

2025 ANNUAL GROUNDWATER QUALITY REPORT

FOR THE NORTH CENTRAL IOWA REGIONAL SOLID WASTE AGENCY (NCIRSWA) SANITARY LANDFILL 94-SDP-1-75P FORT DODGE, IOWA

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

February, 2026



6030-25A.320

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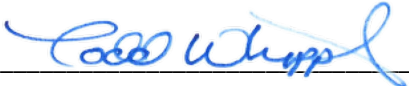
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Certification

Prepared by: 

Date: 2-2-2026

Typed: 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 tables to meet the IDNR format requirements included in Special Provision X.4. of the Permit, dated December 31, 2025 (Doc #115417).

1.2 Report Priority

Low priority is assigned to review of this document. The thirteen (13) rounds of background data required for intrawell statistical evaluations are complete at monitoring wells MW-10A, MW-10B, MW-18, MW-20, MW-21R, and MW-22. The comprehensive background is not yet complete at MW-25, MW-28, MW-29 (new in 2025), MW-30, MW-31 (new in 2024), MW-32 (new in 2024), GU-2 (frequently dry), GU-3 (frequently dry), GU-4 (new in 2024), GU-5 (new in 2024), and GU-6 (new in 2024).

Continued semi-annual monitoring activities are recommended in accordance with IAC 567, Chapter 113.10(5), 113.10(6), and 113.10(9).

1.3 Period of Report Coverage

Water quality data evaluation is based on a running compilation of data beginning in October 28, 2014. Water quality reported herein is based on the most recent water quality data collected April 8, 2025 and October 23, 2025.

1.4 Current Site Map

Figure 1 and Figure 2 are attached illustrating the current site features and monitoring well locations.

1.5 Site Status and Applicable Rules

Site Location

The NCIRSWA Sanitary Landfill is located in E1/2 of the NE1/4 Section 1, T88N, R29W and the NW1/4 Section 6, T88N, R28W in Webster County, Iowa. The facility is situated on Gypsum Hollow Road approximately 1 mile south of the corporate limits of Fort Dodge, Iowa. The facility operates under the Iowa Department of Natural Resources (IDNR) Permit Number 94-SDP-1-75P.

Landfill Layout

The site is situated in the uplands between the Des Moines River to the west-southwest and Gypsum Creek to the east. An inactive strip mine is situated north of the fill areas at this site.

The site has been mined for gypsum historically by both strip mining and underground room and pillar methods. Localized strip mining has also been performed in recent years in order to remove pillars that remain following historic mining.

The site has been landfilled since 1974 and is a long-term multiphase development. Generally, landfilling was initiated along the west side of the site and sequential developments progressed eastward across the site and are now progressing to the north.

Applicable Rules

Iowa Administrative Code (IAC) 567-113 is applicable to the site due to the contiguous nature of the closed and operating landfill areas.

1.6 Summary of Hydrologic Monitoring System Plan (HMSP)

There are three (3) geologic units described across this facility. Pleistocene glacial till soils lie unconformably over the Jurassic age Fort Dodge Formation (the bedrock deposits that include the gypsum). The Fort Dodge formation unconformably overlies the Pennsylvanian Bedrock (shales and coal). Historically, coal and gypsum were mined in the Fort Dodge area. However, at this site, there is only known record of gypsum mining and the underlying Pennsylvanian shales and coal are believed to be undisturbed.

There are two (2) monitored geologic units at this facility. The first unit includes all soils (glacial tills) and spoils (both glacial tills and Fort Dodge Formation materials) on top of Pennsylvanian formations, and the second unit is the basal Pennsylvanian shales across the site.

The HMSP is as approved in Special Provision X.4. of the Permit, dated December 31, 2025 (Doc #115417). The approved HMSP includes twelve (12) monitoring wells and five (5) groundwater underdrain line discharges. MW-30, GU-2, and GU-3 were constructed in 2019 and all are associated with the Phase 2 Expansion. MW-31, MW-32, GU-4, GU-5, and GU-6 were constructed in 2024 and all are associated with the Phase 3 Expansion. The approved statistical plan for the facility includes an intrawell statistical approach based on the prevalence of naturally occurring metals within the shale bedrock formations monitored along the east side of the site. The approved monitoring network is illustrated on Figure 2. The current HMSP is summarized in Table 1. The HMSP Implementation Schedule for 2026 is itemized in Table 2.

MONITORING WELL MAINTENANCE PERFORMANCE REEVALUATION

Table 3 outlines the status of well performance and maintenance activities performed as required by IAC 567-113.10(2) f.

MW-18

Monitoring well MW-18 was discovered to be damaged by heavy equipment in October, 2025 and could not be sampled. The well head and protective cover at MW-18 required repair in 2026.

High & Low Water Levels

Current year water elevation data is included on Table 4. Historic water elevation data is included in Table 4A. A Groundwater Contour Map - Shallow (Figure 3) and a Groundwater Contour Map - Deep (Figure 4) dated October, 2025 are included with this report. The Groundwater Contour Maps illustrate the water table surface within the unconsolidated and the potentiometric surface in the bedrock.

Well Depth & Sedimentation

Well depth measurements were made on October 23, 2025. Review of the well depth data included on Table 4 indicate that well sedimentation is estimated to be less than one (1) foot at all site HMSP monitoring wells.

Well Recharge Rates & Chemistry

The measured horizontal hydraulic conductivity testing results for each site monitoring well is included on Table 4. The horizontal hydraulic conductivities ranged between 10^{-3} cm/sec and 10^{-6} cm/sec.

Field recovery data recorded for April 19, 2022 indicated that the monitoring wells recover to at least 90% recovery within 4 to 12 hours after purging. The exception was at MW-21R, and MW-22, where approximately 24 hours are required for the wells to recover. Field recovery data recorded for April 23, 2024 (Table 4) confirmed the 2022 findings. Well recovery information indicates that recharge to the individual wells remains 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 site monitoring wells are recommended.

Section 2.0 Reporting Period Monitoring Activities

Table 2 includes information related to the Monitoring Activities at this facility. A comprehensive summary of all well testing beginning October 8, 2008 is included in the Table 2A. A summary of the Appendix II sample collection events at each well is included on Table 2.

Field sampling information for April 8, 2025; October 23, 2025; and January 14, 2026 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 October 28, 2014 and October 23, 2025 is included on Table 9.

2.1 Current Detection Monitoring Activities

The HMSP includes twelve (12) monitoring wells and five (5) groundwater underdrain line discharges. The Statistical Plan requires intrawell statistical evaluations, as the site does not lend itself to interwell statistical evaluations. Monitoring points included in the HMSP are: MW-10A, MW-10B, MW-18, MW-20, MW-21R, MW-22, MW-25, MW-28, MW-29, MW-30, MW-31, MW-32, GU-2, GU-3, GU-4, GU-5, and GU-6.

Monitoring wells currently designated as detection system monitoring wells includes: MW-10A, MW-10B, MW-18, MW-20, MW-22, MW-25, MW-28, MW-29, MW-30, MW-31, MW-32, GU-2, GU-3, GU-4, GU-5, and GU-6.

2.2 Current Assessment Monitoring Activities

MW-21R has historically recorded statistically significant increases (SSI). The Permit December 31, 2025 (Doc #115417) approves the five (5) year sampling frequency for full Appendix II analyses at monitoring points that are in assessment monitoring and have had at least two (2) rounds of analyses using the entire Appendix II list. Table 2 confirms the Appendix II sample collection event dates, along with the next scheduled Appendix II sample collection event(s).

2.3 Current Correction Action Monitoring Activities

Not applicable at this time.

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 North Central Iowa Regional Landfill, First Semi-Annual Monitoring Event in 2025, dated July, 2025 is included in Appendix B.1. The Groundwater Statistics Report for the North Central Iowa Regional Landfill, Second Semi-Annual Monitoring Event in 2025, dated November, 2025 is included in Appendix B.2. Time Series plots are included in Appendix B.3 for those wells where background is still insufficient for evaluation.

The Analytical Reports for the laboratory testing on April 8, 2025; October 23, 2025; and January 14, 2026 are included in Appendix C.

QUALITY ASSURANCE/QUALITY CONTROL

A blind duplicate sample was collected at MW-32 during the April 8, 2025 sampling episode. A blind duplicate sample was collected at MW-31 during the October 23, 2025 sampling episode.

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

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

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

The results of the blind duplicate and the monitoring well for April 8, 2025 and October 23, 2025 were within the limits established and indicate that the data quality is acceptable without restriction.

BACKGROUND DATA VALIDATION

On July 10, 2014 an unnumbered Permit Amendment and Memo was issued by the IDNR regarding turbidity (Doc # 80749). A TSS and Field Turbidity Evaluation Report was prepared and submitted on February 27, 2015 (Doc# 82593) and was approved by IDNR on September 9, 2015 (Doc #84187).

The background data utilized herein has been restricted to include only sample results that have been collected by “No Purge” methods in order to avoid turbidity related issues that may have been associated with historic sample collection methods. A summary of the recorded field turbidity measurements is included in Appendix D.

The control limits for VOC are equivalent to the laboratory reporting limits and are established in the background data for each well. Background data required for calculation of control limits for inorganic compounds based on thirteen points is currently complete for MW-10A, MW-10B, MW-18, MW-20, and MW-22. For compounds detected at a rate greater than 25% of the time, normal control limits for intrawell statistics can be calculated based on a minimum of eight data points. For compounds detected at a rate less than 25% of the time, nonparametric control limits for intrawell statistics require a minimum of thirteen (13) data points.

The information included in Table 5 indicates that the normally distributed and nonparametric data results in calculation of Control Limits for most compounds at most wells. Time Series plots are included in Appendix B.3 for those wells where background is still insufficient for evaluation.

SITE SPECIFIC GROUNDWATER PROTECTION STANDARDS (GWPS)

As discussed in the HMSP dated June 14, 2018 (Doc #92593), the normal background concentrations of cobalt are recognized as being naturally elevated above the Statewide Standard

for Protected Groundwater in IAC 567, Chapter 137. Additional metals are also recognized as being elevated.

In instances where the natural concentrations of a compound endemic to a site are recorded at levels greater than the published standard, development of a Site-Specific Groundwater Protection Standard should be developed in accordance with the 2009 Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities by US EPA. The Site-Specific GWPS is based on development of a site wide prediction limit for water quality from all wells that are free of impact. In instances where a compound has a Site-Wide Prediction limit that exceeds the published IAC 567, Chapter 137 Statewide Standard, then the Site-Wide Prediction Limit is used as the Site-Specific GWPS. At NCIRSWA, the Site-Specific GWPS for arsenic, cobalt, and nickel are set equal to the site wide prediction limit. Table 5A summarizes the Site-Wide Prediction Limits (used as the Site-Specific GWPS for the site).

STATISTICALLY SIGNIFICANT INCREASES (SSI)

The detected concentrations of each compound are compared to the control limit for each respective compound calculated based on the background data set. The control limits for each VOC are established (equal to the laboratory Reporting Limit). Inorganic compound control limits are established for both normally distributed and nonparametric data at all monitoring points except MW-25, MW-28, MW-29, MW-31, MW-32, GU-2, GU-3, GU-4, GU-5, and GU-6. Therefore, this evaluation of inorganic compounds is not yet comprehensive for all monitoring points. Time Series plots are included in Appendix B.3 for those wells where background is still insufficient for evaluation.

For those compounds where control limits are established in a well, a compound detected at a concentration that is in excess of the calculated control limit is recorded as a Statistically Significant Increase (SSI). SSI only apply to detection monitoring wells. *There are no SSI recorded in 2025 at any well currently in the detection monitoring system.*

Exceedances of a control limit in a designated assessment monitoring well (MW-21R) are not recorded as SSI.

Table 6 summarizes the compounds that exceed the Control Limits in 2025. Note the exceedance is limited to arsenic in MW-21R (an assessment monitoring point).

The on-going control limit exceedances were recorded at assessment monitoring point MW-21R and are summarized in Table 1 and Table 7. Brown highlights on Table 7 indicate exceedance of the Control Limit. A running summary of recorded control limit exceedances by year is included in Appendix E.

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

ASSESSMENT MONITORING SUMMARY

Assessment monitoring including the full Appendix II list has been performed at each well where an SSI is recorded (MW-21R). Two (2) full rounds of Appendix II assessment monitoring have been completed at MW-21R. The most recent Appendix II sampling episode at MW-21R was collected on April 11, 2023 (Table 2).

To date there are no compounds detected beyond the Appendix I list at MW-21R.

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

STATISTICALLY SIGNIFICANT LEVELS (SSL)

The Confidence Interval (the 95% lower confidence limits (LCL) and the 95% upper control limits (UCL)) is calculated for those compounds identified as SSI. The 95% LCL values are compared to applicable GWPS. Any 95% LCL value that exceeds an applicable GWPS is recorded as a Statistically Significant Level (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 Measures (ACM).

The SSL Evaluation is based on data collected since October 28, 2014. The Confidence Intervals (95% LCL and 95% UCL) are calculated during each statistical evaluation based on the most recent four (4) data points.

There are no SSL recorded at MW-21R.

DELINEATION & ASSESSMENT OF CORRECTIVE MEASURES (ACM)

Based on the absence of SSL at the site, delineation and assessment of corrective measures is not required at this site at this time.

CORRECTIVE ACTION MONITORING & EVALUATIONS

Corrective action monitoring is not required at this site at this time.

Section 4.0 Leachate Collection System Performance Evaluation

Data from US Water (operators of the Fort Dodge POTW) indicated that approximately 3,474,000 gallons of leachate were discharged to the Fort Dodge POTW from the landfill in 2025. Treated leachate volumes are included in Appendix G.1.

Chemical analysis of the waste stream (Appendix G.2) is conducted in accordance with the Industrial User Wastewater Discharge Permit between the City of Fort Dodge and the North Central Iowa Regional Solid Waste Agency (Appendix G.3).

Leachate Recirculation

A Leachate Recirculation Request was submitted to IDNR on June 24, 2022 (Doc #103489). Leachate recirculation over Subtitle D composite lined disposal areas Phase 1 and Phase 2 was approved in Special Provision X.7 of the June 27, 2022 SDP Permit revision. Note that recirculation on the Subtitle D compliant abutment lined area was specifically excluded in the approval. No leachate was recirculated in 2025.

Leachate Head Monitoring Points

Leachate head monitoring point LH-6 is located in the Subtitle D composite lined Phase 1 Expansion Area. Leachate head monitoring points LH-7 and LH-8 are located in the Subtitle D composite lined Phase 2 Expansion Area. Leachate head monitoring points LH-9, LH-10, and LH-11 are located in the Subtitle D composite lined Phase 3 Expansion Area. Leachate head measurements are presented in Table 12. Note that the monthly leachate head measurements for November and December were inadvertently omitted in 2025.

Phase 1 Expansion Area

A leachate head monitoring point was constructed during the Phase 1 Expansion in 2014. Documentation on the leachate head monitoring point was included in the QC&A Report approved in Permit Amendment #9 dated August 26, 2014. LH-6 measures leachate head on the liner in Phase 1.

Levels recorded at LH-6 did not exceed 1' during measurement events in 2025.

Phase 2 Expansion Area

Leachate head monitoring points were constructed during the Phase 2 Expansion in 2019. Documentation on the leachate head monitoring points was included in the QC&A Report approved in the SDP Permit Revision dated August 28, 2019. Two leachate head monitoring points were constructed during the Phase 2 project. LH-7 measures leachate head levels on the southern portion of Phase 2. LH-8 measures leachate head levels on the northern portion of Phase 2.

Levels recorded at LH-7 did not exceed 1' during measurement events in 2025. Levels recorded at LH-8 did not exceed 1' during measurement events in 2025.

Phase 3 Expansion Area

Leachate head monitoring points were constructed during the Phase 3 Expansion in 2024. Documentation on the leachate head monitoring points was included in the QC&A Report approved in the SDP Permit Revision dated October 18, 2024 (Doc #111091). Three (3) leachate head monitoring points were constructed during the Phase 3 project. LH-9 measures leachate head levels on the southern portion of Phase 3. LH-10 measures leachate head levels in the central portion of Phase 3. LH-11 measures leachate head levels on the northern portion of Phase 3.

Levels recorded at LH-9 did not exceed 1' during measurement events in 2025. Levels recorded at LH-10 did not exceed 1' during measurement events in 2025. Levels recorded at LH-11 did not exceed 1' during measurement events in 2025.

Original Landfilling Area

Based on a completed and certified site risk assessment meeting the requirements outlined in Iowa Code section 455B.305(6), the NCIRSWA was conditionally exempted under the Department letter dated September 21, 1995 from providing and implementing a leachate control plan for the original permitted waste footprint that received wastes prior to July 1, 1992.

Groundwater Separation from the MSWLF Base

Groundwater head monitoring point GUH-1 is located in the Subtitle D composite lined Phase 1 Expansion Area.

Groundwater head monitoring points GUH-2 and GUH-3 are located in the Subtitle D composite lined Phase 2 Expansion Area. GUH-2 measures groundwater head levels on the southern portion of Phase 2. GUH-3 measures groundwater head levels on the northern portion of Phase 2.

Groundwater head monitoring points GUH-4, GUH-5, and GUH-6 are located in the Subtitle D composite lined Phase 3 Expansion Area. GUH-4 measures groundwater head levels on the southern portion of Phase 3. GUH-5 measures groundwater head levels on the central portion of Phase 3. GUH-6 measures groundwater head levels on the northern portion of Phase 3.

Special Provision X.4.f of the Permit requires semi-annual monitoring of liquid levels in the Groundwater Diversion Layer Monitoring Points GUH-1, GUH-2, GUH-3, GUH-4, GUH-5, and GUH-6 to document separation between the MSWLF base and the water table. Groundwater head readings are included in Table 4. Based on the groundwater head data, separation is maintained between the base of refuse 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. The leachate collection and conveyance lines, including the force main from the lower pump station to the upper pump station, were cleaned June 2, 2025.

Section 5.0 Gas Monitoring

Explosive gas monitoring per 113.9(2) and the approved GMSP was conducted quarterly during the last reporting period (2025). A summary of gas monitoring in 2025 is included in Table 13.

Monitoring points include the four (4) subsurface gas probes designated SG-1, SG-2, SG-3, and GP-4; four (4) site monitoring wells (MW-8, MW10A, MW-13, and LB-4); five (5) groundwater underdrains (GU-1 manhole, GU-2, GU-3, GU-4, GU-5, and GU-6); and the shop and office structures on site. Figure 2 in this report illustrates the locations of gas monitoring locations.

Explosive gas concentrations were undetected or were below actionable levels during the monitoring episodes.

Monitoring results were again elevated at SG-1. It is noted that this occurrence has been reported for numerous years and is the reason GP-4 was installed further from the waste boundary to ensure compliance with IAC 113.

SG-1 was damaged in the fall of 2025 and requires repair.

The discharge end of the underdrain GU-2 is buried beneath sediment and requires sediment to be removed from the sediment basin to expose the pipe end.

Section 6.0 Recommendations/Requests

Continue semi-annual detection/assessment/interim corrective action monitoring in accordance with IAC 567, Chapter 113.10(5), 113.10(6), and 113.10(9). Testing should continue on a semi-annual basis as indicated in Table 2.

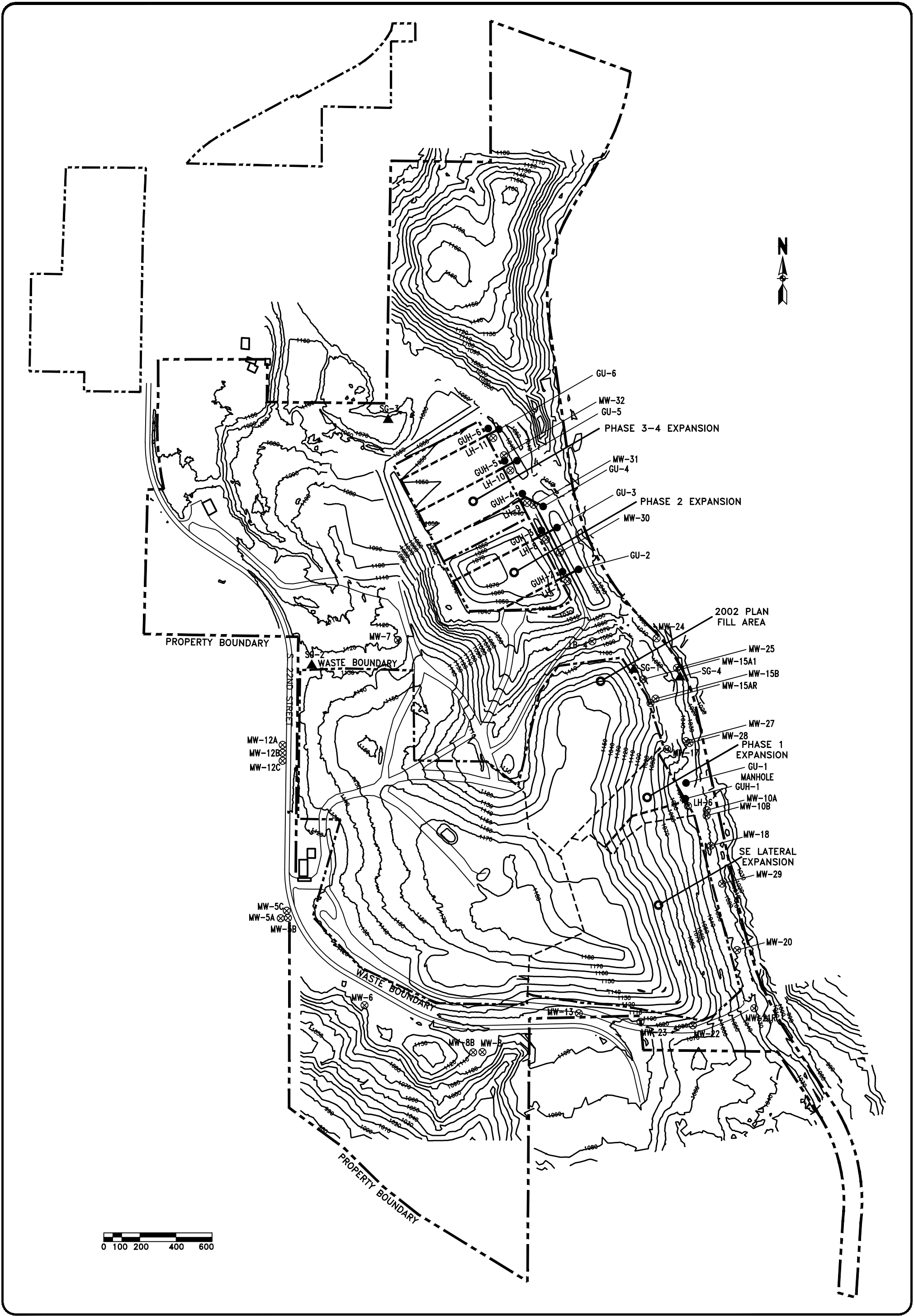
MW-18 was damaged in the fall of 2025 and requires repair.

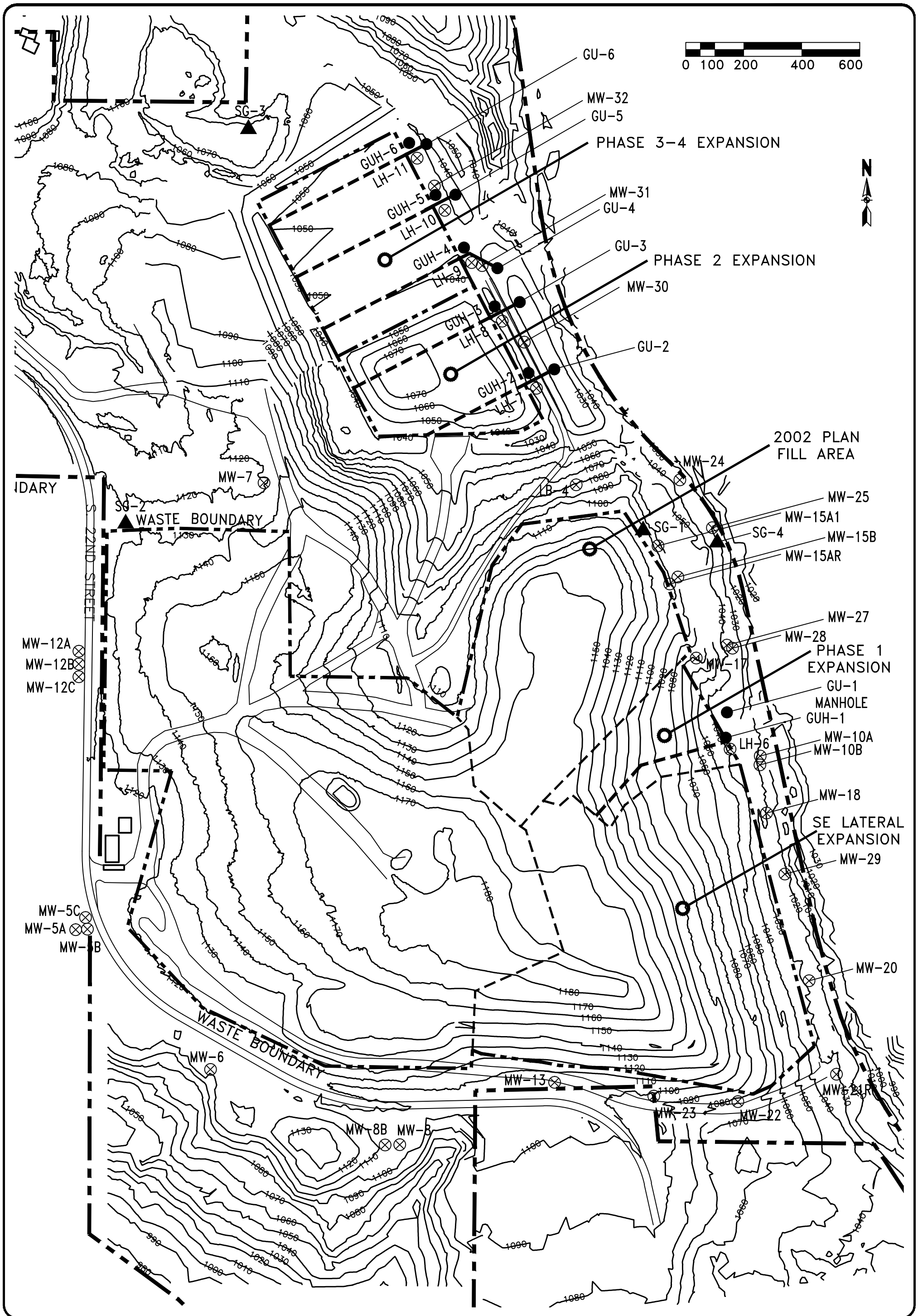
SG-1 was damaged in the fall of 2025 and requires repair.

The discharge end of the underdrain GU-2 is buried beneath sediment and requires sediment to be removed from the sediment basin to expose the pipe end.

Resume monthly measurements in leachate head monitoring points.

Figures



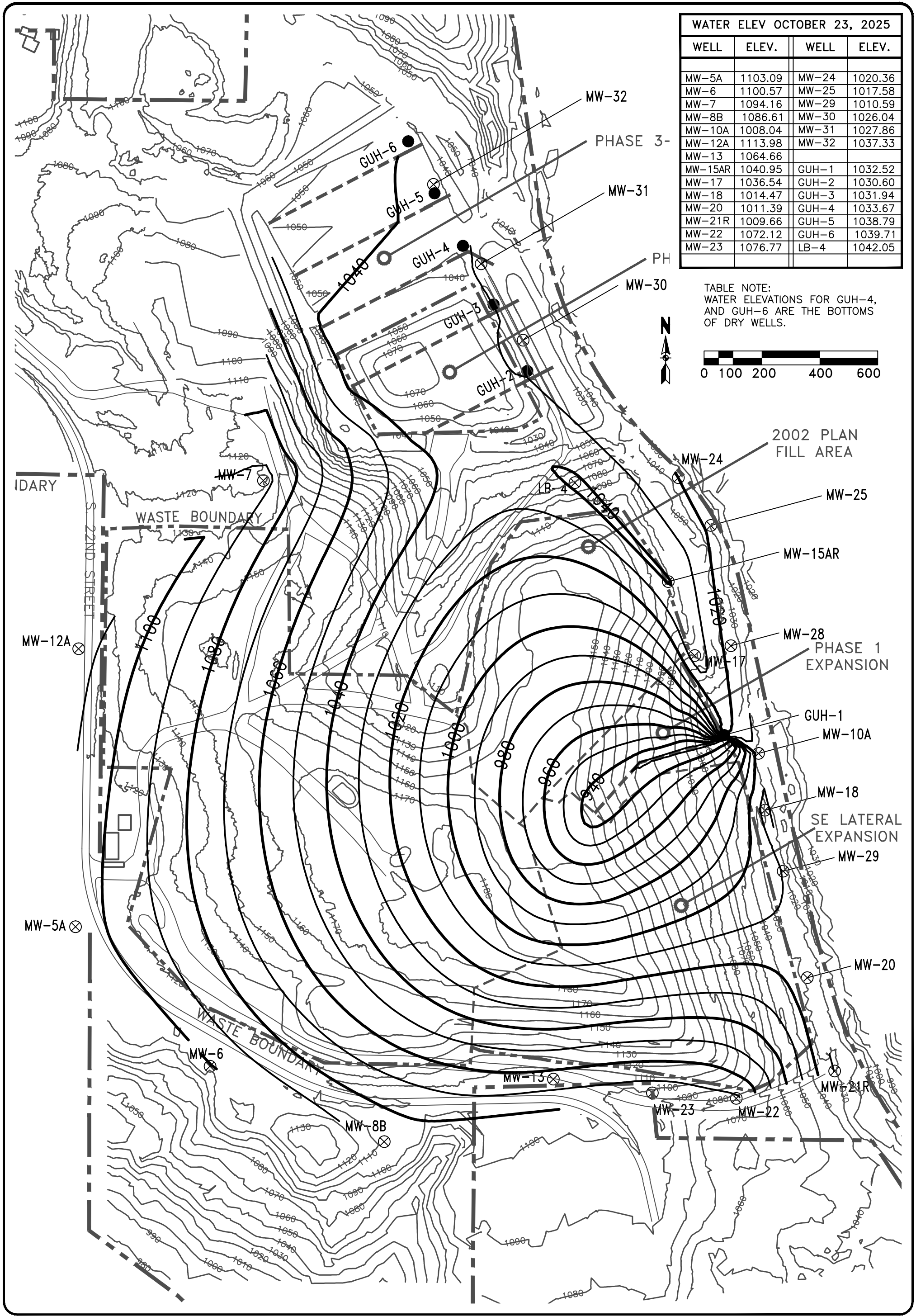


HLW Engineering Group
 204 West Broad Street, P.O. Box 314
 Story City, Iowa 50248
 Phone: (515) 733-4144
 FAX: (515) 733-4146

**SITE PLAN
 LANDFILL VICINITY**
 NORTH CENTRAL IOWA REGIONAL SANITARY LANDFILL
 FORT DODGE, IOWA

FIGURE: 2

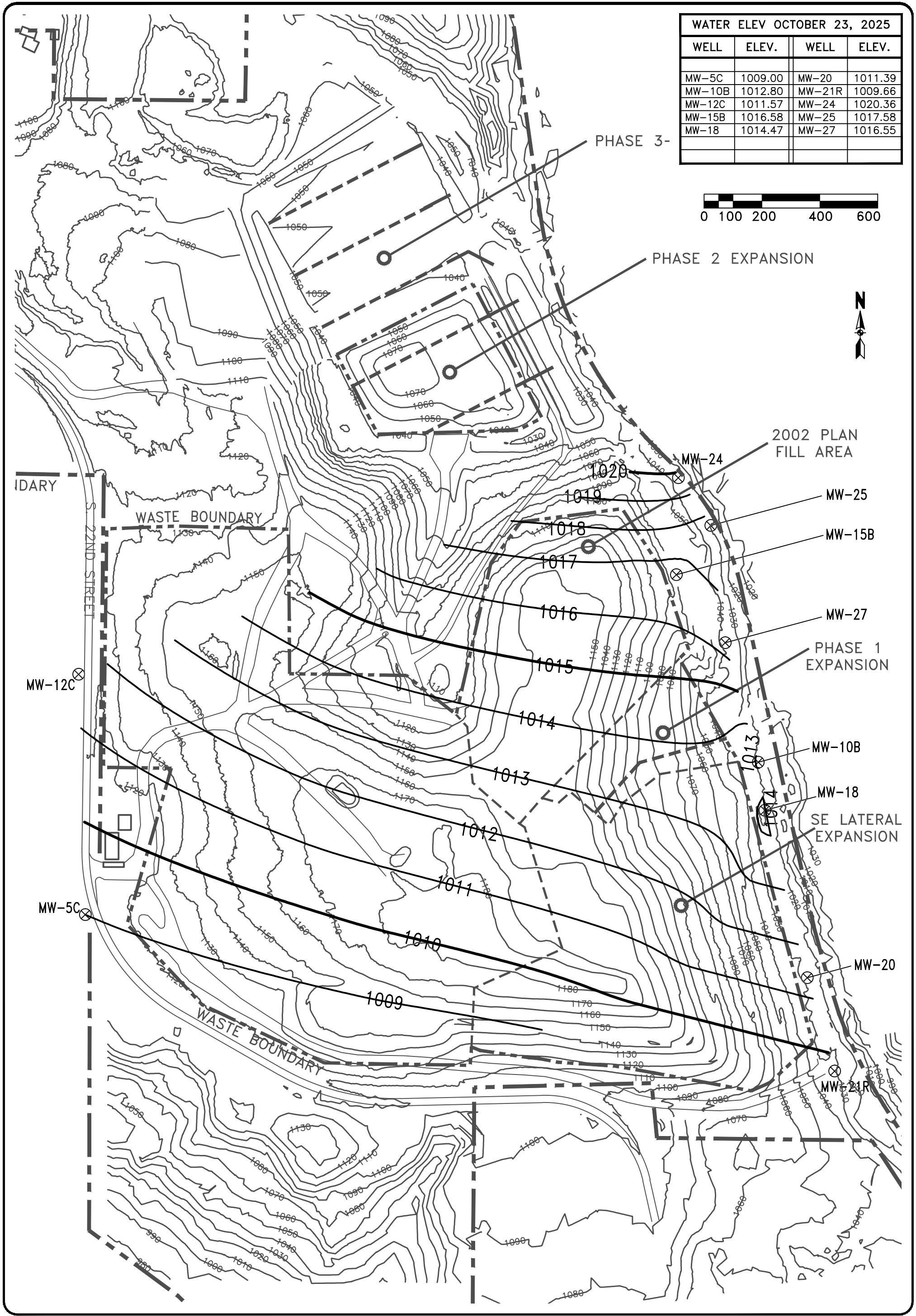
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DRAWN DRA	PROJECT NO. 6030	DATE 1-22-26



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

GROUNDWATER CONTOURS
SHALLOW – CLAY TILLS
NORTH CENTRAL IOWA REGIONAL SANITARY LANDFILL
FORT DODGE, IOWA

FIGURE: 3		
REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6030	DATE 1-22-26



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

GROUNDWATER CONTOURS
DEEP - SHALE BEDROCK
NORTH CENTRAL IOWA REGIONAL SANITARY LANDFILL
FORT DODGE, IOWA

FIGURE:

4

REVISION

DRAWN

NO.

PROJECT NO.

6030

DATE

DATE

1-22-26

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~~Table 11 – Corrective Action Trend Analysis – Not Required~~

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Table 1 – Monitoring Program Summary

Table 1
Monitoring Program Summary
Annual Water Quality Report
NCIRSWA Sanitary Landfill
Permit No. 94-SDP-01-75P

Monitoring Well	Formation	Current Monitoring Program	Change for next sampling event	Constituents w/ SSI	Constituents w/ SSL	Total # of Samples in each monitoring program since October 28, 2014		
						Detection	Assessment	Corrective Action
MW-10A	Alluvium/Red Claystone	Detection	NC	None	None	19	0	0
MW-10B	Basal Shale	Detection	NC	None	None	20	0	0
MW-25	Alluvium/Basal Shale	Detection	NC	None	None	8	0	0
MW-28	Fill/Till	Detection	NC	None	None	7	0	0
MW-18	Alluvium/Red Claystone	Detection	NC	None	None	18	0	0
MW-29	Alluvium/Red Claystone/Basal Shale	Detection	NC	None	None	2	0	0
MW-20	Alluvium/Basal Shale	Detection	NC	None	None	19	0	0
MW-21R	Fill/Basal Shale	Assessment	NC	Arsenic	None	0	18	0
MW-22	Alluvium/Red Claystone	Detection	NC	None	None	21	0	0
MW-30	Alluvium/Red Claystone	Detection	NC	None	None	12	0	0
MW-31	Alluvium/Red Claystone	Detection	NC	None	None	4	0	0
MW-32	Alluvium/Red Claystone	Detection	NC	None	None	4	0	0
GU-2	Underdrain	Detection	NC	None	None	4	0	0
GU-3	Underdrain	Detection	NC	None	None	6	0	0
GU-4	Underdrain	Detection	NC	None	None	5	0	0
GU-5	Underdrain	Detection	NC	None	None	2	0	0
GU-6	Underdrain	Detection	NC	None	None	2	0	0
LB-4	Fill/Gypsum/Red Claystone	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-7	Till/Fill	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-12A	Glacial Till	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-12B	Till/Gypsum	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-12C	Basal Shale	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-5	Glacial Till	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-5B	Glacial Till	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-5C	Basal Shale	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-6	Glacial Till	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-8	Glacial Till	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-8B	Glacial Till	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-13	Glacial Till	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-23	Glacial Till	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-15A1	Till/Gypsum	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-15AR	Fill/Till	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-15B	Basal Shale	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-17	Gypsum/Shale	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-24	Red Claystone/Basal Shale	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-25	Alluvium/Basal Shale	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-26	Gypsum/Shale	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-27	Basal Shale	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-28	Fill/Till	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A
MW-29	Alluvium/Red Claystone/Basal Shale	Water Elevation Only	NC	N/A	N/A	N/A	N/A	N/A

Table 2 – Monitoring Program Implementation Schedule

Table 2
Monitoring Program Implementation Schedule
Annual Water Quality Report
NCIRSWA Sanitary Landfill
Permit No. 94-SDP-01-75P

Monitoring Well	Recent Sampling Dates and Constituents	Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
		April, 2026	October, 2026	Previously Collected	Next Event
MW-10A	See Table 2A	Appendix I	Appendix I		N/A
MW-10B		Appendix I	Appendix I		N/A
MW-25		Appendix I	Appendix I		N/A
MW-28		Appendix I	Appendix I		N/A
MW-18		Appendix I	Appendix I	10/6/2011, 10/5/2012, 10/19/2017	N/A
MW-20		Appendix I	Appendix I	10/6/2011, 10/5/2012, 10/19/2017	N/A
MW-21R		Appendix I	Appendix I	4/19/2022, 4/11/2023	April, 2028
MW-22		Appendix I	Appendix I		N/A
MW-29		Appendix I	Appendix I		N/A
MW-30		Appendix I	Appendix I		N/A
MW-31		Appendix I	Appendix I		N/A
MW-32		Appendix I	Appendix I		N/A
GU-2		Appendix I	Appendix I		N/A
GU-3		Appendix I	Appendix I		N/A
GU-4		Appendix I	Appendix I		N/A
GU-5		Appendix I	Appendix I		N/A
GU-6		Appendix I	Appendix I		N/A

Table 2A – Monitoring Well Testing to Date

[illegible]

WELL	12/20/11	4/02/12	7/12/12	10/5/12	12/26/12
MW-5		Appendix I		Appendix I	
MW-5B		Appendix I		Appendix I	
MW-6		Appendix I		Appendix I	
MW-7		Appendix I		Appendix I	Appendix I
MW-8		I		Appendix I	
MW-8B		Appendix I		Appendix I	
MW-10B	Appendix I ⁽¹⁾	Appendix I	Appendix I ⁽¹⁾	Appendix II	
MW-12A	Appendix I ⁽¹⁾	Appendix I	Appendix I	Appendix I	
MW-12B	Appendix I ^(1,3)	Appendix I		Appendix I ^(1,2)	
MW-13	Appendix I	Appendix I	Appendix I	Appendix II	
MW-15B	Appendix I	Appendix I ⁽¹⁾	Appendix I	Appendix I	
MW-23	Appendix I	Appendix I	Appendix I	Appendix II	
LB-4	Appendix II	Appendix I ⁽¹⁾	Appendix I	Appendix II	
MW-5C		Appendix I		Appendix I ^(1,2)	
MW-10A	Appendix I	Appendix I ⁽¹⁾	Appendix I	Appendix II	Appendix I
MW-12C		Appendix I		Appendix I ^(1,2)	
MW-15AR	Appendix I	Appendix I ⁽¹⁾	Appendix I ⁽¹⁾	Appendix II	
MW-17	Appendix I ^(1,3)	Appendix I		Appendix II	
MW-18	Appendix I ⁽¹⁾	Appendix I ⁽¹⁾	Appendix I ⁽¹⁾	Appendix II	
MW-19	Appendix I ⁽¹⁾	Appendix I ⁽¹⁾	Appendix I ⁽¹⁾	Appendix II	
MW-20	Appendix I ⁽¹⁾	Appendix I ⁽¹⁾	Appendix I ⁽¹⁾	Appendix II	
MW-21		Appendix I		Appendix I ⁽¹⁾	
MW-22		Appendix I ⁽¹⁾		Appendix I	Appendix I

WELL	5/17/13	8/5/13	11/9/13	4/11/2014	10/28/2014
MW-5	Appendix I		Appendix I	Appendix I	Appendix I
MW-5B	Appendix I		Appendix I	Appendix I	Appendix I
MW-6	Appendix I		Appendix I	Appendix I	Appendix I
MW-7	Appendix I		Appendix I	Appendix I	Appendix I
MW-8	Appendix I		Appendix I	Dry	Dry
MW-8B	Appendix I		Appendix I	Appendix I	Appendix I
MW-10B	Appendix I		Appendix I	Appendix I	Appendix I
MW-12A	Appendix I		Appendix I	Appendix I	Appendix I
MW-12B	Appendix I		Appendix I	Appendix I	Appendix I
MW-13	Appendix I		Appendix I	Appendix I	Appendix I
MW-15B	Appendix I		Appendix I	Appendix I	Appendix I
MW-23	Appendix I		Appendix I	Appendix I	Appendix I
LB-4	Appendix I		Appendix I ⁽¹⁾	Appendix I ⁽¹⁾	Appendix I ⁽¹⁾
MW-5C	Appendix I		Appendix I	Appendix I	Appendix I
MW-10A	Appendix I	VOC	Appendix I	Appendix I	Appendix I
MW-12C	Appendix I		Appendix I	Appendix I	Appendix II
MW-15A1	Appendix I	VOC	Appendix I	Dry	Dry
MW-15AR	Appendix I		Appendix I ⁽¹⁾	Appendix I ⁽¹⁾	Broken
MW-17	Appendix I		Appendix I	Appendix I ⁽¹⁾	Appendix I ^(1,3)
MW-18	Appendix I		Appendix I ⁽¹⁾	Appendix I	Appendix I ⁽¹⁾
MW-19	Appendix I		Appendix I ⁽¹⁾	Appendix I	Appendix I ⁽¹⁾
MW-20	Appendix I ⁽²⁾	(2)	Appendix I ^(1,2)	Appendix I ⁽²⁾	Appendix I ^(1,2)
MW-21	Appendix I		Appendix I	Appendix I	Broken
MW-22	Appendix I		Appendix I	Appendix I	Appendix I
Duplicate	At MW-6		At MW-10B	At MW-23	At MW-22

WELL	3/31/15	7/8/15	9/25/15	10/16/15	11/12/15	
MW-5	Appendix I	Appendix I	Appendix I	---	---	
MW-5B	Appendix I	Appendix I	Appendix I	---	---	
MW-6	Appendix I	Appendix I	Appendix I	---	---	
MW-7	Appendix I	Appendix I	Appendix I	---	---	
MW-8	Appendix I	Appendix I	Appendix I	---	---	
MW-8B	Appendix I	Appendix I	Appendix I	---	---	
MW-10B	Not Sampled	Not Sampled	Not Sampled	Appendix I	---	
MW-12A	Appendix I	Appendix I	Appendix I	---	---	
MW-12B	Appendix I	Appendix I	Appendix I	---	---	
MW-13	Appendix I	Appendix I	Appendix I	---	---	
MW-15B	Not Sampled	Not Sampled	Not Sampled	---	---	
MW-23	Appendix II	Appendix I	Appendix I	---	---	
LB-4	Appendix I ⁽¹⁾	---	Appendix I ⁽¹⁾	---	---	
MW-5C	Appendix I	---	Appendix I	---	---	
MW-10A	Dry	---	Not Sampled	VOC	---	
MW-12C	Appendix II	---	Appendix I	---	---	
MW-15A1	Dry	---	Appendix II	---	---	
MW-15AR	Appendix I ⁽¹⁾	---	Appendix I ⁽¹⁾	---	---	
MW-17	Appendix I ^(1,3)	---	Appendix I ^(1,3)	---	---	
MW-18	Appendix I ⁽¹⁾	---	Appendix I ⁽¹⁾	---	---	
MW-19	Appendix I ⁽¹⁾	---	Appendix I ⁽¹⁾	---	---	
MW-20	Appendix I ^(1,2)	---	Appendix I ^(1,2)	---	---	
MW-21	Appendix I	---	Appendix I	---	---	
MW-22	Appendix I	---	Appendix I	---	---	
GU-1	---	---	---	---	Appendix I	
Duplicate	At MW-5B	---	At MW-6	---	---	
	4/13/16	6/6/16	7/8/16	8/31/16	9/29/16	12/28/16
MW-5	Appendix I	---	---	---	Appendix I	---
MW-5B	Appendix II	---	(4)	---	Appendix II	---
MW-6	Appendix I	---	---	---	Appendix I	---
MW-7	Appendix I	---	---	---	Appendix I	---
MW-8	Appendix I	---	---	---	Appendix I	---
MW-8B	Appendix I	---	---	---	Appendix I	---
MW-10B	Appendix I	---	---	---	Appendix I	---
MW-12A	Appendix I	---	---	---	Appendix I	---
MW-12B	Appendix I	---	---	---	Appendix I	---
MW-13	Appendix I	---	---	---	Appendix I	---
MW-15B	Appendix I	---	---	---	Not Sampled	---
MW-23	Appendix I	---	---	---	Appendix I	---
LB-4	Appendix I ⁽¹⁾	---	(R) – Co, Ni, Zn	---	Appendix I ⁽¹⁾	---
MW-5C	Appendix I	---	---	---	Appendix I	---
MW-10A	Appendix I	---	---	---	Appendix I	---
MW-12C	Appendix I	---	---	---	Appendix I	---
MW-15A1	Appendix II	---	---	---	Appendix I ^(3,4)	---
MW-15AR	Appendix I ⁽¹⁾	---	---	---	Appendix I ⁽¹⁾	---
MW-17	Appendix I ^(1,3)	---	---	---	Appendix I ^(1,3)	---
MW-18	Appendix I ⁽¹⁾	---	---	---	Appendix I ⁽¹⁾	---
MW-19	Appendix I ⁽¹⁾	---	---	---	Appendix I ⁽¹⁾	---
MW-20	Appendix I ^(1,2)	---	---	---	Appendix I ^(1,2)	---
MW-21	Appendix I	---	---	---	Broken	---
MW-22	Appendix I	---	---	---	Appendix I	(R) - Ni
GU-1R	---	Appendix I	---	Appendix I	Appendix I	---
Duplicate	At MW-13	---	---	---	At LB-4	---

	4/20/17	7/17/17	10/18/17	1/15/18
MW-5	Appendix I	---	Appendix I	---
MW-5B	Appendix I ⁽⁴⁾	---	Appendix I ⁽⁴⁾	---
MW-6	Appendix I	---	Appendix I	---
MW-7	Appendix I	---	Appendix I	---
MW-8	Appendix I	---	Dry	---
MW-8B	Appendix I	---	Appendix I	---
MW-10B	Appendix I	---	Appendix I	---
MW-12A	Appendix I	---	Appendix I	---
MW-12B	Appendix I	---	Appendix I	---
MW-13	Appendix I	---	Appendix I	---
MW-15B	Appendix I	---	Appendix I	---
MW-23	Appendix I	---	Appendix I	---
LB-4	Appendix I	---	Appendix I	---
MW-5C	Appendix I	---	Appendix I	---
MW-10A	Appendix I	---	Appendix I	---
MW-12C	Appendix I	(R) – Cd,Se	Appendix I	(R) – Sn
MW-15A1	Appendix I ^(3,4)	---	Dry	---
MW-15AR	Appendix I	---	Appendix II	---
MW-17	Appendix I ⁽³⁾	---	Appendix II	---
MW-18	Appendix I	---	Appendix II	(R) – SVOC
MW-19	Appendix I	---	Appendix II	---
MW-20	Appendix I	---	Appendix I	(R) – Co
MW-21R	Appendix I	(R) – Co, Ni	Appendix II	---
MW-22	Appendix I	(R) – Zn	Appendix I	---
GU-1R	Appendix I	plugged	plugged	---
Duplicate	At MW-5B	---	At MW-5B	---

(1) = tin (2) = mercury (3) = sulfide (4) = bis (2-ethylhexyl)phthalate VOC = Appendix I VOC

	10/15/2018	4/9/2019	5/16/2019	8/27/2019	9/9/2019	9/24/2019
MW-10A	Appendix I	Appendix I				
MW-10B	Appendix I	Appendix I				
MW-15A1	Appendix I ^(1,2)	Appendix I ^(1,2)				
MW-17	Appendix I ^(1,2)	Appendix I ^(1,2)				
MW-18	Appendix I	Appendix I				
MW-19	Appendix I	Appendix I				
MW-20	Appendix I	Appendix I	R - acetone			
MW-21R	Appendix I	Appendix I				
MW-22	Appendix I	Appendix I				
MW-30	DNE	DNE				
GU-2	DNE	DNE		Appendix I	Dry	Appendix I
GU-3	DNE	DNE		Appendix I	Appendix I	Appendix I
Duplicate	At MW-17	At MW-10A				

(1) = sulfide (2) = bis (2-ethylhexyl)phthalate DNE – Did not exist

	9/26/2019	10/9/2019	1/8/2020	4/1/2020	10/5/2020
MW-10A		Appendix I		Appendix I	Appendix I
MW-10B		Appendix I		Appendix I	Appendix I
MW-15A1		Appendix I ^(1,2)		Appendix I ^(1,2)	Appendix I ⁽²⁾
MW-17		Appendix I ^(1,2)	R - zinc	Appendix I ^(1,2)	Appendix I ⁽²⁾
MW-18		Appendix I	R - zinc	Appendix I	Appendix I
MW-19		Appendix I		Appendix I	Appendix I
MW-20		Appendix I	R - zinc	Appendix I	Appendix I
MW-21R		Appendix I		Appendix I	Appendix I
MW-22		Appendix I	R - zinc	Appendix I	Appendix I
MW-30		Appendix I		Appendix I	Appendix I
GU-2	Appendix I	Dry		Dry	Dry
GU-3	Appendix I	Appendix I		Appendix I	Dry
Duplicate		At MW-10B		At MW-19	At MW-22

(1) = sulfide (2) = bis (2-ethylhexyl)phthalate DNE – Did not exist

	4/13/2021	10/21/2021	1/10/2022	4/19/2022	7/15/2022	10/18/2022
MW-10A	Appendix I	Appendix I		Appendix I	R - barium	Appendix I
MW-10B	Appendix I	Appendix I		Appendix I		Appendix I
MW-15A1	Dry	Dry		Dry		Dry
MW-17	Appendix I ⁽²⁾	Appendix I ⁽²⁾		Appendix I		Appendix II
MW-18	Appendix I	Appendix I		Appendix I		Appendix I
MW-19	Appendix I	Appendix I		Appendix I		Appendix I
MW-20	Appendix I	Appendix I		Appendix I		Appendix I
MW-21R	Appendix I	Appendix I	R - arsenic	Appendix II		Appendix I
MW-22	Appendix I	Appendix I		Appendix I		Appendix I
MW-30	Appendix I	Appendix I		Appendix I		Appendix I
GU-2	Dry	Dry		Dry		Dry
GU-3	Dry	Dry		Dry		Dry
Duplicate	At MW-10B	At MW-17		At MW-21R		At MW-10B

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

	4/11/2023	5/18/2023	7/7/2023	10/5/2023	12/19/2023
MW-10A	Appendix I		R – As, Ba, Cu	Appendix I	
MW-10B	Appendix I			Appendix I	
MW-15A1	Appendix I VOC	---	---	---	
MW-17	Appendix I	---	---	---	
MW-18	Appendix I			Appendix I	
MW-19	Appendix I			Appendix I	
MW-20	Appendix I			Appendix I	R - Cu
MW-21R	Appendix II			Appendix I	
MW-22	Appendix I			Appendix I	R - Cu
MW-25	---	Appendix I	Appendix I	Appendix I	
MW-28	---	Appendix I	Appendix I	Appendix I	
MW-30	Appendix I			Appendix I	
GU-2	Appendix I			Dry	
GU-3	Dry			Appendix I	
Duplicate	At MW-17			At MW-25	

Appendix I VOC = VOC only

	4/23/2024	9/27/2024	10/11/2024	10/16/2024	11/22/2024	12/10/2024
MW-10A	Appendix I		Appendix I			
MW-10B	Appendix I		Appendix I			
MW-18	Appendix I		Appendix I			
MW-19	Appendix I		<i>buried</i>			
MW-20	Appendix I		Appendix I			
MW-21R	Appendix I		Appendix I			
MW-22	Appendix I		Appendix I			
MW-25	Appendix I		Appendix I			R-1,1-DCE
MW-28	Appendix I		Appendix I			
MW-30	Appendix I		Appendix I			
MW-31	DNE		---	Appendix I	Metals	
MW-32	DNE		---	Appendix I	Metals	
GU-2	Dry		Dry			
GU-3	Dry		Dry			
GU-4	DNE	Metals	Metals		Metals	
GU-5	DNE	Metals	Metals		Dry	
GU-6	DNE	Dry	Dry		Metals	
Duplicate	At MW-25		At MW-18			

Appendix I VOC = VOC only

Metals = Appendix I Metals

DNE = did not exist

Note: Waste placement in Phase 3 started 1-3-2025.

	4/8/2025	10/23/2025	
MW-10A	Appendix I	Appendix I	
MW-10B	Appendix I	Appendix I	
MW-18	Appendix I	Broken	
MW-20	Appendix I	Appendix I	
MW-21R	Appendix I	Appendix I	
MW-22	Appendix I	Appendix I	
MW-25	Appendix I	Appendix I	
MW-28	Appendix I	Appendix I	
MW-29	Appendix I	Appendix I	
MW-30	Appendix I	Appendix I	
MW-31	Appendix I	Appendix I	
MW-32	Appendix I	Appendix I	
GU-2	Dry	Dry	
GU-3	Dry	Dry	
GU-4	Appendix I	Metals	
GU-5	Dry	Dry	
GU-6	Appendix I	Dry	
Duplicate	At MW-32	At MW-31	
<i>Appendix I VOC = VOC only</i> <i>Metals = Appendix I Metals</i> <i>DNE = did not exist</i>			
Note: Waste placement in Phase 3 started 1-3-2025.			

Table 3 – Monitoring Well Maintenance Performance
Reevaluation Schedule

Table 3
Monitoring Well Maintenance and Performance Revaluation Schedule
Annual Water Quality Report
NCIRSWA County Sanitary Landfill
Permit No. 94-SDP-01-75P

Compliance with:	Monitoring Calendar Years									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
567 IAC 113.10(2)"f"(1) high and low water levels (bi-annual)	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 = bi-annual)	X	X		X		X		X		X
567 IAC 113.10(2)"f"(3) well depths (annual)	X	X	X	X	X	X	X	X	X	X
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry (bi-annual)	X	X		X		X		X		X
Waste separation from ground water 113.6(2)"l"	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Compliance with:	Monitoring Calendar Years									
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
567 IAC 113.10(2)"f"(1) high and low water levels (bi-annual)	X	X	X	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 = bi-annual)		X		P		P		P		P
567 IAC 113.10(2)"f"(3) well depths (annual)	X	X	X	P	P	P	P	P	P	P
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry (bi-annual)		X		P		P		P		P
Waste separation from ground water 113.6(2)"l"	2X	2X	2X	2P	2P	2P	2P	2P	2P	2P

X = completed

P = Planned

Table 4 – Monitoring Well Maintenance Performance
Reevaluation Summary

Table 4
Monitoring Well Maintenance and Performance Summary
Annual Water Quality Report
NCIRSWA Sanitary Landfill
Permit No. 94-SDP-01-75P

Well	Top of casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth Discrepancy (ft)	Hydraulic Cond. (cm/sec)/date	Most Recent Recharge Rate	
					4/8/2025	10/23/2025			4/23/2024	Change
MW-10A	1038.04	1018.59	29.2	Groundwater Level (ft)	23.4	24.15	0	0.000348 January, 2013	Full recovery in 6 hour	None percieved
				Groundwater Elevation (Ft MSL)	1014.64	1013.89				
				Measured Well Depth (ft)	29.2	29.2				
				Submerged (+) or Exposed screen (-)	-3.95	-4.7				
MW-10B	1036.57	998.77	48.7	Groundwater Level (ft)	19.34	19.62	0	0.0000221 January, 2013	Full recovery in >6 hour	None percieved
				Groundwater Elevation (Ft MSL)	1017.23	1016.95				
				Measured Well Depth (ft)	48.7	48.7				
				Submerged (+) or Exposed screen (-)	18.46	18.18				
MW-25	1031.96	1011.56	30.4	Groundwater Level (ft)	14.1	14.38	0	0.0000129 5/18/2023	Full recovery in >6 hour	None percieved
				Groundwater Elevation (Ft MSL)	1017.86	1017.58				
				Measured Well Depth (ft)	30.4	30.4				
				Submerged (+) or Exposed screen (-)	6.3	6.02				
MW-28	1035.16	1027.42	13.31	Groundwater Level (ft)	11.82	10.02	0.31	0.00000873 5/18/2023	Full recovery in >6 hour	None percieved
				Groundwater Elevation (Ft MSL)	1023.34	1025.14				
				Measured Well Depth (ft)	13	13				
				Submerged (+) or Exposed screen (-)	-4.08	-2.28				
MW-18	1032.06	1016.66	25.4	Groundwater Level (ft)	17.59		-0.2	0.0014 January, 2013	Full recovery in 5 hour	None percieved
				Groundwater Elevation (Ft MSL)	1014.47					
				Measured Well Depth (ft)	25.6	25.6				
				Submerged (+) or Exposed screen (-)	-2.19					
MW-29	1028.77	1003.1	35.67	Groundwater Level (ft)	16.95	18.2	0.07	0.0000393 September, 2017	pending	pending
				Groundwater Elevation (Ft MSL)	1011.82	1010.57				
				Measured Well Depth (ft)	35.6	35.6				
				Submerged (+) or Exposed screen (-)	8.72	974.9				
MW-20	1026.08	1002.61	30.0	Groundwater Level (ft)	13.74	14.69	0.2	0.000732 January, 2013	Full recovery in 6 hour	None percieved
				Groundwater Elevation (Ft MSL)	1012.34	1011.39				
				Measured Well Depth (ft)	29.8	29.8				
				Submerged (+) or Exposed screen (-)	9.73	8.78				
MW-21R	1033.51	998.01	45.5	Groundwater Level (ft)	22.91	23.85	0	0.00000727 September, 2017	Full recovery in 24 hour	None percieved
				Groundwater Elevation (Ft MSL)	1010.6	1009.66				
				Measured Well Depth (ft)	45.5	45.5				
				Submerged (+) or Exposed screen (-)	12.59	11.65				
MW-22	1079.15	1056.45	32.7	Groundwater Level (ft)	8.94	7.03	0.2	0.0000648 January, 2013	Full recovery in 24 hour	None percieved
				Groundwater Elevation (Ft MSL)	1070.21	1072.12				
				Measured Well Depth (ft)	32.5	32.5				
				Submerged (+) or Exposed screen (-)	13.76	15.67				
MW-30	1042.84	1032.39	20.45	Groundwater Level (ft)	16.83	16.8	0	0.0000259 April 2024	Full recovery in 6 hour	None percieved
				Groundwater Elevation (Ft MSL)	1026.01	1026.04				
				Measured Well Depth (ft)	20.45	20.45				
				Submerged (+) or Exposed screen (-)	-6.38	-6.35				
MW-31	1043.75	1028.09	25.96	Groundwater Level (ft)	16.34	15.89	0	0.0000156 October 2024	Full recovery in 2 hour	None percieved
				Groundwater Elevation (Ft MSL)	1027.41	1027.86				
				Measured Well Depth (ft)	25.96	25.96				
				Submerged (+) or Exposed screen (-)	-0.68	-0.23				
MW-32	1049.25	1035.15	19.4	Groundwater Level (ft)	11.45	11.92	0	0.0000916 October 2024	Full recovery in 24 hour	None percieved
				Groundwater Elevation (Ft MSL)	1037.8	1037.33				
				Measured Well Depth (ft)	19.4	19.4				
				Submerged (+) or Exposed screen (-)	2.65	2.18				

Groundwater Underdrain Piezometer

Well		Date of Measurements	
		4/8/2025	10/23/2025
GUH-1	bottom of waste (feet MSL)	1035	1035
	Top Pipe GUH-1	1035.25	1035.25
	Screen of GPZ (feet MSL)	1029	1029
	Depth to Water in GPZ (ft)	5.55	5.44
	Elevation water in GPZ (feet MSL)	1029.7	1029.81
	Minimum Separation (ft)	5.3	5.19
GUH-2	bottom of waste (feet MSL)	1038	1038
	Top Pipe GUH-2	1042.6	1042.6
	Screen of GPZ (feet MSL)	1029.4	1029.4
	Depth to Water in GPZ (ft)	11.9	11.92
	Elevation water in GPZ (feet MSL)	1030.7	1030.68
	Minimum Separation (ft)	7.3	7.32
GUH-3	bottom of waste (feet MSL)	1038	1038
	Top Pipe GUH-3	1041.44	1041.44
	Screen of GPZ (feet MSL)	1031.75	1031.75
	Depth to Water in GPZ (ft)	9.33	9.45
	Elevation water in GPZ (feet MSL)	1032.11	1031.99
	Minimum Separation (ft)	5.89	6.01
GUH-4	bottom of waste (feet MSL)	1039.5	1039.5
	Top Pipe GUH-4	1045.92	1045.92
	Screen of GPZ (feet MSL)	1033.62	1033.62
	Depth to Water in GPZ (ft)	12.3	12.3
	Elevation water in GPZ (feet MSL)	1033.62	1033.62
	Minimum Separation (ft)	5.88	5.88
GUH-5	bottom of waste (feet MSL)	1044.5	1044.5
	Top Pipe GUH-5	1051.19	1051.19
	Screen of GPZ (feet MSL)	1038.69	1038.69
	Depth to Water in GPZ (ft)	12.5	12.4
	Elevation water in GPZ (feet MSL)	1038.69	1038.79
	Minimum Separation (ft)	5.81	5.71
GUH-6	bottom of waste (feet MSL)	1045.5	1045.5
	Top Pipe GUH-6	1050.71	1050.71
	Screen of GPZ (feet MSL)	1039.51	1039.51
	Depth to Water in GPZ (ft)	11.2	11.2
	Elevation water in GPZ (feet MSL)	1039.51	1039.51
	Minimum Separation (ft)	5.99	5.99

Table 4A – Water Elevation Summary Over Time

Table 4A
Water Elevation Data

NCIRSWA Sanitary Landfill
Fort Dodge, Iowa

								Sedimentation Assessment			
				4/8/2025		10/23/2025		ORIGINAL		10/23/2025	10/23/2025
Existing Monitoring Well ID	Gradient	Top of Casing (Elevation)	Ground Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Bottom Of Well Depth (ft)	year modified	Bottom Of Well Depth (ft)	Well Depth Difference (ft)
MW-5A	U	1112.69	1110.42	7.09	1105.60	9.6	1103.09	29.3		29	0.3
MW-5B	U	1111.68	1109.41	15.92	1095.76	14.08	1097.60	52		48.6	3.4
MW-6	U	1116.43	1113.85	13.37	1103.06	15.86	1100.57	40.9		40.3	0.6
MW-7	U	1117.86	1115.91	23.9	1093.96	23.7	1094.16	52.85	2016	52.85	0
MW-8A	U	1109.48	1106.48	17.61	1091.87	15.36	1094.12	22.7	2017	22.45	0.25
MW-8B	U	1107.31	1104.31	24.66	1082.65	20.7	1086.61	52.3		52.4	-0.1
MW-10B	U	1032.42	1030.65	19.34	1013.08	19.62	1012.80	48.7	2015	48.7	0
MW-12A	U	1123.17	1120.67	4.63	1118.54	9.19	1113.98	31.25		31.25	0
MW-12B	U	1123.13	1120.63	72.18	1050.95	72.09	1051.04	81.25		81.2	0.05
MW-13	U	1103.77	1101.27	28.66	1075.11	39.11	1064.66	51.2		51.3	-0.1
MW-15B	U	1099.76	1097.26	82.68	1017.08	83.18	1016.58	102.7		104.4	-1.7
MW-23	U	1097.12	1093.95	20.33	1076.79	20.35	1076.77	47.17		47.1	0.07
LB-4	D	1104.12	1101.4	61.79	1042.33	62.07	1042.05	68.4	2015	68.4	0
MW-5C	D	1110.74	1108.47	101.85	1008.89	101.74	1009.00	110.3		110.3	0
MW-10A	D	1032.19	1030.42	23.4	1008.79	24.15	1008.04	29.2	2015	29.2	0
MW-12C	D	1123.05	1120.55	111.62	1011.43	111.48	1011.57	124		124.1	-0.1
MW-15A1	D	1104.99	1101.45	63.16	1041.83	62.83	1042.16	65.49		64.65	0.84
MW-15AR	D	1104.54	1101.19	63.49	1041.05	63.59	1040.95	67.54		67.5	0.04
MW-17	D	1076.09	1072.5	39.35	1036.74	39.55	1036.54	51.09		50.2	0.89
MW-18	D	1032.06	1028.63	17.59	1014.47			25.93		25.6	0.33
MW-20	D	1026.08	1023.37	13.74	1012.34	14.69	1011.39	32.21		29.8	2.41
MW-21R	D	1033.51	1031.07	22.91	1010.6	23.85	1009.66	45.5	2017	45.5	0
MW-22	D	1079.15	1075.98	8.94	1070.21	7.03	1072.12	33.17		32.5	0.67
MW-24	D	1033.26	1030.86	11.15	1022.11	12.90	1020.36	23.0	2017	23.0	0
MW-25	D	1031.96	1030.25	14.1	1017.86	14.38	1017.58	30.4	2017	30.4	0
MW-27	D	1034.34	1032.95	17.54	1016.8	17.79	1016.55	20.3	2017	20.3	0
MW-28	D	1035.16	1032.85	11.82	1023.34	10.02	1025.14	13.01	2017	13	0.01
MW-29	D	1028.77	1025.43	16.95	1011.82	18.20	1010.57	35.7	2017	35.6	0.1
MW-30	D	1042.84	1039.55	16.83	1026.01	16.80	1026.04	20.45		20.45	0
MW-31	D	1043.75	1040.90	16.34	1027.41	15.89	1027.86	25.96		25.96	0
MW-32	D	1049.25	1046.20	11.45	1037.8	11.92	1037.33	19.4		19.4	0
GUH-1	D	1038.27	NR	5.55	1032.72	5.75	1032.52	6.35	2017	6.35	0
GUH-2	D	1042.60	NR	11.9	1030.7	12.00	1030.60	13.2	2019	13.2	0
GUH-3	D	1041.44	NR	9.33	1032.11	9.50	1031.94	9.7	2019	9.7	0
GUH-4	D	1045.92	NR	12.3	1033.62	12.25	1033.67	12.55	2024	12.55	0
GUH-5	D	1051.19	NR	12.5	1038.69	12.40	1038.79	12.65	2024	12.65	0
GUH-6	D	1050.71	NR	11.2	1039.51	11.00	1039.71	11.15	2024	11.15	0

