorobenzene	MW-34	8/29/2022		1.7	1.0	ug/L
Chlorobenzene	MW-34	9/25/2023		1.8	1.0	ug/L
Chloroethane	MW-34	3/01/2016		1.6	1.0	ug/L
Dichlorodifluoromethane	MW-34	10/30/2012		3.7	1.0	ug/L
1,1-dichloroethane	MW-35	3/29/2011		1.0	1.0	ug/L
1,1-dichloroethane	MW-35	9/13/2011		6.0	1.0	ug/L
1,1-dichloroethane	MW-35	3/28/2012		4.0	1.0	ug/L
1,1-dichloroethane	MW-35	7/05/2012		4.4	1.0	ug/L
1,1-dichloroethane	MW-35	9/11/2012		4.3	1.0	ug/L
1,1-dichloroethane	MW-35	3/26/2013		2.4	1.0	ug/L
1,1-dichloroethane	MW-35	9/25/2013		3.0	1.0	ug/L
1,1-dichloroethane	MW-35	3/20/2014		3.1	1.0	ug/L
1,1-dichloroethane	MW-35	3/01/2016		2.2	1.0	ug/L
1,1-dichloroethane	MW-35	9/09/2016		1.9	1.0	ug/L
1,1-dichloroethane	MW-35	3/22/2017		1.7	1.0	ug/L
1,1-dichloroethane	MW-35	2/26/2018		1.9	1.0	ug/L
1,1-dichloroethane	MW-35	8/29/2018		1.5	1.0	ug/L
1,1-dichloroethane	MW-35	3/18/2019		1.2	1.0	ug/L
1,1-dichloroethane	MW-35	9/10/2019		1.3	1.0	ug/L
1,1-dichloroethane	MW-35	3/25/2020		1.0	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-35	7/09/2013		36	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-35	9/15/2014		20	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-35	8/24/2015		13	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-35	8/24/2017		15	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-35	8/29/2018		7	6	ug/L
Dichlorodifluoromethane	MW-35	3/26/2013		1.7	1.0	ug/L
Dichlorodifluoromethane	MW-35	5/17/2013		2.0	1.0	ug/L
Dichlorodifluoromethane	MW-35	7/09/2013		1.5	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Dichlorodifluoromethane	MW-35	9/25/2013		7.4	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/20/2014		3.5	1.0	ug/L
Dichlorodifluoromethane	MW-35	9/15/2014		2.3	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/06/2015		7.0	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/01/2016		5.9	1.0	ug/L
Dichlorodifluoromethane	MW-35	9/09/2016		4.3	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/22/2017		3.4	1.0	ug/L
Dichlorodifluoromethane	MW-35	8/24/2017		3.1	1.0	ug/L
Dichlorodifluoromethane	MW-35	2/26/2018		2.1	1.0	ug/L
Dichlorodifluoromethane	MW-35	8/29/2018		1.8	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/18/2019		1.1	1.0	ug/L
Dichlorodifluoromethane	MW-35	9/10/2019		1.5	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/25/2020		2.1	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/02/2022		1.5	1.0	ug/L
Dichlorodifluoromethane	MW-35	8/29/2022		1.5	1.0	ug/L
Dichlorodifluoromethane	MW-35	3/05/2024		1.2	1.0	ug/L
Dichlorodifluoromethane	MW-35	9/30/2024		1.2	1.0	ug/L
Trichloroethylene	MW-36	3/23/2023		3.5	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-3A	2/26/2018		193	30	ug/L
Bis(2-ethylhexyl) phthalate	MW-3A	3/23/2023		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	3/28/2012		25	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	9/25/2013		10	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	3/06/2015		25	10	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	8/24/2017		35	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	2/26/2018		262	30	ug/L
Bis(2-ethylhexyl) phthalate	MW-8	8/29/2018		24	6	ug/L
2-butanone (mek)	SW-101	5/06/2008		284	5	ug/L
4-methyl-2-pentanone (mibk)	SW-101	5/06/2008		35.3	5.0	ug/L
Benzene	SW-101	5/06/2008		3.3	1.0	ug/L
Methylene chloride	SW-101	5/06/2008		6.3	5.0	ug/L
1,2-dichloroethane	SW-102	3/26/2008		1.1	1.0	ug/L
1,2-dichloroethane	SW-102	5/06/2008		1.0	1.0	ug/L
2-butanone (mek)	SW-102	3/26/2008		334	5	ug/L
2-butanone (mek)	SW-102	5/06/2008		489	25	ug/L
2-butanone (mek)	SW-102	5/06/2008		607	5	ug/L
2-butanone (mek)	SW-102	7/23/2008		1340	50	ug/L
2-butanone (mek)	SW-102	7/23/2008		1210	5	ug/L
4-methyl-2-pentanone (mibk)	SW-102	3/26/2008		233	5	ug/L
4-methyl-2-pentanone (mibk)	SW-102	5/06/2008		242	5	ug/L
4-methyl-2-pentanone (mibk)	SW-102	7/23/2008		1340	50	ug/L
4-methyl-2-pentanone (mibk)	SW-102	7/23/2008		1480	5	ug/L
4-methyl-2-pentanone (mibk)	SW-102	9/30/2008		510	25	ug/L
4-methyl-2-pentanone (mibk)	SW-102	9/30/2008		504	5	ug/L
Acetone	SW-102	3/26/2008		271	10	ug/L
Acetone	SW-102	7/23/2008		168	10	ug/L
Benzene	SW-102	3/26/2008		2.4	1.0	ug/L
Benzene	SW-102	5/06/2008		3.2	1.0	ug/L
Benzene	SW-102	7/23/2008		2.4	1.0	ug/L
Benzene	SW-102	9/30/2008		1.4	1.0	ug/L
Benzene	SW-102	12/02/2008		1.0	1.0	ug/L

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

Attachment E

Assessment Statistics for the Verified VOC Detections

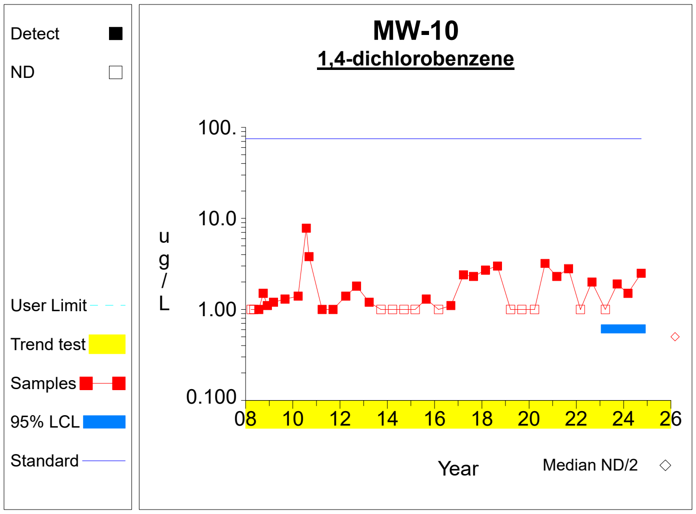
Table 1

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

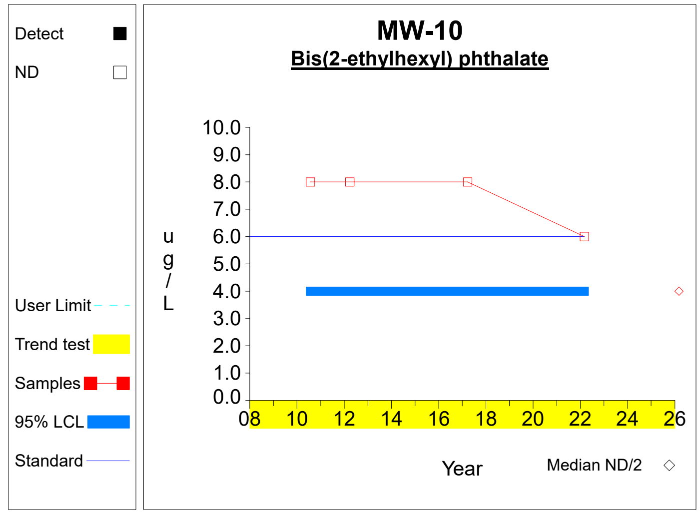
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
1,4-dichlorobenzene	ug/L	MW-10	4	1.600	0.841	1.176	0.611	2.589	75.000		
Bis(2-ethylhexyl) phthalate	ug/L	MW-10	4	4.000	0.000	1.176	4.000	4.000	6.000		
Chlorobenzene	ug/L	MW-10	4	1.050	0.640	1.176	0.297	1.803	100.000		
Chloroethane	ug/L	MW-10	4	0.500	0.000	1.176	0.500	0.500	2800.000		
Dichlorodifluoromethane	ug/L	MW-10	4	0.500	0.000	1.176	0.500	0.500	1000.000		
Trichloroethylene	ug/L	MW-10	4	0.500	0.000	1.176	0.500	0.500	5.000		
1,4-dichlorobenzene	ug/L	MW-34	4	3.100	4.217	1.176	0.000	8.060	75.000		
Bis(2-ethylhexyl) phthalate	ug/L	MW-34	4	4.250	2.500	1.176	1.309	7.191	6.000		
Chlorobenzene	ug/L	MW-34	4	0.825	0.650	1.176	0.060	1.590	100.000		
Chloroethane	ug/L	MW-34	4	0.500	0.000	1.176	0.500	0.500	2800.000		
Dichlorodifluoromethane	ug/L	MW-34	4	0.500	0.000	1.176	0.500	0.500	1000.000		
Trichloroethylene	ug/L	MW-34	4	0.500	0.000	1.176	0.500	0.500	5.000		
1,4-dichlorobenzene	ug/L	MW-35	4	0.500	0.000	1.176	0.500	0.500	75.000		
Bis(2-ethylhexyl) phthalate	ug/L	MW-35	4	4.000	0.000	1.176	4.000	4.000	6.000		
Chlorobenzene	ug/L	MW-35	4	0.500	0.000	1.176	0.500	0.500	100.000		
Chloroethane	ug/L	MW-35	4	0.500	0.000	1.176	0.500	0.500	2800.000		
Dichlorodifluoromethane	ug/L	MW-35	4	0.850	0.404	1.176	0.375	1.325	1000.000		
Trichloroethylene	ug/L	MW-35	4	0.500	0.000	1.176	0.500	0.500	5.000		
1,4-dichlorobenzene	ug/L	MW-36	4	0.500	0.000	1.176	0.500	0.500	75.000		
Bis(2-ethylhexyl) phthalate	ug/L	MW-36	3								*
Chlorobenzene	ug/L	MW-36	4	0.500	0.000	1.176	0.500	0.500	100.000		
Chloroethane	ug/L	MW-36	4	0.500	0.000	1.176	0.500	0.500	2800.000		
Dichlorodifluoromethane	ug/L	MW-36	3								*
Trichloroethylene	ug/L	MW-36	4	1.250	1.500	1.176	0.000	3.014	5.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

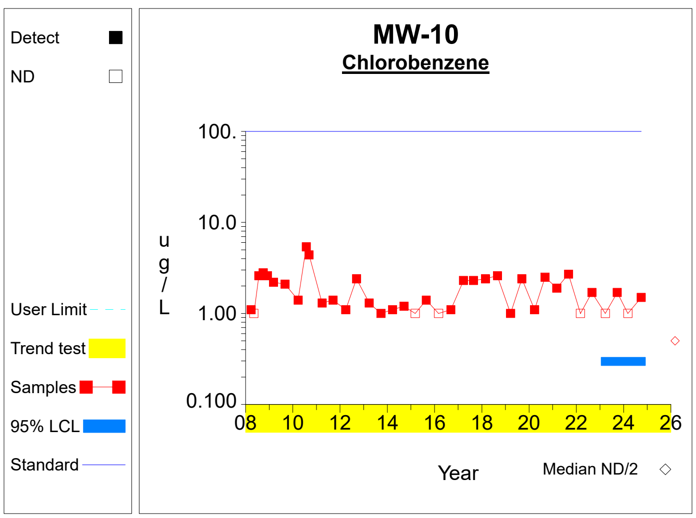
Confidence Limits (Assessment)



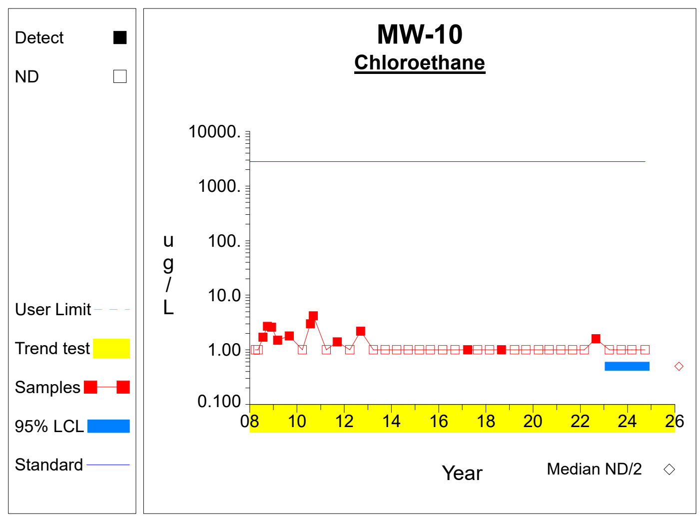
Graph 1



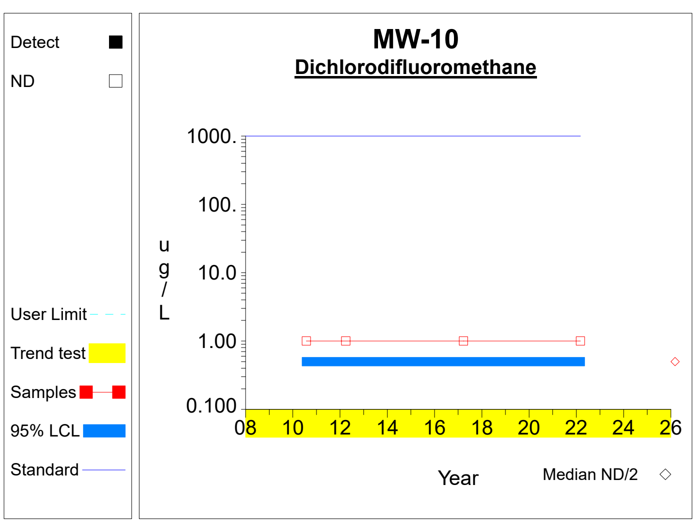
Graph 2



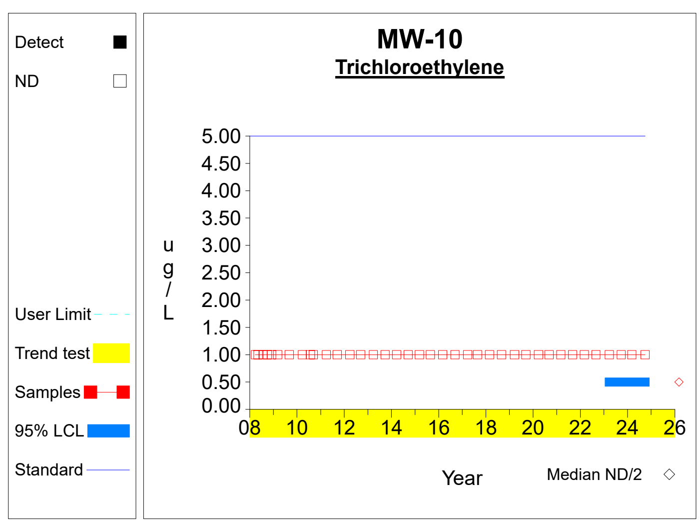
Graph 3



Graph 4



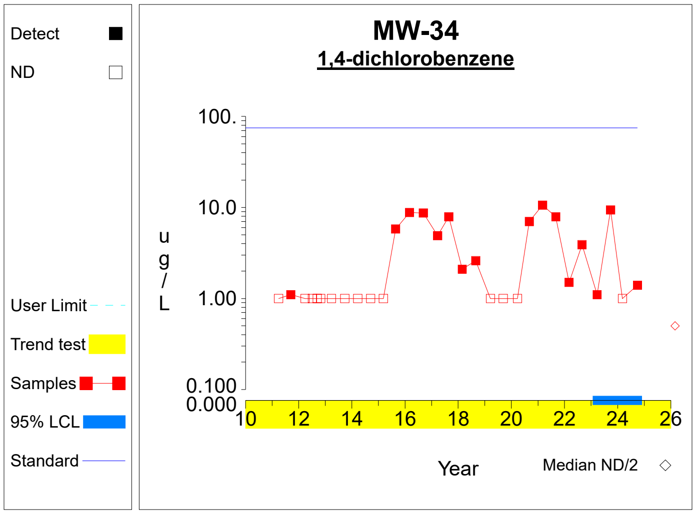
Graph 5



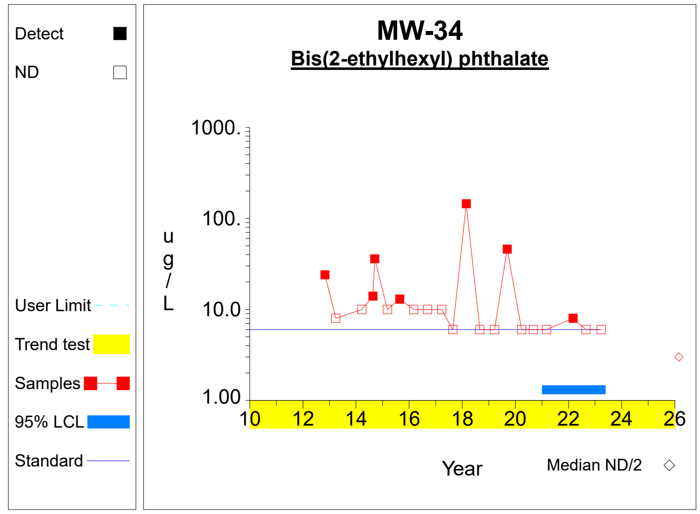
Graph 6

Prepared by: Otter Creek Environmental

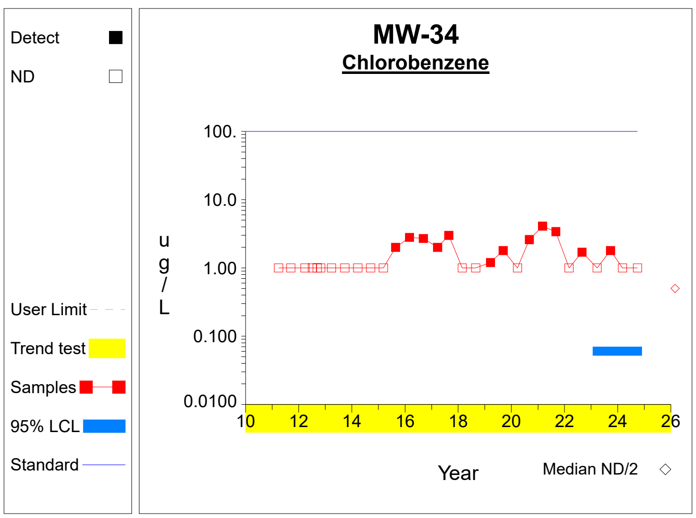
Confidence Limits (Assessment)



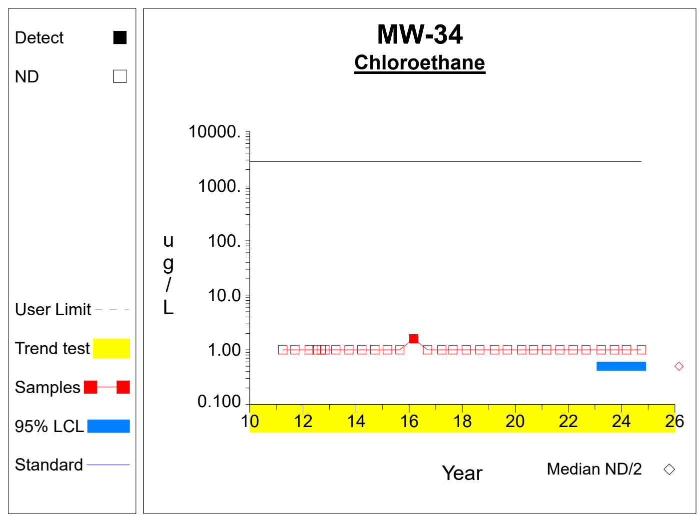
Graph 7



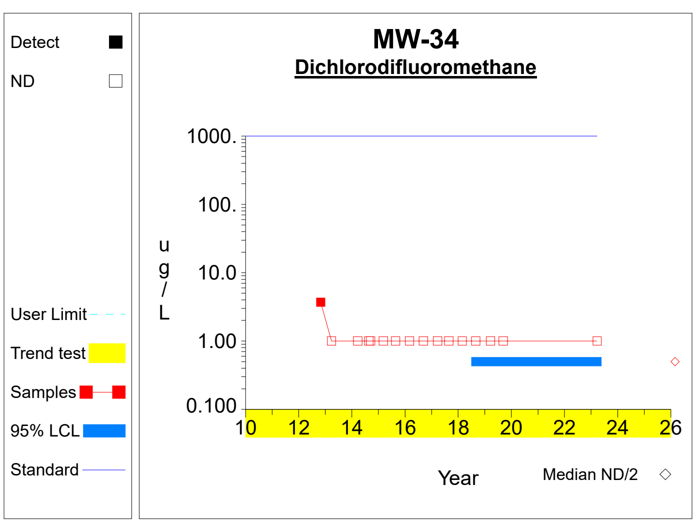
Graph 8



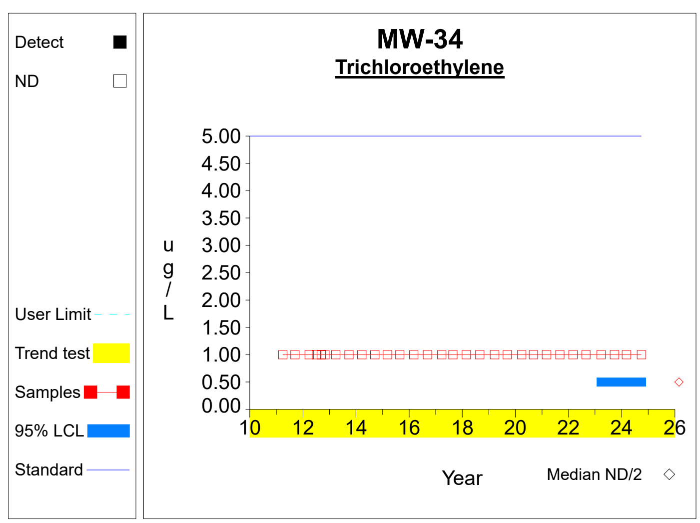
Graph 9



Graph 10

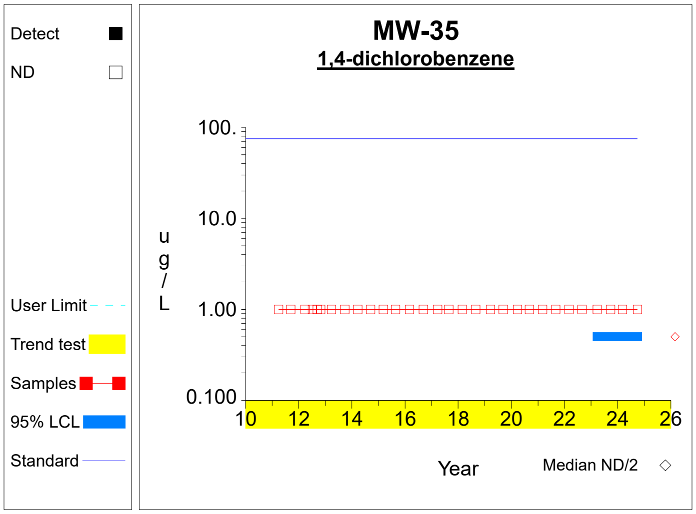


Graph 11

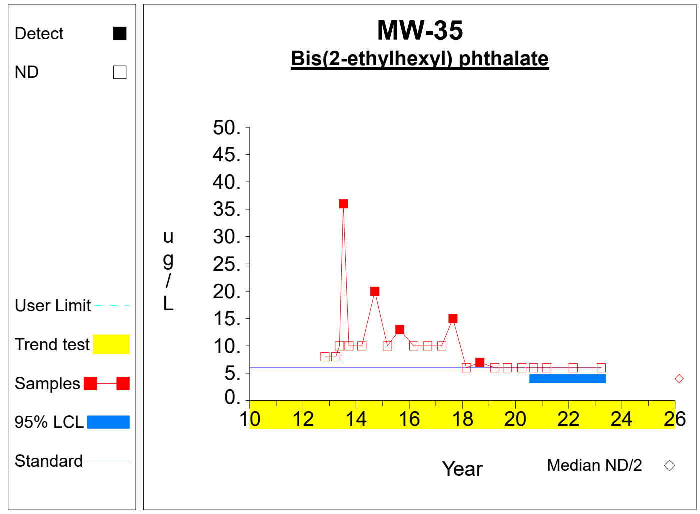


Graph 12

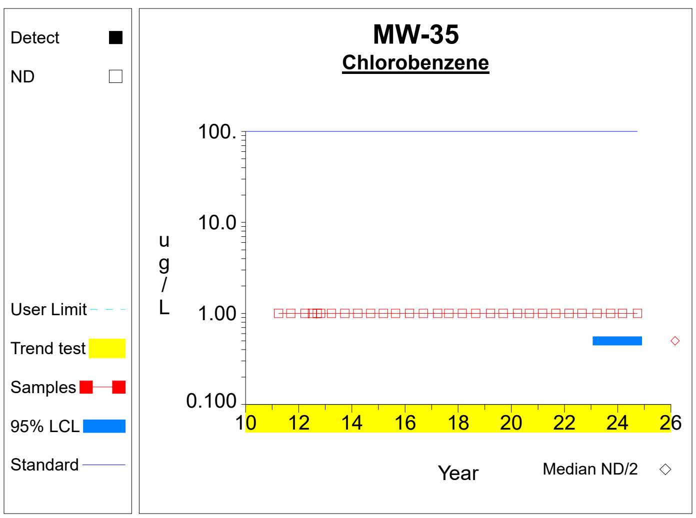
Confidence Limits (Assessment)



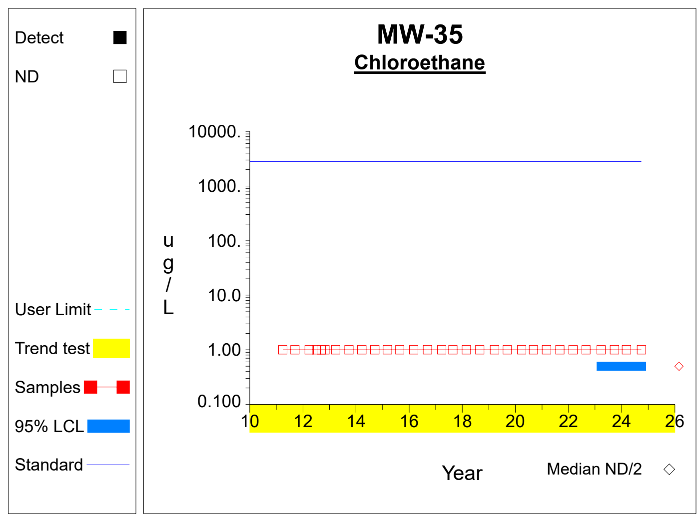
Graph 13



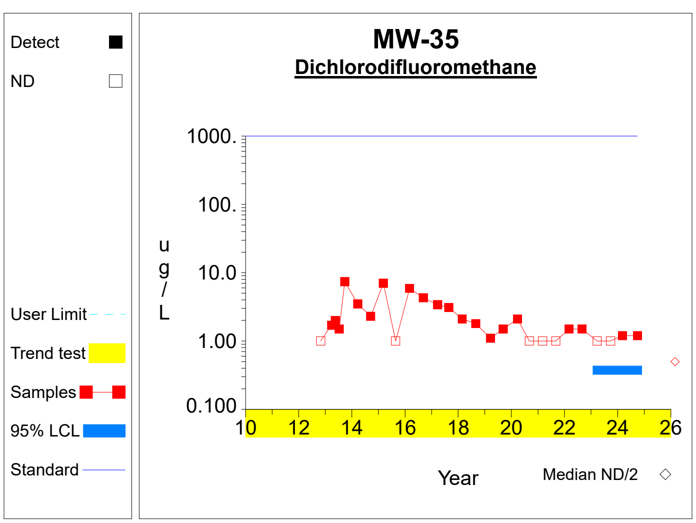
Graph 14



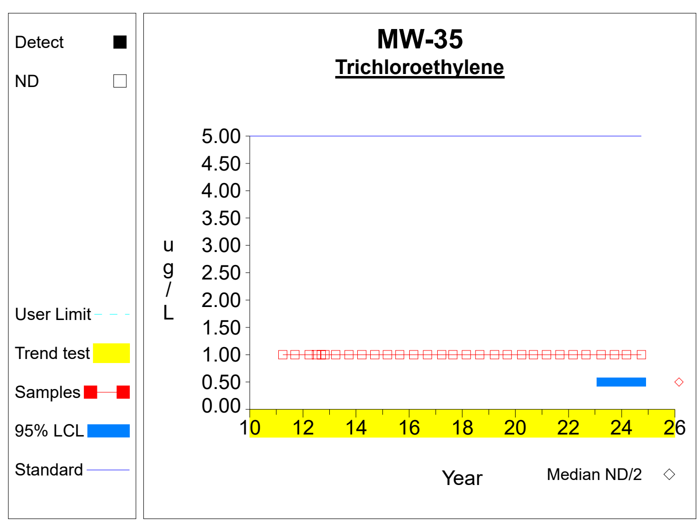
Graph 15



Graph 16

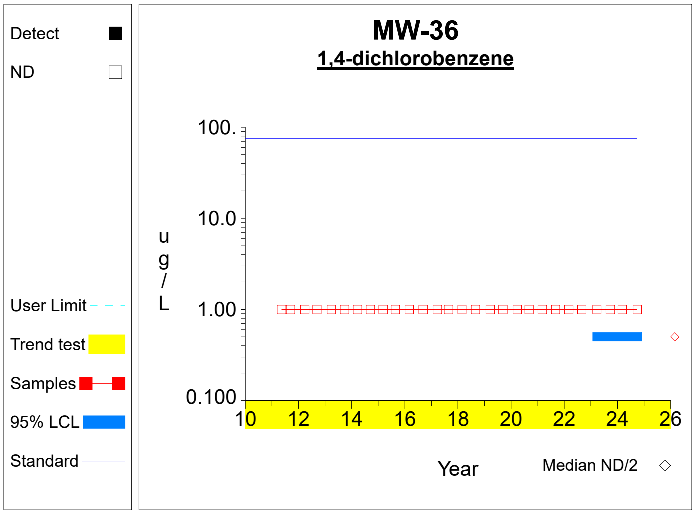


Graph 17

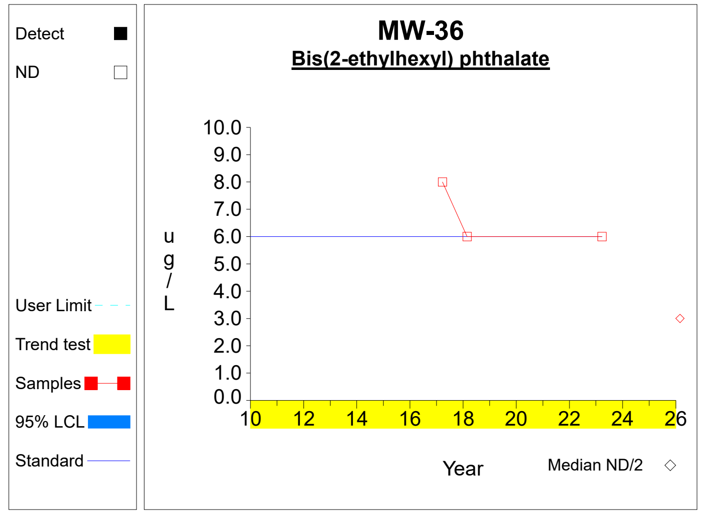


Graph 18

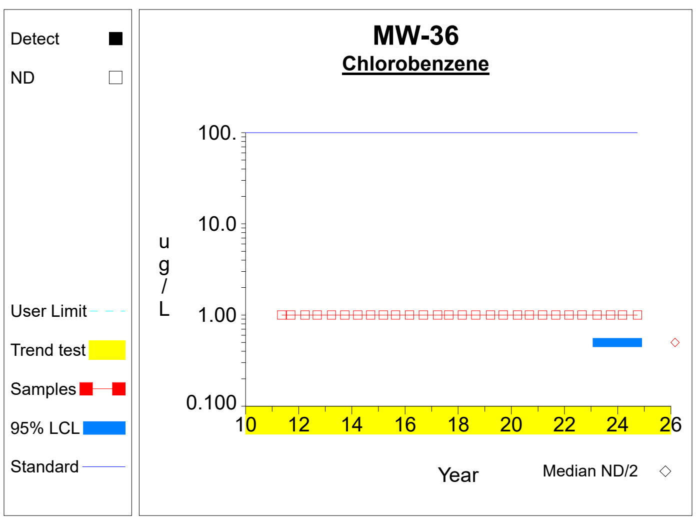
Confidence Limits (Assessment)



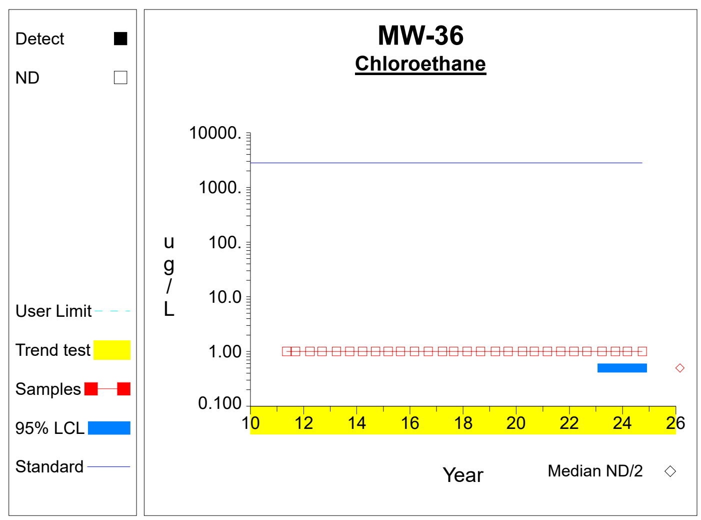
Graph 19



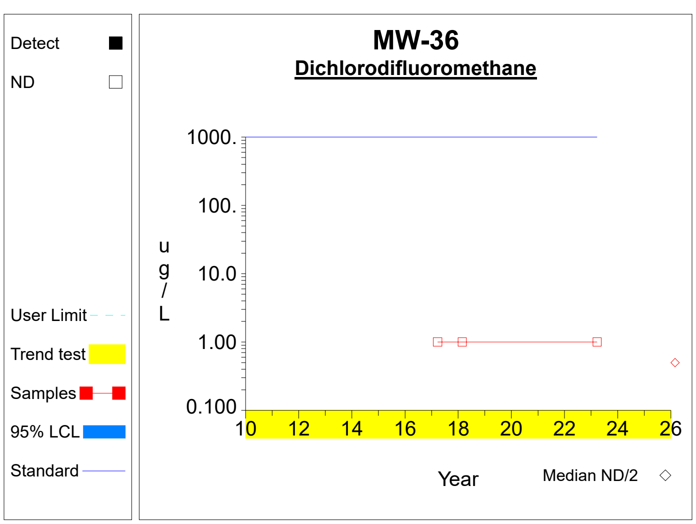
Graph 20



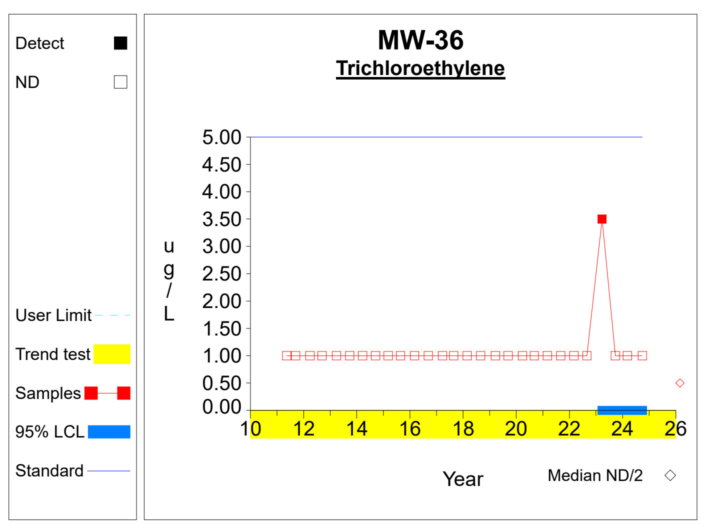
Graph 21



Graph 22



Graph 23



Graph 24

Worksheet 6 - Assessment Monitoring
1,4-dichlorobenzene (ug/L) at MW-10

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **6.4** / **4** = **1.6**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½} = ((**12.36 - 40.96/4**) / (**4**-1))^{½} = **0.841**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**^{½} = **1.6** - **2.353** * **0.841/4**^{½} = **0.611**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**^{½} = **1.6** + **2.353** * **0.841/4**^{½} = **2.589**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **38** * (**38**-1) / 2 = **703**	Number of sample pairs during trend detection period.
6	S = **0.012**	Sen's estimator of trend.
7	var(S) = **6104.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**703** ± **2.576** * **6104.667**^{½}) / 2 = [**250.866**, **452.134**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.046**, **0.125**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Bis(2-ethylhexyl) phthalate (ug/L) at MW-10

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **16.0** / **4** = **4.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**64.0** - **256.0**/**4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$ = **4.0** - **2.353** * **0.0**/**4**$^{1/2}$ = **4.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$ = **4.0** + **2.353** * **0.0**/**4**$^{1/2}$ = **4.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **4** * (**4**-1) / 2 = **6**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**6** ± **2.576** * **0.0**$^{1/2}$) / 2 = [**3.0**, **3.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chlorobenzene (ug/L) at MW-10

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **4.2** / **4** = **1.05**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**5.64 - 17.64/4**) / (**4**-1))$^{1/2}$ = **0.64**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**$^{1/2}$ = **1.05** - **2.353** * **0.64/4**$^{1/2}$ = **0.297**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS/N**$^{1/2}$ = **1.05** + **2.353** * **0.64/4**$^{1/2}$ = **1.803**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **38** * (**38**-1) / 2 = **703**	Number of sample pairs during trend detection period.
6	S = **-0.035**	Sen's estimator of trend.
7	var(S) = **6267.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**$^{1/2}$) / 2 = (**703** ± **2.576** * **6267.0**$^{1/2}$) / 2 = [**249.536**, **453.464**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.118**, **0.038**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chloroethane (ug/L) at MW-10

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**1.0** - **4.0**/**4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N$^{1/2}$** = **0.5** - **2.353** * **0.0/4$^{1/2}$** = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N$^{1/2}$** = **0.5** + **2.353** * **0.0/4$^{1/2}$** = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **38** * (**38**-1) / 2 = **703**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **4267.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)$^{1/2}$**) / 2 = (**703** ± **2.576** * **4267.667$^{1/2}$**) / 2 = [**267.358**, **435.642**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.069**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Dichlorodifluoromethane (ug/L) at MW-10

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.0 - 4.0/4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**^{½} = **0.5** - **2.353** * **0.0/4**^{½} = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**^{½} = **0.5** + **2.353** * **0.0/4**^{½} = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **4** * (**4**-1) / 2 = **6**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**^{½}) / 2 = (**6** ± **2.576** * **0.0**^{½}) / 2 = [**3.0**, **3.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Trichloroethylene (ug/L) at MW-10

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**1.0** - **4.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = $\overline{X}$ - **tS**/**N**^{½} = **0.5** - **2.353** * **0.0**/**4**^{½} = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{X}$ + **tS**/**N**^{½} = **0.5** + **2.353** * **0.0**/**4**^{½} = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **38** * (**38**-1) / 2 = **703**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**703** ± **2.576** * **0.0**^{½}) / 2 = [**351.5**, **351.5**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
1,4-dichlorobenzene (ug/L) at MW-34

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **12.4** / **4** = **3.1**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½} = ((**91.78** - **153.76**/**4**) / (**4**-1))^{½} = **4.217**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**^{½} = **3.1** - **2.353** * **4.217**/**4**^{½} = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**^{½} = **3.1** + **2.353** * **4.217**/**4**^{½} = **8.06**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.067**	Sen's estimator of trend.
7	var(S) = **2806.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**435** ± **2.576** * **2806.0**^{½}) / 2 = [**149.272**, **285.728**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.452**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Bis(2-ethylhexyl) phthalate (ug/L) at MW-34

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **17.0** / **4** = **4.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**91.0** - **289.0**/**4**) / (**4**-1))$^{1/2}$ = **2.5**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**$^{1/2}$ = **4.25 - 2.353** * **2.5/4**$^{1/2}$ = **1.309**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS/N**$^{1/2}$ = **4.25** + **2.353** * **2.5/4**$^{1/2}$ = **7.191**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **763.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **763.0**$^{1/2}$) / 2 = [**69.422**, **140.578**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.349**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chlorobenzene (ug/L) at MW-34

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute the mean of the last 4 measurements.
	= **3.3** / **4**	
	= **0.825**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$	Compute sd of the last 4 measurements.
	= ((**3.99** - **10.89**/**4**) / (**4**-1))$^{1/2}$	
	= **0.65**	
3	LCL = **$\overline{X}$** - **tS**/**N**$^{1/2}$	Compute lower confidence limit for the mean of the last 4 measurements.
	= **0.825** - **2.353** * **0.65**/**4**$^{1/2}$	
	= **0.06**	
4	UCL = **$\overline{X}$** + **tS**/**N**$^{1/2}$	Compute upper confidence limit for the mean of the last 4 measurements.
	= **0.825** + **2.353** * **0.65**/**4**$^{1/2}$	
	= **1.59**	
5	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **30** * (**30**-1) / 2	
	= **435**	
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **2442.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
	= (**435** ± **2.576** * **2442.667**$^{1/2}$) / 2	
	= [**153.843**, **281.157**]	
9	CL(S) = [**0.0**, **0.135**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chloroethane (ug/L) at MW-34

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**1.0** - **4.0**/**4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**$^{1/2}$ = **0.5** - **2.353** * **0.0**/**4**$^{1/2}$ = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**$^{1/2}$ = **0.5** + **2.353** * **0.0**/**4**$^{1/2}$ = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **299.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**435** ± **2.576** * **299.667**$^{1/2}$) / 2 = [**195.204**, **239.796**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Dichlorodifluoromethane (ug/L) at MW-34

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{2.0} / \mathbf{4}$ $= \mathbf{0.5}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2] - sum[X]^2/N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{1.0 - 4.0/4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \mathbf{\bar{X} - tS/N^{½}}$ $= \mathbf{0.5} - \mathbf{2.353} * \mathbf{0.0/4^{½}}$ $= \mathbf{0.5}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \mathbf{\bar{X} + tS/N^{½}}$ $= \mathbf{0.5} + \mathbf{2.353} * \mathbf{0.0/4^{½}}$ $= \mathbf{0.5}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{16} * (\mathbf{16}-1) / 2$ $= \mathbf{120}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{85.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N' \pm Z_{.995} * var(S)^{½}}) / 2$ $= (\mathbf{120} \pm \mathbf{2.576} * \mathbf{85.0}^{½}) / 2$ $= [\ \mathbf{48.125}, \mathbf{71.875}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Trichloroethylene (ug/L) at MW-34

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.0 - 4.0/4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**^{½} = **0.5** - **2.353** * **0.0/4**^{½} = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**^{½} = **0.5** + **2.353** * **0.0/4**^{½} = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**^{½}) / 2 = (**435** ± **2.576** * **0.0**^{½}) / 2 = [**217.5**, **217.5**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
1,4-dichlorobenzene (ug/L) at MW-35

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**1.0** - **4.0/4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**$^{1/2}$ = **0.5** - **2.353** * **0.0/4**$^{1/2}$ = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**$^{1/2}$ = **0.5** + **2.353** * **0.0/4**$^{1/2}$ = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**435** ± **2.576** * **0.0**$^{1/2}$) / 2 = [**217.5**, **217.5**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Bis(2-ethylhexyl) phthalate (ug/L) at MW-35

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **16.0** / **4** = **4.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**64.0** - **256.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**^{½} = **4.0** - **2.353** * **0.0**/**4**^{½} = **4.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**^{½} = **4.0** + **2.353** * **0.0**/**4**^{½} = **4.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **668.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**231** ± **2.576** * **668.333**^{½}) / 2 = [**82.202**, **148.798**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chlorobenzene (ug/L) at MW-35

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.0 - 4.0/4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = $\overline{\mathbf{X}}$ **- tS/N**^{½} = **0.5** - **2.353** * **0.0/4**^{½} = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{\mathbf{X}}$ **+ tS/N**^{½} = **0.5** + **2.353** * **0.0/4**^{½} = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**435** ± **2.576** * **0.0**^{½}) / 2 = [**217.5**, **217.5**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chloroethane (ug/L) at MW-35

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**1.0 - 4.0/4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$ = **0.5** - **2.353** * **0.0/4**$^{1/2}$ = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**$^{1/2}$ = **0.5** + **2.353** * **0.0/4**$^{1/2}$ = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**$^{1/2}$) / 2 = (**435** ± **2.576** * **0.0**$^{1/2}$) / 2 = [**217.5**, **217.5**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Dichlorodifluoromethane (ug/L) at MW-35

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{3.4} / \mathbf{4}$ $= \mathbf{0.85}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{3.38} - \mathbf{11.56/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{0.404}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{0.85} - \mathbf{2.353} * \mathbf{0.404/4}^{1/2}$ $= \mathbf{0.375}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{0.85} + \mathbf{2.353} * \mathbf{0.404/4}^{1/2}$ $= \mathbf{1.325}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{27} * (\mathbf{27}-1) / 2$ $= \mathbf{351}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{-0.151}$	Sen's estimator of trend.
7	$var(S) = \mathbf{2246.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{351} \pm \mathbf{2.576} * \mathbf{2246.0}^{1/2}) / 2$ $= [\ \mathbf{114.459}, \mathbf{236.541}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{-0.468}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Trichloroethylene (ug/L) at MW-35

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{2.0} / \mathbf{4}$ $= \mathbf{0.5}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{1.0} - \mathbf{4.0}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{0.5} - \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{1/2}$ $= \mathbf{0.5}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{0.5} + \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{1/2}$ $= \mathbf{0.5}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{30} * (\mathbf{30}-1) / 2$ $= \mathbf{435}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{435} \pm \mathbf{2.576} * \mathbf{0.0}^{1/2}) / 2$ $= [\ \mathbf{217.5}, \mathbf{217.5}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
1,4-dichlorobenzene (ug/L) at MW-36

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**1.0** - **4.0**/**4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **0.5** - **2.353** * **0.0**/**4**$^{1/2}$ = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **0.5** + **2.353** * **0.0**/**4**$^{1/2}$ = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **28** * (**28**-1) / 2 = **378**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**378** ± **2.576** * **0.0**$^{1/2}$) / 2 = [**189.0**, **189.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chlorobenzene (ug/L) at MW-36

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.0 - 4.0/4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**^{½} = **0.5** - **2.353** * **0.0/4**^{½} = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**^{½} = **0.5** + **2.353** * **0.0/4**^{½} = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **28** * (**28**-1) / 2 = **378**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**378** ± **2.576** * **0.0**^{½}) / 2 = [**189.0**, **189.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chloroethane (ug/L) at MW-36

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**1.0** - **4.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **0.5** - **2.353** * **0.0**/**4**^{½} = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **0.5** + **2.353** * **0.0**/**4**^{½} = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **28** * (**28**-1) / 2 = **378**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**378** ± **2.576** * **0.0**^{½}) / 2 = [**189.0**, **189.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Trichloroethylene (ug/L) at MW-36

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **5.0** / **4** = **1.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**13.0** - **25.0**/**4**) / (**4**-1))$^{1/2}$ = **1.5**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **1.25** - **2.353** * **1.5**/**4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **1.25** + **2.353** * **1.5**/**4**$^{1/2}$ = **3.014**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **28** * (**28**-1) / 2 = **378**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **261.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**$^{1/2}$) / 2 = (**378** ± **2.576** * **261.0**$^{1/2}$) / 2 = [**168.192**, **209.808**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Appendix D

Laboratory Reports for Reporting Period

With Chain of Custody

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0404

Project Description

6029

For:

Todd Whipple

HLW Engineering

PO Box 314

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Wednesday, March 20, 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., Newton

CERTIFICATE OF ANALYSIS

1HC0404

HLW Engineering

Todd Whipple
PO Box 314
Story City, IA 50248

Project Name: 6029

Project / PO Number: N/A
Received: 03/06/2024
Reported: 03/20/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-20(up)	1HC0404-01	Water	GRAB		03/05/24 10:01	03/06/24 10:04
MW-26(up)	1HC0404-02	Water	GRAB		03/05/24 09:25	03/06/24 10:04
MW-37(up)	1HC0404-03	Water	GRAB		03/05/24 09:41	03/06/24 10:04
MW-33(up)	1HC0404-04	Water	GRAB		03/05/24 10:14	03/06/24 10:04
MW-3A	1HC0404-05	Water	GRAB		03/05/24 12:17	03/06/24 10:04
MW-8	1HC0404-06	Water	GRAB		03/05/24 10:37	03/06/24 10:04
MW-10	1HC0404-07	Water	GRAB		03/05/24 10:58	03/06/24 10:04
MW-11	1HC0404-08	Water	GRAB		03/05/24 11:11	03/06/24 10:04
MW-27	1HC0404-09	Water	GRAB		03/05/24 11:25	03/06/24 10:04
MW-34	1HC0404-10	Water	GRAB		03/05/24 12:43	03/06/24 10:04
MW-35	1HC0404-11	Water	GRAB		03/05/24 11:41	03/06/24 10:04
MW-36	1HC0404-12	Water	GRAB		03/05/24 11:58	03/06/24 10:04
Duplicate	1HC0404-13	Water	GRAB		03/05/24 10:37	03/06/24 10:04

Analytical Testing Parameters

Client Sample ID:	MW-20(up)		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-01	**Collection Date:**	03/05/2024 10:01

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		03/08/24 0000	03/08/24 2326	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS

Client Sample ID:	MW-20(up)		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-01	**Collection Date:**	03/05/2024 10:01

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2326	LJS
Surrogate: Dibromofluoromethane	80.1	Limit: 75-136	% Rec	1		03/08/24 0000	03/08/24 2326	LJS
Surrogate: Dibromofluoromethane	80.1	Limit: 80-126	% Rec	1		03/08/24 0000	03/08/24 2326	LJS
Surrogate: 1,2-Dichloroethane-d4	75.4	Limit: 63-138	% Rec	1		03/08/24 0000	03/08/24 2326	LJS
Surrogate: 1,2-Dichloroethane-d4	75.4	Limit: 61-142	% Rec	1		03/08/24 0000	03/08/24 2326	LJS
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		03/08/24 0000	03/08/24 2326	LJS
Surrogate: Toluene-d8	103	Limit: 87-116	% Rec	1		03/08/24 0000	03/08/24 2326	LJS
Surrogate: 4-Bromofluorobenzene	91.6	Limit: 80-116	% Rec	1		03/08/24 0000	03/08/24 2326	LJS
Surrogate: 4-Bromofluorobenzene	91.6	Limit: 85-111	% Rec	1		03/08/24 0000	03/08/24 2326	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		03/11/24 0841	03/12/24 0245	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Barium, total	**0.201**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Cobalt, total	**0.0004**	0.0004	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0245	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0245	RVV

Client Sample ID:	MW-26(up)			
Sample Matrix:	Water		**Collected By:**	JGH
Lab Sample ID:	1HC0404-02		**Collection Date:**	03/05/2024 9:25

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		03/08/24 0000	03/08/24 2352	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS

Client Sample ID:	MW-26(up)		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-02	**Collection Date:**	03/05/2024 9:25

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		03/08/24 0000	03/08/24 2352	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/08/24 2352	LJS
Surrogate: Dibromofluoromethane	78.7	Limit: 75-136	% Rec	1		03/08/24 0000	03/08/24 2352	LJS
Surrogate: Dibromofluoromethane	78.7	Limit: 80-126	% Rec	1	**S-GC**	03/08/24 0000	03/08/24 2352	LJS
Surrogate: 1,2-Dichloroethane-d4	74.5	Limit: 63-138	% Rec	1		03/08/24 0000	03/08/24 2352	LJS
Surrogate: 1,2-Dichloroethane-d4	74.5	Limit: 61-142	% Rec	1		03/08/24 0000	03/08/24 2352	LJS
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		03/08/24 0000	03/08/24 2352	LJS
Surrogate: Toluene-d8	103	Limit: 87-116	% Rec	1		03/08/24 0000	03/08/24 2352	LJS
Surrogate: 4-Bromofluorobenzene	89.6	Limit: 80-116	% Rec	1		03/08/24 0000	03/08/24 2352	LJS
Surrogate: 4-Bromofluorobenzene	89.6	Limit: 85-111	% Rec	1		03/08/24 0000	03/08/24 2352	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		03/11/24 0841	03/12/24 0322	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Barium, total	**0.118**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0322	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0322	RVV

Client Sample ID:	MW-37(up)			
Sample Matrix:	Water		**Collected By:**	JGH
Lab Sample ID:	1HC0404-03		**Collection Date:**	03/05/2024 9:41

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		03/08/24 0000	03/09/24 0018	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS

Client Sample ID:	MW-37(up)			
Sample Matrix:	Water		**Collected By:**	JGH
Lab Sample ID:	1HC0404-03		**Collection Date:**	03/05/2024 9:41

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		03/08/24 0000	03/09/24 0018	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0018	LJS
Surrogate: Dibromofluoromethane	78.7	Limit: 75-136	% Rec	1		03/08/24 0000	03/09/24 0018	LJS
Surrogate: Dibromofluoromethane	78.7	Limit: 80-126	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0018	LJS
Surrogate: 1,2-Dichloroethane-d4	72.8	Limit: 63-138	% Rec	1		03/08/24 0000	03/09/24 0018	LJS
Surrogate: 1,2-Dichloroethane-d4	72.8	Limit: 61-142	% Rec	1		03/08/24 0000	03/09/24 0018	LJS
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec	1		03/08/24 0000	03/09/24 0018	LJS
Surrogate: Toluene-d8	104	Limit: 87-116	% Rec	1		03/08/24 0000	03/09/24 0018	LJS
Surrogate: 4-Bromofluorobenzene	91.4	Limit: 85-111	% Rec	1		03/08/24 0000	03/09/24 0018	LJS
Surrogate: 4-Bromofluorobenzene	91.4	Limit: 80-116	% Rec	1		03/08/24 0000	03/09/24 0018	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		03/11/24 0841	03/12/24 0328	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Barium, total	**0.0618**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Selenium, total	**0.0165**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0328	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0328	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0404

Client Sample ID:	MW-33(up)		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-04	**Collection Date:**	03/05/2024 10:14

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		03/08/24 0000	03/09/24 0045	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS

Client Sample ID:	MW-33(up)		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-04	**Collection Date:**	03/05/2024 10:14

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		03/08/24 0000	03/09/24 0045	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0045	LJS
Surrogate: Dibromofluoromethane	74.0	Limit: 75-136	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0045	LJS
Surrogate: Dibromofluoromethane	74.0	Limit: 80-126	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0045	LJS
Surrogate: 1,2-Dichloroethane-d4	69.5	Limit: 63-138	% Rec	1		03/08/24 0000	03/09/24 0045	LJS
Surrogate: 1,2-Dichloroethane-d4	69.5	Limit: 61-142	% Rec	1		03/08/24 0000	03/09/24 0045	LJS
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec	1		03/08/24 0000	03/09/24 0045	LJS
Surrogate: Toluene-d8	104	Limit: 87-116	% Rec	1		03/08/24 0000	03/09/24 0045	LJS
Surrogate: 4-Bromofluorobenzene	90.2	Limit: 80-116	% Rec	1		03/08/24 0000	03/09/24 0045	LJS
Surrogate: 4-Bromofluorobenzene	90.2	Limit: 85-111	% Rec	1		03/08/24 0000	03/09/24 0045	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		03/11/24 0841	03/12/24 0334	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Barium, total	**0.0773**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0334	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0334	RVV

Client Sample ID:	MW-3A		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-05	**Collection Date:**	03/05/2024 12:17

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		03/08/24 0000	03/09/24 0111	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0404

Client Sample ID:	MW-3A		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-05	**Collection Date:**	03/05/2024 12:17

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		03/08/24 0000	03/09/24 0111	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0111	LJS
Surrogate: Dibromofluoromethane	80.3	Limit: 75-136	% Rec	1		03/08/24 0000	03/09/24 0111	LJS
Surrogate: Dibromofluoromethane	80.3	Limit: 80-126	% Rec	1		03/08/24 0000	03/09/24 0111	LJS
Surrogate: 1,2-Dichloroethane-d4	75.2	Limit: 63-138	% Rec	1		03/08/24 0000	03/09/24 0111	LJS
Surrogate: 1,2-Dichloroethane-d4	75.2	Limit: 61-142	% Rec	1		03/08/24 0000	03/09/24 0111	LJS
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		03/08/24 0000	03/09/24 0111	LJS
Surrogate: Toluene-d8	103	Limit: 87-116	% Rec	1		03/08/24 0000	03/09/24 0111	LJS
Surrogate: 4-Bromofluorobenzene	89.7	Limit: 85-111	% Rec	1		03/08/24 0000	03/09/24 0111	LJS
Surrogate: 4-Bromofluorobenzene	89.7	Limit: 80-116	% Rec	1		03/08/24 0000	03/09/24 0111	LJS

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8270C								
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		03/11/24 1114	03/19/24 1854	EPP
Surrogate: Nitrobenzene-d5	82.6	Limit: 29-130	% Rec	1		03/11/24 1114	03/19/24 1854	EPP
Surrogate: 2-Fluorobiphenyl	68.5	Limit: 23-113	% Rec	1		03/11/24 1114	03/19/24 1854	EPP
Surrogate: Terphenyl-dl4	79.9	Limit: 27-141	% Rec	1		03/11/24 1114	03/19/24 1854	EPP

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		03/11/24 0841	03/12/24 0340	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Barium, total	**0.153**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Cobalt, total	**0.0011**	0.0004	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Nickel, total	**0.0126**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0340	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0340	RVV

MICROBAC

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0404

Client Sample ID:	MW-8		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-06	**Collection Date:**	03/05/2024 10:37

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		03/08/24 0000	03/09/24 0441	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS

Client Sample ID:	MW-8			
Sample Matrix:	Water		**Collected By:**	JGH
Lab Sample ID:	1HC0404-06		**Collection Date:**	03/05/2024 10:37

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		03/08/24 0000	03/09/24 0441	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0441	LJS
Surrogate: Dibromofluoromethane	71.9	Limit: 75-136	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0441	LJS
Surrogate: Dibromofluoromethane	71.9	Limit: 80-126	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0441	LJS
Surrogate: 1,2-Dichloroethane-d4	68.5	Limit: 61-142	% Rec	1		03/08/24 0000	03/09/24 0441	LJS
Surrogate: 1,2-Dichloroethane-d4	68.5	Limit: 63-138	% Rec	1		03/08/24 0000	03/09/24 0441	LJS
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		03/08/24 0000	03/09/24 0441	LJS
Surrogate: Toluene-d8	102	Limit: 87-116	% Rec	1		03/08/24 0000	03/09/24 0441	LJS
Surrogate: 4-Bromofluorobenzene	92.7	Limit: 80-116	% Rec	1		03/08/24 0000	03/09/24 0441	LJS
Surrogate: 4-Bromofluorobenzene	92.7	Limit: 85-111	% Rec	1		03/08/24 0000	03/09/24 0441	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		03/11/24 0841	03/12/24 0346	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Barium, total	**0.201**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Cobalt, total	**0.0006**	0.0004	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Nickel, total	**0.0055**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0346	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0346	RVV

Client Sample ID:	MW-10		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-07	**Collection Date:**	03/05/2024 10:58

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		03/08/24 0000	03/09/24 0508	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS

Client Sample ID:	MW-10		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-07	**Collection Date:**	03/05/2024 10:58

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		03/08/24 0000	03/09/24 0508	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,4-Dichlorobenzene	**1.5**	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0508	LJS
Surrogate: Dibromofluoromethane	73.1	Limit: 80-126	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0508	LJS
Surrogate: Dibromofluoromethane	73.1	Limit: 75-136	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0508	LJS
Surrogate: 1,2-Dichloroethane-d4	69.8	Limit: 61-142	% Rec	1		03/08/24 0000	03/09/24 0508	LJS
Surrogate: 1,2-Dichloroethane-d4	69.8	Limit: 63-138	% Rec	1		03/08/24 0000	03/09/24 0508	LJS
Surrogate: Toluene-d8	101	Limit: 87-116	% Rec	1		03/08/24 0000	03/09/24 0508	LJS
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		03/08/24 0000	03/09/24 0508	LJS
Surrogate: 4-Bromofluorobenzene	90.6	Limit: 85-111	% Rec	1		03/08/24 0000	03/09/24 0508	LJS
Surrogate: 4-Bromofluorobenzene	90.6	Limit: 80-116	% Rec	1		03/08/24 0000	03/09/24 0508	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		03/11/24 0841	03/12/24 0353	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Barium, total	**0.440**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Cobalt, total	**0.0057**	0.0004	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Nickel, total	**0.0111**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0353	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0353	RVV

Client Sample ID:	MW-11		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-08	**Collection Date:**	03/05/2024 11:11

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Cobalt, total	<0.0004	0.0004	mg/L	4		03/11/24 0841	03/12/24 0359	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0404

Client Sample ID:	MW-27		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-09	**Collection Date:**	03/05/2024 11:25

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		03/08/24 0000	03/09/24 0534	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS

CERTIFICATE OF ANALYSIS

1HC0404

Client Sample ID:	MW-27		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-09	**Collection Date:**	03/05/2024 11:25

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		03/08/24 0000	03/09/24 0534	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0534	LJS
Surrogate: Dibromofluoromethane	69.3	Limit: 80-126	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0534	LJS
Surrogate: Dibromofluoromethane	69.3	Limit: 75-136	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0534	LJS
Surrogate: 1,2-Dichloroethane-d4	65.2	Limit: 61-142	% Rec	1		03/08/24 0000	03/09/24 0534	LJS
Surrogate: 1,2-Dichloroethane-d4	65.2	Limit: 63-138	% Rec	1		03/08/24 0000	03/09/24 0534	LJS
Surrogate: Toluene-d8	103	Limit: 87-116	% Rec	1		03/08/24 0000	03/09/24 0534	LJS
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		03/08/24 0000	03/09/24 0534	LJS
Surrogate: 4-Bromofluorobenzene	91.5	Limit: 80-116	% Rec	1		03/08/24 0000	03/09/24 0534	LJS
Surrogate: 4-Bromofluorobenzene	91.5	Limit: 85-111	% Rec	1		03/08/24 0000	03/09/24 0534	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		03/11/24 0841	03/12/24 0405	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Barium, total	**0.194**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0405	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0405	RVV

Client Sample ID:	MW-34			
Sample Matrix:	Water		**Collected By:**	JGH
Lab Sample ID:	1HC0404-10		**Collection Date:**	03/05/2024 12:43

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		03/08/24 0000	03/09/24 0600	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS

CERTIFICATE OF ANALYSIS

1HC0404

Client Sample ID:	MW-34		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-10	**Collection Date:**	03/05/2024 12:43

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		03/08/24 0000	03/09/24 0600	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0600	LJS
Surrogate: Dibromofluoromethane	71.3	Limit: 75-136	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0600	LJS
Surrogate: Dibromofluoromethane	71.3	Limit: 80-126	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0600	LJS
Surrogate: 1,2-Dichloroethane-d4	68.0	Limit: 61-142	% Rec	1		03/08/24 0000	03/09/24 0600	LJS
Surrogate: 1,2-Dichloroethane-d4	68.0	Limit: 63-138	% Rec	1		03/08/24 0000	03/09/24 0600	LJS
Surrogate: Toluene-d8	101	Limit: 87-116	% Rec	1		03/08/24 0000	03/09/24 0600	LJS
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		03/08/24 0000	03/09/24 0600	LJS
Surrogate: 4-Bromofluorobenzene	89.9	Limit: 80-116	% Rec	1		03/08/24 0000	03/09/24 0600	LJS
Surrogate: 4-Bromofluorobenzene	89.9	Limit: 85-111	% Rec	1		03/08/24 0000	03/09/24 0600	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		03/11/24 0841	03/12/24 0423	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Barium, total	**0.192**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Cobalt, total	**0.0005**	0.0004	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Nickel, total	**0.0076**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0423	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0423	RVV

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0404

Client Sample ID:	MW-35		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-11	**Collection Date:**	03/05/2024 11:41

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Dichlorodifluoromethane	**1.2**	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LNH
Chloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS

Client Sample ID:	MW-35			
Sample Matrix:	Water		**Collected By:**	JGH
Lab Sample ID:	1HC0404-11		**Collection Date:**	03/05/2024 11:41

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0627	LJS
Surrogate: Dibromofluoromethane	69.4	Limit: 80-126	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0627	LJS
Surrogate: Dibromofluoromethane	69.4	Limit: 75-136	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0627	LJS
Surrogate: 1,2-Dichloroethane-d4	66.3	Limit: 63-138	% Rec	1		03/08/24 0000	03/09/24 0627	LJS
Surrogate: 1,2-Dichloroethane-d4	66.3	Limit: 61-142	% Rec	1		03/08/24 0000	03/09/24 0627	LJS
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		03/08/24 0000	03/09/24 0627	LJS
Surrogate: Toluene-d8	103	Limit: 87-116	% Rec	1		03/08/24 0000	03/09/24 0627	LJS
Surrogate: 4-Bromofluorobenzene	90.5	Limit: 85-111	% Rec	1		03/08/24 0000	03/09/24 0627	LJS
Surrogate: 4-Bromofluorobenzene	90.5	Limit: 80-116	% Rec	1		03/08/24 0000	03/09/24 0627	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		03/11/24 0841	03/12/24 0429	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Barium, total	**0.460**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0429	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0429	RVV

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0404

Client Sample ID:	MW-36			
Sample Matrix:	Water		**Collected By:**	JGH
Lab Sample ID:	1HC0404-12		**Collection Date:**	03/05/2024 11:58

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		03/08/24 0000	03/09/24 0653	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS

Client Sample ID:	MW-36		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-12	**Collection Date:**	03/05/2024 11:58

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		03/08/24 0000	03/09/24 0653	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0653	LJS
Surrogate: Dibromofluoromethane	68.5	Limit: 80-126	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0653	LJS
Surrogate: Dibromofluoromethane	68.5	Limit: 75-136	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0653	LJS
Surrogate: 1,2-Dichloroethane-d4	65.7	Limit: 61-142	% Rec	1		03/08/24 0000	03/09/24 0653	LJS
Surrogate: 1,2-Dichloroethane-d4	65.7	Limit: 63-138	% Rec	1		03/08/24 0000	03/09/24 0653	LJS
Surrogate: Toluene-d8	103	Limit: 87-116	% Rec	1		03/08/24 0000	03/09/24 0653	LJS
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		03/08/24 0000	03/09/24 0653	LJS
Surrogate: 4-Bromofluorobenzene	89.7	Limit: 85-111	% Rec	1		03/08/24 0000	03/09/24 0653	LJS
Surrogate: 4-Bromofluorobenzene	89.7	Limit: 80-116	% Rec	1		03/08/24 0000	03/09/24 0653	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		03/11/24 0841	03/12/24 0436	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Barium, total	**0.315**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0436	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0436	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0404

Client Sample ID:	Duplicate		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-13	**Collection Date:**	03/05/2024 10:37

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		03/08/24 0000	03/09/24 0719	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Acetone	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Chloroform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Benzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Toluene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Styrene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Bromoform	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS

Client Sample ID:	Duplicate		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0404-13	**Collection Date:**	03/05/2024 10:37

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		03/08/24 0000	03/09/24 0719	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/08/24 0000	03/09/24 0719	LJS
Surrogate: Dibromofluoromethane	71.6	Limit: 80-126	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0719	LJS
Surrogate: Dibromofluoromethane	71.6	Limit: 75-136	% Rec	1	**S-GC**	03/08/24 0000	03/09/24 0719	LJS
Surrogate: 1,2-Dichloroethane-d4	68.8	Limit: 63-138	% Rec	1		03/08/24 0000	03/09/24 0719	LJS
Surrogate: 1,2-Dichloroethane-d4	68.8	Limit: 61-142	% Rec	1		03/08/24 0000	03/09/24 0719	LJS
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		03/08/24 0000	03/09/24 0719	LJS
Surrogate: Toluene-d8	102	Limit: 87-116	% Rec	1		03/08/24 0000	03/09/24 0719	LJS
Surrogate: 4-Bromofluorobenzene	90.0	Limit: 85-111	% Rec	1		03/08/24 0000	03/09/24 0719	LJS
Surrogate: 4-Bromofluorobenzene	90.0	Limit: 80-116	% Rec	1		03/08/24 0000	03/09/24 0719	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		03/11/24 0841	03/12/24 0442	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Barium, total	**0.210**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Cobalt, total	**0.0007**	0.0004	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Nickel, total	**0.0057**	0.0040	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0442	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/11/24 0841	03/12/24 0442	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HC0510	1HC0510-BS1	
		1HC0510-BSD1	
		1HC0510-BLK1	
		1HC0404-01	MW-20(up)
		1HC0404-02	MW-26(up)
		1HC0404-03	MW-37(up)
		1HC0404-04	MW-33(up)
		1HC0404-05	MW-3A
		1HC0510-MS1	1HC0401-08
		1HC0510-MSD1	1HC0401-08
		1HC0510-BS2	
		1HC0510-BSD2	
		1HC0510-BLK2	
		1HC0404-06	MW-8
		1HC0404-07	MW-10
		1HC0404-09	MW-27
		1HC0404-10	MW-34
		1HC0404-11	MW-35
		1HC0404-12	MW-36
		1HC0404-13	Duplicate
		1HC0510-MS2	1HC0401-09
		1HC0510-MSD2	1HC0401-09

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HC0519	1HC0519-BLK1	
		1HC0519-BS1	
		1HC0404-01	MW-20(up)
		1HC0519-MS1	1HC0404-01
		1HC0519-MSD1	1HC0404-01
		1HC0519-PS1	1HC0404-01
		1HC0404-02	MW-26(up)
		1HC0404-03	MW-37(up)
		1HC0404-04	MW-33(up)
		1HC0404-05	MW-3A
		1HC0404-06	MW-8
		1HC0404-07	MW-10
		1HC0404-08	MW-11
		1HC0404-09	MW-27
		1HC0404-10	MW-34
		1HC0404-11	MW-35

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HC0519	1HC0404-12	MW-36
		1HC0404-13	Duplicate

Method	Batch	Laboratory ID	Client / Source ID
EPA 8270C	1HC0558	1HC0558-BLK1	
		1HC0558-BS1	
		1HC0558-BSD1	
		1HC0404-05	MW-3A

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 1HC0510 - EPA 5030B - EPA 8260B										
Blank (1HC0510-BLK1)				Prepared: 03/08/24 00:00 Analyzed: 03/08/24 16:25						
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							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	81.24	10.0	ug/L							QB-02
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							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
Blank (1HC0510-BLK1)			Prepared: 03/08/24 00:00 Analyzed: 03/08/24 16:25							
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	*37.2*		ug/L	*50.2*		*74.2*	*80-126*			*S-GC*
Surrogate: Dibromofluoromethane	*37.2*		ug/L	*50.2*		*74.2*	*75-136*			*S-GC*
Surrogate: 1,2-Dichloroethane-d4	*33.8*		ug/L	*50.1*		*67.5*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*33.8*		ug/L	*50.1*		*67.5*	*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	*48.4*		ug/L	*50.1*		*96.6*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*48.4*		ug/L	*50.1*		*96.6*	*80-116*			
Blank (1HC0510-BLK2)			Prepared: 03/08/24 00:00 Analyzed: 03/09/24 04:15							
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							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	81.15	10.0	ug/L							QB-02
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							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
Blank (1HC0510-BLK2)				Prepared: 03/08/24 00:00 Analyzed: 03/09/24 04:15						
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	*35.3*		ug/L	*50.2*		*70.4*	*80-126*			*S-GC*
Surrogate: Dibromofluoromethane	*35.3*		ug/L	*50.2*		*70.4*	*75-136*			*S-GC*
Surrogate: 1,2-Dichloroethane-d4	*33.5*		ug/L	*50.1*		*66.9*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*33.5*		ug/L	*50.1*		*66.9*	*61-142*			
Surrogate: Toluene-d8	*51.5*		ug/L	*50.4*		*102*	*87-116*			
Surrogate: Toluene-d8	*51.5*		ug/L	*50.4*		*102*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*46.0*		ug/L	*50.1*		*91.7*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*46.0*		ug/L	*50.1*		*91.7*	*80-116*			
LCS (1HC0510-BS1)				Prepared: 03/08/24 00:00 Analyzed: 03/08/24 15:06						
Dichlorodifluoromethane	31.94	1.0	ug/L	31.6		101	44-139			
Chloromethane	33.23	1.0	ug/L	30.6		108	63-155			
Vinyl Chloride	30.61	1.0	ug/L	30.2		101	70-154			
Bromomethane	30.17	1.0	ug/L	28.8		105	52-176			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
LCS (1HC0510-BS1)			Prepared: 03/08/24 00:00 Analyzed: 03/08/24 15:06							
Chloroethane	34.22	1.0	ug/L	31.6		108	72-148			
Trichlorofluoromethane	32.24	1.0	ug/L	32.6		98.9	70-152			
1,1-Dichloroethylene	55.05	1.0	ug/L	50.0		110	70-148			
Acetone	111.3	10.0	ug/L	102		109	43-172			
Methyl Iodide	111.6	1.0	ug/L	99.7		112	69-170			
Carbon Disulfide	99.86	1.0	ug/L	101		98.9	72-162			
Methylene Chloride	49.51	5.0	ug/L	50.0		99.0	68-142			
Acrylonitrile	82.61	5.0	ug/L	100		82.3	67-144			
trans-1,2-Dichloroethylene	51.83	1.0	ug/L	50.0		104	66-148			
1,1-Dichloroethane	50.53	1.0	ug/L	50.0		101	66-143			
Vinyl Acetate	114.5	5.0	ug/L	102		112	43-153			
cis-1,2-Dichloroethylene	51.62	1.0	ug/L	49.5		104	71-149			
2-Butanone (MEK)	103.9	10.0	ug/L	103		101	52-159			
Bromochloromethane	52.10	1.0	ug/L	50.0		104	69-143			
Chloroform	50.99	1.0	ug/L	50.0		102	69-144			
1,1,1-Trichloroethane	46.85	1.0	ug/L	50.0		93.7	62-129			
Carbon Tetrachloride	49.64	1.0	ug/L	50.0		99.3	63-141			
Benzene	50.69	1.0	ug/L	50.0		101	71-134			
1,2-Dichloroethane	49.04	1.0	ug/L	50.0		98.1	72-132			
Trichloroethylene	49.07	1.0	ug/L	50.0		98.1	71-135			
1,2-Dichloropropane	49.27	1.0	ug/L	50.0		98.5	69-136			
Dibromomethane	51.22	1.0	ug/L	50.0		102	73-147			
Bromodichloromethane	47.31	1.0	ug/L	50.0		94.6	68-129			
cis-1,3-Dichloropropene	48.59	1.0	ug/L	50.3		96.6	65-134			
4-Methyl-2-pentanone (MIBK)	97.75	5.0	ug/L	101		96.4	58-147			
Toluene	49.42	1.0	ug/L	50.0		98.8	72-133			
trans-1,3-Dichloropropene	47.44	1.0	ug/L	50.4		94.1	67-130			
1,1,2-Trichloroethane	48.55	1.0	ug/L	50.0		97.1	69-135			
Tetrachloroethylene	50.16	1.0	ug/L	50.0		100	69-130			
2-Hexanone (MBK)	100.4	5.0	ug/L	103		97.2	55-144			
Dibromochloromethane	49.30	1.0	ug/L	49.5		99.6	73-127			
1,2-Dibromoethane	49.08	1.0	ug/L	50.0		98.2	67-132			
Chlorobenzene	50.56	1.0	ug/L	50.0		101	72-123			
1,1,1,2-Tetrachloroethane	50.56	1.0	ug/L	50.0		101	73-127			
Ethylbenzene	48.11	1.0	ug/L	50.0		96.2	71-127			
Xylenes, total	144.9	2.0	ug/L	150		96.6	74-127			
Styrene	47.41	1.0	ug/L	50.0		94.8	66-126			
Bromoform	53.13	1.0	ug/L	50.0		106	68-130			
1,2,3-Trichloropropane	48.66	1.0	ug/L	50.0		97.3	63-136			
trans-1,4-Dichloro-2-butene	87.42	5.0	ug/L	104		84.1	54-134			
1,1,2,2-Tetrachloroethane	48.73	1.0	ug/L	49.8		97.8	61-131			
1,4-Dichlorobenzene	48.88	1.0	ug/L	50.0		97.8	70-129			
1,2-Dichlorobenzene	49.22	1.0	ug/L	50.0		98.4	69-126			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
LCS (1HC0510-BS1)				Prepared: 03/08/24 00:00 Analyzed: 03/08/24 15:06						
1,2-Dibromo-3-chloropropane	49.01	5.0	ug/L	50.0		98.0	50-143			
Surrogate: Dibromofluoromethane	*55.4*		ug/L	*50.2*		*110*	*80-126*			
Surrogate: Dibromofluoromethane	*55.4*		ug/L	*50.2*		*110*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*55.1*		ug/L	*50.1*		*110*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*55.1*		ug/L	*50.1*		*110*	*61-142*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.4*		*99.1*	*87-116*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.4*		*99.1*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*51.3*		ug/L	*50.1*		*102*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*51.3*		ug/L	*50.1*		*102*	*80-116*			
LCS (1HC0510-BS2)				Prepared: 03/08/24 00:00 Analyzed: 03/09/24 02:56						
Dichlorodifluoromethane	29.21	1.0	ug/L	31.6		92.5	44-139			
Chloromethane	31.68	1.0	ug/L	30.6		103	63-155			
Vinyl Chloride	28.94	1.0	ug/L	30.2		95.7	70-154			
Bromomethane	28.73	1.0	ug/L	28.8		99.8	52-176			
Chloroethane	32.15	1.0	ug/L	31.6		102	72-148			
Trichlorofluoromethane	29.53	1.0	ug/L	32.6		90.6	70-152			
1,1-Dichloroethylene	51.12	1.0	ug/L	50.0		102	70-148			
Acetone	107.6	10.0	ug/L	102		105	43-172			
Methyl Iodide	105.6	1.0	ug/L	99.7		106	69-170			
Carbon Disulfide	93.31	1.0	ug/L	101		92.4	72-162			
Methylene Chloride	45.97	5.0	ug/L	50.0		91.9	68-142			
Acrylonitrile	79.34	5.0	ug/L	100		79.1	67-144			
trans-1,2-Dichloroethylene	49.12	1.0	ug/L	50.0		98.2	66-148			
1,1-Dichloroethane	47.89	1.0	ug/L	50.0		95.8	66-143			
Vinyl Acetate	111.8	5.0	ug/L	102		110	43-153			
cis-1,2-Dichloroethylene	47.27	1.0	ug/L	49.5		95.5	71-149			
2-Butanone (MEK)	82.89	10.0	ug/L	103		80.2	52-159			
Bromochloromethane	49.11	1.0	ug/L	50.0		98.2	69-143			
Chloroform	47.92	1.0	ug/L	50.0		95.8	69-144			
1,1,1-Trichloroethane	44.27	1.0	ug/L	50.0		88.6	62-129			
Carbon Tetrachloride	47.24	1.0	ug/L	50.0		94.5	63-141			
Benzene	51.05	1.0	ug/L	50.0		102	71-134			
1,2-Dichloroethane	48.20	1.0	ug/L	50.0		96.4	72-132			
Trichloroethylene	49.37	1.0	ug/L	50.0		98.7	71-135			
1,2-Dichloropropane	49.61	1.0	ug/L	50.0		99.2	69-136			
Dibromomethane	50.26	1.0	ug/L	50.0		101	73-147			
Bromodichloromethane	46.68	1.0	ug/L	50.0		93.4	68-129			
cis-1,3-Dichloropropene	45.22	1.0	ug/L	50.3		89.9	65-134			
4-Methyl-2-pentanone (MIBK)	96.66	5.0	ug/L	101		95.3	58-147			
Toluene	49.59	1.0	ug/L	50.0		99.2	72-133			
trans-1,3-Dichloropropene	43.99	1.0	ug/L	50.4		87.2	67-130			
1,1,2-Trichloroethane	47.06	1.0	ug/L	50.0		94.1	69-135			
Tetrachloroethylene	50.34	1.0	ug/L	50.0		101	69-130			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
LCS (1HC0510-BS2)			Prepared: 03/08/24 00:00 Analyzed: 03/09/24 02:56							
2-Hexanone (MBK)	101.9	5.0	ug/L	103		98.7	55-144			
Dibromochloromethane	49.23	1.0	ug/L	49.5		99.5	73-127			
1,2-Dibromoethane	48.73	1.0	ug/L	50.0		97.5	67-132			
Chlorobenzene	51.67	1.0	ug/L	50.0		103	72-123			
1,1,1,2-Tetrachloroethane	51.01	1.0	ug/L	50.0		102	73-127			
Ethylbenzene	49.30	1.0	ug/L	50.0		98.6	71-127			
Xylenes, total	148.7	2.0	ug/L	150		99.2	74-127			
Styrene	48.46	1.0	ug/L	50.0		96.9	66-126			
Bromoform	51.96	1.0	ug/L	50.0		104	68-130			
1,2,3-Trichloropropane	49.16	1.0	ug/L	50.0		98.3	63-136			
trans-1,4-Dichloro-2-butene	79.04	5.0	ug/L	104		76.1	54-134			
1,1,2,2-Tetrachloroethane	48.96	1.0	ug/L	49.8		98.2	61-131			
1,4-Dichlorobenzene	48.73	1.0	ug/L	50.0		97.5	70-129			
1,2-Dichlorobenzene	49.17	1.0	ug/L	50.0		98.3	69-126			
1,2-Dibromo-3-chloropropane	45.75	5.0	ug/L	50.0		91.5	50-143			
Surrogate: Dibromofluoromethane	*51.0*		ug/L	*50.2*		*102*	*80-126*			
Surrogate: Dibromofluoromethane	*51.0*		ug/L	*50.2*		*102*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*51.6*		ug/L	*50.1*		*103*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*51.6*		ug/L	*50.1*		*103*	*61-142*			
Surrogate: Toluene-d8	*49.9*		ug/L	*50.4*		*99.0*	*87-116*			
Surrogate: Toluene-d8	*49.9*		ug/L	*50.4*		*99.0*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*51.7*		ug/L	*50.1*		*103*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*51.7*		ug/L	*50.1*		*103*	*80-116*			
LCS Dup (1HC0510-BSD1)			Prepared: 03/08/24 00:00 Analyzed: 03/08/24 15:32							
Dichlorodifluoromethane	30.98	1.0	ug/L	31.6		98.1	44-139	3.05	30	
Chloromethane	32.15	1.0	ug/L	30.6		105	63-155	3.30	24	
Vinyl Chloride	29.29	1.0	ug/L	30.2		96.9	70-154	4.41	25	
Bromomethane	30.26	1.0	ug/L	28.8		105	52-176	0.298	27	
Chloroethane	33.22	1.0	ug/L	31.6		105	72-148	2.97	25	
Trichlorofluoromethane	30.50	1.0	ug/L	32.6		93.5	70-152	5.55	26	
1,1-Dichloroethylene	51.55	1.0	ug/L	50.0		103	70-148	6.57	24	
Acetone	105.1	10.0	ug/L	102		103	43-172	5.76	30	
Methyl Iodide	108.2	1.0	ug/L	99.7		109	69-170	3.10	30	
Carbon Disulfide	95.46	1.0	ug/L	101		94.5	72-162	4.51	24	
Methylene Chloride	47.91	5.0	ug/L	50.0		95.8	68-142	3.28	21	
Acrylonitrile	79.03	5.0	ug/L	100		78.8	67-144	4.43	24	
trans-1,2-Dichloroethylene	48.52	1.0	ug/L	50.0		97.0	66-148	6.60	27	
1,1-Dichloroethane	47.17	1.0	ug/L	50.0		94.3	66-143	6.88	24	
Vinyl Acetate	113.8	5.0	ug/L	102		112	43-153	0.605	30	
cis-1,2-Dichloroethylene	48.47	1.0	ug/L	49.5		98.0	71-149	6.29	26	
2-Butanone (MEK)	93.68	10.0	ug/L	103		90.7	52-159	10.4	27	
Bromochloromethane	49.63	1.0	ug/L	50.0		99.3	69-143	4.86	23	
Chloroform	47.72	1.0	ug/L	50.0		95.4	69-144	6.63	23	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
LCS Dup (1HC0510-BSD1)				Prepared: 03/08/24 00:00 Analyzed: 03/08/24 15:32						
1,1,1-Trichloroethane	43.89	1.0	ug/L	50.0		87.8	62-129	6.52	24	
Carbon Tetrachloride	46.84	1.0	ug/L	50.0		93.7	63-141	5.80	25	
Benzene	48.94	1.0	ug/L	50.0		97.9	71-134	3.51	24	
1,2-Dichloroethane	46.66	1.0	ug/L	50.0		93.3	72-132	4.97	24	
Trichloroethylene	47.35	1.0	ug/L	50.0		94.7	71-135	3.57	24	
1,2-Dichloropropane	47.68	1.0	ug/L	50.0		95.4	69-136	3.28	24	
Dibromomethane	49.21	1.0	ug/L	50.0		98.4	73-147	4.00	25	
Bromodichloromethane	44.79	1.0	ug/L	50.0		89.6	68-129	5.47	22	
cis-1,3-Dichloropropene	46.85	1.0	ug/L	50.3		93.1	65-134	3.65	23	
4-Methyl-2-pentanone (MIBK)	99.48	5.0	ug/L	101		98.1	58-147	1.75	27	
Toluene	48.69	1.0	ug/L	50.0		97.4	72-133	1.49	24	
trans-1,3-Dichloropropene	46.14	1.0	ug/L	50.4		91.5	67-130	2.78	24	
1,1,2-Trichloroethane	46.79	1.0	ug/L	50.0		93.6	69-135	3.69	23	
Tetrachloroethylene	47.97	1.0	ug/L	50.0		95.9	69-130	4.46	25	
2-Hexanone (MBK)	100.6	5.0	ug/L	103		97.4	55-144	0.189	25	
Dibromochloromethane	47.18	1.0	ug/L	49.5		95.3	73-127	4.39	22	
1,2-Dibromoethane	47.55	1.0	ug/L	50.0		95.1	67-132	3.17	24	
Chlorobenzene	49.41	1.0	ug/L	50.0		98.8	72-123	2.30	23	
1,1,1,2-Tetrachloroethane	48.29	1.0	ug/L	50.0		96.6	73-127	4.59	24	
Ethylbenzene	46.79	1.0	ug/L	50.0		93.6	71-127	2.78	26	
Xylenes, total	141.9	2.0	ug/L	150		94.6	74-127	2.14	25	
Styrene	46.68	1.0	ug/L	50.0		93.4	66-126	1.55	23	
Bromoform	52.18	1.0	ug/L	50.0		104	68-130	1.80	23	
1,2,3-Trichloropropane	47.31	1.0	ug/L	50.0		94.6	63-136	2.81	24	
trans-1,4-Dichloro-2-butene	88.11	5.0	ug/L	104		84.8	54-134	0.786	27	
1,1,2,2-Tetrachloroethane	48.59	1.0	ug/L	49.8		97.5	61-131	0.288	29	
1,4-Dichlorobenzene	48.25	1.0	ug/L	50.0		96.5	70-129	1.30	24	
1,2-Dichlorobenzene	48.83	1.0	ug/L	50.0		97.7	69-126	0.796	26	
1,2-Dibromo-3-chloropropane	49.42	5.0	ug/L	50.0		98.8	50-143	0.833	30	
Surrogate: Dibromofluoromethane	*52.6*		ug/L	*50.2*		*105*	*80-126*			
Surrogate: Dibromofluoromethane	*52.6*		ug/L	*50.2*		*105*	*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*	*61-142*			
Surrogate: Toluene-d8	*50.8*		ug/L	*50.4*		*101*	*87-116*			
Surrogate: Toluene-d8	*50.8*		ug/L	*50.4*		*101*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*51.2*		ug/L	*50.1*		*102*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*51.2*		ug/L	*50.1*		*102*	*80-116*			
LCS Dup (1HC0510-BSD2)				Prepared: 03/08/24 00:00 Analyzed: 03/09/24 03:22						
Dichlorodifluoromethane	27.17	1.0	ug/L	31.6		86.0	44-139	7.24	30	
Chloromethane	29.79	1.0	ug/L	30.6		97.2	63-155	6.15	24	
Vinyl Chloride	27.13	1.0	ug/L	30.2		89.8	70-154	6.46	25	
Bromomethane	27.51	1.0	ug/L	28.8		95.5	52-176	4.34	27	
Chloroethane	30.52	1.0	ug/L	31.6		96.5	72-148	5.20	25	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
LCS Dup (1HC0510-BSD2)				Prepared: 03/08/24 00:00 Analyzed: 03/09/24 03:22						
Trichlorofluoromethane	27.62	1.0	ug/L	32.6		84.7	70-152	6.68	26	
1,1-Dichloroethylene	48.48	1.0	ug/L	50.0		97.0	70-148	5.30	24	
Acetone	106.5	10.0	ug/L	102		104	43-172	1.02	30	
Methyl Iodide	100.7	1.0	ug/L	99.7		101	69-170	4.75	30	
Carbon Disulfide	87.36	1.0	ug/L	101		86.5	72-162	6.59	24	
Methylene Chloride	44.88	5.0	ug/L	50.0		89.8	68-142	2.40	21	
Acrylonitrile	78.48	5.0	ug/L	100		78.2	67-144	1.09	24	
trans-1,2-Dichloroethylene	46.66	1.0	ug/L	50.0		93.3	66-148	5.14	27	
1,1-Dichloroethane	45.47	1.0	ug/L	50.0		90.9	66-143	5.18	24	
Vinyl Acetate	108.6	5.0	ug/L	102		107	43-153	2.83	30	
cis-1,2-Dichloroethylene	45.44	1.0	ug/L	49.5		91.8	71-149	3.95	26	
2-Butanone (MEK)	89.39	10.0	ug/L	103		86.5	52-159	7.55	27	
Bromochloromethane	48.32	1.0	ug/L	50.0		96.6	69-143	1.62	23	
Chloroform	46.24	1.0	ug/L	50.0		92.5	69-144	3.57	23	
1,1,1-Trichloroethane	41.91	1.0	ug/L	50.0		83.9	62-129	5.48	24	
Carbon Tetrachloride	44.39	1.0	ug/L	50.0		88.8	63-141	6.22	25	
Benzene	48.24	1.0	ug/L	50.0		96.5	71-134	5.66	24	
1,2-Dichloroethane	46.86	1.0	ug/L	50.0		93.7	72-132	2.82	24	
Trichloroethylene	46.22	1.0	ug/L	50.0		92.4	71-135	6.59	24	
1,2-Dichloropropane	47.42	1.0	ug/L	50.0		94.8	69-136	4.51	24	
Dibromomethane	49.17	1.0	ug/L	50.0		98.3	73-147	2.19	25	
Bromodichloromethane	44.83	1.0	ug/L	50.0		89.7	68-129	4.04	22	
cis-1,3-Dichloropropene	44.26	1.0	ug/L	50.3		87.9	65-134	2.15	23	
4-Methyl-2-pentanone (MIBK)	96.05	5.0	ug/L	101		94.7	58-147	0.633	27	
Toluene	46.92	1.0	ug/L	50.0		93.8	72-133	5.53	24	
trans-1,3-Dichloropropene	43.10	1.0	ug/L	50.4		85.5	67-130	2.04	24	
1,1,2-Trichloroethane	46.23	1.0	ug/L	50.0		92.5	69-135	1.78	23	
Tetrachloroethylene	46.82	1.0	ug/L	50.0		93.6	69-130	7.25	25	
2-Hexanone (MBK)	100.8	5.0	ug/L	103		97.5	55-144	1.16	25	
Dibromochloromethane	47.34	1.0	ug/L	49.5		95.6	73-127	3.91	22	
1,2-Dibromoethane	48.09	1.0	ug/L	50.0		96.2	67-132	1.32	24	
Chlorobenzene	48.82	1.0	ug/L	50.0		97.6	72-123	5.67	23	
1,1,1,2-Tetrachloroethane	48.78	1.0	ug/L	50.0		97.6	73-127	4.47	24	
Ethylbenzene	46.26	1.0	ug/L	50.0		92.5	71-127	6.36	26	
Xylenes, total	140.1	2.0	ug/L	150		93.4	74-127	5.98	25	
Styrene	46.52	1.0	ug/L	50.0		93.0	66-126	4.09	23	
Bromoform	50.90	1.0	ug/L	50.0		102	68-130	2.06	23	
1,2,3-Trichloropropane	48.17	1.0	ug/L	50.0		96.3	63-136	2.03	24	
trans-1,4-Dichloro-2-butene	79.37	5.0	ug/L	104		76.4	54-134	0.417	27	
1,1,2,2-Tetrachloroethane	48.47	1.0	ug/L	49.8		97.2	61-131	1.01	29	
1,4-Dichlorobenzene	46.94	1.0	ug/L	50.0		93.9	70-129	3.74	24	
1,2-Dichlorobenzene	47.39	1.0	ug/L	50.0		94.8	69-126	3.69	26	
1,2-Dibromo-3-chloropropane	45.50	5.0	ug/L	50.0		91.0	50-143	0.548	30	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
LCS Dup (1HC0510-BSD2)			Prepared: 03/08/24 00:00 Analyzed: 03/09/24 03:22							
Surrogate: Dibromofluoromethane	*50.5*		ug/L	*50.2*		*101*	*80-126*			
Surrogate: Dibromofluoromethane	*50.5*		ug/L	*50.2*		*101*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*52.4*		ug/L	*50.1*		*105*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*52.4*		ug/L	*50.1*		*105*	*61-142*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.4*		*98.1*	*87-116*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.4*		*98.1*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*51.5*		ug/L	*50.1*		*103*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*51.5*		ug/L	*50.1*		*103*	*80-116*			
Matrix Spike (1HC0510-MS1)	**Source: 1HC0401-08**		Prepared: 03/08/24 00:00 Analyzed: 03/09/24 02:04							
Dichlorodifluoromethane	293.8	10.0	ug/L	316	ND	93.0	47-137			
Chloromethane	316.8	10.0	ug/L	306	ND	103	61-152			
Vinyl Chloride	295.5	10.0	ug/L	302	ND	97.8	66-149			
Bromomethane	281.8	10.0	ug/L	288	ND	97.8	43-171			
Chloroethane	326.0	10.0	ug/L	316	ND	103	69-148			
Trichlorofluoromethane	304.3	10.0	ug/L	326	ND	93.3	62-163			
1,1-Dichloroethylene	522.9	10.0	ug/L	500	ND	105	70-148			
Acetone	1050	100	ug/L	1020	ND	103	45-173			
Methyl Iodide	1065	10.0	ug/L	997	ND	107	62-167			
Carbon Disulfide	963.1	10.0	ug/L	1010	ND	95.4	71-163			
Methylene Chloride	461.6	50.0	ug/L	500	ND	92.3	69-140			
Acrylonitrile	773.0	50.0	ug/L	1000	ND	77.0	58-151			
trans-1,2-Dichloroethylene	499.2	10.0	ug/L	500	ND	99.8	69-144			
1,1-Dichloroethane	495.2	10.0	ug/L	500	18.96	95.2	70-138			
Vinyl Acetate	1152	50.0	ug/L	1020	ND	113	58-142			
cis-1,2-Dichloroethylene	477.4	10.0	ug/L	495	ND	96.5	68-151			
2-Butanone (MEK)	922.0	100	ug/L	1030	ND	89.3	50-160			
Bromochloromethane	486.5	10.0	ug/L	500	ND	97.3	65-143			
Chloroform	484.6	10.0	ug/L	500	ND	96.9	71-143			
1,1,1-Trichloroethane	455.0	10.0	ug/L	500	ND	91.0	63-133			
Carbon Tetrachloride	483.5	10.0	ug/L	500	ND	96.7	63-142			
Benzene	513.7	10.0	ug/L	500	ND	103	69-133			
1,2-Dichloroethane	480.9	10.0	ug/L	500	ND	96.2	63-138			
Trichloroethylene	497.9	10.0	ug/L	500	ND	99.6	71-133			
1,2-Dichloropropane	490.5	10.0	ug/L	500	ND	98.1	69-132			
Dibromomethane	504.2	10.0	ug/L	500	ND	101	70-147			
Bromodichloromethane	466.5	10.0	ug/L	500	ND	93.3	67-130			
cis-1,3-Dichloropropene	449.2	10.0	ug/L	503	ND	89.3	61-126			
4-Methyl-2-pentanone (MIBK)	936.3	50.0	ug/L	1010	ND	92.3	55-147			
Toluene	498.6	10.0	ug/L	500	ND	99.7	71-133			
trans-1,3-Dichloropropene	432.7	10.0	ug/L	504	ND	85.8	63-124			
1,1,2-Trichloroethane	471.8	10.0	ug/L	500	ND	94.4	69-133			
Tetrachloroethylene	510.9	10.0	ug/L	500	ND	102	70-124			
2-Hexanone (MBK)	976.2	50.0	ug/L	1030	ND	94.5	53-141			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
Matrix Spike (1HC0510-MS1)	**Source: 1HC0401-08**	Prepared: 03/08/24 00:00 Analyzed: 03/09/24 02:04								
Dibromochloromethane	487.3	10.0	ug/L	495	ND	98.4	74-122			
1,2-Dibromoethane	473.9	10.0	ug/L	500	ND	94.8	66-127			
Chlorobenzene	508.6	10.0	ug/L	500	ND	102	76-116			
1,1,1,2-Tetrachloroethane	508.3	10.0	ug/L	500	ND	102	77-121			
Ethylbenzene	490.5	10.0	ug/L	500	ND	98.1	73-124			
Xylenes, total	1473	20.0	ug/L	1500	ND	98.2	75-123			
Styrene	479.1	10.0	ug/L	500	ND	95.8	70-120			
Bromoform	512.7	10.0	ug/L	500	ND	103	70-124			
1,2,3-Trichloropropane	484.4	10.0	ug/L	500	ND	96.9	62-135			
trans-1,4-Dichloro-2-butene	795.4	50.0	ug/L	1040	ND	76.6	50-120			
1,1,2,2-Tetrachloroethane	479.9	10.0	ug/L	498	ND	96.3	63-126			
1,4-Dichlorobenzene	480.5	10.0	ug/L	500	ND	96.1	72-119			
1,2-Dichlorobenzene	485.4	10.0	ug/L	500	ND	97.1	71-117			
1,2-Dibromo-3-chloropropane	452.6	50.0	ug/L	500	ND	90.5	49-134			
Surrogate: Dibromofluoromethane	*524*		ug/L	*502*		*104*	*80-126*			
Surrogate: Dibromofluoromethane	*524*		ug/L	*502*		*104*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*525*		ug/L	*501*		*105*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*525*		ug/L	*501*		*105*	*61-142*			
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	*510*		ug/L	*501*		*102*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*510*		ug/L	*501*		*102*	*80-116*			
Matrix Spike (1HC0510-MS2)	**Source: 1HC0401-09**	Prepared: 03/08/24 00:00 Analyzed: 03/09/24 07:46								
Dichlorodifluoromethane	262.1	10.0	ug/L	316	ND	83.0	47-137			
Chloromethane	276.6	10.0	ug/L	306	ND	90.3	61-152			
Vinyl Chloride	277.3	10.0	ug/L	302	ND	91.7	66-149			
Bromomethane	257.7	10.0	ug/L	288	ND	89.5	43-171			
Chloroethane	274.1	10.0	ug/L	316	ND	86.6	69-148			
Trichlorofluoromethane	262.5	10.0	ug/L	326	ND	80.5	62-163			
1,1-Dichloroethylene	452.7	10.0	ug/L	500	ND	90.5	70-148			
Acetone	984.1	100	ug/L	1020	ND	96.5	45-173			
Methyl Iodide	926.1	10.0	ug/L	997	ND	92.9	62-167			
Carbon Disulfide	927.5	10.0	ug/L	1010	ND	91.8	71-163			
Methylene Chloride	435.1	50.0	ug/L	500	ND	87.0	69-140			
Acrylonitrile	433.7	50.0	ug/L	1000	ND	43.2	58-151			QM-05
trans-1,2-Dichloroethylene	459.6	10.0	ug/L	500	ND	91.9	69-144			
1,1-Dichloroethane	457.3	10.0	ug/L	500	ND	91.5	70-138			
Vinyl Acetate	1241	50.0	ug/L	1020	ND	122	58-142			
cis-1,2-Dichloroethylene	424.2	10.0	ug/L	495	ND	85.7	68-151			
2-Butanone (MEK)	855.1	100	ug/L	1030	ND	82.8	50-160			
Bromochloromethane	434.6	10.0	ug/L	500	ND	86.9	65-143			
Chloroform	451.4	10.0	ug/L	500	ND	90.3	71-143			
1,1,1-Trichloroethane	464.1	10.0	ug/L	500	ND	92.9	63-133			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
Matrix Spike (1HC0510-MS2)	**Source: 1HC0401-09**	Prepared: 03/08/24 00:00 Analyzed: 03/09/24 07:46								
Carbon Tetrachloride	461.9	10.0	ug/L	500	ND	92.4	63-142			
Benzene	505.4	10.0	ug/L	500	ND	101	69-133			
1,2-Dichloroethane	469.7	10.0	ug/L	500	ND	93.9	63-138			
Trichloroethylene	494.1	10.0	ug/L	500	ND	98.8	71-133			
1,2-Dichloropropane	481.2	10.0	ug/L	500	ND	96.2	69-132			
Dibromomethane	459.3	10.0	ug/L	500	ND	91.9	70-147			
Bromodichloromethane	474.5	10.0	ug/L	500	ND	94.9	67-130			
cis-1,3-Dichloropropene	434.2	10.0	ug/L	503	ND	86.3	61-126			
4-Methyl-2-pentanone (MIBK)	877.4	50.0	ug/L	1010	ND	86.5	55-147			
Toluene	498.7	10.0	ug/L	500	ND	99.7	71-133			
trans-1,3-Dichloropropene	419.5	10.0	ug/L	504	ND	83.2	63-124			
1,1,2-Trichloroethane	466.5	10.0	ug/L	500	ND	93.3	69-133			
Tetrachloroethylene	513.8	10.0	ug/L	500	ND	103	70-124			
2-Hexanone (MBK)	901.4	50.0	ug/L	1030	ND	87.3	53-141			
Dibromochloromethane	473.7	10.0	ug/L	495	ND	95.7	74-122			
1,2-Dibromoethane	464.9	10.0	ug/L	500	ND	93.0	66-127			
Chlorobenzene	521.3	10.0	ug/L	500	ND	104	76-116			
1,1,1,2-Tetrachloroethane	495.7	10.0	ug/L	500	ND	99.1	77-121			
Ethylbenzene	505.0	10.0	ug/L	500	ND	101	73-124			
Xylenes, total	1510	20.0	ug/L	1500	ND	101	75-123			
Styrene	496.4	10.0	ug/L	500	ND	99.3	70-120			
Bromoform	490.0	10.0	ug/L	500	ND	98.0	70-124			
1,2,3-Trichloropropane	471.0	10.0	ug/L	500	ND	94.2	62-135			
trans-1,4-Dichloro-2-butene	787.7	50.0	ug/L	1040	ND	75.8	50-120			
1,1,2,2-Tetrachloroethane	479.1	10.0	ug/L	498	ND	96.1	63-126			
1,4-Dichlorobenzene	473.4	10.0	ug/L	500	ND	94.7	72-119			
1,2-Dichlorobenzene	487.7	10.0	ug/L	500	ND	97.5	71-117			
1,2-Dibromo-3-chloropropane	439.4	50.0	ug/L	500	ND	87.9	49-134			
Surrogate: Dibromofluoromethane	*484*		ug/L	*502*		*96.5*	*80-126*			
Surrogate: Dibromofluoromethane	*484*		ug/L	*502*		*96.5*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*499*		ug/L	*501*		*99.7*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*499*		ug/L	*501*		*99.7*	*61-142*			
Surrogate: Toluene-d8	*497*		ug/L	*504*		*98.6*	*87-116*			
Surrogate: Toluene-d8	*497*		ug/L	*504*		*98.6*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*508*		ug/L	*501*		*101*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*508*		ug/L	*501*		*101*	*80-116*			
Matrix Spike Dup (1HC0510-MSD1)	**Source: 1HC0401-08**	Prepared: 03/08/24 00:00 Analyzed: 03/09/24 02:30								
Dichlorodifluoromethane	284.3	10.0	ug/L	316	ND	90.0	47-137	3.29	20	
Chloromethane	304.3	10.0	ug/L	306	ND	99.3	61-152	4.03	26	
Vinyl Chloride	284.1	10.0	ug/L	302	ND	94.0	66-149	3.93	23	
Bromomethane	277.7	10.0	ug/L	288	ND	96.4	43-171	1.47	29	
Chloroethane	313.9	10.0	ug/L	316	ND	99.2	69-148	3.78	25	
Trichlorofluoromethane	297.6	10.0	ug/L	326	ND	91.3	62-163	2.23	25	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HC0510-MSD1)		**Source: 1HC0401-08**	Prepared: 03/08/24 00:00 Analyzed: 03/09/24 02:30							
1,1-Dichloroethylene	515.3	10.0	ug/L	500	ND	103	70-148	1.46	22	
Acetone	1096	100	ug/L	1020	ND	107	45-173	4.28	30	
Methyl Iodide	1029	10.0	ug/L	997	ND	103	62-167	3.47	24	
Carbon Disulfide	930.3	10.0	ug/L	1010	ND	92.1	71-163	3.46	22	
Methylene Chloride	456.8	50.0	ug/L	500	ND	91.4	69-140	1.05	19	
Acrylonitrile	812.2	50.0	ug/L	1000	ND	80.9	58-151	4.95	15	
trans-1,2-Dichloroethylene	495.7	10.0	ug/L	500	ND	99.1	69-144	0.704	22	
1,1-Dichloroethane	494.8	10.0	ug/L	500	18.96	95.2	70-138	0.0808	20	
Vinyl Acetate	1124	50.0	ug/L	1020	ND	110	58-142	2.49	24	
cis-1,2-Dichloroethylene	479.7	10.0	ug/L	495	ND	97.0	68-151	0.481	22	
2-Butanone (MEK)	987.4	100	ug/L	1030	ND	95.6	50-160	6.85	23	
Bromochloromethane	496.2	10.0	ug/L	500	ND	99.2	65-143	1.97	22	
Chloroform	486.8	10.0	ug/L	500	ND	97.4	71-143	0.453	21	
1,1,1-Trichloroethane	447.7	10.0	ug/L	500	ND	89.6	63-133	1.62	23	
Carbon Tetrachloride	477.0	10.0	ug/L	500	ND	95.4	63-142	1.35	22	
Benzene	499.8	10.0	ug/L	500	ND	100	69-133	2.74	18	
1,2-Dichloroethane	487.5	10.0	ug/L	500	ND	97.5	63-138	1.36	20	
Trichloroethylene	482.8	10.0	ug/L	500	ND	96.6	71-133	3.08	23	
1,2-Dichloropropane	487.4	10.0	ug/L	500	ND	97.5	69-132	0.634	20	
Dibromomethane	508.0	10.0	ug/L	500	ND	102	70-147	0.751	22	
Bromodichloromethane	467.6	10.0	ug/L	500	ND	93.5	67-130	0.236	21	
cis-1,3-Dichloropropene	452.5	10.0	ug/L	503	ND	89.9	61-126	0.732	21	
4-Methyl-2-pentanone (MIBK)	972.7	50.0	ug/L	1010	ND	95.9	55-147	3.81	23	
Toluene	483.7	10.0	ug/L	500	ND	96.7	71-133	3.03	19	
trans-1,3-Dichloropropene	440.7	10.0	ug/L	504	ND	87.4	63-124	1.83	21	
1,1,2-Trichloroethane	479.4	10.0	ug/L	500	ND	95.9	69-133	1.60	19	
Tetrachloroethylene	498.0	10.0	ug/L	500	ND	99.6	70-124	2.56	24	
2-Hexanone (MBK)	1022	50.0	ug/L	1030	ND	98.9	53-141	4.57	24	
Dibromochloromethane	494.4	10.0	ug/L	495	ND	99.9	74-122	1.45	21	
1,2-Dibromoethane	487.4	10.0	ug/L	500	ND	97.5	66-127	2.81	23	
Chlorobenzene	501.5	10.0	ug/L	500	ND	100	76-116	1.41	21	
1,1,1,2-Tetrachloroethane	505.5	10.0	ug/L	500	ND	101	77-121	0.552	25	
Ethylbenzene	479.3	10.0	ug/L	500	ND	95.9	73-124	2.31	20	
Xylenes, total	1440	20.0	ug/L	1500	ND	96.0	75-123	2.27	20	
Styrene	472.1	10.0	ug/L	500	ND	94.4	70-120	1.47	23	
Bromoform	522.6	10.0	ug/L	500	ND	105	70-124	1.91	22	
1,2,3-Trichloropropane	491.3	10.0	ug/L	500	ND	98.3	62-135	1.41	28	
trans-1,4-Dichloro-2-butene	815.5	50.0	ug/L	1040	ND	78.5	50-120	2.50	26	
1,1,2,2-Tetrachloroethane	487.6	10.0	ug/L	498	ND	97.8	63-126	1.59	24	
1,4-Dichlorobenzene	477.4	10.0	ug/L	500	ND	95.5	72-119	0.647	24	
1,2-Dichlorobenzene	480.9	10.0	ug/L	500	ND	96.2	71-117	0.931	24	
1,2-Dibromo-3-chloropropane	463.5	50.0	ug/L	500	ND	92.7	49-134	2.38	28	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HC0510-MSD1)	**Source: 1HC0401-08**	Prepared: 03/08/24 00:00 Analyzed: 03/09/24 02:30								
Surrogate: Dibromofluoromethane	*529*		ug/L	*502*		*105*	*80-126*			
Surrogate: Dibromofluoromethane	*529*		ug/L	*502*		*105*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*544*		ug/L	*501*		*109*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*544*		ug/L	*501*		*109*	*61-142*			
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	*512*		ug/L	*501*		*102*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*512*		ug/L	*501*		*102*	*80-116*			
Matrix Spike Dup (1HC0510-MSD2)	**Source: 1HC0401-09**	Prepared: 03/08/24 00:00 Analyzed: 03/09/24 08:12								
Dichlorodifluoromethane	246.4	10.0	ug/L	316	ND	78.0	47-137	6.18	20	
Chloromethane	264.5	10.0	ug/L	306	ND	86.3	61-152	4.47	26	
Vinyl Chloride	263.5	10.0	ug/L	302	ND	87.2	66-149	5.10	23	
Bromomethane	255.6	10.0	ug/L	288	ND	88.8	43-171	0.818	29	
Chloroethane	263.2	10.0	ug/L	316	ND	83.2	69-148	4.06	25	
Trichlorofluoromethane	251.4	10.0	ug/L	326	ND	77.1	62-163	4.32	25	
1,1-Dichloroethylene	435.9	10.0	ug/L	500	ND	87.2	70-148	3.78	22	
Acetone	988.7	100	ug/L	1020	ND	96.9	45-173	0.466	30	
Methyl Iodide	884.2	10.0	ug/L	997	ND	88.7	62-167	4.63	24	
Carbon Disulfide	886.5	10.0	ug/L	1010	ND	87.8	71-163	4.52	22	
Methylene Chloride	423.6	50.0	ug/L	500	ND	84.7	69-140	2.68	19	
Acrylonitrile	432.0	50.0	ug/L	1000	ND	43.0	58-151	0.393	15	QM-05
trans-1,2-Dichloroethylene	450.5	10.0	ug/L	500	ND	90.1	69-144	2.00	22	
1,1-Dichloroethane	444.2	10.0	ug/L	500	ND	88.8	70-138	2.91	20	
Vinyl Acetate	1301	50.0	ug/L	1020	ND	128	58-142	4.73	24	
cis-1,2-Dichloroethylene	417.5	10.0	ug/L	495	ND	84.4	68-151	1.59	22	
2-Butanone (MEK)	796.8	100	ug/L	1030	ND	77.1	50-160	7.06	23	
Bromochloromethane	433.1	10.0	ug/L	500	ND	86.6	65-143	0.346	22	
Chloroform	440.9	10.0	ug/L	500	ND	88.2	71-143	2.35	21	
1,1,1-Trichloroethane	450.1	10.0	ug/L	500	ND	90.1	63-133	3.06	23	
Carbon Tetrachloride	445.5	10.0	ug/L	500	ND	89.1	63-142	3.61	22	
Benzene	492.4	10.0	ug/L	500	ND	98.5	69-133	2.61	18	
1,2-Dichloroethane	462.6	10.0	ug/L	500	ND	92.5	63-138	1.52	20	
Trichloroethylene	484.1	10.0	ug/L	500	ND	96.8	71-133	2.04	23	
1,2-Dichloropropane	476.2	10.0	ug/L	500	ND	95.2	69-132	1.04	20	
Dibromomethane	460.9	10.0	ug/L	500	ND	92.2	70-147	0.348	22	
Bromodichloromethane	467.0	10.0	ug/L	500	ND	93.4	67-130	1.59	21	
cis-1,3-Dichloropropene	435.1	10.0	ug/L	503	ND	86.5	61-126	0.207	21	
4-Methyl-2-pentanone (MIBK)	893.8	50.0	ug/L	1010	ND	88.1	55-147	1.85	23	
Toluene	486.2	10.0	ug/L	500	ND	97.2	71-133	2.54	19	
trans-1,3-Dichloropropene	423.2	10.0	ug/L	504	ND	83.9	63-124	0.878	21	
1,1,2-Trichloroethane	462.6	10.0	ug/L	500	ND	92.5	69-133	0.840	19	
Tetrachloroethylene	500.5	10.0	ug/L	500	ND	100	70-124	2.62	24	
2-Hexanone (MBK)	921.3	50.0	ug/L	1030	ND	89.2	53-141	2.18	24	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0510 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HC0510-MSD2)	**Source: 1HC0401-09**		Prepared: 03/08/24 00:00 Analyzed: 03/09/24 08:12							
Dibromochloromethane	470.7	10.0	ug/L	495	ND	95.1	74-122	0.635	21	
1,2-Dibromoethane	467.5	10.0	ug/L	500	ND	93.5	66-127	0.558	23	
Chlorobenzene	513.8	10.0	ug/L	500	ND	103	76-116	1.45	21	
1,1,1,2-Tetrachloroethane	489.4	10.0	ug/L	500	ND	97.9	77-121	1.28	25	
Ethylbenzene	496.4	10.0	ug/L	500	ND	99.3	73-124	1.72	20	
Xylenes, total	1491	20.0	ug/L	1500	ND	99.4	75-123	1.29	20	
Styrene	489.9	10.0	ug/L	500	ND	98.0	70-120	1.32	23	
Bromoform	494.5	10.0	ug/L	500	ND	98.9	70-124	0.914	22	
1,2,3-Trichloropropane	479.7	10.0	ug/L	500	ND	95.9	62-135	1.83	28	
trans-1,4-Dichloro-2-butene	787.9	50.0	ug/L	1040	ND	75.8	50-120	0.0254	26	
1,1,2,2-Tetrachloroethane	489.9	10.0	ug/L	498	ND	98.3	63-126	2.23	24	
1,4-Dichlorobenzene	475.6	10.0	ug/L	500	ND	95.1	72-119	0.464	24	
1,2-Dichlorobenzene	485.8	10.0	ug/L	500	ND	97.2	71-117	0.390	24	
1,2-Dibromo-3-chloropropane	437.6	50.0	ug/L	500	ND	87.5	49-134	0.410	28	
Surrogate: Dibromofluoromethane	*476*		ug/L	*502*		*94.8*	*80-126*			
Surrogate: Dibromofluoromethane	*476*		ug/L	*502*		*94.8*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*496*		ug/L	*501*		*99.0*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*496*		ug/L	*501*		*99.0*	*61-142*			
Surrogate: Toluene-d8	*496*		ug/L	*504*		*98.5*	*87-116*			
Surrogate: Toluene-d8	*496*		ug/L	*504*		*98.5*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*512*		ug/L	*501*		*102*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*512*		ug/L	*501*		*102*	*80-116*			