U- Indicates Upgradient/Background
D - Indicates Downgradient

Water Elevation Data

NCIRSWA Sanitary Landfill
Fort Dodge, Iowa

								Sedimentation Assessment			
				4/23/2024		10/11/2024		ORIGINAL		10/11/2024	10/11/2024
Existing Monitoring Well ID	Gradient	Top of Casing (Elevation)	Ground Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Bottom Of Well Depth (ft)	year modified	Bottom Of Well Depth (ft)	Well Depth Difference (ft)
MW-5A	U	1112.69	1110.42	8.5	1104.19	13.44	1099.25	29.3		29	0.3
MW-5B	U	1111.68	1109.41	17.26	1094.42	18.3	1093.38	52		48.6	3.4
MW-6	U	1116.43	1113.85	16.23	1100.20	21.37	1095.06	40.9		40.3	0.6
MW-7	U	1117.86	1115.91	26.89	1090.97	25.84	1092.02	52.85	2016	52.85	0
MW-8A	U	1109.48	1106.48	22.7	1086.78	22.7	1086.78	22.7	2017	22.45	0.25
MW-8B	U	1107.31	1104.31	29.08	1078.23	27.9	1079.41	52.3		52.4	-0.1
MW-10B	U	1032.42	1030.65	19.86	1012.56	19.94	1012.48	48.7	2015	48.7	0
MW-12A	U	1123.17	1120.67	5.8	1117.37	13.28	1109.89	31.25		31.25	0
MW-12B	U	1123.13	1120.63	72.38	1050.75	72.16	1050.97	81.25		81.2	0.05
MW-13	U	1103.77	1101.27	40.75	1063.02	41.05	1062.72	51.2		51.3	-0.1
MW-15B	U	1099.76	1097.26	82.82	1016.94	83.3	1016.46	102.7		104.4	-1.7
MW-23	U	1097.12	1093.95	22.41	1074.71	23.04	1074.08	47.17		47.1	0.07
LB-4	D	1104.12	1101.4	62.16	1041.96	62.56	1041.56	68.4	2015	68.4	0
MW-5C	D	1110.74	1108.47	101.81	1008.93	101.81	1008.93	110.3		110.3	0
MW-10A	D	1032.19	1030.42	24.5	1007.69	25.09	1007.10	29.2	2015	29.2	0
MW-12C	D	1123.05	1120.55	111.31	1011.74	111.45	1011.60	124		124.1	-0.1
MW-15A1	D	1104.99	1101.45	63.8	1041.19	63.73	1041.26	65.49		64.65	0.84
MW-15AR	D	1104.54	1101.19	64.53	1040.01	64.58	1039.96	67.54		67.5	0.04
MW-17	D	1076.09	1072.5	40.96	1035.13	41.15	1034.94	51.09		50.2	0.89
MW-18	D	1032.06	1028.63	17.85	1014.21	17.88	1014.18	25.93		25.6	0.33
MW-19	D	1028.21	1024.92	14.73	1013.48	15.12	1013.09	35.29		35.5	-0.21
MW-20	D	1026.08	1023.37	14.82	1011.26	15.01	1011.07	32.21		29.8	2.41
MW-21R	D	1033.51	1031.07	23.05	1010.46	24.03	1009.48	45.5	2017	45.5	0
MW-22	D	1079.15	1075.98	9.53	1069.62	8.30	1070.85	33.17		32.5	0.67
MW-24	D	1033.26	1030.86	12.36	1020.9	12.72	1020.54	23.0	2017	23.0	0
MW-25	D	1031.96	1030.25	13.34	1018.62	15.18	1016.78	30.4	2017	30.4	0
MW-27	D	1034.34	1032.95	17.85	1016.49	18.25	1016.09	20.3	2017	20.3	0
MW-28	D	1035.16	1032.85	10.81	1024.35	11.01	1024.15	13.01	2017	13.01	0
MW-29	D	1028.77	1025.43	18.06	1010.71	18.88	1009.89	35.7	2017	35.7	0
MW-30	D	1042.84	1039.55	17.14	1025.7	17.81	1025.03	20.45		20.45	0
MW-31	D	1043.75	1040.90			17.42	1026.33	25.96		25.96	0
MW-32	D	1049.25	1046.20			12.36	1036.89	19.4		19.4	0
GUH-1	D	1038.27	NR	6.35	1031.92	5.60	1032.67	6.35	2017	6.35	0
GUH-2	D	1042.60	NR	13.2	1029.4	11.90	1030.70	13.2	2019	13.2	0
GUH-3	D	1041.44	NR	9.7	1031.74	9.20	1032.24	9.7	2019	9.7	0
GUH-4	D	1045.92	NR			12.55	1033.37	12.55	2024	12.55	0
GUH-5	D	1051.19	NR			12.40	1038.79	12.65	2024	12.65	0
GUH-6	D	1050.71	NR			11.15	1039.56	11.15	2024	11.15	0

U- Indicates Upgradient/Background

D - Indicates Downgradient

Water Elevation Data

NCIRSWA Sanitary Landfill

Fort Dodge, Iowa

								Sedimentation Assessment			
				4/11/2023		10/5/2023		ORIGINAL		10/5/2023	10/5/2023
Existing Monitoring Well ID	Gradient	Top of Casing (Elevation)	Ground Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Bottom Of Well Depth (ft)	year modified	Bottom Of Well Depth (ft)	Well Depth Difference (ft)
MW-5A	U	1112.69	1110.42	8.98	1103.71	14.1	1098.59	29.3		29	0.3
MW-5B	U	1111.68	1109.41	16.7	1094.98	19.49	1092.19	52		48.6	3.4
MW-6	U	1116.43	1113.85	18.19	1098.24	23.5	1092.93	40.9		40.3	0.6
MW-7	U	1117.86	1115.91	26.63	1091.23	27.09	1090.77	52.85	2016	52.85	0
MW-8A	U	1109.48	1106.48	22.5	1086.98	22.7	1086.78	22.7	2017	22.45	0.25
MW-8B	U	1107.31	1104.31	29.27	1078.04	29.91	1077.40	52.3		52.4	-0.1
MW-10B	U	1032.42	1030.65	20.13	1012.29	20.48	1011.94	48.7	2015	48.7	0
MW-12A	U	1123.17	1120.67	9	1114.17	14.26	1108.91	31.25		31.25	0
MW-12B	U	1123.13	1120.63	72.45	1050.68	72.37	1050.76	81.25		81.2	0.05
MW-13	U	1103.77	1101.27	41.73	1062.04	42.48	1061.29	51.2		51.3	-0.1
MW-15B	U	1099.76	1097.26	83.03	1016.73	83.87	1015.89	102.7		104.4	-1.7
MW-23	U	1097.12	1093.95	23.14	1073.98	24.88	1072.24	47.17		47.1	0.07
LB-4	D	1104.12	1101.4	62.48	1041.64	62.83	1041.29	68.4	2015	68.4	0
MW-5C	D	1110.74	1108.47	101.51	1009.23	101.77	1008.97	110.3		110.3	0
MW-10A	D	1032.19	1030.42	24.75	1007.44	24.44	1007.75	29.2	2015	29.2	0
MW-12C	D	1123.05	1120.55	111.31	1011.74	111.34	1011.71	124		124.1	-0.1
MW-15A1	D	1104.99	1101.45	64.1	1040.89	64.28	1040.71	65.49		64.65	0.84
MW-15AR	D	1104.54	1101.19	64.75	1039.79	65.15	1039.39	67.54		67.5	0.04
MW-17	D	1076.09	1072.5	42.4	1033.69	42.64	1033.45	51.09		50.2	0.89
MW-18	D	1032.06	1028.63	17.84	1014.22	17.98	1014.08	25.93		25.6	0.33
MW-19	D	1028.21	1024.92	15	1013.21	15.12	1013.09	35.29		35.5	-0.21
MW-20	D	1026.08	1023.37	14.77	1011.31	15.46	1010.62	32.21		29.8	2.41
MW-21R	D	1033.51	1031.07	22.72	1010.79	24.40	1009.11	45.5	2017	45.5	0
MW-22	D	1079.15	1075.98	8.98	1070.17	7.60	1071.55	33.17		32.5	0.67
MW-24	D	1033.26	1030.86	13.1	1020.16	13.45	1019.81	23.0	2017	23.0	0
MW-25	D	1031.96	1030.25	14.92	1017.04	15.22	1016.74	30.4	2017	30.4	0
MW-27	D	1034.34	1032.95	17.95	1016.39	18.25	1016.09	20.3	2017	20.3	0
MW-28	D	1035.16	1032.85	11.3	1023.86	11.02	1024.14	13.01	2017	13.01	0
MW-29	D	1028.77	1025.43	18.39	1010.38	20.05	1008.72	35.7	2017	35.7	0
MW-30	D	1042.84	1039.55	18.32	1024.52	18.90	1023.94	20.45		20.45	0
GUH-1	D	1038.27	NR	5.5	1032.77	5.70	1032.57	6.25	2017	6.25	0

U- Indicates Upgradient/Background

D - Indicates Downgradient

Water Elevation Data

NCIRSWA Sanitary Landfill
Fort Dodge, Iowa

								Sedimentation Assessment			
				4/19/2022		10/18/2022		ORIGINAL		10/18/2022	10/18/2022
Existing Monitoring Well ID	Gradient	Top of Casing (Elevation)	Ground Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Bottom Of Well Depth (ft)	year modified	Bottom Of Well Depth (ft)	Well Depth Difference (ft)
MW-5A	U	1112.69	1110.42	9.3	1103.39	14.29	1098.40	29.3		29	0.3
MW-5B	U	1111.68	1109.41	15.86	1095.82	18.77	1092.91	52		48.6	3.4
MW-6	U	1116.43	1113.85	17.5	1098.93	24.16	1092.27	40.9		40.3	0.6
MW-7	U	1117.86	1115.91	27.32	1090.54	26.83	1091.03	52.85	2016	52.85	0
MW-8A	U	1109.48	1106.48	21.2	1088.28	22.5	1086.98	22.7	2017	22.45	0.25
MW-8B	U	1107.31	1104.31	25.08	1082.23	28.75	1078.56	52.3		52.4	-0.1
MW-10B	U	1032.42	1030.65	19.72	1012.70	20.23	1012.19	48.7	2015	48.7	0
MW-12A	U	1123.17	1120.67	8.55	1114.62	14.98	1108.19	31.25		31.25	0
MW-12B	U	1123.13	1120.63	72.42	1050.71	72.43	1050.70	81.25		81.2	0.05
MW-13	U	1103.77	1101.27	42.63	1061.14	43.37	1060.40	51.2		51.3	-0.1
MW-15B	U	1099.76	1097.26	83.13	1016.63	83.3	1016.46	102.7		104.4	-1.7
MW-23	U	1097.12	1093.95	23.57	1073.55	NR	NR	47.17		47.1	0.07
LB-4	D	1104.12	1101.4	62.75	1041.37	63.00	1041.12	68.4	2015	68.4	0
MW-5C	D	1110.74	1108.47	101.71	1009.03	101.95	1008.79	110.3		110.3	0
MW-10A	D	1032.19	1030.42	24.7	1007.49	25.18	1007.01	29.2	2015	29.2	0
MW-12C	D	1123.05	1120.55	111.51	1011.54	111.54	1011.51	124		124.1	-0.1
MW-15A1	D	1104.99	1101.45	64.1	1040.89	64.20	1040.79	65.49		64.65	0.84
MW-15AR	D	1104.54	1101.19	64.63	1039.91	65.00	1039.54	67.54		67.5	0.04
MW-17	D	1076.09	1072.5	40.37	1035.72	42.32	1033.77	51.09		50.2	0.89
MW-18	D	1032.06	1028.63	17.88	1014.18	18.06	1014.00	25.93		25.6	0.33
MW-19	D	1028.21	1024.92	14.86	1013.35	15.03	1013.18	35.29		35.5	-0.21
MW-20	D	1026.08	1023.37	15.62	1010.46	15.45	1010.63	32.21		29.8	2.41
MW-21R	D	1033.51	1031.07	21.57	1011.94	23.86	1009.65	45.5	2017	45.5	0
MW-22	D	1079.15	1075.98	8.15	1071	7.00	1072.15	33.17		32.5	0.67
MW-24	D	1033.26	1030.86	12.75	1020.51	13.40	1019.86	23.0	2017	23.0	0
MW-25	D	1031.96	1030.25	14.73	1017.23	15.15	1016.81	30.4	2017	30.4	0
MW-27	D	1034.34	1032.95	18.05	1016.29	18.32	1016.02	20.3	2017	20.3	0
MW-28	D	1035.16	1032.85	11.8	1023.36	11.45	1023.71	13.01	2017	13.01	0
MW-29	D	1028.77	1025.43	17.54	1011.23	17.87	1010.90	35.7	2017	35.7	0
MW-30	D	1042.84	1039.55	18.28	1024.56	18.19	1024.65	20.45		20.45	0
GUH-1	D	1038.27	NR	6.35	1031.92	6.35	1031.92	6.25	2017	6.25	0

U- Indicates Upgradient/Background
D - Indicates Downgradient

Water Elevation Data

NCIRSWA Sanitary Landfill
Fort Dodge, Iowa

										Sedimentation Assessment			
				4/20/2017		7/17/2017		10/18/2017		ORIGINAL		10/18/2017	10/18/2017
Existing Monitoring Well ID	Gradient	Top of Casing (Elevation)	Ground Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Bottom Of Well Depth (ft)	year modified	Bottom Of Well Depth (ft)	Well Depth Difference (ft)
M-5	U	1112.69	1110.42	5.1	1107.59	NR	NR	10.46	1102.23	29.3		29	0.3
MW-5B	U	1111.68	1109.41	8.81	1102.87	NR	NR	15.8	1095.88	52		48.6	3.4
MW-6	U	1116.43	1113.85	8.68	1107.75	NR	NR	21.17	1095.26	40.9		40.3	0.6
MW-7	U	1117.86	1115.91	24.34	1093.52	NR	NR	24.55	1093.31	52.85	2016	52.85	0
MW-8A	U	1109.48	1106.48	6.21	1103.27	NR	NR	22.7	1086.78	22.7	2017	22.7	0
MW-8B	U	1107.31	1104.31	15.77	1091.54	NR	NR	27.59	1079.72	52.3		52.4	-0.1
MW-10B	U	1032.42	1030.65	19.34	1013.08	NR	NR	19.13	1013.29	48.7	2015	48.7	0
MW-12A	U	1123.17	1120.67	2.7	1120.47	NR	NR	10.3	1112.87	31.25		31.25	0
MW-12B	U	1123.13	1120.63	73.65	1049.48	NR	NR	72.95	1050.18	81.25		81.2	0.05
MW-13	U	1103.77	1101.27	40.01	1063.76	NR	NR	44.25	1059.52	51.2		51.3	-0.1
MW-15B	U	1099.76	1097.26	81.65	1018.11	NR	NR	82.8	1016.96	102.7		104.4	-1.7
MW-23	U	1097.12	1093.95	18.22	1078.9	NR	NR	23.85	1073.27	47.17		47.1	0.07
LB-4	D	1104.12	1101.4	60.92	1043.2	NR	NR	62.08	1042.04	68.4	2015	68.4	0
MW-5C	D	1110.74	1108.47	100.98	1009.76	NR	NR	101.28	1009.46	110.3		110.3	0
MW-10A	D	1032.19	1030.42	23.22	1008.97	NR	NR	24.3	1007.89	29.2	2015	29.2	0
MW-12C	D	1123.05	1120.55	111.25	1011.8	111.33	1011.72	110.96	1012.09	124		124.1	-0.1
MW-15A1	D	1104.99	1101.45	61.4	1043.59	NR	NR	63.11	1041.88	65.49		64.65	0.84
MW-15AR	D	1104.54	1101.19	60.56	1043.98	NR	NR	63.26	1041.28	67.54		67.5	0.04
MW-17	D	1076.09	1072.5	37.4	1038.69	NR	NR	39.35	1036.74	51.09		50.2	0.89
MW-18	D	1032.06	1028.63	16.91	1015.15	NR	NR	17.39	1014.67	25.93		25.6	0.33
MW-19	D	1028.21	1024.92	13.95	1014.26	NR	NR	14.77	1013.44	35.29		35.5	-0.21
MW-20	D	1026.08	1023.37	13.7	1012.38	NR	NR	14.77	1011.31	32.21		29.8	2.41
MW-21R	D	1033.51	1031.07	27.34	1006.17	25.1	1008.41	31.5	1002.01	45.5	2017	45.5	0
MW-22	D	1079.15	1075.98	4.25	1074.9	4.6	1074.55	3.5	1075.65	33.17		32.5	0.67
MW-24	D	1033.26	1030.86	NR	NR	NR	NR	12.1	1021.16	23.0	2017	23.0	0
MW-25	D	1031.96	1030.25	NR	NR	NR	NR	14.2	1017.76	30.4	2017	30.4	0
MW-26	D	1028.93	1026.15	NR	NR	NR	NR	13.9	1015.03	25.5	2017	25.5	0
MW-27	D	1034.34	1032.95	NR	NR	NR	NR	16.88	1017.46	20.3	2017	20.3	0
MW-28	D	1035.16	1032.85	NR	NR	NR	NR	13.01	1022.15	13.01	2017	13.01	0
MW-29	D	1028.77	1025.43	NR	NR	NR	NR	18.4	1010.37	35.7	2017	35.7	0
GUH-1	D	1038.27	NR	6.2	1032.07	5.5	1032.77	3.4	1034.87	6.25	2017	6.25	0

U- Indicates Upgradient/Background

D - Indicates Downgradient

Water Elevation Data

NCIRSWA Sanitary Landfill
Fort Dodge, Iowa

Existing Monitoring Well ID	Gradient	Top of Casing (Elevation)	Ground Surface (Elevation)	5/17/2013		7/23/2013		8/5/2013		11/17/2013		ORIGINAL	11/17/2013	11/17/2013
				Water Depth (ft)	Water Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Water Depth (ft)	Water Surface (Elevation)	Bottom Of Well Depth (ft)	Bottom Of Well Depth (ft)	Well Depth Difference (ft)
M-5	U	1112.69	1110.42	10.9	1101.79					17.32	1095.37	29.3	29	0.3
MW-5B	U	1111.68	1109.41	16.3	1095.38					19.7	1091.98	52	48.6	3.4
MW-6	U	1116.43	1113.85	14.8	1101.63					24.38	1092.05	40.9	40.35	0.55
MW-7	U	1117.86	1115.91	17.25	1100.61					20.3	1097.56	48.3	45	3.3
MW-8A	U	1109.48	1106.48	15.3	1094.18					22.15	1087.33	20.5	22.15	-1.65
MW-8B	U	1107.31	1104.31	24.25	1083.06					29.1	1078.21	52.3	48.85	3.45
MW-10B	U	1032.42	1030.65	18.3	1014.12					20.4	1012.02	45.8	43.85	1.95
MW-12A	U	1123.17	1120.67	4.25	1118.92					16.48	1106.69	31.25	31.25	0
MW-12B	U	1123.13	1120.63	77	1046.13					77.25	1045.88	81.25	81.25	0
MW-13	U	1103.77	1101.27	41.05	1062.72					44.5	1059.27	51.2	51.2	0
MW-15B	U	1099.76	1097.26	82.6	1017.16					83.2	1016.56	102.7	102.7	0
MW-23	U	1097.12	1093.95	20.5	1076.62					23.8	1073.32	47.17	47.1	0.07
LB-4	D	1104.12	1101.4	62.8	1041.32					65.2	1038.92	71	69.2	1.8
MW-5C	D	1110.74	1108.47	101.4	1009.34					101.6	1009.14	110.3	110.3	0
MW-10A	D	1032.19	1030.42	18.5	1013.69			19.45	1012.74	19.99	1012.2	23.9	23.55	0.35
MW-12C	D	1123.05	1120.55	111.3	1011.75					110.15	1012.9	124	124	0
MW-15A1	D	1104.99	1101.45	62.7	1042.29			63	1041.99	63.25	1041.74	65.49	64.9	0.59
MW-15AR	D	1104.54	1101.19	62.8	1041.74					64.1	1040.44	67.54	67.5	0.04
MW-17	D	1076.09	1072.5	39.9	1036.19					40.91	1035.18	51.09	50.75	0.34
MW-18	D	1032.06	1028.63	16.4	1015.66					17.56	1014.5	25.93	25.66	0.27
MW-19	D	1028.21	1024.92	14.5	1013.71					15	1013.21	35.29	35.5	-0.21
MW-20	D	1026.08	1023.37	14.3	1011.78	14.55	1011.53			15.25	1010.83	32.21	29.7	2.51
MW-21	D	1030.27	1027.31	22.9	1007.37					22.2	1008.07	46.96	46.1	0.86
MW-22	D	1079.15	1075.98	4.4	1074.75					23.8	1055.35	33.17	32.6	0.57

U- Indicates Upgradient/Background
D - Indicates Downgradient

Table 5 – Background and GWPS Summary
(Intrawell)

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Antimony, total	ug/L	GU-4	5	0	5										*
Arsenic, total	ug/L	GU-4	5	0	5										*
Barium, total	ug/L	GU-4	5	0	5										*
Beryllium, total	ug/L	GU-4	5	0	5										*
Cadmium, total	ug/L	GU-4	5	0	5										*
Chromium, total	ug/L	GU-4	3	0	5										*
Cobalt, total	ug/L	GU-4	5	0	5										*
Copper, total	ug/L	GU-4	5	0	5										*
Lead, total	ug/L	GU-4	5	0	5										*
Nickel, total	ug/L	GU-4	5	0	5										*
Selenium, total	ug/L	GU-4	5	0	5										*
Silver, total	ug/L	GU-4	5	0	5										*
Thallium, total	ug/L	GU-4	5	0	5										*
Vanadium, total	ug/L	GU-4	5	0	5										*
Zinc, total	ug/L	GU-4	5	0	5										*
Antimony, total	ug/L	MW-10A	13	7	43			1.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-10A	13	8	44	6.8000	3.7354	3.0000	2.0000	12.6969	6.8000	31.0802	normal		
Barium, total	ug/L	MW-10A	11	9	45	37.1000	10.5196	41.9000	33.0000	45.9608	37.1000	105.4774	normal		
Beryllium, total	ug/L	MW-10A	13	7	43			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-10A	13	7	43			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-10A	13	7	43			1.0000	1.0000			12.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-10A	13	7	43	1.4615	1.9894	1.6000	1.2000	1.4615	1.4615	14.3924	normal		
Copper, total	ug/L	MW-10A	13	8	44			5.0000	5.0000			11.4000	nonpar	.99	**
Lead, total	ug/L	MW-10A	13	7	43			1.0000	1.0000			6.9000	nonpar	.99	**
Nickel, total	ug/L	MW-10A	13	7	43	12.4000	14.5913	21.0000	9.6000	12.4000	12.4000	107.2436	normal		
Selenium, total	ug/L	MW-10A	13	7	43			2.0000	2.0000			9.0000	nonpar	.99	**
Silver, total	ug/L	MW-10A	13	7	43			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-10A	13	7	43			0.5000	0.5000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-10A	13	7	43			2.0000	2.0000			28.4000	nonpar	.99	**
Zinc, total	ug/L	MW-10A	13	7	43	23.1231	14.8627	42.7000	54.5000	31.5530	51.7829	119.7307	normal		
Antimony, total	ug/L	MW-10B	13	8	39			1.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-10B	13	8	39			2.0000	2.0000			4.1000	nonpar	.99	**
Barium, total	ug/L	MW-10B	11	8	39	31.4091	6.2633	29.5000	26.7000	31.4091	31.4091	72.1205	normal		
Beryllium, total	ug/L	MW-10B	13	8	39			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-10B	13	8	40			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-10B	13	8	39			1.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-10B	13	8	40			0.5000	0.5000			4.1000	nonpar	.99	**
Copper, total	ug/L	MW-10B	13	8	39			5.0000	5.0000			7.4000	nonpar	.99	**
Lead, total	ug/L	MW-10B	13	8	39			1.0000	1.0000			4.6000	nonpar	.99	**
Nickel, total	ug/L	MW-10B	13	8	40	8.6538	4.8541	5.0000	5.6000	8.6538	8.6538	40.2058	normal		
Selenium, total	ug/L	MW-10B	13	8	40			2.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-10B	13	8	40			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-10B	13	8	39			0.5000	0.5000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-10B	13	8	39			2.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-10B	12	8	39	18.2583	8.2091	7.6000	8.1000	18.2583	18.2583	71.6177	normal		
Antimony, total	ug/L	MW-20	13	9	43			1.0000	1.0000			2.0000	nonpar	.99	**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

* - Insufficient Data.

** - Detection Frequency < 25%.

*** - Zero Variance.

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Arsenic, total	ug/L	MW-20	13	9	43	25.2154	16.8948	8.3000	11.2000	25.2154	25.2154	135.0314	normal		
Barium, total	ug/L	MW-20	13	9	43	67.6154	27.4452	65.3000	59.1000	67.6154	67.6154	246.0093	normal		
Beryllium, total	ug/L	MW-20	13	9	43			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-20	13	9	43			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-20	13	9	43			1.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-20	13	9	44	5.9308	2.2574	1.0000	1.3000	5.9308	5.9308	20.6036	normal		
Copper, total	ug/L	MW-20	13	10	44			5.0000	5.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-20	13	9	43			1.0000	1.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-20	13	9	43	8.4692	2.6550	5.0000	5.0000	8.4692	8.4692	25.7267	normal		
Selenium, total	ug/L	MW-20	13	9	43			2.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-20	13	9	43			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-20	13	9	43			0.5000	0.5000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-20	13	9	43			2.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-20	14	9	44	21.4357	17.4166	12.0000	5.0000	21.4357	21.4357	134.6433	normal		
Antimony, total	ug/L	MW-21R	8	9	17			1.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-21R	8	10	18	4.1250	0.2315	5.8000	8.4000	6.4121	9.0121	5.6295	normal		
Barium, total	ug/L	MW-21R	8	9	17	31.8000	12.8251	26.8000	28.8000	31.8000	31.8000	115.1631	normal		
Beryllium, total	ug/L	MW-21R	8	9	17			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-21R	8	9	17			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-21R	8	9	17			1.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-21R	9	9	18	17.8111	5.2987	5.4000	4.0000	17.8111	17.8111	52.2526	normal		
Copper, total	ug/L	MW-21R	8	9	17			5.0000	5.0000			5.2000	nonpar	.99	**
Lead, total	ug/L	MW-21R	8	9	17			1.0000	1.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-21R	9	9	18	35.4889	15.6969	7.2000	5.0000	35.4889	35.4889	137.5189	normal		
Selenium, total	ug/L	MW-21R	8	9	17			2.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-21R	8	9	17			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-21R	8	9	17			0.5000	0.5000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-21R	8	9	17			2.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-21R	8	9	17	22.8625	12.7285	12.6000	5.0000	22.8625	22.8625	105.5976	normal		
Antimony, total	ug/L	MW-22	13	9	42			1.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-22	13	9	42			2.0000	2.0000			4.0000	nonpar	.99	**
Barium, total	ug/L	MW-22	13	9	42	18.1385	4.1526	14.3000	12.7000	18.1385	18.1385	45.1305	normal		
Beryllium, total	ug/L	MW-22	13	9	42			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-22	13	9	42			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-22	13	9	42			1.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-22	13	9	42			0.5000	0.5000			0.8000	nonpar	.99	**
Copper, total	ug/L	MW-22	13	10	43			5.0000	5.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-22	13	9	42			1.0000	1.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-22	14	9	43	18.7929	15.0825	5.0000	5.6000	18.7929	18.7929	116.8292	normal		
Selenium, total	ug/L	MW-22	13	9	42			2.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-22	13	9	42			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-22	13	9	42			0.5000	0.5000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-22	13	9	42			2.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-22	15	9	44	22.3733	13.7636	7.1000	8.4000	22.3733	22.3733	111.8370	normal		
Antimony, total	ug/L	MW-25	8	0	8			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-25	8	0	8	6.8875	3.8324	4.0000	5.9000			31.7978	normal		

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

* - Insufficient Data.

** - Detection Frequency < 25%.

*** - Zero Variance.

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Barium, total	ug/L	MW-25	7	0	8	56.0143	8.1659	16.6000	45.9000			109.0924	normal		**
Beryllium, total	ug/L	MW-25	8	0	8			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-25	8	0	8			0.8000	0.8000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-25	8	0	8			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-25	8	0	8	5.6250	3.6881	0.5000	1.1000			29.5977	normal		**
Copper, total	ug/L	MW-25	8	0	8			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-25	8	0	8			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-25	8	0	8	11.1875	6.1527	5.0000	5.0000			51.1800	normal		**
Selenium, total	ug/L	MW-25	8	0	8			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-25	8	0	8			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-25	8	0	8			2.0000	2.0000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-25	8	0	8			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-25	8	0	8	16.6250	6.2513	6.8000	6.2000			57.2587	normal		**
Antimony, total	ug/L	MW-28	7	0	7								nonpar *		**
Arsenic, total	ug/L	MW-28	7	0	7								nonpar *		**
Barium, total	ug/L	MW-28	7	0	7	20.2857	4.3056	17.9000	29.7000			48.2720	normal		**
Beryllium, total	ug/L	MW-28	7	0	7								nonpar *		**
Cadmium, total	ug/L	MW-28	7	0	7								nonpar *		**
Chromium, total	ug/L	MW-28	5	0	7										*
Cobalt, total	ug/L	MW-28	7	0	7								nonpar *		**
Copper, total	ug/L	MW-28	7	0	7								nonpar *		**
Lead, total	ug/L	MW-28	7	0	7								nonpar *		**
Nickel, total	ug/L	MW-28	7	0	7	7.4857	0.9582	7.2000	7.7000			13.7138	normal		**
Selenium, total	ug/L	MW-28	7	0	7	3.8143	0.8971	2.5000	2.7000			9.6453	normal		**
Silver, total	ug/L	MW-28	7	0	7								nonpar *		**
Thallium, total	ug/L	MW-28	7	0	7								nonpar *		**
Vanadium, total	ug/L	MW-28	7	0	7								nonpar *		**
Zinc, total	ug/L	MW-28	7	0	7								nonpar *		**
Antimony, total	ug/L	MW-29	2	0	2										*
Arsenic, total	ug/L	MW-29	2	0	2										*
Barium, total	ug/L	MW-29	2	0	2										*
Beryllium, total	ug/L	MW-29	2	0	2										*
Cadmium, total	ug/L	MW-29	2	0	2										*
Chromium, total	ug/L	MW-29	2	0	2										*
Cobalt, total	ug/L	MW-29	3	0	3										*
Copper, total	ug/L	MW-29	2	0	2										*
Lead, total	ug/L	MW-29	2	0	2										*
Nickel, total	ug/L	MW-29	2	0	2										*
Selenium, total	ug/L	MW-29	2	0	2										*
Silver, total	ug/L	MW-29	2	0	2										*
Thallium, total	ug/L	MW-29	2	0	2										*
Vanadium, total	ug/L	MW-29	2	0	2										*
Zinc, total	ug/L	MW-29	2	0	2										*
Antimony, total	ug/L	MW-30	8	5	13			1.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-30	8	5	13			2.0000	2.0000			9.1000	nonpar	.99	**
Barium, total	ug/L	MW-30	8	5	13	26.8000	9.6465	15.3000	15.3000	26.8000	26.8000	89.5020	normal		**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

* - Insufficient Data.

** - Detection Frequency < 25%.

*** - Zero Variance.

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Beryllium, total	ug/L	MW-30	8	5	13			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-30	8	5	13			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-30	8	5	13			1.0000	1.0000			43.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-30	8	5	13	7.3750	7.3738	3.4000	4.7000	7.3750	7.3750	55.3050	normal		
Copper, total	ug/L	MW-30	7	5	13	4.5143	0.8802	5.0000	5.0000	4.5143	4.5143	10.2356	normal		
Lead, total	ug/L	MW-30	8	5	13			1.0000	1.0000			12.7000	nonpar	.99	**
Nickel, total	ug/L	MW-30	8	5	13	15.5875	16.3448	8.3000	13.9000	15.5875	15.5875	121.8287	normal		
Selenium, total	ug/L	MW-30	8	5	13			2.0000	2.0000			5.7000	nonpar	.99	**
Silver, total	ug/L	MW-30	8	5	13			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-30	8	5	13			0.5000	0.5000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-30	8	5	13			2.0000	2.0000			21.4000	nonpar	.99	**
Zinc, total	ug/L	MW-30	8	5	13	38.4375	41.5326	5.0000	7.9000	38.4375	38.4375	308.3996	normal		
Antimony, total	ug/L	MW-31	4	0	4										*
Arsenic, total	ug/L	MW-31	4	0	4										*
Barium, total	ug/L	MW-31	4	0	4										*
Beryllium, total	ug/L	MW-31	4	0	4										*
Cadmium, total	ug/L	MW-31	4	0	4										*
Chromium, total	ug/L	MW-31	4	0	4										*
Cobalt, total	ug/L	MW-31	4	0	4										*
Copper, total	ug/L	MW-31	4	0	4										*
Lead, total	ug/L	MW-31	4	0	4										*
Nickel, total	ug/L	MW-31	4	0	4										*
Selenium, total	ug/L	MW-31	4	0	4										*
Silver, total	ug/L	MW-31	4	0	4										*
Thallium, total	ug/L	MW-31	4	0	4										*
Vanadium, total	ug/L	MW-31	4	0	4										*
Zinc, total	ug/L	MW-31	4	0	4										*
Antimony, total	ug/L	MW-32	4	0	4										*
Arsenic, total	ug/L	MW-32	4	0	4										*
Barium, total	ug/L	MW-32	4	0	4										*
Beryllium, total	ug/L	MW-32	4	0	4										*
Cadmium, total	ug/L	MW-32	4	0	4										*
Chromium, total	ug/L	MW-32	4	0	4										*
Cobalt, total	ug/L	MW-32	4	0	4										*
Copper, total	ug/L	MW-32	4	0	4										*
Lead, total	ug/L	MW-32	4	0	4										*
Nickel, total	ug/L	MW-32	4	0	4										*
Selenium, total	ug/L	MW-32	4	0	4										*
Silver, total	ug/L	MW-32	4	0	4										*
Thallium, total	ug/L	MW-32	4	0	4										*
Vanadium, total	ug/L	MW-32	4	0	4										*
Zinc, total	ug/L	MW-32	4	0	4										*

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

* - Insufficient Data.

** - Detection Frequency < 25%.

*** - Zero Variance.

Table 5A – Background and GWPS Summary
(Interwell – Site Wide Prediction Limits)

Table 5A
Site-Wide Interwell Prediction Limits - GWPS Summary
Annual Water Quality Report
NCIRSWA Sanitary Landfill
Permit No. 94-SDP-01-75P

Site-Wide *Interwell* Background Study January, 2020

Inorganics - Appendix I										
Constituent	Units	Model Type	Samples - N	Detections	Mean	SD	Prediction Limit	Confidence	GWPS	Source
Antimony (Sb)	µg/l	nonparametric	71	0			2.000	0.99	6	SS
Arsenic (As)	µg/l	nonparametric	71	20			66.100	0.99	66.1	Site
Barium (Ba)	µg/l	lognormal	71	71	3.5364	0.4836	109.470		2000	SS
Beryllium (Be)	µg/l	nonparametric	71	0			4.000	0.99	4	SS
Cadmium (Cd)	µg/l	nonparametric	71	0			0.800	0.99	5	SS
Chromium (Cr)	µg/l	nonparametric	71	1			12.000	0.99	100	SS
Cobalt (Co)	µg/l	normal	73	49	11.6863	15.2029	48.105		48.1070	Site
Copper (Cu)	µg/l	nonparametric	71	5			32.800	0.99	1300	SS
Lead (Pb)	µg/l	nonparametric	71	2			6.900	0.99	15	SS
Nickel (Ni)	µg/l	lognormal	73	66	2.7603	1.0773	207.713		207.7134	Site
Selenium (Se)	µg/l	nonparametric	71	4			19.200	0.99	50	SS
Silver (Ag)	µg/l	nonparametric	71	0			4.000	0.99	100	SS
Thallium (Tl)	µg/l	nonparametric	71	0			4.000	0.99	2	SS
Vanadium (V)	µg/l	nonparametric	71	1			28.400	0.99	35	SS
Zinc (Zn)	µg/l	nonparametric	72	41			158.000	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	71	0	<1	<1	<1		various	SS

= Prediction limit exceeds the GWPS. A Site-Specific GWPS equal to the Prediction Limit is used.

Table 6 – Summary of Detections

Table 6
Summary of Well/Detected Constituent Pairs that Exceed the Control
Annual Water Quality Report
NCIRSWA Sanitary Landfill
Permit No. 94-SDP-01-75P

Well	Constituent	Date	Most recent result (ug/L)	Background Standard (ug/L)	GWPS (ug/L)	Monitoring Program
MW-21R	Arsenic	4/8/2025	5.80	5.6295	66.1	Assessment Monitoring Well
MW-21R	Arsenic	10/23/2025	8.40	5.6295	66.1	Assessment Monitoring Well

Table 7 – Summary of Ongoing and Newly Identified SSI

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
NCIRSWA
Permit No. 94-SDP-01-75P

KEY:	SSI	SSL LCL>GWPS

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

Monitoring Well	Compound	Sample	Each	Control	95% LCL (ug/L)	GWPS	SSI	Resamples	5th Background
		Date	Result (ug/L)	Limit (ug/L)		Limit (ug/L)	Initial Exceedance		Sample
MW-21R	Arsenic	4/20/2017	4.5	5.6295	2.000	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	10/18/2017	4.5	5.6295	2.000	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	10/15/2018	<4	5.6295	2.000	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	4/9/2019	<4	5.6295	2.000	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	10/9/2019	<4	5.6295	2.000	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	4/1/2020	<4	5.6295	2.000	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	10/5/2020	<4	5.6295	2.000	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	4/13/2021	<4	5.6295	2.000	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	10/21/2021	16.2	5.6295	0.000	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	1/10/2022	15.2	5.6295	0.000	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	4/19/2022	17.1	5.6295	4.243	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	10/18/2022	9.8	5.6295	10.712	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	4/11/2023	14.7	5.6295	10.542	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	10/5/2023	10.9	5.6295	9.148	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	4/23/2024	5.2	5.6295	5.549	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	10/11/2024	12.6	5.6295	6.057	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	4/8/2025	5.8	5.6295	4.293	66.1*	1/10/2022	N/A	4/9/2019
MW-21R	Arsenic	10/23/2025	8.4	5.6295	4.040	66.1*	1/10/2022	N/A	4/9/2019

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
NCIRSWA
Permit No. 94-SDP-01-75P

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)	Control Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-21R	Cobalt	4/20/2017	25.20	---	---	51.9*	N/A	N/A	4/9/2019
MW-21R	Cobalt	7/17/2017	20.90	---	---	51.9*	N/A	N/A	4/9/2019
MW-21R	Cobalt	10/18/2017	19.4	---	---	51.9*	N/A	N/A	4/9/2019
MW-21R	Cobalt	10/15/2018	15.7	---	15.677	51.9*	N/A	N/A	4/9/2019
MW-21R	Cobalt	4/9/2019	12	43.8208	12.312	51.9*	N/A	N/A	4/9/2019
MW-21R	Cobalt	10/9/2019	16.5	48.1081	12.315	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	4/1/2020	8.1	53.8038	8.543	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	10/5/2020	21.1	52.9745	7.814	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	4/13/2021	21.4	52.2526	9.479	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	10/21/2021	24.4	52.2526	10.216	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	4/19/2022	23.6	52.2526	20.713	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	10/18/2022	23.6	52.2526	21.733	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	4/11/2023	16.7	52.2526	17.837	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	10/5/2023	12.0	52.2526	12.300	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	4/23/2024	9.1	52.2526	7.905	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	10/11/2024	6.8	52.2526	6.129	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	4/8/2025	5.4	52.2526	4.930	48.1*	N/A	N/A	4/9/2019
MW-21R	Cobalt	10/23/2025	4.0	52.2526	3.767	48.1*	N/A	N/A	4/9/2019

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
(Not Required)

Table 9 – Analytical Data Summary

Table 9

Analytical Data Summary for GU-2

Constituents	Units	8/27/2019	9/24/2019	9/26/2019	4/11/2023
1,1,1,2-tetrachloroethane	ug/L	<1			<1
1,1,1-trichloroethane	ug/L	<1			<1
1,1,2,2-tetrachloroethane	ug/L	<1			<1
1,1,2-trichloroethane	ug/L	<1			<1
1,1-dichloroethane	ug/L	<1			<1
1,1-dichloroethene	ug/L	<1			<1
1,2,3-trichloropropane	ug/L	<1			<1
1,2-dibromo-3-chloropropane	ug/L	<1			<5
1,2-dibromoethane	ug/L	<1			<1
1,2-dichlorobenzene	ug/L	<1			<1
1,2-dichloroethane	ug/L	<1			<1
1,2-dichloropropane	ug/L	<1			<1
1,4-dichlorobenzene	ug/L	<1			<1
2-butanone (mek)	ug/L	<5			<10
2-hexanone (mbk)	ug/L	<5			<5
4-methyl-2-pentanone (mibk)	ug/L	<5			<5
Acetone	ug/L	<10.0			10.7
Acrylonitrile	ug/L	<5			<5
Antimony, total	ug/L	<2	<2	<2	<2
Arsenic, total	ug/L	<4.0	<4.0	<4.0	4.5
Barium, total	ug/L	18.7	39.6	69.8	39.9
Benzene	ug/L	<1			<1
Beryllium, total	ug/L	<4	<4	<4	<4
Bromochloromethane	ug/L	<1			<1
Bromodichloromethane	ug/L	<1			<1
Bromoform	ug/L	<1			<1
Bromomethane	ug/L	<1			<1
Cadmium, total	ug/L	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1			<1
Carbon tetrachloride	ug/L	<1			<1
Chlorobenzene	ug/L	<1			<1
Chloroethane	ug/L	<1			<1
Chloroform	ug/L	<1			<1
Chloromethane	ug/L	<1			<1
Chromium, total	ug/L	<8	<8	<8	<8
Cis-1,2-dichloroethene	ug/L	<1			<1
Cis-1,3-dichloropropene	ug/L	<1			<1
Cobalt, total	ug/L	<.8	.9	<.8	6.5
Copper, total	ug/L	32.8	<4.0	<4.0	6.0
Dibromochloromethane	ug/L	<1			<1
Dibromomethane	ug/L	<1			<1
Ethylbenzene	ug/L	<1			<1
Iodomethane	ug/L	<1			<1
Lead, total	ug/L	<4	<4	<4	<4
Methylene chloride	ug/L	<5			<5
Nickel, total	ug/L	23.1	24.7	16.7	44.2
Selenium, total	ug/L	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4
Styrene	ug/L	<1			<1
Tetrachloroethene	ug/L	<1			<1
Thallium, total	ug/L	<2	<2	<2	<2
Toluene	ug/L	<1			<1
Trans-1,2-dichloroethene	ug/L	<1			<1
Trans-1,3-dichloropropene	ug/L	<1			<1
Trans-1,4-dichloro-2-butene	ug/L	<5			<5
Trichloroethene	ug/L	<1			<1
Trichlorofluoromethane	ug/L	<1			<1
Vanadium, total	ug/L	<20	<20	<20	<20
Vinyl acetate	ug/L	<5			<5
Vinyl chloride	ug/L	<1			<1
Xylenes, total	ug/L	<2			<2
Zinc, total	ug/L	22.8	12.2	10.4	30.1

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

Table 9

Analytical Data Summary for GU-3

Constituents	Units	8/27/2019	9/9/2019	9/24/2019	9/26/2019	10/9/2019	4/1/2020	10/5/2023
1,1,1,2-tetrachloroethane	ug/L	<1				<1	<1	<1
1,1,1-trichloroethane	ug/L	<1				<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1				<1	<1	<1
1,1,2-trichloroethane	ug/L	<1				<1	<1	<1
1,1-dichloroethane	ug/L	<1				<1	<1	<1
1,1-dichloroethene	ug/L	<1				<1	<1	<1
1,2,3-trichloropropane	ug/L	<1				<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1				<1	<5	<5
1,2-dibromoethane	ug/L	<1				<1	<1	<1
1,2-dichlorobenzene	ug/L	<1				<1	<1	<1
1,2-dichloroethane	ug/L	<1				<1	<1	<1
1,2-dichloropropane	ug/L	<1				<1	<1	<1
1,4-dichlorobenzene	ug/L	<1				<1	<1	<1
2-butanone (mek)	ug/L	<5				<5	<5	<10
2-hexanone (mbk)	ug/L	<5				<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5				<5	<5	<5
Acetone	ug/L	<10				<10	<10	<10
Acrylonitrile	ug/L	<5				<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.7
Barium, total	ug/L	26.2	26.1	25.8	24.5	26.3	22.1	55.1
Benzene	ug/L	<1				<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L	<1				<1	<1	<1
Bromodichloromethane	ug/L	<1				<1	<1	<1
Bromoform	ug/L	<1				<1	<1	<1
Bromomethane	ug/L	<1				<1	<1	<1
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1				<1	<1	<1
Carbon tetrachloride	ug/L	<1				<1	<1	<1
Chlorobenzene	ug/L	<1				<1	<1	<1
Chloroethane	ug/L	<1				<1	<1	<1
Chloroform	ug/L	<1				<1	<1	<1
Chloromethane	ug/L	<1				<1	<1	<1
Chromium, total	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	13.8
Cis-1,2-dichloroethene	ug/L	<1				<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1				<1	<1	<1
Cobalt, total	ug/L	3.0	2.3	1.7	1.7	<.8	<.8	19.8
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	12
Dibromochloromethane	ug/L	<1				<1	<1	<1
Dibromomethane	ug/L	<1				<1	<1	<1
Ethylbenzene	ug/L	<1				<1	<1	<1
Iodomethane	ug/L	<1				<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Methylene chloride	ug/L	<5				<5	<5	<5
Nickel, total	ug/L	33.8	31.5	31.5	30.5	18.7	5.9	67.1
Selenium, total	ug/L	<4.0	<4.0	4.7	6.1	19.2	21.8	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Styrene	ug/L	<1				<1	<1	<1
Tetrachloroethene	ug/L	<1				<1	<1	<1
Thallium, total	ug/L	<2	<2	<2	<2	<2	<2	<2
Toluene	ug/L	<1				<1	<1	<1
Trans-1,2-dichloroethene	ug/L	<1				<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1				<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5				<5	<5	<5
Trichloroethene	ug/L	<1				<1	<1	<1
Trichlorofluoromethane	ug/L	<1				<1	<1	<1
Vanadium, total	ug/L	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	22.4
Vinyl acetate	ug/L	<5				<5	<5	<5
Vinyl chloride	ug/L	<1				<1	<1	<1
Xylenes, total	ug/L	<2				<2	<2	<2
Zinc, total	ug/L	11.2	8.4	8.8	8.8	<20.0	<20.0	26.4

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

Table 9

Analytical Data Summary for GU-4

Constituents	Units	9/27/2024	10/11/2024	11/22/2024	4/8/2025	10/23/2025
1,1,1,2-tetrachloroethane	ug/L				<1	<1
1,1,1-trichloroethane	ug/L				<1	<1
1,1,2,2-tetrachloroethane	ug/L				<1	<1
1,1,2-trichloroethane	ug/L				<1	<1
1,1-dichloroethane	ug/L				<1	<1
1,1-dichloroethene	ug/L				<1	<1
1,2,3-trichloropropane	ug/L				<1	<1
1,2-dibromo-3-chloropropane	ug/L				<5	<5
1,2-dibromoethane	ug/L				<1	<1
1,2-dichlorobenzene	ug/L				<1	<1
1,2-dichloroethane	ug/L				<1	<1
1,2-dichloropropane	ug/L				<1	<1
1,4-dichlorobenzene	ug/L				<1	<1
2-butanone (mek)	ug/L				<10	<10
2-hexanone (mbk)	ug/L				<5	<5
4-methyl-2-pentanone (mibk)	ug/L				<5	<5
Acetone	ug/L				<10	<10
Acrylonitrile	ug/L				<5	<5
Antimony, total	ug/L	<2	<2	<2	<1	<1
Arsenic, total	ug/L	<4.0	<4.0	4.3	<2.0	<2.0
Barium, total	ug/L	19.6	15.2	14.4	12.9	18.4
Benzene	ug/L				<1	<1
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<5	<5
Bromochloromethane	ug/L				<1	<1
Bromodichloromethane	ug/L				<1	<1
Bromoform	ug/L				<1	<1
Bromomethane	ug/L				<1	<1
Cadmium, total	ug/L	<.8	<.8	<.8	<2	<2
Carbon disulfide	ug/L				<1	<1
Carbon tetrachloride	ug/L				<1	<1
Chlorobenzene	ug/L				<1	<1
Chloroethane	ug/L				<1	<1
Chloroform	ug/L				<1	<1
Chloromethane	ug/L				<1	<1
Chromium, total	ug/L	<8.0	<8.0	<8.0	1.4	1.0
Cis-1,2-dichloroethene	ug/L				<1	<1
Cis-1,3-dichloropropene	ug/L				<1	<1
Cobalt, total	ug/L	.6	<.4	<.4	<5	<5
Copper, total	ug/L	<4	<4	<4	<5	<5
Dibromochloromethane	ug/L				<1	<1
Dibromomethane	ug/L				<1	<1
Ethylbenzene	ug/L				<1	<1
Iodomethane	ug/L				<1	<1
Lead, total	ug/L	<4	<4	<4	<1	<1
Methylene chloride	ug/L				<5	<5
Nickel, total	ug/L	35.5	18.4	15.7	25.9	12.6
Selenium, total	ug/L	<4.0	<4.0	<4.0	2.4	<2.0
Silver, total	ug/L	<4	<4	<4	<5	<5
Styrene	ug/L				<1	<1
Tetrachloroethene	ug/L				<1	<1
Thallium, total	ug/L	<2.0	<2.0	<2.0	<5	<5
Toluene	ug/L				<1	<1
Trans-1,2-dichloroethene	ug/L				<1	<1
Trans-1,3-dichloropropene	ug/L				<1	<1
Trans-1,4-dichloro-2-butene	ug/L				<5	<5
Trichloroethene	ug/L				<1	<1
Trichlorofluoromethane	ug/L				<1	<1
Vanadium, total	ug/L	<20	<20	<20	<2	<2
Vinyl acetate	ug/L				<5	<5
Vinyl chloride	ug/L				<1	<1
Xylenes, total	ug/L				<2	<2
Zinc, total	ug/L	3590	358	1070	398	203

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

Table 9

Analytical Data Summary for GU-5

Constituents	Units	9/27/2024	10/11/2024
Antimony, total	ug/L	<2	<2
Arsenic, total	ug/L	<4	<4
Barium, total	ug/L	25.6	23.3
Beryllium, total	ug/L	<4	<4
Cadmium, total	ug/L	<.8	<.8
Chromium, total	ug/L	<8	<8
Cobalt, total	ug/L	2.8	2.2
Copper, total	ug/L	<4	<4
Lead, total	ug/L	<4	<4
Nickel, total	ug/L	30.5	23.4
Selenium, total	ug/L	<4	<4
Silver, total	ug/L	<4	<4
Thallium, total	ug/L	<2	<2
Vanadium, total	ug/L	<20	<20
Zinc, total	ug/L	11500	13000

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

Table 9

Analytical Data Summary for MW-10A

Constituents	Units	10/28/2014	4/14/2016	9/29/2016	4/20/2017	10/18/2017	10/15/2018	4/9/2019	10/9/2019
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-dichloroethene	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	18.1	<10.0	<10.0	<10.0	20.3	<10.0	<10.0	<10.0
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	8.4	10.2	8.8	<4.0	6.6	4.1	4.7	16.9
Barium, total	ug/L	143.0	41.3	35.1	29.3	37.8	46.3	31.1	62.3
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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	12.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	7.9	1.5	<8	<8	<8	1.3	<8	2.1
Copper, total	ug/L	11.4	<8.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	6.9	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	55.2	25.8	<8.0	12.9	<4.0	17.5	4.8	14.3
Selenium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	4.9	<4.0	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<2.0	<2.0
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	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
Trichloroethene	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	28.4	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<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	39.7	32.4	8.2	9.3	<20.0	8.1	<8.0	62.9

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

Table 9

Analytical Data Summary for MW-10A

Constituents	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022	7/15/2022	10/18/2022	4/11/2023	7/7/2023
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1		<1	<1	
1,1,1-trichloroethane	<1	<1	<1	<1	<1		<1	<1	
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1		<1	<1	
1,1,2-trichloroethane	<1	<1	<1	<1	<1		<1	<1	
1,1-dichloroethane	<1	<1	<1	<1	<1		<1	<1	
1,1-dichloroethene	<1	<1	<1	<1	<1		<1	<1	
1,2,3-trichloropropane	<1	<1	<1	<1	<1		<1	<1	
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<5		<5	<5	
1,2-dibromoethane	<1	<1	<1	<1	<1		<1	<1	
1,2-dichlorobenzene	<1	<1	<1	<1	<1		<1	<1	
1,2-dichloroethane	<1	<1	<1	<1	<1		<1	<1	
1,2-dichloropropane	<1	<1	<1	<1	<1		<1	<1	
1,4-dichlorobenzene	<1	<1	<1	<1	<1		<1	<1	
2-butanone (mek)	<5	<5	<5	<5	<10		<10	<10	
2-hexanone (mbk)	<5	<5	<5	<5	<5		<5	<5	
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5		<5	<5	
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0	<10.0	
Acrylonitrile	<5	<5	<5	<5	<5		<5	<5	
Antimony, total	<2	<2	<2	<2	<2		<2	<2	
Arsenic, total	4.5	4.4	7.8	<4.0	<4.0		7.5	38.5	7.3
Barium, total	23.7	28.3	38.7	34.2	453.0	47.6	46.1	173.0	39.0
Benzene	<1	<1	<1	<1	<1		<1	<1	
Beryllium, total	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	
Bromochloromethane	<1	<1	<1	<1	<1		<1	<1	
Bromodichloromethane	<1	<1	<1	<1	<1		<1	<1	
Bromoform	<1	<1	<1	<1	<1		<1	<1	
Bromomethane	<1	<1	<1	<1	<1		<1	<1	
Cadmium, total	<.8	<.8	<.8	<.8	<.8		<.8	<.8	
Carbon disulfide	<1	<1	<1	<1	<1		<1	<1	
Carbon tetrachloride	<1	<1	<1	<1	<1		<1	<1	
Chlorobenzene	<1	<1	<1	<1	<1		<1	<1	
Chloroethane	<1	<1	<1	<1	<1		<1	<1	
Chloroform	<1	<1	<1	<1	<1		<1	<1	
Chloromethane	<1	<1	<1	<1	<1		<1	<1	
Chromium, total	<8.0	<8.0	<8.0	<8.0	<8.0		<8.0	9.1	
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1		<1	<1	
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1		<1	<1	
Cobalt, total	<.8	.4	.5	.5	<.4		2.0	4.9	
Copper, total	<4.0	<4.0	<4.0	9.0	<4.0		<4.0	16.3	<4.0
Dibromochloromethane	<1	<1	<1	<1	<1		<1	<1	
Dibromomethane	<1	<1	<1	<1	<1		<1	<1	
Ethylbenzene	<1	<1	<1	<1	<1		<1	<1	
Iodomethane	<1	<1	<1	<1	<1		<1	<1	
Lead, total	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	5.1	
Methylene chloride	<5	<5	<5	<5	<5		<5	<5	
Nickel, total	6.7	<4.0	<4.0	<4.0	<4.0		5.6	22.4	
Selenium, total	<4.0	<4.0	<4.0	<4.0	9.0		<4.0	<4.0	
Silver, total	<4	<4	<4	<4	<4		<4	<4	
Styrene	<1	<1	<1	<1	<1		<1	<1	
Tetrachloroethene	<1	<1	<1	<1	<1		<1	<1	
Thallium, total	<2.0	<2.0	<2.0	<2.0	<2.0		<2.0	<2.0	
Toluene	<1	<1	<1	<1	<1		<1	<1	
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1		<1	<1	
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1		<1	<1	
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5		<5	<5	
Trichloroethene	<1	<1	<1	<1	<1		<1	<1	
Trichlorofluoromethane	<1	<1	<1	<1	<1		<1	<1	
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0		<20.0	<20.0	
Vinyl acetate	<5	<5	<5	<5	<5		<5	<5	
Vinyl chloride	<1	<1	<1	<1	<1		<1	<1	
Xylenes, total	<2	<2	<2	<2	<2		<2	<2	
Zinc, total	<20.0	<20.0	<20.0	<20.0	<20.0		<20.0	69.3	

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

Table 9

Analytical Data Summary for MW-10A

Constituents	10/5/2023	4/23/2024	10/11/2024	4/8/2025	10/23/2025
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1
1,2,3-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	<10.0	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<1	<1
Arsenic, total	4.7	<4.0	22.1	3.0	<2.0
Barium, total	29.7	31.0	62.2	41.9	33.0
Benzene	<1	<1	<1	<1	<1
Beryllium, total	<4.0	<4.0	<4.0	<.5	<.5
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	<.2	<.2
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	1.0	1.0
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	.5	<.4	1.8	1.6	1.2
Copper, total	<4.0	<4.0	<4.0	<5.0	<5.0
Dibromochloromethane	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1
Lead, total	<4.0	<4.0	<4.0	<1.0	<1.0
Methylene chloride	<5	<5	<5	<5	<5
Nickel, total	<4.0	<4.0	11.0	21.0	9.6
Selenium, total	<4.0	<4.0	<4.0	<2.0	<2.0
Silver, total	<4	<4	<4	<5	<5
Styrene	<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1
Thallium, total	<2.0	<2.0	<2.0	<.5	<.5
Toluene	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<2.0	<2.0
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	26.6	42.7	54.5

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

Table 9

Analytical Data Summary for MW-10B

Constituents	Units	10/28/2014	12/3/2014	4/14/2016	9/29/2016	4/20/2017	10/18/2017	10/15/2018	4/9/2019
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-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	19.2	<10.0	<10.0
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	4.1	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Barium, total	ug/L	104.0	97.5	36.9	28.4	30.9	28.2	26.6	30.8
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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-dichloroethene	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	3.1	4.1	<.8	<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	5.3	7.4	<8.0	<4.0	<4.0	<4.0	<4.0	<4.0
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
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4.0	4.6	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	15.8	17.7	13.2	<8.0	9.8	<4.0	<4.0	12.3
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	614							
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<2.0
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	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
Trichloroethene	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	39.3	158.0	<20.0	9.7	8.2	<20.0	9.3	13.3

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

Table 9

Analytical Data Summary for MW-10B

Constituents	10/9/2019	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022	10/18/2022	4/11/2023	10/5/2023
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<5	<5	<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
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<5	<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Barium, total	47.9	31.1	30.8	28.8	25.1	28.5	26.9	28.8	26.8
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<8	<8	<4	<4	<4	<4	1.5	<4	<4
Copper, total	<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
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	8.4	9.1	6.2	<4.0	<4.0	<4.0	4.9	4.9	5.6
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
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	19.3	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-10B

Constituents	4/23/2024	10/11/2024	4/8/2025	10/23/2025
1,1,1,2-tetrachloroethane	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1
2-butanone (mek)	<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5
Acetone	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5
Antimony, total	<2	<2	<1	<1
Arsenic, total	<4.0	<4.0	<2.0	<2.0
Barium, total	28.7	26.0	29.5	26.7
Benzene	<1	<1	<1	<1
Beryllium, total	<4.0	<4.0	<5	<5
Bromochloromethane	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.2	<.2
Carbon disulfide	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1
Chromium, total	<8	<8	1	<1
Cis-1,2-dichloroethene	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1
Cobalt, total	<.4	<.4	<.5	<.5
Copper, total	<4.0	<4.0	<5.0	<5.0
Dibromochloromethane	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1
Lead, total	<4.0	<4.0	<1.0	<1.0
Methylene chloride	<5	<5	<5	<5
Nickel, total	5.6	9.6	<5.0	5.6
Selenium, total	<4	<4	<2	<2
Silver, total	<4	<4	<5	<5
Solids, total suspended				
Styrene	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1
Thallium, total	<2.0	<2.0	<.5	<.5
Toluene	<1	<1	<1	<1
Trans-1,2-dichloroethene	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1
Vanadium, total	<20	<20	<2	<2
Vinyl acetate	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2
Zinc, total	<20.0	<20.0	7.6	8.1

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

Table 9

Analytical Data Summary for MW-15A1

Constituents	Units	9/22/2015	4/14/2016	9/29/2016	4/20/2017	10/15/2018	4/9/2019	10/9/2019	4/1/2020
(3,4)-methylphenol	ug/L	<8	<8						
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-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	21.3	20.0	24.1	22.0	14.8	13.3	12.1	10.3
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L	<1	<1						
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L	<8	<8						
1,2,4-trichlorobenzene	ug/L	<1	<1						
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<5
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	<8						
1,3,5-trinitrobenzene	ug/L	<8	<8						
1,3-dichlorobenzene	ug/L	<1	<1						
1,3-dichloropropane	ug/L	<1	<1						
1,3-dinitrobenzene	ug/L	<8	<8						
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L	<8	<8						
1,4-phenylenediamine	ug/L	<8	<8						
1-naphthylamine	ug/L	<8	<8						
2,2-dichloropropane	ug/L	<1	<1						
2,3,4,6-tetrachlorophenol	ug/L	<8	<8						
2,4,5-t	ug/L	<.5	<.5						
2,4,5-tp (silvex)	ug/L	<.5	<.5						
2,4,5-trichlorophenol	ug/L	<8	<8						
2,4,6-trichlorophenol	ug/L	<8	<8						
2,4-d	ug/L	<2	<2						
2,4-dichlorophenol	ug/L	<8	<8						
2,4-dimethylphenol	ug/L	<8	<8						
2,4-dinitrophenol	ug/L	<8	<8						
2,4-dinitrotoluene	ug/L	<8	<8						
2,6-dichlorophenol	ug/L	<8	<8						
2,6-dinitrotoluene	ug/L	<8	<8						
2-acetylaminofluorene	ug/L	<8	<8						
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L	<8	<8						
2-chlorophenol	ug/L	<8	<8						
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L	<8	<8						
2-methylphenol (o-cresol)	ug/L	<8	<8						
2-naphthylamine	ug/L	<8	<8						
2-nitroaniline	ug/L	<8	<8						
2-nitrophenol	ug/L	<8	<8						
3,3'-dichlorobenzidine	ug/L	<8	<8						
3,3'-dimethylbenzidine	ug/L	<8	<8						
3-methylcholanthrene	ug/L	<8	<8						
3-nitroaniline	ug/L	<8	<8						
4,4'-ddd	ug/L	<.05	<.05						
4,4'-dde	ug/L	<.05	<.05						
4,4'-ddt	ug/L	<.05	<.05						
4,6-dinitro-2-methylphenol	ug/L	<8	<8						
4-aminobiphenyl	ug/L	<8	<8						
4-bromophenyl phenyl ether	ug/L	<8	<8						
4-chloro-3-methylphenol	ug/L	<8	<8						
4-chloroaniline	ug/L	<8	<8						
4-chlorophenyl phenyl ether	ug/L	<8	<8						
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L	<8	<8						
4-nitrophenol	ug/L	<8	<8						
5-nitro-o-toluidine	ug/L	<8	<8						
7,12-dimethylbenz (a) anthracene	ug/L	<8	<8						
Acenaphthene	ug/L	<8	<8						
Acenaphthylene	ug/L	<8	<8						
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile	ug/L	<10	<10						
Acetophenone	ug/L	<8	<8						
Acrolein	ug/L	<10	<10						
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin	ug/L	<.05	<.05						
Allyl chloride	ug/L	<1	<1						
Alpha-bhc	ug/L	<.05	<.05						
Anthracene	ug/L	<8	<8						