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0558 - EPA 625 BNA - EPA 8270C										
Blank (1HC0558-BLK1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 15:12							
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L							
Surrogate: Nitrobenzene-d5	*48.7*		ug/L	*62.6*		*77.7*	*29-130*			
Surrogate: 2-Fluorobiphenyl	*37.9*		ug/L	*60.0*		*63.1*	*23-113*			
Surrogate: Terphenyl-dl4	*57.1*		ug/L	*60.0*		*95.0*	*27-141*			
LCS (1HC0558-BS1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 15:37							
Bis(2-Ethylhexyl) Phthalate	22.3	6	ug/L	21.4		104	33-184			
Surrogate: Nitrobenzene-d5	*52.4*		ug/L	*62.6*		*83.6*	*38-115*			
Surrogate: 2-Fluorobiphenyl	*38.5*		ug/L	*60.0*		*64.1*	*33-110*			
Surrogate: Terphenyl-dl4	*57.6*		ug/L	*60.0*		*96.0*	*30-142*			
LCS Dup (1HC0558-BSD1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 16:02							
Bis(2-Ethylhexyl) Phthalate	20.4	6	ug/L	21.4		95.3	33-184	9.18	30	
Surrogate: Nitrobenzene-d5	*50.9*		ug/L	*62.6*		*81.3*	*38-115*			

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0558 - EPA 625 BNA - EPA 8270C										
LCS Dup (1HC0558-BSD1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 16:02							
Surrogate: 2-Fluorobiphenyl	*36.2*		ug/L	*60.0*		*60.3*	*33-110*			
Surrogate: Terphenyl-dl4	*56.5*		ug/L	*60.0*		*94.1*	*30-142*			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0519 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HC0519-BLK1)			Prepared: 03/11/24 08:41 Analyzed: 03/12/24 02:20							
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							
Vanadium, total	<0.0200	0.0200	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1HC0519-BS1)			Prepared: 03/11/24 08:41 Analyzed: 03/12/24 02:27							
Antimony, total	0.0944	0.0020	mg/L	0.100		94.4	80-120			
Arsenic, total	0.0932	0.0040	mg/L	0.100		93.2	80-120			
Barium, total	0.102	0.0040	mg/L	0.100		102	80-120			
Beryllium, total	0.0950	0.0040	mg/L	0.100		95.0	80-120			
Cadmium, total	0.0962	0.0008	mg/L	0.100		96.2	80-120			
Chromium, total	0.0937	0.0080	mg/L	0.100		93.7	80-120			
Cobalt, total	0.0930	0.0004	mg/L	0.100		93.0	80-120			
Copper, total	0.0939	0.0040	mg/L	0.100		93.9	80-120			
Lead, total	0.0942	0.0040	mg/L	0.100		94.2	80-120			
Nickel, total	0.0932	0.0040	mg/L	0.100		93.2	80-120			
Selenium, total	0.0956	0.0040	mg/L	0.100		95.6	80-120			
Silver, total	0.100	0.0040	mg/L	0.100		100	80-120			
Thallium, total	0.0952	0.0020	mg/L	0.100		95.2	80-120			
Vanadium, total	0.0966	0.0200	mg/L	0.100		96.6	80-120			
Zinc, total	0.0966	0.0200	mg/L	0.100		96.6	80-120			
Matrix Spike (1HC0519-MS1)	**Source: 1HC0404-01**		Prepared: 03/11/24 08:41 Analyzed: 03/12/24 02:51							
Antimony, total	0.0958	0.0020	mg/L	0.100	ND	95.8	75-125			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0519 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Matrix Spike (1HC0519-MS1)	**Source: 1HC0404-01**	Prepared: 03/11/24 08:41 Analyzed: 03/12/24 02:51								
Arsenic, total	0.0976	0.0040	mg/L	0.100	0.0022	95.4	75-125			
Barium, total	0.302	0.0040	mg/L	0.100	0.201	101	75-125			
Beryllium, total	0.0944	0.0040	mg/L	0.100	ND	94.4	75-125			
Cadmium, total	0.0941	0.0008	mg/L	0.100	ND	94.1	75-125			
Chromium, total	0.0967	0.0080	mg/L	0.100	0.0039	92.7	75-125			
Cobalt, total	0.0955	0.0004	mg/L	0.100	0.0004	95.1	75-125			
Copper, total	0.0967	0.0040	mg/L	0.100	0.0014	95.3	75-125			
Lead, total	0.0938	0.0040	mg/L	0.100	ND	93.8	75-125			
Nickel, total	0.0954	0.0040	mg/L	0.100	0.0014	94.0	75-125			
Selenium, total	0.1012	0.0040	mg/L	0.100	ND	101	75-125			
Silver, total	0.101	0.0040	mg/L	0.100	ND	101	75-125			
Thallium, total	0.0950	0.0020	mg/L	0.100	ND	95.0	75-125			
Vanadium, total	0.102	0.0200	mg/L	0.100	ND	102	75-125			
Zinc, total	0.0977	0.0200	mg/L	0.100	ND	97.7	75-125			
Matrix Spike Dup (1HC0519-MSD1)	**Source: 1HC0404-01**	Prepared: 03/11/24 08:41 Analyzed: 03/12/24 03:10								
Antimony, total	0.0933	0.0020	mg/L	0.100	ND	93.3	75-125	2.66	20	
Arsenic, total	0.0961	0.0040	mg/L	0.100	0.0022	93.9	75-125	1.53	20	
Barium, total	0.298	0.0040	mg/L	0.100	0.201	97.0	75-125	1.39	20	
Beryllium, total	0.0935	0.0040	mg/L	0.100	ND	93.5	75-125	0.966	20	
Cadmium, total	0.0934	0.0008	mg/L	0.100	ND	93.4	75-125	0.662	20	
Chromium, total	0.0950	0.0080	mg/L	0.100	0.0039	91.1	75-125	1.72	20	
Cobalt, total	0.0942	0.0004	mg/L	0.100	0.0004	93.8	75-125	1.37	20	
Copper, total	0.0914	0.0040	mg/L	0.100	0.0014	90.0	75-125	5.63	20	
Lead, total	0.0922	0.0040	mg/L	0.100	ND	92.2	75-125	1.72	20	
Nickel, total	0.0944	0.0040	mg/L	0.100	0.0014	93.0	75-125	1.02	20	
Selenium, total	0.0970	0.0040	mg/L	0.100	ND	97.0	75-125	4.18	20	
Silver, total	0.0989	0.0040	mg/L	0.100	ND	98.9	75-125	1.65	20	
Thallium, total	0.0936	0.0020	mg/L	0.100	ND	93.6	75-125	1.45	20	
Vanadium, total	0.0999	0.0200	mg/L	0.100	ND	99.9	75-125	1.86	20	
Zinc, total	0.0976	0.0200	mg/L	0.100	ND	97.6	75-125	0.136	20	
Post Spike (1HC0519-PS1)	**Source: 1HC0404-01**	Prepared: 03/11/24 08:41 Analyzed: 03/12/24 03:16								
Antimony, total	0.0773		mg/L	0.0800	0.0001	96.6	80-120			
Arsenic, total	0.0795		mg/L	0.0800	0.0022	96.6	80-120			
Barium, total	0.281		mg/L	0.0800	0.197	105	80-120			
Beryllium, total	0.0761		mg/L	0.0800	-0.00004	95.2	80-120			
Cadmium, total	0.0762		mg/L	0.0800	0.00006	95.2	80-120			
Chromium, total	0.0778		mg/L	0.0800	0.0039	92.4	80-120			
Cobalt, total	0.0781		mg/L	0.0800	0.0004	97.2	80-120			
Copper, total	0.0756		mg/L	0.0800	0.0013	92.8	80-120			
Lead, total	0.0762		mg/L	0.0800	0.0004	94.8	80-120			
Nickel, total	0.0787		mg/L	0.0800	0.0014	96.6	80-120			
Selenium, total	0.0763		mg/L	0.0800	0.0011	94.0	80-120			
Silver, total	0.0804		mg/L	0.0800	-0.0003	101	80-120			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0519 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Post Spike (1HC0519-PS1)	**Source: 1HC0404-01**	Prepared: 03/11/24 08:41 Analyzed: 03/12/24 03:16								
Thallium, total	0.0793		mg/L	0.0800	0.00001	99.1	80-120			
Vanadium, total	0.0840		mg/L	0.0800	0.0080	95.0	80-120			
Zinc, total	0.0796		mg/L	0.0800	0.0038	94.7	80-120			

Definitions

QB-02:	The method blank contains analyte at a concentration above the MRL; however, sample concentration was less than the MRL or less than the applicable action level.
QM-05:	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
RL:	Reporting Limit
RPD:	Relative Percent Difference
S-GC:	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

Cooler Receipt Log

Cooler ID: Default Cooler   Temp: 1.6ºC

Cooler Inspection Checklist

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

Report Comments

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

Reviewed and Approved By:

Heather Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
03/20/24 16:48

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES
A Microbac Company

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

Printed: 2/21/2024 2:35:34P

www.keystonelabs.com

SITE INFORMATION

Sampler: JGH

Project: Tama County - New Regs
6029

REPORT TO

Todd Whipple
HLW Engineering
PO Box 314
Story City, IA 50248

INVOICE TO

Dave Sherwood
Tama County Landfill Commission
PO Box 31
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☒ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HC0404
Temperature 1.6
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-20(up)	Water	GRAB	3/5/24	10:01	7	lndfill-app1-voc-group lndfill-app1-metals-6020	01
-001	MW-26(up)	Water	GRAB	3/5/24	9:25	7	lndfill-app1-voc-group lndfill-app1-metals-6020	02
-001	MW-37(up)	Water	GRAB	3/5/24	9:41	7	lndfill-app1-voc-group lndfill-app1-metals-6020	03
-001	MW-33(up)	Water	GRAB	3/5/24	10:14	7	lndfill-app1-voc-group lndfill-app1-metals-6020	04
-001	MW-3A	Water	GRAB	3/5/24	12:17	8	8270-110 lndfill-app1-voc-group lndfill-app1-metals-6020	05
-001	MW-8	Water	GRAB	3/5/24	10:37	7	lndfill-app1-voc-group lndfill-app1-metals-6020	06
-001	MW-10	Water	GRAB	3/5/24	10:58	7	lndfill-app1-voc-group lndfill-app1-metals-6020	07

Relinquished By	Date/Time	Relinquished By	Date/Time
J. Colbert	3/6/24		

Received By	Date/Time	Received for Lab By	Date/Time
		Maher 3/6/24	10:04

Rel

1HC0404
HLW Engineering
PM: Heather Murphy

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES A Microbac Company

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

Page 2 of

Printed: 2/21/2024 2:35:34P

www.keystonelabs.com

SITE INFORMATION

Sampler: JonH

Project: Tama County - New Regs

6029

REPORT TO

Todd Whipple
HLW Engineering
PO Box 314
Story City, IA 50248

INVOICE TO

Dave Sherwood
Tama County Landfill Commission
PO Box 31
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time

☑ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order: 1HC0404

Temperature: 1.6

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-11	Water	GRAB	3/5/24	11:11	1	co-t-6020	08
-001	MW-27	Water	GRAB	3/5/24	11:25	7	lndfill-app1-voc-group lndfll-app1-metals-6020	09
-001	MW-34	Water	GRAB	3/5/24	12:43	7	lndfill-app1-voc-group lndfll-app1-metals-6020	10
-001	MW-35	Water	GRAB	3/5/24	11:41	7	8260@dichlorodifluoromethane lndfill-app1-voc-group lndfll-app1-metals-6020	11
-001	MW-36	Water	GRAB	3/5/24	11:58	7	lndfill-app1-voc-group lndfll-app1-metals-6020	12
-001	SW-3 DRY - No SAMPLE	Water	GRAB	~~/ /~~			lndfill-app1-voc-group lndfll-app1-metals-6020	
-001	Duplicate	Water	GRAB	3/5/24	10:37	7	lndfill-app1-voc-group lndfll-app1-metals-6020	13

Relinquished By: [signature] Date/Time: 3/6/24

Received By: Date/Time:

Relinquished By: Date/Time:

Received for Lab By: Mahu Date/Time: 3/6/24 10:04

1HC0404
HLW Engineering
PM: Heather Murphy

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0275

Project Description

6029

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Monday, October 28, 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

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0275

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6029

Project / PO Number: N/A
Received: 10/01/2024
Reported: 10/28/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-20(up)	1HJ0275-01	Aqueous	GRAB		09/30/24 09:11	10/01/24 10:30
MW-26(up)	1HJ0275-02	Aqueous	GRAB		09/30/24 09:35	10/01/24 10:30
MW-37(up)	1HJ0275-03	Aqueous	GRAB		09/30/24 09:21	10/01/24 10:30
MW-33(up)	1HJ0275-04	Aqueous	GRAB		09/30/24 09:48	10/01/24 10:30
MW-3A	1HJ0275-05	Aqueous	GRAB		09/30/24 11:23	10/01/24 10:30
MW-8	1HJ0275-06	Aqueous	GRAB		09/30/24 10:09	10/01/24 10:30
MW-10	1HJ0275-07	Aqueous	GRAB		09/30/24 10:22	10/01/24 10:30
MW-11	1HJ0275-08	Aqueous	GRAB		09/30/24 10:26	10/01/24 10:30
MW-27	1HJ0275-09	Aqueous	GRAB		09/30/24 10:44	10/01/24 10:30
MW-34	1HJ0275-10	Aqueous	GRAB		09/30/24 11:09	10/01/24 10:30
MW-35	1HJ0275-11	Aqueous	GRAB		09/30/24 11:34	10/01/24 10:30
MW-36	1HJ0275-12	Aqueous	GRAB		09/30/24 11:45	10/01/24 10:30
Duplicate	1HJ0275-13	Aqueous	GRAB		09/30/24 10:09	10/01/24 10:30

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0275

Analytical Testing Parameters

Client Sample ID:	MW-20(up)		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-01	**Collection Date:**	09/30/2024 9:11

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			10/03/24 2229	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Bromomethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Chloroethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Acetone	<10.0	10.0	ug/L	1			10/03/24 2229	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			10/03/24 2229	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			10/03/24 2229	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1			10/03/24 2229	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			10/03/24 2229	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Chloroform	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Benzene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Dibromomethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			10/03/24 2229	BDF
Toluene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			10/03/24 2229	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
Xylenes, total	<2.0	2.0	ug/L	1			10/03/24 2229	BDF
Styrene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF

Client Sample ID:	MW-20(up)		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-01	**Collection Date:**	09/30/2024 9:11

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			10/03/24 2229	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2229	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			10/03/24 2229	BDF
Surrogate: Dibromofluoromethane	94.5	Limit: 57-134	% Rec	1			10/03/24 2229	BDF
Surrogate: Dibromofluoromethane	94.5	Limit: 75-136	% Rec	1			10/03/24 2229	BDF
Surrogate: 1,2-Dichloroethane-d4	93.5	Limit: 53-140	% Rec	1			10/03/24 2229	BDF
Surrogate: 1,2-Dichloroethane-d4	93.5	Limit: 61-142	% Rec	1			10/03/24 2229	BDF
Surrogate: Toluene-d8	96.7	Limit: 86-114	% Rec	1			10/03/24 2229	BDF
Surrogate: Toluene-d8	96.7	Limit: 82-121	% Rec	1			10/03/24 2229	BDF
Surrogate: 4-Bromofluorobenzene	96.8	Limit: 80-116	% Rec	1			10/03/24 2229	BDF
Surrogate: 4-Bromofluorobenzene	96.8	Limit: 78-121	% Rec	1			10/03/24 2229	BDF

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		10/07/24 1602	10/08/24 1757	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Barium, total	**0.194**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1757	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1757	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0275

Client Sample ID:	MW-26(up)		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-02	**Collection Date:**	09/30/2024 9:35

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			10/03/24 2252	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Bromomethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Chloroethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Acetone	<10.0	10.0	ug/L	1			10/03/24 2252	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			10/03/24 2252	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			10/03/24 2252	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1			10/03/24 2252	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			10/03/24 2252	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Chloroform	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Benzene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Dibromomethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			10/03/24 2252	BDF
Toluene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			10/03/24 2252	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Xylenes, total	<2.0	2.0	ug/L	1			10/03/24 2252	BDF
Styrene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
Bromoform	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF

Client Sample ID:	MW-26(up)			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HJ0275-02		**Collection Date:**	09/30/2024 9:35

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			10/03/24 2252	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2252	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			10/03/24 2252	BDF
Surrogate: Dibromofluoromethane	96.8	Limit: 75-136	% Rec	1			10/03/24 2252	BDF
Surrogate: Dibromofluoromethane	96.8	Limit: 57-134	% Rec	1			10/03/24 2252	BDF
Surrogate: 1,2-Dichloroethane-d4	94.8	Limit: 53-140	% Rec	1			10/03/24 2252	BDF
Surrogate: 1,2-Dichloroethane-d4	94.8	Limit: 61-142	% Rec	1			10/03/24 2252	BDF
Surrogate: Toluene-d8	97.7	Limit: 82-121	% Rec	1			10/03/24 2252	BDF
Surrogate: Toluene-d8	97.7	Limit: 86-114	% Rec	1			10/03/24 2252	BDF
Surrogate: 4-Bromofluorobenzene	96.1	Limit: 80-116	% Rec	1			10/03/24 2252	BDF
Surrogate: 4-Bromofluorobenzene	96.1	Limit: 78-121	% Rec	1			10/03/24 2252	BDF

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		10/07/24 1602	10/08/24 1834	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Barium, total	**0.153**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1834	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1834	RVV

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0275

Client Sample ID:	MW-37(up)		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-03	**Collection Date:**	09/30/2024 9:21

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			10/03/24 2315	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Bromomethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Chloroethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Acetone	<10.0	10.0	ug/L	1			10/03/24 2315	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			10/03/24 2315	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			10/03/24 2315	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1			10/03/24 2315	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			10/03/24 2315	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Chloroform	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Benzene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Dibromomethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			10/03/24 2315	BDF
Toluene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			10/03/24 2315	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Xylenes, total	<2.0	2.0	ug/L	1			10/03/24 2315	BDF
Styrene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
Bromoform	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF

Client Sample ID:	MW-37(up)			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HJ0275-03		**Collection Date:**	09/30/2024 9:21

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			10/03/24 2315	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2315	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			10/03/24 2315	BDF
Surrogate: Dibromofluoromethane	95.7	Limit: 57-134	% Rec	1			10/03/24 2315	BDF
Surrogate: Dibromofluoromethane	95.7	Limit: 75-136	% Rec	1			10/03/24 2315	BDF
Surrogate: 1,2-Dichloroethane-d4	94.9	Limit: 61-142	% Rec	1			10/03/24 2315	BDF
Surrogate: 1,2-Dichloroethane-d4	94.9	Limit: 53-140	% Rec	1			10/03/24 2315	BDF
Surrogate: Toluene-d8	98.0	Limit: 86-114	% Rec	1			10/03/24 2315	BDF
Surrogate: Toluene-d8	98.0	Limit: 82-121	% Rec	1			10/03/24 2315	BDF
Surrogate: 4-Bromofluorobenzene	96.7	Limit: 80-116	% Rec	1			10/03/24 2315	BDF
Surrogate: 4-Bromofluorobenzene	96.7	Limit: 78-121	% Rec	1			10/03/24 2315	BDF

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		10/07/24 1602	10/08/24 1840	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Barium, total	**0.0437**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Selenium, total	**0.0102**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1840	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1840	RVV

Client Sample ID:	MW-33(up)		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-04	**Collection Date:**	09/30/2024 9:48

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			10/03/24 2337	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Bromomethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Chloroethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Acetone	<10.0	10.0	ug/L	1			10/03/24 2337	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			10/03/24 2337	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			10/03/24 2337	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1			10/03/24 2337	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			10/03/24 2337	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Chloroform	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Benzene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Dibromomethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			10/03/24 2337	BDF
Toluene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			10/03/24 2337	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Xylenes, total	<2.0	2.0	ug/L	1			10/03/24 2337	BDF
Styrene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
Bromoform	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF

Client Sample ID:	MW-33(up)			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HJ0275-04		**Collection Date:**	09/30/2024 9:48

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			10/03/24 2337	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			10/03/24 2337	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			10/03/24 2337	BDF
Surrogate: Dibromofluoromethane	95.2	Limit: 75-136	% Rec	1			10/03/24 2337	BDF
Surrogate: Dibromofluoromethane	95.2	Limit: 57-134	% Rec	1			10/03/24 2337	BDF
Surrogate: 1,2-Dichloroethane-d4	93.4	Limit: 53-140	% Rec	1			10/03/24 2337	BDF
Surrogate: 1,2-Dichloroethane-d4	93.4	Limit: 61-142	% Rec	1			10/03/24 2337	BDF
Surrogate: Toluene-d8	97.5	Limit: 82-121	% Rec	1			10/03/24 2337	BDF
Surrogate: Toluene-d8	97.5	Limit: 86-114	% Rec	1			10/03/24 2337	BDF
Surrogate: 4-Bromofluorobenzene	96.5	Limit: 78-121	% Rec	1			10/03/24 2337	BDF
Surrogate: 4-Bromofluorobenzene	96.5	Limit: 80-116	% Rec	1			10/03/24 2337	BDF

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		10/07/24 1602	10/08/24 1846	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Barium, total	**0.167**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1846	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1846	RVV

Client Sample ID:	MW-3A		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-05	**Collection Date:**	09/30/2024 11:23

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			10/04/24 0000	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Bromomethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Chloroethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Acetone	<10.0	10.0	ug/L	1			10/04/24 0000	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			10/04/24 0000	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			10/04/24 0000	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1			10/04/24 0000	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			10/04/24 0000	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Chloroform	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Benzene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Dibromomethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			10/04/24 0000	BDF
Toluene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			10/04/24 0000	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Xylenes, total	<2.0	2.0	ug/L	1			10/04/24 0000	BDF
Styrene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
Bromoform	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF

Client Sample ID:	MW-3A		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-05	**Collection Date:**	09/30/2024 11:23

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			10/04/24 0000	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0000	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			10/04/24 0000	BDF
Surrogate: Dibromofluoromethane	95.2	Limit: 75-136	% Rec	1			10/04/24 0000	BDF
Surrogate: Dibromofluoromethane	95.2	Limit: 57-134	% Rec	1			10/04/24 0000	BDF
Surrogate: 1,2-Dichloroethane-d4	94.4	Limit: 53-140	% Rec	1			10/04/24 0000	BDF
Surrogate: 1,2-Dichloroethane-d4	94.4	Limit: 61-142	% Rec	1			10/04/24 0000	BDF
Surrogate: Toluene-d8	97.4	Limit: 86-114	% Rec	1			10/04/24 0000	BDF
Surrogate: Toluene-d8	97.4	Limit: 82-121	% Rec	1			10/04/24 0000	BDF
Surrogate: 4-Bromofluorobenzene	97.3	Limit: 78-121	% Rec	1			10/04/24 0000	BDF
Surrogate: 4-Bromofluorobenzene	97.3	Limit: 80-116	% Rec	1			10/04/24 0000	BDF

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		10/07/24 1602	10/08/24 1852	RVV
Arsenic, total	**0.0101**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Barium, total	**0.0978**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Cobalt, total	**0.0015**	0.0004	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1852	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1852	RVV

Client Sample ID:	MW-8		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-06	**Collection Date:**	09/30/2024 10:09

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			10/04/24 0022	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Bromomethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Chloroethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Acetone	<10.0	10.0	ug/L	1			10/04/24 0022	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			10/04/24 0022	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			10/04/24 0022	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1			10/04/24 0022	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			10/04/24 0022	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Chloroform	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Benzene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Dibromomethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			10/04/24 0022	BDF
Toluene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			10/04/24 0022	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Xylenes, total	<2.0	2.0	ug/L	1			10/04/24 0022	BDF
Styrene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
Bromoform	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF

Client Sample ID:	MW-8		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-06	**Collection Date:**	09/30/2024 10:09

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			10/04/24 0022	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0022	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			10/04/24 0022	BDF
Surrogate: Dibromofluoromethane	95.9	Limit: 57-134	% Rec	1			10/04/24 0022	BDF
Surrogate: Dibromofluoromethane	95.9	Limit: 75-136	% Rec	1			10/04/24 0022	BDF
Surrogate: 1,2-Dichloroethane-d4	94.9	Limit: 53-140	% Rec	1			10/04/24 0022	BDF
Surrogate: 1,2-Dichloroethane-d4	94.9	Limit: 61-142	% Rec	1			10/04/24 0022	BDF
Surrogate: Toluene-d8	97.7	Limit: 86-114	% Rec	1			10/04/24 0022	BDF
Surrogate: Toluene-d8	97.7	Limit: 82-121	% Rec	1			10/04/24 0022	BDF
Surrogate: 4-Bromofluorobenzene	96.1	Limit: 78-121	% Rec	1			10/04/24 0022	BDF
Surrogate: 4-Bromofluorobenzene	96.1	Limit: 80-116	% Rec	1			10/04/24 0022	BDF

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		10/07/24 1602	10/08/24 1858	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Barium, total	**0.264**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Cobalt, total	**0.0031**	0.0004	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Nickel, total	**0.0133**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1858	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1858	RVV

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0275

Client Sample ID:	MW-10		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-07	**Collection Date:**	09/30/2024 10:22

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			10/04/24 0045	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Bromomethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Chloroethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Acetone	<10.0	10.0	ug/L	1			10/04/24 0045	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			10/04/24 0045	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			10/04/24 0045	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1			10/04/24 0045	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			10/04/24 0045	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Chloroform	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Benzene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Dibromomethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			10/04/24 0045	BDF
Toluene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			10/04/24 0045	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Chlorobenzene	**1.5**	1.0	ug/L	1			10/04/24 0045	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Xylenes, total	<2.0	2.0	ug/L	1			10/04/24 0045	BDF
Styrene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
Bromoform	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF

Client Sample ID:	MW-10		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-07	**Collection Date:**	09/30/2024 10:22

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			10/04/24 0045	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
1,4-Dichlorobenzene	**2.5**	1.0	ug/L	1			10/04/24 0045	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0045	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			10/04/24 0045	BDF
Surrogate: Dibromofluoromethane	95.6	Limit: 57-134	% Rec	1			10/04/24 0045	BDF
Surrogate: Dibromofluoromethane	95.6	Limit: 75-136	% Rec	1			10/04/24 0045	BDF
Surrogate: 1,2-Dichloroethane-d4	95.3	Limit: 53-140	% Rec	1			10/04/24 0045	BDF
Surrogate: 1,2-Dichloroethane-d4	95.3	Limit: 61-142	% Rec	1			10/04/24 0045	BDF
Surrogate: Toluene-d8	97.5	Limit: 86-114	% Rec	1			10/04/24 0045	BDF
Surrogate: Toluene-d8	97.5	Limit: 82-121	% Rec	1			10/04/24 0045	BDF
Surrogate: 4-Bromofluorobenzene	96.9	Limit: 78-121	% Rec	1			10/04/24 0045	BDF
Surrogate: 4-Bromofluorobenzene	96.9	Limit: 80-116	% Rec	1			10/04/24 0045	BDF

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		10/07/24 1602	10/08/24 1904	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Barium, total	**0.533**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Cobalt, total	**0.0057**	0.0004	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Nickel, total	**0.0135**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1904	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1904	RVV

Client Sample ID:	MW-11		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-08	**Collection Date:**	09/30/2024 10:26

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Cobalt, total	<0.0004	0.0004	mg/L	4		10/07/24 1602	10/08/24 1910	RVV

Client Sample ID:	MW-27		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-09	**Collection Date:**	09/30/2024 10:44

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			10/04/24 0108	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Bromomethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Chloroethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Acetone	<10.0	10.0	ug/L	1			10/04/24 0108	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			10/04/24 0108	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			10/04/24 0108	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1			10/04/24 0108	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			10/04/24 0108	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Chloroform	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Benzene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Dibromomethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			10/04/24 0108	BDF
Toluene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			10/04/24 0108	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Xylenes, total	<2.0	2.0	ug/L	1			10/04/24 0108	BDF
Styrene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
Bromoform	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF

Client Sample ID:	MW-27		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-09	**Collection Date:**	09/30/2024 10:44

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			10/04/24 0108	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0108	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			10/04/24 0108	BDF
Surrogate: Dibromofluoromethane	95.4	Limit: 57-134	% Rec	1			10/04/24 0108	BDF
Surrogate: Dibromofluoromethane	95.4	Limit: 75-136	% Rec	1			10/04/24 0108	BDF
Surrogate: 1,2-Dichloroethane-d4	95.7	Limit: 53-140	% Rec	1			10/04/24 0108	BDF
Surrogate: 1,2-Dichloroethane-d4	95.7	Limit: 61-142	% Rec	1			10/04/24 0108	BDF
Surrogate: Toluene-d8	97.7	Limit: 86-114	% Rec	1			10/04/24 0108	BDF
Surrogate: Toluene-d8	97.7	Limit: 82-121	% Rec	1			10/04/24 0108	BDF
Surrogate: 4-Bromofluorobenzene	96.3	Limit: 78-121	% Rec	1			10/04/24 0108	BDF
Surrogate: 4-Bromofluorobenzene	96.3	Limit: 80-116	% Rec	1			10/04/24 0108	BDF

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		10/07/24 1602	10/08/24 1917	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Barium, total	**0.200**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1917	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1917	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0275

Client Sample ID:	MW-34			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HJ0275-10		**Collection Date:**	09/30/2024 11:09

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			10/04/24 0130	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Bromomethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Chloroethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Acetone	<10.0	10.0	ug/L	1			10/04/24 0130	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			10/04/24 0130	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			10/04/24 0130	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1			10/04/24 0130	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			10/04/24 0130	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Chloroform	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Benzene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Dibromomethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			10/04/24 0130	BDF
Toluene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			10/04/24 0130	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Xylenes, total	<2.0	2.0	ug/L	1			10/04/24 0130	BDF
Styrene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
Bromoform	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0275

Client Sample ID:	MW-34		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-10	**Collection Date:**	09/30/2024 11:09

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			10/04/24 0130	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,4-Dichlorobenzene	**1.4**	1.0	ug/L	1			10/04/24 0130	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			10/04/24 0130	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			10/04/24 0130	BDF
Surrogate: Dibromofluoromethane	96.0	Limit: 75-136	% Rec	1			10/04/24 0130	BDF
Surrogate: Dibromofluoromethane	96.0	Limit: 57-134	% Rec	1			10/04/24 0130	BDF
Surrogate: 1,2-Dichloroethane-d4	94.3	Limit: 53-140	% Rec	1			10/04/24 0130	BDF
Surrogate: 1,2-Dichloroethane-d4	94.3	Limit: 61-142	% Rec	1			10/04/24 0130	BDF
Surrogate: Toluene-d8	97.5	Limit: 86-114	% Rec	1			10/04/24 0130	BDF
Surrogate: Toluene-d8	97.5	Limit: 82-121	% Rec	1			10/04/24 0130	BDF
Surrogate: 4-Bromofluorobenzene	97.4	Limit: 80-116	% Rec	1			10/04/24 0130	BDF
Surrogate: 4-Bromofluorobenzene	97.4	Limit: 78-121	% Rec	1			10/04/24 0130	BDF

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		10/07/24 1602	10/08/24 1935	RVV
Arsenic, total	**0.0042**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Barium, total	**0.207**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Cobalt, total	**0.0054**	0.0004	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Nickel, total	**0.0159**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1935	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1935	RVV

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0275

Client Sample ID:	MW-35		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-11	**Collection Date:**	09/30/2024 11:34

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Dichlorodifluoromethane	**1.2**	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Chloromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1718	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1718	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2016	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Acetone	<10.0	10.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2016	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1718	CSM
Chloroform	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1718	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1718	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Benzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Toluene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/11/24 0000	10/11/24 1718	CSM
Styrene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1718	CSM
Bromoform	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1718	CSM

Client Sample ID:	MW-35		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-11	**Collection Date:**	09/30/2024 11:34

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1740	CSM
Surrogate: Dibromofluoromethane	95.9	Limit: 75-136	% Rec	1		10/11/24 0000	10/11/24 1740	CSM
Surrogate: Dibromofluoromethane	101	Limit: 57-134	% Rec	1		10/07/24 0000	10/07/24 2016	CSM
Surrogate: Dibromofluoromethane	101	Limit: 75-136	% Rec	1		10/07/24 0000	10/07/24 2016	CSM
Surrogate: 1,2-Dichloroethane-d4	98.8	Limit: 61-142	% Rec	1		10/11/24 0000	10/11/24 1740	CSM
Surrogate: 1,2-Dichloroethane-d4	106	Limit: 53-140	% Rec	1		10/07/24 0000	10/07/24 2016	CSM
Surrogate: 1,2-Dichloroethane-d4	106	Limit: 61-142	% Rec	1		10/07/24 0000	10/07/24 2016	CSM
Surrogate: Toluene-d8	99.1	Limit: 86-114	% Rec	1		10/07/24 0000	10/07/24 2016	CSM
Surrogate: Toluene-d8	99.8	Limit: 82-121	% Rec	1		10/11/24 0000	10/11/24 1740	CSM
Surrogate: Toluene-d8	99.1	Limit: 82-121	% Rec	1		10/07/24 0000	10/07/24 2016	CSM
Surrogate: 4-Bromofluorobenzene	108	Limit: 80-116	% Rec	1		10/11/24 0000	10/11/24 1718	CSM
Surrogate: 4-Bromofluorobenzene	104	Limit: 78-121	% Rec	1		10/07/24 0000	10/07/24 2016	CSM
Surrogate: 4-Bromofluorobenzene	104	Limit: 80-116	% Rec	1		10/07/24 0000	10/07/24 2016	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		10/07/24 1602	10/09/24 1038	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Barium, total	**0.448**	0.0040	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/09/24 1038	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/09/24 1038	RVV

Client Sample ID:	MW-36		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-12	**Collection Date:**	09/30/2024 11:45

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		10/11/24 0000	10/11/24 1803	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2038	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Acetone	<10.0	10.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2038	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Chloroform	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Benzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Toluene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Styrene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Bromoform	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM

Client Sample ID:	MW-36		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-12	**Collection Date:**	09/30/2024 11:45

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		10/11/24 0000	10/11/24 1803	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1803	CSM
Surrogate: Dibromofluoromethane	103	Limit: 57-134	% Rec	1		10/07/24 0000	10/07/24 2038	CSM
Surrogate: Dibromofluoromethane	103	Limit: 75-136	% Rec	1		10/07/24 0000	10/07/24 2038	CSM
Surrogate: Dibromofluoromethane	96.0	Limit: 75-136	% Rec	1		10/11/24 0000	10/11/24 1803	CSM
Surrogate: 1,2-Dichloroethane-d4	100	Limit: 61-142	% Rec	1		10/11/24 0000	10/11/24 1803	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 61-142	% Rec	1		10/07/24 0000	10/07/24 2038	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 53-140	% Rec	1		10/07/24 0000	10/07/24 2038	CSM
Surrogate: Toluene-d8	100	Limit: 86-114	% Rec	1		10/07/24 0000	10/07/24 2038	CSM
Surrogate: Toluene-d8	100	Limit: 82-121	% Rec	1		10/07/24 0000	10/07/24 2038	CSM
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		10/11/24 0000	10/11/24 1803	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 80-116	% Rec	1		10/07/24 0000	10/07/24 2038	CSM
Surrogate: 4-Bromofluorobenzene	107	Limit: 80-116	% Rec	1		10/11/24 0000	10/11/24 1803	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 78-121	% Rec	1		10/07/24 0000	10/07/24 2038	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		10/07/24 1602	10/08/24 1947	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Barium, total	**0.292**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Copper, total	**0.0120**	0.0040	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1947	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/08/24 1947	RVV

Client Sample ID:	Duplicate			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HJ0275-13		**Collection Date:**	09/30/2024 10:09

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		10/11/24 0000	10/11/24 1825	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2101	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Acetone	<10.0	10.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2101	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Chloroform	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Benzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Toluene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Styrene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Bromoform	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM

Client Sample ID:	Duplicate		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ0275-13	**Collection Date:**	09/30/2024 10:09

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		10/11/24 0000	10/11/24 1825	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/11/24 0000	10/11/24 1825	CSM
Surrogate: Dibromofluoromethane	97.6	Limit: 75-136	% Rec	1		10/11/24 0000	10/11/24 1825	CSM
Surrogate: Dibromofluoromethane	102	Limit: 57-134	% Rec	1		10/07/24 0000	10/07/24 2101	CSM
Surrogate: Dibromofluoromethane	102	Limit: 75-136	% Rec	1		10/07/24 0000	10/07/24 2101	CSM
Surrogate: 1,2-Dichloroethane-d4	107	Limit: 61-142	% Rec	1		10/07/24 0000	10/07/24 2101	CSM
Surrogate: 1,2-Dichloroethane-d4	107	Limit: 53-140	% Rec	1		10/07/24 0000	10/07/24 2101	CSM
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 61-142	% Rec	1		10/11/24 0000	10/11/24 1825	CSM
Surrogate: Toluene-d8	99.6	Limit: 82-121	% Rec	1		10/11/24 0000	10/11/24 1825	CSM
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		10/07/24 0000	10/07/24 2101	CSM
Surrogate: Toluene-d8	102	Limit: 86-114	% Rec	1		10/07/24 0000	10/07/24 2101	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 80-116	% Rec	1		10/07/24 0000	10/07/24 2101	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 78-121	% Rec	1		10/07/24 0000	10/07/24 2101	CSM
Surrogate: 4-Bromofluorobenzene	105	Limit: 80-116	% Rec	1		10/11/24 0000	10/11/24 1825	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		10/07/24 1602	10/09/24 1044	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Barium, total	**0.319**	0.0040	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Cobalt, total	**0.0045**	0.0004	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Nickel, total	**0.0164**	0.0040	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/09/24 1044	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/07/24 1602	10/09/24 1044	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ0341	1HJ0341-BS1	
		1HJ0341-BLK1	
		1HJ0341-MS1	1HJ0275-05
		1HJ0341-MSD1	1HJ0275-05
		1HJ0275-01	MW-20(up)
		1HJ0275-02	MW-26(up)
		1HJ0275-03	MW-37(up)
		1HJ0275-04	MW-33(up)
		1HJ0275-05	MW-3A
		1HJ0275-06	MW-8
		1HJ0275-07	MW-10
		1HJ0275-09	MW-27
		1HJ0275-10	MW-34

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HJ0426	1HJ0426-BLK1	
		1HJ0426-BS1	
		1HJ0275-01	MW-20(up)
		1HJ0426-MS1	1HJ0275-01
		1HJ0426-PS1	1HJ0275-01
		1HJ0275-02	MW-26(up)
		1HJ0275-03	MW-37(up)
		1HJ0275-04	MW-33(up)
		1HJ0275-05	MW-3A
		1HJ0275-06	MW-8
		1HJ0275-07	MW-10
		1HJ0275-08	MW-11
		1HJ0275-09	MW-27
		1HJ0275-10	MW-34
		1HJ0275-12	MW-36
		1HJ0426-MSD1	1HJ0275-01
		1HJ0275-11	MW-35
		1HJ0275-13	Duplicate

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ0486	1HJ0486-BS1	
		1HJ0486-BSD1	
		1HJ0486-BLK1	
		1HJ0486-BLK1	
		1HJ0486-MS1	1HJ0520-03

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ0486	1HJ0486-MSD1	1HJ0520-03
		1HJ0275-11RE2	MW-35
		1HJ0275-11	MW-35
		1HJ0275-12RE2	MW-36
		1HJ0275-12	MW-36
		1HJ0275-13RE2	Duplicate
		1HJ0275-13	Duplicate

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ0786	1HJ0786-BS1	
		1HJ0786-BSD1	
		1HJ0786-BLK1	
		1HJ0275-11	MW-35
		1HJ0275-11	MW-35
		1HJ0275-11	MW-35
		1HJ0275-12	MW-36
		1HJ0275-13	Duplicate
		1HJ0786-MS1	1HJ0396-13RE1
		1HJ0786-MSD1	1HJ0396-13RE1

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ1255	1HJ1255-BS1	
		1HJ1255-BSD1	
		1HJ1255-BLK1	
		1HJ1255-MS1	1HJ0275-11RE1
		1HJ1255-MSD1	1HJ0275-11RE1

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 1HJ0341 - EPA 5030B - EPA 8260B										
Blank (1HJ0341-BLK1)			Prepared & Analyzed: 10/03/24 16:13							
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							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0341 - EPA 5030B - EPA 8260B										
Blank (1HJ0341-BLK1)			Prepared & Analyzed: 10/03/24 16:13							
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							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*46.9*		ug/L	*50.2*		*93.5*	*57-134*			
Surrogate: Dibromofluoromethane	*46.9*		ug/L	*50.2*		*93.5*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*46.1*		ug/L	*50.4*		*91.6*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*46.1*		ug/L	*50.4*		*91.6*	*61-142*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.5*		*97.9*	*86-114*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.5*		*97.9*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.2*		ug/L	*50.2*		*98.1*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*49.2*		ug/L	*50.2*		*98.1*	*80-116*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0341 - EPA 5030B - EPA 8260B										
LCS (1HJ0341-BS1)			Prepared & Analyzed: 10/03/24 15:05							
Chloromethane	29.61	1.0	ug/L	30.0		98.7	63-155			
Vinyl Chloride	25.80	1.0	ug/L	30.0		86.0	70-154			
Bromomethane	29.84	1.0	ug/L	30.0		99.5	52-176			
Chloroethane	28.25	1.0	ug/L	30.0		94.2	72-148			
Trichlorofluoromethane	28.40	1.0	ug/L	30.0		94.7	70-152			
1,1-Dichloroethylene	81.74	1.0	ug/L	100		81.7	70-148			
Acetone	134.9	10.0	ug/L	101		133	43-172			
Methyl Iodide	110.8	1.0	ug/L	102		109	69-170			
Carbon Disulfide	86.48	1.0	ug/L	103		84.2	72-162			
Methylene Chloride	86.75	5.0	ug/L	100		86.8	68-142			
Acrylonitrile	82.22	5.0	ug/L	100		81.9	56-135			
trans-1,2-Dichloroethylene	82.53	1.0	ug/L	100		82.5	66-148			
1,1-Dichloroethane	81.24	1.0	ug/L	100		81.2	66-143			
Vinyl Acetate	87.98	5.0	ug/L	100		88.0	43-153			
cis-1,2-Dichloroethylene	74.74	1.0	ug/L	100		74.7	71-149			
2-Butanone (MEK)	106.8	10.0	ug/L	102		105	52-159			
Bromochloromethane	90.74	1.0	ug/L	100		90.7	69-143			
Chloroform	86.69	1.0	ug/L	100		86.7	69-144			
1,1,1-Trichloroethane	83.18	1.0	ug/L	100		83.2	62-129			
Carbon Tetrachloride	97.71	1.0	ug/L	100		97.7	63-141			
Benzene	94.37	1.0	ug/L	100		94.4	71-134			
1,2-Dichloroethane	92.39	1.0	ug/L	100		92.4	72-132			
Trichloroethylene	89.50	1.0	ug/L	100		89.5	71-135			
1,2-Dichloropropane	86.55	1.0	ug/L	100		86.6	69-136			
Dibromomethane	91.62	1.0	ug/L	100		91.6	73-147			
Bromodichloromethane	87.48	1.0	ug/L	100		87.5	68-129			
cis-1,3-Dichloropropene	89.24	1.0	ug/L	100		89.2	65-134			
4-Methyl-2-pentanone (MIBK)	83.29	5.0	ug/L	100		83.2	58-147			
Toluene	96.03	1.0	ug/L	100		96.0	72-133			
trans-1,3-Dichloropropene	94.02	1.0	ug/L	100		94.0	67-130			
1,1,2-Trichloroethane	96.16	1.0	ug/L	100		96.2	69-135			
Tetrachloroethylene	94.71	1.0	ug/L	100		94.7	69-130			
2-Hexanone (MBK)	98.47	5.0	ug/L	99.3		99.2	55-144			
Dibromochloromethane	95.83	1.0	ug/L	100		95.8	73-127			
1,2-Dibromoethane	90.68	1.0	ug/L	100		90.7	67-132			
Chlorobenzene	97.53	1.0	ug/L	100		97.5	72-123			
1,1,1,2-Tetrachloroethane	96.63	1.0	ug/L	100		96.6	73-127			
Ethylbenzene	91.29	1.0	ug/L	100		91.3	71-127			
Xylenes, total	276.4	2.0	ug/L	300		92.1	74-127			
Styrene	96.27	1.0	ug/L	100		96.3	66-126			
Bromoform	95.14	1.0	ug/L	100		95.1	68-130			
1,2,3-Trichloropropane	89.64	1.0	ug/L	100		89.6	63-136			
trans-1,4-Dichloro-2-butene	78.98	5.0	ug/L	103		76.8	54-134			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0341 - EPA 5030B - EPA 8260B										
LCS (1HJ0341-BS1)			Prepared & Analyzed: 10/03/24 15:05							
1,1,2,2-Tetrachloroethane	86.99	1.0	ug/L	100		87.0	61-131			
1,4-Dichlorobenzene	97.51	1.0	ug/L	100		97.5	70-129			
1,2-Dichlorobenzene	100.5	1.0	ug/L	100		101	69-126			
1,2-Dibromo-3-chloropropane	107.4	5.0	ug/L	100		107	50-143			
Surrogate: Dibromofluoromethane	*46.5*		ug/L	*50.2*		*92.6*	*57-134*			
Surrogate: Dibromofluoromethane	*46.5*		ug/L	*50.2*		*92.6*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*45.1*		ug/L	*50.4*		*89.6*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*45.1*		ug/L	*50.4*		*89.6*	*61-142*			
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	*50.5*		ug/L	*50.2*		*101*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*50.5*		ug/L	*50.2*		*101*	*80-116*			
Matrix Spike (1HJ0341-MS1)	**Source: 1HJ0275-05**		Prepared & Analyzed: 10/03/24 17:35							
Chloromethane	308.9	10.0	ug/L	300	ND	103	61-152			
Vinyl Chloride	264.7	10.0	ug/L	300	ND	88.2	66-149			
Bromomethane	300.7	10.0	ug/L	300	ND	100	43-171			
Chloroethane	290.0	10.0	ug/L	300	ND	96.7	69-148			
Trichlorofluoromethane	291.4	10.0	ug/L	300	ND	97.1	62-163			
1,1-Dichloroethylene	830.8	10.0	ug/L	1000	ND	83.1	70-148			
Acetone	1997	100	ug/L	1010	ND	197	45-173			M1
Methyl Iodide	1037	10.0	ug/L	1020	ND	102	62-167			
Carbon Disulfide	874.3	10.0	ug/L	1030	ND	85.1	71-163			
Methylene Chloride	869.9	50.0	ug/L	1000	ND	87.0	69-140			
Acrylonitrile	823.0	50.0	ug/L	1000	ND	82.0	38-147			
trans-1,2-Dichloroethylene	834.6	10.0	ug/L	1000	ND	83.5	69-144			
1,1-Dichloroethane	817.1	10.0	ug/L	1000	ND	81.7	70-138			
Vinyl Acetate	869.2	50.0	ug/L	1000	ND	86.9	58-142			
cis-1,2-Dichloroethylene	746.9	10.0	ug/L	1000	ND	74.7	68-151			
2-Butanone (MEK)	1434	100	ug/L	1020	ND	141	50-160			
Bromochloromethane	884.5	10.0	ug/L	1000	ND	88.4	65-143			
Chloroform	872.3	10.0	ug/L	1000	ND	87.2	71-143			
1,1,1-Trichloroethane	835.8	10.0	ug/L	1000	ND	83.6	63-133			
Carbon Tetrachloride	987.7	10.0	ug/L	1000	ND	98.8	63-142			
Benzene	934.2	10.0	ug/L	1000	ND	93.4	69-133			
1,2-Dichloroethane	914.3	10.0	ug/L	1000	ND	91.4	63-138			
Trichloroethylene	890.8	10.0	ug/L	1000	ND	89.1	71-133			
1,2-Dichloropropane	850.7	10.0	ug/L	1000	ND	85.1	69-132			
Dibromomethane	902.7	10.0	ug/L	1000	ND	90.3	70-147			
Bromodichloromethane	860.5	10.0	ug/L	1000	ND	86.0	67-130			
cis-1,3-Dichloropropene	888.1	10.0	ug/L	1000	ND	88.8	61-126			
4-Methyl-2-pentanone (MIBK)	892.3	50.0	ug/L	1000	ND	89.1	55-147			
Toluene	949.9	10.0	ug/L	1000	ND	95.0	71-133			
trans-1,3-Dichloropropene	931.3	10.0	ug/L	1000	ND	93.1	63-124			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0341 - EPA 5030B - EPA 8260B										
Matrix Spike (1HJ0341-MS1)	**Source: 1HJ0275-05**	Prepared & Analyzed: 10/03/24 17:35								
1,1,2-Trichloroethane	940.3	10.0	ug/L	1000	ND	94.0	69-133			
Tetrachloroethylene	942.3	10.0	ug/L	1000	ND	94.2	70-124			
2-Hexanone (MBK)	1364	50.0	ug/L	993	ND	137	53-141			
Dibromochloromethane	947.7	10.0	ug/L	1000	ND	94.8	74-122			
1,2-Dibromoethane	898.6	10.0	ug/L	1000	ND	89.9	66-127			
Chlorobenzene	956.2	10.0	ug/L	1000	ND	95.6	76-116			
1,1,1,2-Tetrachloroethane	946.0	10.0	ug/L	1000	ND	94.6	77-121			
Ethylbenzene	904.5	10.0	ug/L	1000	ND	90.4	73-124			
Xylenes, total	2725	20.0	ug/L	3000	ND	90.8	75-123			
Styrene	943.8	10.0	ug/L	1000	ND	94.4	70-120			
Bromoform	928.3	10.0	ug/L	1000	ND	92.8	70-124			
1,2,3-Trichloropropane	883.3	10.0	ug/L	1000	ND	88.3	62-135			
trans-1,4-Dichloro-2-butene	783.5	50.0	ug/L	1030	ND	76.2	50-120			
1,1,2,2-Tetrachloroethane	860.5	10.0	ug/L	1000	ND	86.0	63-126			
1,4-Dichlorobenzene	965.3	10.0	ug/L	1000	ND	96.5	72-119			
1,2-Dichlorobenzene	992.3	10.0	ug/L	1000	ND	99.2	71-117			
1,2-Dibromo-3-chloropropane	1043	50.0	ug/L	1000	ND	104	49-134			
Surrogate: Dibromofluoromethane	*465*		ug/L	*502*		*92.6*	*57-134*			
Surrogate: Dibromofluoromethane	*465*		ug/L	*502*		*92.6*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*453*		ug/L	*504*		*89.9*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*453*		ug/L	*504*		*89.9*	*61-142*			
Surrogate: Toluene-d8	*495*		ug/L	*505*		*98.1*	*86-114*			
Surrogate: Toluene-d8	*495*		ug/L	*505*		*98.1*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*501*		ug/L	*502*		*99.9*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*501*		ug/L	*502*		*99.9*	*80-116*			
Matrix Spike Dup (1HJ0341-MSD1)	**Source: 1HJ0275-05**	Prepared & Analyzed: 10/03/24 17:58								
Chloromethane	278.2	10.0	ug/L	300	ND	92.7	61-152	10.5	26	
Vinyl Chloride	235.8	10.0	ug/L	300	ND	78.6	66-149	11.5	23	
Bromomethane	276.5	10.0	ug/L	300	ND	92.2	43-171	8.39	29	
Chloroethane	261.3	10.0	ug/L	300	ND	87.1	69-148	10.4	25	
Trichlorofluoromethane	262.8	10.0	ug/L	300	ND	87.6	62-163	10.3	25	
1,1-Dichloroethylene	750.8	10.0	ug/L	1000	ND	75.1	70-148	10.1	22	
Acetone	1789	100	ug/L	1010	ND	177	45-173	11.0	30	M1
Methyl Iodide	948.2	10.0	ug/L	1020	ND	93.1	62-167	8.93	24	
Carbon Disulfide	792.2	10.0	ug/L	1030	ND	77.1	71-163	9.85	22	
Methylene Chloride	814.4	50.0	ug/L	1000	ND	81.4	69-140	6.59	19	
Acrylonitrile	790.8	50.0	ug/L	1000	ND	78.8	38-147	3.99	30	
trans-1,2-Dichloroethylene	760.9	10.0	ug/L	1000	ND	76.1	69-144	9.24	22	
1,1-Dichloroethane	752.1	10.0	ug/L	1000	ND	75.2	70-138	8.28	20	
Vinyl Acetate	842.4	50.0	ug/L	1000	ND	84.2	58-142	3.13	24	
cis-1,2-Dichloroethylene	689.1	10.0	ug/L	1000	ND	68.9	68-151	8.05	22	
2-Butanone (MEK)	1292	100	ug/L	1020	ND	127	50-160	10.4	23	
Bromochloromethane	826.4	10.0	ug/L	1000	ND	82.6	65-143	6.79	22	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0341 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HJ0341-MSD1)	**Source: 1HJ0275-05**	Prepared & Analyzed: 10/03/24 17:58								
Chloroform	806.2	10.0	ug/L	1000	ND	80.6	71-143	7.88	21	
1,1,1-Trichloroethane	762.7	10.0	ug/L	1000	ND	76.3	63-133	9.15	23	
Carbon Tetrachloride	906.8	10.0	ug/L	1000	ND	90.7	63-142	8.54	22	
Benzene	867.2	10.0	ug/L	1000	ND	86.7	69-133	7.44	18	
1,2-Dichloroethane	866.9	10.0	ug/L	1000	ND	86.7	63-138	5.32	20	
Trichloroethylene	822.0	10.0	ug/L	1000	ND	82.2	71-133	8.03	23	
1,2-Dichloropropane	801.2	10.0	ug/L	1000	ND	80.1	69-132	5.99	20	
Dibromomethane	858.5	10.0	ug/L	1000	ND	85.8	70-147	5.02	22	
Bromodichloromethane	818.2	10.0	ug/L	1000	ND	81.8	67-130	5.04	21	
cis-1,3-Dichloropropene	839.3	10.0	ug/L	1000	ND	83.9	61-126	5.65	21	
4-Methyl-2-pentanone (MIBK)	818.5	50.0	ug/L	1000	ND	81.8	55-147	8.63	23	
Toluene	879.8	10.0	ug/L	1000	ND	88.0	71-133	7.66	19	
trans-1,3-Dichloropropene	885.0	10.0	ug/L	1000	ND	88.5	63-124	5.10	21	
1,1,2-Trichloroethane	902.4	10.0	ug/L	1000	ND	90.2	69-133	4.11	19	
Tetrachloroethylene	869.2	10.0	ug/L	1000	ND	86.9	70-124	8.07	24	
2-Hexanone (MBK)	1253	50.0	ug/L	993	ND	126	53-141	8.53	24	
Dibromochloromethane	910.9	10.0	ug/L	1000	ND	91.1	74-122	3.96	21	
1,2-Dibromoethane	861.1	10.0	ug/L	1000	ND	86.1	66-127	4.26	23	
Chlorobenzene	897.5	10.0	ug/L	1000	ND	89.8	76-116	6.33	21	
1,1,1,2-Tetrachloroethane	896.2	10.0	ug/L	1000	ND	89.6	77-121	5.41	25	
Ethylbenzene	843.6	10.0	ug/L	1000	ND	84.4	73-124	6.97	20	
Xylenes, total	2548	20.0	ug/L	3000	ND	84.9	75-123	6.71	20	
Styrene	891.8	10.0	ug/L	1000	ND	89.2	70-120	5.67	23	
Bromoform	909.5	10.0	ug/L	1000	ND	91.0	70-124	2.05	22	
1,2,3-Trichloropropane	853.4	10.0	ug/L	1000	ND	85.3	62-135	3.44	28	
trans-1,4-Dichloro-2-butene	753.4	50.0	ug/L	1030	ND	73.3	50-120	3.92	26	
1,1,2,2-Tetrachloroethane	816.5	10.0	ug/L	1000	ND	81.6	63-126	5.25	24	
1,4-Dichlorobenzene	901.3	10.0	ug/L	1000	ND	90.1	72-119	6.86	24	
1,2-Dichlorobenzene	932.4	10.0	ug/L	1000	ND	93.2	71-117	6.22	24	
1,2-Dibromo-3-chloropropane	984.0	50.0	ug/L	1000	ND	98.4	49-134	5.86	28	
Surrogate: Dibromofluoromethane	*469*		ug/L	*502*		*93.4*	*57-134*			
Surrogate: Dibromofluoromethane	*469*		ug/L	*502*		*93.4*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*451*		ug/L	*504*		*89.5*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*451*		ug/L	*504*		*89.5*	*61-142*			
Surrogate: Toluene-d8	*498*		ug/L	*505*		*98.6*	*86-114*			
Surrogate: Toluene-d8	*498*		ug/L	*505*		*98.6*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*503*		ug/L	*502*		*100*	*80-116*			
Surrogate: 4-Bromofluorobenzene	*503*		ug/L	*502*		*100*	*78-121*			
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
Blank (1HJ0486-BLK1)		Prepared: 10/07/24 00:00 Analyzed: 10/07/24 19:53								
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
Blank (1HJ0486-BLK1)				Prepared: 10/07/24 00:00 Analyzed: 10/07/24 19:53						
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Methyl Iodide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
Vinyl Acetate	<5.0	5.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
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							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
Blank (1HJ0486-BLK1)				Prepared: 10/07/24 00:00 Analyzed: 10/07/24 19:53						
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*49.8*		ug/L	*50.2*		*99.2*	*57-134*			
Surrogate: Dibromofluoromethane	*49.8*		ug/L	*50.2*		*99.2*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*52.3*		ug/L	*50.4*		*104*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*52.3*		ug/L	*50.4*		*104*	*61-142*			
Surrogate: Toluene-d8	*50.6*		ug/L	*50.5*		*100*	*86-114*			
Surrogate: Toluene-d8	*50.6*		ug/L	*50.5*		*100*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*53.2*		ug/L	*50.2*		*106*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*53.2*		ug/L	*50.2*		*106*	*80-116*			
LCS (1HJ0486-BS1)				Prepared: 10/07/24 00:00 Analyzed: 10/07/24 10:45						
Chloromethane	31.94	1.0	ug/L	30.0		106	63-155			
Vinyl Chloride	29.77	1.0	ug/L	30.0		99.2	70-154			
Bromomethane	24.97	1.0	ug/L	30.0		83.2	52-176			
Chloroethane	31.84	1.0	ug/L	30.0		106	72-148			
Trichlorofluoromethane	31.60	1.0	ug/L	30.0		105	70-152			
1,1-Dichloroethylene	97.58	1.0	ug/L	100		97.6	70-148			
Acetone	102.0	10.0	ug/L	101		101	43-172			
Methyl Iodide	98.21	1.0	ug/L	102		96.4	69-170			
Carbon Disulfide	98.29	1.0	ug/L	103		95.7	72-162			
Methylene Chloride	95.42	5.0	ug/L	100		95.4	68-142			
Acrylonitrile	97.40	5.0	ug/L	100		97.0	56-135			
trans-1,2-Dichloroethylene	97.95	1.0	ug/L	100		98.0	66-148			
1,1-Dichloroethane	98.23	1.0	ug/L	100		98.2	66-143			
Vinyl Acetate	97.52	5.0	ug/L	100		97.5	43-153			
cis-1,2-Dichloroethylene	91.14	1.0	ug/L	100		91.1	71-149			
2-Butanone (MEK)	103.2	10.0	ug/L	102		101	52-159			
Bromochloromethane	98.33	1.0	ug/L	100		98.3	69-143			
Chloroform	91.93	1.0	ug/L	100		91.9	69-144			
1,1,1-Trichloroethane	86.69	1.0	ug/L	100		86.7	62-129			
Carbon Tetrachloride	92.01	1.0	ug/L	100		92.0	63-141			
Benzene	105.6	1.0	ug/L	100		106	71-134			
1,2-Dichloroethane	107.1	1.0	ug/L	100		107	72-132			
Trichloroethylene	99.33	1.0	ug/L	100		99.3	71-135			
1,2-Dichloropropane	95.58	1.0	ug/L	100		95.6	69-136			
Dibromomethane	100.4	1.0	ug/L	100		100	73-147			
Bromodichloromethane	98.49	1.0	ug/L	100		98.5	68-129			
cis-1,3-Dichloropropene	99.22	1.0	ug/L	100		99.2	65-134			
4-Methyl-2-pentanone (MIBK)	114.0	5.0	ug/L	100		114	58-147			
Toluene	100.7	1.0	ug/L	100		101	72-133			
trans-1,3-Dichloropropene	101.2	1.0	ug/L	100		101	67-130			
1,1,2-Trichloroethane	99.57	1.0	ug/L	100		99.6	69-135			
Tetrachloroethylene	101.7	1.0	ug/L	100		102	69-130			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
LCS (1HJ0486-BS1)				Prepared: 10/07/24 00:00 Analyzed: 10/07/24 10:45						
2-Hexanone (MBK)	112.3	5.0	ug/L	99.3		113	55-144			
Dibromochloromethane	100.6	1.0	ug/L	100		101	73-127			
1,2-Dibromoethane	98.00	1.0	ug/L	100		98.0	67-132			
Chlorobenzene	100.5	1.0	ug/L	100		101	72-123			
1,1,1,2-Tetrachloroethane	97.89	1.0	ug/L	100		97.9	73-127			
Ethylbenzene	98.42	1.0	ug/L	100		98.4	71-127			
Xylenes, total	307.9	2.0	ug/L	300		103	74-127			
Styrene	100.7	1.0	ug/L	100		101	66-126			
Bromoform	98.73	1.0	ug/L	100		98.7	68-130			
1,2,3-Trichloropropane	104.4	1.0	ug/L	100		104	63-136			
trans-1,4-Dichloro-2-butene	98.56	5.0	ug/L	103		95.9	54-134			
1,1,2,2-Tetrachloroethane	123.6	1.0	ug/L	100		124	61-131			
1,4-Dichlorobenzene	97.02	1.0	ug/L	100		97.0	70-129			
1,2-Dichlorobenzene	95.70	1.0	ug/L	100		95.7	69-126			
1,2-Dibromo-3-chloropropane	96.90	5.0	ug/L	100		96.9	50-143			
Surrogate: Dibromofluoromethane	*45.8*		ug/L	*50.2*		*91.3*	*57-134*			
Surrogate: Dibromofluoromethane	*45.8*		ug/L	*50.2*		*91.3*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*47.8*		ug/L	*50.4*		*95.0*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*47.8*		ug/L	*50.4*		*95.0*	*61-142*			
Surrogate: Toluene-d8	*52.2*		ug/L	*50.5*		*103*	*86-114*			
Surrogate: Toluene-d8	*52.2*		ug/L	*50.5*		*103*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.7*		ug/L	*50.2*		*99.0*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*49.7*		ug/L	*50.2*		*99.0*	*80-116*			
LCS Dup (1HJ0486-BSD1)				Prepared: 10/07/24 00:00 Analyzed: 10/07/24 11:07						
Chloromethane	29.57	1.0	ug/L	30.0		98.6	63-155	7.71	24	
Vinyl Chloride	27.40	1.0	ug/L	30.0		91.3	70-154	8.29	25	
Bromomethane	24.81	1.0	ug/L	30.0		82.7	52-176	0.643	27	
Chloroethane	30.46	1.0	ug/L	30.0		102	72-148	4.43	25	
Trichlorofluoromethane	29.30	1.0	ug/L	30.0		97.7	70-152	7.55	26	
1,1-Dichloroethylene	92.26	1.0	ug/L	100		92.3	70-148	5.60	24	
Acetone	103.0	10.0	ug/L	101		102	43-172	0.947	30	
Methyl Iodide	94.18	1.0	ug/L	102		92.5	69-170	4.19	30	
Carbon Disulfide	92.56	1.0	ug/L	103		90.1	72-162	6.00	24	
Methylene Chloride	92.88	5.0	ug/L	100		92.9	68-142	2.70	21	
Acrylonitrile	97.14	5.0	ug/L	100		96.8	56-135	0.267	16	
trans-1,2-Dichloroethylene	93.06	1.0	ug/L	100		93.1	66-148	5.12	27	
1,1-Dichloroethane	95.09	1.0	ug/L	100		95.1	66-143	3.25	24	
Vinyl Acetate	96.39	5.0	ug/L	100		96.4	43-153	1.17	30	
cis-1,2-Dichloroethylene	87.64	1.0	ug/L	100		87.6	71-149	3.92	26	
2-Butanone (MEK)	102.9	10.0	ug/L	102		101	52-159	0.320	27	
Bromochloromethane	97.23	1.0	ug/L	100		97.2	69-143	1.12	23	
Chloroform	89.21	1.0	ug/L	100		89.2	69-144	3.00	23	
1,1,1-Trichloroethane	82.90	1.0	ug/L	100		82.9	62-129	4.47	24	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
LCS Dup (1HJ0486-BSD1)			Prepared: 10/07/24 00:00 Analyzed: 10/07/24 11:07							
Carbon Tetrachloride	88.19	1.0	ug/L	100		88.2	63-141	4.24	25	
Benzene	102.6	1.0	ug/L	100		103	71-134	2.93	24	
1,2-Dichloroethane	105.5	1.0	ug/L	100		105	72-132	1.50	24	
Trichloroethylene	96.24	1.0	ug/L	100		96.2	71-135	3.16	24	
1,2-Dichloropropane	95.18	1.0	ug/L	100		95.2	69-136	0.419	24	
Dibromomethane	101.0	1.0	ug/L	100		101	73-147	0.665	25	
Bromodichloromethane	98.05	1.0	ug/L	100		98.0	68-129	0.448	22	
cis-1,3-Dichloropropene	106.1	1.0	ug/L	100		106	65-134	6.69	23	
4-Methyl-2-pentanone (MIBK)	116.3	5.0	ug/L	100		116	58-147	2.01	27	
Toluene	98.29	1.0	ug/L	100		98.3	72-133	2.38	24	
trans-1,3-Dichloropropene	101.0	1.0	ug/L	100		101	67-130	0.158	24	
1,1,2-Trichloroethane	99.82	1.0	ug/L	100		99.8	69-135	0.251	23	
Tetrachloroethylene	98.06	1.0	ug/L	100		98.1	69-130	3.64	25	
2-Hexanone (MBK)	116.3	5.0	ug/L	99.3		117	55-144	3.49	25	
Dibromochloromethane	100.6	1.0	ug/L	100		101	73-127	0.0298	22	
1,2-Dibromoethane	98.65	1.0	ug/L	100		98.6	67-132	0.661	24	
Chlorobenzene	98.36	1.0	ug/L	100		98.4	72-123	2.16	23	
1,1,1,2-Tetrachloroethane	96.45	1.0	ug/L	100		96.4	73-127	1.48	24	
Ethylbenzene	95.94	1.0	ug/L	100		95.9	71-127	2.55	26	
Xylenes, total	306.4	2.0	ug/L	300		102	74-127	0.472	25	
Styrene	103.1	1.0	ug/L	100		103	66-126	2.41	23	
Bromoform	101.7	1.0	ug/L	100		102	68-130	2.99	23	
1,2,3-Trichloropropane	109.6	1.0	ug/L	100		110	63-136	4.91	24	
trans-1,4-Dichloro-2-butene	101.3	5.0	ug/L	103		98.6	54-134	2.78	27	
1,1,2,2-Tetrachloroethane	145.0	1.0	ug/L	100		145	61-131	16.0	29	Q2
1,4-Dichlorobenzene	99.21	1.0	ug/L	100		99.2	70-129	2.23	24	
1,2-Dichlorobenzene	98.04	1.0	ug/L	100		98.0	69-126	2.42	26	
1,2-Dibromo-3-chloropropane	101.0	5.0	ug/L	100		101	50-143	4.12	30	
Surrogate: Dibromofluoromethane	*45.6*		ug/L	*50.2*		*90.8*	*75-136*			
Surrogate: Dibromofluoromethane	*45.6*		ug/L	*50.2*		*90.8*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*47.3*		ug/L	*50.4*		*93.9*	*61-142*			
Surrogate: 1,2-Dichloroethane-d4	*47.3*		ug/L	*50.4*		*93.9*	*53-140*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.5*		*104*	*82-121*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.5*		*104*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*53.7*		ug/L	*50.2*		*107*	*80-116*			
Surrogate: 4-Bromofluorobenzene	*53.7*		ug/L	*50.2*		*107*	*78-121*			
Matrix Spike (1HJ0486-MS1)	**Source: 1HJ0520-03**		Prepared: 10/07/24 00:00 Analyzed: 10/07/24 18:46							
Chloromethane	31.58	1.0	ug/L	30.0	ND	105	61-152			
Vinyl Chloride	28.52	1.0	ug/L	30.0	ND	95.1	66-149			
Bromomethane	22.11	1.0	ug/L	30.0	ND	73.7	43-171			
Chloroethane	34.05	1.0	ug/L	30.0	ND	114	69-148			
Trichlorofluoromethane	32.24	1.0	ug/L	30.0	ND	107	62-163			
1,1-Dichloroethylene	101.5	1.0	ug/L	100	ND	102	70-148			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
Matrix Spike (1HJ0486-MS1)	**Source: 1HJ0520-03**	Prepared: 10/07/24 00:00 Analyzed: 10/07/24 18:46								
Acetone	115.3	10.0	ug/L	101	ND	114	45-173			
Methyl Iodide	99.68	1.0	ug/L	102	ND	97.8	62-167			
Carbon Disulfide	101.6	1.0	ug/L	103	ND	99.0	71-163			
Methylene Chloride	98.97	5.0	ug/L	100	ND	99.0	69-140			
Acrylonitrile	105.9	5.0	ug/L	100	ND	105	38-147			
trans-1,2-Dichloroethylene	100.3	1.0	ug/L	100	ND	100	69-144			
1,1-Dichloroethane	99.23	1.0	ug/L	100	ND	99.2	70-138			
Vinyl Acetate	101.2	5.0	ug/L	100	ND	101	58-142			
cis-1,2-Dichloroethylene	92.99	1.0	ug/L	100	ND	93.0	68-151			
2-Butanone (MEK)	108.9	10.0	ug/L	102	ND	107	50-160			
Bromochloromethane	103.6	1.0	ug/L	100	ND	104	65-143			
Chloroform	92.53	1.0	ug/L	100	ND	92.5	71-143			
1,1,1-Trichloroethane	86.87	1.0	ug/L	100	ND	86.9	63-133			
Carbon Tetrachloride	88.20	1.0	ug/L	100	ND	88.2	63-142			
Benzene	95.45	1.0	ug/L	100	ND	95.4	69-133			
1,2-Dichloroethane	99.60	1.0	ug/L	100	ND	99.6	63-138			
Trichloroethylene	90.15	1.0	ug/L	100	ND	90.2	71-133			
1,2-Dichloropropane	87.36	1.0	ug/L	100	ND	87.4	69-132			
Dibromomethane	92.91	1.0	ug/L	100	ND	92.9	70-147			
Bromodichloromethane	93.53	1.0	ug/L	100	ND	93.5	67-130			
cis-1,3-Dichloropropene	90.70	1.0	ug/L	100	ND	90.7	61-126			
4-Methyl-2-pentanone (MIBK)	106.1	5.0	ug/L	100	ND	106	55-147			
Toluene	91.95	1.0	ug/L	100	ND	92.0	71-133			
trans-1,3-Dichloropropene	93.56	1.0	ug/L	100	ND	93.6	63-124			
1,1,2-Trichloroethane	92.18	1.0	ug/L	100	ND	92.2	69-133			
Tetrachloroethylene	87.49	1.0	ug/L	100	ND	87.5	70-124			
2-Hexanone (MBK)	107.7	5.0	ug/L	99.3	ND	108	53-141			
Dibromochloromethane	92.01	1.0	ug/L	100	ND	92.0	74-122			
1,2-Dibromoethane	92.67	1.0	ug/L	100	ND	92.7	66-127			
Chlorobenzene	90.20	1.0	ug/L	100	ND	90.2	76-116			
1,1,1,2-Tetrachloroethane	87.47	1.0	ug/L	100	ND	87.5	77-121			
Ethylbenzene	88.59	1.0	ug/L	100	ND	88.6	73-124			
Xylenes, total	271.2	2.0	ug/L	300	ND	90.4	75-123			
Styrene	85.93	1.0	ug/L	100	ND	85.9	70-120			
Bromoform	85.24	1.0	ug/L	100	ND	85.2	70-124			
1,2,3-Trichloropropane	91.76	1.0	ug/L	100	ND	91.8	62-135			
trans-1,4-Dichloro-2-butene	85.58	5.0	ug/L	103	ND	83.2	50-120			
1,1,2,2-Tetrachloroethane	114.1	1.0	ug/L	100	ND	114	63-126			
1,4-Dichlorobenzene	89.92	1.0	ug/L	100	ND	89.9	72-119			
1,2-Dichlorobenzene	89.70	1.0	ug/L	100	ND	89.7	71-117			
1,2-Dibromo-3-chloropropane	92.09	5.0	ug/L	100	ND	92.1	49-134			
Surrogate: Dibromofluoromethane	*50.1*		ug/L	*50.2*		*99.7*	*75-136*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
Matrix Spike (1HJ0486-MS1)	**Source: 1HJ0520-03**	Prepared: 10/07/24 00:00 Analyzed: 10/07/24 18:46								
Surrogate: Dibromofluoromethane	*50.1*		ug/L	*50.2*		*99.7*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*50.2*		ug/L	*50.4*		*99.7*	*61-142*			
Surrogate: 1,2-Dichloroethane-d4	*50.2*		ug/L	*50.4*		*99.7*	*53-140*			
Surrogate: Toluene-d8	*52.2*		ug/L	*50.5*		*103*	*82-121*			
Surrogate: Toluene-d8	*52.2*		ug/L	*50.5*		*103*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*47.3*		ug/L	*50.2*		*94.3*	*80-116*			
Surrogate: 4-Bromofluorobenzene	*47.3*		ug/L	*50.2*		*94.3*	*78-121*			
Matrix Spike Dup (1HJ0486-MSD1)	**Source: 1HJ0520-03**	Prepared: 10/07/24 00:00 Analyzed: 10/07/24 19:09								
Chloromethane	30.05	1.0	ug/L	30.0	ND	100	61-152	4.97	26	
Vinyl Chloride	29.57	1.0	ug/L	30.0	ND	98.6	66-149	3.62	23	
Bromomethane	23.35	1.0	ug/L	30.0	ND	77.8	43-171	5.46	29	
Chloroethane	32.09	1.0	ug/L	30.0	ND	107	69-148	5.93	25	
Trichlorofluoromethane	32.28	1.0	ug/L	30.0	ND	108	62-163	0.124	25	
1,1-Dichloroethylene	99.15	1.0	ug/L	100	ND	99.2	70-148	2.35	22	
Acetone	107.4	10.0	ug/L	101	ND	106	45-173	7.12	30	
Methyl Iodide	98.73	1.0	ug/L	102	ND	96.9	62-167	0.958	24	
Carbon Disulfide	97.88	1.0	ug/L	103	ND	95.3	71-163	3.76	22	
Methylene Chloride	94.06	5.0	ug/L	100	ND	94.1	69-140	5.09	19	
Acrylonitrile	95.96	5.0	ug/L	100	ND	95.6	38-147	9.85	30	
trans-1,2-Dichloroethylene	97.69	1.0	ug/L	100	ND	97.7	69-144	2.66	22	
1,1-Dichloroethane	98.48	1.0	ug/L	100	ND	98.5	70-138	0.759	20	
Vinyl Acetate	97.81	5.0	ug/L	100	ND	97.8	58-142	3.37	24	
cis-1,2-Dichloroethylene	90.86	1.0	ug/L	100	ND	90.9	68-151	2.32	22	
2-Butanone (MEK)	99.87	10.0	ug/L	102	ND	98.1	50-160	8.66	23	
Bromochloromethane	98.52	1.0	ug/L	100	ND	98.5	65-143	5.01	22	
Chloroform	91.96	1.0	ug/L	100	ND	92.0	71-143	0.618	21	
1,1,1-Trichloroethane	88.36	1.0	ug/L	100	ND	88.4	63-133	1.70	23	
Carbon Tetrachloride	94.38	1.0	ug/L	100	ND	94.4	63-142	6.77	22	
Benzene	94.12	1.0	ug/L	100	ND	94.1	69-133	1.40	18	
1,2-Dichloroethane	96.77	1.0	ug/L	100	ND	96.8	63-138	2.88	20	
Trichloroethylene	89.29	1.0	ug/L	100	ND	89.3	71-133	0.959	23	
1,2-Dichloropropane	85.34	1.0	ug/L	100	ND	85.3	69-132	2.34	20	
Dibromomethane	95.29	1.0	ug/L	100	ND	95.3	70-147	2.53	22	
Bromodichloromethane	93.16	1.0	ug/L	100	ND	93.2	67-130	0.396	21	
cis-1,3-Dichloropropene	88.72	1.0	ug/L	100	ND	88.7	61-126	2.21	21	
4-Methyl-2-pentanone (MIBK)	102.8	5.0	ug/L	100	ND	103	55-147	3.18	23	
Toluene	90.11	1.0	ug/L	100	ND	90.1	71-133	2.02	19	
trans-1,3-Dichloropropene	89.78	1.0	ug/L	100	ND	89.8	63-124	4.12	21	
1,1,2-Trichloroethane	89.81	1.0	ug/L	100	ND	89.8	69-133	2.60	19	
Tetrachloroethylene	99.81	1.0	ug/L	100	ND	99.8	70-124	13.2	24	
2-Hexanone (MBK)	107.9	5.0	ug/L	99.3	ND	109	53-141	0.213	24	
Dibromochloromethane	102.8	1.0	ug/L	100	ND	103	74-122	11.1	21	
1,2-Dibromoethane	102.3	1.0	ug/L	100	ND	102	66-127	9.88	23	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HJ0486-MSD1)	**Source: 1HJ0520-03**		Prepared: 10/07/24 00:00 Analyzed: 10/07/24 19:09							
Chlorobenzene	95.01	1.0	ug/L	100	ND	95.0	76-116	5.19	21	
1,1,1,2-Tetrachloroethane	93.38	1.0	ug/L	100	ND	93.4	77-121	6.54	25	
Ethylbenzene	95.07	1.0	ug/L	100	ND	95.1	73-124	7.06	20	
Xylenes, total	294.5	2.0	ug/L	300	ND	98.2	75-123	8.27	20	
Styrene	96.42	1.0	ug/L	100	ND	96.4	70-120	11.5	23	
Bromoform	95.11	1.0	ug/L	100	ND	95.1	70-124	10.9	22	
1,2,3-Trichloropropane	100.7	1.0	ug/L	100	ND	101	62-135	9.28	28	
trans-1,4-Dichloro-2-butene	94.52	5.0	ug/L	103	ND	91.9	50-120	9.93	26	
1,1,2,2-Tetrachloroethane	116.5	1.0	ug/L	100	ND	117	63-126	2.12	24	
1,4-Dichlorobenzene	93.64	1.0	ug/L	100	ND	93.6	72-119	4.05	24	
1,2-Dichlorobenzene	93.24	1.0	ug/L	100	ND	93.2	71-117	3.87	24	
1,2-Dibromo-3-chloropropane	94.15	5.0	ug/L	100	ND	94.2	49-134	2.21	28	
Surrogate: Dibromofluoromethane	*48.7*		ug/L	*50.2*		*96.9*	*75-136*			
Surrogate: Dibromofluoromethane	*48.7*		ug/L	*50.2*		*96.9*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*50.3*		ug/L	*50.4*		*100*	*61-142*			
Surrogate: 1,2-Dichloroethane-d4	*50.3*		ug/L	*50.4*		*100*	*53-140*			
Surrogate: Toluene-d8	*49.2*		ug/L	*50.5*		*97.5*	*82-121*			
Surrogate: Toluene-d8	*49.2*		ug/L	*50.5*		*97.5*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*50.6*		ug/L	*50.2*		*101*	*80-116*			
Surrogate: 4-Bromofluorobenzene	*50.6*		ug/L	*50.2*		*101*	*78-121*			
Batch 1HJ0786 - EPA 5030B - EPA 8260B										
Blank (1HJ0786-BLK1)			Prepared: 10/11/24 00:00 Analyzed: 10/11/24 09:39							
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							
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							
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							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0786 - EPA 5030B - EPA 8260B										
Blank (1HJ0786-BLK1)			Prepared: 10/11/24 00:00 Analyzed: 10/11/24 09:39							
Benzene	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*48.4*		ug/L	*50.2*		*96.5*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*50.4*		ug/L	*50.4*		*100*	*61-142*			
Surrogate: Toluene-d8	*50.4*		ug/L	*50.5*		*99.9*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*53.0*		ug/L	*50.2*		*106*	*80-116*			
LCS (1HJ0786-BS1)			Prepared: 10/11/24 00:00 Analyzed: 10/11/24 08:31							
Dichlorodifluoromethane	32.33	1.0	ug/L	30.3		107	49-138			
Chloromethane	29.85	1.0	ug/L	30.3		98.4	63-155			
Vinyl Chloride	26.29	1.0	ug/L	30.2		86.9	70-154			
Bromomethane	18.67	1.0	ug/L	30.1		62.0	52-176			
Chloroethane	32.73	1.0	ug/L	30.3		108	72-148			
Trichlorofluoromethane	31.44	1.0	ug/L	30.3		104	70-152			
1,1-Dichloroethylene	52.73	1.0	ug/L	50.1		105	70-148			
Acetone	105.9	10.0	ug/L	100		106	43-172			
Methyl Iodide	86.33	1.0	ug/L	100		86.2	69-170			
Carbon Disulfide	118.0	1.0	ug/L	100		118	72-162			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0786 - EPA 5030B - EPA 8260B										
LCS (1HJ0786-BS1)				Prepared: 10/11/24 00:00 Analyzed: 10/11/24 08:31						
Methylene Chloride	52.49	5.0	ug/L	50.2		105	68-142			
trans-1,2-Dichloroethylene	52.82	1.0	ug/L	50.3		105	66-148			
1,1-Dichloroethane	54.04	1.0	ug/L	50.3		108	66-143			
Vinyl Acetate	174.5	5.0	ug/L	156		112	43-153			
cis-1,2-Dichloroethylene	47.65	1.0	ug/L	50.5		94.4	71-149			
2-Butanone (MEK)	111.3	10.0	ug/L	100		111	52-159			
Bromochloromethane	54.49	1.0	ug/L	50.4		108	69-143			
Chloroform	50.02	1.0	ug/L	50.2		99.7	69-144			
1,1,1-Trichloroethane	48.58	1.0	ug/L	50.3		96.6	62-129			
Carbon Tetrachloride	49.77	1.0	ug/L	50.2		99.1	63-141			
Benzene	56.26	1.0	ug/L	50.4		112	71-134			
1,2-Dichloroethane	52.74	1.0	ug/L	50.2		105	72-132			
Trichloroethylene	52.01	1.0	ug/L	50.3		103	71-135			
1,2-Dichloropropane	52.60	1.0	ug/L	50.2		105	69-136			
Dibromomethane	50.64	1.0	ug/L	50.5		100	73-147			
Bromodichloromethane	51.77	1.0	ug/L	50.3		103	68-129			
cis-1,3-Dichloropropene	53.91	1.0	ug/L	50.2		107	65-134			
4-Methyl-2-pentanone (MIBK)	122.6	5.0	ug/L	100		122	58-147			
Toluene	52.97	1.0	ug/L	50.5		105	72-133			
trans-1,3-Dichloropropene	52.64	1.0	ug/L	50.3		105	67-130			
1,1,2-Trichloroethane	52.86	1.0	ug/L	50.2		105	69-135			
Tetrachloroethylene	52.51	1.0	ug/L	50.2		105	69-130			
2-Hexanone (MBK)	119.9	5.0	ug/L	100		120	55-144			
Dibromochloromethane	50.60	1.0	ug/L	50.3		101	73-127			
1,2-Dibromoethane	50.88	1.0	ug/L	50.4		101	67-132			
Chlorobenzene	52.24	1.0	ug/L	50.2		104	72-123			
1,1,1,2-Tetrachloroethane	50.17	1.0	ug/L	50.4		99.5	73-127			
Ethylbenzene	52.31	1.0	ug/L	50.5		104	71-127			
Xylenes, total	163.6	2.0	ug/L	151		108	74-127			
Styrene	53.31	1.0	ug/L	50.4		106	66-126			
Bromoform	50.82	1.0	ug/L	50.2		101	68-130			
1,2,3-Trichloropropane	55.74	1.0	ug/L	50.4		111	63-136			
trans-1,4-Dichloro-2-butene	101.2	5.0	ug/L	100		101	54-134			
1,1,2,2-Tetrachloroethane	56.88	1.0	ug/L	50.2		113	61-131			
1,4-Dichlorobenzene	51.92	1.0	ug/L	50.2		103	70-129			
1,2-Dichlorobenzene	50.23	1.0	ug/L	50.2		100	69-126			
1,2-Dibromo-3-chloropropane	53.75	5.0	ug/L	50.5		106	50-143			
Surrogate: Dibromofluoromethane	*47.7*		ug/L	*50.2*		*95.1*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*48.6*		ug/L	*50.4*		*96.6*	*61-142*			
Surrogate: Toluene-d8	*52.7*		ug/L	*50.5*		*104*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*52.2*		ug/L	*50.2*		*104*	*80-116*			
LCS Dup (1HJ0786-BSD1)				Prepared: 10/11/24 00:00 Analyzed: 10/11/24 08:54						