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

Table 9

Analytical Data Summary for MW-15A1

Constituents	10/6/2020	4/11/2023
(3,4)-methylphenol		
1,1,1,2-tetrachloroethane	<1	<1
1,1,1-trichloroethane	<1	<1
1,1,2,2-tetrachloroethane	<1	<1
1,1,2-trichloroethane	<1	<1
1,1-dichloroethane	9.9	8.6
1,1-dichloroethene	<1	<1
1,1-dichloropropene		
1,2,3-trichloropropane	<1	<1
1,2,4,5-tetrachlorobenzene		
1,2,4-trichlorobenzene		
1,2-dibromo-3-chloropropane	<5	<5
1,2-dibromoethane	<1	<1
1,2-dichlorobenzene	<1	<1
1,2-dichloroethane	<1	<1
1,2-dichloropropane	<1	<1
1,2-dinitrobenzene		
1,3,5-trinitrobenzene		
1,3-dichlorobenzene		
1,3-dichloropropane		
1,3-dinitrobenzene		
1,4-dichlorobenzene	<1	<1
1,4-naphthoquinone		
1,4-phenylenediamine		
1-naphthylamine		
2,2-dichloropropane		
2,3,4,6-tetrachlorophenol		
2,4,5-t		
2,4,5-tp (silvex)		
2,4,5-trichlorophenol		
2,4,6-trichlorophenol		
2,4-d		
2,4-dichlorophenol		
2,4-dimethylphenol		
2,4-dinitrophenol		
2,4-dinitrotoluene		
2,6-dichlorophenol		
2,6-dinitrotoluene		
2-acetylaminofluorene		
2-butanone (mek)	<5	<10
2-chloronaphthalene		
2-chlorophenol		
2-hexanone (mbk)	<5	<5
2-methylnaphthalene		
2-methylphenol (o-cresol)		
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
4-nitroaniline		
4-nitrophenol		
5-nitro-o-toluidine		
7,12-dimethylbenz (a) anthracene		
Acenaphthene		
Acenaphthylene		
Acetone	<10	<10
Acetonitrile		
Acetophenone		
Acrolein		
Acrylonitrile	<5	<5
Aldrin		
Allyl chloride		
Alpha-bhc		
Anthracene		

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

Table 9

Analytical Data Summary for MW-15A1

Constituents	Units	9/22/2015	4/14/2016	9/29/2016	4/20/2017	10/15/2018	4/9/2019	10/9/2019	4/1/2020
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L	<.1	<.1						
Arochlor 1221	ug/L	<2	<2						
Arochlor 1232	ug/L	<2	<2						
Arochlor 1242	ug/L	<2	<2						
Arochlor 1248	ug/L	<2	<2						
Arochlor 1254	ug/L	<.1	<.1						
Arochlor 1260	ug/L	<.1	<.1						
Arsenic, total	ug/L	11.2	10.3	7.4	8.2	5.9	8.2	9.2	14.2
Azobenzene	ug/L	<8	<8						
Barium, total	ug/L	273.0	61.3	52.4	57.8	65.6	62.4	75.9	138.0
Benzene	ug/L	1.2	1.8	1.2	1.6	3.2	2.9	<1.0	2.8
Benzo(a)anthracene	ug/L	<8	<8						
Benzo(a)pyrene	ug/L	<8	<8						
Benzo(b)fluoranthene	ug/L	<8	<8						
Benzo(g,h,i)perylene	ug/L	<8	<8						
Benzo(k)fluoranthene	ug/L	<8	<8						
Benzyl alcohol	ug/L	<8	<8						
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc	ug/L	<.05	<.05						
Bis(2-chloroethoxy)methane	ug/L	<8	<8						
Bis(2-chloroethyl)ether	ug/L	<8	<8						
Bis(2-ethylhexyl)phthalate	ug/L	8	10	<10	<6	<6	6	6	<6
Bis[2-chloroisopropyl]ether	ug/L	<8	<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	<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	<.1						
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L	<8	<8						
Chloroethane	ug/L	6.1	7.0	8.0	8.5	6.5	5.9	6.0	4.9
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	<1						
Chromium, total	ug/L	69.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene	ug/L	<8	<8						
Cis-1,2-dichloroethene	ug/L	6.9	11.8	9.2	8.7	11.8	12.4	9.9	8.4
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	17.6	20.9	18.8	16.2	17.5	23.4	27.6	39.9
Copper, total	ug/L	25.0	<4.0	<4.0	<4.0	8.2	<4.0	<4.0	5.4
Cyanide, total	mg/L	<.005	<.005						
Delta-bhc	ug/L	<.05	<.05						
Diallate	ug/L	<8	<8						
Dibenzo(a,h)anthracene	ug/L	<8	<8						
Dibenzofuran	ug/L	<8	<8						
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1						
Dieldrin	ug/L	<.05	<.05						
Diethyl phthalate	ug/L	<8	<8						
Dimethoate	ug/L	<.4	<.4						
Dimethylphthalate	ug/L	<8	<8						
Di-n-butyl phthalate	ug/L	<8	<8						
Di-n-octyl phthalate	ug/L	<8	<8						
Dinoseb	ug/L	<.5	<.5						
Diphenylamine	ug/L	<8	<8						
Disulfoton	ug/L	<.4	<.4						
Endosulfan i	ug/L	<.05	<.05						
Endosulfan ii	ug/L	<.05	<.05						
Endosulfan sulfate	ug/L	<.05	<.05						
Endrin	ug/L	<.05	<.05						
Endrin aldehyde	ug/L	<.05	<.05						
Ethyl methacrylate	ug/L	<10	<10						
Ethyl methanesulfonate	ug/L	<8	<8						
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Famphur	ug/L	<.4	<.4						
Fluoranthene	ug/L	<8	<8						
Fluorene	ug/L	<8	<8						
Gamma-bhc [lindane]	ug/L	<.05	<.05						
Heptachlor	ug/L	<.05	<.05						
Heptachlor epoxide	ug/L	<.05	<.05						
Hexachlorobenzene	ug/L	<.05	<.05						

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

Table 9

Analytical Data Summary for MW-15A1

Constituents	10/6/2020	4/11/2023
Antimony, total	<2	
Arochlor 1016		
Arochlor 1221		
Arochlor 1232		
Arochlor 1242		
Arochlor 1248		
Arochlor 1254		
Arochlor 1260		
Arsenic, total	8.8	
Azobenzene		
Barium, total	201.0	
Benzene	2.8	3.4
Benzo(a)anthracene		
Benzo(a)pyrene		
Benzo(b)fluoranthene		
Benzo(g,h,i)perylene		
Benzo(k)fluoranthene		
Benzyl alcohol		
Beryllium, total	<4	
Beta-bhc		
Bis(2-chloroethoxy)methane		
Bis(2-chloroethyl)ether		
Bis(2-ethylhexyl)phthalate	<25	
Bis[2-chloroisopropyl]ether		
Bromochloromethane	<1	<1
Bromodichloromethane	<1	<1
Bromoform	<1	<1
Bromomethane	<1	<1
Butyl benzyl phthalate		
Cadmium, total	1.1	
Carbon disulfide	<1	<1
Carbon tetrachloride	<1	<1
Chlordane		
Chlorobenzene	<1	<1
Chlorobenzilate		
Chloroethane	5.1	4.0
Chloroform	<1	<1
Chloromethane	<1	<1
Chloroprene		
Chromium, total	19.7	
Chrysene		
Cis-1,2-dichloroethene	9.9	9.2
Cis-1,3-dichloropropene	<1	<1
Cobalt, total	24.6	
Copper, total	18.6	
Cyanide, total		
Delta-bhc		
Diallate		
Dibenzo(a,h)anthracene		
Dibenzofuran		
Dibromochloromethane	<1	<1
Dibromomethane	<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
Famphur		
Fluoranthene		
Fluorene		
Gamma-bhc [lindane]		
Heptachlor		
Heptachlor epoxide		
Hexachlorobenzene		

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

Table 9

Analytical Data Summary for MW-15A1

Constituents	Units	9/22/2015	4/14/2016	9/29/2016	4/20/2017	10/15/2018	4/9/2019	10/9/2019	4/1/2020
Hexachlorobutadiene	ug/L	<8	<8						
Hexachlorocyclopentadiene	ug/L	<8	<8						
Hexachloroethane	ug/L	<8	<8						
Hexachloropropene	ug/L	<8	<8						
Indeno(1,2,3-cd)pyrene	ug/L	<8	<8						
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Isobutanol	mg/L	<1	<1						
Isodrin	ug/L	<8	<8						
Isophorone	ug/L	<8	<8						
Isosafrole	ug/L	<8	<8						
Kepone	ug/L	<8	<8						
Lead, total	ug/L	23.4	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Mercury, Total	ug/L	<.5	<.5						
Methacrylonitrile	ug/L	<1	<1						
Methapyrilene	ug/L	<8	<8						
Methoxychlor	ug/L	<.05	<.05						
Methyl methacrylate	ug/L	<1	<1						
Methyl methanesulfonate	ug/L	<8	<8						
Methyl parathion	ug/L	<.4	<.4						
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L	<8	<8						
Nickel, total	ug/L	134	135	117	113	111	128	107	175
Nitrobenzene	ug/L	<8	<8						
N-nitrosodiethylamine	ug/L	<8	<8						
N-nitrosodimethylamine	ug/L	<8	<8						
N-nitrosodi-n-butylamine	ug/L	<8	<8						
N-nitroso-di-n-propylamine	ug/L	<8	<8						
N-nitrosodiphenylamine	ug/L	<8	<8						
N-nitrosomethylethylamine	ug/L	<8	<8						
N-nitrosopiperidine	ug/L	<8	<8						
N-nitrosopyrrolidine	ug/L	<8	<8						
O,o,o-triethyl phosphorothioate	ug/L	<.4	<.4						
O-toluidine	ug/L	<8	<8						
P-(dimethylamino)azobenzene	ug/L	<8	<8						
Parathion	ug/L	<.4	<.4						
Pentachlorobenzene	ug/L	<8	<8						
Pentachloronitrobenzene (pcnb)	ug/L	<8	<8						
Pentachlorophenol	ug/L	<8	<8						
Phenacetin	ug/L	<8	<8						
Phenanthrene	ug/L	<8	<8						
Phenol	ug/L	<8	<8						
Phorate	ug/L	<.4	<.4						
Pronamide	ug/L	<8	<8						
Propionitrile	ug/L	<10	<40						
Pyrene	ug/L	<8	<8						
Safrole	ug/L	<8	<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
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L	.16	<.10	<.10	<.10	<.10	<.10	<.10	<.10
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<1	<4	<4	<4	<4	<2	<2	<2
Thionazin	ug/L	<.4	<.4						
Tin, Total	ug/L	<20	<20						
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L	<.2	<.2						
Trans-1,2-dichloroethene	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
Trichloroethene	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	2.0	2.4	2.2	2.2	2.6	1.8	1.3	2.1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	89.3	15.5	11.0	10.0	13.1	<8.0	22.4	23.6

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

Table 9

Analytical Data Summary for MW-15A1

Constituents	10/6/2020	4/11/2023
Hexachlorobutadiene		
Hexachlorocyclopentadiene		
Hexachloroethane		
Hexachloropropene		
Indeno(1,2,3-cd)pyrene		
Iodomethane	<1	<1
Isobutanol		
Isodrin		
Isophorone		
Isosafrole		
Kepon		
Lead, total	13.9	
Mercury, Total		
Methacrylonitrile		
Methapyrilene		
Methoxychlor		
Methyl methacrylate		
Methyl methanesulfonate		
Methyl parathion		
Methylene chloride	<5	<5
Naphthalene		
Nickel, total	121	
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		
P-(dimethylamino)azobenzene		
Parathion		
Pentachlorobenzene		
Pentachloronitrobenzene (pcnb)		
Pentachlorophenol		
Phenacetin		
Phenanthrene		
Phenol		
Phorate		
Pronamide		
Propionitrile		
Pyrene		
Safrole		
Selenium, total	<4	
Silver, total	<4	
Styrene	<1	<1
Sulfide, total		
Tetrachloroethene	<1	<1
Thallium, total	<2	
Thionazin		
Tin, Total		
Toluene	<1	<1
Toxaphene		
Trans-1,2-dichloroethene	<1	<1
Trans-1,3-dichloropropene	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5
Trichloroethene	<1	<1
Trichlorofluoromethane	<1	<1
Vanadium, total	<20	
Vinyl acetate	<5	<5
Vinyl chloride	1.6	1.5
Xylenes, total	<2	<2
Zinc, total	81.2	

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

Table 9

Analytical Data Summary for MW-17

Constituents	Units	10/28/2014	3/30/2015	9/22/2015	4/14/2016	9/29/2016	4/20/2017	10/19/2017	10/15/2018
(3,4)-methylphenol	ug/L							<8	
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-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	2.6	2.3	2.0	1.0	1.5	1.5	1.3	2.2
1,1-dichloroethene	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 (o-cresol)	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	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	24.1	<10.0
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 9

Analytical Data Summary for MW-17

Constituents	4/9/2019	10/9/2019	1/8/2020	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022	10/18/2022
(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	1.0	<1.0		<1.0	<1.0	<1.0	<1.0	1.1	1.0
1,1-dichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
1,1-dichloropropene									<1
1,2,3-trichloropropane	<1	<1		<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene									<8
1,2,4-trichlorobenzene									<1
1,2-dibromo-3-chloropropane	<1	<1		<5	<5	<5	<5	<5	<1
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	<10	<.5
2-chloronaphthalene									<8
2-chlorophenol									<8
2-hexanone (mbk)	<5	<5		<5	<5	<5	<5	<5	<.5
2-methylnaphthalene									<8
2-methylphenol (o-cresol)									<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	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile									<10
Acetophenone									<8
Acrolein									<10
Acrylonitrile	<5	<5		<5	<5	<5	<5	<5	<.5
Aldrin									<.05
Allyl chloride									<1
Alpha-bhc									<.05
Anthracene									<8

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Table 9

Analytical Data Summary for MW-17

Constituents	4/11/2023
(3,4)-methylphenol	
1,1,1,2-tetrachloroethane	<1
1,1,1-trichloroethane	<1
1,1,2,2-tetrachloroethane	<1
1,1,2-trichloroethane	<1
1,1-dichloroethane	1.0
1,1-dichloroethene	<1
1,1-dichloropropene	
1,2,3-trichloropropane	<1
1,2,4,5-tetrachlorobenzene	
1,2,4-trichlorobenzene	
1,2-dibromo-3-chloropropane	<5
1,2-dibromoethane	<1
1,2-dichlorobenzene	<1
1,2-dichloroethane	<1
1,2-dichloropropane	<1
1,2-dinitrobenzene	
1,3,5-trinitrobenzene	
1,3-dichlorobenzene	
1,3-dichloropropane	
1,3-dinitrobenzene	
1,4-dichlorobenzene	<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
2-chloronaphthalene	
2-chlorophenol	
2-hexanone (mbk)	<5
2-methylnaphthalene	
2-methylphenol (o-cresol)	
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
4-nitroaniline	
4-nitrophenol	
5-nitro-o-toluidine	
7,12-dimethylbenz (a) anthracene	
Acenaphthene	
Acenaphthylene	
Acetone	<10.0
Acetonitrile	
Acetophenone	
Acrolein	
Acrylonitrile	<5
Aldrin	
Allyl chloride	
Alpha-bhc	
Anthracene	

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

Table 9

Analytical Data Summary for MW-17

Constituents	Units	10/28/2014	3/30/2015	9/22/2015	4/14/2016	9/29/2016	4/20/2017	10/19/2017	10/15/2018
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	5.1	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene	ug/L							<8	
Barium, total	ug/L	28.6	21.7	16.3	18.7	16.8	15.8	14.9	17.9
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-ethylhexyl)phthalate	ug/L							9	<6
Bis[2-chloroisopropyl]ether	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	<1.0	<1.0	1.2	<1.0	1.0	1.3	<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							<1	
Chromium, total	ug/L	17.5	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene	ug/L							<8	
Cis-1,2-dichloroethene	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	15.1	166.0	107.0	134.0	137.0	114.0	113.0	145.0
Copper, total	ug/L	10.8	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.0
Cyanide, total	mg/L							<.005	
Delta-bhc	ug/L							<.05	
Diallate	ug/L							<8	
Dibenzo(a,h)anthracene	ug/L							<8	
Dibenzofuran	ug/L							<8	
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<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 9

Analytical Data Summary for MW-17

Constituents	4/9/2019	10/9/2019	1/8/2020	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022	10/18/2022
Antimony, total	<2	<2		<2	<2	<2	<2	<2	<2
Arochlor 1016									<.1
Arochlor 1221									<.2
Arochlor 1232									<.2
Arochlor 1242									<.2
Arochlor 1248									<.2
Arochlor 1254									<.1
Arochlor 1260									<.1
Arsenic, total	<4.0	4.4		6.1	<4.0	<4.0	4.5	5.4	4.1
Azobenzene									<.8
Barium, total	14.8	23.4		17.1	14.5	17.8	17.9	20.2	22.7
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-ethylhexyl)phthalate	<6	6		<6	6	<6	<6		10
Bis[2-chloroisopropyl]ether									<.8
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	<1.0	<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	<8.0	<8.0		<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene									<.8
Cis-1,2-dichloroethene	<1.0	<1.0		<1.0	<1.0	<1.0	<1.0	1.6	1.1
Cis-1,3-dichloropropene	<1	<1		<1	<1	<1	<1	<1	<1
Cobalt, total	98.1	140.0		125.0	113.0	137.0	128.0	137.0	17.2
Copper, total	<4.0	4.0		<4.0	4.8	<4.0	12.6	<4.0	<4.0
Cyanide, total									<.005
Delta-bhc									<.05
Diallate									<.8
Dibenzo(a,h)anthracene									<.8
Dibenzofuran									<.8
Dibromochloromethane	<1	<1		<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1		<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane									<1
Dieldrin									<.05
Diethyl phthalate									<.8
Dimethoate									<.4
Dimethylphthalate									<.8
Di-n-butyl phthalate									<.8
Di-n-octyl phthalate									<.8
Dinoseb									<.5
Diphenylamine									<.8
Disulfoton									<.4
Endosulfan i									<.05
Endosulfan ii									<.05
Endosulfan sulfate									<.05
Endrin									<.05
Endrin aldehyde									<.05
Ethyl methacrylate									<10
Ethyl methanesulfonate									<.8
Ethylbenzene	<1	<1		<1	<1	<1	<1	<1	<1
Famphur									<.4
Fluoranthene									<.8
Fluorene									<.8
Gamma-bhc [lindane]									<.05
Heptachlor									<.05
Heptachlor epoxide									<.05
Hexachlorobenzene									<.05

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

Table 9

Analytical Data Summary for MW-17

Constituents	4/11/2023
Antimony, total	<2
Arochlor 1016	
Arochlor 1221	
Arochlor 1232	
Arochlor 1242	
Arochlor 1248	
Arochlor 1254	
Arochlor 1260	
Arsenic, total	<4.0
Azobenzene	
Barium, total	17.8
Benzene	<1
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(g,h,i)perylene	
Benzo(k)fluoranthene	
Benzyl alcohol	
Beryllium, total	<4
Beta-bhc	
Bis(2-chloroethoxy)methane	
Bis(2-chloroethyl)ether	
Bis(2-ethylhexyl)phthalate	
Bis[2-chloroisopropyl]ether	
Bromochloromethane	<1
Bromodichloromethane	<1
Bromoform	<1
Bromomethane	<1
Butyl benzyl phthalate	
Cadmium, total	<.8
Carbon disulfide	<1
Carbon tetrachloride	<1
Chlordane	
Chlorobenzene	<1
Chlorobenzilate	
Chloroethane	<1.0
Chloroform	<1
Chloromethane	<1
Chloroprene	
Chromium, total	<8.0
Chrysene	
Cis-1,2-dichloroethene	<1.0
Cis-1,3-dichloropropene	<1
Cobalt, total	.9
Copper, total	8.2
Cyanide, total	
Delta-bhc	
Diallate	
Dibenzo(a,h)anthracene	
Dibenzofuran	
Dibromochloromethane	<1
Dibromomethane	<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
Famphur	
Fluoranthene	
Fluorene	
Gamma-bhc [lindane]	
Heptachlor	
Heptachlor epoxide	
Hexachlorobenzene	

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

Table 9

Analytical Data Summary for MW-17

Constituents	Units	10/28/2014	3/30/2015	9/22/2015	4/14/2016	9/29/2016	4/20/2017	10/19/2017	10/15/2018
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	
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Isobutanol	mg/L							<1	
Isodrin	ug/L							<8	
Isophorone	ug/L							<8	
Isosafrole	ug/L							<8	
Kepone	ug/L							<8	
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, Total	ug/L							<.5	
Methacrylonitrile	ug/L							<1	
Methapyrilene	ug/L							<8	
Methoxychlor	ug/L							<.05	
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	111.0	201.0	146.0	179.0	156.0	141.0	136.0	138.0
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	
P-(dimethylamino)azobenzene	ug/L							<8	
Parathion	ug/L							<.4	
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
Solids, total suspended	mg/L		56						
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L	1.0	<.1	<.1	<.1	<.1	<.1	<.3	<.1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4	<4	<4	<4
Thionazin	ug/L							<.4	
Tin, Total	ug/L	<20	<20	<20	<20	<20		<20	
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L							<.2	
Trans-1,2-dichloroethene	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
Trichloroethene	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	40.0	43.4	36.2	39.2	37.0	31.5	35.0	33.4

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

Table 9

Analytical Data Summary for MW-17

Constituents	4/9/2019	10/9/2019	1/8/2020	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022	10/18/2022
Hexachlorobutadiene									<8
Hexachlorocyclopentadiene									<8
Hexachloroethane									<8
Hexachloropropene									<8
Indeno(1,2,3-cd)pyrene									<8
Iodomethane	<1	<1		<1	<1	<1	<1	<1	<2
Isobutanol									<1
Isodrin									<8
Isophorone									<8
Isosafrole									<8
Kepone									<8
Lead, total	<4	<4		<4	<4	<4	<4	<4	<4
Mercury, Total									<.5
Methacrylonitrile									<1
Methapyrilene									<8
Methoxychlor									<.05
Methyl methacrylate									<1
Methyl methanesulfonate									<8
Methyl parathion									<.4
Methylene chloride	<5	<5		<5	<5	<5	<5	<5	<5
Naphthalene									<8
Nickel, total	116.0	130.0		132.0	113.0	114.0	115.0	110.0	68.0
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
P-(dimethylamino)azobenzene									<8
Parathion									<.4
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	<.1		<.1					<.1
Tetrachloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2		<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-dichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1		<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5		<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1		<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20		<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5		<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1		<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2		<2	<2	<2	<2	<2	<2
Zinc, total	30.3	62.0	46.4	40.6	37.1	32.6	36.9	29.7	<20.0

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

Table 9

Analytical Data Summary for MW-17

Constituents	4/11/2023
Hexachlorobutadiene	
Hexachlorocyclopentadiene	
Hexachloroethane	
Hexachloropropene	
Indeno(1,2,3-cd)pyrene	
Iodomethane	<1
Isobutanol	
Isodrin	
Isophorone	
Isosafrole	
Kepon	
Lead, total	<4
Mercury, Total	
Methacrylonitrile	
Methapyrilene	
Methoxychlor	
Methyl methacrylate	
Methyl methanesulfonate	
Methyl parathion	
Methylene chloride	<5
Naphthalene	
Nickel, total	46.9
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	
P-(dimethylamino)azobenzene	
Parathion	
Pentachlorobenzene	
Pentachloronitrobenzene (pcnb)	
Pentachlorophenol	
Phenacetin	
Phenanthrene	
Phenol	
Phorate	
Pronamide	
Propionitrile	
Pyrene	
Safrole	
Selenium, total	<4
Silver, total	<4
Solids, total suspended	
Styrene	<1
Sulfide, total	
Tetrachloroethene	<1
Thallium, total	<2
Thionazin	
Tin, Total	
Toluene	<1
Toxaphene	
Trans-1,2-dichloroethene	<1
Trans-1,3-dichloropropene	<1
Trans-1,4-dichloro-2-butene	<5
Trichloroethene	<1
Trichlorofluoromethane	<1
Vanadium, total	<20
Vinyl acetate	<5
Vinyl chloride	<1
Xylenes, total	<2
Zinc, total	<20.0

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

Table 9

Analytical Data Summary for MW-18

Constituents	Units	10/28/2014	3/30/2015	9/24/2015	4/14/2016	9/29/2016	4/20/2017	10/19/2017	1/5/2018
(3,4)-methylphenol	ug/L							<8	
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-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-dichloroethene	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 (o-cresol)	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	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	21.1	<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 9

Analytical Data Summary for MW-18

Constituents	10/15/2018	4/9/2019	10/9/2019	1/8/2020	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022
(3,4)-methylphenol									
1,1,1,2-tetrachloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1		<1	<1	<1	<1	<1
1,1-dichloropropene									
1,2,3-trichloropropane	<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
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									
1,3,5-trinitrobenzene									
1,3-dichlorobenzene									
1,3-dichloropropane									
1,3-dinitrobenzene									
1,4-dichlorobenzene	<1	<1	<1		<1	<1	<1	<1	<1
1,4-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
2-chloronaphthalene									
2-chlorophenol									
2-hexanone (mbk)	<5	<5	<5		<5	<5	<5	<5	<5
2-methylnaphthalene									
2-methylphenol (o-cresol)									
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
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz (a) anthracene									
Acenaphthene									
Acenaphthylene									
Acetone	<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<5	<5	<5		<5	<5	<5	<5	<5
Aldrin									
Allyl chloride									
Alpha-bhc									
Anthracene									

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

Table 9

Analytical Data Summary for MW-18

Constituents	10/18/2022	4/11/2023	10/5/2023	12/19/2023	4/23/2024	10/11/2024	4/8/2025
(3,4)-methylphenol							
1,1,1,2-tetrachloroethane	<1	<1	<1		<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1		<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1		<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1		<1	<1	<1
1,1-dichloroethane	<1	<1	<1		<1	<1	<1
1,1-dichloroethene	<1	<1	<1		<1	<1	<1
1,1-dichloropropene							
1,2,3-trichloropropane	<1	<1	<1		<1	<1	<1
1,2,4,5-tetrachlorobenzene							
1,2,4-trichlorobenzene							
1,2-dibromo-3-chloropropane	<5	<5	<5		<5	<5	<5
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							
1,3,5-trinitrobenzene							
1,3-dichlorobenzene							
1,3-dichloropropane							
1,3-dinitrobenzene							
1,4-dichlorobenzene	<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)	<10	<10	<10		<10	<10	<10
2-chloronaphthalene							
2-chlorophenol							
2-hexanone (mbk)	<5	<5	<5		<5	<5	<5
2-methylnaphthalene							
2-methylphenol (o-cresol)							
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
4-nitroaniline							
4-nitrophenol							
5-nitro-o-toluidine							
7,12-dimethylbenz (a) anthracene							
Acenaphthene							
Acenaphthylene							
Acetone	<10.0	<10.0	<10.0		<10.0	<10.0	<10.0
Acetonitrile							
Acetophenone							
Acrolein							
Acrylonitrile	<5	<5	<5		<5	<5	<5
Aldrin							
Allyl chloride							
Alpha-bhc							
Anthracene							

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

Table 9

Analytical Data Summary for MW-18

Constituents	Units	10/28/2014	3/30/2015	9/24/2015	4/14/2016	9/29/2016	4/20/2017	10/19/2017	1/5/2018
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	
Arochlor 1016	ug/L							2.36	<.10
Arochlor 1221	ug/L							<.2	<.2
Arochlor 1232	ug/L							<.2	<.2
Arochlor 1242	ug/L							<.2	<.2
Arochlor 1248	ug/L							<.2	<.2
Arochlor 1254	ug/L							<.1	<.1
Arochlor 1260	ug/L							.2	<.1
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4	
Azobenzene	ug/L							<8	
Barium, total	ug/L	30.8	25.4	23.5	26.1	26.4	26.9	25.0	
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	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	
Beta-bhc	ug/L							<.05	
Bis(2-chloroethoxy)methane	ug/L							<8	
Bis(2-chloroethyl)ether	ug/L							<8	
Bis(2-ethylhexyl)phthalate	ug/L							<6	
Bis[2-chloroisopropyl]ether	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-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	
Cobalt, total	ug/L	57.8	28.9	37.6	37.7	50.8	33.6	39.1	
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	
Cyanide, total	mg/L							<.005	
Delta-bhc	ug/L							<.05	
Diallate	ug/L							<8	
Dibenzo(a,h)anthracene	ug/L							<8	
Dibenzofuran	ug/L							<8	
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	
Dichlorodifluoromethane	ug/L							<1	
Dieldrin	ug/L							<.05	
Diethyl phthalate	ug/L							<8	
Dimethoate	ug/L							<.4	
Dimethylphthalate	ug/L							<8	
Di-n-butyl phthalate	ug/L							<8	
Di-n-octyl phthalate	ug/L							<8	
Dinoseb	ug/L							<.5	
Diphenylamine	ug/L							<8	
Disulfoton	ug/L							<.4	
Endosulfan i	ug/L							<.05	
Endosulfan ii	ug/L							<.05	
Endosulfan sulfate	ug/L							<.05	
Endrin	ug/L							<.05	
Endrin aldehyde	ug/L							<.05	
Ethyl methacrylate	ug/L							<10	
Ethyl methanesulfonate	ug/L							<8	
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	
Famphur	ug/L							<.4	
Fluoranthene	ug/L							<8	
Fluorene	ug/L							<8	
Gamma-bhc [lindane]	ug/L							<.05	
Heptachlor	ug/L							<.05	
Heptachlor epoxide	ug/L							<.05	
Hexachlorobenzene	ug/L							<.05	

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

Table 9

Analytical Data Summary for MW-18

Constituents	10/15/2018	4/9/2019	10/9/2019	1/8/2020	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022
Antimony, total	<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
Azobenzene									
Barium, total	19.1	27.6	30.2		24.4	26.7	24.2	25.6	28.2
Benzene	<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	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0
Beta-bhc									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-ethylhexyl)phthalate									
Bis[2-chloroisopropyl]ether									
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									
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									
Chlorobenzene	<1	<1	<1		<1	<1	<1	<1	<1
Chlorobenzilate									
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									
Chromium, total	<8	<8	<8		<8	<8	<8	<8	<8
Chrysene									
Cis-1,2-dichloroethene	<1	<1	<1		<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1		<1	<1	<1	<1	<1
Cobalt, total	9.0	48.6	30.7		29.8	57.5	42.8	53.9	46.7
Copper, total	<4	<4	<4		<4	<4	<4	<4	<4
Cyanide, total									
Delta-bhc									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1		<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1		<1	<1	<1	<1	<1
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethylphthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene	<1	<1	<1		<1	<1	<1	<1	<1
Famphur									
Fluoranthene									
Fluorene									
Gamma-bhc [lindane]									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									

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

Table 9

Analytical Data Summary for MW-18

Constituents	10/18/2022	4/11/2023	10/5/2023	12/19/2023	4/23/2024	10/11/2024	4/8/2025
Antimony, total	<2	<2	<2		<2	<2	<1
Arochlor 1016							
Arochlor 1221							
Arochlor 1232							
Arochlor 1242							
Arochlor 1248							
Arochlor 1254							
Arochlor 1260							
Arsenic, total	<4	<4	<4		<4	<4	<2
Azobenzene							
Barium, total	32.1	32.9	25.8		24.0	27.2	27.9
Benzene	<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	<4.0	<4.0	<4.0		<4.0	<4.0	<.5
Beta-bhc							
Bis(2-chloroethoxy)methane							
Bis(2-chloroethyl)ether							
Bis(2-ethylhexyl)phthalate							
Bis[2-chloroisopropyl]ether							
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							
Cadmium, total	<.8	<.8	<.8		<.8	<.8	<.2
Carbon disulfide	<1	<1	<1		<1	<1	<1
Carbon tetrachloride	<1	<1	<1		<1	<1	<1
Chlordane							
Chlorobenzene	<1	<1	<1		<1	<1	<1
Chlorobenzilate							
Chloroethane	<1	<1	<1		<1	<1	<1
Chloroform	<1	<1	<1		<1	<1	<1
Chloromethane	<1	<1	<1		<1	<1	<1
Chloroprene							
Chromium, total	<8	<8	<8		<8	<8	1
Chrysene							
Cis-1,2-dichloroethene	<1	<1	<1		<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1		<1	<1	<1
Cobalt, total	61.1	56.5	62.7	66.2	39.8	68.3	30.3
Copper, total	<4	<4	<4		<4	<4	<5
Cyanide, total							
Delta-bhc							
Diallate							
Dibenzo(a,h)anthracene							
Dibenzofuran							
Dibromochloromethane	<1	<1	<1		<1	<1	<1
Dibromomethane	<1	<1	<1		<1	<1	<1
Dichlorodifluoromethane							
Dieldrin							
Diethyl phthalate							
Dimethoate							
Dimethylphthalate							
Di-n-butyl phthalate							
Di-n-octyl phthalate							
Dinoseb							
Diphenylamine							
Disulfoton							
Endosulfan i							
Endosulfan ii							
Endosulfan sulfate							
Endrin							
Endrin aldehyde							
Ethyl methacrylate							
Ethyl methanesulfonate							
Ethylbenzene	<1	<1	<1		<1	<1	<1
Famphur							
Fluoranthene							
Fluorene							
Gamma-bhc [lindane]							
Heptachlor							
Heptachlor epoxide							
Hexachlorobenzene							

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

Table 9

Analytical Data Summary for MW-18

Constituents	Units	10/28/2014	3/30/2015	9/24/2015	4/14/2016	9/29/2016	4/20/2017	10/19/2017	1/5/2018
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	
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	
Isobutanol	mg/L							<1	
Isodrin	ug/L							<8	
Isophorone	ug/L							<8	
Isosafrole	ug/L							<8	
Kepone	ug/L							<8	
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	
Mercury, Total	ug/L							<.5	
Methacrylonitrile	ug/L							<1	
Methapyrilene	ug/L							<8	
Methoxychlor	ug/L							<.05	
Methyl 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	52.8	36.1	38.8	46.8	46.9	31.5	36.1	
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	
P-(dimethylamino)azobenzene	ug/L							<8	
Parathion	ug/L							<.4	
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	788	125						
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	
Sulfide, total	mg/L							<.3	
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	
Thallium, total	ug/L	<4.0	<4.0	<1.0	<4.0	<4.0	<4.0	<4.0	
Thionazin	ug/L							<.4	
Tin, Total	ug/L	<20	<20	<20	<20	<20	<20	<20	
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	
Toxaphene	ug/L							<.2	
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	
Zinc, total	ug/L	20.9	13.1	22.8	16.6	17.5	12.5	<20.0	

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

Table 9

Analytical Data Summary for MW-18

Constituents	10/15/2018	4/9/2019	10/9/2019	1/8/2020	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Iodomethane	<1	<1	<1		<1	<1	<1	<1	<1
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepon									
Lead, total	<4	<4	<4		<4	<4	<4	<4	<4
Mercury, Total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5		<5	<5	<5	<5	<5
Naphthalene									
Nickel, total	13.0	38.4	30.9		30.0	43.3	35.6	41.7	38.2
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									
P-(dimethylamino)azobenzene									
Parathion									
Pentachlorobenzene									
Pentachloronitrobenzene (pcnb)									
Pentachlorophenol									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
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									
Tetrachloroethene	<1	<1	<1		<1	<1	<1	<1	<1
Thallium, total	<4.0	<2.0	<2.0		<2.0	<2.0	<2.0	<2.0	<2.0
Thionazin									
Tin, Total									
Toluene	<1	<1	<1		<1	<1	<1	<1	<1
Toxaphene									
Trans-1,2-dichloroethene	<1	<1	<1		<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1		<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5		<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1		<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1		<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20		<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5		<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1		<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2		<2	<2	<2	<2	<2
Zinc, total	<8.0	17.9	62.7	21.6	<20.0	<20.0	22.9	21.8	<20.0

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

Table 9

Analytical Data Summary for MW-18

Constituents	10/18/2022	4/11/2023	10/5/2023	12/19/2023	4/23/2024	10/11/2024	4/8/2025
Hexachlorobutadiene							
Hexachlorocyclopentadiene							
Hexachloroethane							
Hexachloropropene							
Indeno(1,2,3-cd)pyrene							
Iodomethane	<1	<1	<1		<1	<1	<1
Isobutanol							
Isodrin							
Isophorone							
Isosafrole							
Kepon							
Lead, total	<4	<4	<4		<4	<4	<1
Mercury, Total							
Methacrylonitrile							
Methapyrene							
Methoxychlor							
Methyl methacrylate							
Methyl methanesulfonate							
Methyl parathion							
Methylene chloride	<5	<5	<5		<5	<5	<5
Naphthalene							
Nickel, total	44.1	43.1	47.7		37.2	50.1	31.1
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							
P-(dimethylamino)azobenzene							
Parathion							
Pentachlorobenzene							
Pentachloronitrobenzene (pcnb)							
Pentachlorophenol							
Phenacetin							
Phenanthrene							
Phenol							
Phorate							
Pronamide							
Propionitrile							
Pyrene							
Safrole							
Selenium, total	<4	<4	<4		<4	<4	<2
Silver, total	<4	<4	<4		<4	<4	<5
Solids, total suspended							
Styrene	<1	<1	<1		<1	<1	<1
Sulfide, total							
Tetrachloroethene	<1	<1	<1		<1	<1	<1
Thallium, total	<2.0	<2.0	<2.0		<2.0	<2.0	<.5
Thionazin							
Tin, Total							
Toluene	<1	<1	<1		<1	<1	<1
Toxaphene							
Trans-1,2-dichloroethene	<1	<1	<1		<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1		<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5		<5	<5	<5
Trichloroethene	<1	<1	<1		<1	<1	<1
Trichlorofluoromethane	<1	<1	<1		<1	<1	<1
Vanadium, total	<20	<20	<20		<20	<20	<2
Vinyl acetate	<5	<5	<5		<5	<5	<5
Vinyl chloride	<1	<1	<1		<1	<1	<1
Xylenes, total	<2	<2	<2		<2	<2	<2
Zinc, total	20.1	23.1	25.5		<20.0	27.3	18.5

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

Table 9

Analytical Data Summary for MW-19

Constituents	Units	10/28/2014	3/30/2015	9/24/2015	4/14/2016	9/29/2016	4/20/2017	10/19/2017	10/15/2018
(3,4)-methylphenol	ug/L							<8	
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-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-dichloroethene	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 (o-cresol)	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	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	19.5	<10.0
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 9

Analytical Data Summary for MW-19

Constituents	4/9/2019	10/9/2019	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022	10/18/2022	4/11/2023
(3,4)-methylphenol									
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<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	<5	<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	<10	<10	<10
2-chloronaphthalene									
2-chlorophenol									
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene									
2-methylphenol (o-cresol)									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3'-dichlorobenzidine									
3,3'-dimethylbenzidine									
3-methylcholanthrene									
3-nitroaniline									
4,4'-ddd									
4,4'-dde									
4,4'-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz (a) anthracene									
Acenaphthene									
Acenaphthylene									
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin									
Allyl chloride									
Alpha-bhc									
Anthracene									

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

Table 9

Analytical Data Summary for MW-19

Constituents	10/5/2023	4/23/2024
(3,4)-methylphenol		
1,1,1,2-tetrachloroethane	<1	<1
1,1,1-trichloroethane	<1	<1
1,1,2,2-tetrachloroethane	<1	<1
1,1,2-trichloroethane	<1	<1
1,1-dichloroethane	<1	<1
1,1-dichloroethene	<1	<1
1,1-dichloropropene		
1,2,3-trichloropropane	<1	<1
1,2,4,5-tetrachlorobenzene		
1,2,4-trichlorobenzene		
1,2-dibromo-3-chloropropane	<5	<5
1,2-dibromoethane	<1	<1
1,2-dichlorobenzene	<1	<1
1,2-dichloroethane	<1	<1
1,2-dichloropropane	<1	<1
1,2-dinitrobenzene		
1,3,5-trinitrobenzene		
1,3-dichlorobenzene		
1,3-dichloropropane		
1,3-dinitrobenzene		
1,4-dichlorobenzene	<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
2-chloronaphthalene		
2-chlorophenol		
2-hexanone (mbk)	<5	<5
2-methylnaphthalene		
2-methylphenol (o-cresol)		
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
4-nitroaniline		
4-nitrophenol		
5-nitro-o-toluidine		
7,12-dimethylbenz (a) anthracene		
Acenaphthene		
Acenaphthylene		
Acetone	<10.0	<10.0
Acetonitrile		
Acetophenone		
Acrolein		
Acrylonitrile	<5	<5
Aldrin		
Allyl chloride		
Alpha-bhc		
Anthracene		

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

Table 9

Analytical Data Summary for MW-19

Constituents	Units	10/28/2014	3/30/2015	9/24/2015	4/14/2016	9/29/2016	4/20/2017	10/19/2017	10/15/2018
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	42.8	42.3	32.3	37.6	34.4	40.7	37.6	36.0
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-ethylhexyl)phthalate	ug/L							<.6	
Bis[2-chloroisopropyl]ether	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-dichloroethene	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	32.3	47.9	18.1	19.3	13.4	36.8	24.8	19.8
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 9

Analytical Data Summary for MW-19

Constituents	4/9/2019	10/9/2019	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022	10/18/2022	4/11/2023
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	40.7	39.2	39.4	21.4	21.6	20.7	22.7	33.9	28.9
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-ethylhexyl)phthalate									
Bis[2-chloroisopropyl]ether									
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-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	35.4	15.8	9.2	.8	.6	1.1	.7	10.9	4.1
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cyanide, total									
Delta-bhc									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethylphthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur									
Fluoranthene									
Fluorene									
Gamma-bhc [lindane]									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									

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

Table 9

Analytical Data Summary for MW-19

Constituents	10/5/2023	4/23/2024
Antimony, total	<2	<2
Arochlor 1016		
Arochlor 1221		
Arochlor 1232		
Arochlor 1242		
Arochlor 1248		
Arochlor 1254		
Arochlor 1260		
Arsenic, total	<4	<4
Azobenzene		
Barium, total	17.4	17.8
Benzene	<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
Beta-bhc		
Bis(2-chloroethoxy)methane		
Bis(2-chloroethyl)ether		
Bis(2-ethylhexyl)phthalate		
Bis[2-chloroisopropyl]ether		
Bromochloromethane	<1	<1
Bromodichloromethane	<1	<1
Bromoform	<1	<1
Bromomethane	<1	<1
Butyl benzyl phthalate		
Cadmium, total	<.8	<.8
Carbon disulfide	<1	<1
Carbon tetrachloride	<1	<1
Chlordane		
Chlorobenzene	<1	<1
Chlorobenzilate		
Chloroethane	<1	<1
Chloroform	<1	<1
Chloromethane	<1	<1
Chloroprene		
Chromium, total	<8	<8
Chrysene		
Cis-1,2-dichloroethene	<1	<1
Cis-1,3-dichloropropene	<1	<1
Cobalt, total	.8	.7
Copper, total	<4	<4
Cyanide, total		
Delta-bhc		
Diallate		
Dibenzo(a,h)anthracene		
Dibenzofuran		
Dibromochloromethane	<1	<1
Dibromomethane	<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
Famphur		
Fluoranthene		
Fluorene		
Gamma-bhc [lindane]		
Heptachlor		
Heptachlor epoxide		
Hexachlorobenzene		

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

Table 9

Analytical Data Summary for MW-19

Constituents	Units	10/28/2014	3/30/2015	9/24/2015	4/14/2016	9/29/2016	4/20/2017	10/19/2017	10/15/2018
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	
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Isobutanol	mg/L							<1	
Isodrin	ug/L							<8	
Isophorone	ug/L							<8	
Isosafrole	ug/L							<8	
Kepone	ug/L							<8	
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, Total	ug/L							<.5	
Methacrylonitrile	ug/L							<1	
Methapyrilene	ug/L							<8	
Methoxychlor	ug/L							<.05	
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	29.5	42.5	18.6	23.2	13.3	31.4	23.2	18.8
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	
P-(dimethylamino)azobenzene	ug/L							<8	
Parathion	ug/L							<.4	
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	498	15						
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L							<.1	
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4	<4	<4	<4
Thionazin	ug/L							<.4	
Tin, Total	ug/L	<20	<20	<20	<20	<20		<20	
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L							<.2	
Trans-1,2-dichloroethene	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
Trichloroethene	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	15.0	<8.0	<8.0	<20.0	<8.0

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

Table 9

Analytical Data Summary for MW-19

Constituents	4/9/2019	10/9/2019	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022	10/18/2022	4/11/2023
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Iodomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, Total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene									
Nickel, total	29.8	15.8	14.5	18.3	11.8	4.4	<4.0	27.1	22.4
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									
P-(dimethylamino)azobenzene									
Parathion									
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									
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<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-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	28.8	<20.0	30.9	<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-19

Constituents	10/5/2023	4/23/2024
Hexachlorobutadiene		
Hexachlorocyclopentadiene		
Hexachloroethane		
Hexachloropropene		
Indeno(1,2,3-cd)pyrene		
Iodomethane	<1	<1
Isobutanol		
Isodrin		
Isophorone		
Isosafrole		
Kepon		
Lead, total	<4	<4
Mercury, Total		
Methacrylonitrile		
Methapyrilene		
Methoxychlor		
Methyl methacrylate		
Methyl methanesulfonate		
Methyl parathion		
Methylene chloride	<5	<5
Naphthalene		
Nickel, total	<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		
P-(dimethylamino)azobenzene		
Parathion		
Pentachlorobenzene		
Pentachloronitrobenzene (pcnb)		
Pentachlorophenol		
Phenacetin		
Phenanthrene		
Phenol		
Phorate		
Pronamide		
Propionitrile		
Pyrene		
Safrole		
Selenium, total	<4	<4
Silver, total	<4	<4
Solids, total suspended		
Styrene	<1	<1
Sulfide, total		
Tetrachloroethene	<1	<1
Thallium, total	<2	<2
Thionazin		
Tin, Total		
Toluene	<1	<1
Toxaphene		
Trans-1,2-dichloroethene	<1	<1
Trans-1,3-dichloropropene	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5
Trichloroethene	<1	<1
Trichlorofluoromethane	<1	<1
Vanadium, total	<20	<20
Vinyl acetate	<5	<5
Vinyl chloride	<1	<1
Xylenes, total	<2	<2
Zinc, total	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-20

Constituents	Units	10/28/2014	3/30/2015	9/24/2015	4/14/2016	9/29/2016	4/20/2017	10/18/2017	1/5/2018
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-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	20.2	<10.0
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	34.5	17.6	40.1	66.1	31.8	6.2	21.1	66.1
Barium, total	ug/L	45.2	54.9	51.3	97.0	66.2	32.4	69.1	97.0
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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-dichloroethene	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	11.6	7.9	5.3	5.9	4.1	1.2	7.4	11.6
Copper, total	ug/L	<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
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, Total	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	15.0	10.3	8.0	9.6	<4.0	8.6	9.1	15.0
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	1010	117						
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4.0	<4.0	<1.0	<4.0	<4.0	<4.0	<4.0	<4.0
Tin, Total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	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
Trichloroethene	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	9.2	<8.0	8.3	9.4	<8.0	<8.0	<20.0	9.2

6.6

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

Table 9

Analytical Data Summary for MW-20

Constituents	10/15/2018	4/9/2019	5/16/2019	10/9/2019	1/8/2020	4/1/2020	10/6/2020	4/13/2021	10/21/2021
1,1,1,2-tetrachloroethane	<1	<1		<1		<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1		<1		<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1		<1		<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1		<1		<1	<1	<1	<1
1,1-dichloroethane	<1	<1		<1		<1	<1	<1	<1
1,1-dichloroethene	<1	<1		<1		<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1		<1		<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1		<1		<5	<5	<5	<5
1,2-dibromoethane	<1	<1		<1		<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1		<1		<1	<1	<1	<1
1,2-dichloroethane	<1	<1		<1		<1	<1	<1	<1
1,2-dichloropropane	<1	<1		<1		<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1		<1		<1	<1	<1	<1
2-butanone (mek)	<5	<5		<5		<5	<5	<5	<5
2-hexanone (mbk)	<5	<5		<5		<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5		<5		<5	<5	<5	<5
Acetone	<10.0	22.2	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5		<5		<5	<5	<5	<5
Antimony, total	<2	<2		<2		<2	<2	<2	<2
Arsenic, total	32.9	4.3		31.3		19.9	10.8	11.2	10.8
Barium, total	34.4	59.2		92.7		52.6	116.0	108.0	99.5
Benzene	<1	<1		<1		<1	<1	<1	<1
Beryllium, total	<4.0	<4.0		<4.0		<4.0	<4.0	<4.0	<4.0
Bromochloromethane	<1	<1		<1		<1	<1	<1	<1
Bromodichloromethane	<1	<1		<1		<1	<1	<1	<1
Bromoform	<1	<1		<1		<1	<1	<1	<1
Bromomethane	<1	<1		<1		<1	<1	<1	<1
Cadmium, total	<8	<8		<8		<8	<8	<8	<8
Carbon disulfide	<1	<1		<1		<1	<1	<1	<1
Carbon tetrachloride	<1	<1		<1		<1	<1	<1	<1
Chlorobenzene	<1	<1		<1		<1	<1	<1	<1
Chloroethane	<1	<1		<1		<1	<1	<1	<1
Chloroform	<1	<1		<1		<1	<1	<1	<1
Chloromethane	<1	<1		<1		<1	<1	<1	<1
Chromium, total	<8	<8		<8		<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1		<1		<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1		<1		<1	<1	<1	<1
Cobalt, total	6.9	3.9		4.3		6.0	3.3	3.9	2.7
Copper, total	<4.0	<4.0		<4.0		<4.0	<4.0	<4.0	10.2
Dibromochloromethane	<1	<1		<1		<1	<1	<1	<1
Dibromomethane	<1	<1		<1		<1	<1	<1	<1
Ethylbenzene	<1	<1		<1		<1	<1	<1	<1
Iodomethane	<1	<1		<1		<1	<1	<1	<1
Lead, total	<4	<4		<4		<4	<4	<4	<4
Mercury, Total									
Methylene chloride	<5	<5		<5		<5	<5	<5	<5
Nickel, total	10.1	8.8		7.3		6.7	6.2	6.4	10.3
Selenium, total	<4	<4		<4		<4	<4	<4	<4
Silver, total	<4	<4		<4		<4	<4	<4	<4
Solids, total suspended									
Styrene	<1	<1		<1		<1	<1	<1	<1
Tetrachloroethene	<1	<1		<1		<1	<1	<1	<1
Thallium, total	<4.0	<2.0		<2.0		<2.0	<2.0	<2.0	<2.0
Tin, Total									
Toluene	<1	<1		<1		<1	<1	<1	<1
Trans-1,2-dichloroethene	<1	<1		<1		<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1		<1		<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5		<5		<5	<5	<5	<5
Trichloroethene	<1	<1		<1		<1	<1	<1	<1
Trichlorofluoromethane	<1	<1		<1		<1	<1	<1	<1
Vanadium, total	<20	<20		<20		<20	<20	<20	<20
Vinyl acetate	<5	<5		<5		<5	<5	<5	<5
Vinyl chloride	<1	<1		<1		<1	<1	<1	<1
Xylenes, total	<2	<2		<2		<2	<2	<2	<2
Zinc, total	<20.0	<8.0		79.7	13.5	<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-20

Constituents	4/19/2022	10/18/2022	4/11/2023	10/5/2023	12/19/2023	4/23/2024	10/11/2024	4/8/2025	10/23/2025
1,1,1,2-tetrachloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5		<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1		<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
2-butanone (mek)	<10	<10	<10	<10		<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5		<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5		<5	<5	<5	<5
Acetone	<10.0	<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5		<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2		<2	<2	<1	<1
Arsenic, total	11.2	16.7	25.9	10.8		8.0	26.2	8.3	11.2
Barium, total	125.0	139.0	80.0	45.1		39.0	61.8	65.3	59.1
Benzene	<1	<1	<1	<1		<1	<1	<1	<1
Beryllium, total	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	<5	<5
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
Cadmium, total	<8	<8	<8	<8		<8	<8	<2	<2
Carbon disulfide	<1	<1	<1	<1		<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1		<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
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
Chromium, total	<8	<8	<8	<8		<8	<8	<1	<1
Cis-1,2-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1		<1	<1	<1	<1
Cobalt, total	3.2	3.7	4.0	1.8		2.4	2.1	1.0	1.3
Copper, total	<4.0	<4.0	<4.0	5.0	<4.0	<4.0	<4.0	<5.0	<5.0
Dibromochloromethane	<1	<1	<1	<1		<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1		<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1		<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1		<1	<1	<1	<1
Lead, total	<4	<4	<4	<4		<4	<4	<1	<1
Mercury, Total									
Methylene chloride	<5	<5	<5	<5		<5	<5	<5	<5
Nickel, total	5.7	5.1	7.2	5.0		4.0	4.0	<5.0	<5.0
Selenium, total	<4	<4	<4	<4		<4	<4	<2	<2
Silver, total	<4	<4	<4	<4		<4	<4	<5	<5
Solids, total suspended									
Styrene	<1	<1	<1	<1		<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Thallium, total	<2.0	<2.0	<2.0	<2.0		<2.0	<2.0	<.5	<.5
Tin, Total									
Toluene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,2-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5		<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1		<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20		<20	<20	<2	<2
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	<20.0	<20.0	<20.0	<20.0		<20.0	<20.0	12.0	<5.0

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

Table 9

Analytical Data Summary for MW-21R

Constituents	Units	4/20/2017	7/17/2017	10/19/2017	10/15/2018	4/9/2019	10/9/2019	4/1/2020	10/6/2020
(3,4)-methylphenol	ug/L			△.8					
1,1,1,2-tetrachloroethane	ug/L	<1		<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1		<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1		△.1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1		<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1		<1	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1		△.1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L			<1					
1,2,3-trichloropropane	ug/L	<1		△.1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L			△.8					
1,2,4-trichlorobenzene	ug/L			△.1					
1,2-dibromo-3-chloropropane	ug/L	<1		△.1	<1	<1	<1	<5	<5
1,2-dibromoethane	ug/L	<1		△.1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1		△.1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1		△.1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1		△.1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L			△.8					
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 (o-cresol)	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	<10.0		21.5	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile	ug/L			<10					
Acetophenone	ug/L			△.8					
Acrolein	ug/L			<10					
Acrylonitrile	ug/L	<5		<5	<5	<5	<5	<5	<5
Aldrin	ug/L			△.05					
Allyl chloride	ug/L			△.1					
Alpha-bhc	ug/L			△.05					
Anthracene	ug/L			△.8					

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

Table 9

Analytical Data Summary for MW-21R

Constituents	4/13/2021	10/21/2021	1/10/2022	4/19/2022	10/18/2022	4/11/2023	10/5/2023	4/23/2024	10/11/2024
(3,4)-methylphenol				<8		<8			
1,1,1,2-tetrachloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
1,1-dichloropropene				<1		<1			
1,2,3-trichloropropane	<1	<1		<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene				<8		<8			
1,2,4-trichlorobenzene				<1		<1			
1,2-dibromo-3-chloropropane	<5	<5		<1	<5	<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		<8			
1,3,5-trinitrobenzene				<8		<8			
1,3-dichlorobenzene				<1		<1			
1,3-dichloropropane				<1		<1			
1,3-dinitrobenzene				<8		<8			
1,4-dichlorobenzene	<1	<1		<1	<1	<1	<1	<1	<1
1,4-naphthoquinone				<8		<8			
1,4-phenylenediamine				<8		<8			
1-naphthylamine				<8		<8			
2,2-dichloropropane				<1		<1			
2,3,4,6-tetrachlorophenol				<8		<8			
2,4,5-t				<5		<5			
2,4,5-tp (silvex)				<5		<5			
2,4,5-trichlorophenol				<8		<8			
2,4,6-trichlorophenol				<8		<8			
2,4-d				<2		<2			
2,4-dichlorophenol				<8		<8			
2,4-dimethylphenol				<8		<8			
2,4-dinitrophenol				<8		<8			
2,4-dinitrotoluene				<8		<8			
2,6-dichlorophenol				<8		<8			
2,6-dinitrotoluene				<8		<8			
2-acetylaminofluorene				<8		<8			
2-butanone (mek)	<5	<5		<5	<10	<5	<10	<10	<10
2-chloronaphthalene				<8		<8			
2-chlorophenol				<8		<8			
2-hexanone (mbk)	<5	<5		<5	<5	<5	<5	<5	<5
2-methylnaphthalene				<8		<8			
2-methylphenol (o-cresol)				<8		<8			
2-naphthylamine				<8		<8			
2-nitroaniline				<8		<8			
2-nitrophenol				<8		<8			
3,3'-dichlorobenzidine				<8		<8			
3,3'-dimethylbenzidine				<8		<8			
3-methylcholanthrene				<8		<8			
3-nitroaniline				<8		<8			
4,4'-ddd				<.05		<.05			
4,4'-dde				<.05		<.05			
4,4'-ddt				<.05		<.05			
4,6-dinitro-2-methylphenol				<8		<8			
4-aminobiphenyl				<8		<8			
4-bromophenyl phenyl ether				<8		<8			
4-chloro-3-methylphenol				<8		<8			
4-chloroaniline				<8		<8			
4-chlorophenyl phenyl ether				<8		<8			
4-methyl-2-pentanone (mibk)	<5	<5		<5	<5	<5	<5	<5	<5
4-nitroaniline				<8		<8			
4-nitrophenol				<8		<8			
5-nitro-o-toluidine				<8		<8			
7,12-dimethylbenz (a) anthracene				<8		<8			
Acenaphthene				<8		<8			
Acenaphthylene				<8		<8			
Acetone	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile				<10		<10			
Acetophenone				<8		<8			
Acrolein				<10		<10			
Acrylonitrile	<5	<5		<5	<5	<5	<5	<5	<5
Aldrin				<.05		<.05			
Allyl chloride				<1		<1			
Alpha-bhc				<.05		<.05			
Anthracene				<8		<8			

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

Table 9

Analytical Data Summary for MW-21R

Constituents	4/8/2025	10/23/2025
(3,4)-methylphenol		
1,1,1,2-tetrachloroethane	<1	<1
1,1,1-trichloroethane	<1	<1
1,1,2,2-tetrachloroethane	<1	<1
1,1,2-trichloroethane	<1	<1
1,1-dichloroethane	<1	<1
1,1-dichloroethene	<1	<1
1,1-dichloropropene		
1,2,3-trichloropropane	<1	<1
1,2,4,5-tetrachlorobenzene		
1,2,4-trichlorobenzene		
1,2-dibromo-3-chloropropane	<5	<5
1,2-dibromoethane	<1	<1
1,2-dichlorobenzene	<1	<1
1,2-dichloroethane	<1	<1
1,2-dichloropropane	<1	<1
1,2-dinitrobenzene		
1,3,5-trinitrobenzene		
1,3-dichlorobenzene		
1,3-dichloropropane		
1,3-dinitrobenzene		
1,4-dichlorobenzene	<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
2-chloronaphthalene		
2-chlorophenol		
2-hexanone (mbk)	<5	<5
2-methylnaphthalene		
2-methylphenol (o-cresol)		
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
4-nitroaniline		
4-nitrophenol		
5-nitro-o-toluidine		
7,12-dimethylbenz (a) anthracene		
Acenaphthene		
Acenaphthylene		
Acetone	<10.0	<10.0
Acetonitrile		
Acetophenone		
Acrolein		
Acrylonitrile	<5	<5
Aldrin		
Allyl chloride		
Alpha-bhc		
Anthracene		

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

Table 9

Analytical Data Summary for MW-21R

Constituents	Units	4/20/2017	7/17/2017	10/19/2017	10/15/2018	4/9/2019	10/9/2019	4/1/2020	10/6/2020
Antimony, total	ug/L	<2		<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L			<.10					
Arochlor 1221	ug/L			<.20					
Arochlor 1232	ug/L			<.20					
Arochlor 1242	ug/L			<.20					
Arochlor 1248	ug/L			<.20					
Arochlor 1254	ug/L			<.10					
Arochlor 1260	ug/L			<.10					
Arsenic, total	ug/L	4.5		4.5	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene	ug/L			<.8					
Barium, total	ug/L	60.3		35.9	30.3	21.1	35.4	23.9	24.3
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	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Beta-bhc	ug/L			<.05					
Bis(2-chloroethoxy)methane	ug/L			<.8					
Bis(2-chloroethyl)ether	ug/L			<.8					
Bis(2-ethylhexyl)phthalate	ug/L			7					
Bis[2-chloroisopropyl]ether	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-dichloroethene	ug/L	<1		<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1		<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	25.2	20.9	19.4	15.7	12.0	16.5	8.1	21.1
Copper, total	ug/L	<4.0		<4.0	5.2	<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 9

Analytical Data Summary for MW-21R

Constituents	4/13/2021	10/21/2021	1/10/2022	4/19/2022	10/18/2022	4/11/2023	10/5/2023	4/23/2024	10/11/2024
Antimony, total	<2	<2		<2	<2	<2	<2	<2	<2
Arochlor 1016				<.14		<.10			
Arochlor 1221				<.29		<.20			
Arochlor 1232				<.29		<.20			
Arochlor 1242				<.29		<.20			
Arochlor 1248				<.29		<.20			
Arochlor 1254				<.14		<.10			
Arochlor 1260				<.14		<.10			
Arsenic, total	<4.0	16.2	15.2	17.1	9.8	14.7	10.9	5.2	12.6
Azobenzene				<8		<8			
Barium, total	23.2	32.2		35.2	32.6	28.1	24.2	19.6	25.2
Benzene	<1	<1		<1	<1	<1	<1	<1	<1
Benzo(a)anthracene				<8		<8			
Benzo(a)pyrene				<8		<8			
Benzo(b)fluoranthene				<8		<8			
Benzo(g,h,i)perylene				<8		<8			
Benzo(k)fluoranthene				<8		<8			
Benzyl alcohol				<8		<8			
Beryllium, total	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Beta-bhc				<.05		<.05			
Bis(2-chloroethoxy)methane				<8		<8			
Bis(2-chloroethyl)ether				<8		<8			
Bis(2-ethylhexyl)phthalate				<6		<6			
Bis[2-chloroisopropyl]ether				<8		<8			
Bromochloromethane	<1	<1		<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1		<1	<1	<1	<1	<1	<1
Bromoform	<1	<1		<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1		<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate				<8		<8			
Cadmium, total	<.8	<.8		<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1		<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1		<1	<1	<1	<1	<1	<1
Chlordane				<.1		<.1			
Chlorobenzene	<1	<1		<1	<1	<1	<1	<1	<1
Chlorobenzilate				<8		<8			
Chloroethane	<1	<1		<1	<1	<1	<1	<1	<1
Chloroform	<1	<1		<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1		<1	<1	<1	<1	<1	<1
Chloroprene				<1		<1			
Chromium, total	<8	<8		<8	<8	<8	<8	<8	<8
Chrysene				<8		<8			
Cis-1,2-dichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1		<1	<1	<1	<1	<1	<1
Cobalt, total	21.4	24.4		23.6	23.6	16.7	12.0	9.1	6.8
Copper, total	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total				<.005		<.005			
Delta-bhc				<.05		<.05			
Diallate				<8		<8			
Dibenzo(a,h)anthracene				<8		<8			
Dibenzofuran				<8		<8			
Dibromochloromethane	<1	<1		<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1		<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane				<1		<1			
Dieldrin				<.05		<.05			
Diethyl phthalate				<8		<8			
Dimethoate				<.4		<.4			
Dimethylphthalate				<8		<8			
Di-n-butyl phthalate				<8		<8			
Di-n-octyl phthalate				<8		<8			
Dinoseb				<.5		<.5			
Diphenylamine				<8		<8			
Disulfoton				<.4		<.4			
Endosulfan i				<.05		<.05			
Endosulfan ii				<.05		<.05			
Endosulfan sulfate				<.05		<.05			
Endrin				<.05		<.05			
Endrin aldehyde				<.05		<.05			
Ethyl methacrylate				<10		<10			
Ethyl methanesulfonate				<8		<8			
Ethylbenzene	<1	<1		<1	<1	<1	<1	<1	<1
Famphur				<.4		<.4			
Fluoranthene				<8		<8			
Fluorene				<8		<8			
Gamma-bhc [lindane]				<.05		<.05			
Heptachlor				<.05		<.05			
Heptachlor epoxide				<.05		<.05			
Hexachlorobenzene				<.05		<.05			

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

Table 9

Analytical Data Summary for MW-21R

Constituents	4/8/2025	10/23/2025
Antimony, total	<1	<1
Arochlor 1016		
Arochlor 1221		
Arochlor 1232		
Arochlor 1242		
Arochlor 1248		
Arochlor 1254		
Arochlor 1260		
Arsenic, total	5.8	8.4
Azobenzene		
Barium, total	26.8	28.8
Benzene	<1	<1
Benzo(a)anthracene		
Benzo(a)pyrene		
Benzo(b)fluoranthene		
Benzo(g,h,i)perylene		
Benzo(k)fluoranthene		
Benzyl alcohol		
Beryllium, total	<.5	<.5
Beta-bhc		
Bis(2-chloroethoxy)methane		
Bis(2-chloroethyl)ether		
Bis(2-ethylhexyl)phthalate		
Bis[2-chloroisopropyl]ether		
Bromochloromethane	<1	<1
Bromodichloromethane	<1	<1
Bromoform	<1	<1
Bromomethane	<1	<1
Butyl benzyl phthalate		
Cadmium, total	<.2	<.2
Carbon disulfide	<1	<1
Carbon tetrachloride	<1	<1
Chlordane		
Chlorobenzene	<1	<1
Chlorobenzilate		
Chloroethane	<1	<1
Chloroform	<1	<1
Chloromethane	<1	<1
Chloroprene		
Chromium, total	<1	<1
Chrysene		
Cis-1,2-dichloroethene	<1	<1
Cis-1,3-dichloropropene	<1	<1
Cobalt, total	5.4	4.0
Copper, total	<5.0	<5.0
Cyanide, total		
Delta-bhc		
Diallate		
Dibenzo(a,h)anthracene		
Dibenzofuran		
Dibromochloromethane	<1	<1
Dibromomethane	<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
Famphur		
Fluoranthene		
Fluorene		
Gamma-bhc [lindane]		
Heptachlor		
Heptachlor epoxide		
Hexachlorobenzene		

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

Table 9

Analytical Data Summary for MW-21R

Constituents	Units	4/20/2017	7/17/2017	10/19/2017	10/15/2018	4/9/2019	10/9/2019	4/1/2020	10/6/2020
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					
Iodomethane	ug/L	<1		<1	<1	<1	<1	<1	<1
Isobutanol	mg/L			<1					
Isodrin	ug/L			<8					
Isophorone	ug/L			<8					
Isosafrole	ug/L			<8					
Kepone	ug/L			<8					
Lead, total	ug/L	<4		<4	<4	<4	<4	<4	<4
Mercury, Total	ug/L			<5					
Methacrylonitrile	ug/L			<1					
Methapyrilene	ug/L			<8					
Methoxychlor	ug/L			<.05					
Methyl 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	55.8	50.7	53.1	44.7	21.5	24.2	13.1	27.9
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					
P-(dimethylamino)azobenzene	ug/L			<8					
Parathion	ug/L			<4					
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
Styrene	ug/L	<1		<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L			<.1					
Tetrachloroethene	ug/L	<1		<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4.0		<4.0	<4.0	<2.0	<2.0	<2.0	<2.0
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-dichloroethene	ug/L	<1		<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1		<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5		<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L	<1		<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1		<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20		<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5		<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1		<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2		<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	9.8		<20.0	<20.0	<8.0	53.1	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-21R