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0786 - EPA 5030B - EPA 8260B										
LCS Dup (1HJ0786-BSD1)			Prepared: 10/11/24 00:00 Analyzed: 10/11/24 08:54							
Dichlorodifluoromethane	32.29	1.0	ug/L	30.3		107	49-138	0.124	22	
Chloromethane	28.92	1.0	ug/L	30.3		95.4	63-155	3.16	24	
Vinyl Chloride	26.55	1.0	ug/L	30.2		87.8	70-154	0.984	25	
Bromomethane	18.58	1.0	ug/L	30.1		61.7	52-176	0.483	27	
Chloroethane	32.67	1.0	ug/L	30.3		108	72-148	0.183	25	
Trichlorofluoromethane	31.36	1.0	ug/L	30.3		103	70-152	0.255	26	
1,1-Dichloroethylene	52.65	1.0	ug/L	50.1		105	70-148	0.152	24	
Acetone	103.5	10.0	ug/L	100		103	43-172	2.33	30	
Methyl Iodide	86.45	1.0	ug/L	100		86.3	69-170	0.139	30	
Carbon Disulfide	117.7	1.0	ug/L	100		118	72-162	0.289	24	
Methylene Chloride	52.45	5.0	ug/L	50.2		105	68-142	0.0762	21	
trans-1,2-Dichloroethylene	52.93	1.0	ug/L	50.3		105	66-148	0.208	27	
1,1-Dichloroethane	54.07	1.0	ug/L	50.3		108	66-143	0.0555	24	
Vinyl Acetate	173.2	5.0	ug/L	156		111	43-153	0.713	30	
cis-1,2-Dichloroethylene	47.50	1.0	ug/L	50.5		94.1	71-149	0.315	26	
2-Butanone (MEK)	108.0	10.0	ug/L	100		108	52-159	3.01	27	
Bromochloromethane	54.45	1.0	ug/L	50.4		108	69-143	0.0734	23	
Chloroform	49.65	1.0	ug/L	50.2		99.0	69-144	0.742	23	
1,1,1-Trichloroethane	49.11	1.0	ug/L	50.3		97.6	62-129	1.09	24	
Carbon Tetrachloride	49.67	1.0	ug/L	50.2		98.9	63-141	0.201	25	
Benzene	55.70	1.0	ug/L	50.4		110	71-134	1.00	24	
1,2-Dichloroethane	51.88	1.0	ug/L	50.2		103	72-132	1.64	24	
Trichloroethylene	51.07	1.0	ug/L	50.3		101	71-135	1.82	24	
1,2-Dichloropropane	51.63	1.0	ug/L	50.2		103	69-136	1.86	24	
Dibromomethane	50.19	1.0	ug/L	50.5		99.4	73-147	0.893	25	
Bromodichloromethane	50.71	1.0	ug/L	50.3		101	68-129	2.07	22	
cis-1,3-Dichloropropene	52.92	1.0	ug/L	50.2		105	65-134	1.85	23	
4-Methyl-2-pentanone (MIBK)	121.1	5.0	ug/L	100		121	58-147	1.21	27	
Toluene	52.64	1.0	ug/L	50.5		104	72-133	0.625	24	
trans-1,3-Dichloropropene	51.75	1.0	ug/L	50.3		103	67-130	1.71	24	
1,1,2-Trichloroethane	51.50	1.0	ug/L	50.2		103	69-135	2.61	23	
Tetrachloroethylene	52.61	1.0	ug/L	50.2		105	69-130	0.190	25	
2-Hexanone (MBK)	118.4	5.0	ug/L	100		118	55-144	1.24	25	
Dibromochloromethane	50.01	1.0	ug/L	50.3		99.3	73-127	1.17	22	
1,2-Dibromoethane	50.35	1.0	ug/L	50.4		99.8	67-132	1.05	24	
Chlorobenzene	52.20	1.0	ug/L	50.2		104	72-123	0.0766	23	
1,1,1,2-Tetrachloroethane	49.24	1.0	ug/L	50.4		97.6	73-127	1.87	24	
Ethylbenzene	52.10	1.0	ug/L	50.5		103	71-127	0.402	26	
Xylenes, total	163.4	2.0	ug/L	151		108	74-127	0.141	25	
Styrene	52.98	1.0	ug/L	50.4		105	66-126	0.621	23	
Bromoform	49.53	1.0	ug/L	50.2		98.6	68-130	2.57	23	
1,2,3-Trichloropropane	55.27	1.0	ug/L	50.4		110	63-136	0.847	24	
trans-1,4-Dichloro-2-butene	100.2	5.0	ug/L	100		100	54-134	0.973	27	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0786 - EPA 5030B - EPA 8260B										
LCS Dup (1HJ0786-BSD1)				Prepared: 10/11/24 00:00 Analyzed: 10/11/24 08:54						
1,1,2,2-Tetrachloroethane	57.30	1.0	ug/L	50.2		114	61-131	0.736	29	
1,4-Dichlorobenzene	52.53	1.0	ug/L	50.2		105	70-129	1.17	24	
1,2-Dichlorobenzene	49.89	1.0	ug/L	50.2		99.4	69-126	0.679	26	
1,2-Dibromo-3-chloropropane	54.56	5.0	ug/L	50.5		108	50-143	1.50	30	
Surrogate: Dibromofluoromethane	*48.2*		ug/L	*50.2*		*96.1*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*49.1*		ug/L	*50.4*		*97.6*	*61-142*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.5*		*104*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*52.4*		ug/L	*50.2*		*105*	*80-116*			
Matrix Spike (1HJ0786-MS1)	**Source: 1HJ0396-13RE1**			Prepared: 10/11/24 00:00 Analyzed: 10/11/24 19:10						
Dichlorodifluoromethane	333.2	10.0	ug/L	303	ND	110	37-140			
Chloromethane	290.2	10.0	ug/L	303	ND	95.7	61-152			
Vinyl Chloride	269.9	10.0	ug/L	302	ND	89.2	66-149			
Bromomethane	160.1	10.0	ug/L	301	ND	53.2	43-171			
Chloroethane	336.8	10.0	ug/L	303	ND	111	69-148			
Trichlorofluoromethane	329.9	10.0	ug/L	303	ND	109	62-163			
1,1-Dichloroethylene	547.4	10.0	ug/L	501	ND	109	70-148			
Acetone	1009	100	ug/L	1000	ND	101	45-173			
Methyl Iodide	767.9	10.0	ug/L	1000	ND	76.6	62-167			
Carbon Disulfide	1198	10.0	ug/L	1000	ND	120	71-163			
Methylene Chloride	536.6	50.0	ug/L	502	ND	107	69-140			
trans-1,2-Dichloroethylene	533.0	10.0	ug/L	503	ND	106	69-144			
1,1-Dichloroethane	544.7	10.0	ug/L	503	ND	108	70-138			
Vinyl Acetate	1704	50.0	ug/L	1560	ND	109	58-142			
cis-1,2-Dichloroethylene	471.6	10.0	ug/L	505	ND	93.4	68-151			
2-Butanone (MEK)	1012	100	ug/L	1000	ND	101	50-160			
Bromochloromethane	544.1	10.0	ug/L	504	ND	108	65-143			
Chloroform	494.1	10.0	ug/L	502	ND	98.5	71-143			
1,1,1-Trichloroethane	489.6	10.0	ug/L	503	ND	97.3	63-133			
Carbon Tetrachloride	497.9	10.0	ug/L	502	ND	99.2	63-142			
Benzene	557.2	10.0	ug/L	504	ND	110	69-133			
1,2-Dichloroethane	518.5	10.0	ug/L	502	ND	103	63-138			
Trichloroethylene	513.5	10.0	ug/L	503	ND	102	71-133			
1,2-Dichloropropane	513.0	10.0	ug/L	502	ND	102	69-132			
Dibromomethane	497.1	10.0	ug/L	505	ND	98.5	70-147			
Bromodichloromethane	504.5	10.0	ug/L	503	ND	100	67-130			
cis-1,3-Dichloropropene	516.6	10.0	ug/L	502	ND	103	61-126			
4-Methyl-2-pentanone (MIBK)	1141	50.0	ug/L	1000	ND	114	55-147			
Toluene	529.3	10.0	ug/L	505	ND	105	71-133			
trans-1,3-Dichloropropene	508.6	10.0	ug/L	503	ND	101	63-124			
1,1,2-Trichloroethane	509.7	10.0	ug/L	502	ND	102	69-133			
Tetrachloroethylene	522.6	10.0	ug/L	502	ND	104	70-124			
2-Hexanone (MBK)	1110	50.0	ug/L	1000	ND	111	53-141			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0786 - EPA 5030B - EPA 8260B										
Matrix Spike (1HJ0786-MS1)	**Source: 1HJ0396-13RE1** Prepared: 10/11/24 00:00 Analyzed: 10/11/24 19:10									
Dibromochloromethane	494.6	10.0	ug/L	503	ND	98.3	74-122			
1,2-Dibromoethane	483.4	10.0	ug/L	504	ND	95.8	66-127			
Chlorobenzene	515.8	10.0	ug/L	502	ND	103	76-116			
1,1,1,2-Tetrachloroethane	492.0	10.0	ug/L	504	ND	97.6	77-121			
Ethylbenzene	512.6	10.0	ug/L	505	ND	102	73-124			
Xylenes, total	1625	20.0	ug/L	1510	ND	107	75-123			
Styrene	522.2	10.0	ug/L	504	ND	104	70-120			
Bromoform	473.8	10.0	ug/L	502	ND	94.3	70-124			
1,2,3-Trichloropropane	515.4	10.0	ug/L	504	ND	102	62-135			
trans-1,4-Dichloro-2-butene	820.2	50.0	ug/L	1000	ND	81.8	50-120			
1,1,2,2-Tetrachloroethane	529.0	10.0	ug/L	502	ND	105	63-126			
1,4-Dichlorobenzene	505.2	10.0	ug/L	502	ND	101	72-119			
1,2-Dichlorobenzene	481.6	10.0	ug/L	502	ND	96.0	71-117			
1,2-Dibromo-3-chloropropane	482.4	50.0	ug/L	505	ND	95.6	49-134			
Surrogate: Dibromofluoromethane	*485*		ug/L	*502*		*96.7*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*492*		ug/L	*504*		*97.6*	*61-142*			
Surrogate: Toluene-d8	*529*		ug/L	*505*		*105*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*521*		ug/L	*502*		*104*	*80-116*			
Matrix Spike Dup (1HJ0786-MSD1)	**Source: 1HJ0396-13RE1** Prepared: 10/11/24 00:00 Analyzed: 10/12/24 15:14									
Dichlorodifluoromethane	209.8	10.0	ug/L	303	ND	69.3	37-140	45.5	18	R1
Chloromethane	289.4	10.0	ug/L	303	ND	95.4	61-152	0.276	26	
Vinyl Chloride	156.8	10.0	ug/L	302	ND	51.8	66-149	53.0	23	M2
Bromomethane	107.5	10.0	ug/L	301	ND	35.7	43-171	39.3	29	M2
Chloroethane	227.8	10.0	ug/L	303	ND	75.1	69-148	38.6	25	R1
Trichlorofluoromethane	323.2	10.0	ug/L	303	ND	107	62-163	2.05	25	
1,1-Dichloroethylene	525.4	10.0	ug/L	501	ND	105	70-148	4.10	22	
Acetone	959.1	100	ug/L	1000	ND	95.8	45-173	5.08	30	
Methyl Iodide	310.1	10.0	ug/L	1000	ND	30.9	62-167	84.9	24	R1
Carbon Disulfide	1129	10.0	ug/L	1000	ND	113	71-163	5.91	22	
Methylene Chloride	517.5	50.0	ug/L	502	ND	103	69-140	3.62	19	
trans-1,2-Dichloroethylene	509.9	10.0	ug/L	503	ND	101	69-144	4.43	22	
1,1-Dichloroethane	516.1	10.0	ug/L	503	ND	103	70-138	5.39	20	
Vinyl Acetate	1664	50.0	ug/L	1560	ND	107	58-142	2.35	24	
cis-1,2-Dichloroethylene	440.5	10.0	ug/L	505	ND	87.2	68-151	6.82	22	
2-Butanone (MEK)	1030	100	ug/L	1000	ND	103	50-160	1.82	23	
Bromochloromethane	481.8	10.0	ug/L	504	ND	95.5	65-143	12.1	22	
Chloroform	463.2	10.0	ug/L	502	ND	92.3	71-143	6.46	21	
1,1,1-Trichloroethane	451.0	10.0	ug/L	503	ND	89.6	63-133	8.21	23	
Carbon Tetrachloride	461.8	10.0	ug/L	502	ND	92.0	63-142	7.52	22	
Benzene	533.3	10.0	ug/L	504	ND	106	69-133	4.38	18	
1,2-Dichloroethane	495.4	10.0	ug/L	502	ND	98.7	63-138	4.56	20	
Trichloroethylene	491.1	10.0	ug/L	503	ND	97.5	71-133	4.46	23	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0786 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HJ0786-MSD1)	**Source: 1HJ0396-13RE1**	Prepared: 10/11/24 00:00 Analyzed: 10/12/24 15:14								
1,2-Dichloropropane	485.0	10.0	ug/L	502	ND	96.6	69-132	5.61	20	
Dibromomethane	470.6	10.0	ug/L	505	ND	93.2	70-147	5.48	22	
Bromodichloromethane	479.8	10.0	ug/L	503	ND	95.5	67-130	5.02	21	
cis-1,3-Dichloropropene	484.8	10.0	ug/L	502	ND	96.6	61-126	6.35	21	
4-Methyl-2-pentanone (MIBK)	1234	50.0	ug/L	1000	ND	123	55-147	7.86	23	
Toluene	518.9	10.0	ug/L	505	ND	103	71-133	1.98	19	
trans-1,3-Dichloropropene	478.1	10.0	ug/L	503	ND	95.1	63-124	6.18	21	
1,1,2-Trichloroethane	485.0	10.0	ug/L	502	ND	96.6	69-133	4.97	19	
Tetrachloroethylene	506.9	10.0	ug/L	502	ND	101	70-124	3.05	24	
2-Hexanone (MBK)	1234	50.0	ug/L	1000	ND	123	53-141	10.6	24	
Dibromochloromethane	478.2	10.0	ug/L	503	ND	95.0	74-122	3.37	21	
1,2-Dibromoethane	478.0	10.0	ug/L	504	ND	94.8	66-127	1.12	23	
Chlorobenzene	503.2	10.0	ug/L	502	ND	100	76-116	2.47	21	
1,1,1,2-Tetrachloroethane	469.1	10.0	ug/L	504	ND	93.0	77-121	4.77	25	
Ethylbenzene	495.1	10.0	ug/L	505	ND	98.1	73-124	3.47	20	
Xylenes, total	1516	20.0	ug/L	1510	ND	100	75-123	6.93	20	
Styrene	490.9	10.0	ug/L	504	ND	97.4	70-120	6.18	23	
Bromoform	480.5	10.0	ug/L	502	ND	95.7	70-124	1.40	22	
1,2,3-Trichloropropane	529.6	10.0	ug/L	504	ND	105	62-135	2.72	28	
trans-1,4-Dichloro-2-butene	816.5	50.0	ug/L	1000	ND	81.4	50-120	0.452	26	
1,1,2,2-Tetrachloroethane	572.3	10.0	ug/L	502	ND	114	63-126	7.86	24	
1,4-Dichlorobenzene	507.1	10.0	ug/L	502	ND	101	72-119	0.375	24	
1,2-Dichlorobenzene	488.7	10.0	ug/L	502	ND	97.4	71-117	1.46	24	
1,2-Dibromo-3-chloropropane	537.4	50.0	ug/L	505	ND	106	49-134	10.8	28	
Surrogate: Dibromofluoromethane	*459*		ug/L	*502*		*91.4*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*453*		ug/L	*504*		*90.0*	*61-142*			
Surrogate: Toluene-d8	*530*		ug/L	*505*		*105*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*507*		ug/L	*502*		*101*	*80-116*			
Batch 1HJ1255 - EPA 5030B - EPA 8260B										
Blank (1HJ1255-BLK1)		Prepared: 10/18/24 00:00 Analyzed: 10/18/24 12:45								
Bromomethane	<1.0	1.0	ug/L							
Surrogate: Dibromofluoromethane	*44.9*		ug/L	*50.2*		*89.5*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*46.0*		ug/L	*50.4*		*91.3*	*61-142*			
Surrogate: Toluene-d8	*47.9*		ug/L	*50.5*		*94.9*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*50.8*		ug/L	*50.2*		*101*	*80-116*			
LCS (1HJ1255-BS1)		Prepared: 10/18/24 00:00 Analyzed: 10/18/24 11:38								
Bromomethane	23.61	1.0	ug/L	30.0		78.7	52-176			
Surrogate: Dibromofluoromethane	*44.4*		ug/L	*50.2*		*88.4*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*44.6*		ug/L	*50.4*		*88.5*	*61-142*			
Surrogate: Toluene-d8	*49.5*		ug/L	*50.5*		*98.1*	*82-121*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1255 - EPA 5030B - EPA 8260B										
LCS (1HJ1255-BS1)			Prepared: 10/18/24 00:00 Analyzed: 10/18/24 11:38							
Surrogate: 4-Bromofluorobenzene	*49.8*		ug/L	*50.2*		*99.2*	*80-116*			
LCS Dup (1HJ1255-BSD1)			Prepared: 10/18/24 00:00 Analyzed: 10/18/24 12:00							
Bromomethane	22.13	1.0	ug/L	30.0		73.8	52-176	6.47	27	
Surrogate: Dibromofluoromethane	*44.8*		ug/L	*50.2*		*89.1*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*45.2*		ug/L	*50.4*		*89.7*	*61-142*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.5*		*97.9*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*51.3*		ug/L	*50.2*		*102*	*80-116*			
Matrix Spike (1HJ1255-MS1)	**Source: 1HJ0275-11RE1**		Prepared: 10/18/24 00:00 Analyzed: 10/19/24 00:57							
Bromomethane	329.3	10.0	ug/L	300	ND	110	43-171			
Surrogate: Dibromofluoromethane	*467*		ug/L	*502*		*93.0*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*485*		ug/L	*504*		*96.3*	*61-142*			
Surrogate: Toluene-d8	*495*		ug/L	*505*		*98.0*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*494*		ug/L	*502*		*98.5*	*80-116*			
Matrix Spike Dup (1HJ1255-MSD1)	**Source: 1HJ0275-11RE1**		Prepared: 10/18/24 00:00 Analyzed: 10/19/24 01:20							
Bromomethane	310.5	10.0	ug/L	300	ND	104	43-171	5.88	29	
Surrogate: Dibromofluoromethane	*463*		ug/L	*502*		*92.3*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*482*		ug/L	*504*		*95.8*	*61-142*			
Surrogate: Toluene-d8	*494*		ug/L	*505*		*97.8*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*501*		ug/L	*502*		*99.9*	*80-116*			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0426 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HJ0426-BLK1)			Prepared: 10/07/24 16:02 Analyzed: 10/08/24 17:26							
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							
Vanadium, total	<0.0200	0.0200	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1HJ0426-BS1)			Prepared: 10/07/24 16:02 Analyzed: 10/08/24 17:32							

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0426 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Antimony, total	0.103	0.0020	mg/L	0.100		103	80-120			
Arsenic, total	0.104	0.0040	mg/L	0.100		104	80-120			
Barium, total	0.114	0.0040	mg/L	0.100		114	80-120			
Beryllium, total	0.108	0.0040	mg/L	0.100		108	80-120			
Cadmium, total	0.105	0.0008	mg/L	0.100		105	80-120			
Chromium, total	0.103	0.0080	mg/L	0.100		103	80-120			
Cobalt, total	0.109	0.0004	mg/L	0.100		109	80-120			
Copper, total	0.112	0.0040	mg/L	0.100		112	80-120			
Lead, total	0.106	0.0040	mg/L	0.100		106	80-120			
Nickel, total	0.110	0.0040	mg/L	0.100		110	80-120			
Selenium, total	0.1007	0.0040	mg/L	0.100		101	80-120			
Silver, total	0.106	0.0040	mg/L	0.100		106	80-120			
Thallium, total	0.0928	0.0020	mg/L	0.100		92.8	80-120			
Vanadium, total	0.106	0.0200	mg/L	0.100		106	80-120			
Zinc, total	0.103	0.0200	mg/L	0.100		103	80-120			
Matrix Spike (1HJ0426-MS1)	**Source: 1HJ0275-01**	Prepared: 10/07/24 16:02 Analyzed: 10/08/24 18:03								
Antimony, total	0.0987	0.0020	mg/L	0.100	ND	98.7	75-125			
Arsenic, total	0.101	0.0040	mg/L	0.100	0.0012	99.9	75-125			
Barium, total	0.300	0.0040	mg/L	0.100	0.194	107	75-125			
Beryllium, total	0.102	0.0040	mg/L	0.100	ND	102	75-125			
Cadmium, total	0.0983	0.0008	mg/L	0.100	ND	98.3	75-125			
Chromium, total	0.101	0.0080	mg/L	0.100	0.0059	95.5	75-125			
Cobalt, total	0.109	0.0004	mg/L	0.100	ND	109	75-125			
Copper, total	0.106	0.0040	mg/L	0.100	ND	106	75-125			
Lead, total	0.0992	0.0040	mg/L	0.100	ND	99.2	75-125			
Nickel, total	0.109	0.0040	mg/L	0.100	ND	109	75-125			
Selenium, total	0.0981	0.0040	mg/L	0.100	ND	98.1	75-125			
Silver, total	0.0992	0.0040	mg/L	0.100	ND	99.2	75-125			
Thallium, total	0.0880	0.0020	mg/L	0.100	ND	88.0	75-125			
Vanadium, total	0.103	0.0200	mg/L	0.100	ND	103	75-125			
Zinc, total	0.0991	0.0200	mg/L	0.100	ND	99.1	75-125			
Matrix Spike Dup (1HJ0426-MSD1)	**Source: 1HJ0275-01**	Prepared: 10/07/24 16:02 Analyzed: 10/09/24 10:31								
Antimony, total	0.102	0.0020	mg/L	0.100	ND	102	75-125	3.23	20	
Arsenic, total	0.107	0.0040	mg/L	0.100	0.0012	105	75-125	5.23	20	
Barium, total	0.314	0.0040	mg/L	0.100	0.194	120	75-125	4.26	20	
Beryllium, total	0.110	0.0040	mg/L	0.100	ND	110	75-125	7.42	20	
Cadmium, total	0.101	0.0008	mg/L	0.100	ND	101	75-125	2.27	20	
Chromium, total	0.109	0.0080	mg/L	0.100	0.0059	103	75-125	6.83	20	
Cobalt, total	0.115	0.0004	mg/L	0.100	ND	115	75-125	5.71	20	
Copper, total	0.116	0.0040	mg/L	0.100	ND	116	75-125	8.36	20	
Lead, total	0.0983	0.0040	mg/L	0.100	ND	98.3	75-125	0.952	20	
Nickel, total	0.115	0.0040	mg/L	0.100	ND	115	75-125	4.83	20	
Selenium, total	0.0992	0.0040	mg/L	0.100	ND	99.2	75-125	1.16	20	
Silver, total	0.103	0.0040	mg/L	0.100	ND	103	75-125	4.15	20	
Thallium, total	0.0942	0.0020	mg/L	0.100	ND	94.2	75-125	6.84	20	

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0426 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Matrix Spike Dup (1HJ0426-MSD1)	**Source: 1HJ0275-01**		Prepared: 10/07/24 16:02 Analyzed: 10/09/24 10:31							
Vanadium, total	0.110	0.0200	mg/L	0.100	ND	110	75-125	7.12	20	
Zinc, total	0.118	0.0200	mg/L	0.100	ND	118	75-125	17.2	20	
Post Spike (1HJ0426-PS1)	**Source: 1HJ0275-01**		Prepared: 10/07/24 16:02 Analyzed: 10/08/24 18:28							
Antimony, total	0.0745		mg/L	0.0800	0.0001	93.0	80-120			
Arsenic, total	0.0779		mg/L	0.0800	0.0012	95.9	80-120			
Barium, total	0.267		mg/L	0.0800	0.190	96.6	80-120			
Beryllium, total	0.0796		mg/L	0.0800	-0.00001	99.5	80-120			
Cadmium, total	0.0732		mg/L	0.0800	0.00003	91.4	80-120			
Chromium, total	0.0755		mg/L	0.0800	0.0058	87.2	80-120			
Cobalt, total	0.0794		mg/L	0.0800	0.0001	99.2	80-120			
Copper, total	0.0756		mg/L	0.0800	0.0007	93.7	80-120			
Lead, total	0.0746		mg/L	0.0800	-0.000007	93.3	80-120			
Nickel, total	0.0793		mg/L	0.0800	0.0011	97.7	80-120			
Selenium, total	0.0730		mg/L	0.0800	-0.0003	91.3	80-120			
Silver, total	0.0749		mg/L	0.0800	-0.00008	93.6	80-120			
Thallium, total	0.0634		mg/L	0.0800	0.00001	79.3	80-120			Q
Vanadium, total	0.0791		mg/L	0.0800	0.0049	92.7	80-120			
Zinc, total	0.0753		mg/L	0.0800	0.0013	92.5	80-120			

Definitions

M1:	Matrix spike recovery is above acceptance limits.
M2:	Matrix spike recovery is below acceptance limits.
Q:	One or more quality control criteria failed.
Q2:	LCS recovery is above acceptance limits.
R1:	Duplicate RPD is outside acceptance criteria.
RL:	Reporting Limit
RPD:	Relative Percent Difference

Cooler Receipt Log

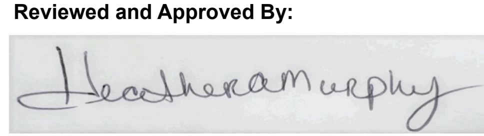
Cooler ID: Default Cooler   Temp: 0.0°C

Cooler Inspection Checklist

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

Report Comments

Reviewed and Approved By:



Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
10/28/24 15:52

CHAIN OF CUSTODY RECORD

MICROBAC®

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

1HJ0275
HLW Engineering
PM: Heather Murphy

Page 1 of
Printed: 8/12/2024 4:23:11P
www.keystonelabs.com

SITE INFORMATION

Sampler: JGH

Project: Tama County - New Regs 6029

REPORT T

Todd Whipple
HLW Engineering
PO Box 314
Story City, IA 50248

Dave Sherwood
Tama County Landfill Commission
PO Box 31
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☒ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HJ0275
Temperature 0.0
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-20(up)	Aqueous	GRAB	9/30/24	9:11	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	01
-001	MW-26(up)	Aqueous	GRAB	9/30/24	9:35	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	02
-001	MW-37(up)	Aqueous	GRAB	9/30/24	9:21	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	03
-001	MW-33(up)	Aqueous	GRAB	9/30/24	9:48	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	04
-001	MW-3A	Aqueous	GRAB	9/30/24	11:23	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	05
-001	MW-8	Aqueous	GRAB	9/30/24	10:09	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	06
-001	MW-10	Aqueous	GRAB	9/30/24	10:22	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	07

Relinquished By [signature] Date/Time

Received By Date/Time

Relinquished By Date/Time

[signature] 10-1-24 1030
Received for Lab By Date/Time

Remarks:

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF CUSTODY RECORD

MICROBAC®

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

1HJ0275
HLW Engineering
PM: Heather Murphy

Printed: 8/12/2024 4:23:11P

www.keystonelabs.com

SITE INFORMATION

Sampler: JeH

Project: Tama County - New Regs
6020

REPORT TO

Todd Whipple
HLW Engineering
PO Box 314
Story City, IA 50248

INVOICE TO

Dave Sherwood
Tama County Landfill Commission
PO Box 31
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☒ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HJ0275
Temperature 0.0
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-11	Aqueous	GRAB	9/30/24	10:26	~~10~~ 1	co-t-6020		08
-001	MW-27	Aqueous	GRAB	9/30/24	10:44	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	09
-001	MW-34	Aqueous	GRAB	9/30/24	11:09	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	10
-001	MW-35	Aqueous	GRAB	9/30/24	11:34	7	8260@dichlorodifluoromethane lndfll-app1-metals-6020	lndfill-app1-voc-group	11
-001	MW-36	Aqueous	GRAB	9/30/24	11:45	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	12
-001	~~SW-3~~ - DRY - No SAMPLE	~~Aqueous~~	~~GRAB~~	/ /			~~lndfill-app1-voc-group~~	~~lndfll-app1-metals-6020~~	—
-001	Duplicate	Aqueous	GRAB	9/30/24	10:09	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	13

Relinquished By	Date/Time	Relinquished By	Date/Time
JC [signature]			
Received By	Date/Time	Received for Lab By	Date/Time
		[signature]	10-1-24 1030

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Appendix E

Summary of Turbidity Measurements

\

Tama County Sanitary Landfill

Field Turbidity Over Time

No-Purge Sampling

	9/15/14	1/14/15	3/6/15	6/16/15	8/24/15	3/1/16	9/9/16	10/31/16	3/22/17	6/7/17
Well	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**
3A	2.35		11.89		0.64	3.47	5.17	1.53	0.6	
8B	3.59		12.54		0.83	4.92	1.92	3.12	1.07	
10	38.7		3.51		0.55	5.45	4.23		26.7	
20	1.77	1.31	1.34	0.66	0.37	2.74	0.9		0.5	
26	1.2	1.39	0.94	0.5	0.1	2.10	2.62		0.97	
27	1.63		2.16		0.3	1.54	1.15		0.7	
33	2.97		0.12		9.36	1.86	11		1.1	0.31
34	2.01		0.54		0.34	18.3	5.64		1.61	
35	5.27		0.26		0.29	1.74	1.25		0.72	
36	1.25	1.09	0.13		0.26	0.82	1.36		0.78	
37	2.28	1.36	0.72	1.67	0.2	1.55	1.41		2.48	
PZ-11								11.2		
SW-3	2.16				0.26	1.17			0.61	
Max	**38.70**	**1.39**	**12.54**	**1.67**	**9.36**	**18.30**	**11.00**	**11.20**	**26.70**	**0.31**
Min	**1.20**	**1.09**	**0.12**	**0.50**	**0.10**	**0.82**	**0.90**	**1.53**	**0.50**	**0.31**
Median	**2.22**	**1.34**	**0.94**	**0.66**	**0.32**	**1.98**	**1.92**	**3.12**	**0.88**	**0.31**
Average	**5.43**	**1.29**	**3.10**	**0.94**	**1.13**	**3.81**	**3.33**	**5.28**	**3.15**	**0.31**

Tama Co

Field Turbic

No-Purg

	8/24/17	11/15/17	2/26/18	8/29/18	3/18/19	9/10/19	3/25/20	9/4/20	3/2/21	9/2/21
Well	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**
3A	9.84	17.3	17.1	1.35	1.11	1.94	0.72	1.34	1.24	2.41
8B	6.22		6.8	2.86	0.55	0.83	0.43	2	9.88	1.77
10	1.98		27.7	2.7	38.5	1.14	10.7	8.89	7.03	2.45
20	1.65		3.6	1.23	1.16	0.85	1.5	1.54	0.92	2.79
26	0.96		1.13	0.61	0.36	0.56	0.61	0.8	0.29	1.88
27	1.08		0.56	1.5	0.36	0.94	0.22	0.79	0.98	1.74
33	1.19		0.77	0.98	0.38	0.66	2.53	0.82	0.97	1.91
34	11	5.45	1.27	0.87	93.6	2.65	0.53	1.67	0.92	6.3
35	6.41		0.66	1.26	0.43	1.8	0.91	0.91	1.51	2.54
36	2.14		0.47	0.33	0.67	0.93	0.8	0.5	0.51	1.65
37	2.7		2.61	0.94	0.59	0.74	0.84	0.89	0.49	1.73
PZ-11	1.53		38.4	3.2	2.77	34.49	62.5	1.16		1.93
SW-3					2.61		0.87			
Max	**11.00**	**17.30**	**38.40**	**3.20**	**93.60**	**34.49**	**62.50**	**8.89**	**9.88**	**6.30**
Min	**0.96**	**5.45**	**0.47**	**0.33**	**0.36**	**0.56**	**0.22**	**0.50**	**0.29**	**1.65**
Median	**2.06**	**11.38**	**1.94**	**1.25**	**0.67**	**0.94**	**0.84**	**1.04**	**0.97**	**1.92**
Average	**3.89**	**11.38**	**8.42**	**1.49**	**11.01**	**3.96**	**6.40**	**1.78**	**2.25**	**2.43**

Tama Co

Field Turbic

No-Purg

	3/2/22	8/29/22	3/23/23	9/25/23	3/5/24	9/30/24	Max	Min	Ave	Std Dev
Well	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**				
3A	1.4	2.73	0.91		6.11	128	**128.00**	**0.60**	**9.96**	**26.85**
8B	3.17	2.1	0.57	3.33	2.2	8.45	**12.54**	**0.43**	**3.60**	**3.28**
10	1.09	1.02	3.31	3.4	13.5	2.82	**38.70**	**0.55**	**9.78**	**12.22**
20	4.01	2.26	2.69	7.67	3.88	0.77	**7.67**	**0.37**	**2.00**	**1.63**
26	0.76	1.4	0.72	1.99	2.37	0.88	**2.62**	**0.10**	**1.09**	**0.68**
27	0.62	3.55	1.45	2.2	0.49	1.39	**3.55**	**0.22**	**1.21**	**0.79**
33	3.8	1.15	0.98	2.35	0.97	1.5	**11.00**	**0.12**	**2.17**	**2.76**
34	4.72	3.85	0.8	5.47	13.8	1.35	**93.60**	**0.34**	**8.30**	**19.62**
35	4.22	1.48	1.32	1.4	1.28	3.4	**6.41**	**0.26**	**1.86**	**1.65**
36	1.04	2.35	1.14	1.6	1.07	1.29	**2.35**	**0.13**	**1.01**	**0.58**
37	1.38	1.19	1.03	2.62	0.78	1.21	**2.70**	**0.20**	**1.37**	**0.74**
PZ-11	0.75	0.62	1.28	2.2	1.19	1.41	**62.50**	**0.62**	**10.98**	**18.76**
SW-3							**2.61**	**0.26**	**1.28**	**0.92**
Max	**4.72**	**3.85**	**3.31**	**7.67**	**13.80**	**128.00**				
Min	**0.62**	**0.62**	**0.57**	**1.40**	**0.49**	**0.77**				
Median	**1.39**	**1.79**	**1.09**	**2.35**	**1.74**	**1.40**				
Average	**2.25**	**1.98**	**1.35**	**3.11**	**3.97**	**12.71**				

Appendix F

Running Summary of Prediction Limit Exceedances

Spring 2013†		**Fall 2013†**	
MW-8	Selenium	MW-8	bis(2-ethylhexyl)phthalate
MW-10	Barium	MW-10	Barium
	Cobalt		Cobalt
	Nickel		Copper
	1,4-dichlorobenzene		Nickel
	chlorobenzene		chlorobenzene
MW-34	None	MW-34	Barium
			Cobalt
MW-35	Barium	MW-35	Barium
	1,1-dichloroethane		1,1-dichloroethane
	dichlorodifluoromethane		dichlorodifluoromethane

Spring 2014†		**Fall 2014†**	
MW-8	Cobalt	MW-8	None
	Copper		
	Nickel		
MW-10	Barium	MW-10	Barium
	Cobalt		Cobalt
	Nickel		Nickel
	chlorobenzene		chlorobenzene
MW-34	None	MW-34	bis(2-ethylhexyl)phthalate
MW-35	Barium	MW-35	Barium
	1,1-dichloroethane		dichlorodifluoromethane
	dichlorodifluoromethane		bis(2-ethylhexyl)phthalate
SW-101	None	SW-101	Cobalt

Spring 2015†		**Fall 2015†**	
MW-8	bis(2-ethylhexyl)phthalate	MW-8	None
MW-10	Barium	MW-10	Barium
	Cobalt		Cobalt
	Nickel		Nickel
			chlorobenzene
			1,4-dichlorobenzene
MW-34	None	MW-34	Nickel
			1,4-dichlorobenzene
			Benzene
			bis(2-ethylhexyl)phthalate
			chlorobenzene
MW-35	Barium	MW-35	Barium
	dichlorodifluoromethane		bis(2-ethylhexyl)phthalate

SW-101*	None	SW-101*	Nickel*

Spring 2016†		**Fall 2016**	
MW-3A	None	MW-3A	Arsenic
			Barium
MW-8	None	MW-8	Cobalt
			Nickel
MW-10	Barium	MW-10	Barium
	Nickel		Cobalt
			Nickel
			Zinc
			chlorobenzene
			1,4-dichlorobenzene
MW-27	None	MW-27	Barium
MW-34	Nickel	MW-34	Nickel
	1,4-dichlorobenzene		1,4-dichlorobenzene
	chlorobenzene		chlorobenzene
	chloroethane		
MW-35	Barium	MW-35	Barium
	dichlorodifluoromethane		dichlorodifluoromethane
	1,1-dichloroethane		1,1-dichloroethane
MW-36	None	MW-36	Barium

† *Predates paring of the historic background data and the results included herein are considered informational and should not be considered conclusive.*

Spring 2017		**Fall 2017**	
MW-3A	None	MW-3A	Arsenic
			Barium
MW-8	Nickel	MW-8	Nickel
			bis(2-ethylhexyl)phthalate
MW-10	Arsenic	MW-10	Arsenic
	Barium		Barium
	Cobalt		Cobalt
	Nickel		Nickel
	1,4-dichlorobenzene		1,4-dichlorobenzene
	chlorobenzene		chlorobenzene
	chloroethane		
MW-27	Barium	MW-27	Barium
MW-34	Nickel	MW-34	Nickel
	1,4-dichlorobenzene		1,4-dichlorobenzene
	benzene		benzene
	chlorobenzene		chlorobenzene
MW-35	Barium	MW-35	Barium
	dichlorodifluoromethane		bis(2-ethylhexyl)phthalate
	1,1-dichloroethane		dichlorodifluoromethane
MW-36	Barium	MW-36	Barium
	Cadmium		

Spring 2018		**Fall 2018**	
MW-3A	Nickel	MW-3A	Arsenic
	Bis(2-ethylhexyl)phthalate		Barium
			Zinc
MW-8	Nickel	MW-8	Cobalt
	Bis(2-ethylhexyl)phthalate		Nickel
			Zinc
			bis(2-ethylhexyl)phthalate
MW-10	Arsenic	MW-10	Arsenic
	Barium		Barium
	Cobalt		Cobalt
	Nickel		Nickel
	1,4-dichlorobenzene		Zinc
	chlorobenzene		1,4-dichlorobenzene
			chlorobenzene
			chloroethane
MW-27	Barium	MW-27	Barium
	Bis(2-ethylhexyl)phthalate		
MW-34	Nickel	MW-34	Nickel
	1,4-dichlorobenzene		1,4-dichlorobenzene
	Bis(2-ethylhexyl)phthalate		
MW-35	Barium	MW-35	Barium
	Dichlorodifluoromethane		Zinc
	1,1-dichloroethane		1,1-dichloroethane
			bis(2-ethylhexyl)phthalate
			dichlorodifluoromethane
MW-36	Barium	MW-36	Barium

Spring 2019		**Fall 2019**	
MW-3A	Cobalt	MW-3A	Cobalt
	Nickel		Nickel
MW-8	Nickel	MW-8	Cobalt
			Nickel
MW-10	Cobalt	MW-10	Barium
	Nickel		Cobalt
	chlorobenzene		Nickel
			chlorobenzene
MW-27	Barium	MW-27	Barium
	bis(2-ethylhexyl)phthalate		
MW-34	Cobalt	MW-34	Arsenic
	Nickel		Cobalt
	chlorobenzene		Nickel
			chlorobenzene
			bis(2-ethylhexyl)phthalate
MW-35	Barium	MW-35	Barium
	dichlorodifluoromethane		Cobalt
	1,1-dichloroethane		Nickel
			1,1-dichloroethane
			dichlorodifluoromethane
MW-36	Barium	MW-36	Barium

Spring 2020		**Fall 2020**	
MW-3A	Cobalt	MW-3A	Cobalt
	Nickel		
MW-8	None	MW-8	Nickel
MW-10	Barium	MW-10	Barium
	Cobalt		Cadmium
	Nickel		Cobalt
	chlorobenzene		Nickel
			1,4-dichlorobenzene
			chlorobenzene
MW-27	Barium	MW-27	Barium
MW-34	Cobalt	MW-34	Cobalt
	Nickel		Nickel
			1,4-dichlorobenzene
			chlorobenzene
MW-35	Barium	MW-35	None
	dichlorodifluoromethane		
	1,1-dichloroethane		
MW-36	Barium	MW-36	Barium

Spring 2021		**Fall 2021**	
MW-3A	Cobalt	MW-3A	Arsenic
MW-8	Cobalt	MW-8	Nickel
	Nickel		
MW-10	Barium	MW-10	Barium
	Cobalt		Cobalt
	Nickel		Nickel
	1,4-dichlorobenzene		1,4-dichlorobenzene
	chlorobenzene		chlorobenzene
MW-27	Barium	MW-27	Barium
MW-34	Cobalt	MW-34	Cobalt
	Nickel		Nickel
	1,4-dichlorobenzene		1,4-dichlorobenzene
	benzene		chlorobenzene
	chlorobenzene		
MW-35	Barium	MW-35	Cobalt
	Cobalt		Copper
			Nickel
MW-36	Barium	MW-36	Barium
	Cobalt		

Spring 2022		**Fall 2022**	
MW-3A	Barium	MW-3A	Barium
MW-8	Nickel	MW-8	Barium
			Nickel
MW-10	Barium	MW-10	Barium
	Nickel		Cobalt
			Nickel
			1,4-dichlorobenzene
			chlorobenzene
			chloroethane
MW-27	Barium	MW-27	None
MW-34	1,4-dichlorobenzene	MW-34	Nickel
	bis(2-ethylhexyl)phthalate		1,4-dichlorobenzene
			chlorobenzene
MW-35	Barium	MW-35	Barium
	dichlorodifluoromethane		dichlorodifluoromethane
MW-36	Barium	MW-36	Barium

Spring 2023		**Fall 2023**	
MW-3A	Barium	MW-3A	Dry
	bis(2-ethylhexyl)phthalate		
MW-8	None	MW-8	Nickel
MW-10	Barium	MW-10	Barium
	Nickel		Cobalt
	1,4-dichlorobenzene		Nickel
			1,4-dichlorobenzene
			chlorobenzene
MW-34	None	MW-34	Nickel
			1,4-dichlorobenzene
			chlorobenzene
MW-35	Barium	MW-35	Barium
MW-36	Barium	MW-36	Barium
	TCE		

Spring 2024		**Fall 2024**	
MW-3A	Nickel	MW-3A	Arsenic
MW-8	Nickel	MW-8	Cobalt
			Nickel
MW-10	Barium	MW-10	Barium
	Cobalt		Cobalt
	Nickel		Nickel
	1,4-dichlorobenzene		1,4-dichlorobenzene
			chlorobenzene
MW-34	Nickel	MW-34	Arsenic
			Cobalt
			Nickel
			1,4-dichlorobenzene
MW-35	Barium	MW-35	Barium
	dichlorodifluoromethane		dichlorodifluoromethane
MW-36	Barium	MW-36	Barium
	Copper		

Appendix G

Leachate Collection System Performance Evaluation Report

Appendix G.1 – Leachate Treatment Agreement

IOWA DEPARTMENT OF NATURAL RESOURCES

National Pollutant Discharge Elimination System (NPDES) Permit

OWNER NAME & ADDRESS

CITY OF TOLEDO
CITY HALL, 1007 S. PROSPECT DR.
TOLEDO, IA 52342-0234

FACILITY NAME & ADDRESS

TOLEDO CITY OF STP
1200 TRAIL DRIVE
TOLEDO, IA 52342

Section 21, T83N, R15W
Tama County

IOWA NPDES PERMIT NUMBER: 8676001
DATE OF ISSUANCE: 05/01/2023
DATE OF EXPIRATION: 04/30/2028

YOU ARE REQUIRED TO FILE FOR RENEWAL OF THIS PERMIT BY: 11/02/2027
EPA NUMBER: IA0033103

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.

Pursuant to rule 561-7.4, Iowa Administrative Code, you may appeal any condition of this permit by filing a written notice of appeal and request for administrative hearing with the director of the department within 60 days of permit issuance.

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 Nick Kirkendall Digitally signed by Nick Kirkendall Date: 2023.04.18 08:26:13 -05'00'

Nick Kirkendall
NPDES Section, Environmental Services Division

Facility Name: TOLEDO CITY OF STP

Permit Number: 8676001

Outfall No.: 001 DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

Receiving Stream: DEER CREEK

Route of Flow: DEER CREEK

Class A3 waters are children's recreational use waters in which recreational uses by children are common. Class A3 waters are water bodies having definite banks and bed with visible evidence of flow or occurrence of water. This type of use would primarily occur in urban or residential areas.

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: TOLEDO CITY OF STP
Permit Number: 8676001

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.

Outfall: 001 Effective Dates: 05/01/2023 to 04/30/2028			
Parameter	**Season**	**Limit Type**	**Limits**
CBOD5			**85% Removal Required**
	Yearly	7 Day Average	40 MG/L 367 LBS/DAY
	Yearly	30 Day Average	25 MG/L 229 LBS/DAY
TOTAL SUSPENDED SOLIDS			**85% Removal Required**
	Yearly	7 Day Average	45 MG/L 413 LBS/DAY
	Yearly	30 Day Average	30 MG/L 275 LBS/DAY

Facility Name: TOLEDO CITY OF STP

Permit Number: 8676001

Outfall: 001 Effective Dates: 05/01/2023 to 04/30/2028			
Parameter	**Season**	**Limit Type**	**Limits**
AMMONIA NITROGEN (N)			
	JAN	30 Day Average	8.4 MG/L 15.8 LBS/DAY
	JAN	Daily Maximum	77.1 MG/L 145.2 LBS/DAY
	FEB	30 Day Average	9.7 MG/L 14.9 LBS/DAY
	FEB	Daily Maximum	88.7 MG/L 137.1 LBS/DAY
	MAR	30 Day Average	7.6 MG/L 15.2 LBS/DAY
	MAR	Daily Maximum	69.4 MG/L 139.7 LBS/DAY
	APR	30 Day Average	3.3 MG/L 16.1 LBS/DAY
	APR	Daily Maximum	30.2 MG/L 145.9 LBS/DAY
	MAY	30 Day Average	2.8 MG/L 15.6 LBS/DAY
	MAY	Daily Maximum	26.0 MG/L 101.8 LBS/DAY
	JUN	30 Day Average	2.0 MG/L 11.4 LBS/DAY
	JUN	Daily Maximum	18.1 MG/L 72.5 LBS/DAY
	JUL	30 Day Average	1.9 MG/L 9.0 LBS/DAY
	JUL	Daily Maximum	17.3 MG/L 56.9 LBS/DAY
	AUG	30 Day Average	1.7 MG/L 9.1 LBS/DAY
	AUG	Daily Maximum	15.8 MG/L 56.0 LBS/DAY
	SEP	30 Day Average	2.2 MG/L 10.6 LBS/DAY
	SEP	Daily Maximum	20.4 MG/L 67.0 LBS/DAY
	OCT	30 Day Average	3.8 MG/L 16.2 LBS/DAY
	OCT	Daily Maximum	35.1 MG/L 100.0 LBS/DAY
	NOV	30 Day Average	5.6 MG/L 15.1 LBS/DAY
	NOV	Daily Maximum	51.2 MG/L 138.5 LBS/DAY
	DEC	30 Day Average	6.1 MG/L 16.4 LBS/DAY
	DEC	Daily Maximum	55.8 MG/L 150.9 LBS/DAY

Facility Name: TOLEDO CITY OF STP

Permit Number: 8676001

Outfall: 001 Effective Dates: 05/01/2023 to 04/30/2028			
Parameter	**Season**	**Limit Type**	**Limits**
CHLORIDE (AS CL)			
	Yearly	30 Day Average	794 MG/L 7,281 LBS/DAY
	Yearly	Daily Maximum	794 MG/L 7,281 LBS/DAY
ACUTE TOXICITY, CERIODAPHNIA			
	Yearly	Daily Maximum	1 NO TOXICITY
ACUTE TOXICITY, PIMEPHALES			
	Yearly	Daily Maximum	1 NO TOXICITY
DISSOLVED OXYGEN			
	Yearly	Daily Minimum	3.7 MG/L
PH			
	Yearly	Daily Maximum	9.0 STD UNITS
	Yearly	Daily Minimum	6.4 STD UNITS
E. COLI			
	MAR	Geometric Mean	126 #/100 ML
	APR	Geometric Mean	126 #/100 ML
	MAY	Geometric Mean	126 #/100 ML
	JUN	Geometric Mean	126 #/100 ML
	JUL	Geometric Mean	126 #/100 ML
	AUG	Geometric Mean	126 #/100 ML
	SEP	Geometric Mean	126 #/100 ML
	OCT	Geometric Mean	126 #/100 ML
	NOV	Geometric Mean	126 #/100 ML
ANNUAL AVERAGE NITROGEN DISCHARGED (AS N)			
	Yearly	Annual Average	58 LBS/DAY

Facility Name: TOLEDO CITY OF STP

Permit Number: 8676001

Outfall: 001 Effective Dates: 04/01/2023 to 03/31/2027			
Parameter	**Season**	**Limit Type**	**Limits**
CHLORINE, TOTAL RESIDUAL			
	Yearly	30 Day Average	0.245 MG/L 2.247 LBS/DAY
	Yearly	Daily Maximum	0.320 MG/L 2.936 LBS/DAY

Outfall: 001 Effective Dates: 04/01/2027 to 03/31/2028			
Parameter	**Season**	**Limit Type**	**Limits**
CHLORINE, TOTAL RESIDUAL			
	Yearly	30 Day Average	0.020 MG/L 0.19 LBS/DAY
	Yearly	Daily Maximum	0.024 MG/L 0.22 LBS/DAY

Facility Name: TOLEDO CITY OF STP

Permit Number: 8676001

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: TOLEDO CITY OF STP

Permit Number: 8676001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from 05/01/2023 to 04/30/2028				
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	2 TIMES PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE
001	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	NITROGEN, TOTAL KJELDAHL (AS N)	1 EVERY MONTH	24 HOUR COMPOSITE	RAW WASTE
001	PH	2 TIMES PER WEEK	GRAB	RAW WASTE
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	TEMPERATURE	2 TIMES PER WEEK	GRAB	RAW WASTE
001	TOTAL SUSPENDED SOLIDS	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	CBOD5	2 TIMES PER WEEK	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	TOTAL SUSPENDED SOLIDS	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	E. COLI	GEO. MEAN 1/3 MONTHS	GRAB	EFFLUENT AFTER DISINFECTION - GEO MEAN
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
001	ANNUAL AVERAGE NITROGEN DISCHARGED (AS N)	1 EVERY 12 MONTHS	CALCULATED	CALCULATION REPORTED ANNUALLY ON DMR
001	CHLORIDE (AS CL)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	CHLORINE, TOTAL RESIDUAL	3 TIMES PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	CYANIDE, TOTAL (AS CN)	1 EVERY MONTH	GRAB	EFFLUENT AFTER DISINFECTION
001	DISSOLVED OXYGEN	2 TIMES PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	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

Facility Name: TOLEDO CITY OF STP
Permit Number: 8676001

Special Monitoring Requirements

Outfall # **Description**

001 **NITROGEN, TOTAL (AS N)**

Total nitrogen shall be determined by testing for Total Kjeldahl Nitrogen (TKN) and nitrate + nitrite nitrogen and reporting the sum of the TKN and nitrate + nitrite results (reported as N). Nitrate + nitrite can be analyzed together or separately.

ANNUAL AVERAGE NITROGEN DISCHARGED (AS N)

ANNUALLY FROM THE PERMIT AMENDMENT DATE OF JULY 1, 2020, CALCULATE THE AVERAGE OF ALL TOTAL NITROGEN (OR PHOSPHORUS) MASS (LBS/DAY) SAMPLE RESULTS FROM THE PREVIOUS 12 MONTHS. REPORT THE ANNUAL AVERAGE IN THE JUNE DISCHARGE MONITORING REPORT (DMR) EACH YEAR.
CALCULATION: SUM OF ALL MASS MEASUREMENTS (LBS/DAY) IN THE LAST 12 MONTHS DIVIDED BY THE TOTAL NUMBER OF MEASUREMENTS IN THE LAST 12 MONTHS.

E. COLI

The limit for E. coli specified in the limit pages of this permit 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.

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.

Facility Name: TOLEDO CITY OF STP

Permit Number: 8676001

CHLORINE, TOTAL RESIDUAL

TRC monitoring is not required if chlorine is not being utilized at the treatment plant

Mixing Zone Special Monitoring Requirements

The effluent limits in this permit are based on a mixing zone study. The default mixing zone and zone of initial dilution will be used to calculate effluent limits for the renewal permit unless a new mixing zone study is completed. If a new mixing zone study is conducted, it shall be submitted with the permit renewal application.

The permittee is authorized to conduct a mixing zone study under the following conditions:

1) The mixing zone study shall use one of the following dyes:
   a) Rhodamine WT dye
   b) FWT red dye tablets
   c) FLT Yellow/Green Liquid Concentrate dye
   d) Green Sewer Tracing Dye
   e) Fluorescent FLT Yellow/Green Powder
   f) Bright Dye FWT Red Dye
   g) FLT Yellow/Green dye tablets

   If a dye other than one listed above is used, you must obtain permission from the Department prior to use of the dye. Please contact Ian Willard at (515) 954-6450 or ian.willard@dnr.iowa.gov for approval of dyes other than those listed above.

2) The dye shall be used according to the instructions provided by the manufacturer;

3) The introduction of the dye into the receiving stream shall be limited to as short a time period as possible and the amount of dye used shall be as little as possible;

4) The mixing zone study shall follow the mixing zone study guidelines in the Iowa Wasteload Allocation Procedure;

5) The mixing zone study report shall include clear documentation of the mixing characteristics and the percentages of the total river flows in the mixing zone;

6) The following restrictions to the maximum allowed mixing zone shall be recorded in the mixing zone study documentation:
   a) The distance to the juncture of two perennial streams.
   b) The distance to a public water supply intake.
   c) The distance to the upstream limits of an established recreational area, such as public beaches, and state, county and local parks.
   d) The distance to the middle of a crossover point in a stream where the main current flows from one bank across to the opposite bank.
   e) The distance to another mixing zone.

7) The mixing zone does not exceed a distance of 2000 feet; and

8) Notify DNR Field Office 5 at 515-725-0268 at least 48 hours prior to the use of dye.

Please contact Ian Willard at (515) 954-6450 or ian.willard@dnr.iowa.gov for questions regarding mixing zone studies.

Facility Name: TOLEDO CITY OF STP
Permit Number: 8676001

Significant Industrial User Discharges:

Significant Industrial User: TAMA COUNTY LANDFILL

Outfall #	**Outfall Description**
001	Waste is hauled by truck to the treatment plant.

Significant Industrial User Effluent Limitations

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

TAMA COUNTY LANDFILL
Outfall: 001 Effective Dates: 05/01/2023 to 04/30/2028

Parameter	Season	Limit Type	Limit Values
FLOW			
	Yearly	30 Day Average	0.06 MGD
	Yearly	DAILY MAXIMUM	0.1 MGD
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	30 Day Average	120 LBS/DAY
	Yearly	DAILY MAXIMUM	200 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	30 Day Average	70 LBS/DAY
	Yearly	DAILY MAXIMUM	150 LBS/DAY
AMMONIA NITROGEN (N)			
	Yearly	30 Day Average	35 LBS/DAY
	Yearly	DAILY MAXIMUM	70 LBS/DAY
BETX (BENZENE, ETHLYBENZENE, TOLUENE, AND XYLENES)			
	Yearly	30 Day Average	0.750 MG/L 0.380 LBS/DAY
	Yearly	DAILY MAXIMUM	0.750 MG/L 0.380 LBS/DAY
PH			
	Yearly	DAILY MAXIMUM	9.0 STD UNITS
	Yearly	DAILY MINIMUM	6.5 STD UNITS

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: TOLEDO CITY OF STP
Permit Number: 8676001

TAMA COUNTY LANDFILL				
Outfall	**Wastewater Parameter**	**Sample Frequency**	**Sample Type**	**Monitoring Location**
001	AMMONIA NITROGEN (N)	2 PER MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	BETX (BENZENE, ETHLYBENZENE, TOLUENE, AND XYLENES)	2 PER MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	2 PER MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	FLOW	2 PER MONTH	24 HOUR TOTAL	PRIOR TO DISCHARGE TO CITY SEWER
001	NITROGEN, TOTAL KJELDAHL (AS N)	2 PER MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	OIL AND GREASE	2 PER MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	PH	2 PER MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	TOTAL SUSPENDED SOLIDS	2 PER MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER

Facility Name: TOLEDO CITY OF STP

Permit Number: 8676001

ADDITIONAL MONITORING REQUIREMENTS

Tama County Landfill

The permittee shall analyze a representative sample of the landfill leachate discharge from Tama County Landfill at least annually for each of the pollutants listed below. In addition, the permittee shall monitor the volume of waste discharged and BOD5, TSS, TKN, Ammonia Nitrogen, Oil and Grease at the frequencies specified on page 14 of this permit.

Pollutant

Biochemical Oxygen Demand (BOD5)
Total Suspended Solids
Ammonia Nitrogen (NH3-N)
Oil and Grease (O&G)
pH
Chloride (as Cl)
Sulfate (as SO4)
Arsenic, Total (as As)
Chromium, Total (as Cr)
Copper, Total (as Cu)
Iron, Total (as Fe)
Lead, Total (as Pb)
Nickel, Total (as Ni)
Selenium, Total (as Se)
Zinc, Total (as Zn)
Benzoic Acid
Chlorobenzene
Ethylbenzene
p-Cresol
Phenol
Toluene

The permittee will indicate completion of the annual leachate monitoring by entering a “1” in the “LEACHAT” column on the Discharge Monitoring Report (DMR) spreadsheet on the day that the samples are collected. Select the No Discharge Indicator “NOT REQUIRED/MP” on the DMR spreadsheet during the months that the monitoring is not required.

Results of annual monitoring shall be submitted to the addresses below:

NPDES.mail@dnr.iowa.gov	Iowa DNR Field Office 5
Subject: Landfill Leachate Scan (8676001)	502 E. 9th Street
	Des Moines, Iowa 50319

Facility Name: TOLEDO CITY OF STP

Permit Number: 8676001

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 shall be used for acute toxicity testing are Ceriodaphnia dubia and Pimephales promelas. The acute toxicity testing procedures used to demonstrate compliance with permit limits shall be those listed in 567 IAC 63.4 and 40 CFR Part 136 and adopted by reference in rule 567 IAC 63.1(1). The method for measuring acute toxicity is specified in the EPA document EPA-821-R-02-012, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th edition, October 2002.

3. The diluted effluent sample must contain a minimum of 78.30 % effluent and no more than 21.70 % 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 discharge monitoring report (DMR). A toxic test result shall be indicated as a "2" on the DMR. DNR Form 542-1381 shall also be submitted to the DNR field office along with the DMR.

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 the EPA document EPA-821-R-02-012, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th edition, October 2002.

Facility Name: TOLEDO CITY OF STP

Permit Number: 8676001

Design Capacity

Design: 2

The design capacity for the treatment works is specified in Construction Permit Number 2009-212S, issued March 30, 2009. The treatment plant is designed to treat:

* An average dry weather (ADW) flow of 0.3500 Million Gallons Per Day (MGD).
* An average wet weather (AWW) flow of 1.1000 Million Gallons Per Day (MGD).
* A maximum wet weather (MWW) flow of 2.6400 Million Gallons Per Day (MGD).
* A design 5-day biochemical oxygen demand (BOD5) load of 544.00 lbs/day.
* A design Total Kjeldahl Nitrogen (TKN) load of 112.00 lbs/day.
* A design Total Suspended Solids (TSS) load of 640.0000 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: TOLEDO CITY OF STP

Permit Number: 8676001

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: TOLEDO CITY OF STP

Permit Number: 8676001

Total Residual Chlorine Compliance Schedule

The facility shall make necessary improvements to meet the final total residual chlorine limits at Outfall 001 according to the following schedule:

- Submit a compliance strategy no later than **February 1, 2024.** The compliance strategy shall identify the specific steps the facility will take in order to meet the limits as soon as possible, but by no later than **May 1, 2027.** It shall also include a determination of whether a construction permit is necessary, and if so, the status of the Self-Assessment Matrix and Work Record Request to DNR's Wastewater Engineering Section. (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 a progress report by **September 1, 2024.** The progress report shall include specific information on the status of the project and future expected timelines for achieving compliance. It shall include a determination of whether an antidegradation alternatives analysis is required, and if so, the status of the analysis. If a construction permit is required, the progress report shall include specific information on the progress, completion, and submittal of the facility plan

- Submit a progress report by **September 1, 2025**. The progress report shall include specific information on the status of the project and future expected timelines for achieving compliance.

- Submit a progress report by **September 1, 2026**. The progress report shall include specific information on the status of the project and future expected timelines for achieving compliance.

- Achieve compliance with the final total residual chlorine limits by **May 1, 2027**.

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:

Field Office 5
Iowa Department of Natural Resources
502 E. 9th Street
Des Moines, Iowa 50319

Nutrient Reduction Strategy Construction Schedule

Total Phosphorus – Outfall 001

The City of Toledo shall implement the strategy recommended in the Nutrient Reduction Strategy Feasibility Report approved by the Department February 24, 2020 for reducing total phosphorus in the final effluent. Optimization and construction of improvements shall be implemented according to the following schedule:

- Submit progress reports annually on **May 1st** with the first report being due **May 1, 2021**.
- Complete construction of improvements by **November 1, 2025.**
- Complete 6 months of treatment plant optimization for nutrient reduction by **May 1, 2026.**
- Submit one year of at least weekly total phosphorus sampling data from the raw waste and final effluent by **June 1, 2027**. The report must include the results of all monitoring for total phosphorus in the raw waste and final effluent between May 1, 2026 and April 30, 2027.

Progress reports shall be submitted by the required due dates. Within fourteen (14) days following all dates of construction completion, optimization completion, and one year of monitoring, the permittee shall provide written notice of compliance with the scheduled event along with any applicable data. All written notices and progress reports shall be sent to the following address:

npdes.mail@dnr.iowa.gov
subject: (8676001 Toledo NRS Data)

SIGNIFICANT INDUSTRIAL USER LIMITATIONS, MONITORING AND REPORTING REQUIREMENTS

1. You must enforce the pollutant limits for each significant industrial user that are listed elsewhere in this permit. Violation of a treatment agreement limit is prohibited by subrule 567 IAC 62.1(6). Monitoring of each significant industrial user is required elsewhere in this permit.

2. Monitoring of each significant industrial user is required elsewhere in this permit. Results of the required monitoring shall be included on your discharge monitoring report, which must be submitted by the fifteenth of the following month.

3. 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).

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

   (a) 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.

   (b) 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.

   (c) 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.

STANDARD CONDITIONS

1. **ADMINISTRATIVE RULES -** Rules of the Iowa Department of Natural Resources (department) that govern the operation of a 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. **LIMIT DEFINITIONS -**
   (a) 7 day average means the arithmetic mean (average) of pollutant parameter values for samples collected in a period of seven consecutive days. The first 7-day period shall begin with the first day of the month. ***{567 IAC 60.2}***
   (b) 30 day average means the arithmetic mean of pollutant parameter values for samples collected in a period of 30 consecutive days. ***{567 IAC 60.2}***
   (c) Daily maximum means the total discharge by mass, volume, or concentration during a twenty-four hour period. ***{567 IAC 60.2}***

3. **MONITORING AND RECORDS OF OPERATION -**
   (a) Electronic reporting. Records of operation required by this permit shall be electronically submitted to the department within 15 days following the close of the monthly reporting period, in accordance with the monitoring requirements incorporated in this permit, unless an approval for paper submittal of records of operation has been obtained in accordance with 567 IAC 63.7(2).
   (b) 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. ***{567 IAC 63.2(3)}***
   (c) 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. ***{40 CFR 122.41(j)(5)}***

4. **USE OF CERTIFIED LABORATORIES -** Analyses of wastewater, groundwater or sewage sludge that are required to be submitted 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, physical measurements, and operational performance monitoring specified in 567 IAC 63.3(4) are excluded from this requirement. ***{567 IAC 63.1}***

5. **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 amending, 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. If 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. If you become aware that you failed to submit any relevant facts in any report to the director, including records of operation, you shall promptly submit such facts or information. ***{567 IAC 60.4(2)"a", 567 IAC 63.7(6), 40 CFR 122.41(h)}***

6. **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. ***{567 IAC 64.8(1), Iowa Code 17A.18}***

7. **DUTY TO COMPLY -** You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Iowa Code and 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. ***{567 IAC 64.7(4)"E", 40 CFR 122.41(a)}***

8. **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. ***{567 IAC 64.7(7)"i", 40 CFR 122.41(d)}***

9. **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. Adequate laboratory controls and appropriate quality assurance procedures shall be provided to maintain compliance with the conditions of this permit. ***{567 IAC 64.7(7)"f", 40 CFR 122.41(e)}***

10. **SIGNATORY REQUIREMENTS -** Applications, discharge monitoring 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).

11. **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 department shall be notified in writing within 30 days of the occurrence. 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. ***{567 IAC 64.14}***

STANDARD CONDITIONS

12. **PERMIT MODIFICATION, SUSPENSION OR REVOCATION -** This permit may be amended, revoked and reissued, or terminated in whole or in part 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. 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. The filing of a request for a permit amendment, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. ***{567 IAC 64.3(11)"d", 64.7(7)"b" and "g", 40 CFR 122.62(a)(6)}***

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 in Section 307(a)(1) of the Clean Water Act) or hazardous substance (as designated in 40 CFR Part 116 pursuant to 311 of the Act). Information shall be provided orally to the appropriate regional field office of the department within 24 hours from the time you become aware of the circumstances. A written submission that includes a description of noncompliance and its cause; the period of noncompliance including exact dates and times; whether the noncompliance has been corrected or the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent a reoccurrence of the noncompliance must be provided to the appropriate field office within 5 days of the occurrence. ***{567 IAC 63.12, 40 CFR 122.41(l)(6)}***

14. **OTHER NONCOMPLIANCE -** You shall report all instances of noncompliance not reported under Condition #13 at the time discharge monitoring reports are submitted. The report shall contain the information listed in Condition #13. 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. Notice is required only when previous notice has not been given to any other section of the department. ***{567 IAC 63.7(5), 63.14 and 63.15, 40 CFR 122.41(l)(7)}***

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) Provide 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.
    {567 IAC 64.7(7)"c", 40 CFR 122.41(i)}

16. **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, including, but not limited to, the following:
    (a) If your facility is a publicly owned treatment works (POTW) or otherwise accepts waste for treatment from an indirect discharger or industrial contributor, you must notify the director if there is any substantial change in the volume or character of pollutants being introduced to the POTW by an indirect discharger or industrial contributor. See 567 IAC 64.3(5) and 64.7(7)"*d*" for further requirements. ***{40 CFR 122.42(b)}***
    (b) If your facility has a manufacturing, commercial, mining, or silviculture discharge, you must notify the director 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. ***{40 CFR 122.42(a)}***
    (c) You must notify the director 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. ***{40 CFR 122.21(g)(9})***

17. **PLANNED CHANGES -** You 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. Facility expansions, production increases, or process modifications which result in new or increased discharges of pollutants must be reported by submission of a new permit application. If any modification of, addition to, or construction of a disposal system is to be made, you must first obtain a written construction 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.
    Notice is required only when:
    (a) Notice has not been given to any other section of the department:
    (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 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.
    {567 IAC 63.13, 567 IAC 64.2 and 64.7(7)"a"}

18. **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. ***{567 IAC 64.16(1)}***

STANDARD CONDITIONS

19. **BYPASSES -** "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. ***{567 IAC 60.2)}***
    (a) Prohibition. Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited, in accordance with 567 IAC 63.6(1). The department may not assess a civil penalty against a permittee for a bypass if the permittee has complied with all of the following:
        i. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
        ii. 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
        iii. The permittee submitted notices as required by 567 IAC 63.6.
    (b) Anticipated bypass. Except for bypasses that occur as a result of mechanical failure or acts beyond the control of the owner or operator of a waste disposal system (unanticipated bypasses), the owner or operator shall obtain written permission from the department prior to any discharge of sewage or wastes from a waste disposal system not authorized by this permit. 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 appropriate regional field office of the department at least ten days prior to the expected event, in accordance with the requirements listed in 567 IAC 63.6(2).
    (c) Unanticipated bypass. In the event that a bypass or upset occurs without prior notice having been provided pursuant to 567 IAC 63.6(2) or as a result of mechanical failure or acts beyond the control of the owner or operator, the owner or operator of the treatment facility or collection system shall notify the department by telephone as soon as possible but not later than 24 hours after the onset or discovery in accordance with the requirements in 567 IAC 63.6(3). A written submission describing the bypass shall also be provided within five days of the time the permittee becomes aware of the bypass, in accordance with the requirements in 567 IAC 63.6(3)"*d*".
    (d) Reporting. Bypasses shall be reported in accordance with 567 IAC 63.6.
    {567 IAC 63.6}

20. **UPSETS -** "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.
    (a) Effect of an upset. An upset constitutes an affirmative defense to the assessment of a civil penalty for noncompliance with technology-based permit effluent limitations if the requirements of paragraph (b) 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.
    (b) 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 by the department in accordance with 567 IAC 63.6(6)"*b*"(4).
    (c) Burden of Proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.
    {567 IAC 63.6}

21. **NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE -** 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. ***{567 IAC 64.7(7)"j", 40 CFR 122.41(c)}***

22. **PROPERTY RIGHTS -** This permit does not convey any property rights of any sort or any exclusive privilege. ***{567 IAC 64.4(3)"b", 40 CFR 122.41(g)}***

23. **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. ***{567 IAC 64.4(3)"a"}***

24. **SEVERABILITY -** The provisions of this permit are severable. 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.2 – Leachate Hauled

Leachate Hauled to Toledo
Tama County Sanitary Landfill
2024

JANUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		Decmeber		
Date	Gallons	Date	Gallons	Date	Gallons	Date	Gallons	Date	Gallons	Date	Gallons	Date	Gallons	Date	Gallons	Date	Gallons	Date	Gallons	Date	Gallons	
1/2/2024	6,000	3/14/2024	8,407	4/1/2024	9,212	5/1/2024	19,977	6/4/2024	29,722	7/10/2024	2,932	8/7/2024	9,063	9/4/2024	3,368	10/2/2024	3,116	11/21/2024	17,812	12/4/2024	11,789	
1/3/2024	14,000	3/18/2024	24,046	4/2/2024	12,179	5/2/2024	30,095	6/5/2025	11,906	7/24/2024	2,991	8/8/2024	20,972	9/18/2024	2,903	10/30/2024	2,776	11/22/2024	17,901	12/5/2024	26,779	
1/4/2024	16,000	3/20/2024	27,320	4/3/2024	24,099	5/7/2024	14,595	6/6/2024	29,652			8/9/2024	26,913					11/25/2024	8,738	12/19/2024	11,893	
1/5/2024	6,000	3/22/2024	8,306	4/9/2024	14,681	5/10/2024	5,841	6/7/2024	17,914			8/12/2024	11,935									
1/8/2024	8,000	3/26/2024	18,153	4/10/2024	8,960	5/17/2024	32,453	6/13/2024	2,902			8/13/2024	17,881									
		3/27/2024	21,152	4/16/2024	25,641	5/20/2024	11,760	6/14/2024	11,751			8/15/2024	32,892									
		3/28/2024	15,107	4/17/2024	21,289	5/23/2024	17,776	6/19/2024	26,562			8/16/2024	8,989									
						5/24/2024	26,457	6/20/2024	23,654			8/21/2024	2,758									
						5/28/2024	20,839	6/26/2024	2,100													
TOTAL	50,000		122,491		116,061		179,793		156,163		5,923		131,403		6,271		5,892		44,451		50,461	**868,909 Gallons**

Appendix G.3 – Leachate Testing Results

2024 Leachate Testing - Results
Tama County SLF

Date Collected			Ammonia, N (mg/L)	BETX (mg/L)	BOD5 (mg/L)	Kjeldahl, N (mg/L)	O&G (mg/L)	pH	TSS (mg/L)
1/23/2024			10.1	0.005	5	14	4	8	4
2/7/2024			43.1	0.0084	17	39.7	4	7.2	35
2/21/2024			8.65	0.005	6	7.29	4	7.6	10
3/5/2024			2.14	0.005	6		4	7.6	7
3/20/2024			130	0.005	22	137	4	7.8	29
4/3/2024			88.7	0.005	13	103	4	7.8	37
4/17/2024			108	0.005	17	124	4	7.7	54
5/1/2024			17.2	0.005	8	20.8	4	7.5	4
5/15/2024			56.6	0.005	12	53.5	4	7.2	17
5/29/2024			18.1	0.005	6	4.59	4	7.1	19
6/12/2024			28.2	0.005	6	30.9	4	8.4	13
6/26/2024			18.4	0.005	17	17.9	4	7.4	17
7/10/2024			5.35	0.005	9	5.58	4	7.4	6
7/24/2024			123	0.0221	23	97	4	7.1	51
8/7/2024			<0.10	0.005	12	11.9	4	8.1	21
8/21/2024			32.8	0.0063	18	30.8	4	6.6	66
9/4/2024			2.36	0.005	<6	17.2	4	7.2	8
9/18/2024			68	0.005	9	69.9	4	7	32
10/2/2024			144	0.025	26	134	8	6.9	71
10/30/2024			54.6	0.005	14	60.7	4	7.3	23
11/13/2024			16.7	0.005	13	44	4	7.3	6
11/27/2024			52.6	0.005	25	56.7	4	7.6	32
12/11/2024			59.9	0.005	18	49.4	5	8.3	16

Keystone Laboratories - Newton

CERTIFICATE OF ANALYSIS

1HA1353

Tama County Landfill

Project Name: Leachate Sampling

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project / PO Number: / Outfall 001
Received: 01/24/2024
Reported: 02/09/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Water	**Collected By:**	Dave
Lab Sample ID:	1HA1353-01	**Collection Date:**	01/23/2024 8:15

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		01/31/24 0000	01/31/24 1310	CSM
Toluene	<1.0	1.0	ug/L	1		01/31/24 0000	01/31/24 1310	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		01/31/24 0000	01/31/24 1310	CSM
Xylenes, total	<2.0	2.0	ug/L	1		01/31/24 0000	01/31/24 1310	CSM
Surrogate: Dibromofluoromethane	86.2	Limit: 79-129	% Rec	1		01/31/24 0000	01/31/24 1310	CSM
Surrogate: 1,2-Dichloroethane-d4	85.3	Limit: 66-134	% Rec	1		01/31/24 0000	01/31/24 1310	CSM
Surrogate: Toluene-d8	102	Limit: 91-113	% Rec	1		01/31/24 0000	01/31/24 1310	CSM
Surrogate: 4-Bromofluorobenzene	92.7	Limit: 83-112	% Rec	1		01/31/24 0000	01/31/24 1310	CSM

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		01/31/24 1434	02/01/24 1500	CCB
EPA 351.2								
Nitrogen, Kjeldahl, total	**14.0**	0.50	mg/L	1			02/02/24 0852	AKK
SM 4500 H+ B								
pH	**8.0**	0.5	pH	1	**I-03**	01/29/24 1621	01/29/24 1621	AKK
SM 5210 B								
BOD (5 day)	<5	5	mg/L	3			01/24/24 1747	BDF
TIMBERLINE								
Nitrogen, Ammonia	**10.1**	0.10	mg/L	1		02/02/24 1247	02/06/24 1545	LJS
USGS I-3765-85								
Total Suspended Solids (TSS)	**4**	1	mg/L	1		01/25/24 1011	01/25/24 1445	MEAH

Definitions

I-03: Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.

RL: Reporting Limit

Report Comments

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

Reviewed and Approved By:

Heather A Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
02/09/24 16:09

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES
A Microbac Company

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

1 H A 1 3 5 3
Tama County Landfill
PM: Heather Murphy

nted: 12/15/2023 9:23:46A
www.keystonelabs.com

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☒ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order: 1HA1353
Temperature: 3.7
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	Prior to Discharge to City Sewer	Water	GRAB	1/24/24	8:15AM	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By	Date/Time	Relinquished By	Date/Time
[signature]	1-24-24 8:30AM		

Received By	Date/Time	Received for Lab By	Date/Time
		[signature]	1/24/24 0922

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Keystone Laboratories - Newton

CERTIFICATE OF ANALYSIS

1HB0440

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Leachate Sampling

Project / PO Number: / Outfall 001
Received: 02/07/2024
Reported: 02/20/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Water	**Collected By:**	Dave
Lab Sample ID:	1HB0440-01	**Collection Date:**	02/07/2024 8:15

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	**1.8**	1.0	ug/L	1		02/13/24 0000	02/14/24 0031	LJS
Toluene	**3.6**	1.0	ug/L	1		02/13/24 0000	02/14/24 0031	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		02/13/24 0000	02/14/24 0031	LJS
Xylenes, total	<2.0	2.0	ug/L	1		02/13/24 0000	02/14/24 0031	LJS
Surrogate: Dibromofluoromethane	107	Limit: 79-129	% Rec	1		02/13/24 0000	02/14/24 0031	LJS
Surrogate: 1,2-Dichloroethane-d4	114	Limit: 66-134	% Rec	1		02/13/24 0000	02/14/24 0031	LJS
Surrogate: Toluene-d8	97.7	Limit: 91-113	% Rec	1		02/13/24 0000	02/14/24 0031	LJS
Surrogate: 4-Bromofluorobenzene	91.6	Limit: 83-112	% Rec	1		02/13/24 0000	02/14/24 0031	LJS

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		02/09/24 1352	02/12/24 1500	CCB
EPA 351.2								
Nitrogen, Kjeldahl, total	**39.7**	0.50	mg/L	1			02/16/24 0834	AKK
SM 4500 H+ B								
pH	**7.2**	0.5	pH	1	**I-03**		02/09/24 1324	BSS
SM 5210 B								
BOD (5 day)	**17**	6	mg/L	3			02/08/24 1532	BDF
TIMBERLINE								
Nitrogen, Ammonia	**43.1**	1.00	mg/L	10		02/13/24 0831	02/13/24 1214	LJS
USGS I-3765-85								
Total Suspended Solids (TSS)	**35**	1	mg/L	1		02/12/24 0840	02/13/24 1010	MEAH

Definitions

I-03:	Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.
RL:	Reporting Limit

Keystone Laboratories - Newton

CERTIFICATE OF ANALYSIS

1HB0440

Report Comments

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

Reviewed and Approved By:

Heather Murphy

Heather Murphy

Customer Relationship Specialist

heather.murphy@microbac.com

02/20/24 16:16

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES *A Microbac Company*

600 East 17th St
Newton, IA 5020
641-792-8451

1 H B 0 4 4 0
Tama County Landfill
PM: Heather Murphy

Printed: 1/31/2024 8:17:14A
www.keystonelabs.com

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling
Outfall 001

REP... / ...CE TO

REPORT TO	INVOICE TO
Dave Sherwood	Dave Sherwood
Tama County Landfill	Tama County Landfill
2872 K Avenue	2872 K Avenue
Toledo, IA 52342	Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☒ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HB0440
Temperature 3.6
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	Prior to Discharge to City Sewer	Water	GRAB	2/7/24	8:15	6	624-106, bod-5210, nh3-timberline, og-t-1664, ph-4500, tkn-351.2, tss-i-3765-85	01

Relinquished By	Date/Time	Relinquished By	Date/Time
[signature]	2-7-24 - 8:15 AM		

Received By	Date/Time	Received for Lab By	Date/Time
		[signature]	2-7-24 0920

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HB1373

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 02/21/2024
Reported: 03/05/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Water	**Collected By:**	Dave
Lab Sample ID:	1HB1373-01	**Collection Date:**	02/21/2024 9:00

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		02/26/24 0000	02/26/24 1401	CSM
Toluene	<1.0	1.0	ug/L	1		02/26/24 0000	02/26/24 1401	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		02/26/24 0000	02/26/24 1401	CSM
Xylenes, total	<2.0	2.0	ug/L	1		02/26/24 0000	02/26/24 1401	CSM
Surrogate: Dibromofluoromethane	119	Limit: 79-129	% Rec	1		02/26/24 0000	02/26/24 1401	CSM
Surrogate: 1,2-Dichloroethane-d4	125	Limit: 66-134	% Rec	1		02/26/24 0000	02/26/24 1401	CSM
Surrogate: Toluene-d8	99.3	Limit: 91-113	% Rec	1		02/26/24 0000	02/26/24 1401	CSM
Surrogate: 4-Bromofluorobenzene	95.7	Limit: 83-112	% Rec	1		02/26/24 0000	02/26/24 1401	CSM

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		02/23/24 0947	02/28/24 1300	CCB
EPA 351.2								
Nitrogen, Kjeldahl, total	**7.29**	1.25	mg/L	1			02/28/24 1008	AKK
SM 4500 H+ B								
pH	**7.6**	0.5	pH	1	**I-03**	02/22/24 0813	02/22/24 1018	BSS
SM 5210 B								
BOD (5 day)	<6	6	mg/L	3		02/21/24 1432	02/21/24 1530	MND
TIMBERLINE								
Nitrogen, Ammonia	**8.65**	0.10	mg/L	1		02/28/24 0846	02/28/24 1436	LJS
USGS I-3765-85								
Total Suspended Solids (TSS)	**10**	1	mg/L	1		02/22/24 1308	02/23/24 0820	MEAH

Definitions

I-03: Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.

RL: Reporting Limit

Report Comments

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

Reviewed and Approved By:

Heather Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
03/05/24 13:35

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES
A Microbac Company

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

1HB1373
Tama County Landfill
PM: Heather Murphy

Printed: 2/14/2024 9:55:36A

www.keystonelabs.com

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
[X] Standard [ ] RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HB1373
Temperature 0.5
Turn-Cooler: No

[ ] Custody Seal
[X] Containers Intact
[X] COC/Labels Agree
[ ] Preservation Confirmed
[X] Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	Prior to Discharge to City Sewer	Water	GRAB	2/21/24	9:00am	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By	Date/Time	Relinquished By	Date/Time
[signature]	2-21-24 9:15 Am		
Received By	**Date/Time**	**Received for Lab By**	**Date/Time**
		[signature]	2-21-24 0910

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1329

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 03/20/2024
Reported: 04/04/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Water	**Collected By:**	Dave
Lab Sample ID:	1HC1329-01	**Collection Date:**	03/20/2024 8:30

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624			**Method Notes:** PH-6					
Benzene	<1.0	1.0	ug/L	1		03/27/24 0000	03/27/24 1231	CSM
Toluene	<1.0	1.0	ug/L	1		03/27/24 0000	03/27/24 1231	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/27/24 0000	03/27/24 1231	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/27/24 0000	03/27/24 1231	CSM
Surrogate: Dibromofluoromethane	92.4	Limit: 79-129	% Rec	1		03/27/24 0000	03/27/24 1231	CSM
Surrogate: 1,2-Dichloroethane-d4	96.5	Limit: 66-134	% Rec	1		03/27/24 0000	03/27/24 1231	CSM
Surrogate: Toluene-d8	97.3	Limit: 91-113	% Rec	1		03/27/24 0000	03/27/24 1231	CSM
Surrogate: 4-Bromofluorobenzene	98.3	Limit: 83-112	% Rec	1		03/27/24 0000	03/27/24 1231	CSM

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1	**PH-3**	03/25/24 1140	03/26/24 1400	CCB
EPA 351.2								
Nitrogen, Kjeldahl, total	**137**	1.25	mg/L	1			03/22/24 1742	AKK
SM 4500 H+ B								
pH	**7.8**	0.5	pH	1	**I-03**	03/26/24 0834	03/26/24 1516	BSS
SM 5210 B								
BOD (5 day)	**22**	6	mg/L	3			03/21/24 1114	MND
TIMBERLINE			**Method Notes:** PH-3					
Nitrogen, Ammonia	**130**	1.00	mg/L	10		04/01/24 0905	04/01/24 1230	LJS
USGS I-3765-85								
Total Suspended Solids (TSS)	**29**	1	mg/L	1		03/25/24 0828	03/26/24 1000	MEAH

Definitions

I-03:	Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.
PH-3:	Insufficient preservative to adjust the sample pH to less than 2, value measured at 7 pH units.
PH-6:	Insufficient preservative to adjust the sample pH to less than 2, value measured at 7 pH units. Sample was analyzed within 7 days recommended for non-preserved samples.
RL:	Reporting Limit

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
04/04/24 10:08

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES *A Microbac Company*

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

1HC1329
Tama County Landfill
PM: Heather Murphy

Page 1 of
Printed: 2/26/2024 8:27:31A
www.keystonelabs.or

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
[X] Standard [ ] RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HC1329
Temperature 2.6
Turn-Cooler: No

[ ] Custody Seal
[X] Containers Intact
[X] COC/Labels Agree
[ ] Preservation Confirmed
[X] Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	Prior to Discharge to City Sewer	Water	GRAB	3-20-24	8:30AM	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By: Dave Sherwood Date/Time: 3-20-24 8:45AM

Relinquished By Date/Time

Received By Date/Time

Received for Lab By: [signature] Date/Time: 3/20/24 0920

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD0355

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 04/03/2024
Reported: 04/17/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Water	**Collected By:**	Sherwood, Dave
Lab Sample ID:	1HD0355-01	**Collection Date:**	04/03/2024 7:30

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 1620	LJS
Toluene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 1620	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/15/24 0000	04/15/24 1620	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/15/24 0000	04/15/24 1620	LJS
Surrogate: Dibromofluoromethane	111	Limit: 79-129	% Rec	1		04/15/24 0000	04/15/24 1620	LJS
Surrogate: 1,2-Dichloroethane-d4	115	Limit: 66-134	% Rec	1		04/15/24 0000	04/15/24 1620	LJS
Surrogate: Toluene-d8	101	Limit: 91-113	% Rec	1		04/15/24 0000	04/15/24 1620	LJS
Surrogate: 4-Bromofluorobenzene	103	Limit: 83-112	% Rec	1		04/15/24 0000	04/15/24 1620	LJS

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	**4**	4	mg/L	1	**PH-3**	04/05/24 0959	04/08/24 1530	CCB
EPA 351.2								
Nitrogen, Kjeldahl, total	**103**	2.50	mg/L	5			04/05/24 0935	AKK
SM 4500 H+ B								
pH	**7.8**	0.5	pH	1	**I-03**		04/09/24 1643	BSS
SM 5210 B								
BOD (5 day)	**13**	6	mg/L	3		04/04/24 1111	04/04/24 1311	MND
TIMBERLINE								
Nitrogen, Ammonia	**88.7**	1.00	mg/L	10		04/15/24 1022	04/15/24 1313	LJS
USGS I-3765-85								
Total Suspended Solids (TSS)	**37**	1	mg/L	1		04/09/24 1525	04/10/24 1550	MEAH

Definitions

I-03:	Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.
PH-3:	Insufficient preservative to adjust the sample pH to less than 2, value measured at 5 pH units.
RL:	Reporting Limit

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD0355

Report Comments

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

Reviewed and Approved By:

Heather Murphy

Heather Murphy

Customer Relationship Specialist

heather.murphy@microbac.com

04/17/24 08:25

CHAIN OF CU

Keystone LABORATORIES
A Microbac Company

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

1 H D 0 3 5 5
Tama County Landfill
PM: Heather Murphy

Printed: 3/21/2024 9:45:09A
www.keystonelabs.com

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time

☒ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order: 1HD0355
Temperature: 1.1°C
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	Prior to Discharge to City Sewer	Water	GRAB	4.3.24	7:20 AM	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-i-1664, tkn-351.2	01

Relinquished By: [signature] Date/Time: 4-3-24 8:30 AM

Received By: Date/Time:

Relinquished By: Date/Time:

Received for Lab By: Larry Wood Date/Time: 4/3/24 0905

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1300

Revised Report: Amended in response to client complaint

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 04/17/2024
Reported: 06/11/2024

Case Narrative

Amended Report, June 5, 2024: The Total Kjeldahl Nitrogen result originally reported for sample 1HD1300-01 was not correct due to a data entry error. The corrected result is included in this report.

James Eggers
Quality Assurance Officer

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Steve/Rod
Lab Sample ID:	1HD1300-01	**Collection Date:**	04/17/2024 8:00

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1559	LJS
Toluene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1559	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1559	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/25/24 0000	04/25/24 1559	LJS
Surrogate: Dibromofluoromethane	92.8	Limit: 79-129	% Rec	1		04/25/24 0000	04/25/24 1559	LJS
Surrogate: 1,2-Dichloroethane-d4	98.0	Limit: 66-134	% Rec	1		04/25/24 0000	04/25/24 1559	LJS
Surrogate: Toluene-d8	97.7	Limit: 91-113	% Rec	1		04/25/24 0000	04/25/24 1559	LJS
Surrogate: 4-Bromofluorobenzene	96.2	Limit: 83-112	% Rec	1		04/25/24 0000	04/25/24 1559	LJS

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1	**PH-3a**	04/23/24 0927	04/24/24 1500	CCB
EPA 351.2								
Nitrogen, Kjeldahl, total	**124**	2.50	mg/L	5			04/24/24 1727	AKK
SM 4500 H+ B								
pH	**7.7**	0.5	pH	1	**I-03**	04/19/24 0910	04/19/24 0925	BSS
SM 5210 B								
BOD (5 day)	**17**	6	mg/L	3		04/18/24 0942	04/18/24 1104	MND
TIMBERLINE								
Nitrogen, Ammonia	**108**	1.00	mg/L	10		04/29/24 0718	04/29/24 1243	LJS
USGS I-3765-85								
Total Suspended Solids (TSS)	**54**	1	mg/L	1		04/22/24 1458	04/23/24 1150	MEAH

Definitions

I-03:	Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.
PH-3a:	Insufficient preservative to adjust the sample pH to less than 2, value measured at 5 pH units.
RL:	Reporting Limit

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
06/11/24 08:50

CHAIN OF CUST

Keystone LABORATORIES A Microbac Company

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

1HD1300
Tama County Landfill
PM: Heather Murphy

Printed: 4/5/2024 9:57:57A

www.keystonelabs.com

SITE INFORMATION

Sampler: Steve / Rod

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order: 1HD1300
Temperature: 0.9
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	Prior to Discharge to City Sewer	Water	GRAB	4/17/24	8:00AM	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By	Date/Time	Relinquished By	Date/Time
[signature]	4-17-24 9:00AM		

Received By	Date/Time	Received for Lab By	Date/Time
		[signature]	4/17/24 0915

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HE0060

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 05/01/2024
Reported: 05/15/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	RR
Lab Sample ID:	1HE0060-01	**Collection Date:**	05/01/2024 7:45

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		05/07/24 0000	05/07/24 1530	CSM
Toluene	<1.0	1.0	ug/L	1		05/07/24 0000	05/07/24 1530	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		05/07/24 0000	05/07/24 1530	CSM
Xylenes, total	<2.0	2.0	ug/L	1		05/07/24 0000	05/07/24 1530	CSM
Surrogate: Dibromofluoromethane	85.0	Limit: 79-129	% Rec	1		05/07/24 0000	05/07/24 1530	CSM
Surrogate: 1,2-Dichloroethane-d4	96.5	Limit: 66-134	% Rec	1		05/07/24 0000	05/07/24 1530	CSM
Surrogate: Toluene-d8	99.6	Limit: 91-113	% Rec	1		05/07/24 0000	05/07/24 1530	CSM
Surrogate: 4-Bromofluorobenzene	102	Limit: 83-112	% Rec	1		05/07/24 0000	05/07/24 1530	CSM

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		05/06/24 1154	05/08/24 1400	CCB
EPA 351.2								
Nitrogen, Kjeldahl, total	**20.8**	0.50	mg/L	1			05/09/24 1105	AKK
SM 4500 H+ B								
pH	**7.5**	0.5	pH	1	**I-03**	05/03/24 0903	05/03/24 1633	BSS
SM 5210 B								
BOD (5 day)	**8**	6	mg/L	3	**B-10**		05/08/24 1615	MND
TIMBERLINE								
Nitrogen, Ammonia	**17.2**	1.00	mg/L	10		05/08/24 0711	05/08/24 1056	KAJ
USGS I-3765-85								
Total Suspended Solids (TSS)	**4**	1	mg/L	1		05/06/24 0917	05/07/24 1038	MEAH

Definitions

B-10: Sample was initially set within recommended hold time but the results were inconclusive. Sample was then set past recommended hold time.

I-03: Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.

RL: Reporting Limit

Microbac Laboratories, Inc., Newton

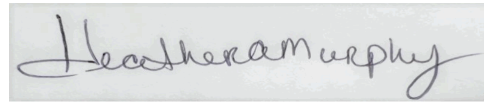
CERTIFICATE OF ANALYSIS

1HE0060

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>](https://www.microbac.com/standard-terms-conditions).***

Reviewed and Approved By:



Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
05/15/24 16:14

Keystone LABORATORIES
A Microbac Company

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

1HE0060
Tama County Landfill
PM: Heather Murphy

www.keystonelabs.com

SITE INFORMATION

Sampler:

Project: Leachate Sampling
Outfall 001

REPORT

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order
Temperature 0.4
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	Prior to Discharge to City Sewer	Water	GRAB	5/1/24	7:45	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	—

Relinquished By	Date/Time	Relinquished By	Date/Time
[signature]	5-1-24 7:45		
Received By	**Date/Time**	**Received for Lab By**	**Date/Time**
		[signature]	5/1/24 09~~50~~15

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HE1189

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 05/15/2024
Reported: 05/31/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	DAVE
Lab Sample ID:	1HE1189-01	**Collection Date:**	05/15/2024 8:00

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		05/28/24 0000	05/28/24 1831	LNH
Toluene	<1.0	1.0	ug/L	1		05/28/24 0000	05/28/24 1831	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		05/28/24 0000	05/28/24 1831	LNH
Xylenes, total	<2.0	2.0	ug/L	1		05/28/24 0000	05/28/24 1831	LNH
Surrogate: Dibromofluoromethane	99.1	Limit: 79-129	% Rec	1		05/28/24 0000	05/28/24 1831	LNH
Surrogate: 1,2-Dichloroethane-d4	105	Limit: 66-134	% Rec	1		05/28/24 0000	05/28/24 1831	LNH
Surrogate: Toluene-d8	102	Limit: 91-113	% Rec	1		05/28/24 0000	05/28/24 1831	LNH
Surrogate: 4-Bromofluorobenzene	100	Limit: 83-112	% Rec	1		05/28/24 0000	05/28/24 1831	LNH

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		05/22/24 1413	05/24/24 0930	CCB
EPA 351.2								
Nitrogen, Kjeldahl, total	**53.5**	0.50	mg/L	1			05/23/24 0954	AKK
SM 4500 H+ B								
pH	**7.2**	0.5	pH	1	**I-03**		05/16/24 1051	BSS
SM 5210 B								
BOD (5 day)	**12**	6	mg/L	3		05/16/24 1640	05/16/24 1805	MND
TIMBERLINE								
Nitrogen, Ammonia	**56.6**	1.00	mg/L	10		05/30/24 1045	05/31/24 0825	LNH
USGS I-3765-85								
Total Suspended Solids (TSS)	**17**	1	mg/L	1		05/20/24 0926	05/21/24 0930	RDH

Definitions

I-03: Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.

RL: Reporting Limit

Report Comments

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
05/31/24 16:50

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>.***

CHAIN O[F CUSTODY]

Keystone LABORATORIES *A Microbac Company*

600 East 17th Str[eet]
Newton, IA 50208
641-792-8451

1HE1189
Tama County Landfill
PM: Heather Murphy

Printed: 5/6/2024 11:31:25[AM]
www.keystonelabs.com

SITE INFORMATION
Sampler: Dave
Project: Leachate Sampling
Outfall 001

REPORT TO
Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO
Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS
None

Turn Around Time
☒ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY
Work Order: 1HE1189
Temperature: 1.3
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	Prior to Discharge to City Sewer	Aqueous	GRAB	5/15/24	8:00 AM	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By	Date/Time	Relinquished By	Date/Time
[signature]	5-15-24 8:30 AM		

Received By	Date/Time	Received for Lab By	Date/Time
		[signature]	5/15/24 0945

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HE2124

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 05/29/2024
Reported: 06/12/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Dave
Lab Sample ID:	1HE2124-01	**Collection Date:**	05/29/2024 9:00

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		06/06/24 0000	06/06/24 1321	BDF
Toluene	<1.0	1.0	ug/L	1		06/06/24 0000	06/06/24 1321	BDF
Ethylbenzene	<1.0	1.0	ug/L	1		06/06/24 0000	06/06/24 1321	BDF
Xylenes, total	<2.0	2.0	ug/L	1		06/06/24 0000	06/06/24 1321	BDF
Surrogate: Dibromofluoromethane	84.8	Limit: 79-129	% Rec	1		06/06/24 0000	06/06/24 1321	BDF
Surrogate: 1,2-Dichloroethane-d4	91.6	Limit: 66-134	% Rec	1		06/06/24 0000	06/06/24 1321	BDF
Surrogate: Toluene-d8	97.4	Limit: 91-113	% Rec	1		06/06/24 0000	06/06/24 1321	BDF
Surrogate: 4-Bromofluorobenzene	97.1	Limit: 83-112	% Rec	1		06/06/24 0000	06/06/24 1321	BDF

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		06/04/24 1219	06/05/24 0800	CSB
EPA 351.2								
Nitrogen, Kjeldahl, total	**4.59**	1.25	mg/L	1		06/10/24 1712	06/12/24 1308	AKK
SM 4500 H+ B								
pH	**7.1**	0.5	pH	1	**I-03**	06/03/24 0855	06/03/24 1044	BSS
SM 5210 B								
BOD (5 day)	<6	6	mg/L	3		05/30/24 1111	05/30/24 1111	MND
TIMBERLINE								
Nitrogen, Ammonia	**18.1**	0.50	mg/L	5		06/10/24 0708	06/12/24 1253	LNH
USGS I-3765-85								
Total Suspended Solids (TSS)	**19**	1	mg/L	1		05/31/24 1536	06/03/24 1540	RDH

Definitions

I-03: Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.

RL: Reporting Limit

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
06/12/24 16:57

MICROBAC®

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

1HE2124
Tama County Landfill
PM: Heather Murphy

www.keystonelabs.com

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
[X] Standard [ ] RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HE2124
Temperature 0.6
Turn-Cooler: No

[ ] Custody Seal
[X] Containers Intact
[X] COC/Labels Agree
[ ] Preservation Confirmed
[X] Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	Prior to Discharge to City Sewer	Aqueous	GRAB	5/29/24	9:00	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By: [signature] Date/Time: 9:00 AM 5-29-2024

Received By ______ Date/Time ______

Relinquished By ______ Date/Time ______

Received for Lab By: [signature] Date/Time: 5/29/24 @ 920

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HF0833

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 06/12/2024
Reported: 06/26/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Radeke, Rod
Lab Sample ID:	1HF0833-01	**Collection Date:**	06/12/2024 8:35

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		06/17/24 0000	06/17/24 1600	CSM
Toluene	<1.0	1.0	ug/L	1		06/17/24 0000	06/17/24 1600	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		06/17/24 0000	06/17/24 1600	CSM
Xylenes, total	<2.0	2.0	ug/L	1		06/17/24 0000	06/17/24 1600	CSM
Surrogate: Dibromofluoromethane	88.5	Limit: 79-129	% Rec	1		06/17/24 0000	06/17/24 1600	CSM
Surrogate: 1,2-Dichloroethane-d4	91.2	Limit: 66-134	% Rec	1		06/17/24 0000	06/17/24 1600	CSM
Surrogate: Toluene-d8	104	Limit: 91-113	% Rec	1		06/17/24 0000	06/17/24 1600	CSM
Surrogate: 4-Bromofluorobenzene	98.6	Limit: 83-112	% Rec	1		06/17/24 0000	06/17/24 1600	CSM

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1	**PH-3**	06/17/24 1528	06/18/24 1700	CSB
EPA 351.2								
Nitrogen, Kjeldahl, total	**30.9**	0.50	mg/L	1		06/21/24 1400	06/25/24 1508	AKK
SM 4500 H+ B								
pH	**8.4**	0.5	pH	1	**I-03**	06/14/24 0815	06/14/24 0909	BSS
SM 5210 B								
BOD (5 day)	**6**	6	mg/L	3			06/13/24 1211	MND
TIMBERLINE								
Nitrogen, Ammonia	**28.2**	1.00	mg/L	10		06/24/24 1339	06/25/24 1317	LNH
USGS I-3765-85								
Total Suspended Solids (TSS)	**13**	1	mg/L	1		06/17/24 0810	06/18/24 1223	RDH

Definitions

I-03:	Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.
PH-3:	Insufficient preservative to adjust the sample pH to less than 2, value measured at 3 pH units.
RL:	Reporting Limit

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HF0833

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
06/26/24 15:31

MICROBAC®
600 Eas
Newton,
641-792

1 H F 0 8 3 3
Tama County Landfill
PM: Heather Murphy

www.keystonelabs.com

SITE INFORMATION

Sampler:

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HF0833
Temperature 0.0
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	Prior to Discharge to City Sewer	Aqueous	GRAB	6/12/24	8:35	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By: Rod Radeke Date/Time: 6/12/24 8:35
Received By: Date/Time:

Relinquished By: Date/Time:
Received for Lab By: [signature] Date/Time: 6/12/24 08:15

Remarks:

Original - Lab Copy   Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HF1885

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 06/26/2024
Reported: 07/10/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Rouse, Stan
Lab Sample ID:	1HF1885-01	**Collection Date:**	06/26/2024 7:50

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		06/28/24 0000	06/28/24 1722	CSM
Toluene	<1.0	1.0	ug/L	1		06/28/24 0000	06/28/24 1722	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		06/28/24 0000	06/28/24 1722	CSM
Xylenes, total	<2.0	2.0	ug/L	1		06/28/24 0000	06/28/24 1722	CSM
Surrogate: Dibromofluoromethane	86.7	Limit: 79-129	% Rec	1		06/28/24 0000	06/28/24 1722	CSM
Surrogate: 1,2-Dichloroethane-d4	89.1	Limit: 66-134	% Rec	1		06/28/24 0000	06/28/24 1722	CSM
Surrogate: Toluene-d8	99.5	Limit: 91-113	% Rec	1		06/28/24 0000	06/28/24 1722	CSM
Surrogate: 4-Bromofluorobenzene	99.9	Limit: 83-112	% Rec	1		06/28/24 0000	06/28/24 1722	CSM

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		06/28/24 0900	06/28/24 0900	CSB
EPA 351.2								
Nitrogen, Kjeldahl, total	**17.9**	0.50	mg/L	1			07/03/24 1022	AKK
SM 4500 H+ B								
pH	**7.4**	0.5	pH	1	**I-03**	06/28/24 1021	06/28/24 1145	BSS
SM 5210 B								
BOD (5 day)	**17**	6	mg/L	3			06/27/24 1438	MND
TIMBERLINE								
Nitrogen, Ammonia	**18.4**	0.50	mg/L	5		07/08/24 0731	07/08/24 1426	LNH
USGS I-3765-85								
Total Suspended Solids (TSS)	**17**	1	mg/L	1		07/01/24 1601	07/02/24 1544	MEAH

Definitions

I-03: Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.