Constituents	4/13/2021	10/21/2021	1/10/2022	4/19/2022	10/18/2022	4/11/2023	10/5/2023	4/23/2024	10/11/2024
Hexachlorobutadiene				<8		<8			
Hexachlorocyclopentadiene				<8		<8			
Hexachloroethane				<8		<8			
Hexachloropropene				<8		<8			
Indeno(1,2,3-cd)pyrene				<8		<8			
Iodomethane	<1	<1		<2	<1	<2	<1	<1	<1
Isobutanol				<1		<1			
Isodrin				<8		<8			
Isophorone				<8		<8			
Isosafrole				<8		<8			
Kepone				<8		<8			
Lead, total	<4	<4		<4	<4	<4	<4	<4	<4
Mercury, Total				<.5		<.5			
Methacrylonitrile				<1		<1			
Methapyrilene				<8		<8			
Methoxychlor				<.05		<.05			
Methyl methacrylate				<1		<1			
Methyl methanesulfonate				<8		<8			
Methyl parathion				<.4		<.4			
Methylene chloride	<5	<5		<5	<5	<5	<5	<5	<5
Naphthalene				<8		<8			
Nickel, total	28.4	32.4		28.3	26.0	24.8	19.4	13.6	9.5
Nitrobenzene				<8		<8			
N-nitrosodiethylamine				<8		<8			
N-nitrosodimethylamine				<8		<8			
N-nitrosodi-n-butylamine				<8		<8			
N-nitroso-di-n-propylamine				<8		<8			
N-nitrosodiphenylamine				<8		<8			
N-nitrosomethylethylamine				<8		<8			
N-nitrosopiperidine				<8		<8			
N-nitrosopyrrolidine				<8		<8			
O,o,o-triethyl phosphorothioate				<.4		<.4			
O-toluidine				<8		<8			
P-(dimethylamino)azobenzene				<8		<8			
Parathion				<.4		<.4			
Pentachlorobenzene				<8		<8			
Pentachloronitrobenzene (pcnb)				<8		<8			
Pentachlorophenol				<8		<8			
Phenacetin				<8		<8			
Phenanthrene				<8		<8			
Phenol				<8		<8			
Phorate				<.4		<.4			
Pronamide				<8		<8			
Propionitrile				<10		<10			
Pyrene				<8		<8			
Safrole				<8		<8			
Selenium, total	<4	<4		<4	<4	<4	<4	<4	<4
Silver, total	<4	<4		<4	<4	<4	<4	<4	<4
Styrene	<1	<1		<1	<1	<1	<1	<1	<1
Sulfide, total				<.1		<.1			
Tetrachloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Thallium, total	<2.0	<2.0		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Thionazin				<.4		<.4			
Tin, Total				<20		<20			
Toluene	<1	<1		<1	<1	<1	<1	<1	<1
Toxaphene				<.2		<.2			
Trans-1,2-dichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1		<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5		<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1		<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20		<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5		<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1		<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2		<2	<2	<2	<2	<2	<2
Zinc, total	<20.0	<20.0		<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-21R

Constituents	4/8/2025	10/23/2025
Hexachlorobutadiene		
Hexachlorocyclopentadiene		
Hexachloroethane		
Hexachloropropene		
Indeno(1,2,3-cd)pyrene		
Iodomethane	<1	<1
Isobutanol		
Isodrin		
Isophorone		
Isosafrole		
Kepon		
Lead, total	<1	<1
Mercury, Total		
Methacrylonitrile		
Methapyrilene		
Methoxychlor		
Methyl methacrylate		
Methyl methanesulfonate		
Methyl parathion		
Methylene chloride	<5	<5
Naphthalene		
Nickel, total	7.2	<5.0
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		
P-(dimethylamino)azobenzene		
Parathion		
Pentachlorobenzene		
Pentachloronitrobenzene (pcnb)		
Pentachlorophenol		
Phenacetin		
Phenanthrene		
Phenol		
Phorate		
Pronamide		
Propionitrile		
Pyrene		
Safrole		
Selenium, total	<2	<2
Silver, total	<5	<5
Styrene	<1	<1
Sulfide, total		
Tetrachloroethene	<1	<1
Thallium, total	<.5	<.5
Thionazin		
Tin, Total		
Toluene	<1	<1
Toxaphene		
Trans-1,2-dichloroethene	<1	<1
Trans-1,3-dichloropropene	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5
Trichloroethene	<1	<1
Trichlorofluoromethane	<1	<1
Vanadium, total	<2	<2
Vinyl acetate	<5	<5
Vinyl chloride	<1	<1
Xylenes, total	<2	<2
Zinc, total	12.6	<5.0

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

Table 9

Analytical Data Summary for MW-22

Constituents	Units	10/28/2014	3/30/2015	9/22/2015	4/13/2016	9/29/2016	12/28/2016	4/20/2017	7/17/2017
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1		<1	
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1		<1	
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1		<1	
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1		<1	
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1		<1	
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1		<1	
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1		<1	
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1		<1	
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1		<1	
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1		<1	
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1		<1	
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5		<5	
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5		<5	
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5		<5	
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0	
Acrylonitrile	ug/L	<5	<5	<5	<5	<5		<5	
Antimony, total	ug/L	<2	<2	<2	<2	<2		<2	
Arsenic, total	ug/L	<4	<4	<4	<4	<4		<4	
Barium, total	ug/L	17.5	20.3	22.2	29.2	15.7		19.2	
Benzene	ug/L	<1	<1	<1	<1	<1		<1	
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	
Bromochloromethane	ug/L	<1	<1	<1	<1	<1		<1	
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1		<1	
Bromoform	ug/L	<1	<1	<1	<1	<1		<1	
Bromomethane	ug/L	<1	<1	<1	<1	<1		<1	
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8		<.8	
Carbon disulfide	ug/L	<1	<1	<1	<1	<1		<1	
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1		<1	
Chlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	
Chloroethane	ug/L	<1	<1	<1	<1	<1		<1	
Chloroform	ug/L	<1	<1	<1	<1	<1		<1	
Chloromethane	ug/L	<1	<1	<1	<1	<1		<1	
Chromium, total	ug/L	<8	<8	<8	<8	<8		<8	
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1		<1	
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1		<1	
Cobalt, total	ug/L	<.8	<.8	<.8	<.8	<.8		<.8	
Copper, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1		<1	
Dibromomethane	ug/L	<1	<1	<1	<1	<1		<1	
Ethylbenzene	ug/L	<1	<1	<1	<1	<1		<1	
Iodomethane	ug/L	<1	<1	<1	<1	<1		<1	
Lead, total	ug/L	<4	<4	<4	<4	<4		<4	
Methylene chloride	ug/L	<5	<5	<5	<5	<5		<5	
Nickel, total	ug/L	16.0	5.4	41.3	8.8	41.5	10.6	<4.0	
Selenium, total	ug/L	<4	<4	<4	<4	<4		<4	
Silver, total	ug/L	<4	<4	<4	<4	<4		<4	
Solids, total suspended	mg/L	84	5						
Styrene	ug/L	<1	<1	<1	<1	<1		<1	
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1		<1	
Thallium, total	ug/L	<4.0	<4.0	<1.0	<4.0	<4.0		<4.0	
Toluene	ug/L	<1	<1	<1	<1	<1		<1	
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1		<1	
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1		<1	
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5		<5	
Trichloroethene	ug/L	<1	<1	<1	<1	<1		<1	
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1		<1	
Vanadium, total	ug/L	<20	<20	<20	<20	<20		<20	
Vinyl acetate	ug/L	<5	<5	<5	<5	<5		<5	
Vinyl chloride	ug/L	<1	<1	<1	<1	<1		<1	
Xylenes, total	ug/L	<2	<2	<2	<2	<2		<2	
Zinc, total	ug/L	15.6	<8.0	16.3	<8.0	22.0		<8.0	<20.0

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

Table 9

Analytical Data Summary for MW-22

Constituents	10/18/2017	10/15/2018	4/9/2019	10/9/2019	1/8/2020	4/1/2020	10/6/2020	4/13/2021	10/21/2021
1,1,1,2-tetrachloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1		<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1		<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5		<5	<5	<5	<5
2-hexanone (mbk)	<5	<5	<5	<5		<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5		<5	<5	<5	<5
Acetone	21.1	<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5		<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2		<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4		<4	<4	<4	<4
Barium, total	15.2	13.3	18.7	15.9		18.2	14.4	16.0	10.1
Benzene	<1	<1	<1	<1		<1	<1	<1	<1
Beryllium, total	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
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
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
Chlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
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
Chromium, total	<8	<8	<8	<8		<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1		<1	<1	<1	<1
Cobalt, total	<.8	<.8	<.8	<.8		<.8	.4	<.4	.8
Copper, total	<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
Dibromomethane	<1	<1	<1	<1		<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1		<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1		<1	<1	<1	<1
Lead, total	<4	<4	<4	<4		<4	<4	<4	<4
Methylene chloride	<5	<5	<5	<5		<5	<5	<5	<5
Nickel, total	37.6	30.6	5.3	16.6		5.6	35.8	<4.0	12.5
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
Tetrachloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Thallium, total	<4.0	<4.0	<2.0	<2.0		<2.0	<2.0	<2.0	<2.0
Toluene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,2-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5		<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1		<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20		<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5		<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1		<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2		<2	<2	<2	<2
Zinc, total	<20.0	<20.0	<8.0	71.1	10.6	<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-22

Constituents	4/19/2022	10/18/2022	4/11/2023	10/5/2023	12/19/2023	4/23/2024	10/11/2024	4/8/2025	10/23/2025
1,1,1,2-tetrachloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5		<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1		<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
2-butanone (mek)	<10	<10	<10	<10		<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5		<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5		<5	<5	<5	<5
Acetone	<10.0	<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5		<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2		<2	<2	<1	<1
Arsenic, total	<4	<4	<4	<4		<4	<4	<2	<2
Barium, total	15.8	12.7	13.1	9.3		13.3	9.9	14.3	12.7
Benzene	<1	<1	<1	<1		<1	<1	<1	<1
Beryllium, total	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	<5	<5
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
Cadmium, total	<8	<8	<8	<8		<8	<8	<2	<2
Carbon disulfide	<1	<1	<1	<1		<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1		<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
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
Chromium, total	<8	<8	<8	<8		<8	<8	<1	<1
Cis-1,2-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1		<1	<1	<1	<1
Cobalt, total	.4	1.5	.4	.4		<4	<4	<5	<5
Copper, total	<4.0	<4.0	<4.0	8.6	<4.0	<4.0	<4.0	<5.0	<5.0
Dibromochloromethane	<1	<1	<1	<1		<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1		<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1		<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1		<1	<1	<1	<1
Lead, total	<4	<4	<4	<4		<4	<4	<1	<1
Methylene chloride	<5	<5	<5	<5		<5	<5	<5	<5
Nickel, total	<4.0	10.6	<4.0	76.0		<4.0	11.7	<5.0	5.6
Selenium, total	<4	<4	<4	<4		<4	<4	<2	<2
Silver, total	<4	<4	<4	<4		<4	<4	<5	<5
Solids, total suspended									
Styrene	<1	<1	<1	<1		<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Thallium, total	<2.0	<2.0	<2.0	<2.0		<2.0	<2.0	<5	<5
Toluene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,2-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5		<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1		<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20		<20	<20	<2	<2
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	<20.0	<20.0	<20.0	29.2		<20.0	<20.0	7.1	8.4

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

Table 9

Analytical Data Summary for MW-25

Constituents	Units	10/18/2017	5/18/2023	7/7/2023	10/5/2023	4/23/2024	10/11/2024	12/10/2024	4/8/2025
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
1,1-dichloroethene	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	<5	<5	<5	<5	<5		<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1		<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1		<1
2-butanone (mek)	ug/L	<5	<10	<10	<10	<10	<10		<10
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5		<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5		<5
Acetone	ug/L	<10.0	25.5	<10.0	<10.0	<10.0	<10.0		<10.0
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5		<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2		<1
Arsenic, total	ug/L	<4.0	<4.0	15.2	9.4	5.7	6.9		<2.0
Barium, total	ug/L	59.0	51.9	69.3	55.7	48.3	62.0		16.6
Benzene	ug/L	<1	<1	<1	<1	<1	<1		<1
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0		<5
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		<2
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	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8		<1
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1		<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1		<1
Cobalt, total	ug/L	10.2	8.9	8.8	7.1	4.7	3.7		<5
Copper, total	ug/L	<4	<4	<4	<4	<4	<4		<5
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1		<1
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4		<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5		<5
Nickel, total	ug/L	22.3	13.2	15.8	13.8	7.9	6.5		<5.0
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4		<2
Silver, total	ug/L	<4	<4	<4	<4	<4	<4		<5
Styrene	ug/L	<1	<1	<1	<1	<1	<1		<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1		<1
Thallium, total	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		<5
Toluene	ug/L	<1	<1	<1	<1	<1	<1		<1
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1		<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1		<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5		<5
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1		<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20		<2
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	<20.0	<20.0	<20.0	<20.0	<20.0		6.8

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

Table 9

Analytical Data Summary for MW-25

Constituents	10/23/2025
1,1,1,2-tetrachloroethane	<1
1,1,1-trichloroethane	<1
1,1,2,2-tetrachloroethane	<1
1,1,2-trichloroethane	<1
1,1-dichloroethane	<1
1,1-dichloroethene	<1
1,2,3-trichloropropane	<1
1,2-dibromo-3-chloropropane	<5
1,2-dibromoethane	<1
1,2-dichlorobenzene	<1
1,2-dichloroethane	<1
1,2-dichloropropane	<1
1,4-dichlorobenzene	<1
2-butanone (mek)	<10
2-hexanone (mbk)	<5
4-methyl-2-pentanone (mibk)	<5
Acetone	<10.0
Acrylonitrile	<5
Antimony, total	<1
Arsenic, total	5.9
Barium, total	45.9
Benzene	<1
Beryllium, total	<.5
Bromochloromethane	<1
Bromodichloromethane	<1
Bromoform	<1
Bromomethane	<1
Cadmium, total	<.2
Carbon disulfide	<1
Carbon tetrachloride	<1
Chlorobenzene	<1
Chloroethane	<1
Chloroform	2.9
Chloromethane	<1
Chromium, total	<1
Cis-1,2-dichloroethene	<1
Cis-1,3-dichloropropene	<1
Cobalt, total	1.1
Copper, total	<5
Dibromochloromethane	<1
Dibromomethane	<1
Ethylbenzene	<1
Iodomethane	<1
Lead, total	<1
Methylene chloride	<5
Nickel, total	<5.0
Selenium, total	<2
Silver, total	<5
Styrene	<1
Tetrachloroethene	<1
Thallium, total	<.5
Toluene	<1
Trans-1,2-dichloroethene	<1
Trans-1,3-dichloropropene	<1
Trans-1,4-dichloro-2-butene	<5
Trichloroethene	<1
Trichlorofluoromethane	<1
Vanadium, total	<2
Vinyl acetate	<5
Vinyl chloride	<1
Xylenes, total	<2
Zinc, total	6.2

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

Table 9

Analytical Data Summary for MW-28

Constituents	Units	5/18/2023	7/7/2023	10/5/2023	4/23/2024	10/11/2024	4/8/2025	10/23/2025
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<10	<10	<10	<10	<10	<10	<10
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	<1	<1
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<2	<2
Barium, total	ug/L	17.4	18.8	20.5	17.8	19.9	17.9	29.7
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<5	<5
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	<2	<2
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	<8.0	<8.0	<8.0	<8.0	<8.0	1.1	1.1
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<4	<4	<4	<4	<4	<5	<5
Copper, total	ug/L	<4	<4	<4	<4	<4	<5	<5
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	5.8	8.1	8.9	7.1	7.6	7.2	7.7
Selenium, total	ug/L	4.7	<4.0	4.8	<4.0	<4.0	2.5	2.7
Silver, total	ug/L	<4	<4	<4	<4	<4	<5	<5
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<5	<5
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<2	<2
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	<20.0	<20.0	<20.0	<20.0	<5.0	9.4

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

Table 9

Analytical Data Summary for MW-29

Constituents	Units	10/18/2017	4/8/2025	10/23/2025
1,1,1,2-tetrachloroethane	ug/L		<1	<1
1,1,1-trichloroethane	ug/L		<1	<1
1,1,2,2-tetrachloroethane	ug/L		<1	<1
1,1,2-trichloroethane	ug/L		<1	<1
1,1-dichloroethane	ug/L		<1	<1
1,1-dichloroethene	ug/L		<1	<1
1,2,3-trichloropropane	ug/L		<1	<1
1,2-dibromo-3-chloropropane	ug/L		<5	<5
1,2-dibromoethane	ug/L		<1	<1
1,2-dichlorobenzene	ug/L		<1	<1
1,2-dichloroethane	ug/L		<1	<1
1,2-dichloropropane	ug/L		<1	<1
1,4-dichlorobenzene	ug/L		<1	<1
2-butanone (mek)	ug/L		<10	<10
2-hexanone (mbk)	ug/L		<5	<5
4-methyl-2-pentanone (mibk)	ug/L		<5	<5
Acetone	ug/L		<10	<10
Acrylonitrile	ug/L		<5	<5
Antimony, total	ug/L		<1	<1
Arsenic, total	ug/L		8.5	17.1
Barium, total	ug/L		35.2	39.5
Benzene	ug/L		<1	<1
Beryllium, total	ug/L		<.5	<.5
Bromochloromethane	ug/L		<1	<1
Bromodichloromethane	ug/L		<1	<1
Bromoform	ug/L		<1	<1
Bromomethane	ug/L		<1	<1
Cadmium, total	ug/L		<.2	<.2
Carbon disulfide	ug/L		<1	<1
Carbon tetrachloride	ug/L		<1	<1
Chlorobenzene	ug/L		<1	<1
Chloroethane	ug/L		<1	<1
Chloroform	ug/L		<1	<1
Chloromethane	ug/L		<1	<1
Chromium, total	ug/L		<1	<1
Cis-1,2-dichloroethene	ug/L		<1	<1
Cis-1,3-dichloropropene	ug/L		<1	<1
Cobalt, total	ug/L	21.2	26.5	25.3
Copper, total	ug/L		<5	<5
Dibromochloromethane	ug/L		<1	<1
Dibromomethane	ug/L		<1	<1
Ethylbenzene	ug/L		<1	<1
Iodomethane	ug/L		<1	<1
Lead, total	ug/L		<1	<1
Methylene chloride	ug/L		<5	<5
Nickel, total	ug/L		35.3	47.4
Selenium, total	ug/L		<2	<2
Silver, total	ug/L		<5	<5
Styrene	ug/L		<1	<1
Tetrachloroethene	ug/L		<1	<1
Thallium, total	ug/L		<.5	<.5
Toluene	ug/L		<1	<1
Trans-1,2-dichloroethene	ug/L		<1	<1
Trans-1,3-dichloropropene	ug/L		<1	<1
Trans-1,4-dichloro-2-butene	ug/L		<5	<5
Trichloroethene	ug/L		<1	<1
Trichlorofluoromethane	ug/L		<1	<1
Vanadium, total	ug/L		<2	<2
Vinyl acetate	ug/L		<5	<5
Vinyl chloride	ug/L		<1	<1
Xylenes, total	ug/L		<2	<2
Zinc, total	ug/L		9.6	12.9

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

Table 9

Analytical Data Summary for MW-30

Constituents	Units	10/9/2019	4/1/2020	10/6/2020	4/13/2021	10/21/2021	4/19/2022	10/18/2022	4/11/2023
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-dichloroethene	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	<5	<5	<5	<5	<5	<5	<5
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	<10	<10	<10
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	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	9.1	<4.0
Barium, total	ug/L	39.5	22.5	22.8	19.4	23.9	20.9	44.7	20.7
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
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	43	<8
Cis-1,2-dichloroethene	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	11.3	3.5	2.9	2.9	3.0	4.7	24.2	6.5
Copper, total	ug/L	<4.0	<4.0	<4.0	5.7	<4.0	5.9	71.2	<4.0
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
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	12.7	<4.0
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	11.0	4.3	5.4	7.0	6.3	10.7	51.0	29.0
Selenium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	5.7	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	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
Trichloroethene	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	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	21.4	<20.0
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	49.5	<20.0	<20.0	<20.0	<20.0	<20.0	138.0	<20.0

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

Table 9

Analytical Data Summary for MW-30

Constituents	10/5/2023	4/23/2024	10/11/2024	4/8/2025	10/23/2025
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1
1,2,3-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	<1	<1
Arsenic, total	<4.0	<4.0	<4.0	<2.0	<2.0
Barium, total	21.0	14.2	24.5	15.3	15.3
Benzene	<1	<1	<1	<1	<1
Beryllium, total	<4.0	<4.0	<4.0	<.5	<.5
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	<.2	<.2
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	1	<1
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	4.1	3.0	7.4	3.4	4.7
Copper, total	<4.0	<4.0	<4.0	<5.0	<5.0
Dibromochloromethane	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1
Lead, total	<4.0	<4.0	<4.0	<1.0	<1.0
Methylene chloride	<5	<5	<5	<5	<5
Nickel, total	19.0	12.7	29.6	8.3	13.9
Selenium, total	<4.0	<4.0	<4.0	<2.0	<2.0
Silver, total	<4	<4	<4	<5	<5
Styrene	<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1
Thallium, total	<2.0	<2.0	<2.0	<.5	<.5
Toluene	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<2.0	<2.0
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	29.3	<5.0	7.9

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

Table 9

Analytical Data Summary for MW-31

Constituents	Units	10/16/2024	11/22/2024	4/8/2025	10/23/2025
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-dichloroethene	ug/L	<1		<1	<1
1,2,3-trichloropropane	ug/L	<1		<1	<1
1,2-dibromo-3-chloropropane	ug/L	<5		<5	<5
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	<10		<10	<10
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	<1	<1
Arsenic, total	ug/L	<4	<4	<2	<2
Barium, total	ug/L	63.5	36.7	20.8	16.9
Benzene	ug/L	<1		<1	<1
Beryllium, total	ug/L	<4.0	<4.0	<5	<5
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	<2	<2
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	<1	<1
Cis-1,2-dichloroethene	ug/L	<1		<1	<1
Cis-1,3-dichloropropene	ug/L	<1		<1	<1
Cobalt, total	ug/L	7.0	8.0	3.8	5.1
Copper, total	ug/L	<4	<4	<5	<5
Dibromochloromethane	ug/L	<1		<1	<1
Dibromomethane	ug/L	<1		<1	<1
Ethylbenzene	ug/L	<1		<1	<1
Iodomethane	ug/L	<1		<1	<1
Lead, total	ug/L	<4	<4	<1	<1
Methylene chloride	ug/L	<5		<5	<5
Nickel, total	ug/L	22.8	17.7	<5.0	5.4
Selenium, total	ug/L	<4	<4	<2	<2
Silver, total	ug/L	<4	<4	<5	<5
Styrene	ug/L	<1		<1	<1
Tetrachloroethene	ug/L	<1		<1	<1
Thallium, total	ug/L	<2.0	<2.0	<5	<5
Toluene	ug/L	<1		<1	<1
Trans-1,2-dichloroethene	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
Trichloroethene	ug/L	<1		<1	<1
Trichlorofluoromethane	ug/L	<1		<1	<1
Vanadium, total	ug/L	<20	<20	<2	<2
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	<20.0	<20.0	7.9	<5.0

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

Table 9

Analytical Data Summary for MW-32

Constituents	Units	10/16/2024	11/22/2024	4/8/2025	10/23/2025
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-dichloroethene	ug/L	<1		<1	<1
1,2,3-trichloropropane	ug/L	<1		<1	<1
1,2-dibromo-3-chloropropane	ug/L	<5		<5	<5
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	<10		<10	<10
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	<1	<1
Arsenic, total	ug/L	<4.0	<4.0	11.7	6.4
Barium, total	ug/L	72.1	68.4	79.8	72.3
Benzene	ug/L	<1		<1	<1
Beryllium, total	ug/L	<4.0	<4.0	<5	<5
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	<.2	<.2
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	<1	<1
Cis-1,2-dichloroethene	ug/L	<1		<1	<1
Cis-1,3-dichloropropene	ug/L	<1		<1	<1
Cobalt, total	ug/L	30.7	25.2	38.8	25.6
Copper, total	ug/L	<4	<4	<5	<5
Dibromochloromethane	ug/L	<1		<1	<1
Dibromomethane	ug/L	<1		<1	<1
Ethylbenzene	ug/L	<1		<1	<1
Iodomethane	ug/L	<1		<1	<1
Lead, total	ug/L	<4	<4	<1	<1
Methylene chloride	ug/L	<5		<5	<5
Nickel, total	ug/L	51.5	46.0	64.6	38.8
Selenium, total	ug/L	<4	<4	<2	<2
Silver, total	ug/L	<4	<4	<5	<5
Styrene	ug/L	<1		<1	<1
Tetrachloroethene	ug/L	<1		<1	<1
Thallium, total	ug/L	<2.0	<2.0	<.5	<.5
Toluene	ug/L	<1		<1	<1
Trans-1,2-dichloroethene	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
Trichloroethene	ug/L	<1		<1	<1
Trichlorofluoromethane	ug/L	<1		<1	<1
Vanadium, total	ug/L	<20	<20	<2	<2
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	<20.0	<20.0	12.4	18.7

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

Table 10 – Historic SSI and SSL
(Not Required)

Table 11 – Corrective Action Trend Analysis
(Not Required)

Table 12 – Leachate Summary

Table 12
Leachate Level Summary
Annual Water Quality Report
NCIRSWA Sanitary Landfill
Permit No. 94-SDP-01-75P

	1/24/2025		2/25/2025		3/18/2025		4/8/2025	
Existing Well ID	Depth to Leachate (ft)	Leachate Thickness (ft)	Depth to Leachate (ft)	Leachate Thickness (ft)	Depth to Leachate (ft)	Leachate Thickness (ft)	Depth to Leachate (ft)	Leachate Thickness (ft)
LH-6	3.1	0.00	3.1	0.00	3.1	0.00	3.1	0.00
LH-7	10.3	0.00	10.3	0.00	9.9	0.40	10.2	0.10
LH-8	5.1	0.25	5.35	0.00	5	0.35	4.9	0.45
LH-9	7.45	0.70	8.15	0.00	8.15	0.00	7.9	0.25
LH-10	8.1	0.00	8.1	0.00	7.65	0.45	7.65	0.45
LH-11	6.15	0.05	frozen	frozen	5.5	0.70	5.6	0.60
GUH-1	5.75	0.50	6.03	0.22	6.05	0.20	5.55	0.70
GUH-2	11.8	1.40	11.78	1.42	9.6	3.60	11.9	1.30
GUH-3	9.1	0.60	9.2	0.50	9.05	0.65	9.33	0.37
GUH-4	12.4	0.15	11.8	0.75	12.55	0.00	12.3	0.25
GUH-5	12.4	0.25	12.38	0.27	12.38	0.27	12.5	0.15
GUH-6	11.15	0.00	10.3	0.85	11.15	0.00	11.15	0.00

NR - Not Recorded

	5/28/2025		6/17/2025		7/17/2025		8/13/2025	
Existing Well ID	Depth to Leachate (ft)	Leachate Thickness (ft)	Depth to Leachate (ft)	Leachate Thickness (ft)	Depth to Leachate (ft)	Leachate Thickness (ft)	Depth to Leachate (ft)	Leachate Thickness (ft)
LH-6	3.1	0.00	3.1	0.00	3.1	0.00	3.1	0.00
LH-7	10.3	0.00	10.3	0.00	10.3	0.00	10.3	0.00
LH-8	5.12	0.23	5.25	0.10	5.1	0.25	4.93	0.42
LH-9	8.15	0.00	8.15	0.00	8.15	0.00	8.15	0.00
LH-10	7.62	0.48	7.6	0.50	7.45	0.65	7.43	0.67
LH-11	5.9	0.30	5.9	0.30	5.45	0.75	5.9	0.30
GUH-1	5.6	0.65	5.63	0.62	5.5	0.75	5.6	0.65
GUH-2	11.82	1.38	11.9	1.30	11.62	1.58	11.9	1.30
GUH-3	9.05	0.65	9.08	0.62	9.22	0.48	9.37	0.33
GUH-4	12.3	0.25	12.3	0.25	12.3	0.25	12.3	0.25
GUH-5	12.38	0.27	12.39	0.26	12.38	0.27	12.38	0.27
GUH-6	11.15	0.00	11.15	0.00	11.15	0.00	11.15	0.00

NR - Not Recorded

	9/22/2025		10/23/2025		Nov. 2025		Dec. 2025	
Existing Well ID	Depth to Leachate (ft)	Leachate Thickness (ft)	Depth to Leachate (ft)	Leachate Thickness (ft)	Depth to Leachate (ft)	Leachate Thickness (ft)	Depth to Leachate (ft)	Leachate Thickness (ft)
LH-6	3.1	0.00	3.1	0.00	NR	NR	NR	NR
LH-7	10.25	0.05	10.3	0.00	NR	NR	NR	NR
LH-8	5.13	0.22	5.35	0.00	NR	NR	NR	NR
LH-9	8.15	0.00	8.15	0.00	NR	NR	NR	NR
LH-10	8.1	0.00	8.1	0.00	NR	NR	NR	NR
LH-11	5.32	0.88	6.2	0.00	NR	NR	NR	NR
GUH-1	5.83	0.42	5.75	0.50	NR	NR	NR	NR
GUH-2	11.83	1.37	12	1.20	NR	NR	NR	NR
GUH-3	9.38	0.32	9.5	0.20	NR	NR	NR	NR
GUH-4	12.3	0.25	12.25	0.30	NR	NR	NR	NR
GUH-5	12.4	0.25	12.4	0.25	NR	NR	NR	NR
GUH-6	11.15	0.00	11.15	0.00	NR	NR	NR	NR

NR - Not Recorded

Table 13 – Gas Monitoring Summary

Table 13
Explosive Gas Monitoring
Annual Water Quality Report
NCIRSWA Sanitary Landfill
Permit No. 94-SDP-01-75P

Readings are % LEL

Location/Date	24-Jan-25 1st Q	8-Apr-25 2nd Q	17-Jul-25 3rd Q	23-Oct-25 4th Q
Shop	0	0	0	0
Office	0	0	0	0
SG-1	12.5	74.6	88.9	damaged
SG-2	0	0	0	0
SG-3	0	0	0	0
MW-8	0	0	0	0
MW-10A	0	0	0	0
MW-13	0	0	0	5
LB-4	0	0	0	0
GU-1 Manhole	0	0	0	0
GU-2	NR ⁽¹⁾	NR ⁽¹⁾	NR ⁽¹⁾	NR ⁽¹⁾
GU-3	0	NR ⁽¹⁾	0	0
GU-4	0	0	0	0
GU-5	0	0	0	0
GU-6	0	0	0	0
GP-4	0	0	0	0

NR = No Reading

(1) Buried

Appendix A

Field Sampling Forms

North Central Iowa Regional Sanitary Landfill
PERMIT # 94-SDP-01-75P

4/8/2025

Sampled by: Todd Whipple

Weather conditions: Sunny, calm, 28-54 degrees

IDNR Form 542-1322

Monitoring Well: MW 10A (dg)

Primary Sampling Method: No-Purge for Appendix I

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

GENERAL INFORMATION

TOC	1038.04
Well Depth	29.20
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1038.04
Well Depth	29.20
Top Screen	1018.59
Bottom Screen	1008.59
Bottom Well	1008.59
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	24.00
Top sample	1014.04
Bottom sample	1010.04
Turbidity(NTU)	32.19

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	11:07	23.4	1014.64	

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		32.19
Appendix I	Metals	150	150		32.19
Appendix I	VOC	240	240		32.19
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	1038.04	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	29.45	Before purging	4/8/2025	11:07	23.40	1014.64		0.0	
		After purging				1038.04			
		Top of Screen after construction				1018.59			
						19.45	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1008.59			
		Bottom of Well	4/8/2025		29.20	1008.84			
						0.25	feet sedimentation		
		Before Sampling				1038.04			
		Recovery				1038.04			
		Recovery				1038.04			
		Recovery				1038.04			
		Recovery				1038.04			

IDNR Form 542-1322

Monitoring Well: MW 10B (ug)

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

GENERAL INFORMATION

TOC	1036.57
Well Depth	48.70
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1036.57
Well Depth	48.70
Top Screen	998.77
Bottom Screen	988.77
Bottom Well	986.77
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	42.00
Top sample	994.57
Bottom sample	990.57
Turbidity(NTU)	2.78

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	11:14	19.34	1017.23	

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		2.78
Appendix I	Metals	150	150		2.78
Appendix I	VOC	240	240		2.78
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	1036.57	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	48.70	Before purging	4/8/2025	11:14	19.34	1017.23		0.0	
		After purging				1036.57			
		Top of Screen after construction				998.77			
						37.80	feet above (+) or below (-) top screen		
		Bottom of Well after construction				986.77			
		Bottom of Well	4/8/2025		48.70	987.87			
						1.10	feet sedimentation		
		Before Sampling				1036.57			
		Recovery				1036.57			
		Recovery				1036.57			
		Recovery				1036.57			
		Recovery				1036.57			

IDNR Form 542-1322

Monitoring Well: MW-25 (dg)

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

GENERAL INFORMATION

TOC	1031.96
Well Depth	31.50
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	1031.96
Well Depth	31.50
Top Screen	1011.56
Bottom Screen	1001.56
Bottom Well	998.75
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	25.00
Top sample	1006.96
Bottom sample	1002.96
Turbidity(NTU)	8.97

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	10:22	14.1	1017.86	

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		8.97
Appendix I	Metals	150	150		8.97
Appendix I	VOC	240	240		8.97
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	1031.96	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	31.50	Before purging	4/8/2025	10:22	14.10	1017.86		0.0	
		After purging				1031.96			
		Top of Screen after construction				1011.56			
						6.30	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1001.56			
		Bottom of Well	4/8/2025		30.40	1001.56			
						0.00	feet sedimentation		
		Before Sampling				1031.96			
		Recovery				1031.96			
		Recovery				1031.96			
		Recovery				1031.96			
		Recovery				1031.96			

IDNR Form 542-1322

Monitoring Well: MW-28 (dg)

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

GENERAL INFORMATION

TOC	1035.16
Well Depth	13.31
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	1035.16
Well Depth	13.31
Top Screen	1027.42
Bottom Screen	1022.16
Bottom Well	1021.85
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	13.00
Top sample	1022.16
Bottom sample	1018.16
Turbidity(NTU)	2.35

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	10:44	11.82	1023.34	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.35
Appendix I	Metals	150	150		2.35
Appendix I	VOC	240	240		2.35
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	1035.16	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	13.31	Before purging	4/8/2025	10:44	11.82	1023.34		0.0	
		After purging				1035.16			
		Top of Screen after construction				1027.42			
						-4.08	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1022.16			
		Bottom of Well	4/8/2025		13.00	1022.16			
						0.00	feet sedimentation		
		Before Sampling				1035.16			
		Recovery				1035.16			
		Recovery				1035.16			
		Recovery				1035.16			
		Recovery				1035.16			

IDNR Form 542-1322

Monitoring Well: MW-18 (dg)

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

GENERAL INFORMATION

TOC	1032.06
Well Depth	25.40
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	1032.06
Well Depth	25.40
Top Screen	1016.66
Bottom Screen	1006.66
Bottom Well	1006.66
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	20.00
Top sample	1012.06
Bottom sample	1008.06
Turbidity(NTU)	3.34

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	11:29	17.59	1014.47	

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		3.34
Appendix I	Metals	150	150		3.34
Appendix I	VOC	240	240		3.34
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	1032.06	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	25.40	Before purging	4/8/2025	11:29	17.59	1014.47		0.0	
		After purging				1032.06			
		Top of Screen after construction				1016.66			
						15.40	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1006.66			
		Bottom of Well	4/8/2025		25.60	1006.46			
						-0.20	feet sedimentation		
		Before Sampling				1032.06			
		Recovery				1032.06			
		Recovery				1032.06			
		Recovery				1032.06			
		Recovery				1032.06			

IDNR Form 542-1322

Monitoring Well: MW-20 (dg)

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

GENERAL INFORMATION

TOC	1026.08
Well Depth	30.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1028.08
Well Depth	30.00
Top Screen	1002.61
Bottom Screen	992.61
Bottom Well	992.61
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	24.00
Top sample	1004.08
Bottom sample	1000.08
Turbidity(NTU)	30.49

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	12:00	13.74	1012.34	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		30.49
Appendix I	Metals	150	150		30.49
Appendix I	VOC	240	240		30.49
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	1026.08	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	30.00	Before purging	4/8/2025	12:00	13.74	1012.34		0.0	
		After purging				1026.08			
		Top of Screen after construction				1006.08			
						20.00	feet above (+) or below (-) top screen		
		Bottom of Well after construction				996.08			
		Bottom of Well	4/8/2025		29.80	996.28			
						0.20	feet sedimentation		
		Before Sampling				1026.08			
		Recovery				1026.08			
		Recovery				1026.08			
		Recovery				1026.08			
		Recovery				1026.08			

IDNR Form 542-1322

Monitoring Well: MW-21R (dg)

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

GENERAL INFORMATION

TOC	1033.51
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	1033.51
Well Depth	45.50
Top Screen	998.01
Bottom Screen	988.01
Bottom Well	988.01
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	40.00
Top sample	993.51
Bottom sample	989.51
Turbidity(NTU)	21.49

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	12:13	22.91	1010.6	

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		21.49
Appendix I	Metals	150	150		21.49
Appendix I	VOC	240	240		21.49
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	1033.51	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	45.50	Before purging	4/8/2025	12:13	22.91	1010.60		0.0	
		After purging				1033.51			
		Top of Screen after construction				998.01			
						35.50	feet above (+) or below (-) top screen		
		Bottom of Well after construction				988.01			
		Bottom of Well	4/8/2025		45.50	988.01			
						0.00	feet sedimentation		
		Before Sampling				1033.51	App I		
		Recovery				1033.51	App II		
		Recovery				1033.51			
		Recovery				1033.51			
		Recovery				1033.51			

IDNR Form 542-1322

Monitoring Well: MW-22 (dg)

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

GENERAL INFORMATION

TOC	1079.15
Well Depth	32.70
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1079.15
Well Depth	32.70
Top Screen	1056.45
Bottom Screen	1046.45
Bottom Well	1046.45
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	27.00
Top sample	1052.15
Bottom sample	1048.15
Turbidity(NTU)	2.77

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	12:31	8.94	1070.21	

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		2.77
Appendix I	Metals	150	150		2.77
Appendix I	VOC	240	240		2.77
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	1079.15	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.70	Before purging	4/8/2025	12:31	8.94	1070.21		0.0	
		After purging				1079.15			
		Top of Screen after construction				1056.45			
						22.70	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1046.45			
		Bottom of Well	4/8/2025		32.50	1046.65			
						0.20	feet sedimentation		
		Before Sampling				1079.15			
		Recovery				1079.15			
		Recovery				1079.15			
		Recovery				1079.15			
		Recovery				1079.15			

IDNR Form 542-1322

Monitoring Well: MW-29 (dg)

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

GENERAL INFORMATION

TOC	1028.77
Well Depth	35.67
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	1028.77
Well Depth	35.67
Top Screen	1003.10
Bottom Screen	993.10
Bottom Well	993.10
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	31.00
Top sample	997.77
Bottom sample	993.77
Turbidity(NTU)	12.91

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	11:40	16.95	1011.82	

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		12.91
Appendix I	Metals	150	150		12.91
Appendix I	VOC	240	240		12.91
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	1028.77	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	35.67	Before purging	4/8/2025	11:40	16.95	1011.82		0.0	
		After purging				1028.77			
		Top of Screen after construction				1003.10			
						8.72	feet above (+) or below (-) top screen		
		Bottom of Well after construction				993.10			
		Bottom of Well	4/8/2025		35.60	993.17			
						0.07	feet sedimentation		
		Before Sampling				1028.77			
		Recovery				1028.77			
		Recovery				1028.77			
		Recovery				1028.77			
		Recovery				1028.77			

IDNR Form 542-1322

Monitoring Well: MW-30 (dg)

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

GENERAL INFORMATION

TOC	1042.84
Well Depth	20.45
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	1042.84
Well Depth	20.45
Top Screen	1032.39
Bottom Screen	1022.39
Bottom Well	1021.55
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.00
Top sample	1026.84
Bottom sample	1022.84
Turbidity(NTU)	2.24

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	9:55	16.83	1026.01	

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		2.24
Appendix I	Metals	150	150		2.24
Appendix I	VOC	240	240		2.24
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	1042.84	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	20.45	Before purging	4/8/2025	9:55	16.83	1026.01		0.0	
		After purging				1042.84			
		Top of Screen after construction				1032.39			
						10.45	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1022.39			
		Bottom of Well	4/8/2025		20.45	1022.39			
						0.00	feet sedimentation		
		Before Sampling				1042.84			
		Recovery				1042.84			
		Recovery				1042.84			
		Recovery				1042.84			
		Recovery				1042.84			

IDNR Form 542-1322

Monitoring Well: MW-31 (dg)

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

GENERAL INFORMATION

TOC	1043.75
Well Depth	25.96
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	1043.75
Well Depth	25.96
Top Screen	1028.09
Bottom Screen	1018.09
Bottom Well	1017.79
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	20.00
Top sample	1023.75
Bottom sample	1019.75
Turbidity(NTU)	3.26

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	9:20	16.34	1027.41	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		3.26
Appendix I	Metals	150	150		3.26
Appendix I	VOC	240	240		3.26
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	1043.75	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	25.96	Before purging	4/8/2025	9:20	16.34	1027.41		0.0	
		After purging				1043.75			
		Top of Screen after construction				1028.09			
						-0.68	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1017.79			
		Bottom of Well	4/8/2025		25.96	1017.79			
						0.00	feet sedimentation		
		Before Sampling				1043.75			
		Recovery				1043.75			
		Recovery				1043.75			
		Recovery				1043.75			
		Recovery				1043.75			

IDNR Form 542-1322

Monitoring Well: MW-32 (dg)

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

GENERAL INFORMATION

TOC	1049.25
Well Depth	19.40
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	1049.25
Well Depth	19.40
Top Screen	1035.15
Bottom Screen	1030.15
Bottom Well	1029.85
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	1035.25
Bottom sample	1031.25
Turbidity(NTU)	78.42

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	8:53	11.45	1037.8	

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		78.42
Appendix I	Metals	150	150		78.42
Appendix I	VOC	240	240		78.42
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	1049.25	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	19.40	Before purging	4/8/2025	8:53	11.45	1037.80		0.0	
		After purging				1049.25			
		Top of Screen after construction				1035.15			
						2.65	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1029.85			
		Bottom of Well	4/8/2025		19.40	1029.85			
						0.00	feet sedimentation		
		Before Sampling				1049.25			
		Recovery				1049.25			
		Recovery				1049.25			
		Recovery				1049.25			
		Recovery				1049.25			

4/8/2025	Sampled by:	Todd Whipple	Weather conditions:	Sunny, calm, 28-54 degrees

Sunny, calm, 28-54 degrees

GU-2

IDNR Form 542-1324

IDNR Form 542-1324

GU-4

GU-5

IDNR Form 542-1324

GU-6

Date	Time	Type	Flowing	Quantity	Discolored	Odor	Litter
4/8/2025	8:42	Underdrain tile	yes	500 mL/min	No	No	No
							Turbidity (NTU)
							2.43

North Central Iowa Regional Sanitary Landfill
PERMIT # 94-SDP-01-75P

4/8/2025

Sampled by: Todd Whipple

Weather conditions: Sunny, calm, 28-54 degrees

IDNR Form 542-1322

Monitoring Well: MW 10A (dg)

Primary Sampling Method: No-Purge for Appendix I

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

GENERAL INFORMATION

TOC	1038.04
Well Depth	29.20
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1038.04
Well Depth	29.20
Top Screen	1018.59
Bottom Screen	1008.59
Bottom Well	1008.59
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	24.00
Top sample	1014.04
Bottom sample	1010.04
Turbidity(NTU)	32.19

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	11:07	23.4	1014.64	

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		32.19
Appendix I	Metals	150	150		32.19
Appendix I	VOC	240	240		32.19
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	1038.04	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	29.45	Before purging	4/8/2025	11:07	23.40	1014.64		0.0	
		After purging				1038.04			
		Top of Screen after construction				1018.59			
						19.45			feet above (+) or below (-) top screen
		Bottom of Well after construction				1008.59			
		Bottom of Well	4/8/2025		29.20	1008.84			
						0.25			feet sedimentation
		Before Sampling				1038.04			
		Recovery				1038.04			
		Recovery				1038.04			
		Recovery				1038.04			
		Recovery				1038.04			

IDNR Form 542-1322

Monitoring Well: MW 10B (ug)

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

GENERAL INFORMATION

TOC	1036.57
Well Depth	48.70
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1036.57
Well Depth	48.70
Top Screen	998.77
Bottom Screen	988.77
Bottom Well	986.77
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	42.00
Top sample	994.57
Bottom sample	990.57
Turbidity(NTU)	2.78

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	11:14	19.34	1017.23	

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		2.78
Appendix I	Metals	150	150		2.78
Appendix I	VOC	240	240		2.78
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	1036.57	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	48.70	Before purging	4/8/2025	11:14	19.34	1017.23		0.0	
		After purging				1036.57			
		Top of Screen after construction				998.77			
						37.80	feet above (+) or below (-) top screen		
		Bottom of Well after construction				986.77			
		Bottom of Well	4/8/2025		48.70	987.87			
						1.10	feet sedimentation		
		Before Sampling				1036.57			
		Recovery				1036.57			
		Recovery				1036.57			
		Recovery				1036.57			
		Recovery				1036.57			

IDNR Form 542-1322

Monitoring Well: MW-25 (dg)

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

GENERAL INFORMATION

TOC	1031.96
Well Depth	31.50
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	1031.96
Well Depth	31.50
Top Screen	1011.56
Bottom Screen	1001.56
Bottom Well	998.75
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	25.00
Top sample	1006.96
Bottom sample	1002.96
Turbidity(NTU)	8.97

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	10:22	14.1	1017.86	

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		8.97
Appendix I	Metals	150	150		8.97
Appendix I	VOC	240	240		8.97
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	1031.96	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	31.50	Before purging	4/8/2025	10:22	14.10	1017.86		0.0	
		After purging				1031.96			
		Top of Screen after construction				1011.56			
						6.30	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1001.56			
		Bottom of Well	4/8/2025		30.40	1001.56			
						0.00	feet sedimentation		
		Before Sampling				1031.96			
		Recovery				1031.96			
		Recovery				1031.96			
		Recovery				1031.96			
		Recovery				1031.96			

IDNR Form 542-1322

Monitoring Well: MW-28 (dg)

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

GENERAL INFORMATION

TOC	1035.16
Well Depth	13.31
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	1035.16
Well Depth	13.31
Top Screen	1027.42
Bottom Screen	1022.16
Bottom Well	1021.85
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	13.00
Top sample	1022.16
Bottom sample	1018.16
Turbidity(NTU)	2.35

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	10:44	11.82	1023.34	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.35
Appendix I	Metals	150	150		2.35
Appendix I	VOC	240	240		2.35
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	1035.16	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	13.31	Before purging	4/8/2025	10:44	11.82	1023.34		0.0	
		After purging				1035.16			
		Top of Screen after construction				1027.42			
						-4.08	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1022.16			
		Bottom of Well	4/8/2025		13.00	1022.16			
						0.00	feet sedimentation		
		Before Sampling				1035.16			
		Recovery				1035.16			
		Recovery				1035.16			
		Recovery				1035.16			
		Recovery				1035.16			

IDNR Form 542-1322

Monitoring Well: MW-18 (dg)

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

GENERAL INFORMATION

TOC	1032.06
Well Depth	25.40
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	1032.06
Well Depth	25.40
Top Screen	1016.66
Bottom Screen	1006.66
Bottom Well	1006.66
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	20.00
Top sample	1012.06
Bottom sample	1008.06
Turbidity(NTU)	3.34

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	11:29	17.59	1014.47	

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		3.34
Appendix I	Metals	150	150		3.34
Appendix I	VOC	240	240		3.34
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	1032.06	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	25.40	Before purging	4/8/2025	11:29	17.59	1014.47		0.0	
		After purging				1032.06			
		Top of Screen after construction				1016.66			
						15.40	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1006.66			
		Bottom of Well	4/8/2025		25.60	1006.46			
						-0.20	feet sedimentation		
		Before Sampling				1032.06			
		Recovery				1032.06			
		Recovery				1032.06			
		Recovery				1032.06			
		Recovery				1032.06			

IDNR Form 542-1322

Monitoring Well: MW-20 (dg)

Primary Sampling Method: No-Purge for Appendix I

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

GENERAL INFORMATION

TOC	1026.08
Well Depth	30.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1028.08
Well Depth	30.00
Top Screen	1002.61
Bottom Screen	992.61
Bottom Well	992.61
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	24.00
Top sample	1004.08
Bottom sample	1000.08
Turbidity(NTU)	30.49

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	12:00	13.74	1012.34	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		30.49
Appendix I	Metals	150	150		30.49
Appendix I	VOC	240	240		30.49
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	1026.08	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	30.00	Before purging	4/8/2025	12:00	13.74	1012.34		0.0	
		After purging				1026.08			
		Top of Screen after construction				1006.08			
						20.00	feet above (+) or below (-) top screen		
		Bottom of Well after construction				996.08			
		Bottom of Well	4/8/2025		29.80	996.28			
						0.20	feet sedimentation		
		Before Sampling				1026.08			
		Recovery				1026.08			
		Recovery				1026.08			
		Recovery				1026.08			
		Recovery				1026.08			

IDNR Form 542-1322

Monitoring Well: MW-21R (dg)

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

GENERAL INFORMATION

TOC	1033.51
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	1033.51
Well Depth	45.50
Top Screen	998.01
Bottom Screen	988.01
Bottom Well	988.01
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	40.00
Top sample	993.51
Bottom sample	989.51
Turbidity(NTU)	21.49

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	12:13	22.91	1010.6	

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		21.49
Appendix I	Metals	150	150		21.49
Appendix I	VOC	240	240		21.49
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	1033.51	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	45.50	Before purging	4/8/2025	12:13	22.91	1010.60		0.0	
		After purging				1033.51			
		Top of Screen after construction				998.01			
						35.50	feet above (+) or below (-) top screen		
		Bottom of Well after construction				988.01			
		Bottom of Well	4/8/2025		45.50	988.01			
						0.00	feet sedimentation		
		Before Sampling				1033.51	App I		
		Recovery				1033.51	App II		
		Recovery				1033.51			
		Recovery				1033.51			
		Recovery				1033.51			

IDNR Form 542-1322

Monitoring Well: MW-22 (dg)

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

GENERAL INFORMATION

TOC	1079.15
Well Depth	32.70
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1079.15
Well Depth	32.70
Top Screen	1056.45
Bottom Screen	1046.45
Bottom Well	1046.45
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	27.00
Top sample	1052.15
Bottom sample	1048.15
Turbidity(NTU)	2.77

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	12:31	8.94	1070.21	

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		2.77
Appendix I	Metals	150	150		2.77
Appendix I	VOC	240	240		2.77
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	1079.15	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.70	Before purging	4/8/2025	12:31	8.94	1070.21		0.0	
		After purging				1079.15			
		Top of Screen after construction				1056.45			
						22.70	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1046.45			
		Bottom of Well	4/8/2025		32.50	1046.65			
						0.20	feet sedimentation		
		Before Sampling				1079.15			
		Recovery				1079.15			
		Recovery				1079.15			
		Recovery				1079.15			
		Recovery				1079.15			

IDNR Form 542-1322

Monitoring Well: MW-29 (dg)

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

GENERAL INFORMATION

TOC	1028.77
Well Depth	35.67
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	1028.77
Well Depth	35.67
Top Screen	1003.10
Bottom Screen	993.10
Bottom Well	993.10
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	31.00
Top sample	997.77
Bottom sample	993.77
Turbidity(NTU)	12.91

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	11:40	16.95	1011.82	

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		12.91
Appendix I	Metals	150	150		12.91
Appendix I	VOC	240	240		12.91
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	1028.77	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	35.67	Before purging	4/8/2025	11:40	16.95	1011.82		0.0	
		After purging				1028.77			
		Top of Screen after construction				1003.10			
						8.72	feet above (+) or below (-) top screen		
		Bottom of Well after construction				993.10			
		Bottom of Well	4/8/2025		35.60	993.17			
						0.07	feet sedimentation		
		Before Sampling				1028.77			
		Recovery				1028.77			
		Recovery				1028.77			
		Recovery				1028.77			
		Recovery				1028.77			

IDNR Form 542-1322

Monitoring Well: MW-30 (dg)

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

GENERAL INFORMATION

TOC	1042.84
Well Depth	20.45
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	1042.84
Well Depth	20.45
Top Screen	1032.39
Bottom Screen	1022.39
Bottom Well	1021.55
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.00
Top sample	1026.84
Bottom sample	1022.84
Turbidity(NTU)	2.24

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	9:55	16.83	1026.01	

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		2.24
Appendix I	Metals	150	150		2.24
Appendix I	VOC	240	240		2.24
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	1042.84	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	20.45	Before purging	4/8/2025	9:55	16.83	1026.01		0.0	
		After purging				1042.84			
		Top of Screen after construction				1032.39			
						10.45	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1022.39			
		Bottom of Well	4/8/2025		20.45	1022.39			
						0.00	feet sedimentation		
		Before Sampling				1042.84			
		Recovery				1042.84			
		Recovery				1042.84			
		Recovery				1042.84			
		Recovery				1042.84			

IDNR Form 542-1322

Monitoring Well: MW-31 (dg)

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

GENERAL INFORMATION

TOC	1043.75
Well Depth	25.96
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	1043.75
Well Depth	25.96
Top Screen	1028.09
Bottom Screen	1018.09
Bottom Well	1017.79
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	20.00
Top sample	1023.75
Bottom sample	1019.75
Turbidity(NTU)	3.26

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	9:20	16.34	1027.41	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		3.26
Appendix I	Metals	150	150		3.26
Appendix I	VOC	240	240		3.26
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	1043.75	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	25.96	Before purging	4/8/2025	9:20	16.34	1027.41		0.0	
		After purging				1043.75			
		Top of Screen after construction				1028.09			
						-0.68	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1017.79			
		Bottom of Well	4/8/2025		25.96	1017.79			
						0.00	feet sedimentation		
		Before Sampling				1043.75			
		Recovery				1043.75			
		Recovery				1043.75			
		Recovery				1043.75			
		Recovery				1043.75			

IDNR Form 542-1322

Monitoring Well: MW-32 (dg)

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

GENERAL INFORMATION

TOC	1049.25
Well Depth	19.40
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	1049.25
Well Depth	19.40
Top Screen	1035.15
Bottom Screen	1030.15
Bottom Well	1029.85
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	1035.25
Bottom sample	1031.25
Turbidity(NTU)	78.42

Date	Time	Water Level	Water Elevation	Notes
4/8/2025	8:53	11.45	1037.8	

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		78.42
Appendix I	Metals	150	150		78.42
Appendix I	VOC	240	240		78.42
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	1049.25	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	19.40	Before purging	4/8/2025	8:53	11.45	1037.80		0.0	
		After purging				1049.25			
		Top of Screen after construction				1035.15			
						2.65	feet above (+) or below (-) top screen		
		Bottom of Well after construction				1029.85			
		Bottom of Well	4/8/2025		19.40	1029.85			
						0.00	feet sedimentation		
		Before Sampling				1049.25			
		Recovery				1049.25			
		Recovery				1049.25			
		Recovery				1049.25			
		Recovery				1049.25			

4/8/2025	Sampled by:	Todd Whipple	Weather conditions:	Sunny, calm, 28-54 degrees

Sunny, calm, 28-54 degrees

GU-2

IDNR Form 542-1324

IDNR Form 542-1324

GU-4

GU-5

IDNR Form 542-1324

GU-6

Date	Time	Type	Flowing	Quantity	Discolored	Odor	Litter
4/8/2025	8:42	Underdrain tile	yes	500 mL/min	No	No	No
							Turbidity (NTU)
							2.43

Appendix B

Statistical Report

APPENDIX B.1 –Spring Statistical Evaluation

**Results of the Ground Water Statistics
for North Central Iowa Regional Landfill**

First Semi-Annual Monitoring Event in 2025

Prepared for:
North Central Iowa Regional Solid Waste Agency (NCIRSWA)
Fort Dodge, Iowa

Prepared by:
Jeffrey A. Holmgren
Otter Creek Environmental Services, L.L.C.
Elgin, IL
(847) 464-1355

July 2025

INTRODUCTION

This report contains the results of the statistical analyses used to evaluate the ground water data obtained during the first semi-annual monitoring event in 2025 at North Central Iowa Regional Landfill in Fort Dodge, Iowa. The ground water at North Central Iowa Regional Landfill is currently monitored by wells MW-10A, MW-10B, MW-18, MW-19, MW-20, MW-21R, MW-22, MW-25, MW-28, MW-30, and GU-2. Monitoring wells MW-10A, MW-10B, MW-18, MW-20, MW-21R, MW-22, MW-25, MW-28, MW-29, MW-30, MW-31, MW-32, GU-4, and GU-6 were sampled on April 8, 2025 and analyzed for the parameters required by permit.

The statistical plan is designed to detect a release from the facility at the earliest indication so that it is protective of human health and the environment. The intrawell methodology is described and then applied to the North Central Iowa Regional Landfill data. The statistical plan conforms with IAC 567, Chapter 113.10 and the USEPA guidance document (*“Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance”*, March 2009).

Ground Water Monitoring Program

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 below.

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

Organic Compounds:

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

Inorganic constituents:

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

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

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

IAC 567, Chapter 113.10(4) provides several options for statistically evaluating the ground water data at those wells that monitor the open cells or contiguous MSWLF units. The preferred methods for comparing ground water data are using either prediction limits or using control charts. The interwell method using site prediction limits was previously applied to the North Central Iowa Regional Landfill data using the DUMPStat® statistical program. DUMPStat® is a program for the statistical analysis of groundwater monitoring data using methods described in “Statistical Methods for Groundwater Monitoring” by Dr. Robert D. Gibbons. The DUMPStat program is completely consistent with all USEPA regulations and guidance and the ASTM D6312-98 guidance. An intrawell method using DUMPStat® was recently approved for the current monitoring network.

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.

Intrawell statistics

Intrawell statistics are appropriate for facilities where the upgradient wells do not accurately characterize the natural ground water conditions downgradient from the facility. This may be due to different hydrogeological conditions where the wells are screened, having too few upgradient wells to account for the spatial variability, or the site exhibiting no definable hydraulic gradient. Intrawell statistics compare new measurements to the historical data at each ground water monitoring well independently. It is recommended that at least eight background samples be obtained prior to performing the statistics.

The most useful technique for intrawell comparisons is the combined Shewhart-CUSUM control chart. This control chart procedure is useful because it will detect releases both in terms of the constituent concentration and cumulative increases. This method is also extremely sensitive to sudden and gradual releases. A requirement for constructing these control charts is that the parameter is detected at a frequency greater than or equal to 25%, otherwise the data variance is not properly defined.

The combined Shewhart-CUSUM control chart assumes that the data are independent and normally distributed with a fixed mean and a constant variance. Independent data is much more critical than the normality assumption. To achieve independence, it is recommended that data are collected no more frequently than quarterly to account for seasonal variation. The combined Shewhart-CUSUM control chart is extremely robust to deviations from normality. Because the control charts do not use a specific multiplier based on a normal distribution, it is more conservative to assume normality.

It is recommended that at least eight rounds of data be available to provide a reliable estimate of the mean and standard deviation of the parameter concentration, although the control charts will be generated with as few as four data points. Having only four data points may produce greater uncertainty in the mean and standard deviation of the background data, leading to higher control limits, thus having a potentially high false negative rate.

Many groundwater monitoring parameters are not detected at a frequency great enough to generate the

combined Shewhart-CUSUM control charts. For constituents that are detected less than 25% of the time at a particular well, the data should be plotted as a time series until a sufficient number of data points are available to provide a 99% confidence nonparametric prediction limit. Thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit. Eight independent measurements (for pass 1 of 2 resamples) are necessary to achieve a 99% confidence nonparametric prediction limit. The nonparametric prediction limit is the largest determination out of the data set collected for that well and parameter. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

In developing the statistical background, the historical data must be thoroughly screened for anomalous data due to sampling error, analytical error, or simply by chance alone. An erroneous data point, if not removed prior to the mean and variance computations, would yield a larger control limit thus increasing the false negative rate. The DUMPStat[®] program screens for outliers using the Dixon test. If the Dixon test indicates an outlier, the value is considered a statistical outlier and will not be used in the mean and variance determinations. Anomalous data will still be plotted on the graphs (with a unique symbol) but will not be included in the calculations.

The verification resample plan is an integral function of the statistical plan to reduce the probability that anomalous data obtained after the background has been established, is indicative of a landfill release.

The background data for each well and constituent is tested for existing trends using Sen's nonparametric estimate of trend. If contamination exists prior to completing the background, the control limits could be potentially high and this control chart method would not be able to detect an increasing trend unless the increase is severe.

Results of the Intrawell Statistics

The Appendix I trace metals data from wells MW-10A, MW-10B, MW-18, MW-20, MW-21R, MW-22, and MW-30 were evaluated using the combined Shewhart-CUSUM control chart method.

The background at MW-18, MW-19, MW-20, and MW-22 included the eight rounds of data obtained from October 2014 through 2020. The background at MW-10A included the eight rounds of data obtained from October 2014 through December 2019. The background at MW-10B included the eight rounds of data obtained from October 2014 through June 2019. The background at MW-21R includes the eight rounds of data obtained from October 2014 through April 2021.

Even for wells with eight rounds of background, there is insufficient data to determine control limits given the approved resample program. For constituents that are detected less than 25% of the time at a particular well, thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit.

As ground water monitoring at a municipal solid waste facility proceeds, it is recommended to update background data sets periodically with valid detection monitoring results that are representative of background groundwater quality not affected by leakage from a monitored unit. Failure to update

background will exclude factors such as natural temporal variation, changes in field or laboratory methodologies, and changes in the water table due to meteorological conditions or other influences.

Since there have been no statistical failures attributed to the landfill, the background was updated to include data obtained from October 2014 through April 2021 for wells MW-10B, MW-18, MW-19, MW-20, MW-21R, and MW-22. The background was updated to include data obtained from October 2014 through April 2022 for well MW-10A. The initial background at ground water well MW-30 includes the eight rounds of data from 2019 through April 2023. Ground water wells MW-25, MW-28, MW-29, MW-31, MW-32, GU-2, GU-3, GU-4, GU-5, and GU-6 have fewer than eight rounds of data.

A summary of the intrawell statistics is included in Attachment B, Table 1 “Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts.” The control charts or time series graphs follow the summary table. For the parameters evaluated, the control limit exceedances detected are summarized in the table below.

Control Limit Exceedances During the First Semi-Annual Monitoring Event in 2025

Sample Point	Trace Metal	Result	CUSUM Value	Control Limit	Control Limit Type	Verified/ Awaiting Verification
MW-21R	Arsenic, µg/L	5.8	6.4121	5.6295	Normal	Verified

No increasing trends were detected in the background data.

A control chart factor was selected to provide a balance of the site-wide false positive and false negative rates. A statistical power curve indicates the expected false assessments for the site as a whole. For intrawell analysis, the site-wide false positive rate is 3% and the test becomes sensitive to 4 standard deviation units over background.

The previous verified exceedances at these wells 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-18 (28.788 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L but does not exceed the site-specific GWPS of 48.1 µg/L.

The 95% LCL for cobalt at MW-21R (4.930 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L but does not exceed the site-specific GWPS of 48.1 µg/L.

The 95% LCL for cobalt at MW-30 (2.120 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L but does not exceed the site-specific GWPS of 48.1 µg/L.

The remainder of the calculated 95% LCLs are below the respective ground water quality standards.

Volatile Organic Compounds

Volatile Organic Compounds (VOCs) are generally man-made compounds not present in ambient ground water. If VOCs are detected above their statistical limit (i.e., the laboratory PQL or reporting limit), a verification resample will be conducted at the next scheduled sampling event. A statistical exceedance will be indicated if the VOC detection is confirmed by the subsequent monitoring. There were no VOCs detected in the ground water at North Central Iowa Regional Landfill during the first semi-annual monitoring event in 2025. Historical VOC detections are summarized in Attachment D.

Attachment A

Ground Water Data obtained during the First Semi-Annual Monitoring Event in 2025

Table 1

Analytical Data Summary for 4/8/2025

Constituents	Units	GU-4	GU-6	MW-10A	MW-10B	MW-18	MW-20	MW-21R	MW-22	MW-25	MW-28	MW-29	MW-30	MW-31	MW-32
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<10	<10	<10	<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	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<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	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic, total	ug/L	<2.0	<2.0	3.0	<2.0	<2.0	8.3	5.8	<2.0	<2.0	<2.0	8.5	<2.0	<2.0	11.7
Barium, total	ug/L	12.9	20.9	41.9	29.5	27.9	65.3	26.8	14.3	16.6	17.9	35.2	15.3	20.8	79.8
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	<.2	.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<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	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	1.4	<1.0	1.0	1.0	1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	1.0	<1.0	<1.0
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.5	<.5	1.6	<.5	30.3	1.0	5.4	<.5	<.5	<.5	26.5	3.4	3.8	38.8
Copper, total	ug/L	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<1	<1	<1	<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	<.5	<.5	<.5
Nickel, total	ug/L	25.9	46.4	21.0	<5.0	31.1	<5.0	7.2	<5.0	<5.0	7.2	35.3	8.3	<5.0	64.6
Selenium, total	ug/L	2.4	5.9	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.5	<2.0	<2.0	<2.0	<2.0
Silver, total	ug/L	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

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

Table 1

Analytical Data Summary for 4/8/2025

Constituents	Units	GU-4	GU-6	MW-10A	MW-10B	MW-18	MW-20	MW-21R	MW-22	MW-25	MW-28	MW-29	MW-30	MW-31	MW-32
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	398.0	1270.0	42.7	7.6	18.5	12.0	12.6	7.1	6.8	<5.0	9.6	<5.0	7.9	12.4

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

Attachment B

Summary Tables and Graphs for the Intrawell Comparisons

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Antimony, total	ug/L	MW-10A	13	6	42			2.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-10A	13	7	43	6.8000	3.7354	22.1000	3.0000	19.2984	12.6969	31.0802	normal		
Barium, total	ug/L	MW-10A	11	8	44	37.1000	10.5196	62.2000	41.9000	51.6804	45.9608	105.4774	normal		
Beryllium, total	ug/L	MW-10A	13	6	42			4.0000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-10A	13	6	42			0.8000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-10A	13	6	42			8.0000	1.0000			12.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-10A	13	6	42	1.4615	1.9894	1.8000	1.6000	1.4615	1.4615	14.3924	normal		
Copper, total	ug/L	MW-10A	13	7	43			4.0000	5.0000			11.4000	nonpar	.99	**
Lead, total	ug/L	MW-10A	13	6	42			4.0000	1.0000			6.9000	nonpar	.99	**
Nickel, total	ug/L	MW-10A	13	6	42	12.4000	14.5913	11.0000	21.0000	12.4000	12.4000	107.2436	normal		
Selenium, total	ug/L	MW-10A	13	6	42			4.0000	2.0000			9.0000	nonpar	.99	**
Silver, total	ug/L	MW-10A	13	6	42			4.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-10A	13	6	42			2.0000	0.5000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-10A	13	6	42			20.0000	2.0000			28.4000	nonpar	.99	**
Zinc, total	ug/L	MW-10A	13	6	42	23.1231	14.8627	26.6000	42.7000	23.1231	31.5530	119.7307	normal		
Antimony, total	ug/L	MW-10B	13	7	38			2.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-10B	13	7	38			4.0000	2.0000			4.1000	nonpar	.99	**
Barium, total	ug/L	MW-10B	11	7	38	31.4091	6.2633	26.0000	29.5000	31.4091	31.4091	72.1205	normal		
Beryllium, total	ug/L	MW-10B	13	7	38			4.0000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-10B	13	7	39			0.8000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-10B	13	7	38			8.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-10B	13	7	39			0.4000	0.5000			4.1000	nonpar	.99	**
Copper, total	ug/L	MW-10B	13	7	38			4.0000	5.0000			7.4000	nonpar	.99	**
Lead, total	ug/L	MW-10B	13	7	38			4.0000	1.0000			4.6000	nonpar	.99	**
Nickel, total	ug/L	MW-10B	13	7	39	8.6538	4.8541	9.6000	5.0000	8.6538	8.6538	40.2058	normal		
Selenium, total	ug/L	MW-10B	13	7	39			4.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-10B	13	7	39			4.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-10B	13	7	38			2.0000	0.5000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-10B	13	7	38			20.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-10B	12	7	38	18.2583	8.2091	20.0000	7.6000	18.2583	18.2583	71.6177	normal		
Antimony, total	ug/L	MW-18	13	8	43			2.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-18	13	8	43			4.0000	2.0000			4.0000	nonpar	.99	**
Barium, total	ug/L	MW-18	13	8	43	25.8692	2.9652	27.2000	27.9000	27.5105	27.3174	45.1429	normal		
Beryllium, total	ug/L	MW-18	13	8	43			4.0000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-18	13	8	43			0.8000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-18	13	8	43			8.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-18	12	9	44	41.2417	10.3115	68.3000	30.3000	104.6395	85.9643	108.2662	normal		
Copper, total	ug/L	MW-18	13	8	43			4.0000	5.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-18	13	8	43			4.0000	1.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-18	13	8	43	36.9385	9.9355	50.1000	31.1000	42.6484	36.9385	101.5192	normal		
Selenium, total	ug/L	MW-18	13	8	43			4.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-18	13	8	43			4.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-18	13	8	43			2.0000	0.5000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-18	13	8	43			20.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-18	13	8	44	18.9077	3.2938	27.3000	18.5000	24.8297	21.9516	40.3174	normal		
Antimony, total	ug/L	MW-20	13	8	42			2.0000	1.0000			2.0000	nonpar	.99	**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

* - Insufficient Data.

** - Detection Frequency < 25%.

*** - Zero Variance.

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Arsenic, total	ug/L	MW-20	13	8	42	25.2154	16.8948	26.2000	8.3000	25.2154	25.2154	135.0314	normal		
Barium, total	ug/L	MW-20	13	8	42	67.6154	27.4452	61.8000	65.3000	67.6154	67.6154	246.0093	normal		
Beryllium, total	ug/L	MW-20	13	8	42			4.0000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-20	13	8	42			0.8000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-20	13	8	42			8.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-20	13	8	43	5.9308	2.2574	2.1000	1.0000	5.9308	5.9308	20.6036	normal		
Copper, total	ug/L	MW-20	13	9	43			4.0000	5.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-20	13	8	42			4.0000	1.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-20	13	8	42	8.4692	2.6550	4.0000	5.0000	8.4692	8.4692	25.7267	normal		
Selenium, total	ug/L	MW-20	13	8	42			4.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-20	13	8	42			4.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-20	13	8	42			2.0000	0.5000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-20	13	8	42			20.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-20	14	8	43	21.4357	17.4166	20.0000	12.0000	21.4357	21.4357	134.6433	normal		
Antimony, total	ug/L	MW-21R	8	8	16			2.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-21R	8	9	17	4.1250	0.2315	12.6000	5.8000	13.2121	6.4121	5.6295	normal		
Barium, total	ug/L	MW-21R	8	8	16	31.8000	12.8251	25.2000	26.8000	31.8000	31.8000	115.1631	normal		
Beryllium, total	ug/L	MW-21R	8	8	16			4.0000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-21R	8	8	16			0.8000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-21R	8	8	16			8.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-21R	9	8	17	17.8111	5.2987	6.8000	5.4000	17.8111	17.8111	52.2526	normal		
Copper, total	ug/L	MW-21R	8	8	16			4.0000	5.0000			5.2000	nonpar	.99	**
Lead, total	ug/L	MW-21R	8	8	16			4.0000	1.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-21R	9	8	17	35.4889	15.6969	9.5000	7.2000	35.4889	35.4889	137.5189	normal		
Selenium, total	ug/L	MW-21R	8	8	16			4.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-21R	8	8	16			4.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-21R	8	8	16			2.0000	0.5000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-21R	8	8	16			20.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-21R	8	8	16	22.8625	12.7285	20.0000	12.6000	22.8625	22.8625	105.5976	normal		
Antimony, total	ug/L	MW-22	13	8	41			2.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-22	13	8	41			4.0000	2.0000			4.0000	nonpar	.99	**
Barium, total	ug/L	MW-22	13	8	41	18.1385	4.1526	9.9000	14.3000	18.1385	18.1385	45.1305	normal		
Beryllium, total	ug/L	MW-22	13	8	41			4.0000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-22	13	8	41			0.8000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-22	13	8	41			8.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-22	13	8	41			0.4000	0.5000			0.8000	nonpar	.99	**
Copper, total	ug/L	MW-22	13	9	42			4.0000	5.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-22	13	8	41			4.0000	1.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-22	14	8	42	18.7929	15.0825	11.7000	5.0000	18.7929	18.7929	116.8292	normal		
Selenium, total	ug/L	MW-22	13	8	41			4.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-22	13	8	41			4.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-22	13	8	41			2.0000	0.5000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-22	13	8	41			20.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-22	15	8	43	22.3733	13.7636	20.0000	7.1000	22.3733	22.3733	111.8370	normal		
Antimony, total	ug/L	MW-30	8	4	12			2.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-30	8	4	12			4.0000	2.0000			9.1000	nonpar	.99	**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

* - Insufficient Data.

** - Detection Frequency < 25%.

*** - Zero Variance.

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Barium, total	ug/L	MW-30	8	4	12	26.8000	9.6465	24.5000	15.3000	26.8000	26.8000	89.5020	normal		
Beryllium, total	ug/L	MW-30	8	4	12			4.0000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-30	8	4	12			0.8000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-30	8	4	12			8.0000	1.0000			43.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-30	8	4	12	7.3750	7.3738	7.4000	3.4000	7.3750	7.3750	55.3050	normal		
Copper, total	ug/L	MW-30	7	4	12	4.5143	0.8802	4.0000	5.0000	4.5143	4.5143	10.2356	normal		
Lead, total	ug/L	MW-30	8	4	12			4.0000	1.0000			12.7000	nonpar	.99	**
Nickel, total	ug/L	MW-30	8	4	12	15.5875	16.3448	29.6000	8.3000	15.5875	15.5875	121.8287	normal		
Selenium, total	ug/L	MW-30	8	4	12			4.0000	2.0000			5.7000	nonpar	.99	**
Silver, total	ug/L	MW-30	8	4	12			4.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-30	8	4	12			2.0000	0.5000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-30	8	4	12			20.0000	2.0000			21.4000	nonpar	.99	**
Zinc, total	ug/L	MW-30	8	4	12	38.4375	41.5326	29.3000	5.0000	38.4375	38.4375	308.3996	normal		

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

* - Insufficient Data.

** - Detection Frequency < 25%.

*** - Zero Variance.

Table 4

**Dixon's Test Outliers
1% Significance Level**

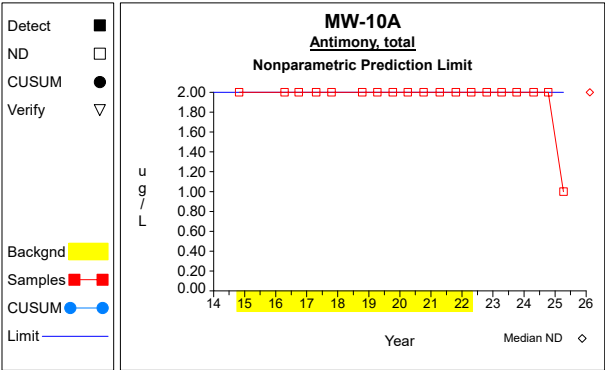
Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Barium, total	ug/L	MW-10A	10/28/2014	143.0000		10/28/2014-04/19/2022	13	0.6425
Barium, total	ug/L	MW-10A	04/19/2022	453.0000		10/28/2014-04/19/2022	13	0.6425
Barium, total	ug/L	MW-10B	10/28/2014	104.0000		10/28/2014-10/21/2021	13	0.6425
Barium, total	ug/L	MW-10B	12/03/2014	97.5000		10/28/2014-10/21/2021	13	0.6425
Zinc, total	ug/L	MW-10B	12/03/2014	158.0000		10/28/2014-10/21/2021	13	0.6174
Cobalt, total	ug/L	MW-18	10/15/2018	9.0000		10/28/2014-04/13/2021	13	0.6174
Zinc, total	ug/L	MW-18	10/09/2019	62.7000		10/28/2014-04/13/2021	14	0.6403
Cobalt, total	ug/L	MW-20	04/20/2017	1.2000		10/28/2014-04/13/2021	14	0.6403
Copper, total	ug/L	MW-30	10/18/2022	71.2000		10/09/2019-04/11/2023	8	0.6808

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

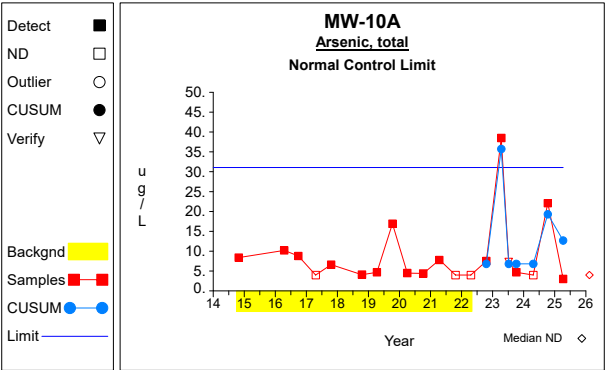
Date Range = Dates of the first and last measurements included in background at each well.

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.

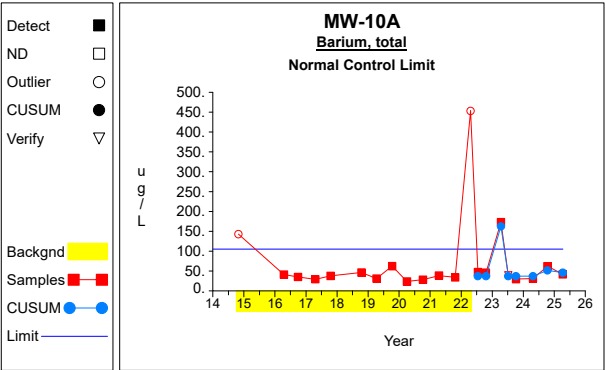
Intra-Well Control Charts / Prediction Limits



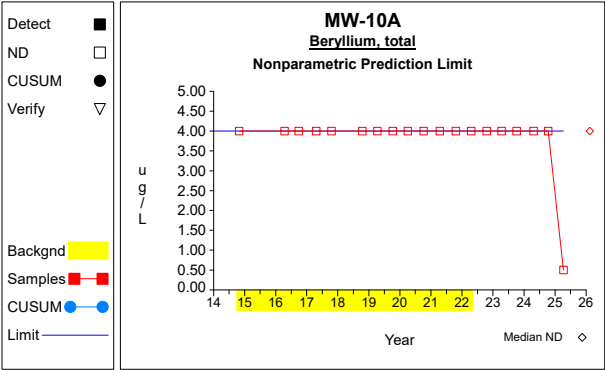
Graph 1



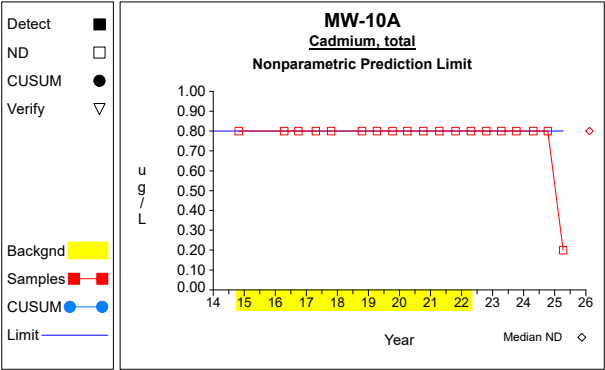
Graph 2



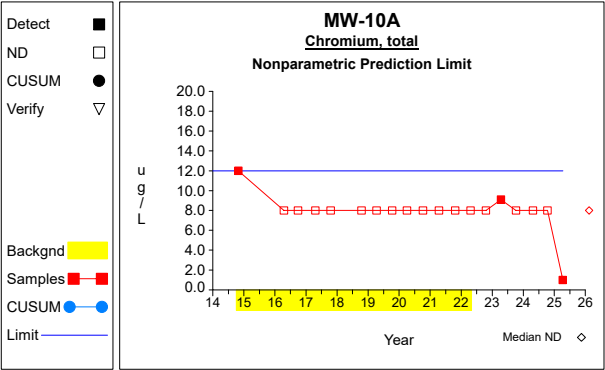
Graph 3



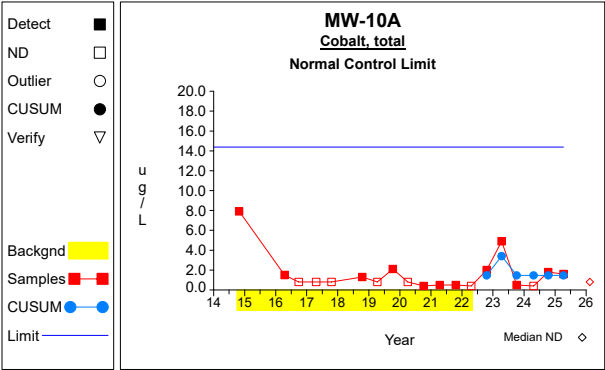
Graph 4



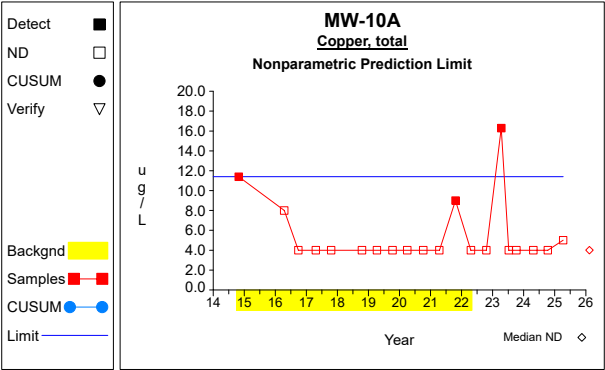
Graph 5



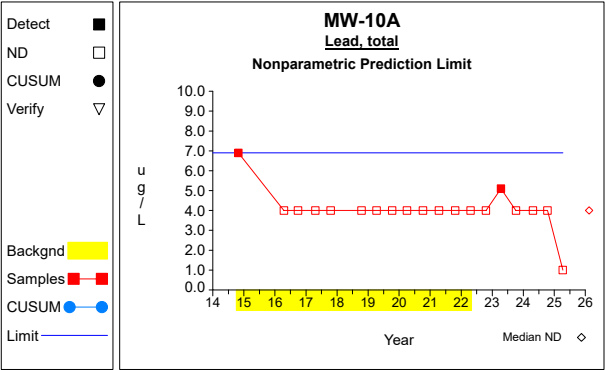
Graph 6



Graph 7

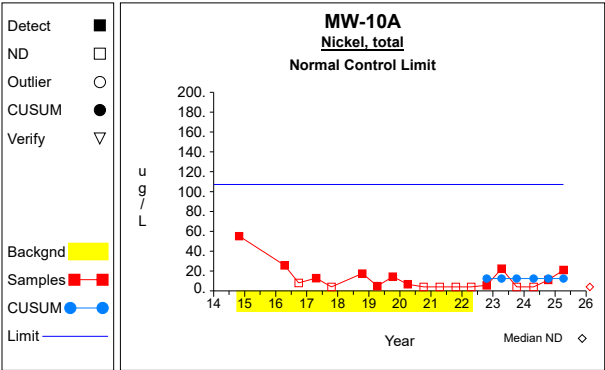


Graph 8

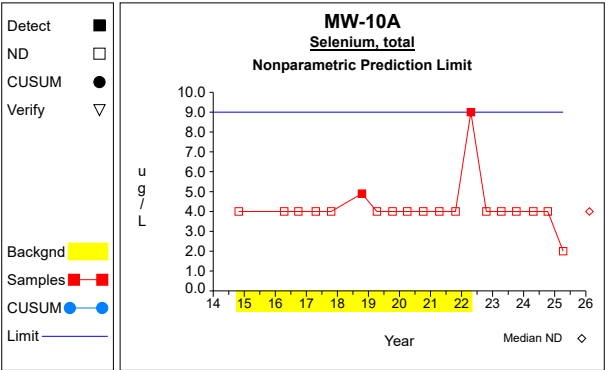


Graph 9

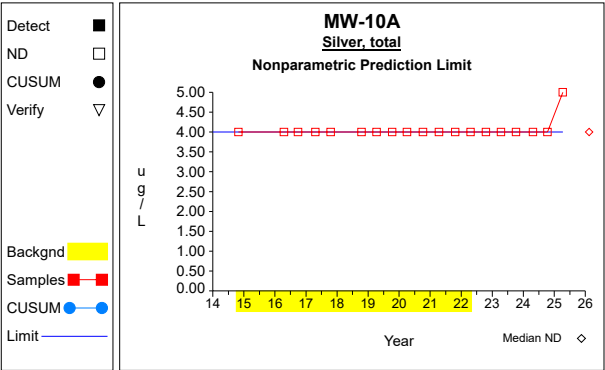
Intra-Well Control Charts / Prediction Limits



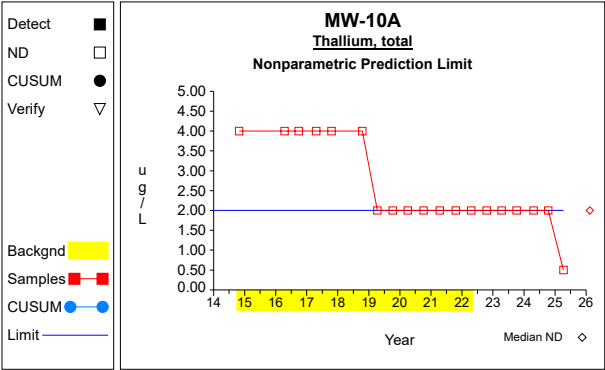
Graph 10



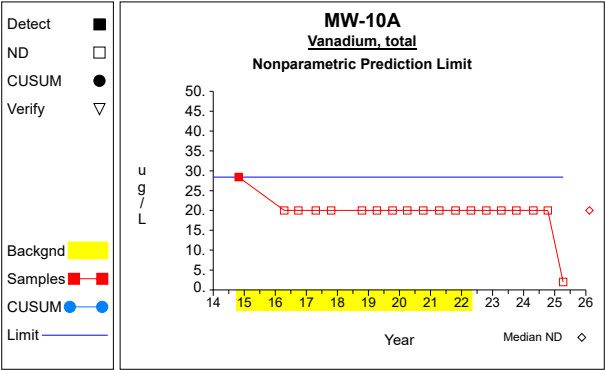
Graph 11



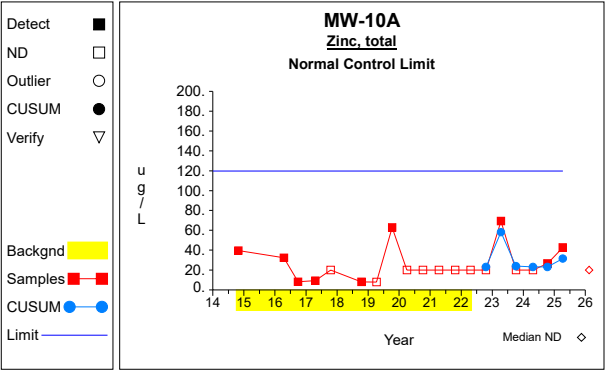
Graph 12



Graph 13

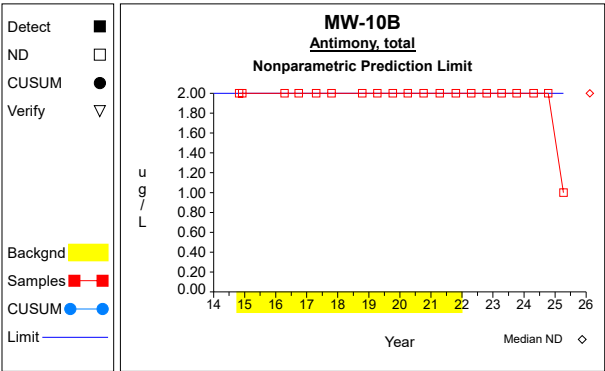


Graph 14

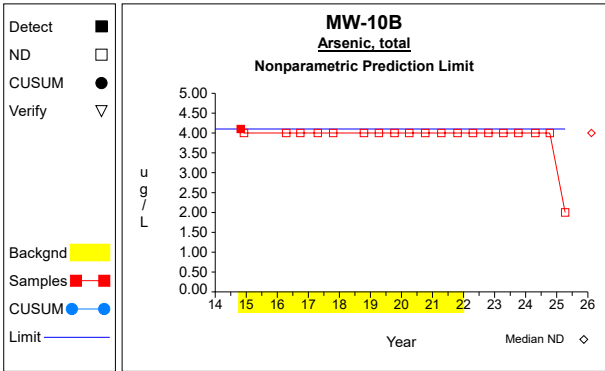


Graph 15

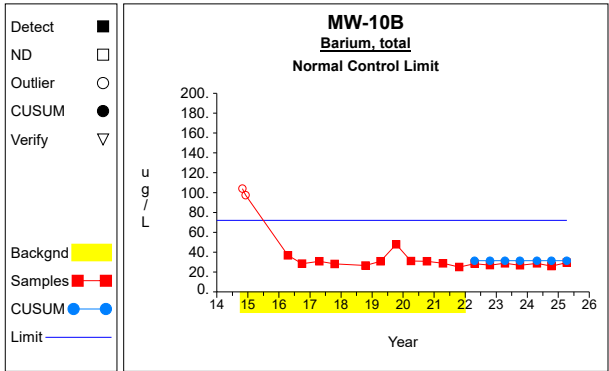
Intra-Well Control Charts / Prediction Limits



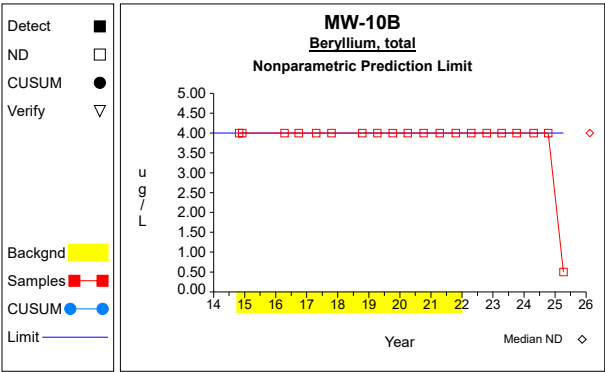
Graph 16



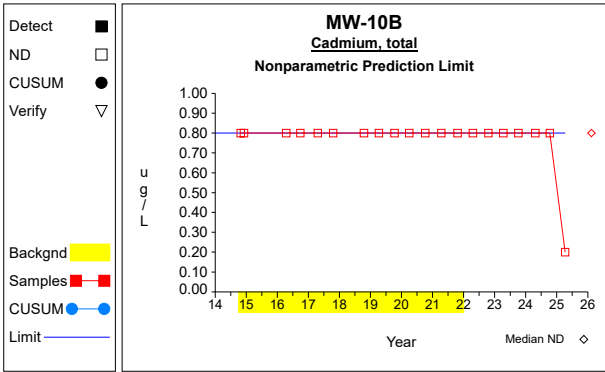
Graph 17



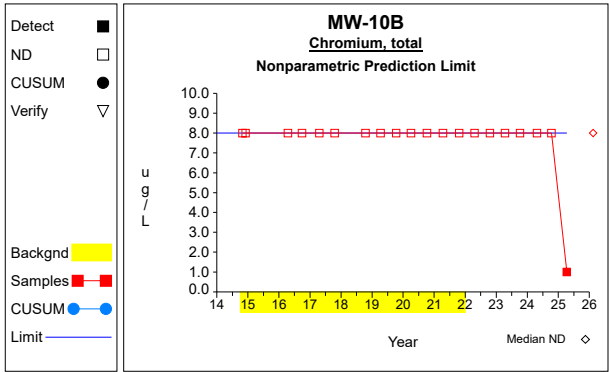
Graph 18



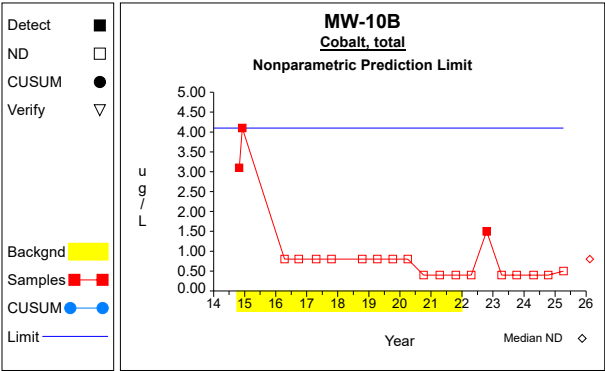
Graph 19



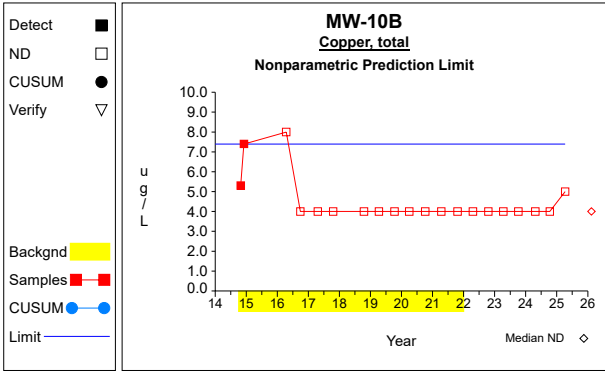
Graph 20



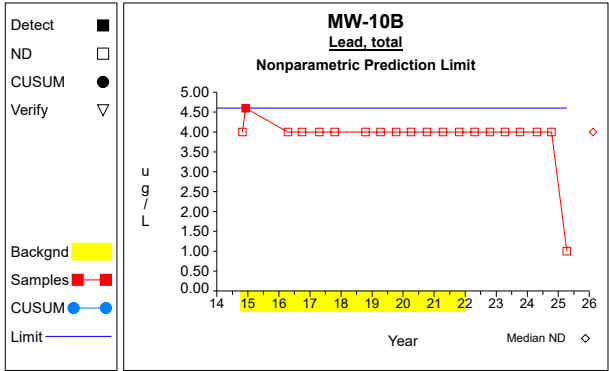
Graph 21



Graph 22

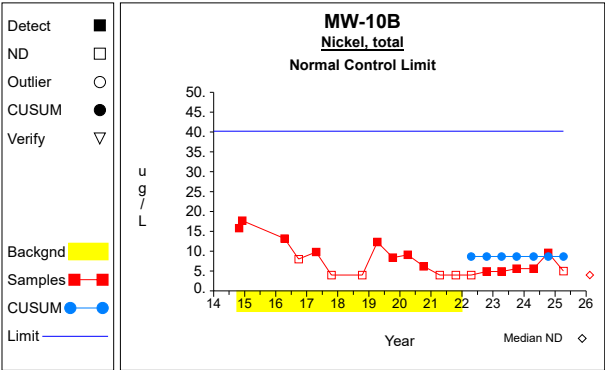


Graph 23

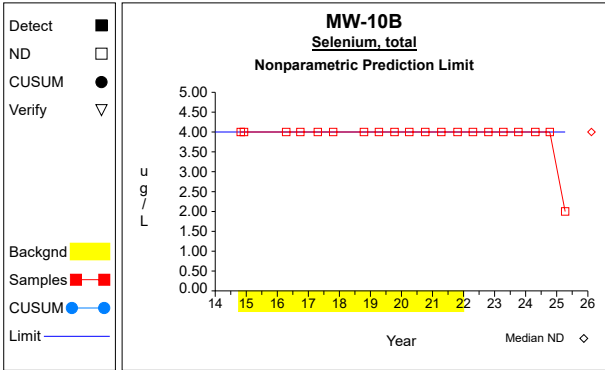


Graph 24

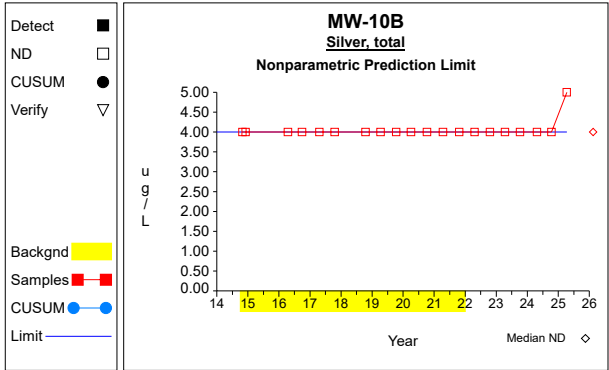
Intra-Well Control Charts / Prediction Limits



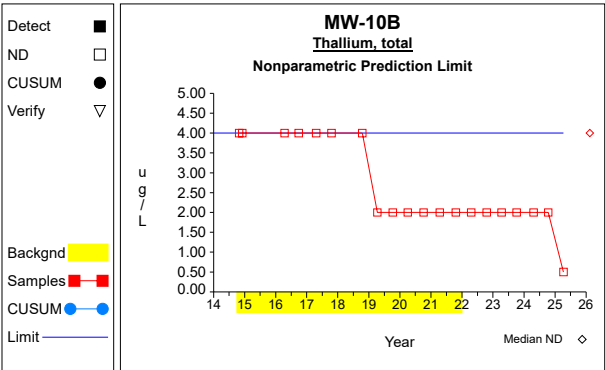
Graph 25



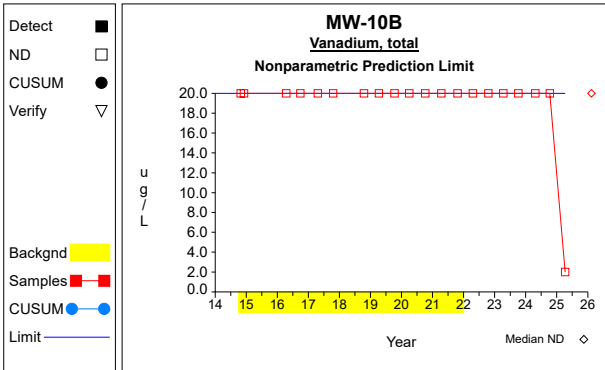
Graph 26



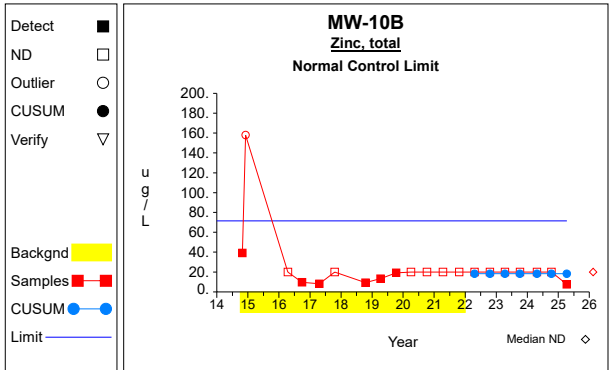
Graph 27



Graph 28

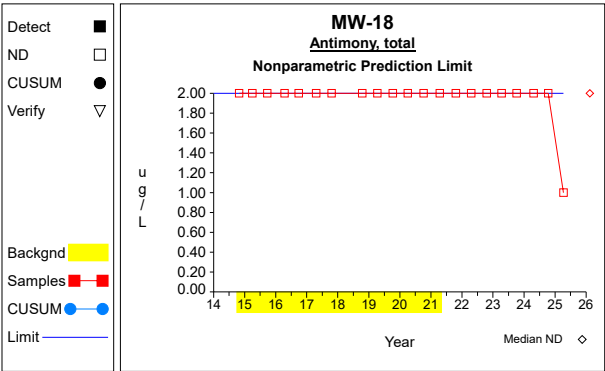


Graph 29

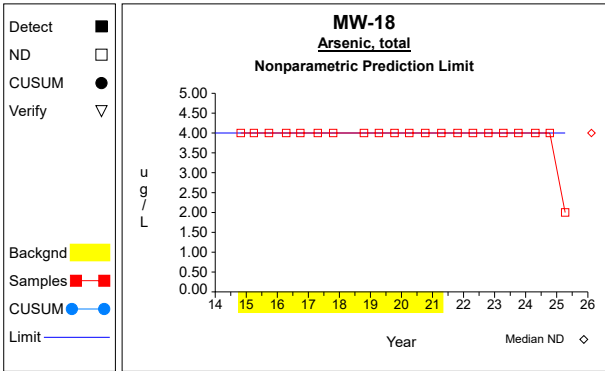


Graph 30

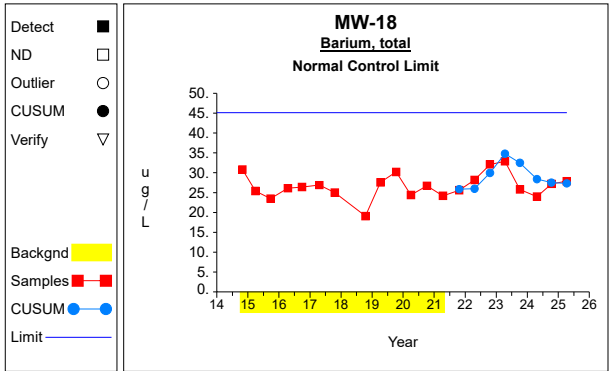
Intra-Well Control Charts / Prediction Limits



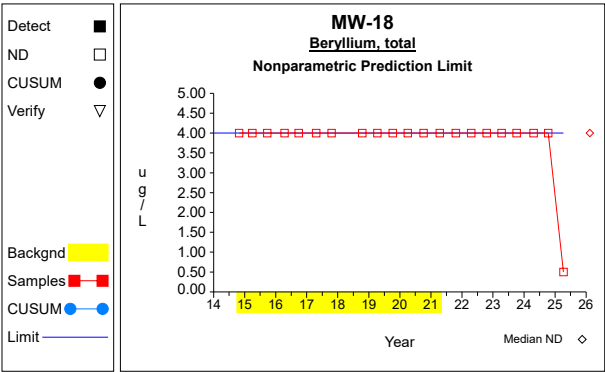
Graph 31



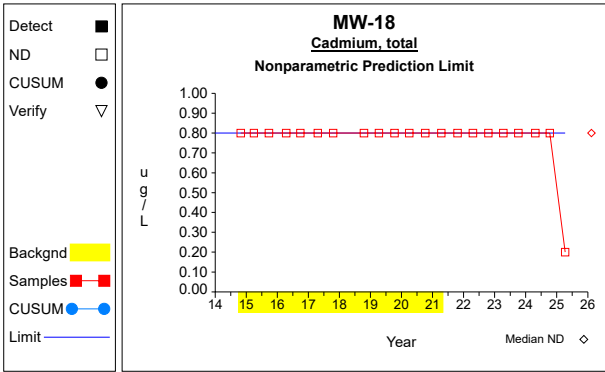
Graph 32



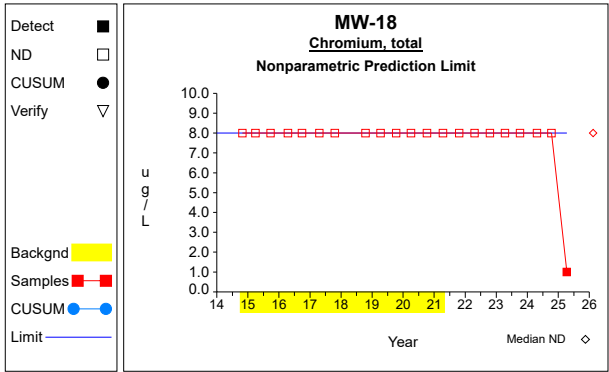
Graph 33



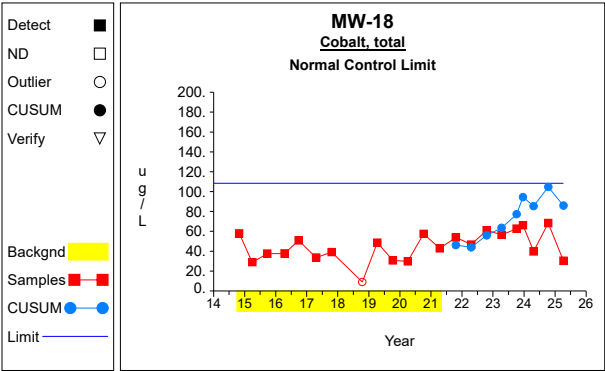
Graph 34



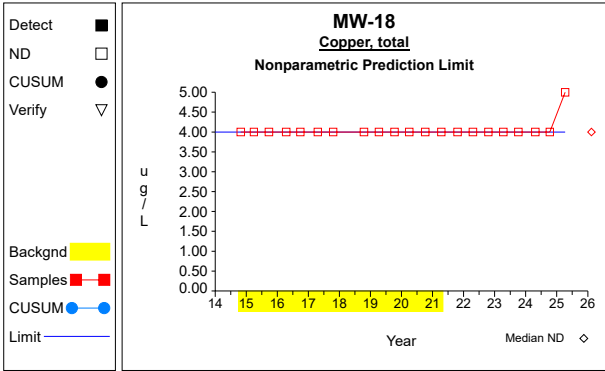
Graph 35



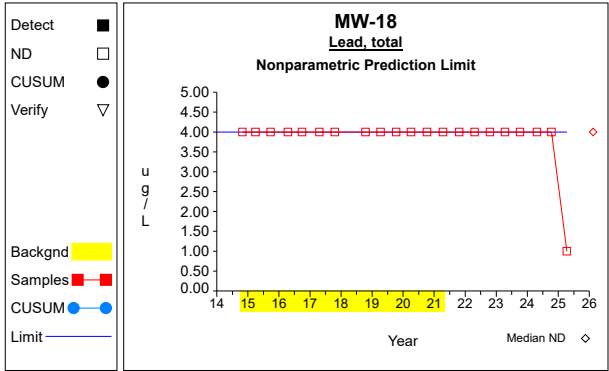
Graph 36



Graph 37

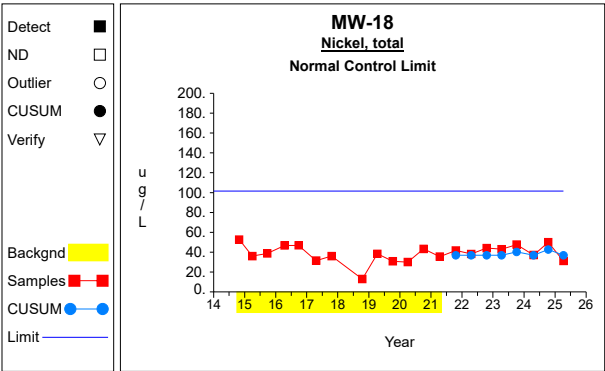


Graph 38

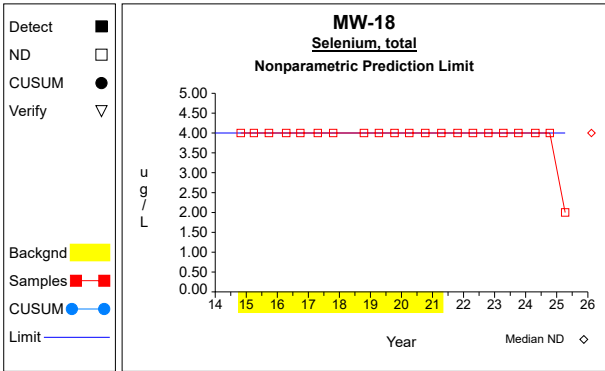


Graph 39

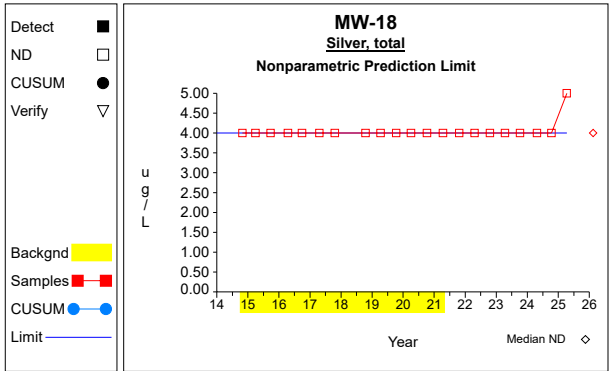
Intra-Well Control Charts / Prediction Limits



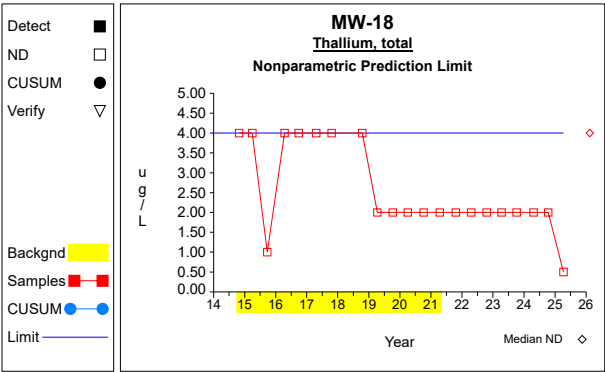
Graph 40



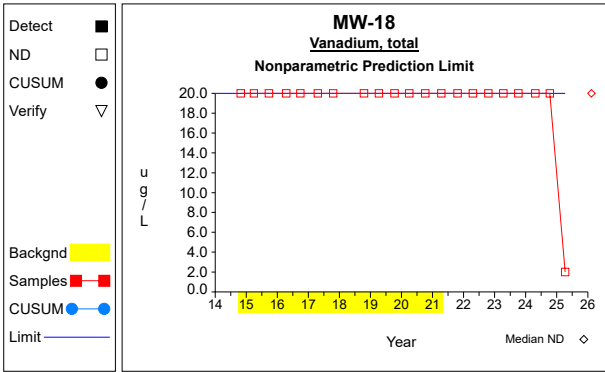
Graph 41



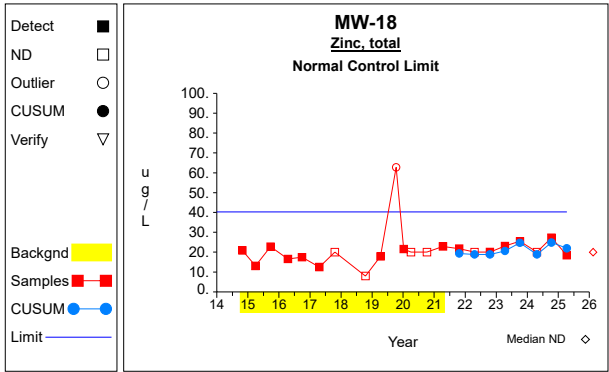
Graph 42



Graph 43

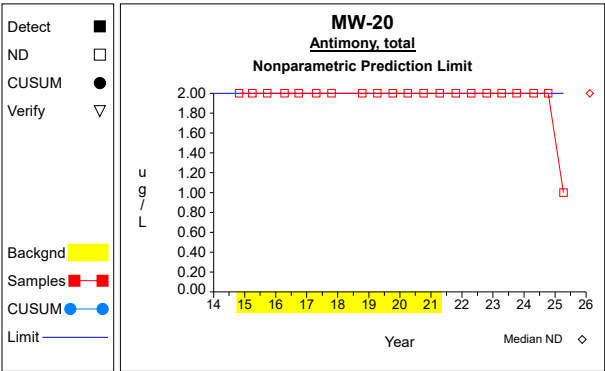


Graph 44

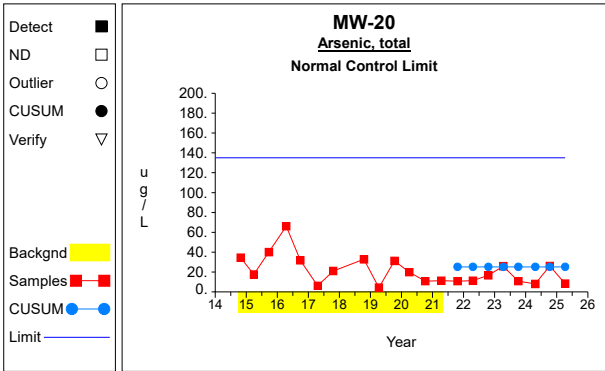


Graph 45

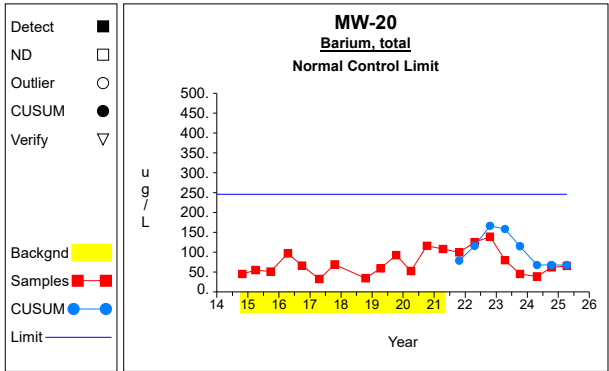
Intra-Well Control Charts / Prediction Limits



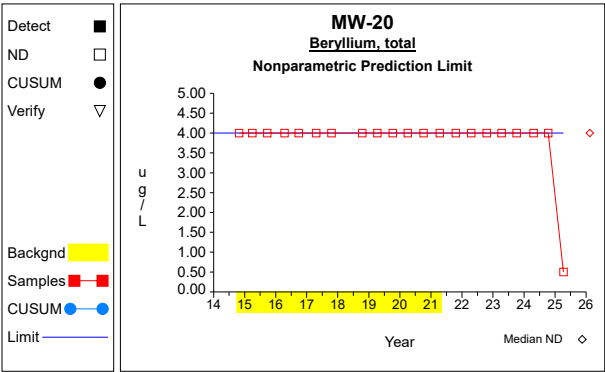
Graph 46



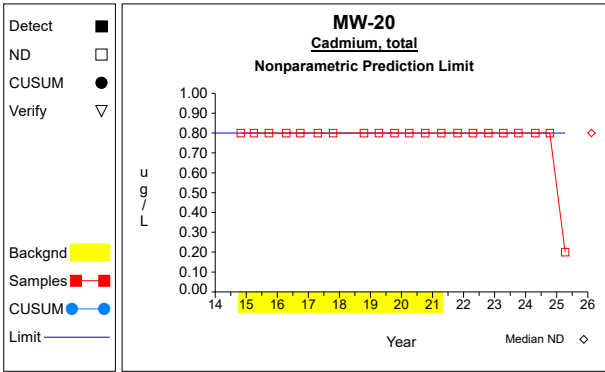
Graph 47



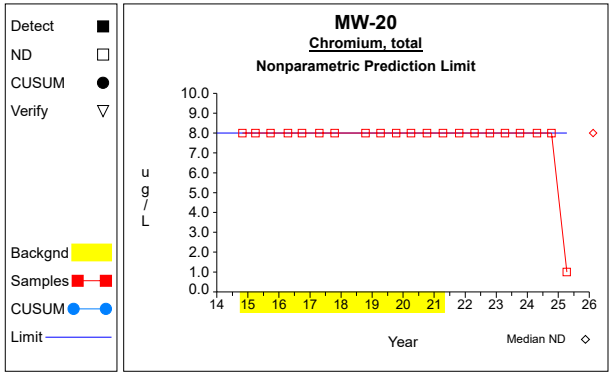
Graph 48



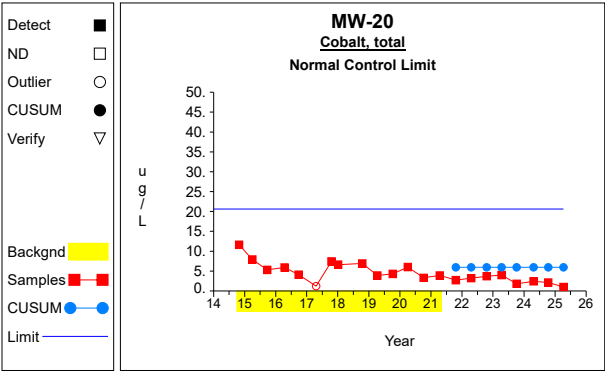
Graph 49



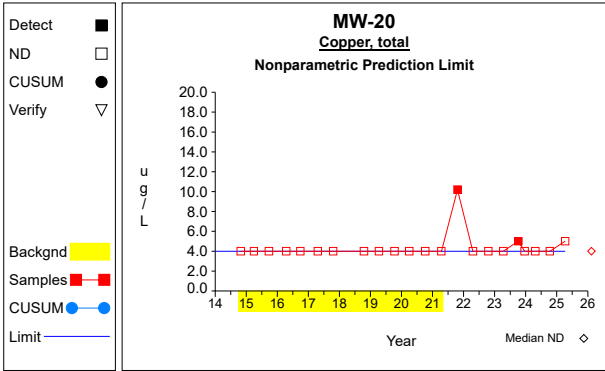
Graph 50



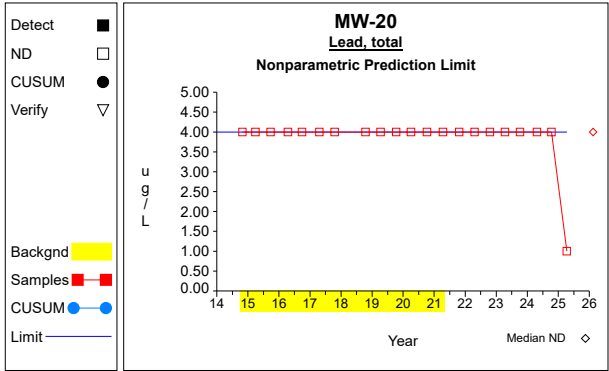
Graph 51



Graph 52

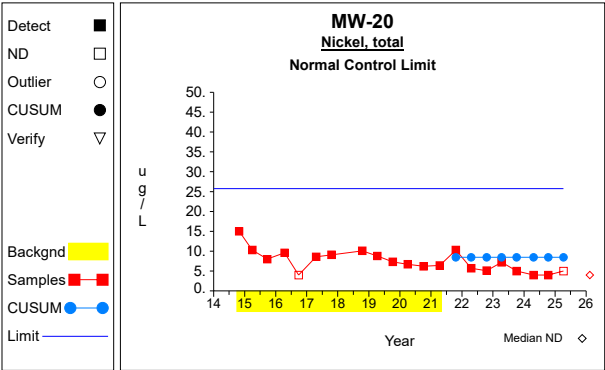


Graph 53

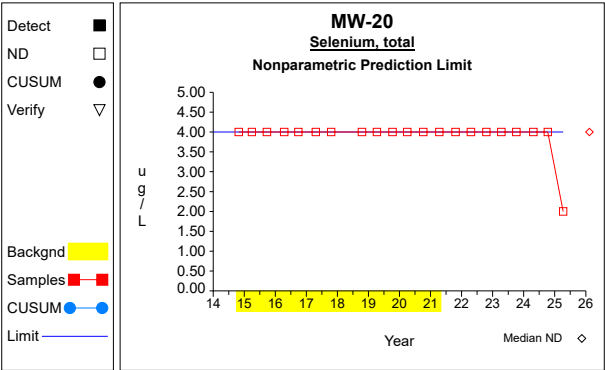


Graph 54

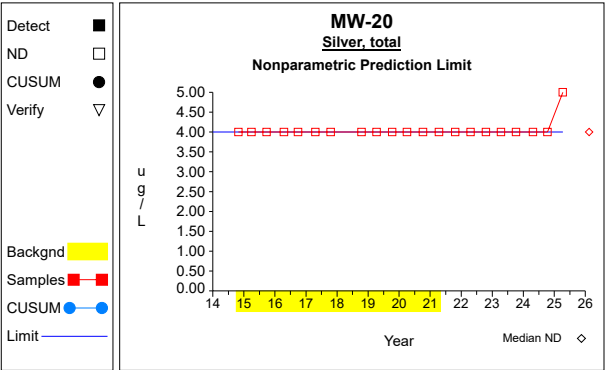
Intra-Well Control Charts / Prediction Limits



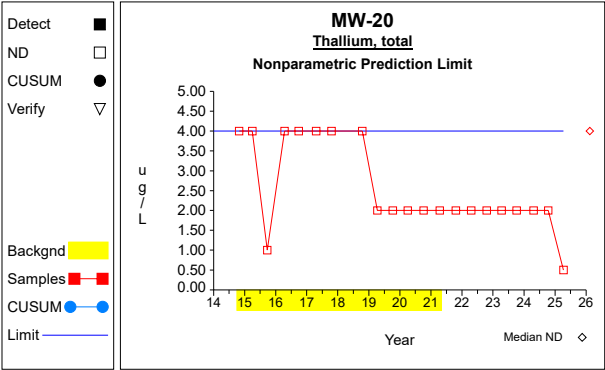
Graph 55



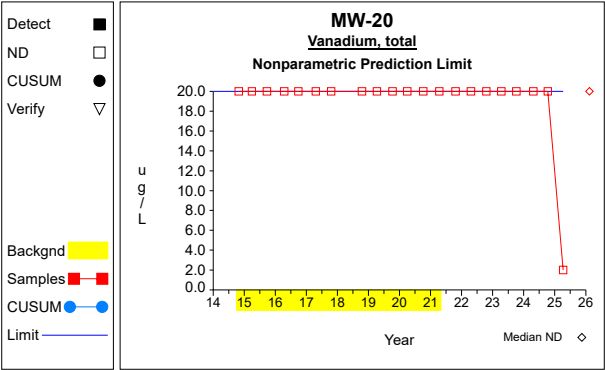
Graph 56



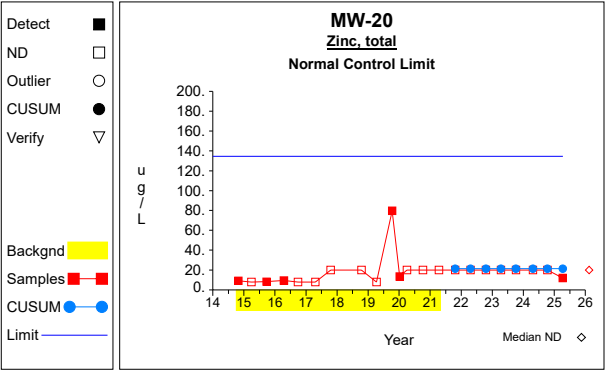
Graph 57



Graph 58

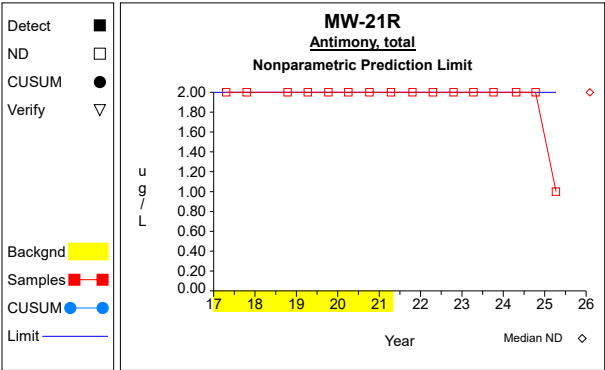


Graph 59

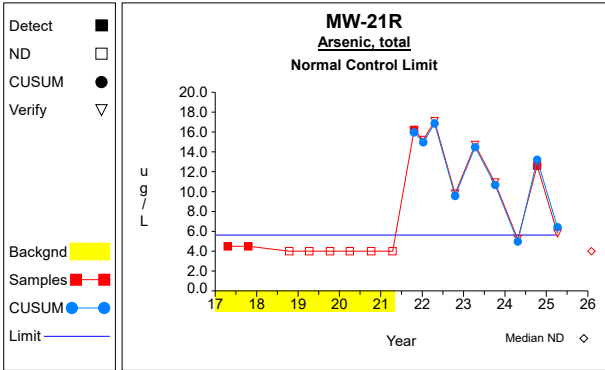


Graph 60

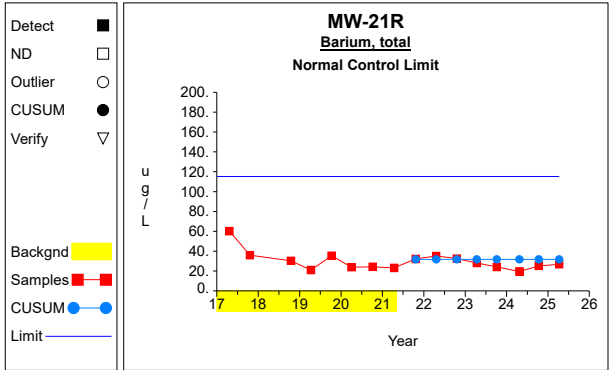
Intra-Well Control Charts / Prediction Limits



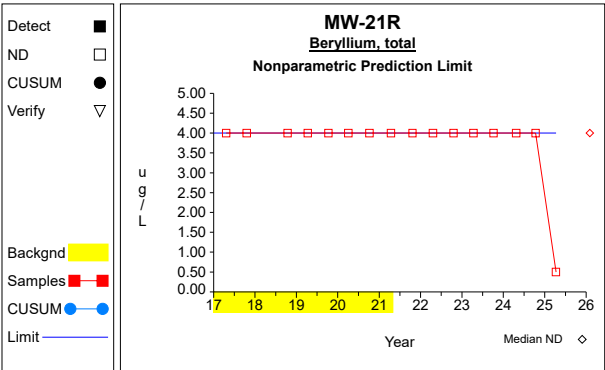
Graph 61



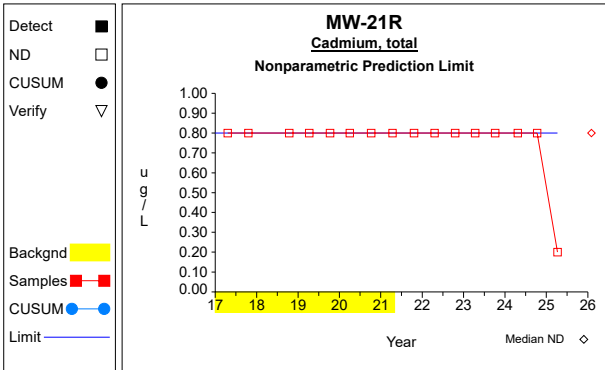
Graph 62



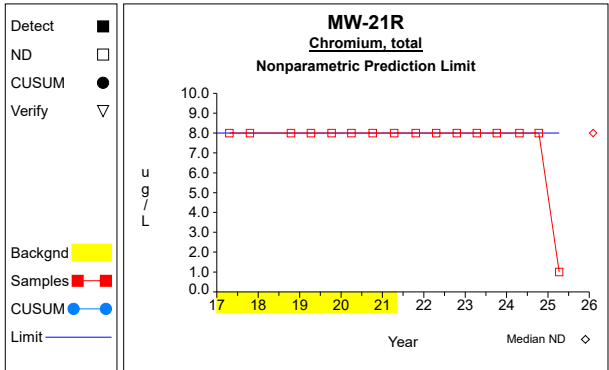
Graph 63



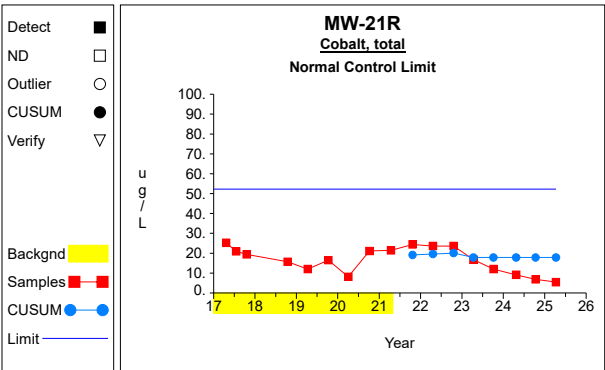
Graph 64



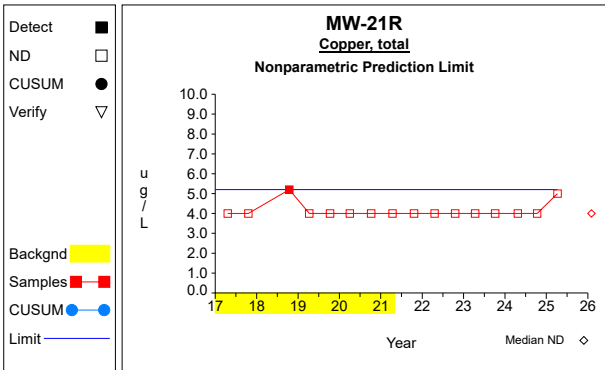
Graph 65



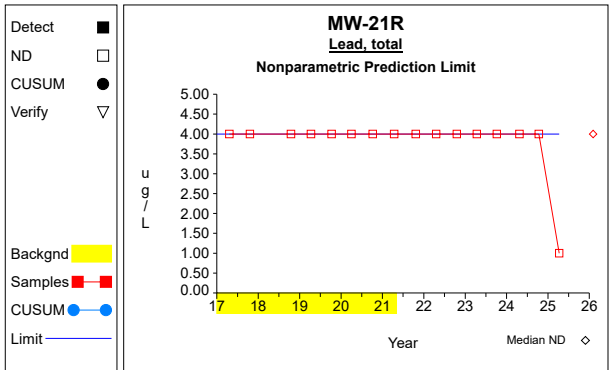
Graph 66



Graph 67

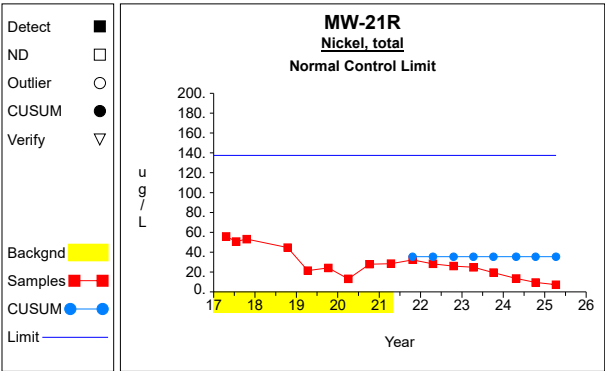


Graph 68

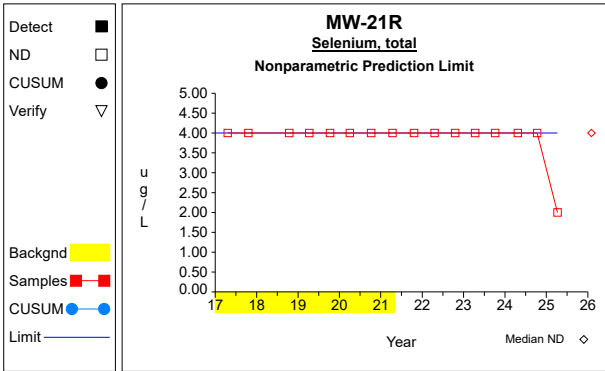


Graph 69

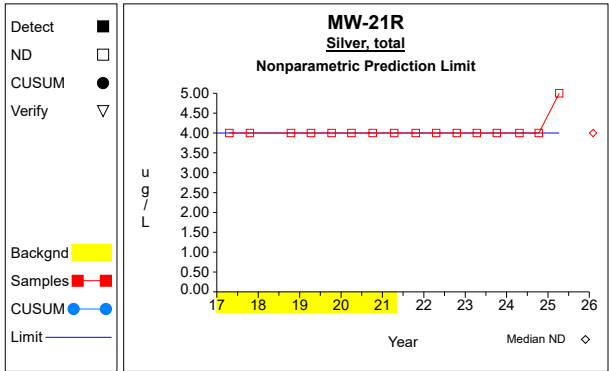
Intra-Well Control Charts / Prediction Limits