RL: Reporting Limit

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HF1885

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
07/10/24 11:11

CHAIN O[illegible]

MICROBAC®

600 East 17th Stre[illegible]
Newton, IA 50208
641-792-8451

1 H F 1 8 8 5
Tama County Landfill
PM: Heather Murphy

Printed: 6/17/2024 9:28:39A

www.keystonelabs.com

SITE INFORMATION

Sampler:

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time

☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HF1885

Temperature 0.4

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	Prior to Discharge to City Sewer	Aqueous	GRAB	6/26/24	7:50 AM	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By: Steve Rowe Date/Time: 6-26-24 / 7:50 AM

Relinquished By Date/Time

Received By Date/Time

Received for Lab By: Larry Wood Date/Time: 6/26/24 0912

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HG0721

Tama County Landfill	**Project Name: Outfall 001**
Dave Sherwood 2872 K Avenue Toledo, IA 52342	Project / PO Number: N/A Received: 07/10/2024 Reported: 07/25/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Dave
Lab Sample ID:	1HG0721-01	**Collection Date:**	07/10/2024 8:00

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		07/18/24 0000	07/18/24 2304	LNH
Toluene	<1.0	1.0	ug/L	1		07/18/24 0000	07/18/24 2304	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		07/18/24 0000	07/18/24 2304	LNH
Xylenes, total	<2.0	2.0	ug/L	1		07/18/24 0000	07/18/24 2304	LNH
Surrogate: Dibromofluoromethane	96.0	Limit: 79-129	% Rec	1		07/18/24 0000	07/18/24 2304	LNH
Surrogate: 1,2-Dichloroethane-d4	96.9	Limit: 66-134	% Rec	1		07/18/24 0000	07/18/24 2304	LNH
Surrogate: Toluene-d8	101	Limit: 91-113	% Rec	1		07/18/24 0000	07/18/24 2304	LNH
Surrogate: 4-Bromofluorobenzene	88.0	Limit: 83-112	% Rec	1		07/18/24 0000	07/18/24 2304	LNH

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1			07/15/24 1000	CSB
EPA 351.2								
Nitrogen, Kjeldahl, total	**5.58**	1.00	mg/L	1			07/22/24 0944	AKK
SM 4500 H+ B								
pH	**7.4**	0.5	pH	1	**H4**	07/15/24 0838	07/15/24 1653	BSS
SM 5210 B								
BOD (5 day)	**9**	6	mg/L	3		07/11/24 1007	07/11/24 1326	MND
TIMBERLINE								
Nitrogen, Ammonia	**5.35**	0.10	mg/L	1		07/23/24 0712	07/23/24 1028	LNH
USGS I-3765-85								
Total Suspended Solids (TSS)	**6**	1	mg/L	1		07/11/24 0711	07/12/24 0740	MEAH

Definitions

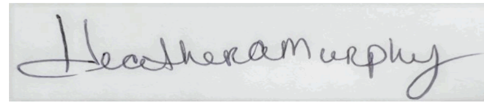
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.

RL: Reporting Limit

Report Comments

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

Reviewed and Approved By:



Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
07/25/24 08:10

CHAIN OF CU

MICROBAC®

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

1HG0721
Tama County Landfill
PM: Heather Murphy

Printed: 7/2/2024 8:37:59A
www.keystonelabs.com

SITE INFORMATION
Sampler: Dave
Project: Leachate Sampling
Outfall 001

REPORT TO
Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO
Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS
None

Turn Around Time
☒ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY
Work Order 1HG0721
Temperature 7.4
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	Prior to Discharge to City Sewer	Aqueous	GRAB	7/10/24	8:00AM	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By: Dave Sherwood Date/Time: 7-10-24 8:00AM
Relinquished By Date/Time
Received By Date/Time
Received for Lab By Date/Time 7/10/24 0910

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HG1886

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 07/24/2024
Reported: 08/08/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	RR
Lab Sample ID:	1HG1886-01	**Collection Date:**	07/24/2024 7:45

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 5030B/EPA 624								
Benzene	**18.1**	1.0	ug/L	1		08/05/24 0000	08/05/24 1433	CSM
Toluene	<1.0	1.0	ug/L	1		08/05/24 0000	08/05/24 1433	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		08/05/24 0000	08/05/24 1433	CSM
Xylenes, total	<2.0	2.0	ug/L	1		08/05/24 0000	08/05/24 1433	CSM
Surrogate: Dibromofluoromethane	96.2	Limit: 59-123	% Rec	1		08/05/24 0000	08/05/24 1433	CSM
Surrogate: 1,2-Dichloroethane-d4	94.8	Limit: 56-130	% Rec	1		08/05/24 0000	08/05/24 1433	CSM
Surrogate: Toluene-d8	95.7	Limit: 85-113	% Rec	1		08/05/24 0000	08/05/24 1433	CSM
Surrogate: 4-Bromofluorobenzene	86.0	Limit: 82-112	% Rec	1		08/05/24 0000	08/05/24 1433	CSM

Determination of Conventional Chemistry Parameters	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 1664A								
Oil and Grease	<4	4	mg/L	1	**A14**	07/24/24 1026	07/25/24 1501	HRM
EPA 351.2								
Nitrogen, Kjeldahl, total	**97.0**	2.50	mg/L	1			08/01/24 0820	AKK
SM 4500 H+ B								
pH	**7.1**	0.5	pH	1	**H4**	07/26/24 0821	07/26/24 1040	BSS
SM 5210 B								
BOD (5 day)	**23**	6	mg/L	3			07/25/24 1124	MND
TIMBERLINE								
Nitrogen, Ammonia	**123**	1.00	mg/L	10		08/02/24 1322	08/05/24 1440	LNH
USGS I-3765-85								
Total Suspended Solids (TSS)	**51**	1	mg/L	1		07/25/24 0720	07/30/24 1030	RDH

Definitions

A14: Sample was preserved with Hydrochloric Acid to pH <2 on receipt.
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
RL: Reporting Limit

Microbac Laboratories, Inc., Newton

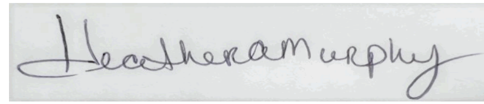
CERTIFICATE OF ANALYSIS

1HG1886

Report Comments

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

Reviewed and Approved By:



Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
08/08/24 17:15

CHA[...]

1HG1886
Tama County Landfill
PM: Heather Murphy

MICROBAC®

600 East 17t[...]
Newton, IA 5[...]
641-792-845[...]

Printed: 7/11/2024 8:28:31A
www.keystonelabs.co[...]

SITE INFORMATION

Sampler:

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HG1886
Temperature 0.0
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	Prior to Discharge to City Sewer	Aqueous	GRAB	7/24/24	7:45	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By: [signature] Date/Time: 7-24-24 7:45

Received By: Date/Time:

Relinquished By: Date/Time:

Received for Lab By: [signature] Date/Time: 7/24/2024 9:25 AM

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HH0533

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 08/07/2024
Reported: 08/21/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Dave
Lab Sample ID:	1HH0533-01	**Collection Date:**	08/07/2024 7:50

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		08/14/24 0000	08/14/24 1741	LNH
Toluene	<1.0	1.0	ug/L	1		08/14/24 0000	08/14/24 1741	LNH
Ethylbenzene	<1.0	1.0	ug/L	1		08/14/24 0000	08/14/24 1741	LNH
Xylenes, total	<2.0	2.0	ug/L	1		08/14/24 0000	08/14/24 1741	LNH
Surrogate: Dibromofluoromethane	107	Limit: 59-123	% Rec	1		08/14/24 0000	08/14/24 1741	LNH
Surrogate: 1,2-Dichloroethane-d4	121	Limit: 56-130	% Rec	1		08/14/24 0000	08/14/24 1741	LNH
Surrogate: Toluene-d8	102	Limit: 85-113	% Rec	1		08/14/24 0000	08/14/24 1741	LNH
Surrogate: 4-Bromofluorobenzene	94.9	Limit: 82-112	% Rec	1		08/14/24 0000	08/14/24 1741	LNH

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		08/07/24 1216	08/09/24 0700	HRM
EPA 351.2								
Nitrogen, Kjeldahl, total	**11.9**	1.00	mg/L	1			08/15/24 0934	AKK
SM 4500 H+ B								
pH	**8.1**	0.5	pH	1	**H4**	08/13/24 1043	08/13/24 1644	BSS
SM 5210 B								
BOD (5 day)	**12**	6	mg/L	3		08/08/24 1037	08/08/24 1218	MND
TIMBERLINE								
Nitrogen, Ammonia	<0.10	0.10	mg/L	1		08/20/24 0649	08/20/24 1201	JAC
USGS I-3765-85								
Total Suspended Solids (TSS)	**21**	1	mg/L	1			08/12/24 0908	MEAH

Definitions

H4: The test was performed outside of the EPA recommended holding time of 15 minutes.

RL: Reporting Limit

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HH0533

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
08/21/24 12:03

CHAIN OF CUS[TODY RECORD]

MICROBAC®
600 East 17th Street Sou[th]
Newton, IA 50208
641-792-8451

1HH0533
Tama County Landfill
PM: Heather Murphy

[Pr]inted: 7/25/2024 9:11:01 A[M]
www.keystonelabs.co[m]

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling

Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVO[ICE TO]

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order: 1HH0533
Temperature: 15.5
Turn-Cooler: No

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

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	Prior to Discharge to City Sewer	Aqueous	GRAB	8/7/24	7:50	6	624-106 nh3-timberline ph-4500 tss-i-3765-85 bod-5210 og-t-1664 tkn-351.2	01 [illegible]

Relinquished By	Date/Time	Relinquished By	Date/Time
		[signature]	8/7/24 0905
Received By	Date/Time	Received for Lab By	Date/Time

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HH1568

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 08/21/2024
Reported: 09/04/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	SR
Lab Sample ID:	1HH1568-01	**Collection Date:**	08/21/2024 8:32

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	**2.3**	1.0	ug/L	1			08/30/24 2144	BDF
Toluene	<1.0	1.0	ug/L	1			08/30/24 2144	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			08/30/24 2144	BDF
Xylenes, total	<2.0	2.0	ug/L	1			08/30/24 2144	BDF
Surrogate: Dibromofluoromethane	92.0	Limit: 59-123	% Rec	1			08/30/24 2144	BDF
Surrogate: 1,2-Dichloroethane-d4	89.6	Limit: 56-130	% Rec	1			08/30/24 2144	BDF
Surrogate: Toluene-d8	101	Limit: 85-113	% Rec	1			08/30/24 2144	BDF
Surrogate: 4-Bromofluorobenzene	90.1	Limit: 82-112	% Rec	1			08/30/24 2144	BDF

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		08/29/24 0612	08/29/24 1200	HRM
EPA 351.2								
Nitrogen, Kjeldahl, total	**30.8**	2.50	mg/L	1	**A9**	08/28/24 1010	08/29/24 1147	AKK
SM 4500 H+ B								
pH	**6.6**	0.5	pH	1	**H4**	08/26/24 1100	08/26/24 1323	BSS
SM 5210 B								
BOD (5 day)	**18**	6	mg/L	3		08/22/24 1454	08/22/24 1625	MND
TIMBERLINE								
Nitrogen, Ammonia	**32.8**	0.50	mg/L	5	**A9**	08/30/24 1515	09/03/24 1332	JAC
USGS I-3765-85								
Total Suspended Solids (TSS)	**66**	1	mg/L	1		08/26/24 1101	08/26/24 1315	MEAH

Definitions

A9: Sample was improperly preserved.

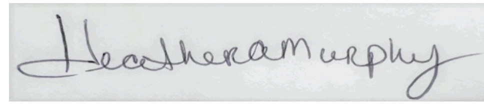
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.

RL: Reporting Limit

Report Comments

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

Reviewed and Approved By:



Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
09/04/24 08:23

1 H H 1 5 6 8
Tama County Landfill
PM: Heather Murphy

MICROBAC®
600 East 17th St
Newton, IA 5020
641-792-8451

SITE INFORMATION
Sampler: Steve
Project: Leachate Sampling
Outfall 001

REPORT TO
Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO
Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS
None

Turn Around Time
[x] Standard [ ] RUSH, need by __/__/__

LAB USE ONLY
Work Order 1HH1568
Temperature 0.7
Turn-Cooler: No

[ ] Custody Seal
[x] Containers Intact
[x] COC/Labels Agree
[ ] Preservation Confirmed
[x] Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	Prior to Discharge to City Sewer	Aqueous	GRAB	8/21/24	8:32 AM	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Steve Rouse 8-21-24 8:32AM
Relinquished By Date/Time

Relinquished By Date/Time

Received By Date/Time

Larry Wood 8/21/24 0910
Received for Lab By Date/Time

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI0115

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 09/04/2024
Reported: 09/17/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Rouse, Steve
Lab Sample ID:	1HI0115-01	**Collection Date:**	09/04/2024 7:45

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		09/10/24 0000	09/10/24 1808	CSM
Toluene	<1.0	1.0	ug/L	1		09/10/24 0000	09/10/24 1808	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		09/10/24 0000	09/10/24 1808	CSM
Xylenes, total	<2.0	2.0	ug/L	1		09/10/24 0000	09/10/24 1808	CSM
Surrogate: Dibromofluoromethane	102	Limit: 59-123	% Rec	1		09/10/24 0000	09/10/24 1808	CSM
Surrogate: 1,2-Dichloroethane-d4	109	Limit: 56-130	% Rec	1		09/10/24 0000	09/10/24 1808	CSM
Surrogate: Toluene-d8	98.9	Limit: 85-113	% Rec	1		09/10/24 0000	09/10/24 1808	CSM
Surrogate: 4-Bromofluorobenzene	98.2	Limit: 82-112	% Rec	1		09/10/24 0000	09/10/24 1808	CSM

Determination of Conventional Chemistry Parameters	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		09/13/24 1344	09/16/24 1642	BMS
EPA 351.2								
Nitrogen, Kjeldahl, total	**17.2**	1.00	mg/L	1		09/11/24 0953	09/16/24 1258	AKK
SM 4500 H+ B								
pH	**7.2**	0.5	pH	1	**H4**		09/09/24 1352	BSS
SM 5210 B								
BOD (5 day)	<6	6	mg/L	3		09/05/24 1003	09/05/24 1241	MND
TIMBERLINE								
Nitrogen, Ammonia	**2.36**	0.10	mg/L	1		09/12/24 1326	09/14/24 2021	JAC
USGS I-3765-85								
Total Suspended Solids (TSS)	**8**	1	mg/L	1		09/06/24 1514	09/09/24 0925	MEAH

Definitions

H4: The test was performed outside of the EPA recommended holding time of 15 minutes.

RL: Reporting Limit

Report Comments

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

Reviewed and Approved By:

Heather Murphy

Customer Relationship Specialist

heather.murphy@microbac.com

09/17/24 08:14

MICROBAC®

600 East 1...
Newton, IA 5020...
641-792-...

1 H I 0 1 1 5

Tama County Landfill

PM: Heather Murphy

Printed: 8/23/2024 3:45:21P

www.keystonelabs.com

SITE INFORMATION

Sampler: Steve Rouse

Project: Leachate Sampling

Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

LAB USE ONLY

Work Order 1HI0115

Temperature 0.4

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	Prior to Discharge to City Sewer	Aqueous	GRAB	09/04/24	7:45	6	624-106 nh3-timberline ph-4500 tss-i-3765-85	bod-5210 og-t-1664 tkn-351.2	01

Steve Rouse 09/04/24 7:45

Relinquished By Date/Time

Relinquished By Date/Time

Received By Date/Time

Received for Lab By [signature] 9/4/24 09:10

Date/Time

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI1178

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 09/18/2024
Reported: 10/02/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Rouse, Steve
Lab Sample ID:	1HI1178-01	**Collection Date:**	09/18/2024 7:42

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 5030B/EPA 624								
Benzene	<1.0	1.0	ug/L	1		09/25/24 0000	09/25/24 1614	BDF
Toluene	<1.0	1.0	ug/L	1		09/25/24 0000	09/25/24 1614	BDF
Ethylbenzene	<1.0	1.0	ug/L	1		09/25/24 0000	09/25/24 1614	BDF
Xylenes, total	<2.0	2.0	ug/L	1		09/25/24 0000	09/25/24 1614	BDF
Surrogate: Dibromofluoromethane	92.3	Limit: 59-123	% Rec	1		09/25/24 0000	09/25/24 1614	BDF
Surrogate: 1,2-Dichloroethane-d4	98.7	Limit: 56-130	% Rec	1		09/25/24 0000	09/25/24 1614	BDF
Surrogate: Toluene-d8	98.0	Limit: 85-113	% Rec	1		09/25/24 0000	09/25/24 1614	BDF
Surrogate: 4-Bromofluorobenzene	96.8	Limit: 82-112	% Rec	1		09/25/24 0000	09/25/24 1614	BDF

Determination of Conventional Chemistry Parameters	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 1664A								
Oil and Grease	<4	4	mg/L	1			09/26/24 1217	RDH
EPA 351.2								
Nitrogen, Kjeldahl, total	**69.9**	2.50	mg/L	1		09/30/24 1102	10/02/24 1102	AKK
SM 4500 H+ B								
pH	**7.0**	0.5	pH	1	**H4**		09/24/24 1130	BSS
SM 5210 B								
BOD (5 day)	**9**	2	mg/L	1		09/18/24 1249	09/18/24 1356	MND
TIMBERLINE								
Nitrogen, Ammonia	**68.0**	1.00	mg/L	10		09/23/24 1440	09/24/24 1300	GGD
USGS I-3765-85								
Total Suspended Solids (TSS)	**32**	1	mg/L	1		09/20/24 1051	09/20/24 1325	MEAH

Definitions

H4: The test was performed outside of the EPA recommended holding time of 15 minutes.

RL: Reporting Limit

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI1178

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
10/02/24 16:19

MICROBAC®

600 Ea
Newto
641-79

1 H I 1 1 7 8
Tama County Landfill
PM: Heather Murphy

Printed: 9/5/2024 10:19:23A

www.keystonelabs.com

SITE INFORMATION

Sampler: Steve Rouse

Project: Leachate Sampling

Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

LAB USE ONLY

Work Order 1HI1178

Temperature 0.0

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	Prior to Discharge to City Sewer	Aqueous	GRAB	09/18/24	7:42	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	01

Relinquished By	Date/Time	Relinquished By	Date/Time
Steve Rouse	09/18/2024 7:42		

Received By	Date/Time	Received for Lab By	Date/Time
		Larry Woza	9/18/24 0900

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0199

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 10/02/2024
Reported: 10/21/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Sherwood, Dave
Lab Sample ID:	1HJ0199-01	**Collection Date:**	10/02/2024 8:00

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624								
Benzene	**13.8**	1.0	ug/L	1		10/10/24 0000	10/10/24 2032	BDF
Toluene	**2.1**	1.0	ug/L	1		10/10/24 0000	10/10/24 2032	BDF
Ethylbenzene	<1.0	1.0	ug/L	1		10/10/24 0000	10/10/24 2032	BDF
Xylenes, total	**3.6**	2.0	ug/L	1		10/10/24 0000	10/10/24 2032	BDF
Surrogate: Dibromofluoromethane	95.7	Limit: 59-123	% Rec	1		10/10/24 0000	10/10/24 2032	BDF
Surrogate: 1,2-Dichloroethane-d4	99.5	Limit: 56-130	% Rec	1		10/10/24 0000	10/10/24 2032	BDF
Surrogate: Toluene-d8	102	Limit: 85-113	% Rec	1		10/10/24 0000	10/10/24 2032	BDF
Surrogate: 4-Bromofluorobenzene	107	Limit: 82-112	% Rec	1		10/10/24 0000	10/10/24 2032	BDF

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<8	8	mg/L	2		10/09/24 0903	10/11/24 1643	BMS
EPA 351.2								
Nitrogen, Kjeldahl, total	**134**	2.50	mg/L	1		10/16/24 1046	10/18/24 1639	AKK
SM 4500 H+ B								
pH	**6.9**	0.5	pH	1	**H4**	10/04/24 1543	10/04/24 1547	BSS
SM 5210 B								
BOD (5 day)	**26**	6	mg/L	3		10/02/24 1821	10/02/24 1821	MND
TIMBERLINE								
Nitrogen, Ammonia	**144**	10.0	mg/L	100		10/08/24 0842	10/08/24 1221	JAC
USGS I-3765-85								
Total Suspended Solids (TSS)	**71**	1	mg/L	1		10/04/24 1502	10/07/24 0905	RDH

Definitions

H4: The test was performed outside of the EPA recommended holding time of 15 minutes.

RL: Reporting Limit

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
10/21/24 13:46

CHAIN OF

MICROBAC®

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

1HJ0199
Tama County Landfill
PM: Heather Murphy

Printed: 9/19/2024 1:15:41P
www.keystonelabs.com

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☒ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order: 1HJ0199
Temperature: 14.1
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	Prior to Discharge to City Sewer	Aqueous	GRAB	10-2-24	8:00	6	624-106; nh3-timberline; ph-4500; tss-i-3765-85; bod-5210; og-t-1664; tkn-351.2	1

Relinquished By	Date/Time	Relinquished By	Date/Time
Dave Sherwood	10-2-24 8:00		

Received By	Date/Time	Received for Lab By	Date/Time
		Larry Wood	10/2/24 0902

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ2274

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 10/30/2024
Reported: 11/12/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Rouse,Steve
Lab Sample ID:	1HJ2274-01	**Collection Date:**	10/30/2024 7:50

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624.1								
Benzene	<1.0	1.0	ug/L	1		11/04/24 0000	11/04/24 1605	CSM
Toluene	<1.0	1.0	ug/L	1		11/04/24 0000	11/04/24 1605	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		11/04/24 0000	11/04/24 1605	CSM
Xylenes, total	<2.0	2.0	ug/L	1		11/04/24 0000	11/04/24 1605	CSM
Surrogate: Dibromofluoromethane	95.9	Limit: 59-123	% Rec	1		11/04/24 0000	11/04/24 1605	CSM
Surrogate: 1,2-Dichloroethane-d4	89.8	Limit: 56-130	% Rec	1		11/04/24 0000	11/04/24 1605	CSM
Surrogate: Toluene-d8	96.6	Limit: 85-113	% Rec	1		11/04/24 0000	11/04/24 1605	CSM
Surrogate: 4-Bromofluorobenzene	95.7	Limit: 82-112	% Rec	1		11/04/24 0000	11/04/24 1605	CSM

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1	**A14**	11/11/24 1204	11/12/24 0800	RDH
EPA 351.2, Rv. 2 (1993)								
Nitrogen, Kjeldahl, total	**60.7**	5.00	mg/L	5		11/07/24 1421	11/11/24 1433	SGB
SM 4500-H+ B-2011								
pH	**7.3**	0.5	pH	1	**H4**		11/01/24 0818	BSS
SM 5210 B-2016								
BOD (5 day)	**14**	6	mg/L	3		10/30/24 1451	10/30/24 1539	MND
TIMBERLINE								
Nitrogen, Ammonia	**54.6**	1.00	mg/L	10		11/05/24 0900	11/05/24 1347	SDF
USGS I-3765-85								
Total Suspended Solids (TSS)	**23**	1	mg/L	1		11/04/24 1103	11/05/24 1009	MEAH

Definitions

A14: Sample was preserved with Hydrochloric Acid to pH <2 on receipt.
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
RL: Reporting Limit

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ2274

Report Comments

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

Reviewed and Approved By:

Heather Murphy

Customer Relationship Specialist

heather.murphy@microbac.com

11/12/24 15:43

CHAIN OF CUSTODY RECORD

MICROBAC®

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

1HJ2274
Tama County Landfill
PM: Heather Murphy

10/7/2024 3:15:15P
keystonelabs.com

SITE INFORMATION
Sampler: Steve Rouse
Project: Leachate Sampling
Outfall 001

REPORT TO
Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS
None

Turn Around Time
☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY
Work Order: 1HJ2274
Temperature: 0.8
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	Prior to Discharge to City Sewer	Aqueous	GRAB	10 30/24	7:50	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	1

Steve Rouse 10-30-24 7:50
Relinquished By Date/Time

Received By Date/Time

Relinquished By Date/Time

Larry Wood 10/30/24 0900
Received for Lab By Date/Time

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HK0882

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 11/13/2024
Reported: 11/26/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	DS
Lab Sample ID:	1HK0882-01	**Collection Date:**	11/13/2024 9:00

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624.1								
Benzene	<1.0	1.0	ug/L	1		11/14/24 0000	11/14/24 1848	CSM
Toluene	<1.0	1.0	ug/L	1		11/14/24 0000	11/14/24 1848	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		11/14/24 0000	11/14/24 1848	CSM
Xylenes, total	<2.0	2.0	ug/L	1		11/14/24 0000	11/14/24 1848	CSM
Surrogate: Dibromofluoromethane	124	Limit: 59-123	% Rec	1	**S1**	11/14/24 0000	11/14/24 1848	CSM
Surrogate: 1,2-Dichloroethane-d4	126	Limit: 56-130	% Rec	1		11/14/24 0000	11/14/24 1848	CSM
Surrogate: Toluene-d8	97.8	Limit: 85-113	% Rec	1		11/14/24 0000	11/14/24 1848	CSM
Surrogate: 4-Bromofluorobenzene	98.7	Limit: 82-112	% Rec	1		11/14/24 0000	11/14/24 1848	CSM

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		11/21/24 1125	11/22/24 0730	RDH
EPA 351.2, Rv. 2 (1993)								
Nitrogen, Kjeldahl, total	**44.0**	2.50	mg/L	1		11/20/24 1200	11/25/24 1050	SGB
SM 4500-H+ B-2011								
pH	**7.3**	0.5	pH	1	**H4**		11/14/24 1412	BSS
SM 5210 B-2016								
BOD (5 day)	**13**	6	mg/L	3		11/13/24 1308	11/13/24 1615	HBH
TIMBERLINE								
Nitrogen, Ammonia	**16.7**	1.00	mg/L	10		11/14/24 1601	11/15/24 1445	SDF
USGS I-3765-85								
Total Suspended Solids (TSS)	**6**	1	mg/L	1		11/18/24 1401	11/19/24 0953	MEAH

Definitions

H4:	The test was performed outside of the EPA recommended holding time of 15 minutes.
RL:	Reporting Limit
S1:	Surrogate recovery is above acceptance limits.

Microbac Laboratories, Inc., Newton

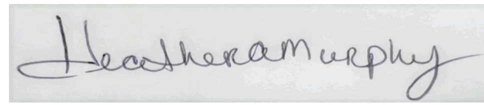
CERTIFICATE OF ANALYSIS

1HK0882

Report Comments

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

Reviewed and Approved By:



Heather Murphy

Customer Relationship Specialist

heather.murphy@microbac.com

11/26/24 12:18

CHAIN

1HK0882
Tama County Landfill
PM: Heather Murphy

Keystone LABORATORIES
A Microbac Company

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

Page 1 of
Printed: 11/1/2024 9:29:14A
www.keystonelabs

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

LAB USE ONLY

Work Order 1HK0882
Temperature 1.1°C
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	Prior to Discharge to City Sewer	Aqueous	GRAB	11/15/24	9:00 AM	6	624-106, bod-5210, nh3-timberline, og-t-1664, ph-4500, tkn-351.2, tss-i-3765-85	01

Relinquished By: [signature] Date/Time: 11-15-24 9:00 AM

Received By Date/Time

Relinquished By Date/Time

Received for Lab By: [signature] Date/Time: 11/13/24 0915

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HK1899

Tama County Landfill

Dave Sherwood
2872 K Avenue
Toledo, IA 52342

Project Name: Outfall 001

Project / PO Number: N/A
Received: 11/27/2024
Reported: 12/13/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Sherwood, Dave
Lab Sample ID:	1HK1899-01	**Collection Date:**	11/27/2024 8:15

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 5030B/EPA 624.1								
Benzene	<1.0	1.0	ug/L	1		12/02/24 0000	12/02/24 1905	CSM
Toluene	<1.0	1.0	ug/L	1		12/02/24 0000	12/02/24 1905	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		12/02/24 0000	12/02/24 1905	CSM
Xylenes, total	<2.0	2.0	ug/L	1		12/02/24 0000	12/02/24 1905	CSM
Surrogate: Dibromofluoromethane	101	Limit: 59-123	% Rec	1		12/02/24 0000	12/02/24 1905	CSM
Surrogate: 1,2-Dichloroethane-d4	113	Limit: 56-130	% Rec	1		12/02/24 0000	12/02/24 1905	CSM
Surrogate: Toluene-d8	97.8	Limit: 85-113	% Rec	1		12/02/24 0000	12/02/24 1905	CSM
Surrogate: 4-Bromofluorobenzene	70.9	Limit: 82-112	% Rec	1	**S**	12/02/24 0000	12/02/24 1905	CSM

Determination of Conventional Chemistry Parameters	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 1664A								
Oil and Grease	<4	4	mg/L	1		12/09/24 0708	12/10/24 0745	RDH
EPA 351.2, Rv. 2 (1993)								
Nitrogen, Kjeldahl, total	**56.7**	2.50	mg/L	1			12/05/24 1041	SGB
SM 4500-H+ B-2011								
pH	**7.6**	0.5	pH	1	**H4**	12/04/24 0833	12/04/24 1249	BSS
SM 5210 B-2016								
BOD (5 day)	**25**	6	mg/L	3			11/27/24 1527	MND
TIMBERLINE								
Nitrogen, Ammonia	**52.6**	1.00	mg/L	10		12/10/24 0945	12/10/24 1226	SDF
USGS I-3765-85								
Total Suspended Solids (TSS)	**32**	4	mg/L	4		12/03/24 0751	12/03/24 1227	MEAH

Definitions

H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
RL: Reporting Limit
S: Spike recovery outside of acceptance limits.

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HK1899

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
12/13/24 08:17

Keystone
LABORATORIES
A Microbac Company

600 East 17
Newton, IA
641-792-84

1HK1899
Tama County Landfill
PM: Heather Murphy

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling
Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☒ RUSH, need by ___/___/___

LAB USE ONLY

Work Order
Temperature 1.3
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	Prior to Discharge to City Sewer	Aqueous	GRAB	11/27/24	8:15	6	624-106, bod-5210, nh3-timberline, og-t-1664, ph-4500, tkn-351.2, tss-i-3765-85	01

Relinquished By: [signature] Date/Time: 11-27-24 8:45

Relinquished By: Date/Time:

Received By: Date/Time:

Received for Lab By: [signature] Date/Time: 11/27/24 0857

Remarks:

Original - Lab Copy Yellow - Sampler Copy

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HL0774

Tama County Landfill	**Project Name: Outfall 001**
Dave Sherwood 2872 K Avenue Toledo, IA 52342	Project / PO Number: N/A Received: 12/11/2024 Reported: 12/27/2024

Analytical Testing Parameters

Client Sample ID:	Prior to Discharge to City Sewer		
Sample Matrix:	Aqueous	**Collected By:**	Sherwood, Dave
Lab Sample ID:	1HL0774-01	**Collection Date:**	12/11/2024 9:00

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 5030B/EPA 624.1								
Benzene	<1.0	1.0	ug/L	1		12/18/24 0000	12/18/24 1804	CSM
Toluene	<1.0	1.0	ug/L	1		12/18/24 0000	12/18/24 1804	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		12/18/24 0000	12/18/24 1804	CSM
Xylenes, total	<2.0	2.0	ug/L	1		12/18/24 0000	12/18/24 1804	CSM
Surrogate: Dibromofluoromethane	93.9	Limit: 59-123	% Rec	1		12/18/24 0000	12/18/24 1804	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 56-130	% Rec	1		12/18/24 0000	12/18/24 1804	CSM
Surrogate: Toluene-d8	92.5	Limit: 85-113	% Rec	1		12/18/24 0000	12/18/24 1804	CSM
Surrogate: 4-Bromofluorobenzene	97.4	Limit: 82-112	% Rec	1		12/18/24 0000	12/18/24 1804	CSM

Determination of Conventional Chemistry Parameters	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 1664A								
Oil and Grease	**5**	4	mg/L	1		12/23/24 1452	12/24/24 0730	RDH
EPA 351.2, Rv. 2 (1993)								
Nitrogen, Kjeldahl, total	**49.4**	2.50	mg/L	1		12/20/24 1438	12/27/24 1101	AKK
SM 4500-H+ B-2011								
pH	**8.3**	0.5	pH	1	**H4**	12/16/24 1311	12/16/24 1415	BSS
SM 5210 B-2016								
BOD (5 day)	**18**	6	mg/L	3		12/11/24 1329	12/11/24 1500	MND
TIMBERLINE								
Nitrogen, Ammonia	**59.9**	1.00	mg/L	10		12/16/24 1159	12/16/24 1436	SDF
USGS I-3765-85								
Total Suspended Solids (TSS)	**16**	3	mg/L	3		12/12/24 0905	12/13/24 1135	MEAH

Definitions

H4: The test was performed outside of the EPA recommended holding time of 15 minutes.

RL: Reporting Limit

Report Comments

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

Reviewed and Approved By:

Heather A Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
12/27/24 14:04

CHAIN OF CUSTODY R

1 H L 0 7 7 4
Tama County Landfill
PM: Heather Murphy

Keystone LABORATORIES
A Microbac Company

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

w.keystonelabs.c

SITE INFORMATION

Sampler: Dave

Project: Leachate Sampling

Outfall 001

REPORT TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

INVOICE TO

Dave Sherwood
Tama County Landfill
2872 K Avenue
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

LAB USE ONLY

Work Order 1HL0774

Temperature 0.0

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	Prior to Discharge to City Sewer	Aqueous	GRAB	12/11/24	9:00 AM	6	624-106, nh3-timberline, ph-4500, tss-i-3765-85, bod-5210, og-t-1664, tkn-351.2	1

Relinquished By: DS Date/Time: 12/11/24 9:00 AM

Received By Date/Time

Relinquished By Date/Time

Received for Lab By: Kerry Ward Date/Time: 12/11/24 0903

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0378

Project Description

Leachate

For:

Todd Whipple

HLW Engineering

PO Box 314

Story City, IA 50248

Heather Murphy

Heather Murphy

Customer Relationship Specialist

Monday, March 25, 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., Newton

CERTIFICATE OF ANALYSIS

1HC0378

HLW Engineering

Todd Whipple
PO Box 314
Story City, IA 50248

Project Name: Leachate

Project / PO Number: N/A
Received: 03/06/2024
Reported: 03/25/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Leachate/Lagoon	1HC0378-01	Water	GRAB		03/05/24 14:20	03/06/24 10:10

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0378

Analytical Testing Parameters

Client Sample ID:	Leachate/Lagoon			
Sample Matrix:	Water		**Collected By:**	JGH
Lab Sample ID:	1HC0378-01		**Collection Date:**	03/05/2024 14:20

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 5030B/EPA 624								
Chloromethane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Chloroform	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Benzene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
2-Chloroethylvinyl ether	<10.0	10.0	ug/L	1	**P-02**	03/14/24 0000	03/14/24 1336	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Toluene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Bromoform	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/14/24 0000	03/14/24 1336	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 66-134	% Rec	1		03/14/24 0000	03/14/24 1336	CSM
Surrogate: Toluene-d8	97.9	Limit: 91-113	% Rec	1		03/14/24 0000	03/14/24 1336	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 83-112	% Rec	1		03/14/24 0000	03/14/24 1336	CSM

Determination of Base/Neutral/Acid Extractable Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 625								
Bis(2-Chloroethyl) Ether	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
2-Chlorophenol	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
1,3-Dichlorobenzene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
1,4-Dichlorobenzene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Benzyl Alcohol	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
1,2-Dichlorobenzene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP

Client Sample ID:	Leachate/Lagoon		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0378-01	**Collection Date:**	03/05/2024 14:20

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bis[2-Chloroisopropyl]ether	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
n-Nitroso-di-n-propylamine	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Hexachloroethane	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Nitrobenzene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Isophorone	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
2-Nitrophenol	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
2,4-Dimethylphenol	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Bis (2-Chloroethoxy) Methane	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Benzoic acid	<50	50	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
2,4-Dichlorophenol	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
1,2,4-Trichlorobenzene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Naphthalene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Hexachlorobutadiene	<20	20	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
4-Chloro-3-methylphenol	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Hexachlorocyclopentadiene	<20	20	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
2,4,6-Trichlorophenol	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
2,4,5-Trichlorophenol	<50	50	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
2-Chloronaphthalene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Dimethylphthalate	<15	15	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Acenaphthylene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
2,6-Dinitrotoluene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Acenaphthene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
2,4-Dinitrophenol	<20	20	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Dibenzofuran	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
2,4-Dinitrotoluene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
4-Nitrophenol	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Diethyl Phthalate	<30	30	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Fluorene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
4-Chlorophenyl Phenyl Ether	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
4,6-Dinitro-2-methylphenol	<20	20	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
N-Nitrosodiphenylamine	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
4-Bromophenyl Phenyl Ether	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Hexachlorobenzene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Pentachlorophenol	<20	20	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Phenanthrene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Anthracene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Di-n-butyl Phthalate	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Fluoranthene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Pyrene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Butyl Benzyl Phthalate	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Benzo(a)anthracene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Chrysene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Bis(2-Ethylhexyl) Phthalate	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP

Client Sample ID:	Leachate/Lagoon		
Sample Matrix:	Water	**Collected By:**	JGH
Lab Sample ID:	1HC0378-01	**Collection Date:**	03/05/2024 14:20

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Di-n-octyl Phthalate	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Indeno(1,2,3-cd)Pyrene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
3,3´-Dichlorobenzidine	<20	20	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Benzo(b)Fluoranthene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Benzo(k)Fluoranthene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Benzo(a)Pyrene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Dibenzo(a,h)anthracene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Benzo(g,h,i)perylene	<10	10	ug/L	1		03/11/24 1117	03/20/24 0657	EPP
Surrogate: 2-Fluorophenol	72.6	Limit: 19-139	% Rec	1		03/11/24 1117	03/20/24 0657	EPP
Surrogate: Phenol-d6	83.8	Limit: 14-154	% Rec	1		03/11/24 1117	03/20/24 0657	EPP
Surrogate: Nitrobenzene-d5	80.8	Limit: 17-146	% Rec	1		03/11/24 1117	03/20/24 0657	EPP
Surrogate: 2-Fluorobiphenyl	68.1	Limit: 18-122	% Rec	1		03/11/24 1117	03/20/24 0657	EPP
Surrogate: 2,4,6-Tribromophenol	59.0	Limit: 21-151	% Rec	1		03/11/24 1117	03/20/24 0657	EPP
Surrogate: Terphenyl-dl4	103	Limit: 27-131	% Rec	1		03/11/24 1117	03/20/24 0657	EPP

Determination of Organochlorine Insecticides & PCBs	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3520C/EPA 608								
Gamma-BHC [Lindane]	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Beta-BHC	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Heptachlor	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Delta-BHC	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Aldrin	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Heptachlor Epoxide	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Endosulfan I	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
4,4`-DDE	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Dieldrin	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Endrin	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
4,4`-DDD	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Endosulfan II	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
4,4`-DDT	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Endrin Aldehyde	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Endosulfan Sulfate	<0.05	0.05	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Chlordane	<0.10	0.10	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Toxaphene	<0.20	0.20	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Arochlor 1016	<0.20	0.20	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Arochlor 1221	<0.20	0.20	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Arochlor 1232	<0.20	0.20	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Arochlor 1242	<0.20	0.20	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Arochlor 1248	<0.20	0.20	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Arochlor 1254	<0.20	0.20	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Arochlor 1260	<0.20	0.20	ug/L	1		03/11/24 1218	03/20/24 1438	EPP
Surrogate: Decachlorobiphenyl	70.8	Limit: 19-120	% Rec	1		03/11/24 1218	03/20/24 1438	EPP
Surrogate: Tetrachloro-m-xylene	84.2	Limit: 30-119	% Rec	1		03/11/24 1218	03/20/24 1438	EPP

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC0378

Client Sample ID:	Leachate/Lagoon			
Sample Matrix:	Water		**Collected By:**	JGH
Lab Sample ID:	1HC0378-01		**Collection Date:**	03/05/2024 14:20

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
5310B								
Total Organic Carbon	**4.22**	0.50	mg/L	1		03/21/24 0000	03/21/24 2017	CSM
SM 4500 H+ B								
pH	**7.6**	0.5	pH	1	**I-03**	03/08/24 0831	03/08/24 0916	BSS
SM 5210 B								
BOD (5 day)	<6	6	mg/L	3			03/07/24 0853	MND
TIMBERLINE								
Nitrogen, Ammonia	**2.14**	1.00	mg/L	10		03/19/24 0857	03/19/24 1325	LJS
USGS I-1750-85								
Total Dissolved Solids (TDS)	**749**	5	mg/L	1		03/08/24 0821	03/11/24 2040	MEAH
USGS I-3765-85								
Total Suspended Solids (TSS)	**7**	1	mg/L	1		03/12/24 0915	03/12/24 1440	MEAH

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
200.7								
Iron, total	**0.293**	0.100	mg/L	1		03/07/24 1520	03/08/24 2334	JAR
245.1								
Mercury, total	<0.00050	0.00050	mg/L	1		03/11/24 1533	03/12/24 1622	JAR
EPA 200.8								
Arsenic, total	<0.0020	0.0020	mg/L	4		03/06/24 1628	03/08/24 0140	RVV
Barium, total	**0.0609**	0.0020	mg/L	4		03/06/24 1628	03/08/24 0140	RVV
Cadmium, total	<0.0002	0.0002	mg/L	4		03/06/24 1628	03/08/24 0140	RVV
Chromium, total	<0.0020	0.0020	mg/L	4		03/06/24 1628	03/08/24 0140	RVV
Copper, total	<0.0020	0.0020	mg/L	4		03/06/24 1628	03/08/24 0140	RVV
Lead, total	<0.0008	0.0008	mg/L	4		03/06/24 1628	03/08/24 0140	RVV
Nickel, total	**0.0042**	0.0040	mg/L	4		03/06/24 1628	03/08/24 0140	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/06/24 1628	03/08/24 0140	RVV
Silver, total	<0.0020	0.0020	mg/L	4		03/06/24 1628	03/08/24 0140	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/06/24 1628	03/08/24 0140	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.8	1HC0320	1HC0320-BLK1	
		1HC0320-BS1	
		1HC0320-MS1	1HC0236-01
		1HC0320-PS1	1HC0236-01
		1HC0378-01	Leachate/Lagoon
		1HC0320-MSD1	1HC0236-01

Method	Batch	Laboratory ID	Client / Source ID
SM 5210 B	1HC0350	1HC0350-BLK1	
		1HC0350-SRM1	
		1HC0378-01	Leachate/Lagoon
		1HC0350-DUP1	1HC0348-01

Method	Batch	Laboratory ID	Client / Source ID
200.7	1HC0399	1HC0399-BLK1	
		1HC0399-BS1	
		1HC0399-MS1	1HC0364-01
		1HC0399-MSD1	1HC0364-01
		1HC0399-PS1	1HC0364-01
		1HC0378-01	Leachate/Lagoon

Method	Batch	Laboratory ID	Client / Source ID
USGS I-1750-85	1HC0452	1HC0452-BLK1	
		1HC0452-DUP1	1HC0411-01
		1HC0452-BS1	
		1HC0378-01	Leachate/Lagoon

Method	Batch	Laboratory ID	Client / Source ID
SM 4500 H+ B	1HC0454	1HC0454-SRM2	
		1HC0454-SRM1	
		1HC0454-DUP1	1HC0455-02
		1HC0378-01	Leachate/Lagoon

Method	Batch	Laboratory ID	Client / Source ID
EPA 625	1HC0558	1HC0558-BLK1	
		1HC0558-BS1	
		1HC0558-BSD1	
		1HC0378-01	Leachate/Lagoon

Method	Batch	Laboratory ID	Client / Source ID
EPA 608	1HC0564	1HC0564-BLK1	

EPA 608	1HC0564	1HC0564-BS1	
		1HC0564-BSD1	
		1HC0378-01	Leachate/Lagoon

Method	Batch	Laboratory ID	Client / Source ID
245.1	1HC0593	1HC0593-BLK1	
		1HC0593-BS1	
		1HC0593-MS1	1HC0190-02
		1HC0593-MSD1	1HC0190-02
		1HC0378-01	Leachate/Lagoon

Method	Batch	Laboratory ID	Client / Source ID
USGS I-3765-85	1HC0622	1HC0378-01	Leachate/Lagoon
		1HC0622-DUP1	1HC0369-01
		1HC0622-BLK1	
		1HC0622-BS1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 624	1HC0850	1HC0850-BS1	
		1HC0850-BSD1	
		1HC0850-BLK1	
		1HC0378-01	Leachate/Lagoon
		1HC0850-MS1	1HC0342-01
		1HC0850-MSD1	1HC0342-01

Method	Batch	Laboratory ID	Client / Source ID
TIMBERLINE	1HC0989	1HC0989-BLK1	
		1HC0989-MRL1	
		1HC0989-BS1	
		1HC0989-MS1	1HC0385-01
		1HC0989-MSD1	1HC0385-01
		1HC0378-01	Leachate/Lagoon

Method	Batch	Laboratory ID	Client / Source ID
5310B	1HC1092	1HC1092-BS1	
		1HC1092-BSD1	
		1HC1092-BLK1	
		1HC0378-01	Leachate/Lagoon
		1HC1092-MS1	1HC0624-01
		1HC1092-MSD1	1HC0624-01