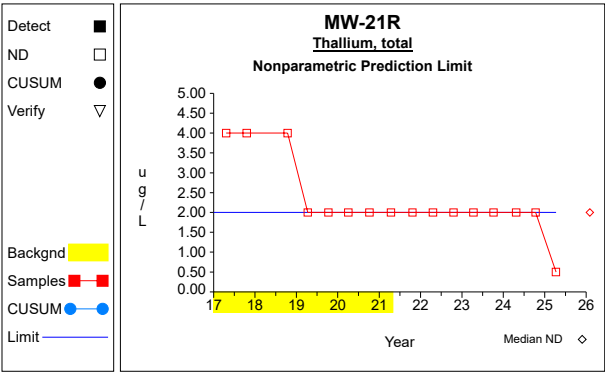
Graph 70



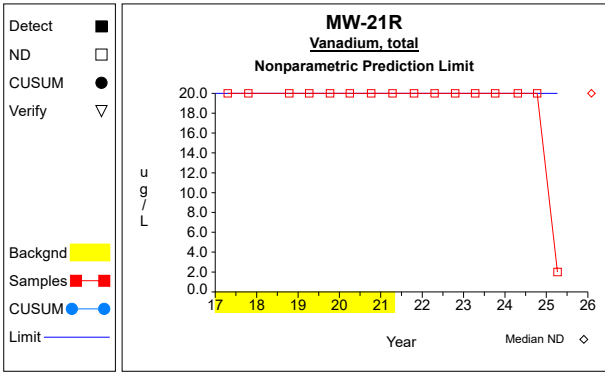
Graph 71



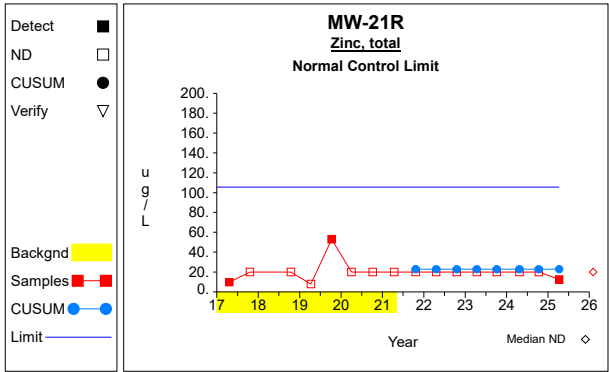
Graph 72



Graph 73

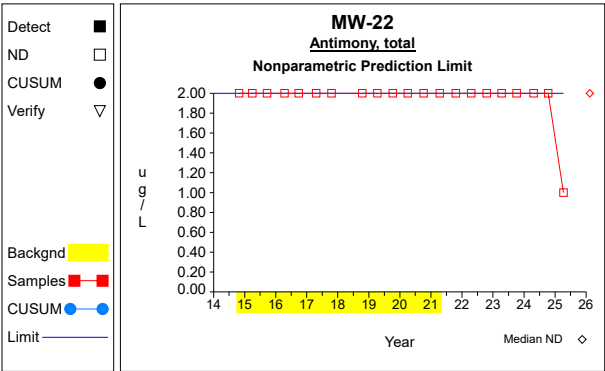


Graph 74

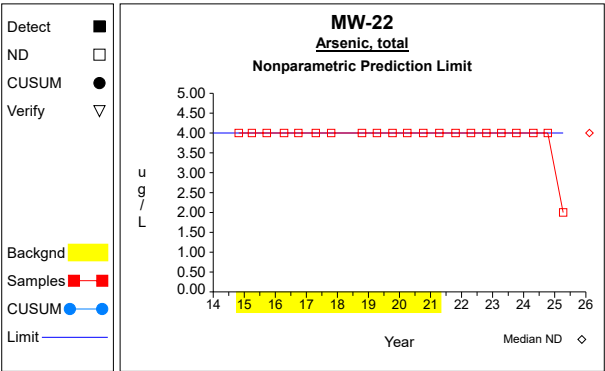


Graph 75

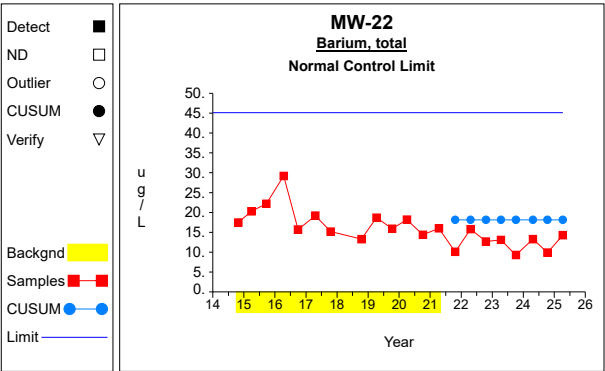
Intra-Well Control Charts / Prediction Limits



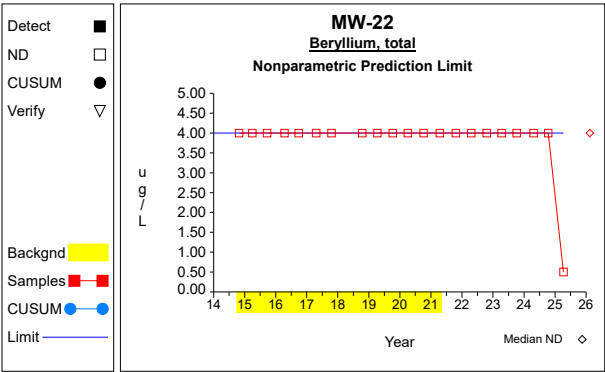
Graph 76



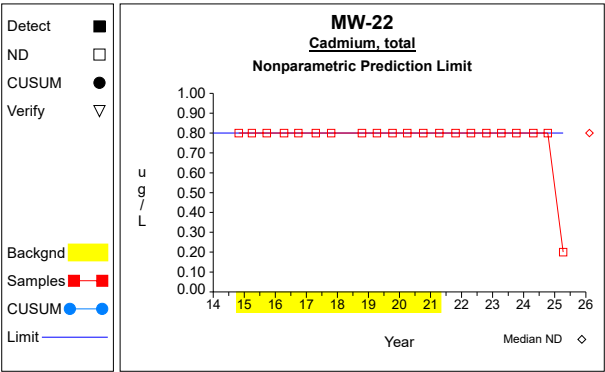
Graph 77



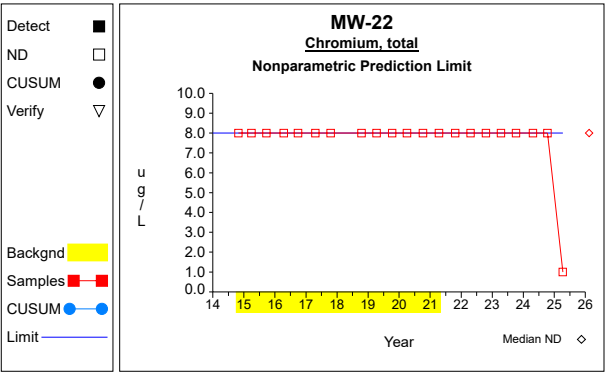
Graph 78



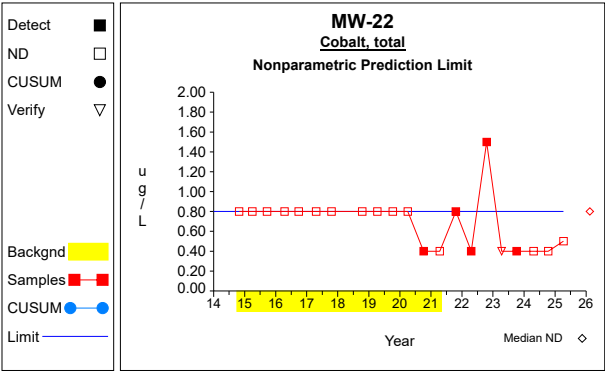
Graph 79



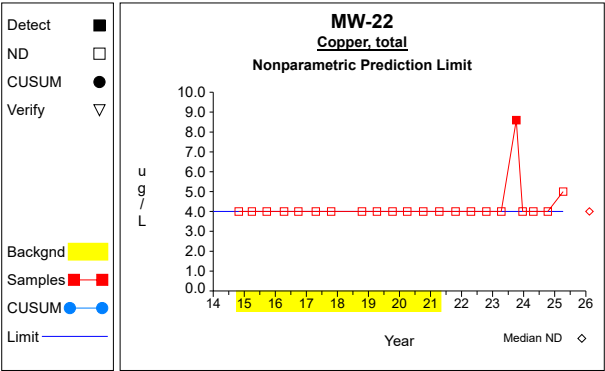
Graph 80



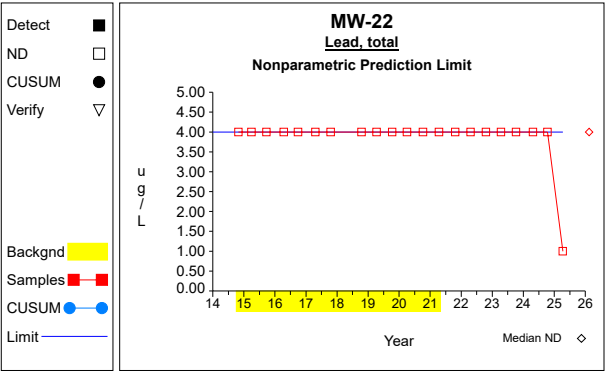
Graph 81



Graph 82

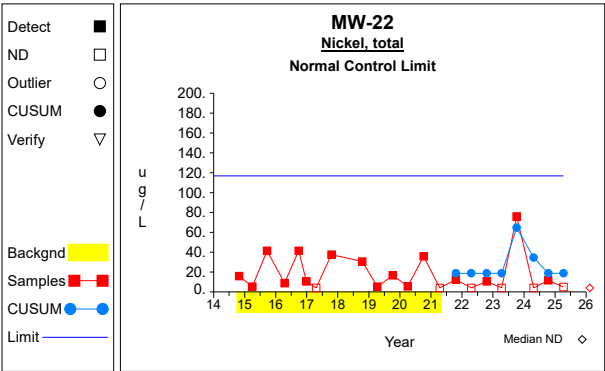


Graph 83

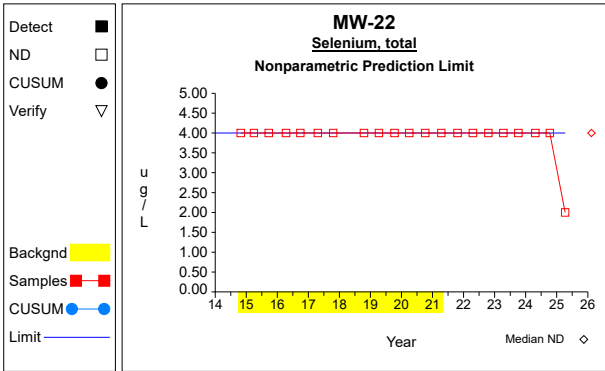


Graph 84

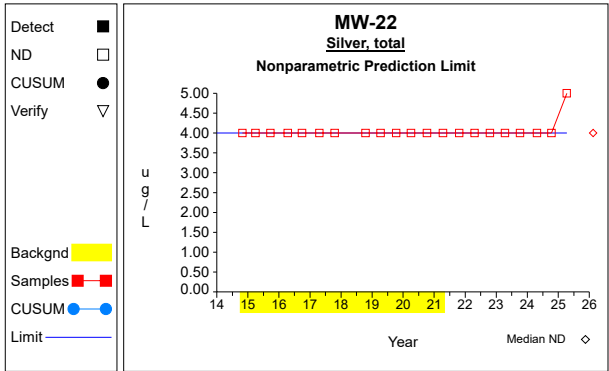
Intra-Well Control Charts / Prediction Limits



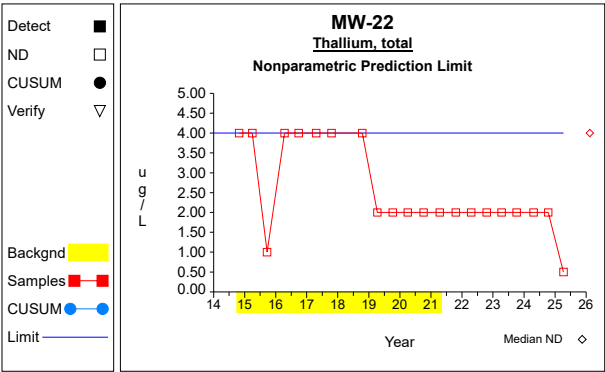
Graph 85



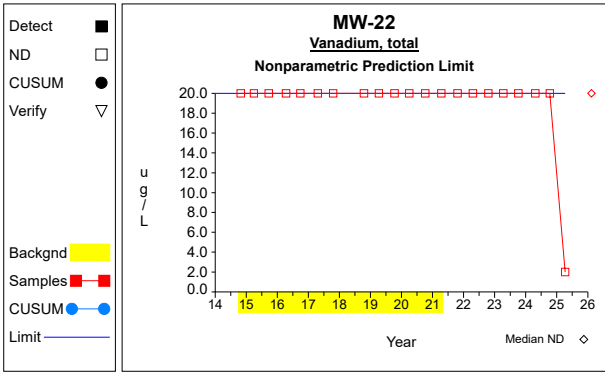
Graph 86



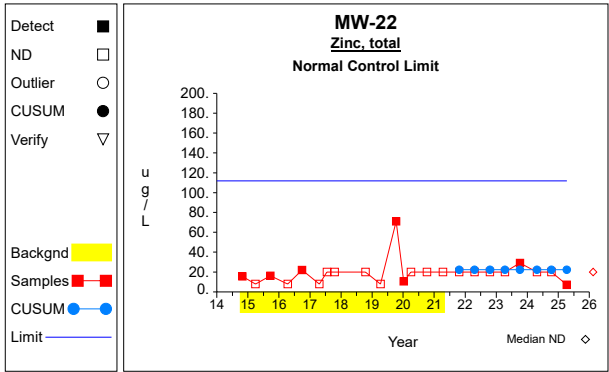
Graph 87



Graph 88

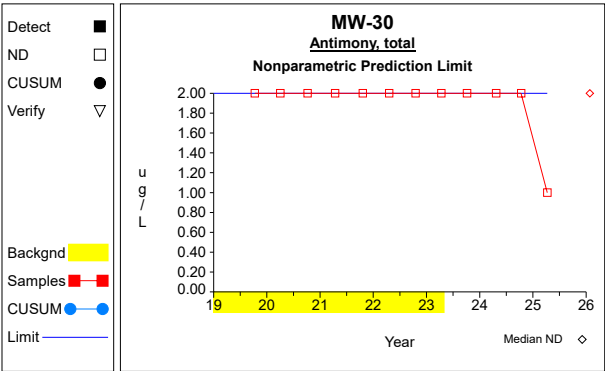


Graph 89

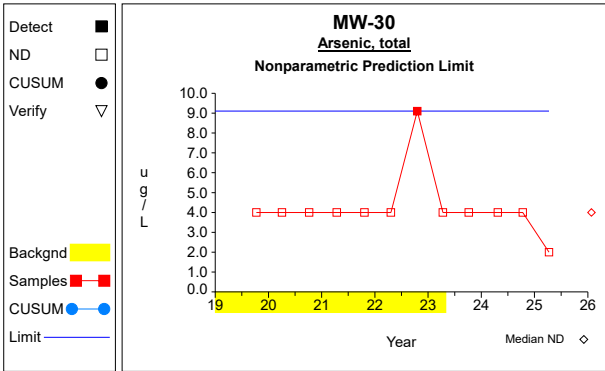


Graph 90

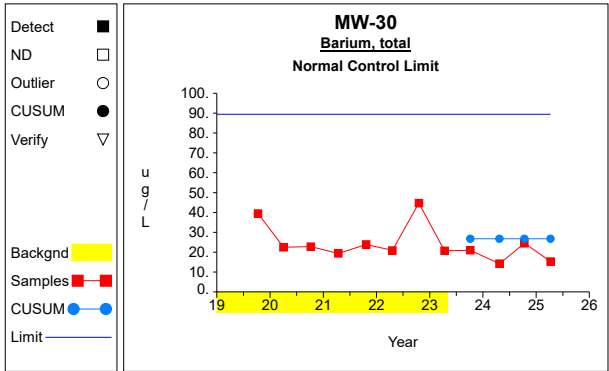
Intra-Well Control Charts / Prediction Limits



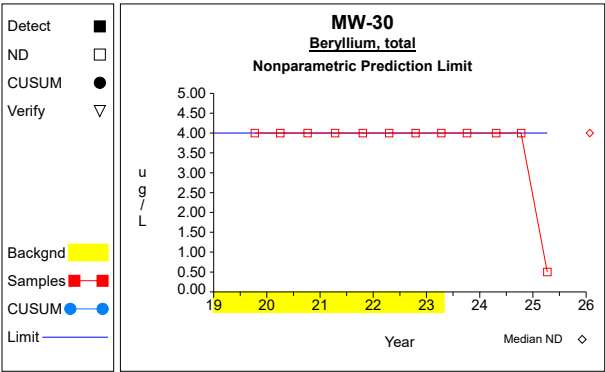
Graph 91



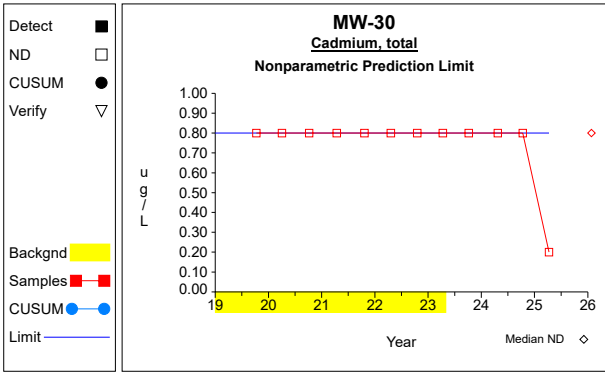
Graph 92



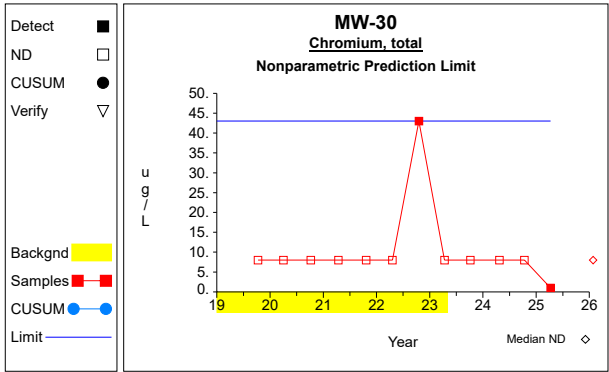
Graph 93



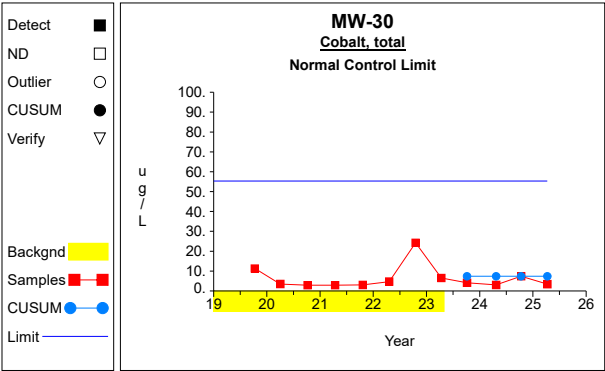
Graph 94



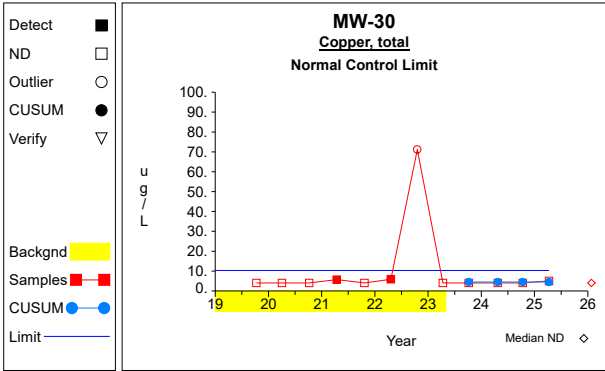
Graph 95



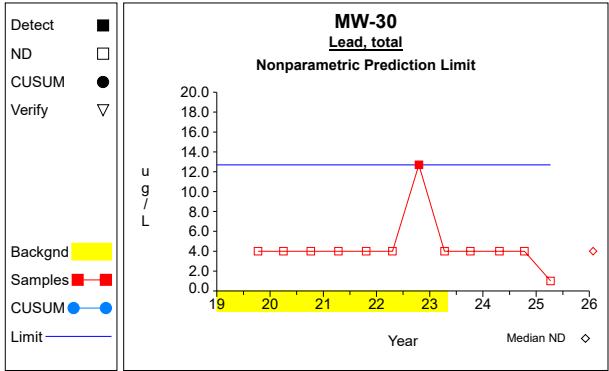
Graph 96



Graph 97

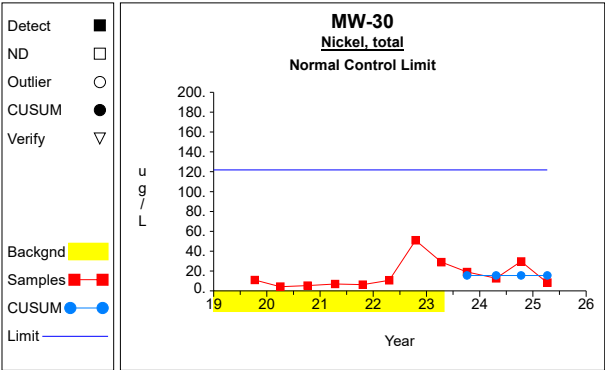


Graph 98

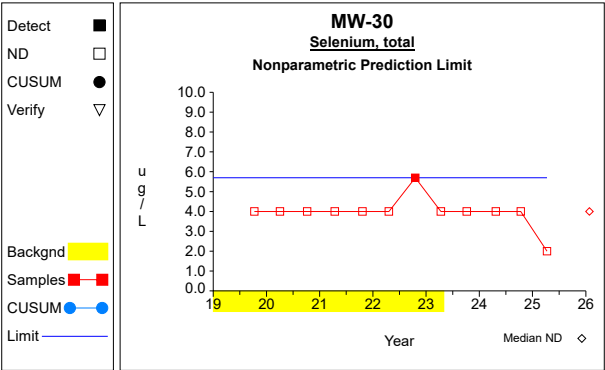


Graph 99

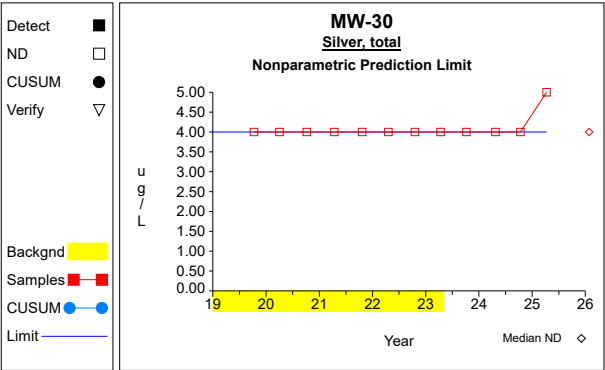
Intra-Well Control Charts / Prediction Limits



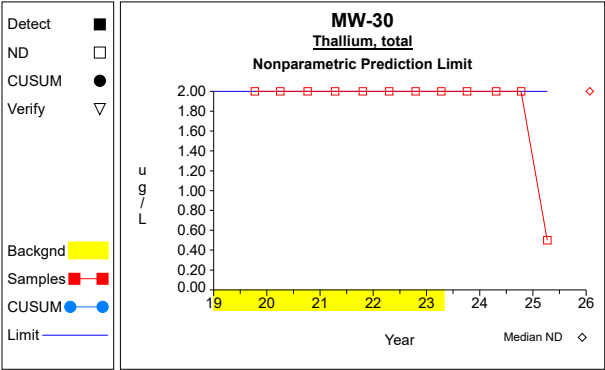
Graph 100



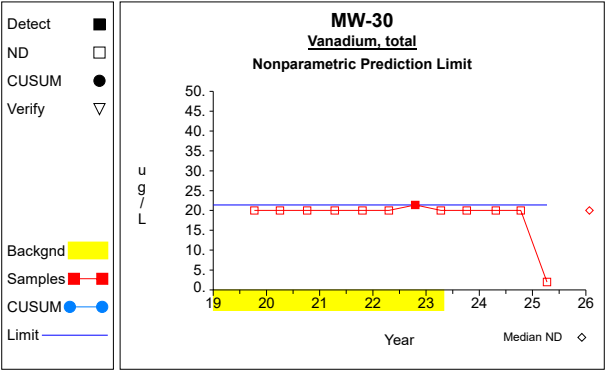
Graph 101



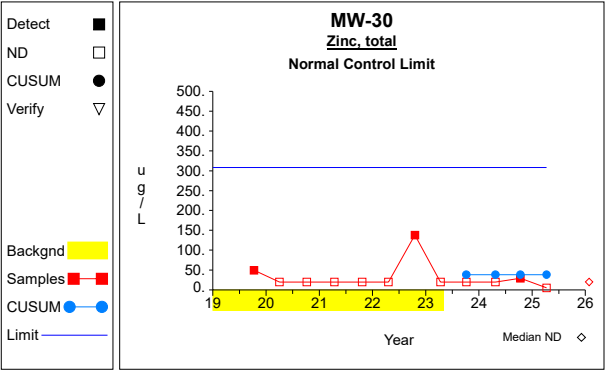
Graph 102



Graph 103

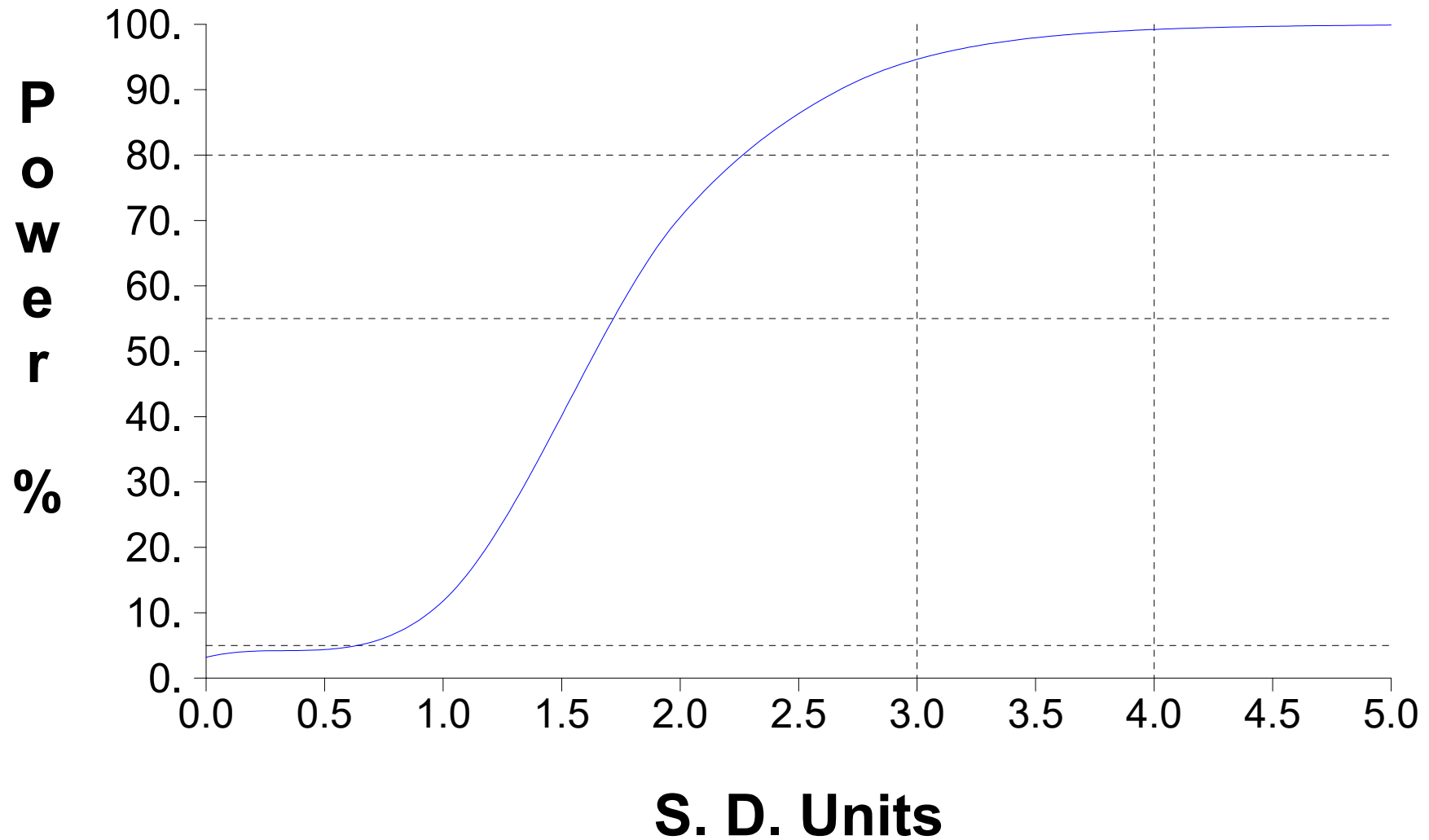


Graph 104



Graph 105

False Positive and False Negative Rates for Current Intra-Well Control Charts Monitoring Program



Attachment C

Assessment Statistics for Trace Metals

Table 1

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

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Arsenic, total	ug/L	MW-10A	4	7.950	9.499	1.176	0.000	19.124	10.000		
Cobalt, total	ug/L	MW-10A	4	1.075	0.727	1.176	0.219	1.931	2.100		
Nickel, total	ug/L	MW-10A	4	9.000	9.055	1.176	0.000	19.652	100.000		
Arsenic, total	ug/L	MW-18	4	2.000	0.000	1.176	2.000	2.000	10.000		**
Cobalt, total	ug/L	MW-18	4	51.150	19.010	1.176	28.788	73.512	2.100		
Nickel, total	ug/L	MW-18	4	41.525	8.927	1.176	31.025	52.025	100.000		
Arsenic, total	ug/L	MW-20	4	13.325	8.675	1.176	3.121	23.529	10.000		
Cobalt, total	ug/L	MW-20	4	1.825	0.602	1.176	1.117	2.533	2.100	dec	
Nickel, total	ug/L	MW-20	4	3.750	1.258	1.176	2.270	5.230	100.000	dec	
Arsenic, total	ug/L	MW-21R	4	8.625	3.683	1.176	4.293	12.957	10.000		
Cobalt, total	ug/L	MW-21R	4	8.325	2.886	1.176	4.930	11.720	2.100		**
Nickel, total	ug/L	MW-21R	4	12.425	5.351	1.176	6.131	18.719	100.000	dec	
Arsenic, total	ug/L	MW-22	4	2.000	0.000	1.176	2.000	2.000	10.000		
Cobalt, total	ug/L	MW-22	4	0.400	0.000	1.176	0.400	0.400	2.100		
Nickel, total	ug/L	MW-22	4	22.925	35.678	1.176	0.000	64.892	100.000		
Arsenic, total	ug/L	MW-25	4	6.000	3.080	1.176	2.377	9.623	10.000		
Cobalt, total	ug/L	MW-25	4	3.938	2.842	1.176	0.594	7.281	2.100	dec	
Nickel, total	ug/L	MW-25	4	7.675	4.681	1.176	2.169	13.181	100.000	dec	
Arsenic, total	ug/L	MW-30	4	2.000	0.000	1.176	2.000	2.000	10.000		
Cobalt, total	ug/L	MW-30	4	4.475	2.002	1.176	2.120	6.830	2.100		**
Nickel, total	ug/L	MW-30	4	17.400	9.243	1.176	6.528	28.272	100.000		

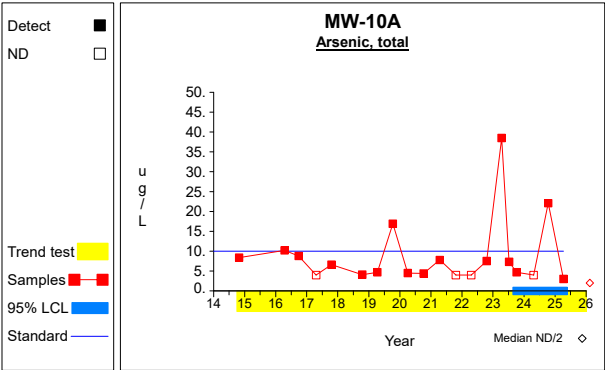
* - Insufficient Data

** - Significant Exceedance

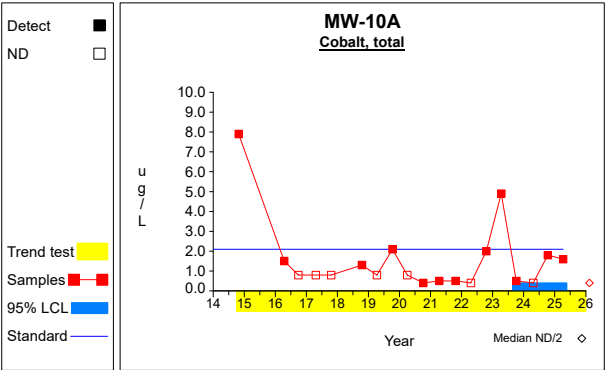
LCL = Lower Confidence Limit

UCL = Upper Confidence Limit

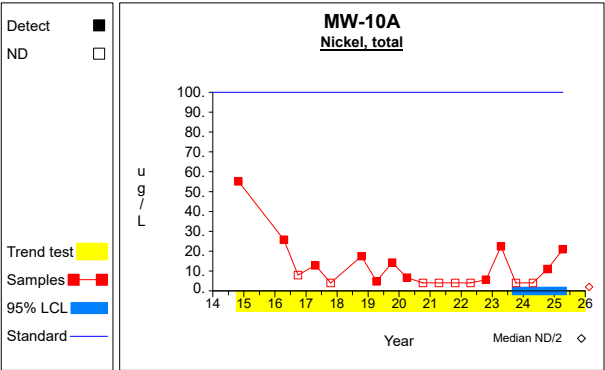
Confidence Limits (Assessment)



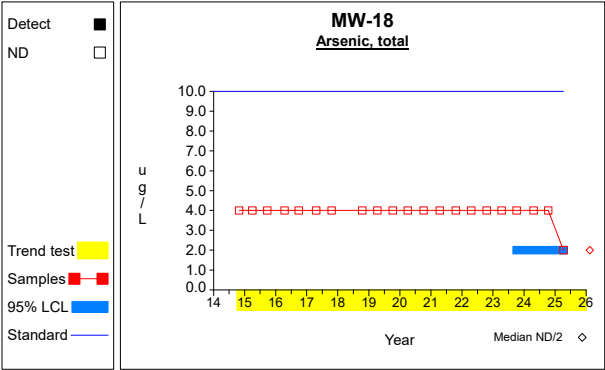
Graph 1



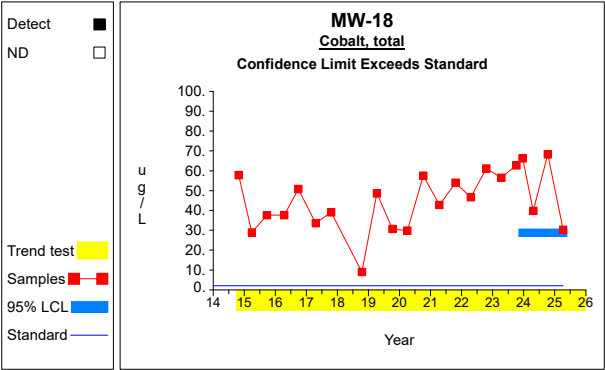
Graph 2



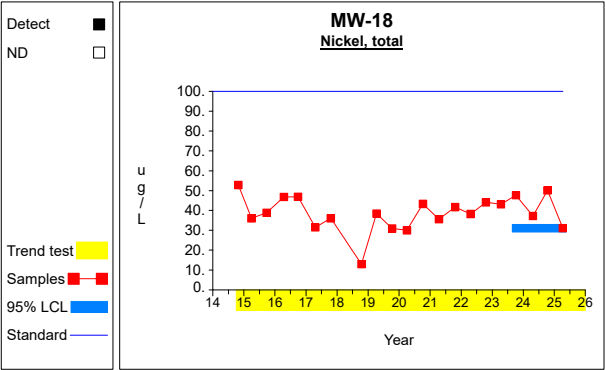
Graph 3



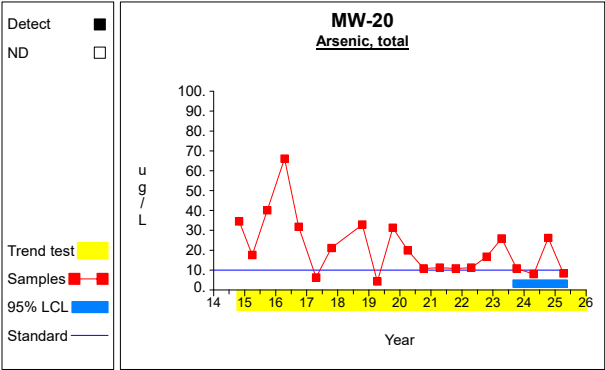
Graph 4



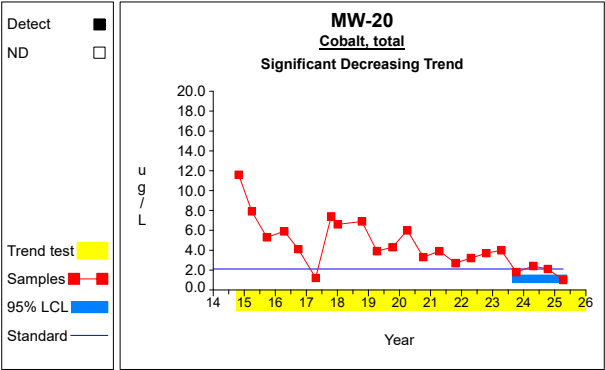
Graph 5



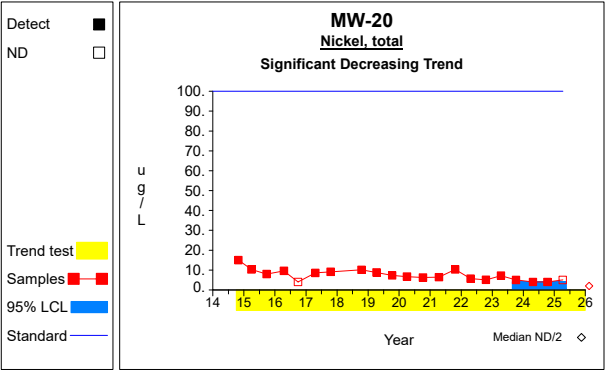
Graph 6



Graph 7

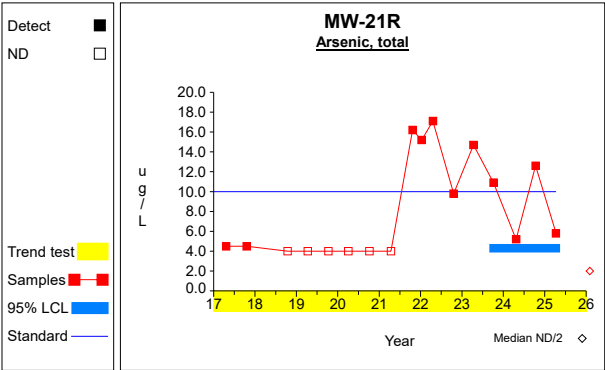


Graph 8

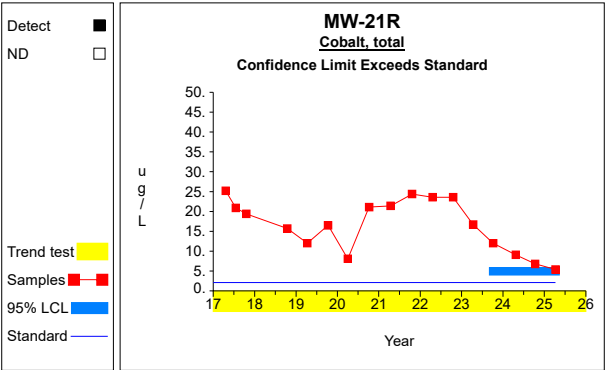


Graph 9

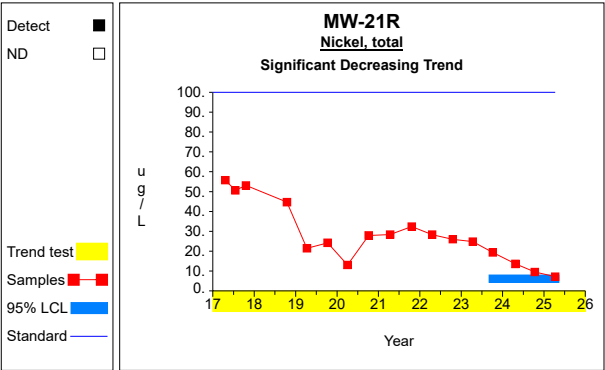
Confidence Limits (Assessment)



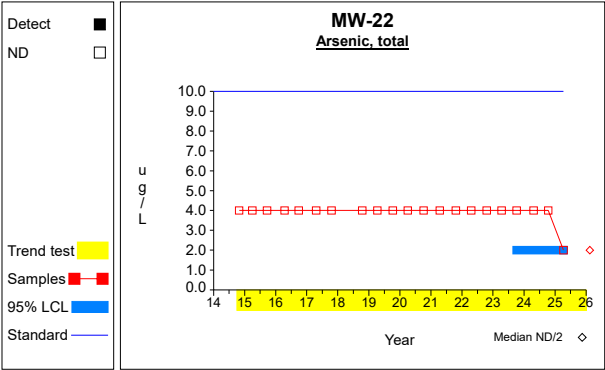
Graph 10



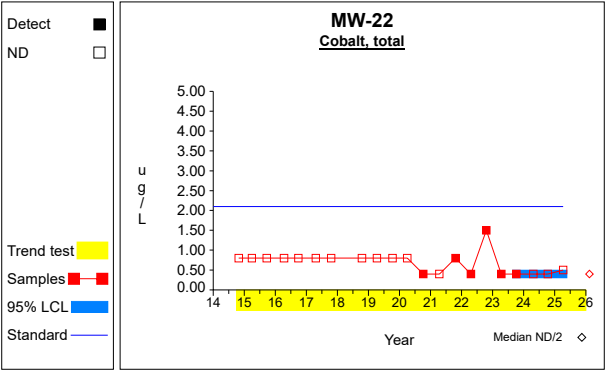
Graph 11



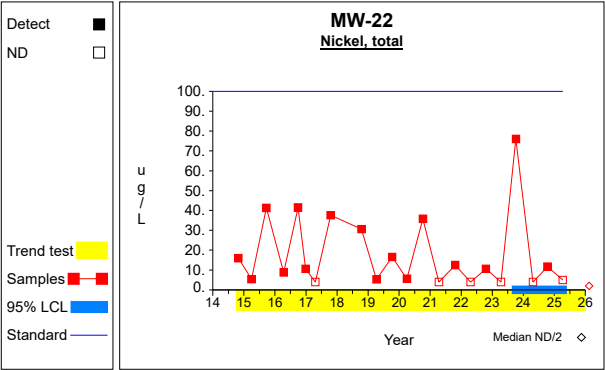
Graph 12



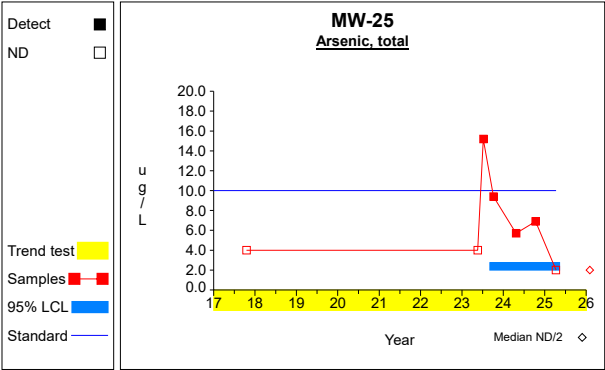
Graph 13



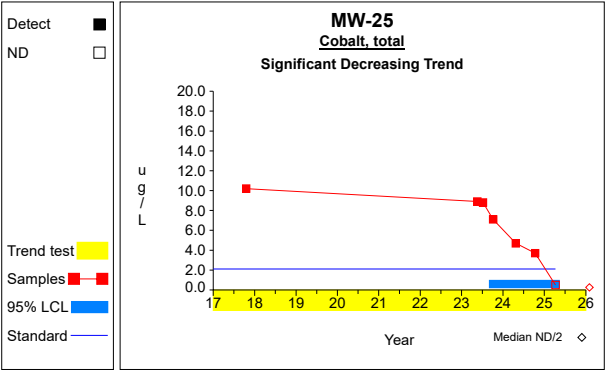
Graph 14



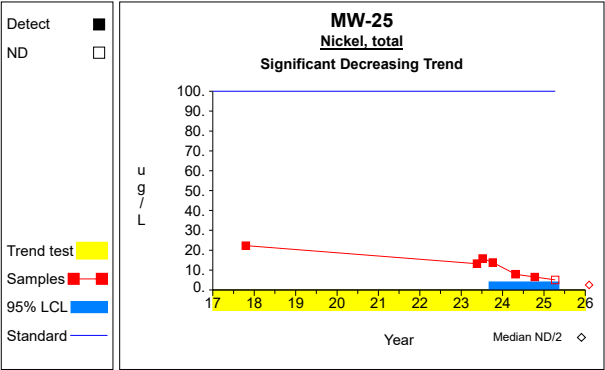
Graph 15



Graph 16

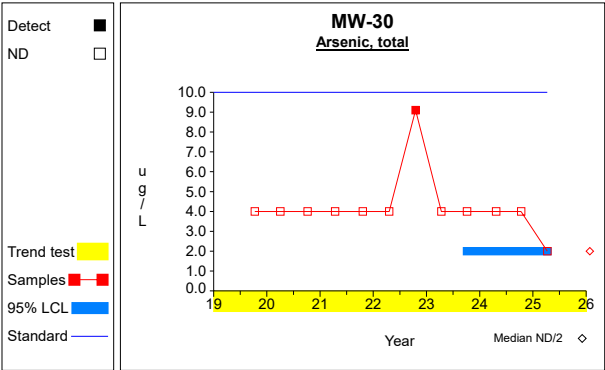


Graph 17

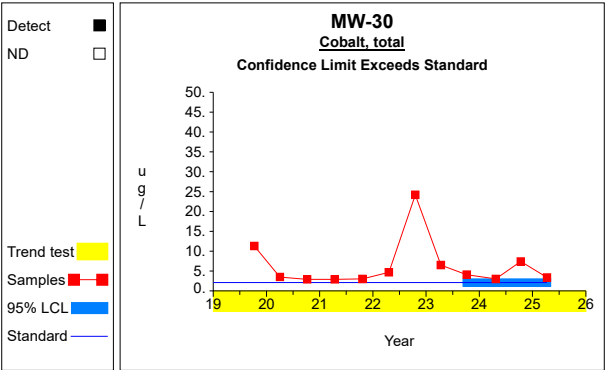


Graph 18

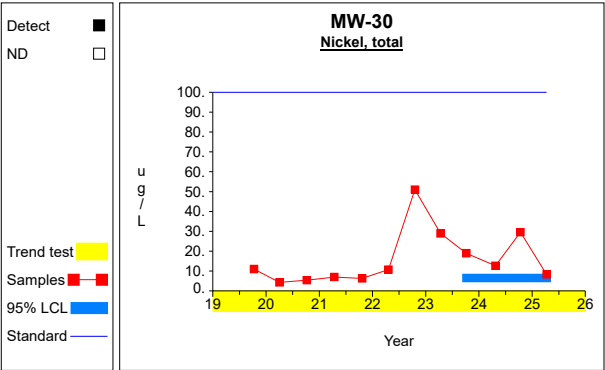
Confidence Limits (Assessment)



Graph 19



Graph 20



Graph 21

Attachment D

Historical VOC Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Acetone	GU-2	4/11/2023		10.7	10.0	ug/L
Acetone	MW-10A	7/29/2009		291.0	1.0	ug/L
Acetone	MW-10A	10/06/2009		164.0	1.0	ug/L
Acetone	MW-10A	5/17/2013		214.0	10.0	ug/L
Acetone	MW-10A	10/28/2014		18.1	10.0	ug/L
Acetone	MW-10A	10/18/2017		20.3	10.0	ug/L
Carbon disulfide	MW-10A	7/29/2009		1.65	1.00	ug/L
Carbon disulfide	MW-10A	7/12/2012		8.79	1.00	ug/L
Carbon disulfide	MW-10A	7/12/2012		8.79	1.00	ug/L
Carbon disulfide	MW-10A	5/17/2013		1.40	1.00	ug/L
Dieldrin	MW-10A	10/02/2012		.00248	.00200	ug/L
Acetone	MW-10B	10/18/2017		19.2	10.0	ug/L
Bis(2-ethylhexyl)phthalate	MW-10B	10/02/2012		.466	.390	ug/L
Carbon disulfide	MW-10B	12/29/2009		1.04	1.00	ug/L
Phorate	MW-10B	10/02/2012		.171	.170	ug/L
Acetone	MW-18	10/19/2017		21.1	10.0	ug/L
Arochlor 1016	MW-18	10/19/2017		2.36	.10	ug/L
Arochlor 1260	MW-18	10/19/2017		.2	.1	ug/L
Bromomethane	MW-18	10/04/2012		.60	.22	ug/L
Bromomethane	MW-18	10/05/2012		.60	.20	ug/L
Acetone	MW-19	10/19/2017		19.5	10.0	ug/L
Bis(2-ethylhexyl)phthalate	MW-19	10/03/2012		17.5	10.0	ug/L
Nitrobenzene	MW-19	10/03/2012		.224	.220	ug/L
Acetone	MW-20	4/11/2014		252.0	10.0	ug/L
Acetone	MW-20	10/18/2017		20.2	10.0	ug/L
Acetone	MW-20	4/09/2019		22.2	10.0	ug/L
Acetone	MW-21R	10/19/2017		21.5	10.0	ug/L
Bis(2-ethylhexyl)phthalate	MW-21R	10/19/2017		7	6	ug/L
Acetone	MW-22	10/18/2017		21.1	10.0	ug/L
Bromomethane	MW-22	10/04/2012		.41	.22	ug/L
Bromomethane	MW-22	10/05/2012		.41	.20	ug/L
1,1-dichloroethene	MW-25	10/11/2024		1	1	ug/L
Acetone	MW-25	5/18/2023		25.5	10.0	ug/L

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

APPENDIX B.2 –Fall Statistical Evaluation

**Results of the Ground Water Statistics
for North Central Iowa Regional Landfill**

Second Semi-Annual Monitoring Event in 2025

Prepared for:
North Central Iowa Regional Solid Waste Agency (NCIRSWA)
Fort Dodge, Iowa

Prepared by:
Jeffrey A. Holmgren
Otter Creek Environmental Services, L.L.C.
Elgin, IL
(847) 464-1355

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INTRODUCTION

This report contains the results of the statistical analyses used to evaluate the ground water data obtained during the second semi-annual monitoring event in 2025 at North Central Iowa Regional Landfill in Fort Dodge, Iowa. Monitoring wells MW-10A, MW-10B, MW-20, MW-21R, MW-22, MW-25, MW-28, MW-29, MW-30, MW-31, MW-32, and GU-4 were sampled on October 23, 2025 and analyzed for the parameters required by permit.

The statistical plan is designed to detect a release from the facility at the earliest indication so that it is protective of human health and the environment. The intrawell methodology is described and then applied to the North Central Iowa Regional Landfill data. The statistical plan conforms with IAC 567, Chapter 113.10 and the USEPA guidance document (“*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance*”, March 2009).

Ground Water Monitoring Program

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 below.

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

Organic Compounds:

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

Inorganic constituents:

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

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

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

IAC 567, Chapter 113.10(4) provides several options for statistically evaluating the ground water data at those wells that monitor the open cells or contiguous MSWLF units. The preferred methods for comparing ground water data are using either prediction limits or using control charts. The interwell method using site prediction limits was previously applied to the North Central Iowa Regional Landfill data using the DUMPStat® statistical program. DUMPStat® is a program for the statistical analysis of groundwater monitoring data using methods described in “Statistical Methods for Groundwater Monitoring” by Dr. Robert D. Gibbons. The DUMPStat program is completely consistent with all USEPA regulations and guidance and the ASTM D6312-98 guidance. An intrawell method using DUMPStat® was recently approved for the current monitoring network.

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.

Intrawell statistics

Intrawell statistics are appropriate for facilities where the upgradient wells do not accurately characterize the natural ground water conditions downgradient from the facility. This may be due to different hydrogeological conditions where the wells are screened, having too few upgradient wells to account for the spatial variability, or the site exhibiting no definable hydraulic gradient. Intrawell statistics compare new measurements to the historical data at each ground water monitoring well independently. It is recommended that at least eight background samples be obtained prior to performing the statistics.

The most useful technique for intrawell comparisons is the combined Shewhart-CUSUM control chart. This control chart procedure is useful because it will detect releases both in terms of the constituent concentration and cumulative increases. This method is also extremely sensitive to sudden and gradual releases. A requirement for constructing these control charts is that the parameter is detected at a frequency greater than or equal to 25%, otherwise the data variance is not properly defined.

The combined Shewhart-CUSUM control chart assumes that the data are independent and normally distributed with a fixed mean and a constant variance. Independent data is much more critical than the normality assumption. To achieve independence, it is recommended that data are collected no more frequently than quarterly to account for seasonal variation. The combined Shewhart-CUSUM control chart is extremely robust to deviations from normality. Because the control charts do not use a specific multiplier based on a normal distribution, it is more conservative to assume normality.

It is recommended that at least eight rounds of data be available to provide a reliable estimate of the mean and standard deviation of the parameter concentration, although the control charts will be generated with as few as four data points. Having only four data points may produce greater uncertainty in the mean and standard deviation of the background data, leading to higher control limits, thus having a potentially high false negative rate.

Many groundwater monitoring parameters are not detected at a frequency great enough to generate the combined Shewhart-CUSUM control charts. For constituents that are detected less than 25% of the time

at a particular well, the data should be plotted as a time series until a sufficient number of data points are available to provide a 99% confidence nonparametric prediction limit. Thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit. Eight independent measurements (for pass 1 of 2 resamples) are necessary to achieve a 99% confidence nonparametric prediction limit. The nonparametric prediction limit is the largest determination out of the data set collected for that well and parameter. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

In developing the statistical background, the historical data must be thoroughly screened for anomalous data due to sampling error, analytical error, or simply by chance alone. An erroneous data point, if not removed prior to the mean and variance computations, would yield a larger control limit thus increasing the false negative rate. The DUMPStat® program screens for outliers using the Dixon test. If the Dixon test indicates an outlier, the value is considered a statistical outlier and will not be used in the mean and variance determinations. Anomalous data will still be plotted on the graphs (with a unique symbol) but will not be included in the calculations.

The verification resample plan is an integral function of the statistical plan to reduce the probability that anomalous data obtained after the background has been established, is indicative of a landfill release.

The background data for each well and constituent is tested for existing trends using Sen's nonparametric estimate of trend. If contamination exists prior to completing the background, the control limits could be potentially high and this control chart method would not be able to detect an increasing trend unless the increase is severe.

Results of the Intrawell Statistics

The Appendix I trace metals data from wells MW-10A, MW-10B, MW-20, MW-21R, MW-22, MW-25, MW-28, MW-29, MW-30, MW-31, MW-32, and GU-4 were evaluated using the combined Shewhart-CUSUM control chart method.

As ground water monitoring at a municipal solid waste facility proceeds, it is recommended to update background data sets periodically with valid detection monitoring results that are representative of background groundwater quality not affected by leakage from a monitored unit. Failure to update background will exclude factors such as natural temporal variation, changes in field or laboratory methodologies, and changes in the water table due to meteorological conditions or other influences.

Since there have been no statistical failures attributed to the landfill, the background was updated to include data obtained from October 2014 through April 2021 for wells MW-10B, MW-18, MW-19, MW-20, MW-21R, and MW-22. The background was updated to include data obtained from October 2014 through April 2022 for well MW-10A. The initial background at ground water well MW-30 includes the eight rounds of data from 2019 through April 2023. Ground water wells MW-25, MW-28, MW-29, MW-31, MW-32, and GU-4 are in background monitoring.

Even for wells with eight rounds of background, there is insufficient data to determine control limits given the approved resample program. For constituents that are detected less than 25% of the time at a particular

well, thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit.

A summary of the intrawell statistics is included in Attachment B, Table 1 “Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts.” The control charts or time series graphs follow the summary table. For the parameters evaluated, the control limit exceedances detected are summarized in the table below.

Control Limit Exceedances During the Second Semi-Annual Monitoring Event in 2025

Sample Point	Trace Metal	Result	CUSUM Value	Control Limit	Control Limit Type	Verified/ Awaiting Verification
MW-21R	Arsenic, µg/L	8.4	9.0121	5.6295	Normal	Verified

No increasing trends were detected in the background data.

A control chart factor was selected to provide a balance of the site-wide false positive and false negative rates. A statistical power curve indicates the expected false assessments for the site as a whole. For intrawell analysis, the site-wide false positive rate is 4% and the test becomes sensitive to 4 standard deviation units over background.

The previous verified exceedances at these wells 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-21R (3.767 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L but does not exceed the site-specific GWPS of 48.1 µg/L.

The 95% LCL for cobalt at MW-30 (2.287 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L but does not exceed the site-specific GWPS of 48.1 µg/L.

The remainder of the calculated 95% LCLs are below the respective ground water quality standards.

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 North Central Iowa Regional Landfill during the second semi-annual monitoring event in 2025 are summarized in the table below.

Organic compounds detected during the second semi-annual monitoring event in 2025

Well	VOC Detected	Result, µg/L	Reporting Limit, µg/L	Verified/ Awaiting Verification	Groundwater Standard, µg/L
MW-25	Chloroform	2.9	1	Awaiting Verification	80 ^b

a - USEPA MCL

b – Iowa Statewide Standard

Historical VOC detections are summarized in Attachment D.

Attachment A

Ground Water Data obtained during the Second Semi-Annual Monitoring Event in 2025

Table 1

Analytical Data Summary for 10/23/2025

Constituents	Units	GU-4	MW-10A	MW-10B	MW-20	MW-21R	MW-22	MW-25	MW-28	MW-29	MW-30	MW-31	MW-32
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<10	<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	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<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	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic, total	ug/L	<2.0	<2.0	<2.0	11.2	8.4	<2.0	5.9	<2.0	17.1	<2.0	<2.0	6.4
Barium, total	ug/L	18.4	33.0	26.7	59.1	28.8	12.7	45.9	29.7	39.5	15.3	16.9	72.3
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<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	<1
Chloroform	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.9	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	1.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	<1.0
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.5	1.2	<.5	1.3	4.0	<.5	1.1	<.5	25.3	4.7	5.1	25.6
Copper, total	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<1	<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	<5
Nickel, total	ug/L	12.6	9.6	5.6	<5.0	<5.0	5.6	<5.0	7.7	47.4	13.9	5.4	38.8
Selenium, total	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.7	<2.0	<2.0	<2.0	<2.0
Silver, total	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

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

Table 1

Analytical Data Summary for 10/23/2025

Constituents	Units	GU-4	MW-10A	MW-10B	MW-20	MW-21R	MW-22	MW-25	MW-28	MW-29	MW-30	MW-31	MW-32
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	203.0	54.5	8.1	<5.0	<5.0	8.4	6.2	9.4	12.9	7.9	<5.0	18.7

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

Attachment B

Summary Tables and Graphs for the Intrawell Comparisons

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Antimony, total	ug/L	GU-4	5	0	5										*
Arsenic, total	ug/L	GU-4	5	0	5										*
Barium, total	ug/L	GU-4	5	0	5										*
Beryllium, total	ug/L	GU-4	5	0	5										*
Cadmium, total	ug/L	GU-4	5	0	5										*
Chromium, total	ug/L	GU-4	3	0	5										*
Cobalt, total	ug/L	GU-4	5	0	5										*
Copper, total	ug/L	GU-4	5	0	5										*
Lead, total	ug/L	GU-4	5	0	5										*
Nickel, total	ug/L	GU-4	5	0	5										*
Selenium, total	ug/L	GU-4	5	0	5										*
Silver, total	ug/L	GU-4	5	0	5										*
Thallium, total	ug/L	GU-4	5	0	5										*
Vanadium, total	ug/L	GU-4	5	0	5										*
Zinc, total	ug/L	GU-4	5	0	5										*
Antimony, total	ug/L	MW-10A	13	7	43			1.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-10A	13	8	44	6.8000	3.7354	3.0000	2.0000	12.6969	6.8000	31.0802	normal		
Barium, total	ug/L	MW-10A	11	9	45	37.1000	10.5196	41.9000	33.0000	45.9608	37.1000	105.4774	normal		
Beryllium, total	ug/L	MW-10A	13	7	43			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-10A	13	7	43			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-10A	13	7	43			1.0000	1.0000			12.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-10A	13	7	43	1.4615	1.9894	1.6000	1.2000	1.4615	1.4615	14.3924	normal		
Copper, total	ug/L	MW-10A	13	8	44			5.0000	5.0000			11.4000	nonpar	.99	**
Lead, total	ug/L	MW-10A	13	7	43			1.0000	1.0000			6.9000	nonpar	.99	**
Nickel, total	ug/L	MW-10A	13	7	43	12.4000	14.5913	21.0000	9.6000	12.4000	12.4000	107.2436	normal		
Selenium, total	ug/L	MW-10A	13	7	43			2.0000	2.0000			9.0000	nonpar	.99	**
Silver, total	ug/L	MW-10A	13	7	43			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-10A	13	7	43			0.5000	0.5000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-10A	13	7	43			2.0000	2.0000			28.4000	nonpar	.99	**
Zinc, total	ug/L	MW-10A	13	7	43	23.1231	14.8627	42.7000	54.5000	31.5530	51.7829	119.7307	normal		
Antimony, total	ug/L	MW-10B	13	8	39			1.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-10B	13	8	39			2.0000	2.0000			4.1000	nonpar	.99	**
Barium, total	ug/L	MW-10B	11	8	39	31.4091	6.2633	29.5000	26.7000	31.4091	31.4091	72.1205	normal		
Beryllium, total	ug/L	MW-10B	13	8	39			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-10B	13	8	40			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-10B	13	8	39			1.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-10B	13	8	40			0.5000	0.5000			4.1000	nonpar	.99	**
Copper, total	ug/L	MW-10B	13	8	39			5.0000	5.0000			7.4000	nonpar	.99	**
Lead, total	ug/L	MW-10B	13	8	39			1.0000	1.0000			4.6000	nonpar	.99	**
Nickel, total	ug/L	MW-10B	13	8	40	8.6538	4.8541	5.0000	5.6000	8.6538	8.6538	40.2058	normal		
Selenium, total	ug/L	MW-10B	13	8	40			2.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-10B	13	8	40			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-10B	13	8	39			0.5000	0.5000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-10B	13	8	39			2.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-10B	12	8	39	18.2583	8.2091	7.6000	8.1000	18.2583	18.2583	71.6177	normal		
Antimony, total	ug/L	MW-20	13	9	43			1.0000	1.0000			2.0000	nonpar	.99	**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

* - Insufficient Data.

** - Detection Frequency < 25%.

*** - Zero Variance.

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Arsenic, total	ug/L	MW-20	13	9	43	25.2154	16.8948	8.3000	11.2000	25.2154	25.2154	135.0314	normal		
Barium, total	ug/L	MW-20	13	9	43	67.6154	27.4452	65.3000	59.1000	67.6154	67.6154	246.0093	normal		
Beryllium, total	ug/L	MW-20	13	9	43			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-20	13	9	43			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-20	13	9	43			1.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-20	13	9	44	5.9308	2.2574	1.0000	1.3000	5.9308	5.9308	20.6036	normal		
Copper, total	ug/L	MW-20	13	10	44			5.0000	5.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-20	13	9	43			1.0000	1.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-20	13	9	43	8.4692	2.6550	5.0000	5.0000	8.4692	8.4692	25.7267	normal		
Selenium, total	ug/L	MW-20	13	9	43			2.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-20	13	9	43			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-20	13	9	43			0.5000	0.5000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-20	13	9	43			2.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-20	14	9	44	21.4357	17.4166	12.0000	5.0000	21.4357	21.4357	134.6433	normal		
Antimony, total	ug/L	MW-21R	8	9	17			1.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-21R	8	10	18	4.1250	0.2315	5.8000	8.4000	6.4121	9.0121	5.6295	normal		
Barium, total	ug/L	MW-21R	8	9	17	31.8000	12.8251	26.8000	28.8000	31.8000	31.8000	115.1631	normal		
Beryllium, total	ug/L	MW-21R	8	9	17			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-21R	8	9	17			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-21R	8	9	17			1.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-21R	9	9	18	17.8111	5.2987	5.4000	4.0000	17.8111	17.8111	52.2526	normal		
Copper, total	ug/L	MW-21R	8	9	17			5.0000	5.0000			5.2000	nonpar	.99	**
Lead, total	ug/L	MW-21R	8	9	17			1.0000	1.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-21R	9	9	18	35.4889	15.6969	7.2000	5.0000	35.4889	35.4889	137.5189	normal		
Selenium, total	ug/L	MW-21R	8	9	17			2.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-21R	8	9	17			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-21R	8	9	17			0.5000	0.5000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-21R	8	9	17			2.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-21R	8	9	17	22.8625	12.7285	12.6000	5.0000	22.8625	22.8625	105.5976	normal		
Antimony, total	ug/L	MW-22	13	9	42			1.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-22	13	9	42			2.0000	2.0000			4.0000	nonpar	.99	**
Barium, total	ug/L	MW-22	13	9	42	18.1385	4.1526	14.3000	12.7000	18.1385	18.1385	45.1305	normal		
Beryllium, total	ug/L	MW-22	13	9	42			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-22	13	9	42			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-22	13	9	42			1.0000	1.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-22	13	9	42			0.5000	0.5000			0.8000	nonpar	.99	**
Copper, total	ug/L	MW-22	13	10	43			5.0000	5.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-22	13	9	42			1.0000	1.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-22	14	9	43	18.7929	15.0825	5.0000	5.6000	18.7929	18.7929	116.8292	normal		
Selenium, total	ug/L	MW-22	13	9	42			2.0000	2.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-22	13	9	42			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-22	13	9	42			0.5000	0.5000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-22	13	9	42			2.0000	2.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-22	15	9	44	22.3733	13.7636	7.1000	8.4000	22.3733	22.3733	111.8370	normal		
Antimony, total	ug/L	MW-25	8	0	8			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-25	8	0	8	6.8875	3.8324	4.0000	5.9000			31.7978	normal		

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

* - Insufficient Data.

** - Detection Frequency < 25%.

*** - Zero Variance.

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Barium, total	ug/L	MW-25	7	0	8	56.0143	8.1659	16.6000	45.9000			109.0924	normal		**
Beryllium, total	ug/L	MW-25	8	0	8			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-25	8	0	8			0.8000	0.8000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-25	8	0	8			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-25	8	0	8	5.6250	3.6881	0.5000	1.1000			29.5977	normal		**
Copper, total	ug/L	MW-25	8	0	8			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-25	8	0	8			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-25	8	0	8	11.1875	6.1527	5.0000	5.0000			51.1800	normal		**
Selenium, total	ug/L	MW-25	8	0	8			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-25	8	0	8			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-25	8	0	8			2.0000	2.0000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-25	8	0	8			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-25	8	0	8	16.6250	6.2513	6.8000	6.2000			57.2587	normal		**
Antimony, total	ug/L	MW-28	7	0	7								nonpar *		**
Arsenic, total	ug/L	MW-28	7	0	7								nonpar *		**
Barium, total	ug/L	MW-28	7	0	7	20.2857	4.3056	17.9000	29.7000			48.2720	normal		**
Beryllium, total	ug/L	MW-28	7	0	7								nonpar *		**
Cadmium, total	ug/L	MW-28	7	0	7								nonpar *		**
Chromium, total	ug/L	MW-28	5	0	7										*
Cobalt, total	ug/L	MW-28	7	0	7								nonpar *		**
Copper, total	ug/L	MW-28	7	0	7								nonpar *		**
Lead, total	ug/L	MW-28	7	0	7								nonpar *		**
Nickel, total	ug/L	MW-28	7	0	7	7.4857	0.9582	7.2000	7.7000			13.7138	normal		**
Selenium, total	ug/L	MW-28	7	0	7	3.8143	0.8971	2.5000	2.7000			9.6453	normal		**
Silver, total	ug/L	MW-28	7	0	7								nonpar *		**
Thallium, total	ug/L	MW-28	7	0	7								nonpar *		**
Vanadium, total	ug/L	MW-28	7	0	7								nonpar *		**
Zinc, total	ug/L	MW-28	7	0	7								nonpar *		**
Antimony, total	ug/L	MW-29	2	0	2										*
Arsenic, total	ug/L	MW-29	2	0	2										*
Barium, total	ug/L	MW-29	2	0	2										*
Beryllium, total	ug/L	MW-29	2	0	2										*
Cadmium, total	ug/L	MW-29	2	0	2										*
Chromium, total	ug/L	MW-29	2	0	2										*
Cobalt, total	ug/L	MW-29	3	0	3										*
Copper, total	ug/L	MW-29	2	0	2										*
Lead, total	ug/L	MW-29	2	0	2										*
Nickel, total	ug/L	MW-29	2	0	2										*
Selenium, total	ug/L	MW-29	2	0	2										*
Silver, total	ug/L	MW-29	2	0	2										*
Thallium, total	ug/L	MW-29	2	0	2										*
Vanadium, total	ug/L	MW-29	2	0	2										*
Zinc, total	ug/L	MW-29	2	0	2										*
Antimony, total	ug/L	MW-30	8	5	13			1.0000	1.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-30	8	5	13			2.0000	2.0000			9.1000	nonpar	.99	**
Barium, total	ug/L	MW-30	8	5	13	26.8000	9.6465	15.3000	15.3000	26.8000	26.8000	89.5020	normal		**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

* - Insufficient Data.

** - Detection Frequency < 25%.

*** - Zero Variance.

Table 1

**Summary Statistics and Intermediate Computations
for Combined Shewhart-CUSUM Control Charts**

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Beryllium, total	ug/L	MW-30	8	5	13			0.5000	0.5000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-30	8	5	13			0.2000	0.2000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-30	8	5	13			1.0000	1.0000			43.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-30	8	5	13	7.3750	7.3738	3.4000	4.7000	7.3750	7.3750	55.3050	normal		
Copper, total	ug/L	MW-30	7	5	13	4.5143	0.8802	5.0000	5.0000	4.5143	4.5143	10.2356	normal		
Lead, total	ug/L	MW-30	8	5	13			1.0000	1.0000			12.7000	nonpar	.99	**
Nickel, total	ug/L	MW-30	8	5	13	15.5875	16.3448	8.3000	13.9000	15.5875	15.5875	121.8287	normal		
Selenium, total	ug/L	MW-30	8	5	13			2.0000	2.0000			5.7000	nonpar	.99	**
Silver, total	ug/L	MW-30	8	5	13			5.0000	5.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-30	8	5	13			0.5000	0.5000			2.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-30	8	5	13			2.0000	2.0000			21.4000	nonpar	.99	**
Zinc, total	ug/L	MW-30	8	5	13	38.4375	41.5326	5.0000	7.9000	38.4375	38.4375	308.3996	normal		
Antimony, total	ug/L	MW-31	4	0	4										*
Arsenic, total	ug/L	MW-31	4	0	4										*
Barium, total	ug/L	MW-31	4	0	4										*
Beryllium, total	ug/L	MW-31	4	0	4										*
Cadmium, total	ug/L	MW-31	4	0	4										*
Chromium, total	ug/L	MW-31	4	0	4										*
Cobalt, total	ug/L	MW-31	4	0	4										*
Copper, total	ug/L	MW-31	4	0	4										*
Lead, total	ug/L	MW-31	4	0	4										*
Nickel, total	ug/L	MW-31	4	0	4										*
Selenium, total	ug/L	MW-31	4	0	4										*
Silver, total	ug/L	MW-31	4	0	4										*
Thallium, total	ug/L	MW-31	4	0	4										*
Vanadium, total	ug/L	MW-31	4	0	4										*
Zinc, total	ug/L	MW-31	4	0	4										*
Antimony, total	ug/L	MW-32	4	0	4										*
Arsenic, total	ug/L	MW-32	4	0	4										*
Barium, total	ug/L	MW-32	4	0	4										*
Beryllium, total	ug/L	MW-32	4	0	4										*
Cadmium, total	ug/L	MW-32	4	0	4										*
Chromium, total	ug/L	MW-32	4	0	4										*
Cobalt, total	ug/L	MW-32	4	0	4										*
Copper, total	ug/L	MW-32	4	0	4										*
Lead, total	ug/L	MW-32	4	0	4										*
Nickel, total	ug/L	MW-32	4	0	4										*
Selenium, total	ug/L	MW-32	4	0	4										*
Silver, total	ug/L	MW-32	4	0	4										*
Thallium, total	ug/L	MW-32	4	0	4										*
Vanadium, total	ug/L	MW-32	4	0	4										*
Zinc, total	ug/L	MW-32	4	0	4										*

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.

N(tot) = All independent measurements for that constituent and well.

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

Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).

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*** - Zero Variance.

Table 4

**Dixon's Test Outliers
1% Significance Level**

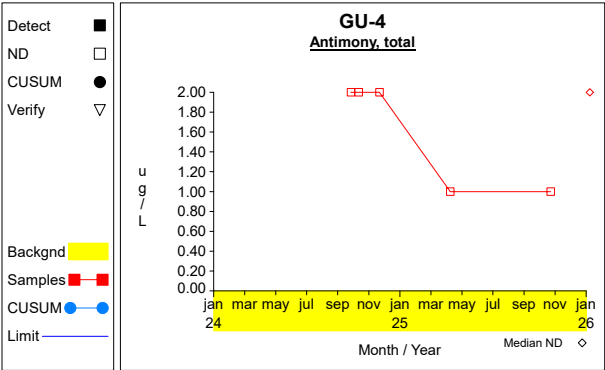
Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Chromium, total	ug/L	GU-4	04/08/2025	1.4000		09/27/2024-10/23/2025	5	0.8886
Chromium, total	ug/L	GU-4	10/23/2025	1.0000		09/27/2024-10/23/2025	5	0.8886
Barium, total	ug/L	MW-10A	10/28/2014	143.0000		10/28/2014-04/19/2022	13	0.6425
Barium, total	ug/L	MW-10A	04/19/2022	453.0000		10/28/2014-04/19/2022	13	0.6425
Barium, total	ug/L	MW-10B	10/28/2014	104.0000		10/28/2014-10/21/2021	13	0.6425
Barium, total	ug/L	MW-10B	12/03/2014	97.5000		10/28/2014-10/21/2021	13	0.6425
Zinc, total	ug/L	MW-10B	12/03/2014	158.0000		10/28/2014-10/21/2021	13	0.6174
Cobalt, total	ug/L	MW-20	04/20/2017	1.2000		10/28/2014-04/13/2021	14	0.6403
Barium, total	ug/L	MW-25	04/08/2025	16.6000		10/18/2017-10/23/2025	8	0.6808
Chromium, total	ug/L	MW-28	04/08/2025	1.1000		05/18/2023-10/23/2025	7	0.6987
Chromium, total	ug/L	MW-28	10/23/2025	1.1000		05/18/2023-10/23/2025	7	0.6987
Copper, total	ug/L	MW-30	10/18/2022	71.2000		10/09/2019-04/11/2023	8	0.6808

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

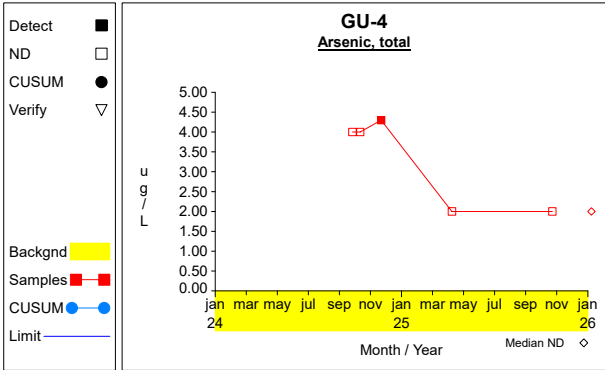
Date Range = Dates of the first and last measurements included in background at each well.

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.

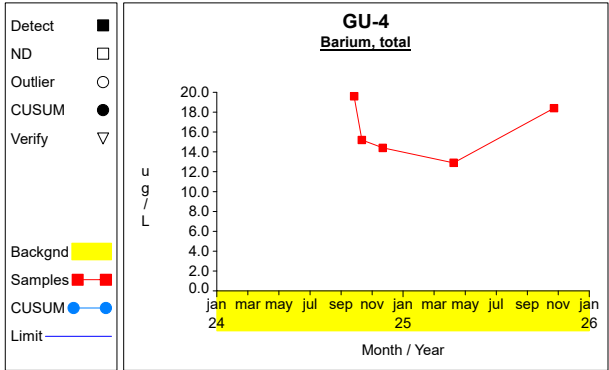
Intra-Well Control Charts / Prediction Limits



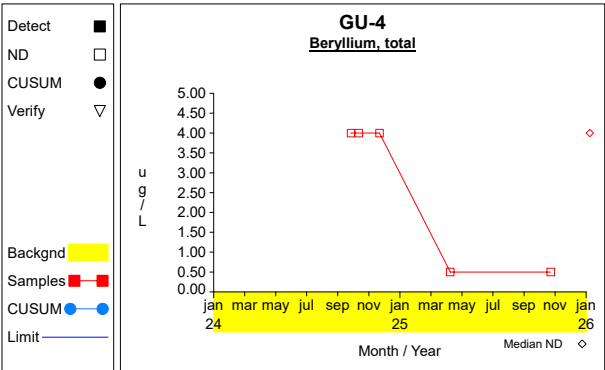
Graph 1



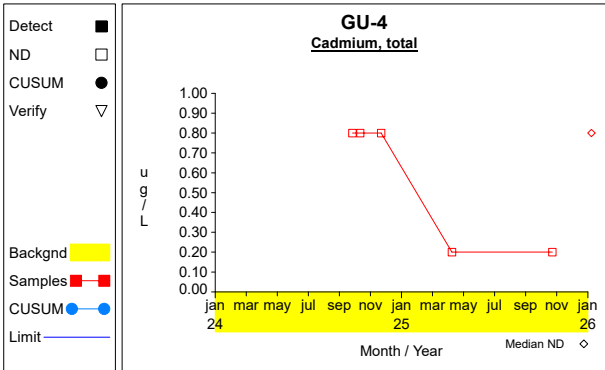
Graph 2



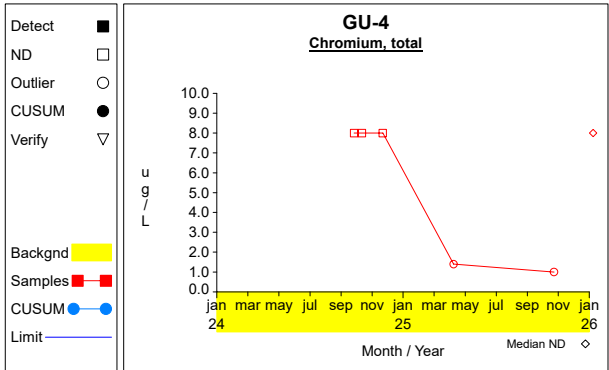
Graph 3



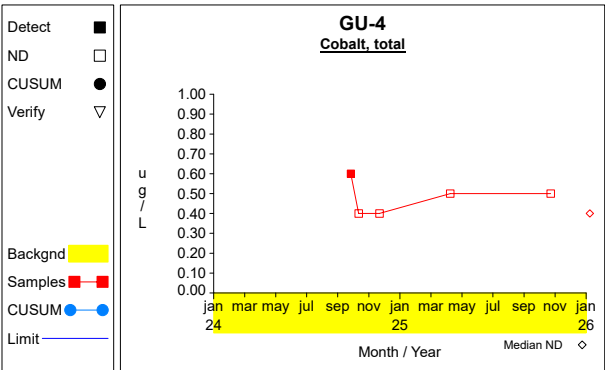
Graph 4



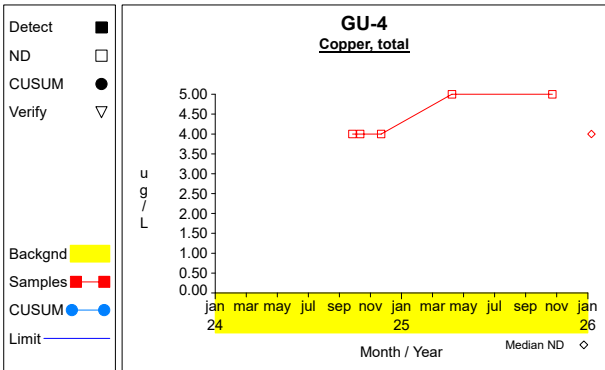
Graph 5



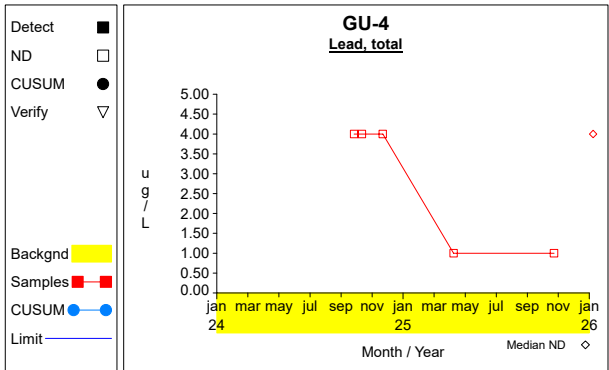
Graph 6



Graph 7

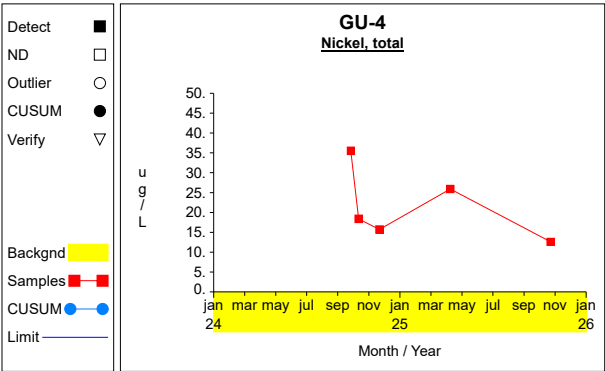


Graph 8

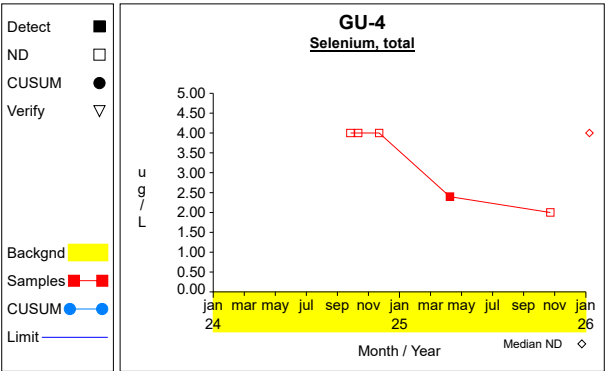


Graph 9

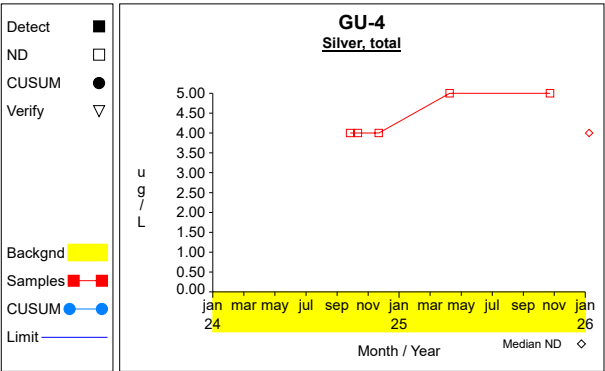
Intra-Well Control Charts / Prediction Limits



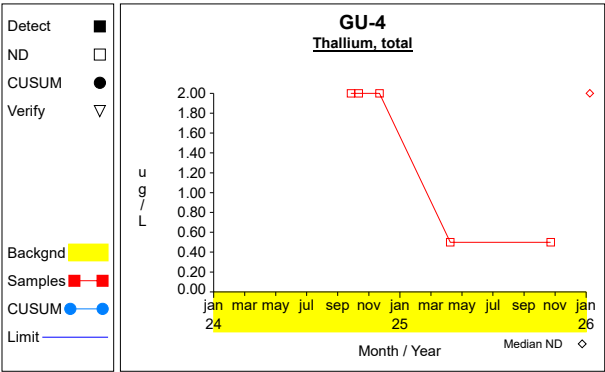
Graph 10



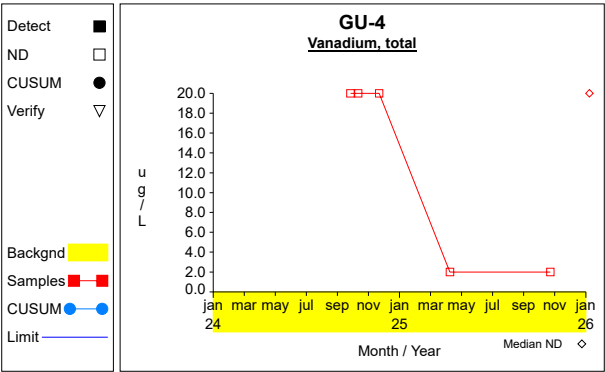
Graph 11



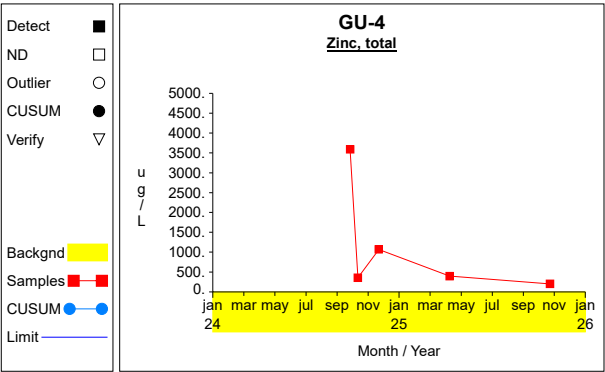
Graph 12



Graph 13

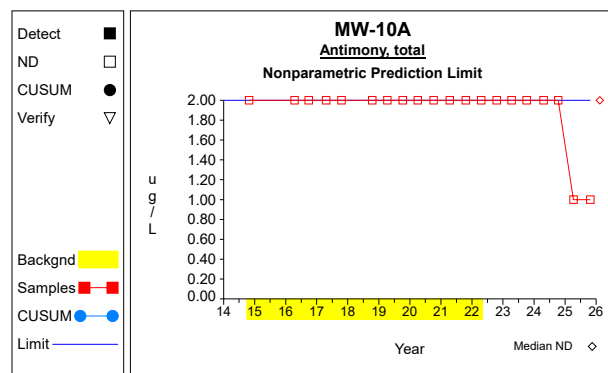


Graph 14

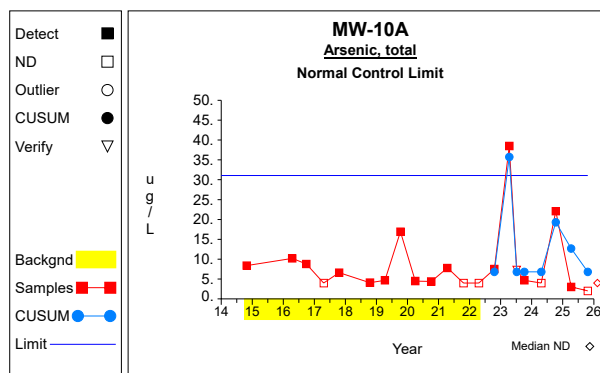


Graph 15

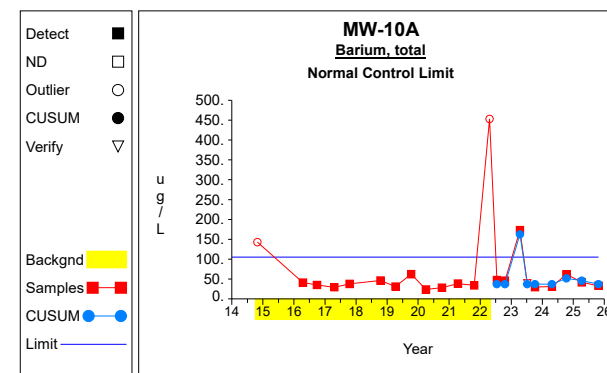
Intra-Well Control Charts / Prediction Limits



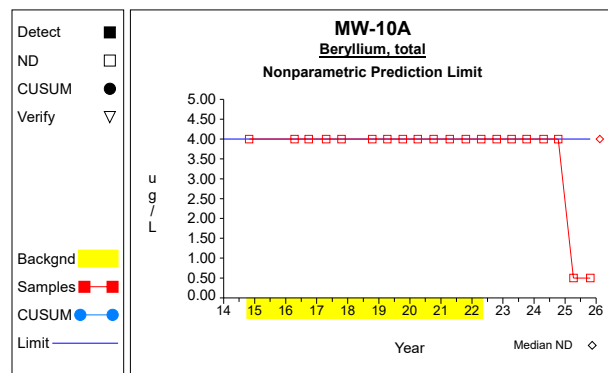
Graph 16



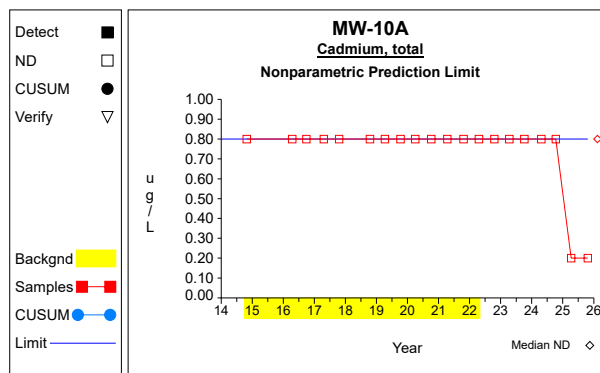
Graph 17



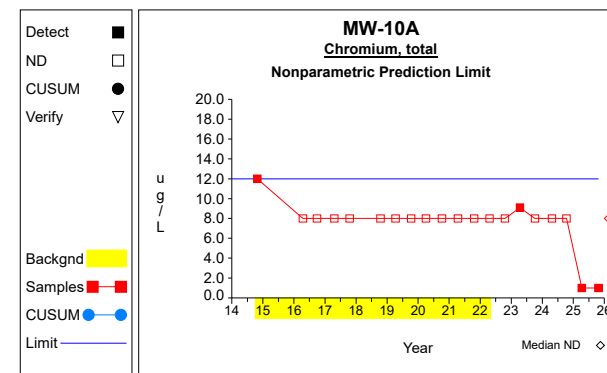
Graph 18



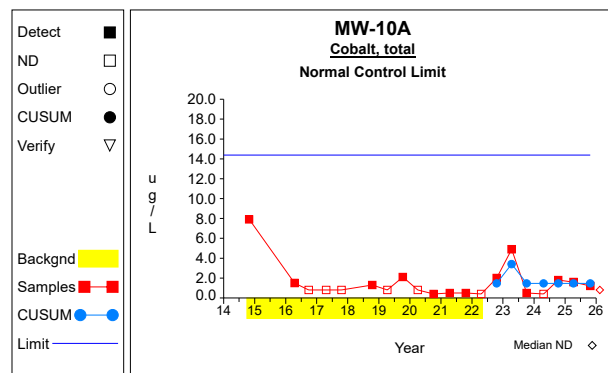
Graph 19



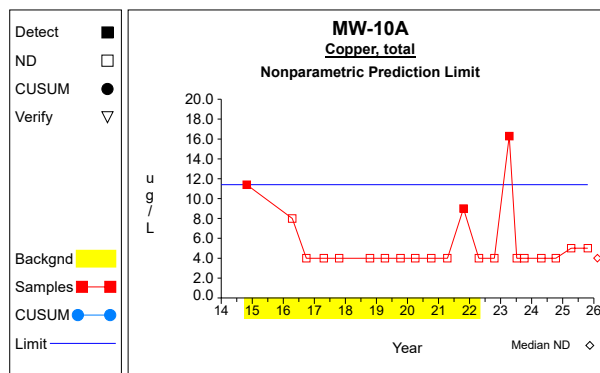
Graph 20



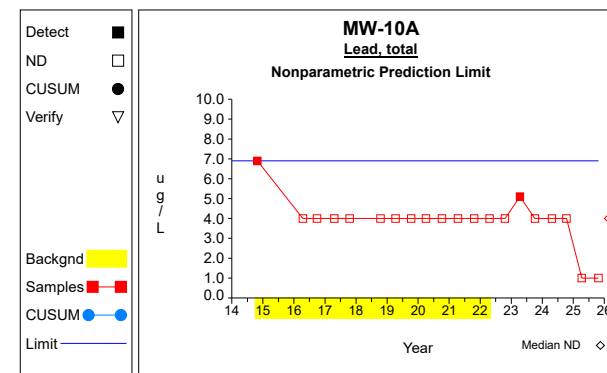
Graph 21



Graph 22

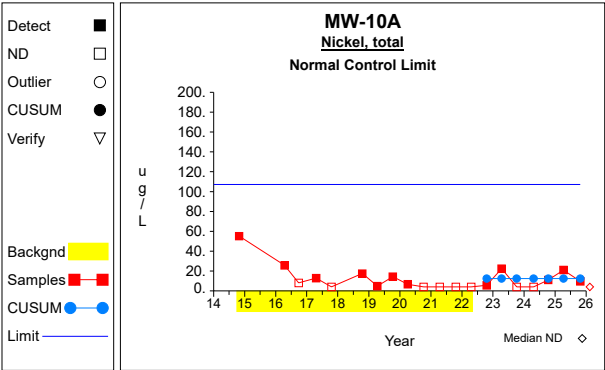


Graph 23

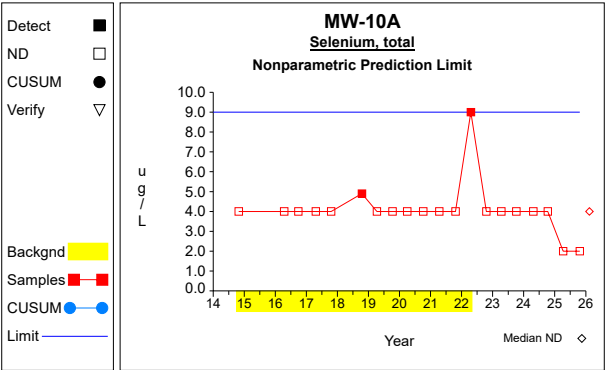


Graph 24

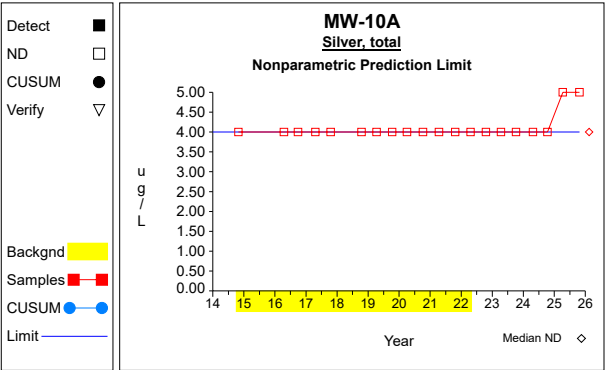
Intra-Well Control Charts / Prediction Limits



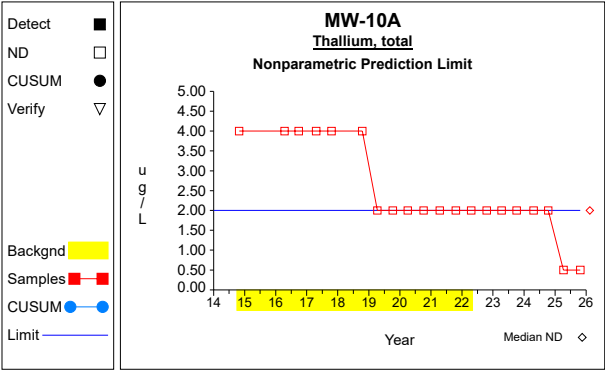
Graph 25



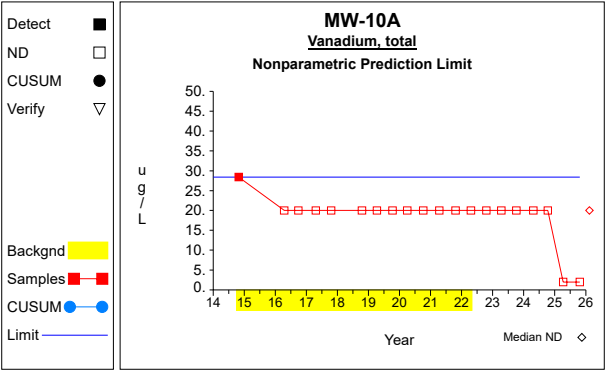
Graph 26



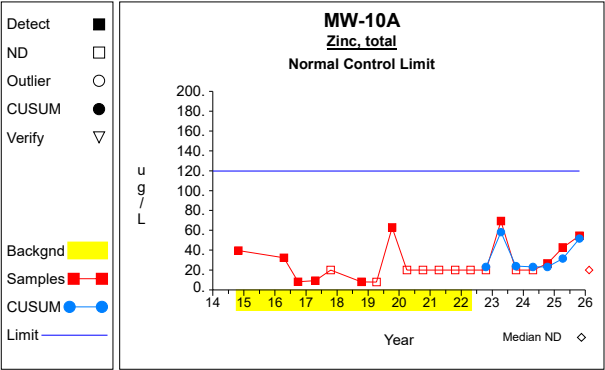
Graph 27



Graph 28

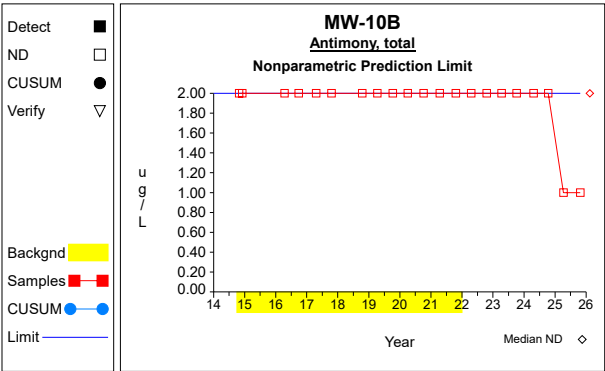


Graph 29

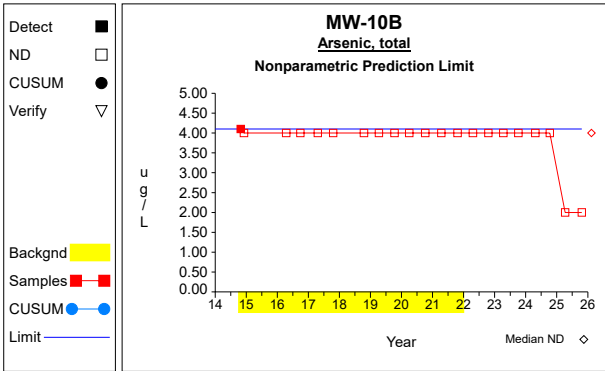


Graph 30

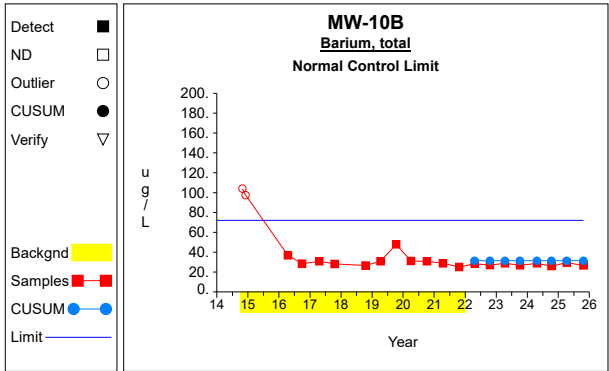
Intra-Well Control Charts / Prediction Limits



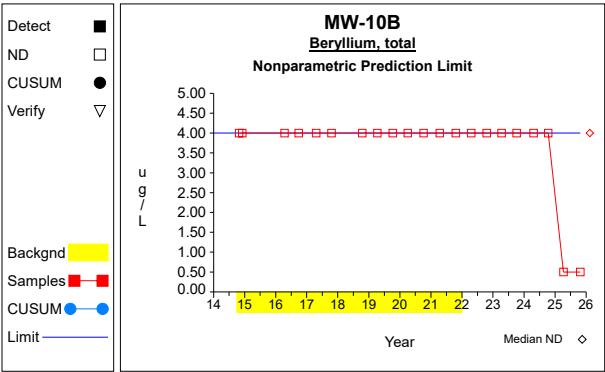
Graph 31



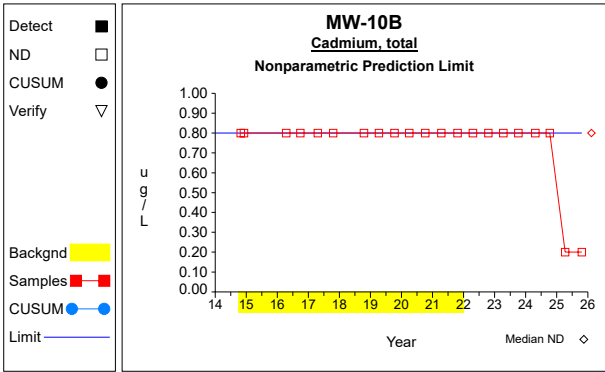
Graph 32



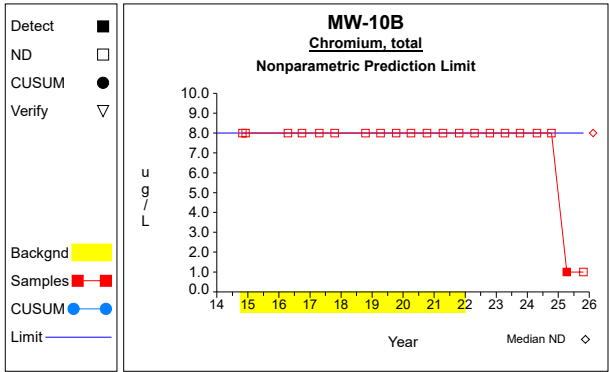
Graph 33



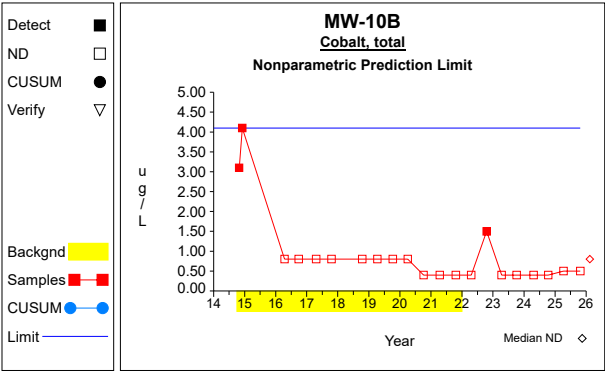
Graph 34



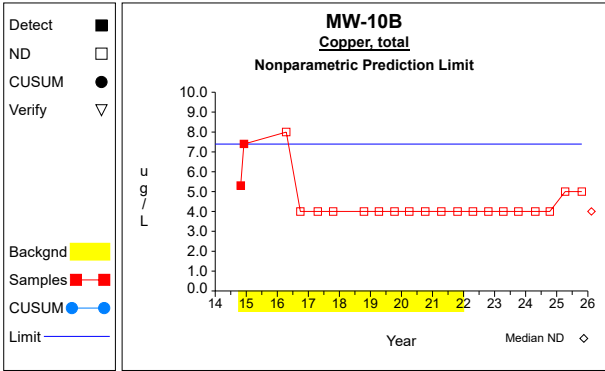
Graph 35



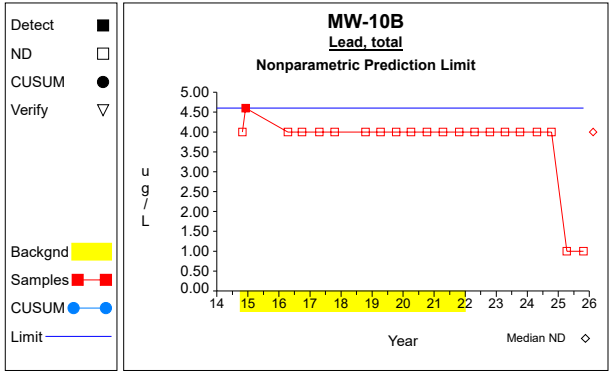
Graph 36



Graph 37

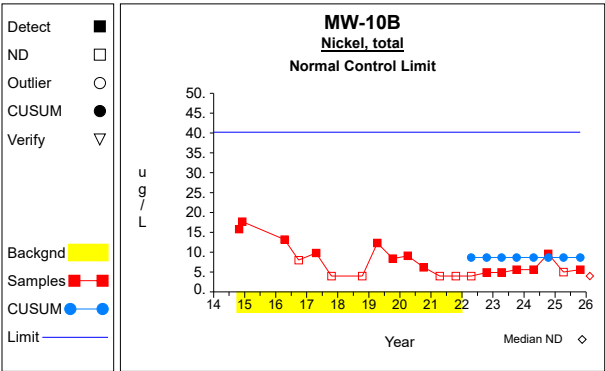


Graph 38

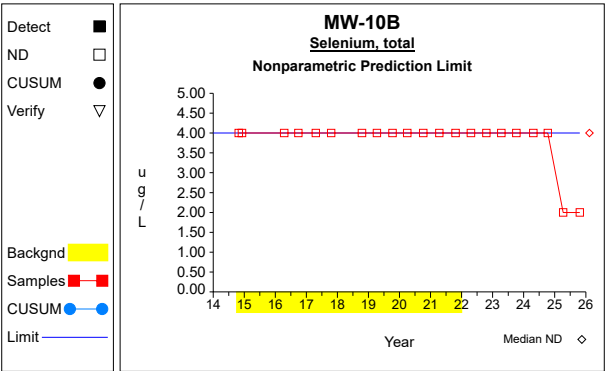


Graph 39

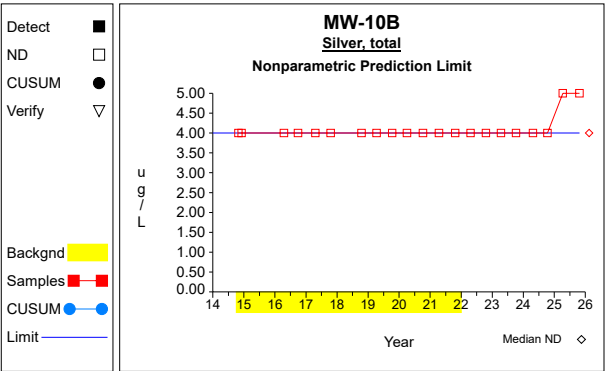
Intra-Well Control Charts / Prediction Limits



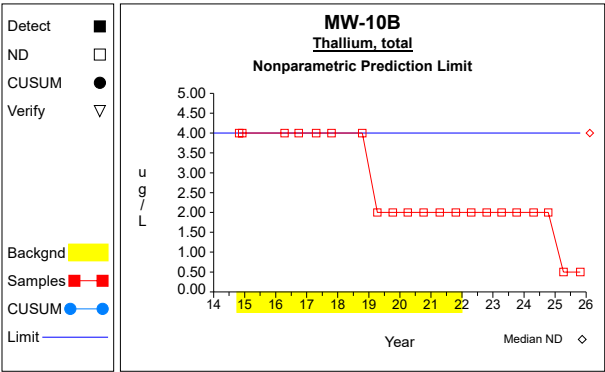
Graph 40



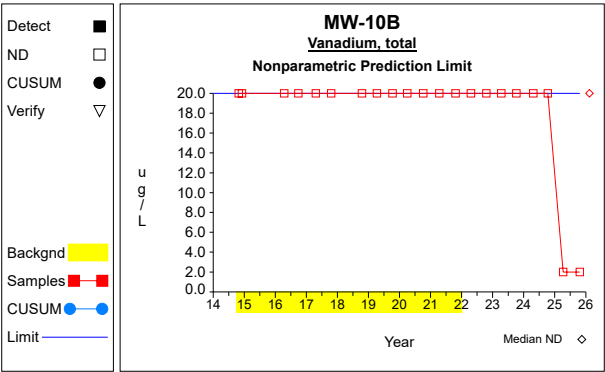
Graph 41



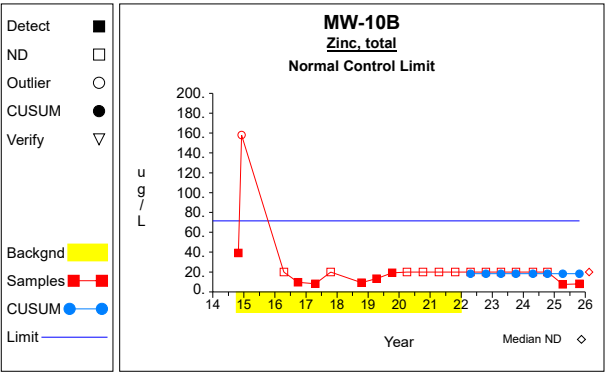
Graph 42



Graph 43

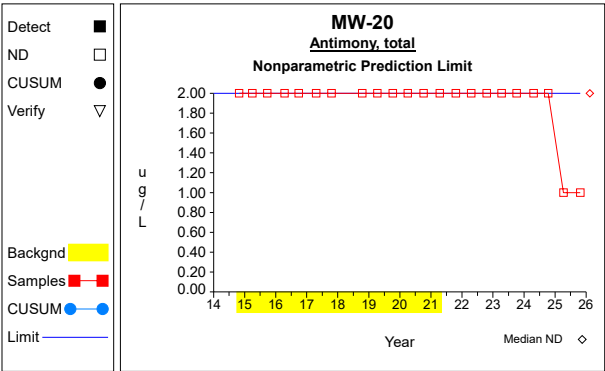


Graph 44

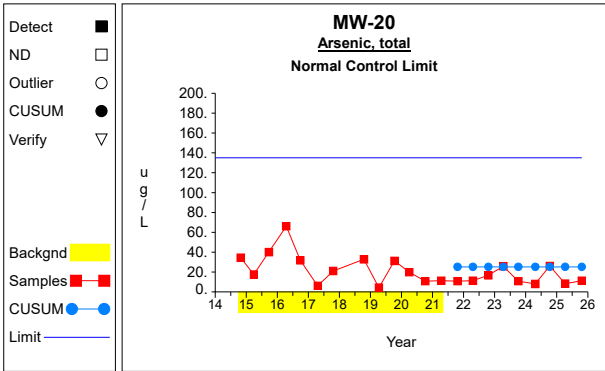


Graph 45

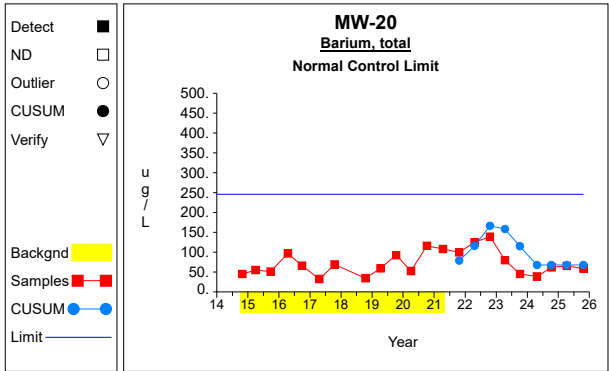
Intra-Well Control Charts / Prediction Limits



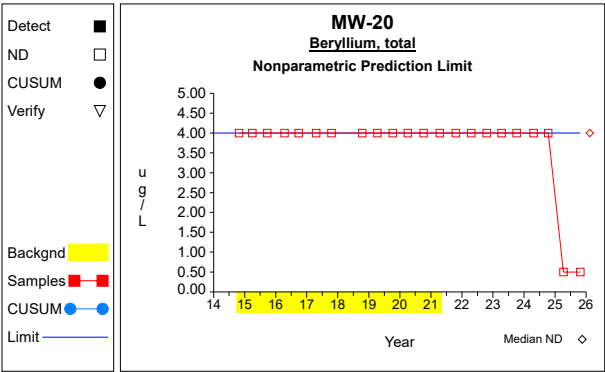
Graph 46



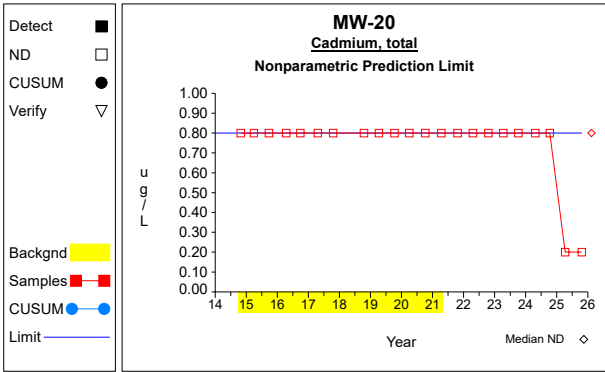
Graph 47



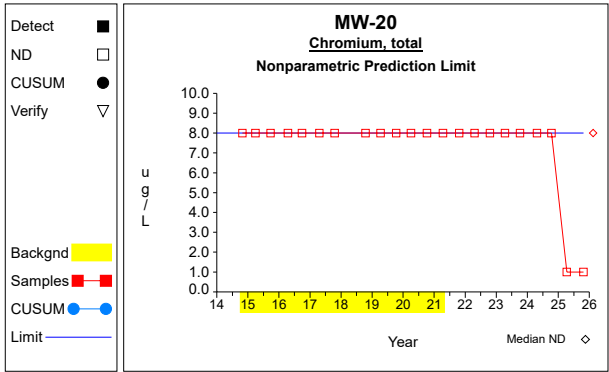
Graph 48



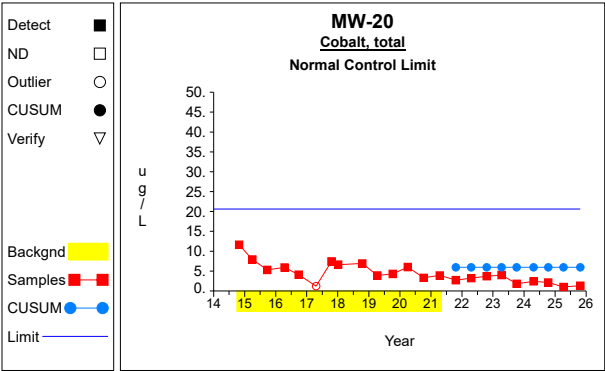
Graph 49



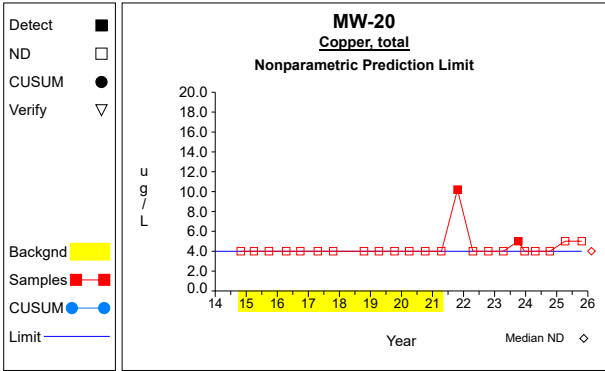
Graph 50



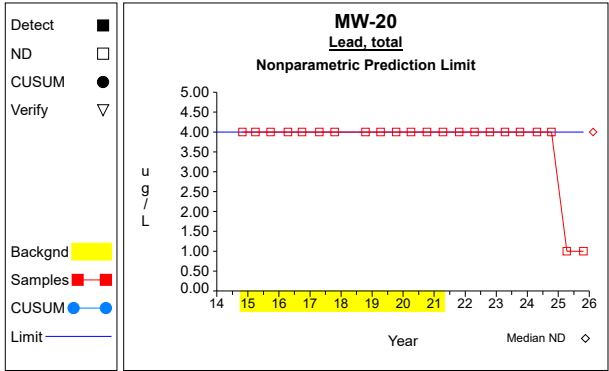
Graph 51



Graph 52

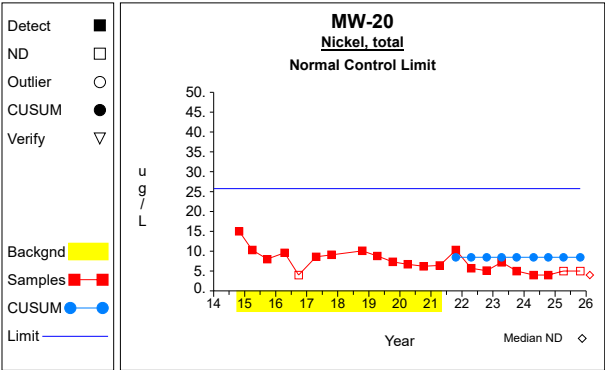


Graph 53

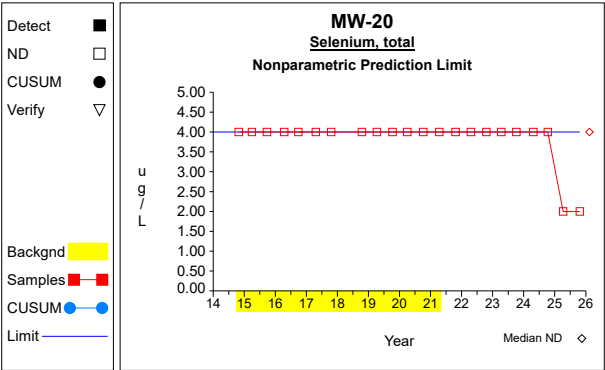


Graph 54

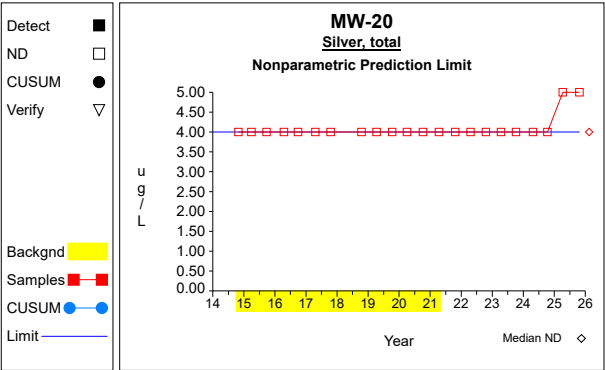
Intra-Well Control Charts / Prediction Limits



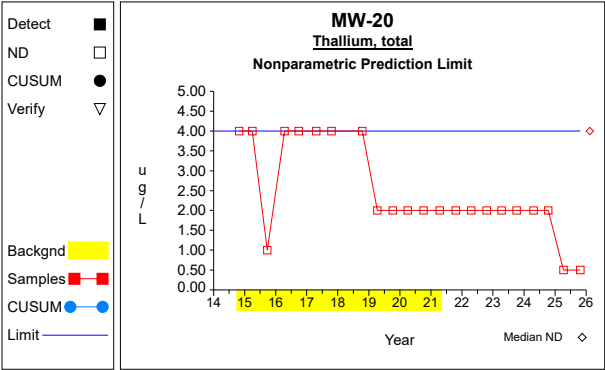
Graph 55



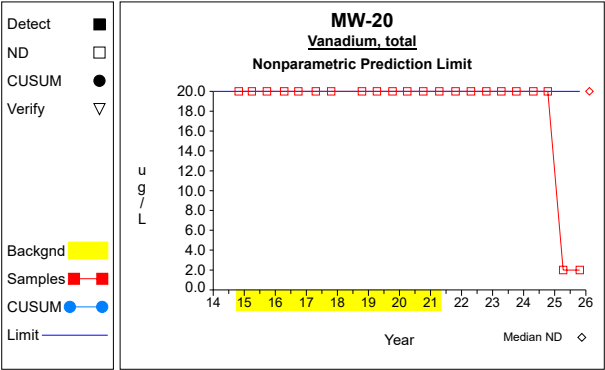
Graph 56



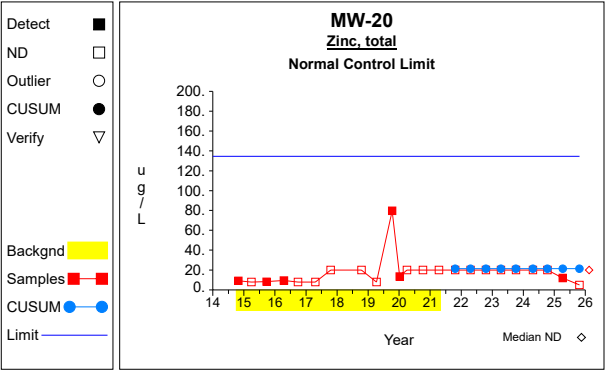
Graph 57



Graph 58

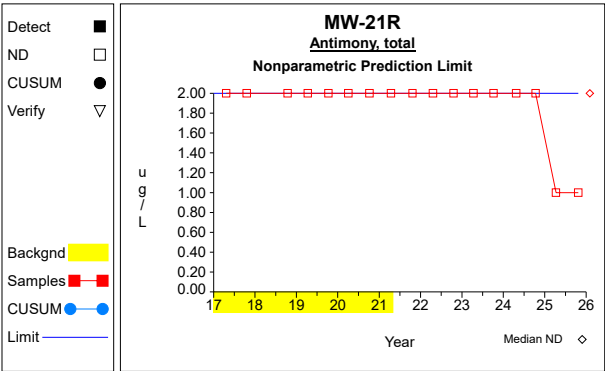


Graph 59

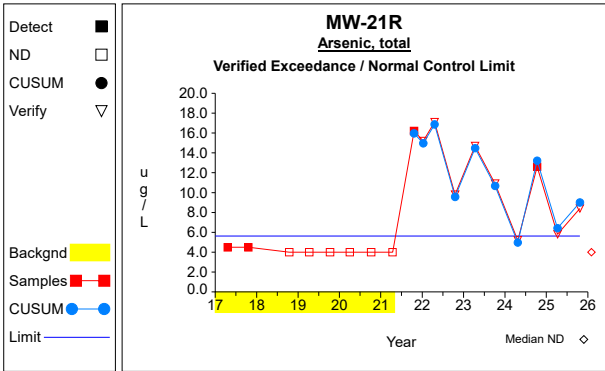


Graph 60

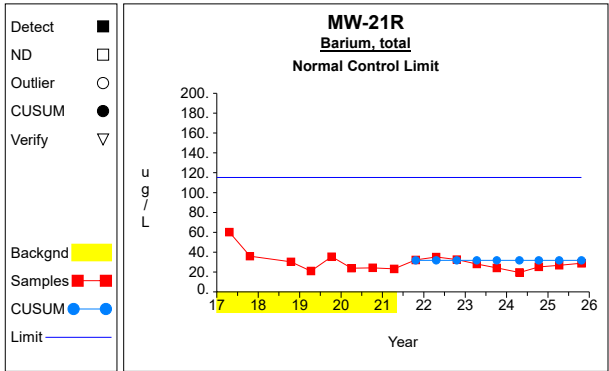
Intra-Well Control Charts / Prediction Limits



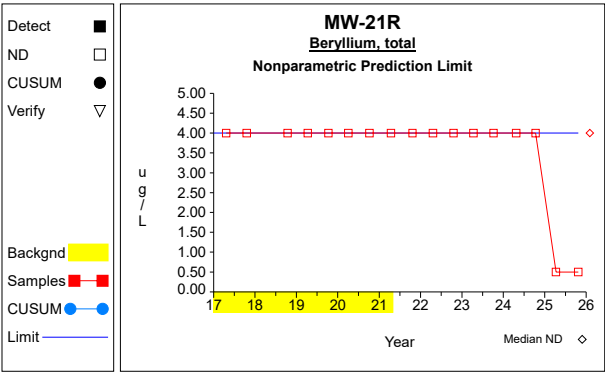
Graph 61



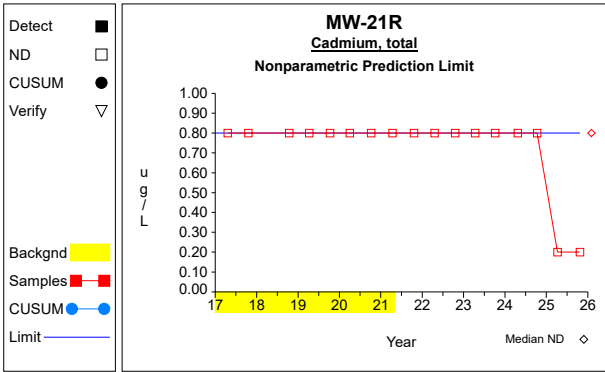
Graph 62



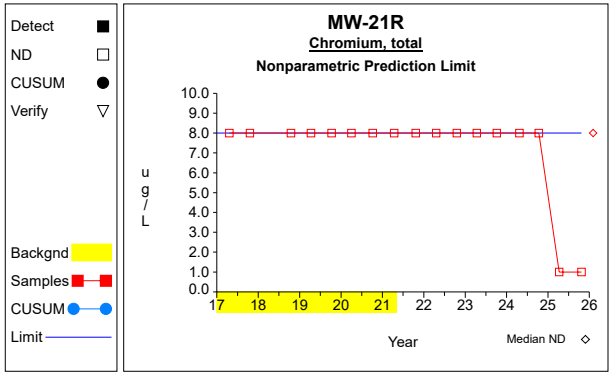
Graph 63



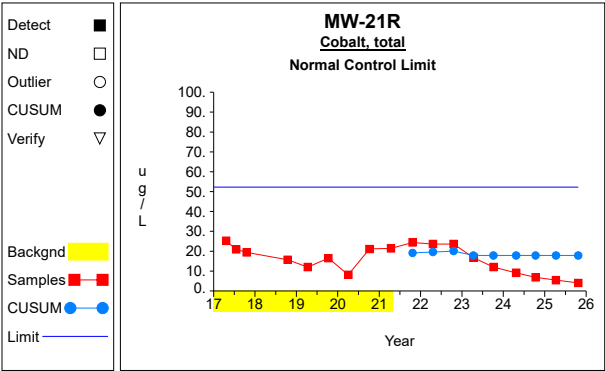
Graph 64



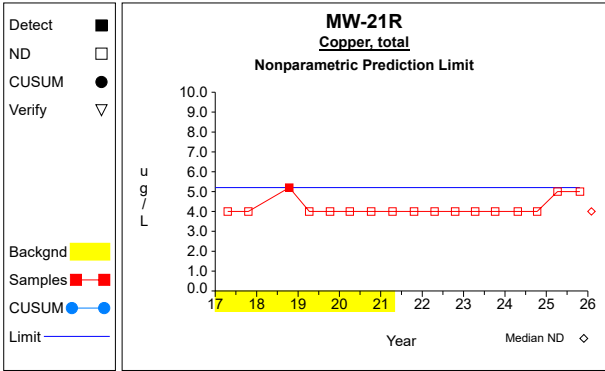
Graph 65



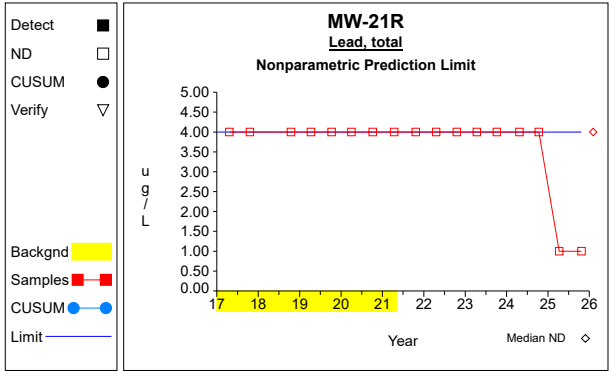
Graph 66



Graph 67

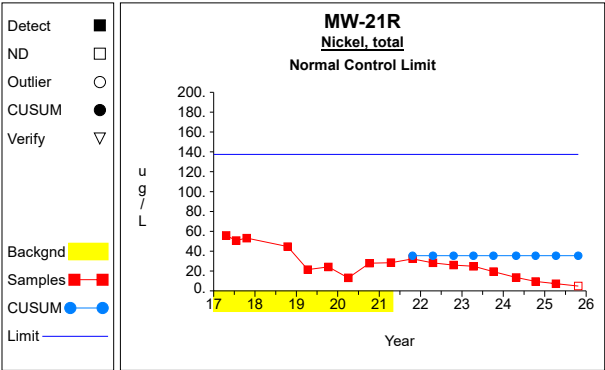


Graph 68

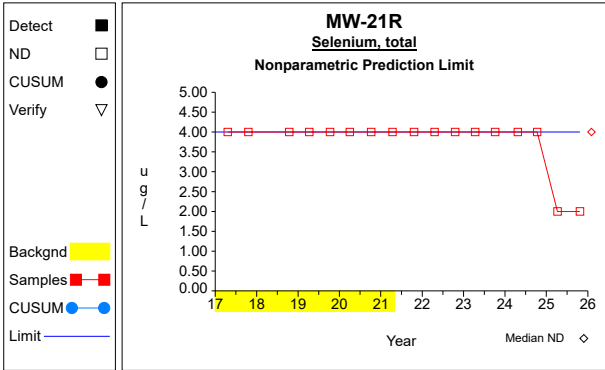


Graph 69

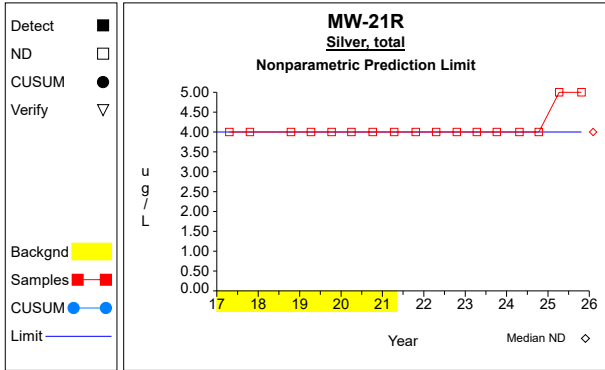
Intra-Well Control Charts / Prediction Limits



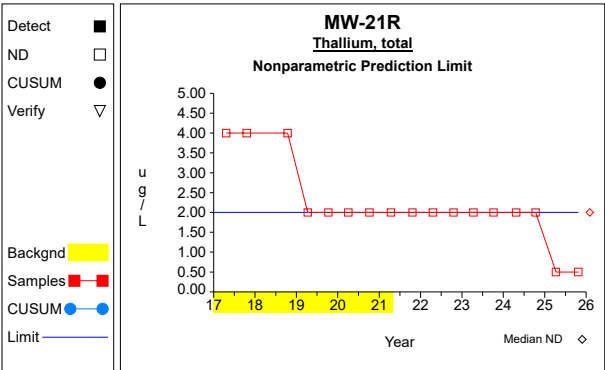
Graph 70



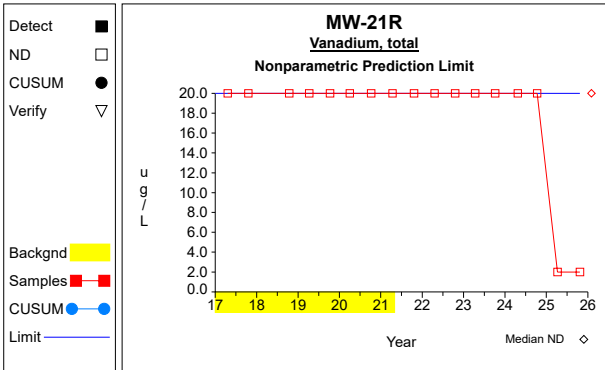
Graph 71



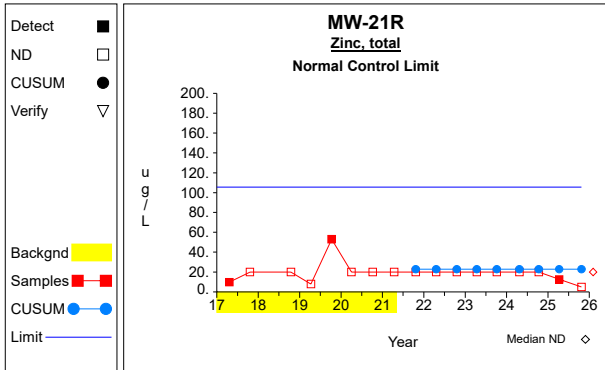
Graph 72



Graph 73

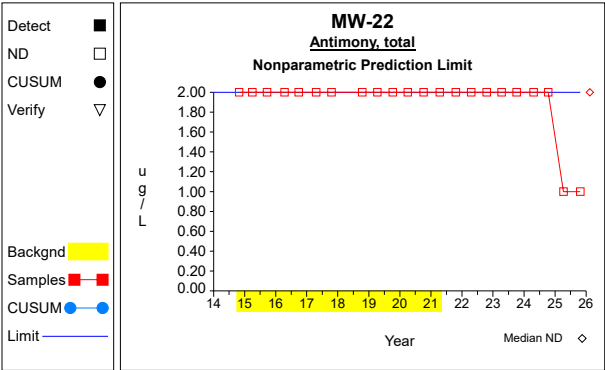


Graph 74

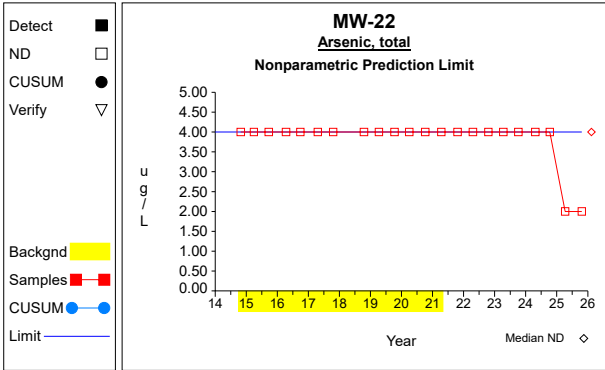


Graph 75

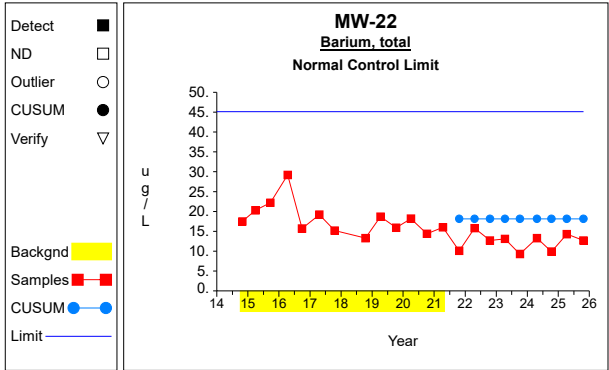
Intra-Well Control Charts / Prediction Limits