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

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0850 - EPA 5030B - EPA 624										
Blank (1HC0850-BLK1)				Prepared: 03/14/24 00:00 Analyzed: 03/14/24 11:03						
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							
Dibromochloromethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*51.5*		ug/L	*50.1*		*103*	*66-134*			
Surrogate: Toluene-d8	*49.6*		ug/L	*50.4*		*98.3*	*91-113*			
Surrogate: 4-Bromofluorobenzene	*52.4*		ug/L	*50.1*		*105*	*83-112*			
LCS (1HC0850-BS1)				Prepared: 03/14/24 00:00 Analyzed: 03/14/24 09:43						
Chloromethane	32.92	1.0	ug/L	30.6		107	63-145			
Vinyl Chloride	28.95	1.0	ug/L	30.2		95.8	68-145			
Bromomethane	34.24	1.0	ug/L	28.8		119	69-150			
Chloroethane	32.21	1.0	ug/L	31.6		102	74-134			
1,1-Dichloroethylene	52.08	1.0	ug/L	50.0		104	76-139			
Methylene Chloride	44.60	5.0	ug/L	50.0		89.2	67-141			
trans-1,2-Dichloroethylene	47.93	1.0	ug/L	50.0		95.9	71-137			
1,1-Dichloroethane	47.29	1.0	ug/L	50.0		94.6	72-130			
cis-1,2-Dichloroethylene	47.30	1.0	ug/L	49.5		95.6	81-134			
2-Butanone (MEK)	98.32	10.0	ug/L	103		95.2	44-158			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0850 - EPA 5030B - EPA 624										
LCS (1HC0850-BS1)				Prepared: 03/14/24 00:00 Analyzed: 03/14/24 09:43						
Chloroform	46.26	1.0	ug/L	50.0		92.5	76-132			
1,1,1-Trichloroethane	42.88	1.0	ug/L	50.0		85.8	65-122			
Carbon Tetrachloride	47.01	1.0	ug/L	50.0		94.0	66-132			
Benzene	45.82	1.0	ug/L	50.0		91.6	77-130			
1,2-Dichloroethane	44.13	1.0	ug/L	50.0		88.3	75-124			
Trichloroethylene	45.35	1.0	ug/L	50.0		90.7	79-126			
1,2-Dichloropropane	45.97	1.0	ug/L	50.0		91.9	79-128			
Dibromomethane	48.87	1.0	ug/L	50.0		97.7	71-139			
Bromodichloromethane	44.11	1.0	ug/L	50.0		88.2	76-122			
2-Chloroethylvinyl ether	99.49	10.0	ug/L	103		97.0	50-169			
cis-1,3-Dichloropropene	44.57	1.0	ug/L	50.3		88.6	74-122			
Toluene	45.30	1.0	ug/L	50.0		90.6	76-128			
trans-1,3-Dichloropropene	44.26	1.0	ug/L	50.4		87.8	73-125			
1,1,2-Trichloroethane	45.33	1.0	ug/L	50.0		90.7	74-126			
Tetrachloroethylene	45.31	1.0	ug/L	50.0		90.6	68-124			
Dibromochloromethane	47.17	1.0	ug/L	49.5		95.3	76-125			
Chlorobenzene	43.81	1.0	ug/L	50.0		87.6	77-120			
Ethylbenzene	44.47	1.0	ug/L	50.0		88.9	76-118			
Xylenes, total	133.5	2.0	ug/L	150		89.0	74-121			
Bromoform	49.03	1.0	ug/L	50.0		98.1	68-128			
1,1,2,2-Tetrachloroethane	47.01	1.0	ug/L	49.8		94.3	62-128			
1,3-Dichlorobenzene	45.28	1.0	ug/L	50.0		90.6	72-123			
1,4-Dichlorobenzene	46.34	1.0	ug/L	50.0		92.7	75-120			
1,2-Dichlorobenzene	44.85	1.0	ug/L	50.0		89.7	72-121			
Surrogate: Dibromofluoromethane	*51.3*		ug/L	*50.2*		*102*	*79-129*			
Surrogate: 1,2-Dichloroethane-d4	*51.2*		ug/L	*50.1*		*102*	*66-134*			
Surrogate: Toluene-d8	*50.2*		ug/L	*50.4*		*99.7*	*91-113*			
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.1*		*99.8*	*83-112*			
LCS Dup (1HC0850-BSD1)				Prepared: 03/14/24 00:00 Analyzed: 03/14/24 10:09						
Chloromethane	30.96	1.0	ug/L	30.6		101	63-145	6.14	27	
Vinyl Chloride	27.54	1.0	ug/L	30.2		91.1	68-145	4.99	30	
Bromomethane	32.76	1.0	ug/L	28.8		114	69-150	4.42	30	
Chloroethane	30.55	1.0	ug/L	31.6		96.6	74-134	5.29	29	
1,1-Dichloroethylene	49.52	1.0	ug/L	50.0		99.0	76-139	5.04	30	
Methylene Chloride	42.90	5.0	ug/L	50.0		85.8	67-141	3.89	25	
trans-1,2-Dichloroethylene	46.45	1.0	ug/L	50.0		92.9	71-137	3.14	29	
1,1-Dichloroethane	45.24	1.0	ug/L	50.0		90.5	72-130	4.43	27	
cis-1,2-Dichloroethylene	45.14	1.0	ug/L	49.5		91.2	81-134	4.67	23	
2-Butanone (MEK)	95.45	10.0	ug/L	103		92.4	44-158	2.96	25	
Chloroform	44.68	1.0	ug/L	50.0		89.4	76-132	3.47	26	
1,1,1-Trichloroethane	41.44	1.0	ug/L	50.0		82.9	65-122	3.42	29	
Carbon Tetrachloride	45.32	1.0	ug/L	50.0		90.6	66-132	3.66	30	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0850 - EPA 5030B - EPA 624										
LCS Dup (1HC0850-BSD1)			Prepared: 03/14/24 00:00 Analyzed: 03/14/24 10:09							
Benzene	44.47	1.0	ug/L	50.0		88.9	77-130	2.99	27	
1,2-Dichloroethane	43.63	1.0	ug/L	50.0		87.3	75-124	1.14	25	
Trichloroethylene	43.97	1.0	ug/L	50.0		87.9	79-126	3.09	28	
1,2-Dichloropropane	44.43	1.0	ug/L	50.0		88.9	79-128	3.41	26	
Dibromomethane	48.48	1.0	ug/L	50.0		97.0	71-139	0.801	27	
Bromodichloromethane	43.11	1.0	ug/L	50.0		86.2	76-122	2.29	24	
2-Chloroethylvinyl ether	98.61	10.0	ug/L	103		96.1	50-169	0.888	28	
cis-1,3-Dichloropropene	43.72	1.0	ug/L	50.3		86.9	74-122	1.93	27	
Toluene	44.57	1.0	ug/L	50.0		89.1	76-128	1.62	28	
trans-1,3-Dichloropropene	43.90	1.0	ug/L	50.4		87.1	73-125	0.817	27	
1,1,2-Trichloroethane	45.07	1.0	ug/L	50.0		90.1	74-126	0.575	26	
Tetrachloroethylene	43.41	1.0	ug/L	50.0		86.8	68-124	4.28	28	
Dibromochloromethane	45.72	1.0	ug/L	49.5		92.4	76-125	3.12	23	
Chlorobenzene	42.25	1.0	ug/L	50.0		84.5	77-120	3.63	27	
Ethylbenzene	42.62	1.0	ug/L	50.0		85.2	76-118	4.25	27	
Xylenes, total	128.9	2.0	ug/L	150		86.0	74-121	3.51	27	
Bromoform	48.30	1.0	ug/L	50.0		96.6	68-128	1.50	25	
1,1,2,2-Tetrachloroethane	46.46	1.0	ug/L	49.8		93.2	62-128	1.18	28	
1,3-Dichlorobenzene	43.68	1.0	ug/L	50.0		87.4	72-123	3.60	29	
1,4-Dichlorobenzene	44.80	1.0	ug/L	50.0		89.6	75-120	3.38	26	
1,2-Dichlorobenzene	43.90	1.0	ug/L	50.0		87.8	72-121	2.14	30	
Surrogate: Dibromofluoromethane	*51.7*		ug/L	*50.2*		*103*	*79-129*			
Surrogate: 1,2-Dichloroethane-d4	*51.0*		ug/L	*50.1*		*102*	*66-134*			
Surrogate: Toluene-d8	*50.5*		ug/L	*50.4*		*100*	*91-113*			
Surrogate: 4-Bromofluorobenzene	*49.7*		ug/L	*50.1*		*99.0*	*83-112*			
Matrix Spike (1HC0850-MS1)	**Source: 1HC0342-01**		Prepared: 03/14/24 00:00 Analyzed: 03/14/24 17:10							
Chloromethane	354.2	10.0	ug/L	306	ND	116	50-155			
Vinyl Chloride	313.3	10.0	ug/L	302	ND	104	64-148			
Bromomethane	272.3	10.0	ug/L	288	ND	94.5	50-159			
Chloroethane	347.3	10.0	ug/L	316	ND	110	65-144			
1,1-Dichloroethylene	554.6	10.0	ug/L	500	ND	111	78-139			
Methylene Chloride	478.9	50.0	ug/L	500	ND	95.8	65-144			
trans-1,2-Dichloroethylene	508.0	10.0	ug/L	500	ND	102	67-142			
1,1-Dichloroethane	499.7	10.0	ug/L	500	ND	99.9	71-133			
cis-1,2-Dichloroethylene	516.3	10.0	ug/L	495	ND	104	76-142			
2-Butanone (MEK)	1073	100	ug/L	1030	ND	104	48-169			
Chloroform	495.3	10.0	ug/L	500	ND	99.1	75-133			
1,1,1-Trichloroethane	466.3	10.0	ug/L	500	ND	93.3	66-120			
Carbon Tetrachloride	501.3	10.0	ug/L	500	ND	100	67-132			
Benzene	490.5	10.0	ug/L	500	ND	98.1	79-128			
1,2-Dichloroethane	470.0	10.0	ug/L	500	ND	94.0	74-124			
Trichloroethylene	487.7	10.0	ug/L	500	ND	97.5	82-122			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0850 - EPA 5030B - EPA 624										
Matrix Spike (1HC0850-MS1)	**Source: 1HC0342-01**	Prepared: 03/14/24 00:00 Analyzed: 03/14/24 17:10								
1,2-Dichloropropane	493.2	10.0	ug/L	500	ND	98.6	80-126			
Dibromomethane	519.0	10.0	ug/L	500	ND	104	62-141			
Bromodichloromethane	468.9	10.0	ug/L	500	ND	93.8	77-119			
2-Chloroethylvinyl ether	<100	100	ug/L	1030	ND	2.26	10-157			QM-05
cis-1,3-Dichloropropene	470.8	10.0	ug/L	503	ND	93.6	69-120			
Toluene	488.6	10.0	ug/L	500	ND	97.7	80-125			
trans-1,3-Dichloropropene	463.5	10.0	ug/L	504	ND	91.9	70-122			
1,1,2-Trichloroethane	485.7	10.0	ug/L	500	ND	97.1	73-127			
Tetrachloroethylene	473.6	10.0	ug/L	500	ND	94.7	70-122			
Dibromochloromethane	477.0	10.0	ug/L	495	ND	96.4	75-122			
Chlorobenzene	458.1	10.0	ug/L	500	ND	91.6	81-114			
Ethylbenzene	467.2	10.0	ug/L	500	ND	93.4	79-113			
Xylenes, total	1407	20.0	ug/L	1500	ND	93.8	79-114			
Bromoform	491.7	10.0	ug/L	500	ND	98.3	66-126			
1,1,2,2-Tetrachloroethane	469.1	10.0	ug/L	498	ND	94.1	56-132			
1,3-Dichlorobenzene	458.9	10.0	ug/L	500	ND	91.8	69-125			
1,4-Dichlorobenzene	477.1	10.0	ug/L	500	ND	95.4	73-119			
1,2-Dichlorobenzene	468.4	10.0	ug/L	500	ND	93.7	71-117			
Surrogate: Dibromofluoromethane	*517*		ug/L	*502*		*103*	*79-129*			
Surrogate: 1,2-Dichloroethane-d4	*514*		ug/L	*501*		*103*	*66-134*			
Surrogate: Toluene-d8	*510*		ug/L	*504*		*101*	*91-113*			
Surrogate: 4-Bromofluorobenzene	*502*		ug/L	*501*		*100*	*83-112*			
Matrix Spike Dup (1HC0850-MSD1)	**Source: 1HC0342-01**	Prepared: 03/14/24 00:00 Analyzed: 03/14/24 17:36								
Chloromethane	324.4	10.0	ug/L	306	ND	106	50-155	8.78	19	
Vinyl Chloride	294.2	10.0	ug/L	302	ND	97.3	64-148	6.29	24	
Bromomethane	239.8	10.0	ug/L	288	ND	83.3	50-159	12.7	17	
Chloroethane	330.1	10.0	ug/L	316	ND	104	65-144	5.08	28	
1,1-Dichloroethylene	536.5	10.0	ug/L	500	ND	107	78-139	3.32	20	
Methylene Chloride	469.1	50.0	ug/L	500	ND	93.8	65-144	2.07	16	
trans-1,2-Dichloroethylene	489.5	10.0	ug/L	500	ND	97.9	67-142	3.71	18	
1,1-Dichloroethane	490.9	10.0	ug/L	500	ND	98.2	71-133	1.78	16	
cis-1,2-Dichloroethylene	475.6	10.0	ug/L	495	ND	96.1	76-142	8.21	17	
2-Butanone (MEK)	1074	100	ug/L	1030	ND	104	48-169	0.102	17	
Chloroform	485.9	10.0	ug/L	500	ND	97.2	75-133	1.92	16	
1,1,1-Trichloroethane	442.6	10.0	ug/L	500	ND	88.6	66-120	5.22	15	
Carbon Tetrachloride	485.6	10.0	ug/L	500	ND	97.1	67-132	3.18	15	
Benzene	472.2	10.0	ug/L	500	ND	94.4	79-128	3.80	12	
1,2-Dichloroethane	468.3	10.0	ug/L	500	ND	93.7	74-124	0.362	12	
Trichloroethylene	463.5	10.0	ug/L	500	ND	92.7	82-122	5.09	13	
1,2-Dichloropropane	478.4	10.0	ug/L	500	ND	95.7	80-126	3.05	10	
Dibromomethane	520.3	10.0	ug/L	500	ND	104	62-141	0.250	11	
Bromodichloromethane	460.7	10.0	ug/L	500	ND	92.1	77-119	1.76	10	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0850 - EPA 5030B - EPA 624										
Matrix Spike Dup (1HC0850-MSD1)	**Source: 1HC0342-01**		Prepared: 03/14/24 00:00 Analyzed: 03/14/24 17:36							
2-Chloroethylvinyl ether	<100	100	ug/L	1030	ND		10-157		30	QM-05
cis-1,3-Dichloropropene	465.6	10.0	ug/L	503	ND	92.5	69-120	1.11	10	
Toluene	473.5	10.0	ug/L	500	ND	94.7	80-125	3.14	12	
trans-1,3-Dichloropropene	467.6	10.0	ug/L	504	ND	92.7	70-122	0.881	10	
1,1,2-Trichloroethane	487.4	10.0	ug/L	500	ND	97.5	73-127	0.349	10	
Tetrachloroethylene	458.4	10.0	ug/L	500	ND	91.7	70-122	3.26	15	
Dibromochloromethane	478.4	10.0	ug/L	495	ND	96.6	75-122	0.293	12	
Chlorobenzene	448.9	10.0	ug/L	500	ND	89.8	81-114	2.03	12	
Ethylbenzene	453.8	10.0	ug/L	500	ND	90.8	79-113	2.91	13	
Xylenes, total	1363	20.0	ug/L	1500	ND	90.9	79-114	3.20	12	
Bromoform	496.2	10.0	ug/L	500	ND	99.2	66-126	0.911	16	
1,1,2,2-Tetrachloroethane	473.1	10.0	ug/L	498	ND	94.9	56-132	0.849	29	
1,3-Dichlorobenzene	452.1	10.0	ug/L	500	ND	90.4	69-125	1.49	18	
1,4-Dichlorobenzene	463.7	10.0	ug/L	500	ND	92.7	73-119	2.85	21	
1,2-Dichlorobenzene	462.2	10.0	ug/L	500	ND	92.4	71-117	1.33	23	
Surrogate: Dibromofluoromethane	*519*		ug/L	*502*		*103*	*79-129*			
Surrogate: 1,2-Dichloroethane-d4	*516*		ug/L	*501*		*103*	*66-134*			
Surrogate: Toluene-d8	*510*		ug/L	*504*		*101*	*91-113*			
Surrogate: 4-Bromofluorobenzene	*501*		ug/L	*501*		*99.9*	*83-112*			

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0558 - EPA 625 BNA - EPA 625										
Blank (1HC0558-BLK1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 15:12							
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							

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0558 - EPA 625 BNA - EPA 625										
Blank (1HC0558-BLK1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 15:12							
1,2,4-Trichlorobenzene	<10	10	ug/L							
Naphthalene	<10	10	ug/L							
Hexachlorobutadiene	<20	20	ug/L							
4-Chloro-3-methylphenol	<10	10	ug/L							
Hexachlorocyclopentadiene	<20	20	ug/L							
2,4,6-Trichlorophenol	<10	10	ug/L							
2,4,5-Trichlorophenol	<50	50	ug/L							
2-Chloronaphthalene	<10	10	ug/L							
Dimethylphthalate	<15	15	ug/L							
Acenaphthylene	<10	10	ug/L							
2,6-Dinitrotoluene	<10	10	ug/L							
Acenaphthene	<10	10	ug/L							
2,4-Dinitrophenol	<20	20	ug/L							
Dibenzofuran	<10	10	ug/L							
2,4-Dinitrotoluene	<10	10	ug/L							
4-Nitrophenol	<10	10	ug/L							
Diethyl Phthalate	<30	30	ug/L							
Fluorene	<10	10	ug/L							
4-Chlorophenyl Phenyl Ether	<10	10	ug/L							
4,6-Dinitro-2-methylphenol	<20	20	ug/L							
N-Nitrosodiphenylamine	<10	10	ug/L							
4-Bromophenyl Phenyl Ether	<10	10	ug/L							
Hexachlorobenzene	<10	10	ug/L							
Pentachlorophenol	<20	20	ug/L							
Phenanthrene	<10	10	ug/L							
Anthracene	<10	10	ug/L							
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							

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0558 - EPA 625 BNA - EPA 625										
Blank (1HC0558-BLK1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 15:12							
Surrogate: 2-Fluorophenol	*41.8*		ug/L	*61.6*		*67.8*	*19-139*			
Surrogate: Phenol-d6	*51.5*		ug/L	*63.5*		*81.2*	*14-154*			
Surrogate: Nitrobenzene-d5	*48.7*		ug/L	*62.6*		*77.7*	*17-146*			
Surrogate: 2-Fluorobiphenyl	*37.9*		ug/L	*60.0*		*63.1*	*18-122*			
Surrogate: 2,4,6-Tribromophenol	*36.4*		ug/L	*62.0*		*58.7*	*21-151*			
Surrogate: Terphenyl-dl4	*57.1*		ug/L	*60.0*		*95.0*	*27-131*			
LCS (1HC0558-BS1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 15:37							
Bis(2-Chloroethyl) Ether	19.5	10	ug/L	21.4		91.0	35-150			
2-Chlorophenol	16.2	10	ug/L	21.4		75.6	51-117			
1,3-Dichlorobenzene	11.6	10	ug/L	21.4		54.2	27-91.3			
1,4-Dichlorobenzene	11.7	10	ug/L	21.4		54.5	28-92.6			
Benzyl Alcohol	22.6	10	ug/L	21.4		105	22-147			
1,2-Dichlorobenzene	12.3	10	ug/L	21.4		57.7	32-94.8			
Bis[2-Chloroisopropyl]ether	15.9	10	ug/L	21.4		74.2	40-125			
n-Nitroso-di-n-propylamine	23.0	10	ug/L	21.4		107	47-136			
Hexachloroethane	10.5	10	ug/L	21.4		49.2	13-110			
Nitrobenzene	19.8	10	ug/L	21.4		92.6	46-133			
Isophorone	21.2	10	ug/L	21.4		99.0	48-130			
2-Nitrophenol	16.1	10	ug/L	21.4		75.3	54-116			
2,4-Dimethylphenol	17.4	10	ug/L	21.4		81.5	47-121			
Bis (2-Chloroethoxy) Methane	19.4	10	ug/L	21.4		90.7	25-110			
2,4-Dichlorophenol	16.7	10	ug/L	21.4		78.1	50-118			
1,2,4-Trichlorobenzene	11.7	10	ug/L	21.4		54.9	27-95.5			
Naphthalene	14.1	10	ug/L	21.4		65.8	42-107			
Hexachlorobutadiene	<20	20	ug/L	21.4		35.7	10-110			
4-Chloro-3-methylphenol	21.3	10	ug/L	21.4		99.4	54-138			
2,4,6-Trichlorophenol	15.9	10	ug/L	21.4		74.3	46-127			
2,4,5-Trichlorophenol	<50	50	ug/L	21.4		78.4	62-119			
2-Chloronaphthalene	14.7	10	ug/L	21.4		68.7	38-118			
Dimethylphthalate	18.0	15	ug/L	21.4		83.9	58-125			
Acenaphthylene	16.3	10	ug/L	21.4		76.1	41-116			
2,6-Dinitrotoluene	18.8	10	ug/L	21.4		87.8	58-126			
Acenaphthene	16.0	10	ug/L	21.4		75.0	45-117			
2,4-Dinitrophenol	<20	20	ug/L	21.4		64.8	21-138			
Dibenzofuran	16.7	10	ug/L	21.4		78.2	51-126			
2,4-Dinitrotoluene	19.0	10	ug/L	21.4		88.9	52-134			
4-Nitrophenol	15.6	10	ug/L	21.4		73.1	41-149			
Diethyl Phthalate	<30	30	ug/L	21.4		84.5	53-132			
Fluorene	17.6	10	ug/L	21.4		82.0	47-126			
4-Chlorophenyl Phenyl Ether	16.4	10	ug/L	21.4		76.6	47-124			
4,6-Dinitro-2-methylphenol	<20	20	ug/L	21.4		70.9	50-139			
N-Nitrosodiphenylamine	18.4	10	ug/L	21.4		86.2	29-129			

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0558 - EPA 625 BNA - EPA 625										
LCS (1HC0558-BS1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 15:37							
4-Bromophenyl Phenyl Ether	15.9	10	ug/L	21.4		74.4	48-125			
Hexachlorobenzene	14.2	10	ug/L	21.4		66.4	29-137			
Pentachlorophenol	<20	20	ug/L	21.4		62.7	15-154			
Phenanthrene	18.3	10	ug/L	21.4		85.7	45-136			
Anthracene	18.4	10	ug/L	21.4		85.8	43-135			
Di-n-butyl Phthalate	19.4	10	ug/L	21.4		90.7	42-153			
Fluoranthene	18.1	10	ug/L	21.4		84.6	42-143			
Pyrene	20.6	10	ug/L	21.4		96.1	40-146			
Butyl Benzyl Phthalate	21.5	10	ug/L	21.4		100	40-151			
Benzo(a)anthracene	18.7	10	ug/L	21.4		87.2	48-136			
Chrysene	18.9	10	ug/L	21.4		88.5	50-136			
Bis(2-Ethylhexyl) Phthalate	22.3	10	ug/L	21.4		104	34-180			
Di-n-octyl Phthalate	23.4	10	ug/L	21.4		109	40-165			
Indeno(1,2,3-cd)Pyrene	17.6	10	ug/L	21.4		82.4	39-152			
Benzo(b)Fluoranthene	19.3	10	ug/L	21.4		90.3	52-140			
Benzo(k)Fluoranthene	19.6	10	ug/L	21.4		91.6	47-147			
Benzo(a)Pyrene	19.0	10	ug/L	21.4		88.7	38-142			
Dibenzo(a,h)anthracene	17.3	10	ug/L	21.4		80.8	37-153			
Benzo(g,h,i)perylene	17.3	10	ug/L	21.4		81.0	39-157			
Surrogate: 2-Fluorophenol	*45.0*		ug/L	*61.6*		*72.9*	*19-139*			
Surrogate: Phenol-d6	*55.2*		ug/L	*63.5*		*87.0*	*14-154*			
Surrogate: Nitrobenzene-d5	*52.4*		ug/L	*62.6*		*83.6*	*17-146*			
Surrogate: 2-Fluorobiphenyl	*38.5*		ug/L	*60.0*		*64.1*	*18-122*			
Surrogate: 2,4,6-Tribromophenol	*40.3*		ug/L	*62.0*		*65.1*	*21-151*			
Surrogate: Terphenyl-dl4	*57.6*		ug/L	*60.0*		*96.0*	*27-131*			
LCS Dup (1HC0558-BSD1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 16:02							
Bis(2-Chloroethyl) Ether	18.9	10	ug/L	21.4		88.1	35-150	3.23	30	
2-Chlorophenol	16.1	10	ug/L	21.4		75.4	51-117	0.310	27	
1,3-Dichlorobenzene	11.3	10	ug/L	21.4		53.0	27-91.3	2.27	30	
1,4-Dichlorobenzene	11.7	10	ug/L	21.4		54.5	28-92.6	0.00	30	
Benzyl Alcohol	22.1	10	ug/L	21.4		103	22-147	2.11	30	
1,2-Dichlorobenzene	12.2	10	ug/L	21.4		56.8	32-94.8	1.47	30	
Bis[2-Chloroisopropyl]ether	15.8	10	ug/L	21.4		74.1	40-125	0.126	26	
n-Nitroso-di-n-propylamine	23.2	10	ug/L	21.4		108	47-136	0.736	29	
Hexachloroethane	11.2	10	ug/L	21.4		52.4	13-110	6.34	30	
Nitrobenzene	20.1	10	ug/L	21.4		94.0	46-133	1.55	19	
Isophorone	21.1	10	ug/L	21.4		98.7	48-130	0.284	23	
2-Nitrophenol	16.0	10	ug/L	21.4		74.8	54-116	0.685	25	
2,4-Dimethylphenol	17.4	10	ug/L	21.4		81.1	47-121	0.460	29	
Bis (2-Chloroethoxy) Methane	15.5	10	ug/L	21.4		72.3	25-110	22.5	30	
2,4-Dichlorophenol	16.1	10	ug/L	21.4		75.2	50-118	3.78	21	
1,2,4-Trichlorobenzene	11.7	10	ug/L	21.4		54.8	27-95.5	0.0852	30	

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0558 - EPA 625 BNA - EPA 625										
LCS Dup (1HC0558-BSD1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 16:02							
Naphthalene	14.2	10	ug/L	21.4		66.6	42-107	1.20	26	
Hexachlorobutadiene	<20	20	ug/L	21.4		36.5	10-110	2.33	30	
4-Chloro-3-methylphenol	20.5	10	ug/L	21.4		95.6	54-138	3.84	12	
2,4,6-Trichlorophenol	14.9	10	ug/L	21.4		69.8	46-127	6.16	21	
2,4,5-Trichlorophenol	<50	50	ug/L	21.4		77.8	62-119	0.718	15	
2-Chloronaphthalene	13.9	10	ug/L	21.4		65.0	38-118	5.45	24	
Dimethylphthalate	18.0	15	ug/L	21.4		84.1	58-125	0.278	20	
Acenaphthylene	15.2	10	ug/L	21.4		71.3	41-116	6.53	30	
2,6-Dinitrotoluene	18.3	10	ug/L	21.4		85.6	58-126	2.53	20	
Acenaphthene	15.3	10	ug/L	21.4		71.6	45-117	4.65	27	
2,4-Dinitrophenol	<20	20	ug/L	21.4		64.9	21-138	0.144	22	
Dibenzofuran	16.4	10	ug/L	21.4		76.5	51-126	2.24	15	
2,4-Dinitrotoluene	18.7	10	ug/L	21.4		87.3	52-134	1.75	22	
4-Nitrophenol	17.2	10	ug/L	21.4		80.3	41-149	9.33	28	
Diethyl Phthalate	<30	30	ug/L	21.4		83.5	53-132	1.17	22	
Fluorene	17.0	10	ug/L	21.4		79.7	47-126	2.89	27	
4-Chlorophenyl Phenyl Ether	15.8	10	ug/L	21.4		73.8	47-124	3.60	20	
4,6-Dinitro-2-methylphenol	<20	20	ug/L	21.4		73.8	50-139	3.94	25	
N-Nitrosodiphenylamine	15.4	10	ug/L	21.4		72.1	29-129	17.8	30	
4-Bromophenyl Phenyl Ether	16.1	10	ug/L	21.4		75.4	48-125	1.31	18	
Hexachlorobenzene	14.7	10	ug/L	21.4		68.5	29-137	3.12	30	
Pentachlorophenol	<20	20	ug/L	21.4		65.6	15-154	4.52	29	
Phenanthrene	18.9	10	ug/L	21.4		88.1	45-136	2.80	27	
Anthracene	18.8	10	ug/L	21.4		87.7	43-135	2.21	28	
Di-n-butyl Phthalate	20.3	10	ug/L	21.4		94.9	42-153	4.53	29	
Fluoranthene	19.0	10	ug/L	21.4		88.6	42-143	4.64	30	
Pyrene	20.2	10	ug/L	21.4		94.6	40-146	1.57	25	
Butyl Benzyl Phthalate	21.4	10	ug/L	21.4		100	40-151	0.419	29	
Benzo(a)anthracene	19.1	10	ug/L	21.4		89.3	48-136	2.38	30	
Chrysene	19.8	10	ug/L	21.4		92.6	50-136	4.54	30	
Bis(2-Ethylhexyl) Phthalate	20.4	10	ug/L	21.4		95.3	34-180	9.18	30	
Di-n-octyl Phthalate	23.8	10	ug/L	21.4		111	40-165	1.57	30	
Indeno(1,2,3-cd)Pyrene	19.4	10	ug/L	21.4		90.9	39-152	9.76	30	
Benzo(b)Fluoranthene	20.1	10	ug/L	21.4		94.0	52-140	3.96	30	
Benzo(k)Fluoranthene	21.2	10	ug/L	21.4		98.9	47-147	7.75	30	
Benzo(a)Pyrene	19.5	10	ug/L	21.4		91.0	38-142	2.50	30	
Dibenzo(a,h)anthracene	19.1	10	ug/L	21.4		89.2	37-153	9.90	30	
Benzo(g,h,i)perylene	19.3	10	ug/L	21.4		90.0	39-157	10.5	30	
Surrogate: 2-Fluorophenol	*44.2*		ug/L	*61.6*		*71.7*	*19-139*			
Surrogate: Phenol-d6	*52.0*		ug/L	*63.5*		*81.8*	*14-154*			
Surrogate: Nitrobenzene-d5	*50.9*		ug/L	*62.6*		*81.3*	*17-146*			
Surrogate: 2-Fluorobiphenyl	*36.2*		ug/L	*60.0*		*60.3*	*18-122*			

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0558 - EPA 625 BNA - EPA 625										
LCS Dup (1HC0558-BSD1)			Prepared: 03/11/24 11:17 Analyzed: 03/19/24 16:02							
Surrogate: 2,4,6-Tribromophenol	*38.0*		ug/L	*62.0*		*61.4*	*21-151*			
Surrogate: Terphenyl-dl4	*56.5*		ug/L	*60.0*		*94.1*	*27-131*			

Determination of Organochlorine Insecticides & PCBs	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0564 - 3520C NP/OC Cont Liq - EPA 608										
Blank (1HC0564-BLK1)			Prepared: 03/11/24 12:18 Analyzed: 03/20/24 13:10							
Gamma-BHC [Lindane]	<0.05	0.05	ug/L							
Beta-BHC	<0.05	0.05	ug/L							
Heptachlor	<0.05	0.05	ug/L							
Delta-BHC	<0.05	0.05	ug/L							
Aldrin	<0.05	0.05	ug/L							
Heptachlor Epoxide	<0.05	0.05	ug/L							
Endosulfan I	<0.05	0.05	ug/L							
4,4`-DDE	<0.05	0.05	ug/L							
Dieldrin	<0.05	0.05	ug/L							
Endrin	<0.05	0.05	ug/L							
4,4`-DDD	<0.05	0.05	ug/L							
Endosulfan II	<0.05	0.05	ug/L							
4,4`-DDT	<0.05	0.05	ug/L							
Endrin Aldehyde	<0.05	0.05	ug/L							
Endosulfan Sulfate	<0.05	0.05	ug/L							
Chlordane	<0.10	0.10	ug/L							
Toxaphene	<0.20	0.20	ug/L							
Arochlor 1016	<0.20	0.20	ug/L							
Arochlor 1221	<0.20	0.20	ug/L							
Arochlor 1232	<0.20	0.20	ug/L							
Arochlor 1242	<0.20	0.20	ug/L							
Arochlor 1248	<0.20	0.20	ug/L							
Arochlor 1254	<0.20	0.20	ug/L							
Arochlor 1260	<0.20	0.20	ug/L							
Surrogate: Tetrachloro-m-xylene	*0.677*		ug/L	*0.600*		*113*	*30-119*			
Surrogate: Decachlorobiphenyl	*0.118*		ug/L	*0.600*		*19.7*	*19-120*			
LCS (1HC0564-BS1)			Prepared: 03/11/24 12:18 Analyzed: 03/20/24 13:25							
Gamma-BHC [Lindane]	0.157	0.05	ug/L	0.250		62.6	37-127			
Beta-BHC	0.181	0.05	ug/L	0.250		72.4	36-131			
Heptachlor	0.202	0.05	ug/L	0.250		80.7	36-128			
Delta-BHC	0.175	0.05	ug/L	0.250		69.8	29-147			

Determination of Organochlorine Insecticides & PCBs	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0564 - 3520C NP/OC Cont Liq - EPA 608										
LCS (1HC0564-BS1)			Prepared: 03/11/24 12:18 Analyzed: 03/20/24 13:25							
Aldrin	0.153	0.05	ug/L	0.250		61.0	41-120			
Heptachlor Epoxide	0.162	0.05	ug/L	0.250		64.6	50-132			
Endosulfan I	0.168	0.05	ug/L	0.250		67.2	50-133			
4,4`-DDE	0.142	0.05	ug/L	0.250		56.8	46-140			
Dieldrin	0.156	0.05	ug/L	0.250		62.5	41-138			
Endrin	0.198	0.05	ug/L	0.250		79.0	32-152			
4,4`-DDD	0.162	0.05	ug/L	0.250		64.9	44-150			
Endosulfan II	0.167	0.05	ug/L	0.250		66.6	45-141			
4,4`-DDT	0.191	0.05	ug/L	0.250		76.5	46-145			
Endrin Aldehyde	0.147	0.05	ug/L	0.250		58.7	33-145			
Endosulfan Sulfate	0.160	0.05	ug/L	0.250		64.0	52-133			
Surrogate: Tetrachloro-m-xylene	*0.347*		ug/L	*0.600*		*57.8*	*30-119*			
Surrogate: Decachlorobiphenyl	*ND*		ug/L	*0.600*			*19-120*			*S-GC*
LCS Dup (1HC0564-BSD1)			Prepared: 03/11/24 12:18 Analyzed: 03/20/24 13:39							
Gamma-BHC [Lindane]	0.251	0.05	ug/L	0.250		100	37-127	46.4	30	QR-02
Beta-BHC	0.278	0.05	ug/L	0.250		111	36-131	42.2	30	QR-02
Heptachlor	0.307	0.05	ug/L	0.250		123	36-128	41.5	30	QR-02
Delta-BHC	0.285	0.05	ug/L	0.250		114	29-147	48.1	30	QR-02
Aldrin	0.249	0.05	ug/L	0.250		99.8	41-120	48.2	30	QR-02
Heptachlor Epoxide	0.267	0.05	ug/L	0.250		107	50-132	49.3	30	QR-02
Endosulfan I	0.283	0.05	ug/L	0.250		113	50-133	50.9	30	QR-02
4,4`-DDE	0.247	0.05	ug/L	0.250		98.9	46-140	54.1	30	QR-02
Dieldrin	0.259	0.05	ug/L	0.250		104	41-138	49.6	30	QR-02
Endrin	0.327	0.05	ug/L	0.250		131	32-152	49.3	30	QR-02
4,4`-DDD	0.274	0.05	ug/L	0.250		110	44-150	51.3	30	QR-02
Endosulfan II	0.280	0.05	ug/L	0.250		112	45-141	50.7	30	QR-02
4,4`-DDT	0.324	0.05	ug/L	0.250		130	46-145	51.7	30	QR-02
Endrin Aldehyde	0.267	0.05	ug/L	0.250		107	33-145	58.2	30	QR-02
Endosulfan Sulfate	0.266	0.05	ug/L	0.250		106	52-133	49.7	30	QR-02
Surrogate: Decachlorobiphenyl	*ND*		ug/L	*0.600*			*19-120*			*S-GC*
Surrogate: Tetrachloro-m-xylene	*0.539*		ug/L	*0.600*		*89.8*	*30-119*			

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0350 - General Prep Micro - SM 5210 B										
Blank (1HC0350-BLK1)			Prepared & Analyzed: 03/07/24 08:29							
BOD (5 day)	<2	2	mg/L							B-06
Duplicate (1HC0350-DUP1)	**Source: 1HC0348-01**		Prepared & Analyzed: 03/07/24 09:27							

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0350 - General Prep Micro - SM 5210 B										
Duplicate (1HC0350-DUP1)		**Source: 1HC0348-01**	Prepared & Analyzed: 03/07/24 09:27							
BOD (5 day)	77.4	24	mg/L		130			50.6	29	QR-04
Reference (1HC0350-SRM1)			Prepared & Analyzed: 03/07/24 08:35							
BOD (5 day)	183	100	mg/L	198		92.6	84.6-115.4			
Batch 1HC0452 - Wet Chem Preparation - USGS I-1750-85										
Blank (1HC0452-BLK1)			Prepared: 03/08/24 08:21 Analyzed: 03/11/24 20:40							
Total Dissolved Solids (TDS)	<5	5	mg/L							
LCS (1HC0452-BS1)			Prepared: 03/08/24 08:21 Analyzed: 03/11/24 20:40							
Total Dissolved Solids (TDS)	99	5	mg/L	100		99.0	71-114			
Duplicate (1HC0452-DUP1)		**Source: 1HC0411-01**	Prepared: 03/08/24 08:21 Analyzed: 03/11/24 20:40							
Total Dissolved Solids (TDS)	1830	5	mg/L		1920			5.23	30	
Batch 1HC0454 - Wet Chem Preparation - SM 4500 H+ B										
Duplicate (1HC0454-DUP1)		**Source: 1HC0455-02**	Prepared: 03/08/24 08:31 Analyzed: 03/08/24 09:16							
pH	8.2	0.5	pH		8.2			0.0367	10	
Reference (1HC0454-SRM1)			Prepared: 03/08/24 08:31 Analyzed: 03/08/24 09:16							
pH	7.0	0.5	pH	7.00		101	90-110			
Reference (1HC0454-SRM2)			Prepared: 03/08/24 08:31 Analyzed: 03/08/24 09:16							
pH	7.0	0.5	pH	7.00		100	90-110			
Batch 1HC0622 - Wet Chem Preparation - USGS I-3765-85										
Blank (1HC0622-BLK1)			Prepared: 03/12/24 09:15 Analyzed: 03/12/24 14:40							
Total Suspended Solids (TSS)	<1	1	mg/L							
LCS (1HC0622-BS1)			Prepared: 03/12/24 09:15 Analyzed: 03/12/24 14:40							
Total Suspended Solids (TSS)	13.7	1	mg/L	15.0		91.3	74-114			
Duplicate (1HC0622-DUP1)		**Source: 1HC0369-01**	Prepared: 03/12/24 09:15 Analyzed: 03/12/24 14:40							
Total Suspended Solids (TSS)	165	1	mg/L		152			8.20	30	
Batch 1HC0989 - General Prep HPLC/IC - TIMBERLINE										
Blank (1HC0989-BLK1)			Prepared: 03/19/24 08:57 Analyzed: 03/19/24 12:52							
Nitrogen, Ammonia	<0.10	0.10	mg/L							
LCS (1HC0989-BS1)			Prepared: 03/19/24 08:57 Analyzed: 03/19/24 12:55							
Nitrogen, Ammonia	4.94	0.10	mg/L	5.00		98.8	90-114			
Matrix Spike (1HC0989-MS1)		**Source: 1HC0385-01**	Prepared: 03/19/24 08:57 Analyzed: 03/19/24 12:56							
Nitrogen, Ammonia	5.52	0.10	mg/L	5.00	ND	110	84-115			
Matrix Spike Dup (1HC0989-MSD1)		**Source: 1HC0385-01**	Prepared: 03/19/24 08:57 Analyzed: 03/19/24 12:58							
Nitrogen, Ammonia	5.69	0.10	mg/L	5.00	ND	114	84-115	3.05	20	

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1092 - TOC/DOC - 5310B										
Blank (1HC1092-BLK1)			Prepared: 03/21/24 00:00 Analyzed: 03/21/24 16:06							
Total Organic Carbon	<0.50	0.50	mg/L							
LCS (1HC1092-BS1)			Prepared: 03/21/24 00:00 Analyzed: 03/21/24 15:27							
Total Organic Carbon	5.01	0.50	mg/L	5.00		100	86-120			
LCS Dup (1HC1092-BSD1)			Prepared: 03/21/24 00:00 Analyzed: 03/21/24 15:48							
Total Organic Carbon	5.49	0.50	mg/L	5.00		110	86-120	9.10	10	
Matrix Spike (1HC1092-MS1)	**Source: 1HC0624-01**		Prepared: 03/21/24 00:00 Analyzed: 03/21/24 22:14							
Total Organic Carbon	13.44	0.50	mg/L	5.00	8.58	97.1	81-128			
Matrix Spike Dup (1HC1092-MSD1)	**Source: 1HC0624-01**		Prepared: 03/21/24 00:00 Analyzed: 03/21/24 22:33							
Total Organic Carbon	13.76	0.50	mg/L	5.00	8.58	104	81-128	2.35	10	

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0320 - EPA 200.2 Total ICP-MS - EPA 200.8										
Blank (1HC0320-BLK1)			Prepared: 03/06/24 16:28 Analyzed: 03/07/24 23:12							
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 (1HC0320-BS1)			Prepared: 03/06/24 16:28 Analyzed: 03/07/24 23:19							
Arsenic, total	0.0888	0.0020	mg/L	0.100		88.8	85-115			
Barium, total	0.104	0.0020	mg/L	0.100		104	85-115			
Cadmium, total	0.0896	0.0002	mg/L	0.100		89.6	85-115			
Chromium, total	0.0931	0.0020	mg/L	0.100		93.1	85-115			
Copper, total	0.0928	0.0020	mg/L	0.100		92.8	85-115			
Lead, total	0.0964	0.0008	mg/L	0.100		96.4	85-115			
Nickel, total	0.0911	0.0040	mg/L	0.100		91.1	85-115			
Selenium, total	0.0891	0.0040	mg/L	0.100		89.1	85-115			
Silver, total	0.0983	0.0020	mg/L	0.100		98.3	85-115			
Zinc, total	0.0942	0.0200	mg/L	0.100		94.2	85-115			
Matrix Spike (1HC0320-MS1)	**Source: 1HC0236-01**		Prepared: 03/06/24 16:28 Analyzed: 03/07/24 23:31							
Arsenic, total	0.0921	0.0020	mg/L	0.100	0.0013	90.9	70-130			
Barium, total	0.141	0.0020	mg/L	0.100	0.0358	105	70-130			
Cadmium, total	0.0880	0.0002	mg/L	0.100	ND	88.0	70-130			
Chromium, total	0.0988	0.0020	mg/L	0.100	0.0045	94.3	70-130			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC0320 - EPA 200.2 Total ICP-MS - EPA 200.8										
Matrix Spike (1HC0320-MS1)	**Source: 1HC0236-01**	Prepared: 03/06/24 16:28 Analyzed: 03/07/24 23:31								
Copper, total	0.175	0.0020	mg/L	0.100	0.0841	90.6	70-130			
Lead, total	0.0952	0.0008	mg/L	0.100	0.0033	91.9	70-130			
Nickel, total	0.0918	0.0040	mg/L	0.100	0.0029	88.9	70-130			
Selenium, total	0.0933	0.0040	mg/L	0.100	0.0013	92.1	70-130			
Silver, total	0.0966	0.0020	mg/L	0.100	ND	96.6	70-130			
Zinc, total	0.127	0.0200	mg/L	0.100	0.0360	91.3	70-130			
Matrix Spike Dup (1HC0320-MSD1)	**Source: 1HC0236-01**	Prepared: 03/06/24 16:28 Analyzed: 03/08/24 11:19								
Arsenic, total	0.116	0.0020	mg/L	0.100	0.0013	115	70-130	22.9	20	QR-02
Barium, total	0.172	0.0020	mg/L	0.100	0.0358	136	70-130	19.7	20	QM-07
Cadmium, total	0.113	0.0002	mg/L	0.100	ND	113	70-130	25.0	20	QR-02
Chromium, total	0.121	0.0020	mg/L	0.100	0.0045	116	70-130	20.0	20	
Copper, total	0.217	0.0020	mg/L	0.100	0.0841	133	70-130	21.4	20	QM-07
Lead, total	0.118	0.0008	mg/L	0.100	0.0033	114	70-130	21.1	20	QR-02
Nickel, total	0.118	0.0040	mg/L	0.100	0.0029	115	70-130	25.2	20	QR-02
Selenium, total	0.113	0.0040	mg/L	0.100	0.0013	111	70-130	18.8	20	
Silver, total	0.118	0.0020	mg/L	0.100	ND	118	70-130	19.8	20	
Zinc, total	0.155	0.0200	mg/L	0.100	0.0360	119	70-130	19.9	20	
Post Spike (1HC0320-PS1)	**Source: 1HC0236-01**	Prepared: 03/06/24 16:28 Analyzed: 03/07/24 23:55								
Arsenic, total	0.0782		mg/L	0.0800	0.0012	96.2	70-130			
Barium, total	0.120		mg/L	0.0800	0.0351	106	70-130			
Cadmium, total	0.0740		mg/L	0.0800	0.00002	92.5	70-130			
Chromium, total	0.0812		mg/L	0.0800	0.0044	96.0	70-130			
Copper, total	0.159		mg/L	0.0800	0.0825	96.1	70-130			
Lead, total	0.0817		mg/L	0.0800	0.0033	98.0	70-130			
Nickel, total	0.0792		mg/L	0.0800	0.0028	95.4	70-130			
Selenium, total	0.0752		mg/L	0.0800	0.0012	92.4	70-130			
Silver, total	0.0819		mg/L	0.0800	0.0002	102	70-130			
Zinc, total	0.111		mg/L	0.0800	0.0353	94.5	70-130			
Batch 1HC0399 - EPA 200.2 Total ICP-OES (200.7) - 200.7										
Blank (1HC0399-BLK1)		Prepared: 03/07/24 15:20 Analyzed: 03/08/24 22:01								
Iron, total	<0.100	0.100	mg/L							
LCS (1HC0399-BS1)		Prepared: 03/07/24 15:20 Analyzed: 03/08/24 22:07								
Iron, total	2.22	0.100	mg/L	2.20		101	85-115			
Matrix Spike (1HC0399-MS1)	**Source: 1HC0364-01**	Prepared: 03/07/24 15:20 Analyzed: 03/08/24 22:18								
Iron, total	2.63	0.100	mg/L	2.20	0.403	101	70-130			
Matrix Spike Dup (1HC0399-MSD1)	**Source: 1HC0364-01**	Prepared: 03/07/24 15:20 Analyzed: 03/08/24 22:24								
Iron, total	2.46	0.100	mg/L	2.20	0.403	93.7	70-130	6.40	20	
Post Spike (1HC0399-PS1)	**Source: 1HC0364-01**	Prepared: 03/07/24 15:20 Analyzed: 03/08/24 22:32								
Iron, total	9.32		mg/L	8.80	0.403	101	85-115			

Batch 1HC0593 - EPA 7470A Hg Water - 245.1

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (1HC0593-BLK1)			Prepared: 03/11/24 15:33 Analyzed: 03/12/24 15:34							
Mercury, total	<0.00050	0.00050	mg/L							
LCS (1HC0593-BS1)			Prepared: 03/11/24 15:33 Analyzed: 03/12/24 15:36							
Mercury, total	0.00268	0.00050	mg/L	0.00250		107	85-115			
Matrix Spike (1HC0593-MS1)	**Source: 1HC0190-02**		Prepared: 03/11/24 15:33 Analyzed: 03/12/24 15:41							
Mercury, total	0.00254	0.00050	mg/L	0.00250	ND	102	70-130			
Matrix Spike Dup (1HC0593-MSD1)	**Source: 1HC0190-02**		Prepared: 03/11/24 15:33 Analyzed: 03/12/24 15:43							
Mercury, total	0.00257	0.00050	mg/L	0.00250	ND	103	70-130	1.17	10	

Definitions

B-06:	Unseeded Blank equals .3mg/L
I-03:	Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.
P-02:	Sample was incorrectly preserved for this analysis.
QM-05:	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-07:	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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.
QR-04:	The Duplicate RPD for this analyte exceeded acceptance limits.
RL:	Reporting Limit
RPD:	Relative Percent Difference
S-GC:	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

Cooler Receipt Log

Cooler ID: Default Cooler   Temp: 4.4°C

Cooler Inspection Checklist

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

Report Comments

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

Reviewed and Approved By:

Heather Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
03/25/24 16:19

Keystone LABORATORIES
A Microbac Company
600 East 17th Street South
Newton, IA 50208
641-792-8451
www.keystonelabs.com

1 H C 0 3 7 8
HLW Engineering
PM: Heather Murphy

SITE INFORMATION

Sampler: JGH

Project: Tama Co. Landfill - Leachate
Leachate

REPORT TO

Todd Whipple
HLW Engineering
PO Box 314
Story City, IA 50248

INVOICE TO

Dave Sherwood
Tama County Landfill Commission
PO Box 31
Toledo, IA 52342

SPECIAL INSTRUCTIONS

None

Turn Around Time
[X] Standard [ ] RUSH, need by ___/___/___

LAB USE ONLY

Work Order: 1HC0378
Temperature: 4.4
Turn-Cooler: No

[ ] Custody Seal
[ ] Containers Intact
[ ] COC/Labels Agree
[ ] Preservation Confirmed
[X] Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	Leachate/Lagoon	Water	GRAB	3/5/24	14:20	12	608-107, 624@dibromochloromethane, 624-105, 625-116, ag-t-200.8, as-t-200.8, ba-t-200.8, bod-5210, cd-t-200.8, cr-t-200.8, cu-t-200.8, fe-t-200.7, hg-t-245.1, nh3-timberline, ni-t-200.8, pb-t-200.8, ph-4500, se-t-200.8, tds-i-1750-85, toc-5310b, tss-i-3765-85, zn-t-200.8	01

Relinquished By: J. C[illegible] Date/Time: 3/6/24

Relinquished By: ___ Date/Time: ___

Received By: ___ Date/Time: ___

Received for Lab By: Mahu Date/Time: 3/6/24 10:16

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Appendix G.4 – Leachate Recirculation Volumes

Leachate Recirculation - Surface Application
Tama County Sanitary Landfill
2024

JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER			
Date	Gallons	Date	Gallons	Date	Gallons	Date	Gallons	Date	Gallons		
6/17/2024	16,800	7/23/2024	21,000	8/6/2024	12,600	9/6/2024	12,600	10/1/2024	4,200		
6/18/2024	21,000			8/7/2024	18,900	9/11/2024	4,200	10/3/2024	21,000		
				8/8/2024	14,700			10/4/2024	18,900		
				8/16/2024	8,400			10/8/2024	4,200		
				8/17/2024	8,400			10/9/2024	4,200		
				8/19/2024	10,500			10/14/2024	4,200		
								10/17/2024	4,200		
								10/21/2024	8,400		
								10/23/2024	8,400		
TOTAL	37,800		21,000		73,500		16,800		77,700	**226,800**	**Gallons**

Appendix H

Gas Monitoring Report

Appendix H.1- Gas Monitoring Location Map

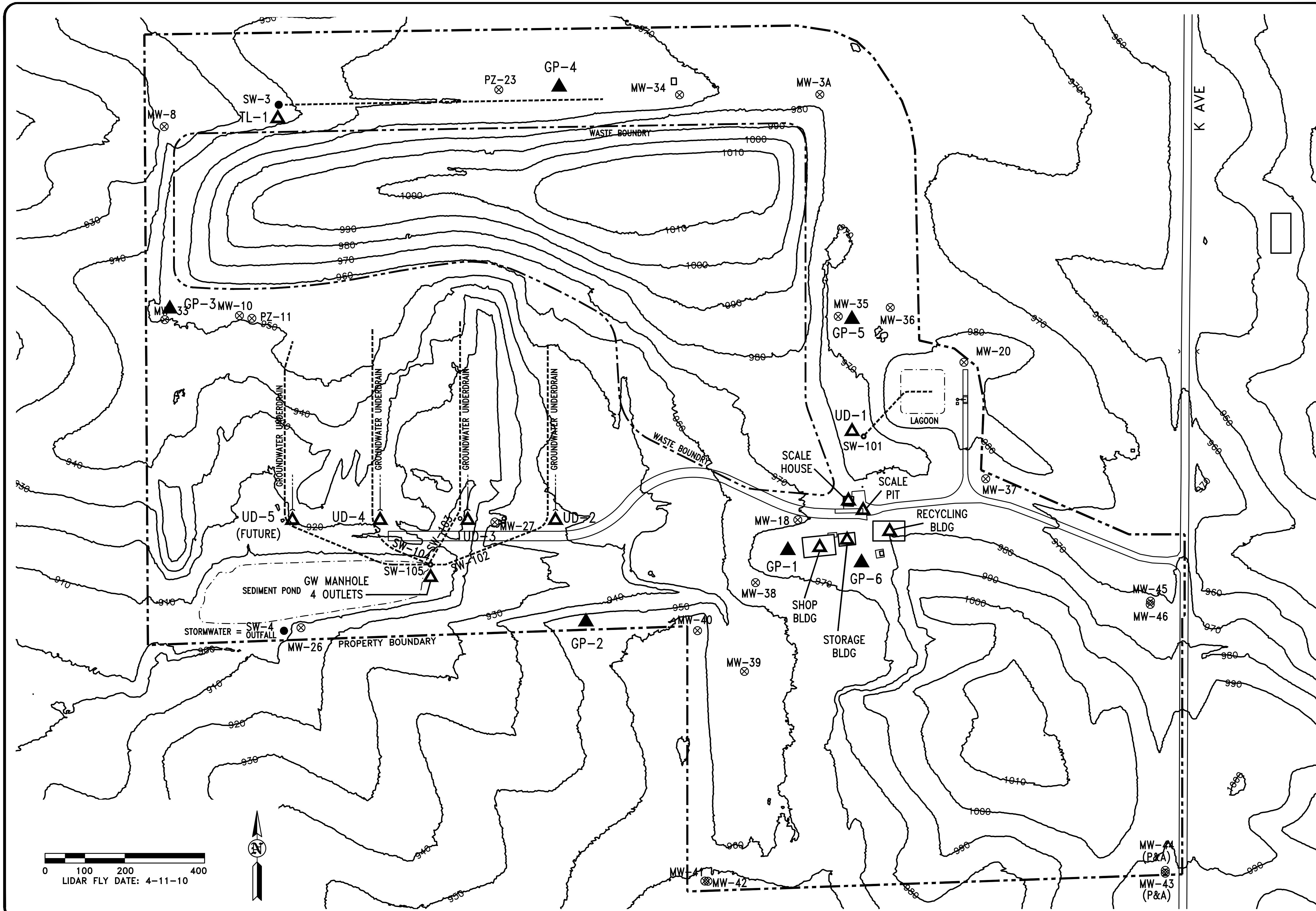


FIGURE: 4

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6000	DATE 11-28-23

GAS MONITORING POINTS

TAMA COUNTY SANITARY LANDFILL
TOLEDO, IOWA

HLW Engineering Group
204 West Broad Street, P.O. Box 314
Story City, Iowa 50248
Phone: (515) 733-4144
FAX: (515) 733-4146

HLW Engineering Group