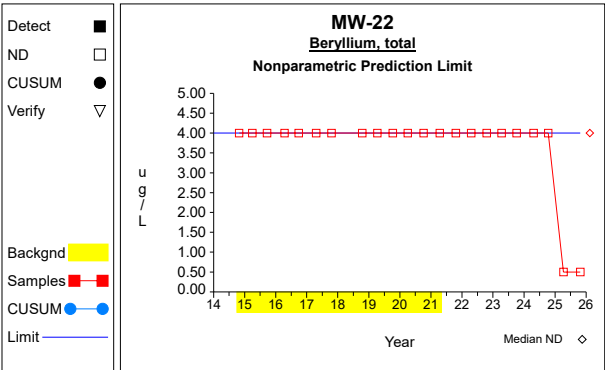
Graph 76



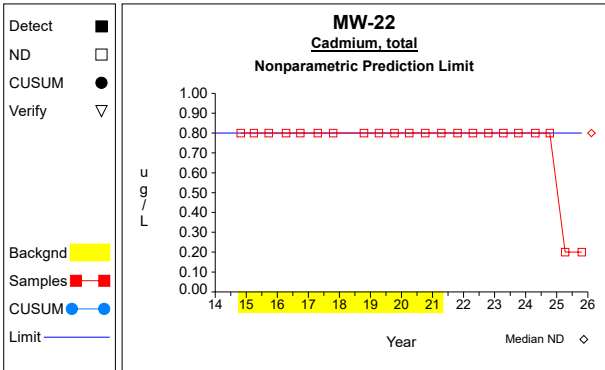
Graph 77



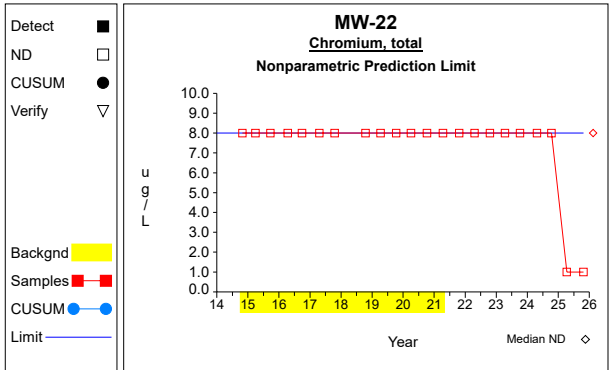
Graph 78



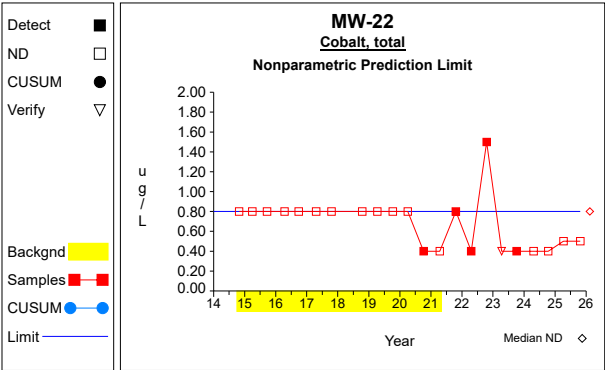
Graph 79



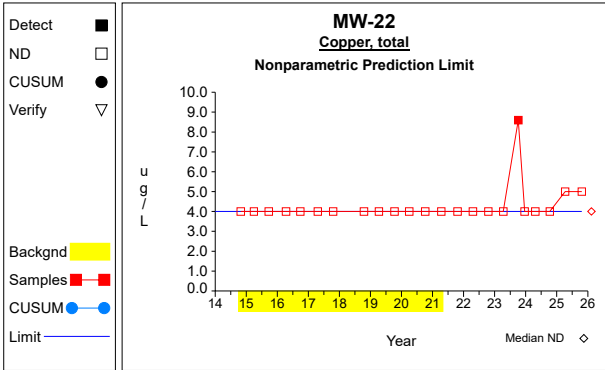
Graph 80



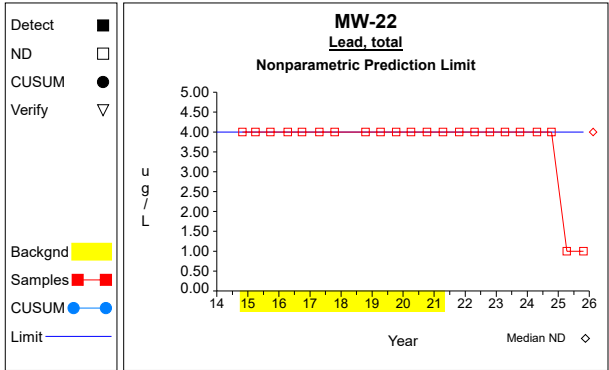
Graph 81



Graph 82

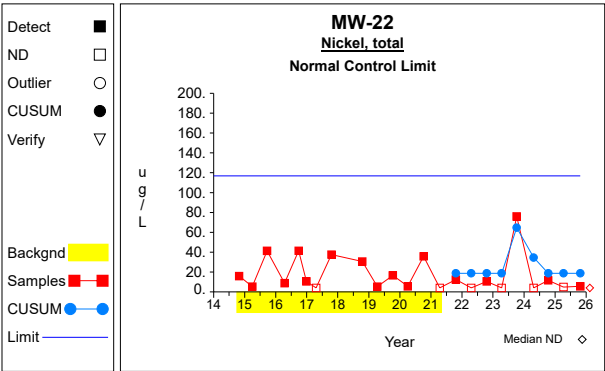


Graph 83

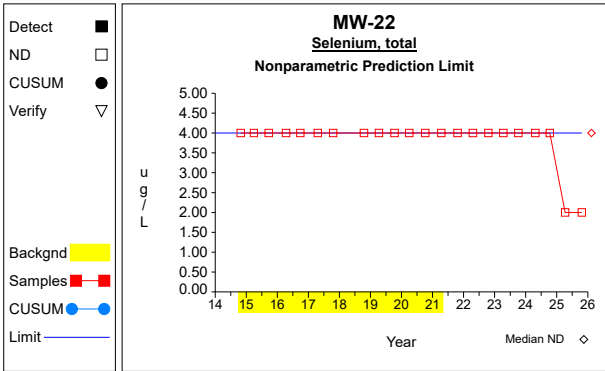


Graph 84

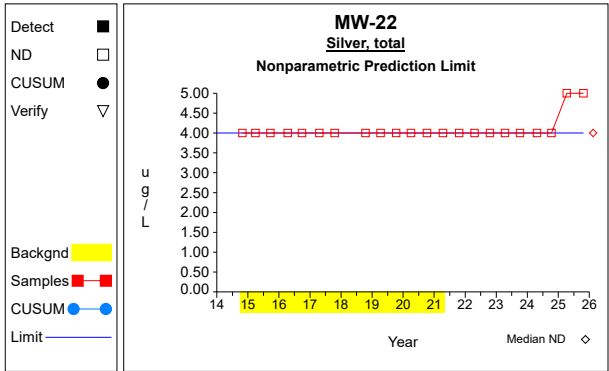
Intra-Well Control Charts / Prediction Limits



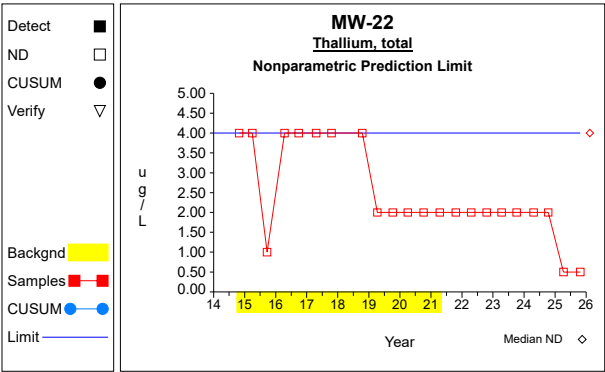
Graph 85



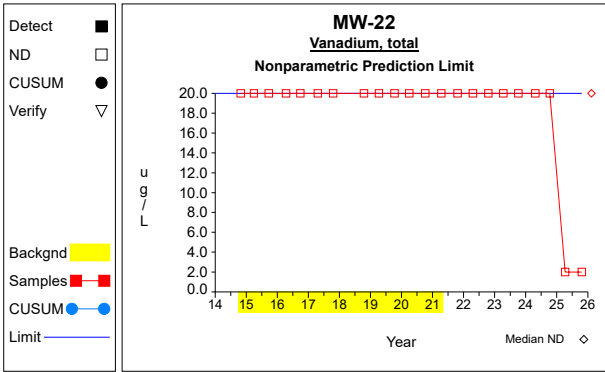
Graph 86



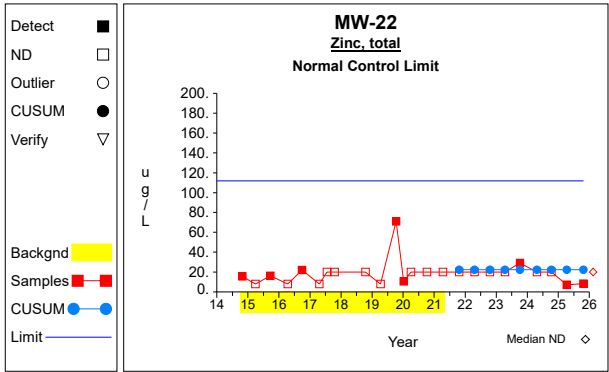
Graph 87



Graph 88

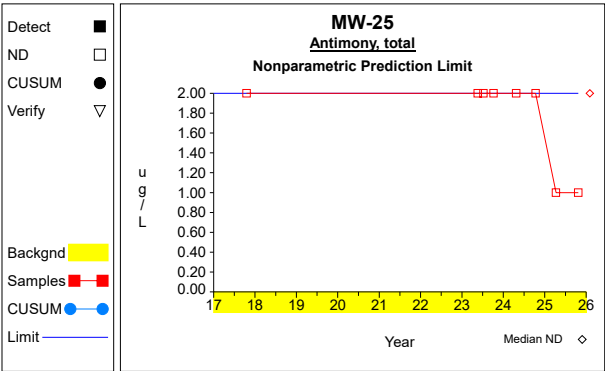


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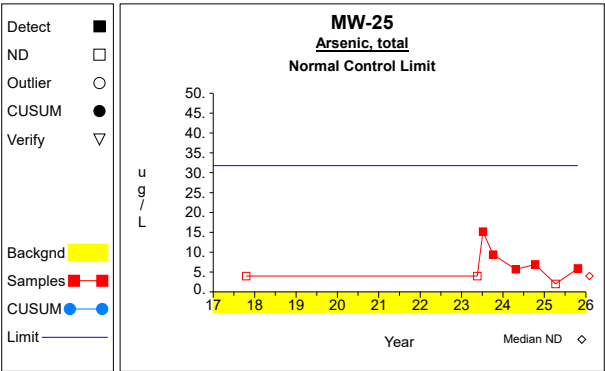


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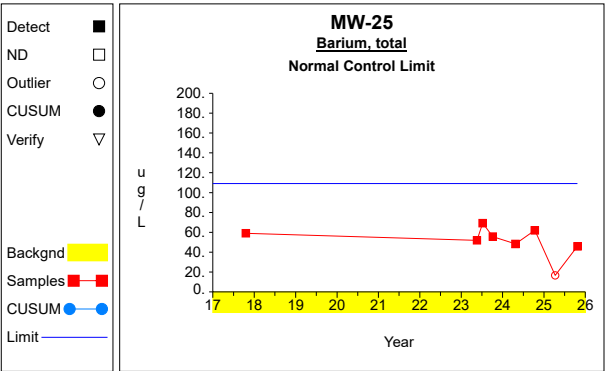
Intra-Well Control Charts / Prediction Limits



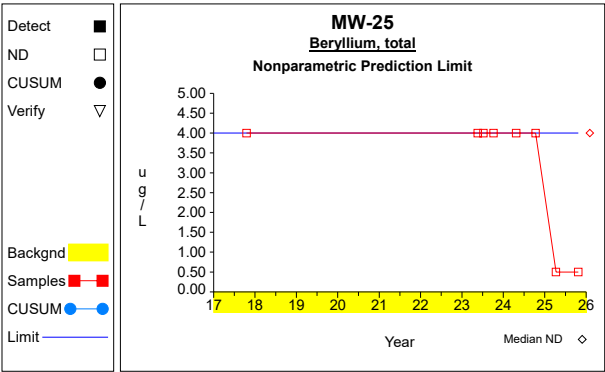
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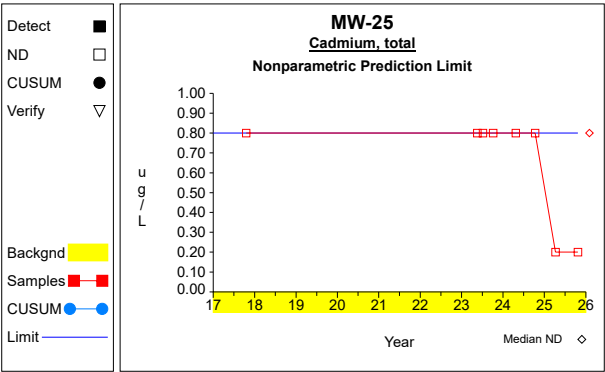
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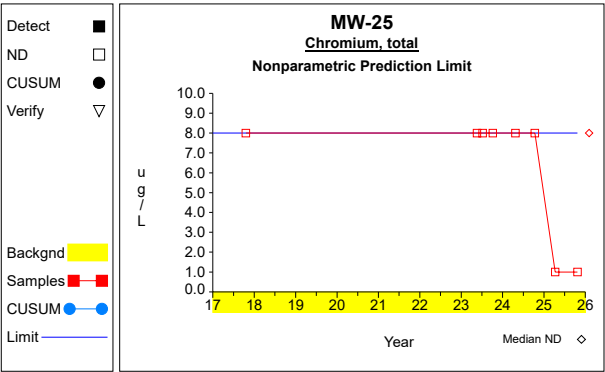
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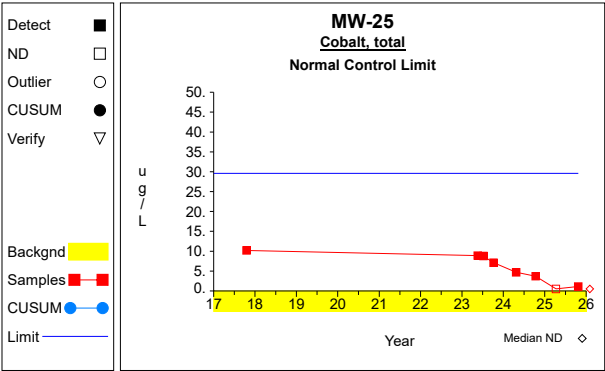
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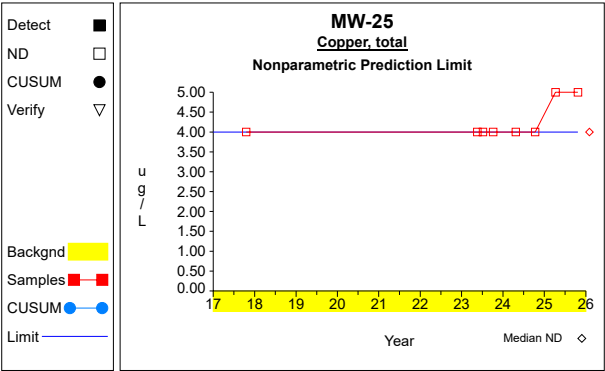
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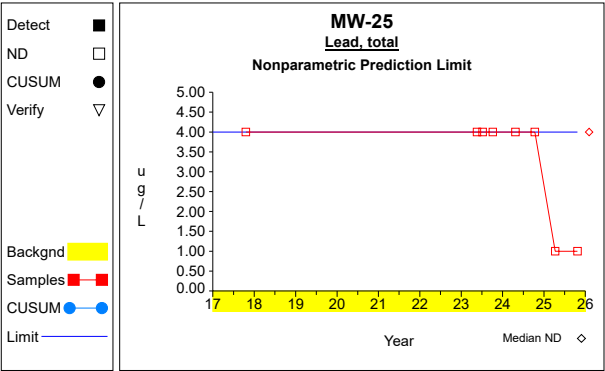
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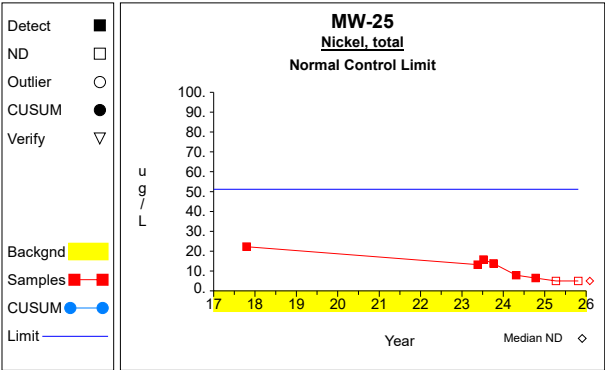


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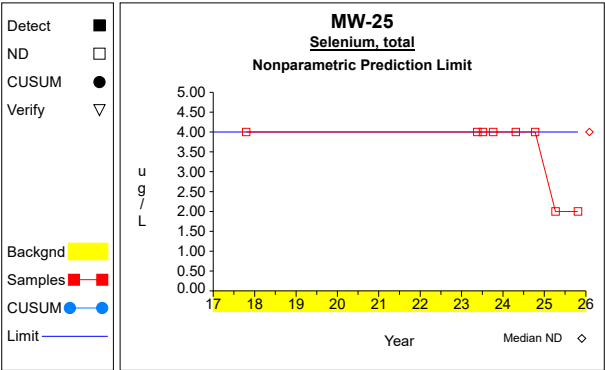


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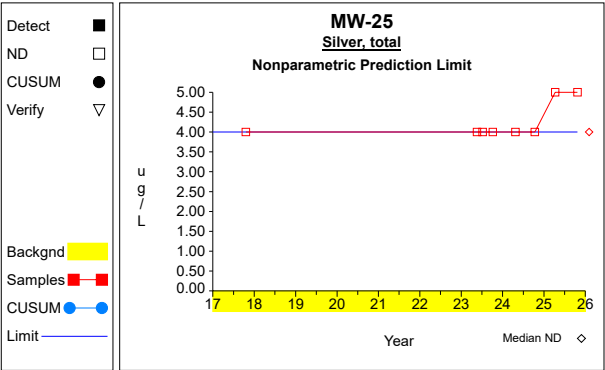
Intra-Well Control Charts / Prediction Limits



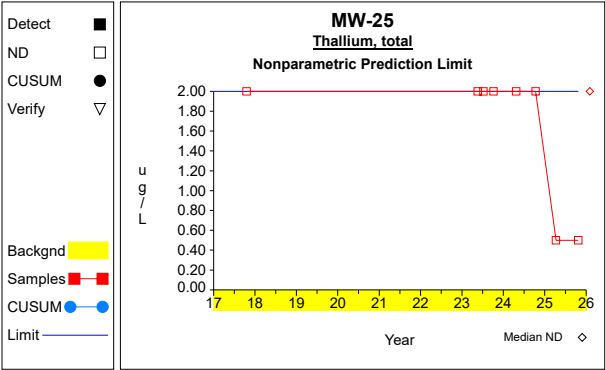
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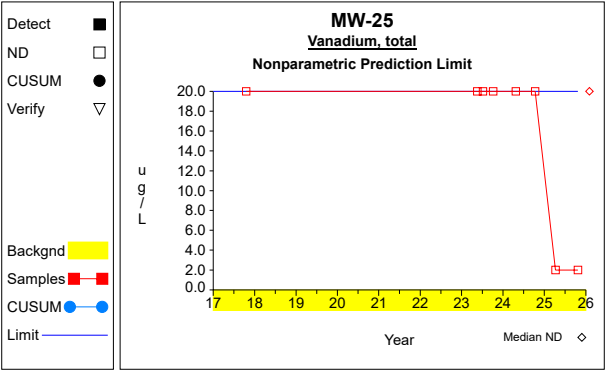
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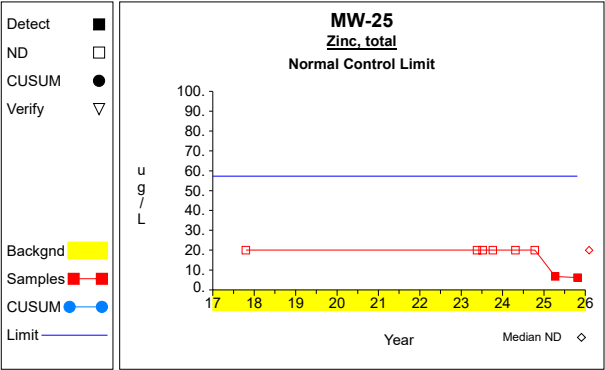
Graph 102



Graph 103

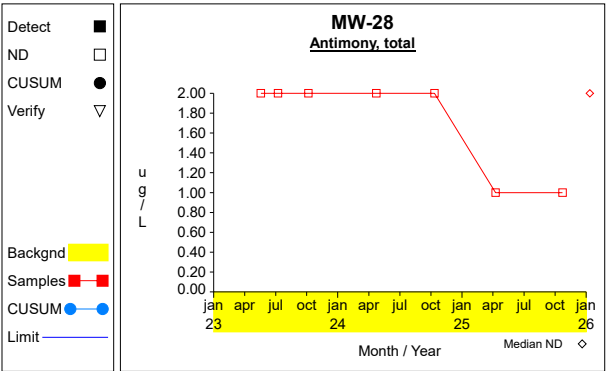


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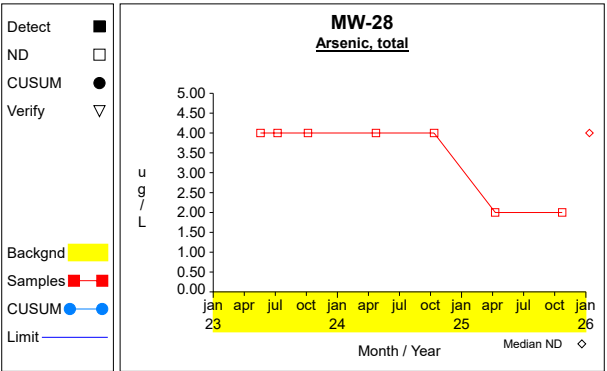


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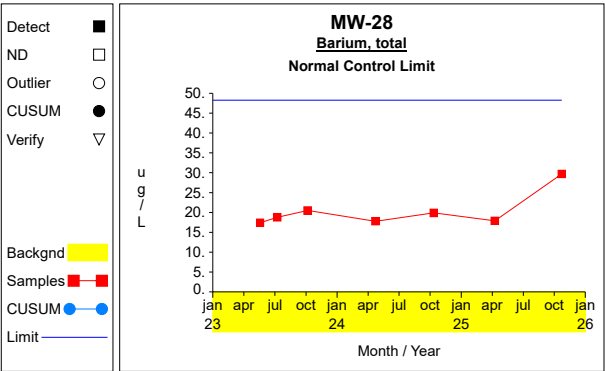
Intra-Well Control Charts / Prediction Limits



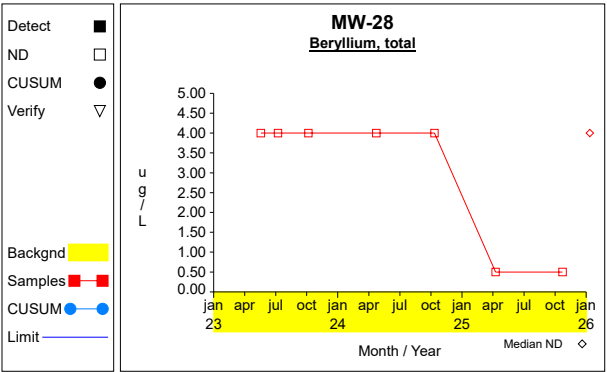
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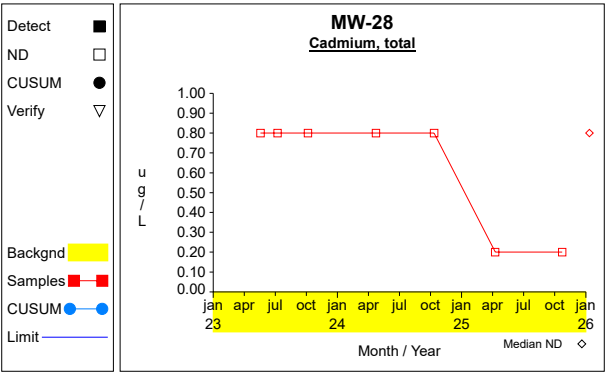
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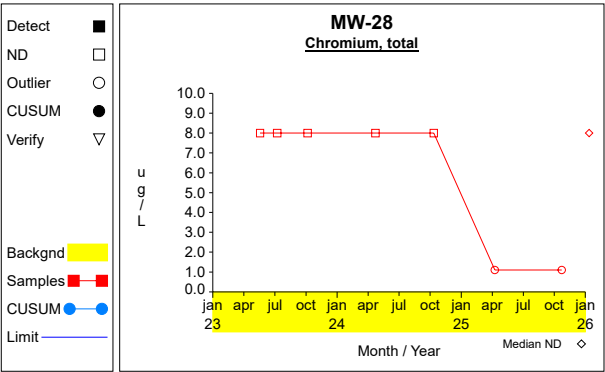
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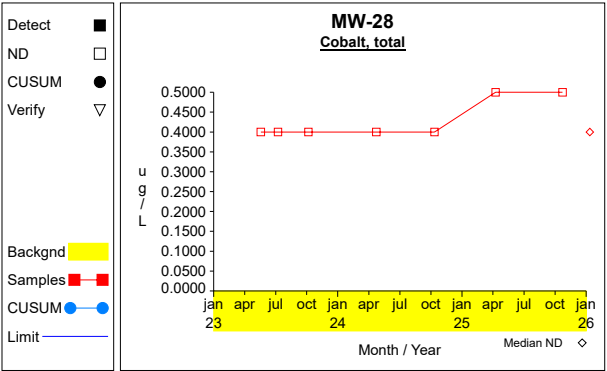
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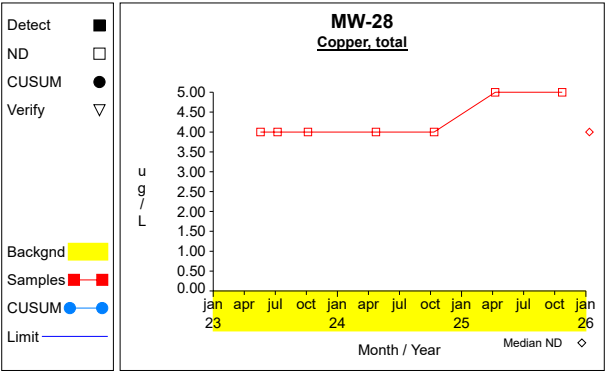
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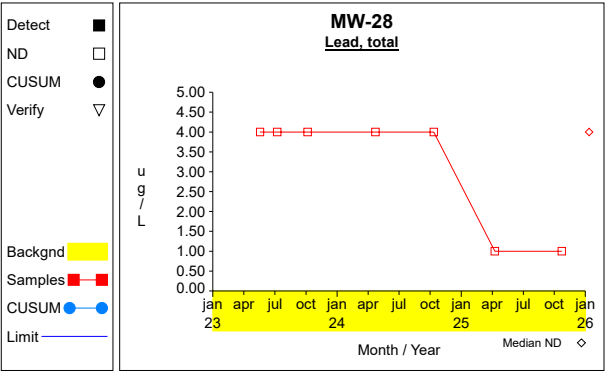
Graph 111



Graph 112

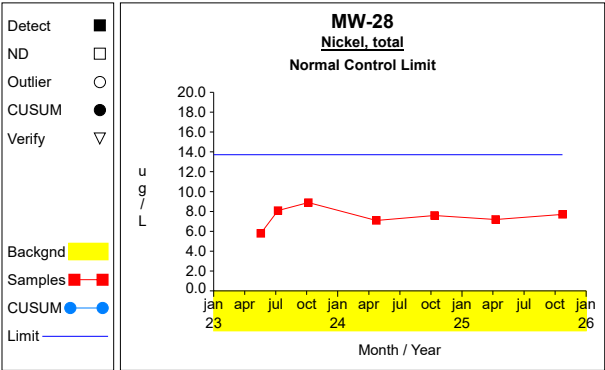


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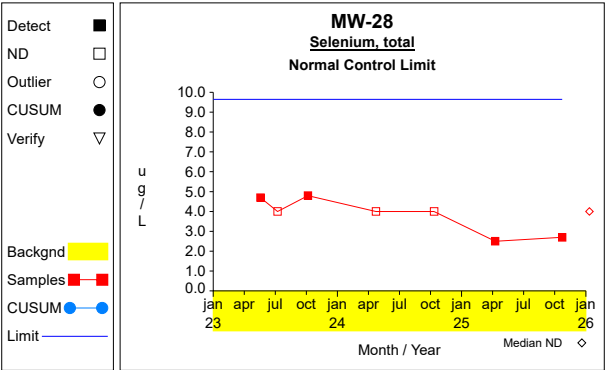


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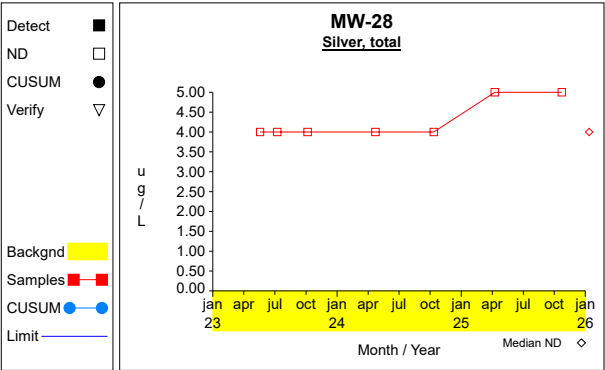
Intra-Well Control Charts / Prediction Limits



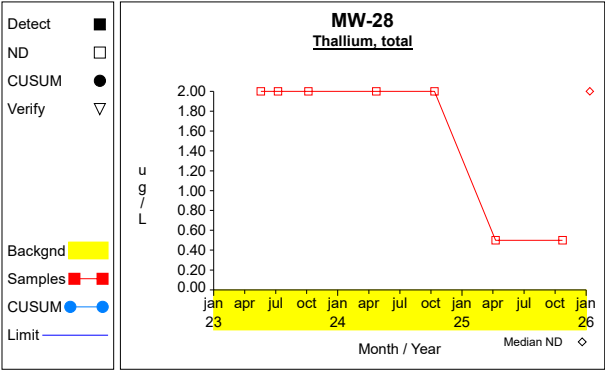
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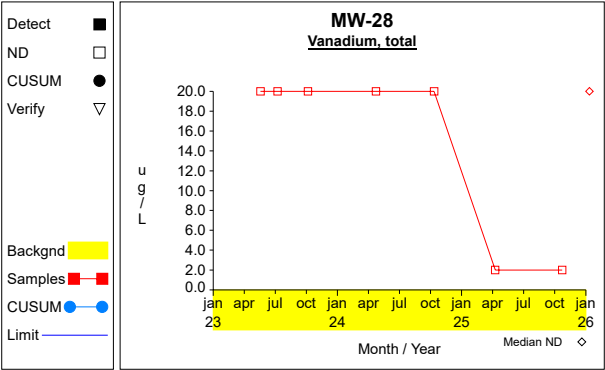
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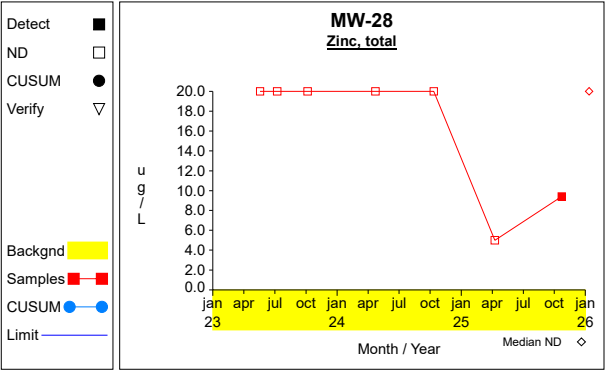
Graph 117



Graph 118

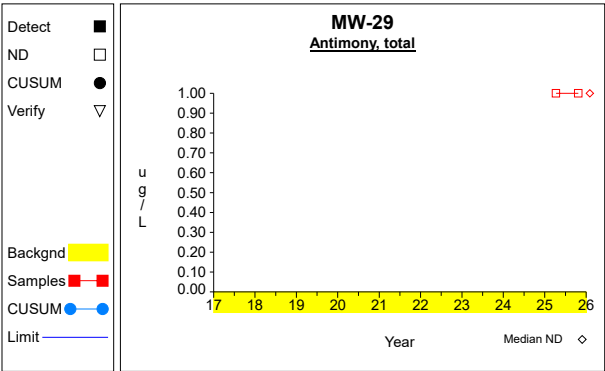


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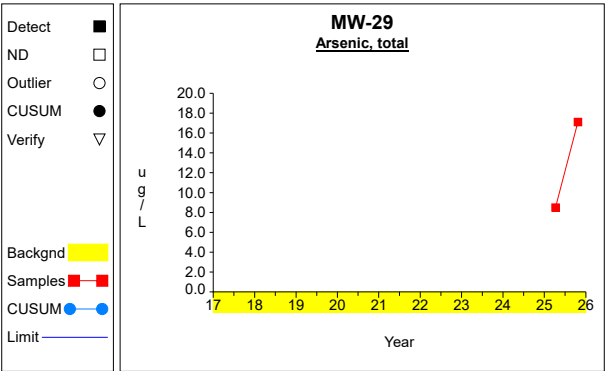


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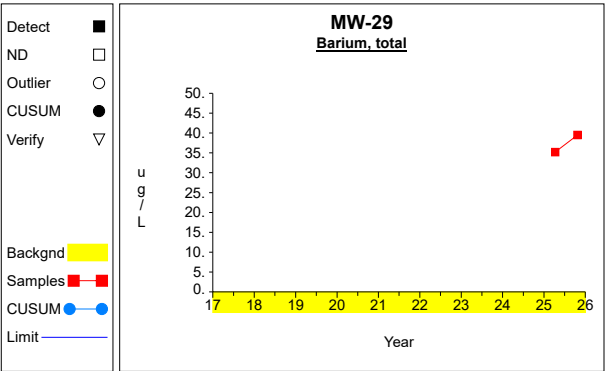
Intra-Well Control Charts / Prediction Limits



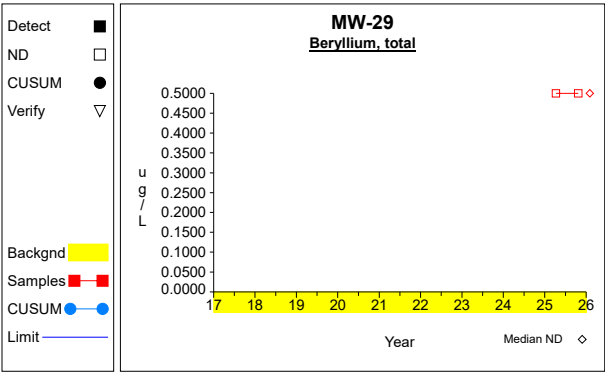
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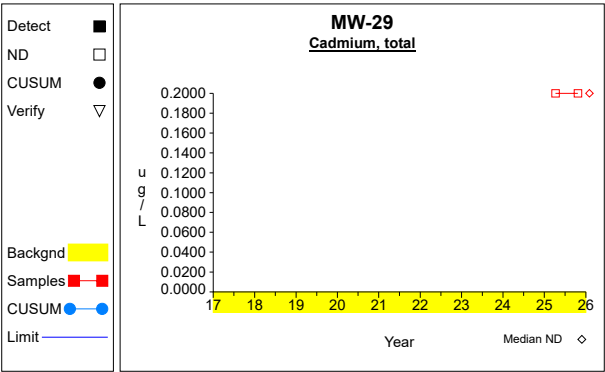
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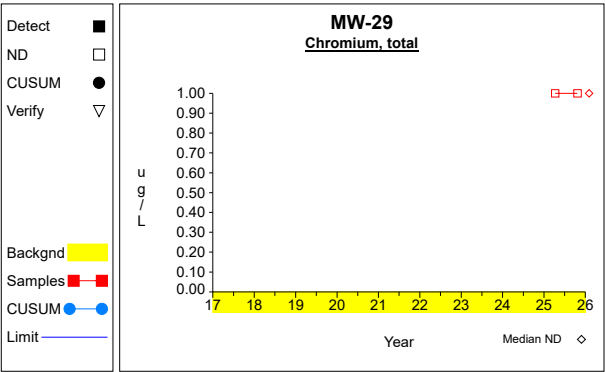
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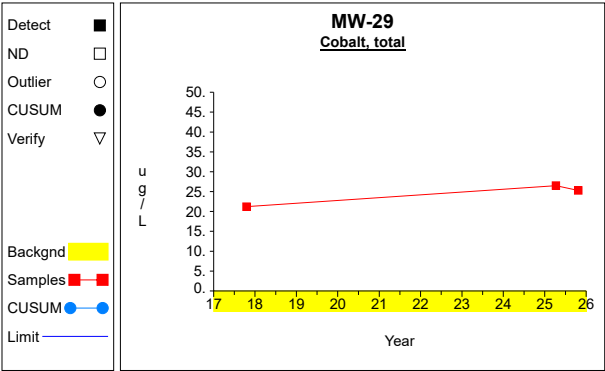
Graph 124



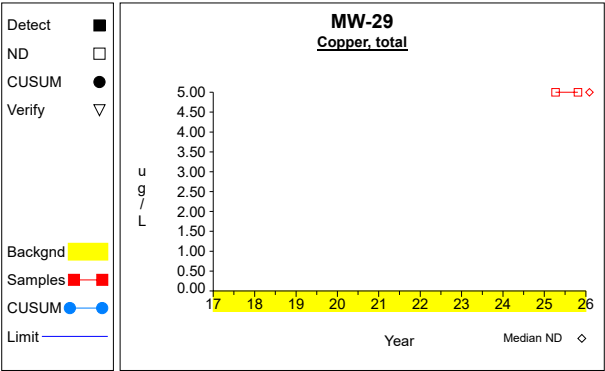
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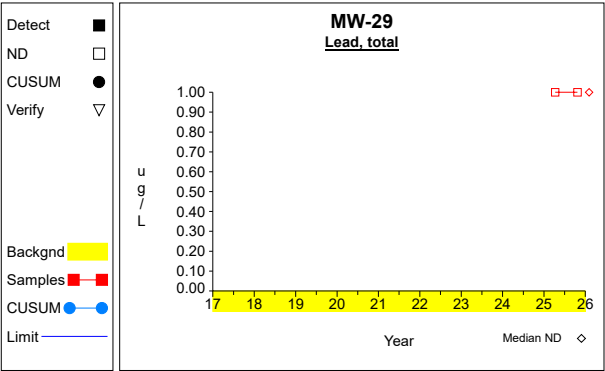
Graph 126



Graph 127

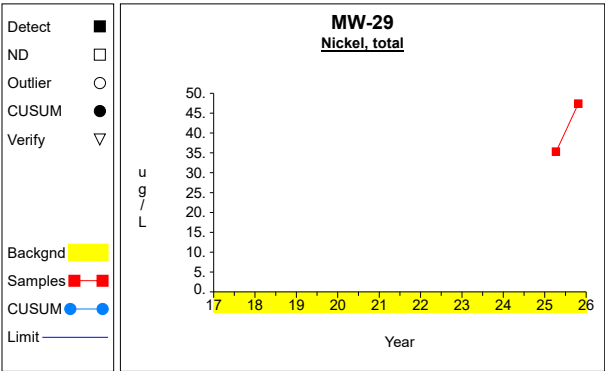


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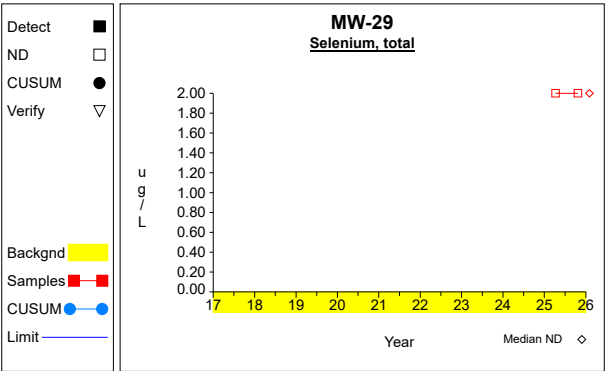


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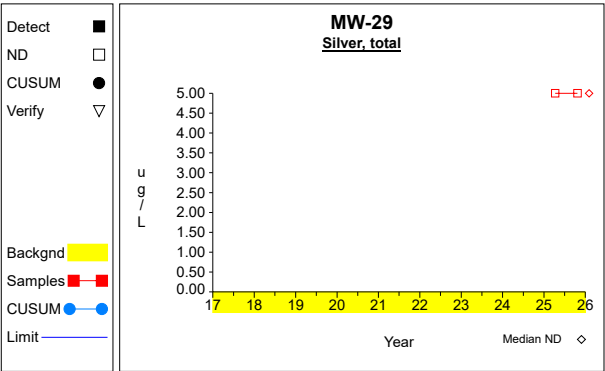
Intra-Well Control Charts / Prediction Limits



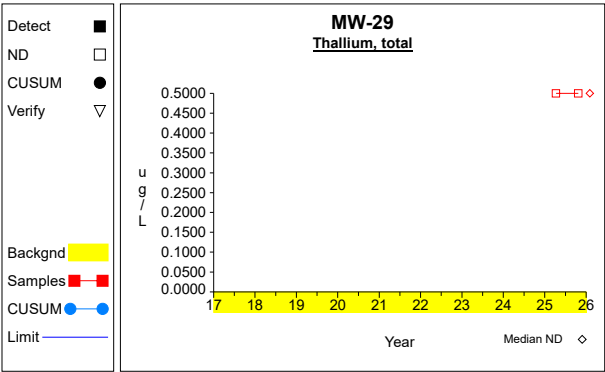
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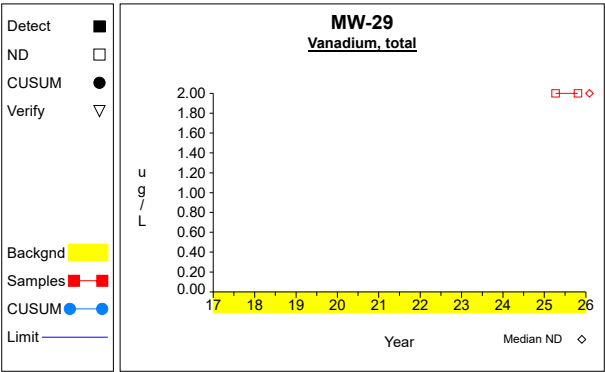
Graph 131



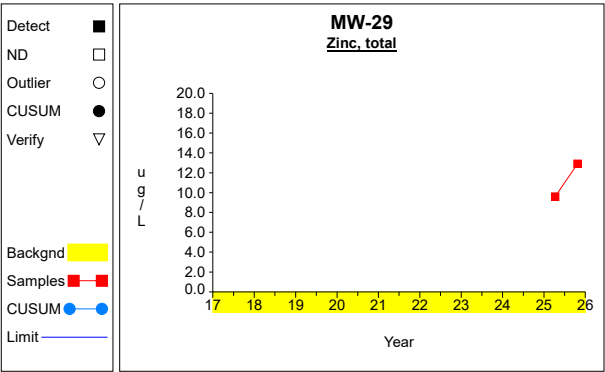
Graph 132



Graph 133

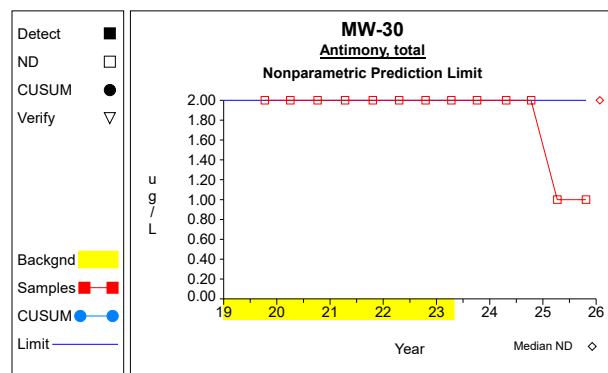


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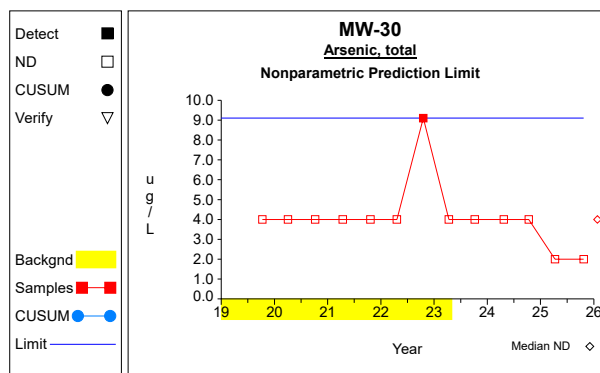


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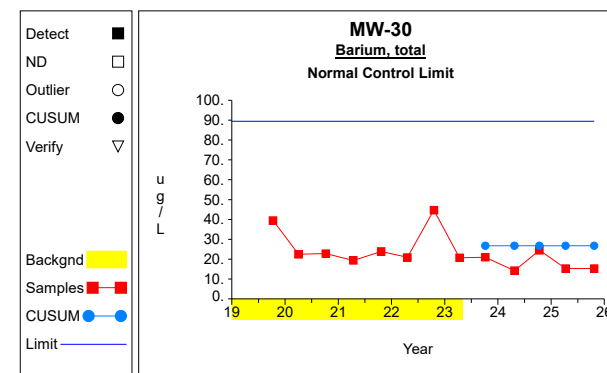
Intra-Well Control Charts / Prediction Limits



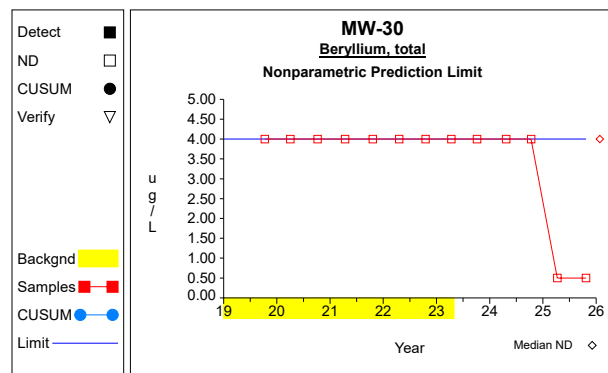
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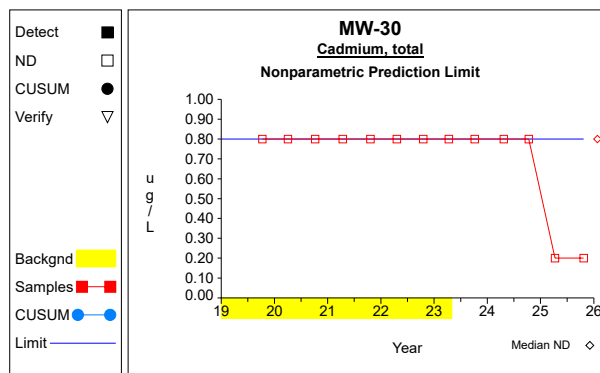
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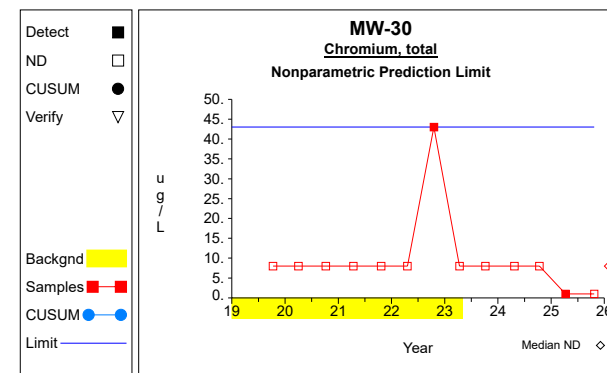
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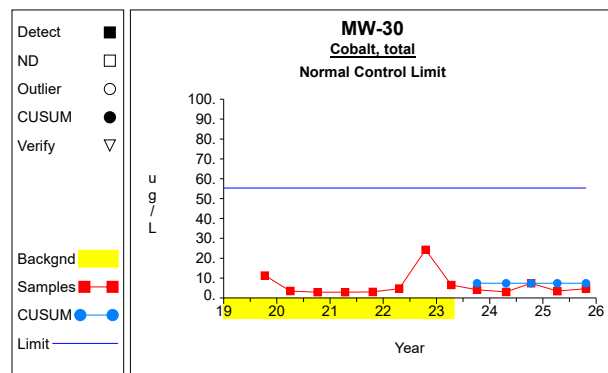
Graph 139



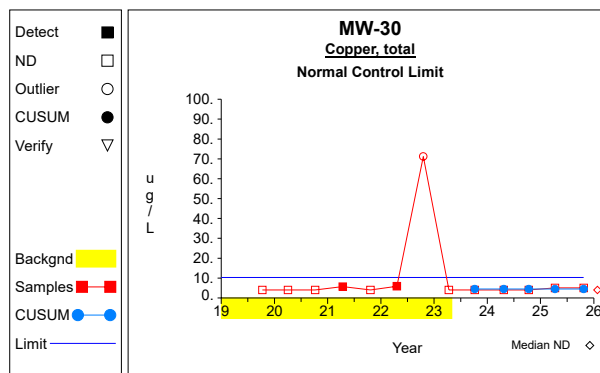
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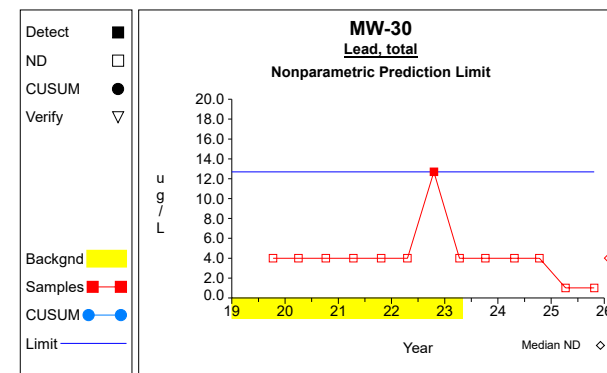
Graph 141



Graph 142

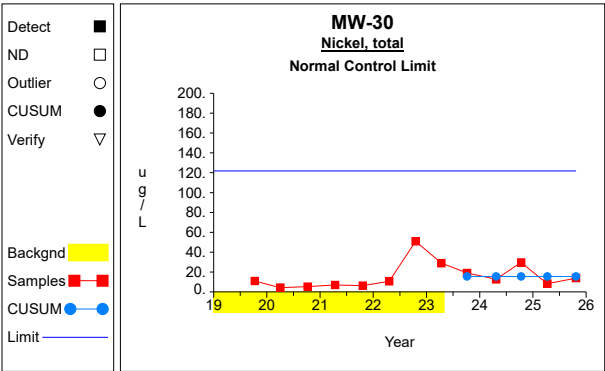


Graph 143

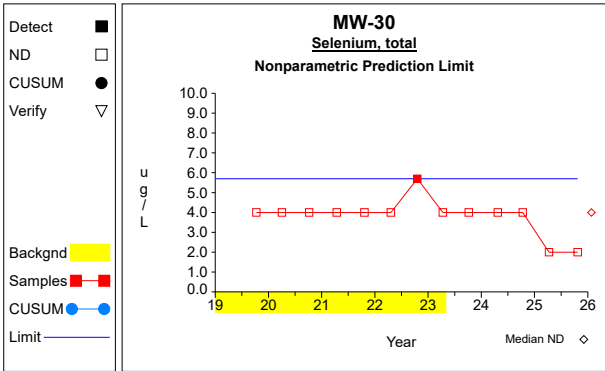


Graph 144

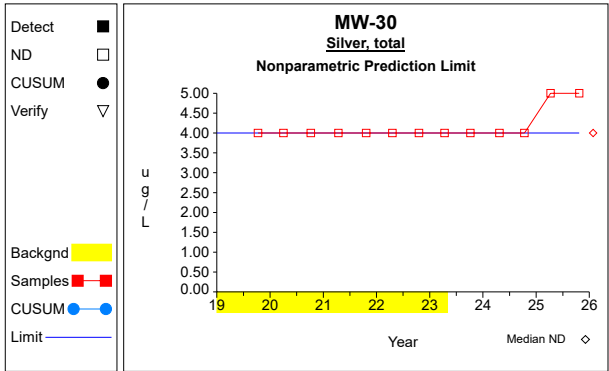
Intra-Well Control Charts / Prediction Limits



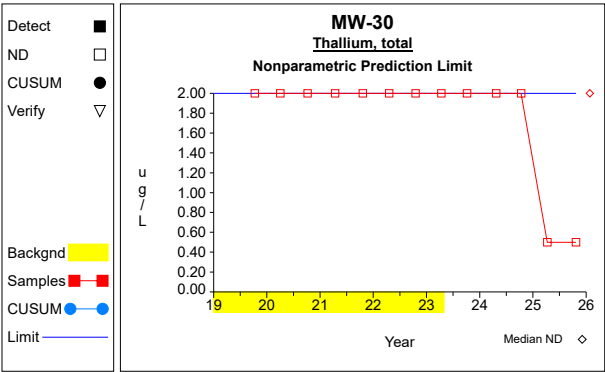
Graph 145



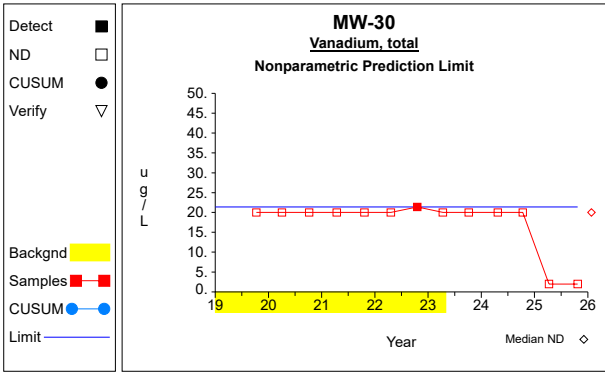
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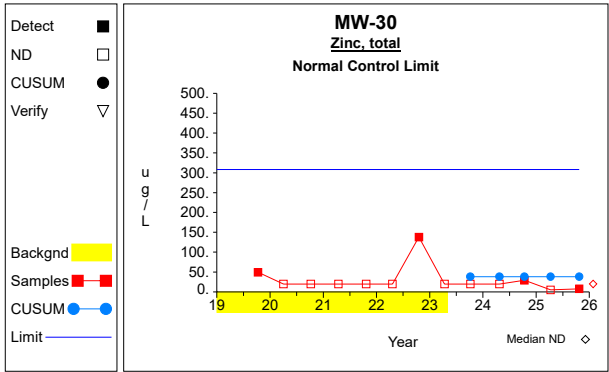
Graph 147



Graph 148

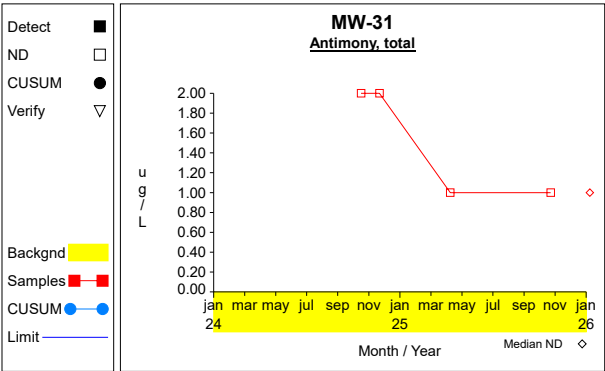


Graph 149

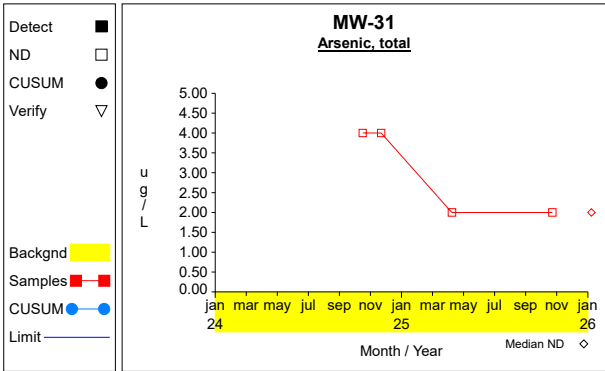


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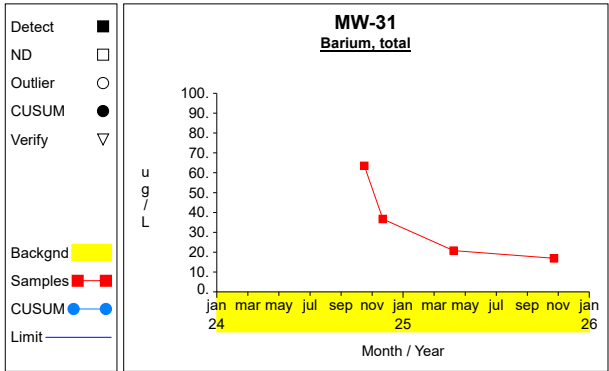
Intra-Well Control Charts / Prediction Limits



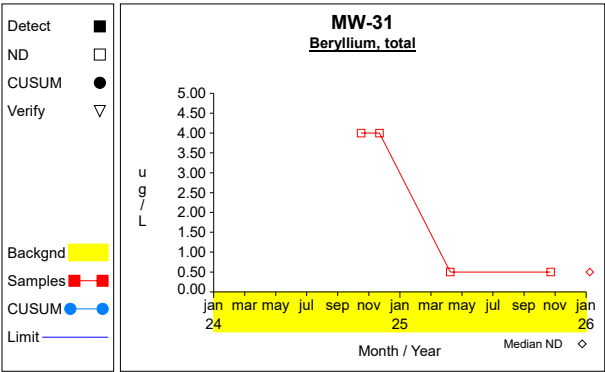
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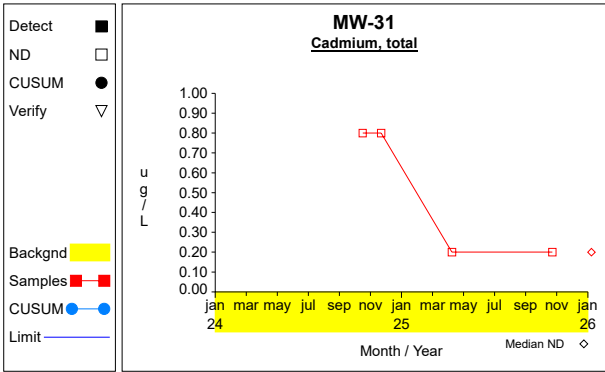
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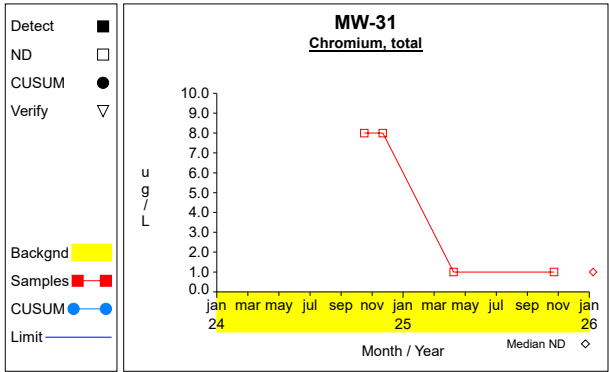
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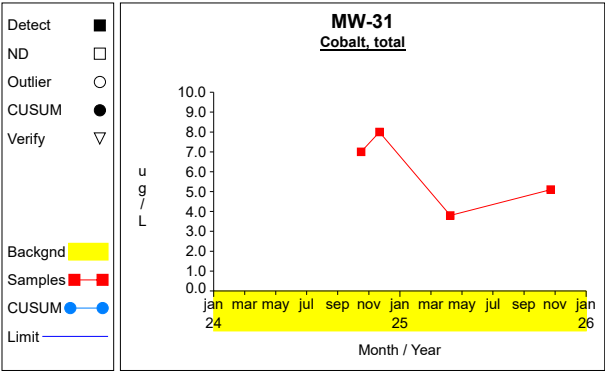
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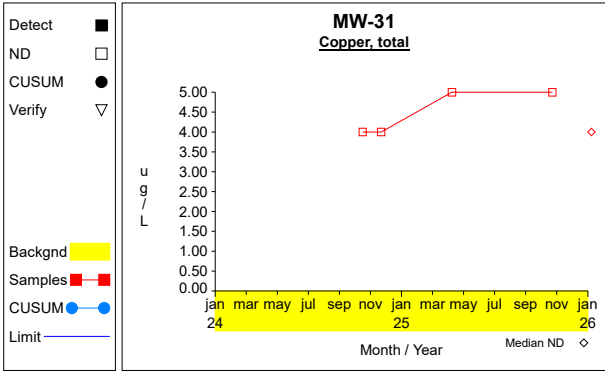
Graph 155



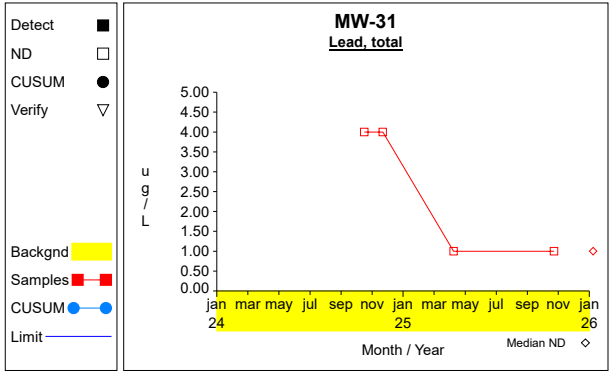
Graph 156



Graph 157

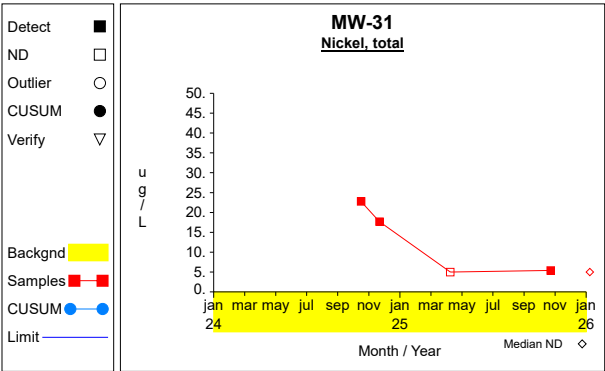


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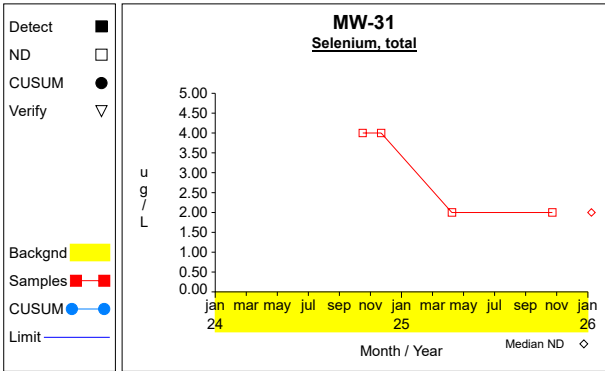


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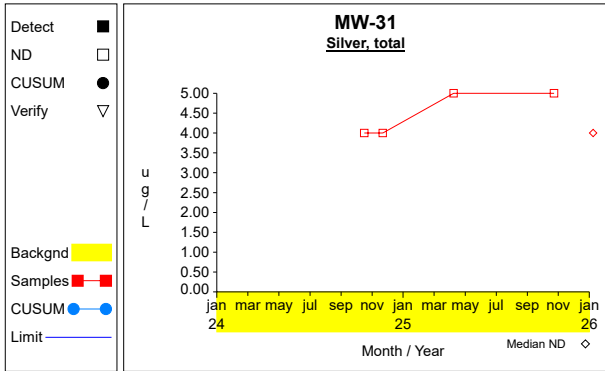
Intra-Well Control Charts / Prediction Limits



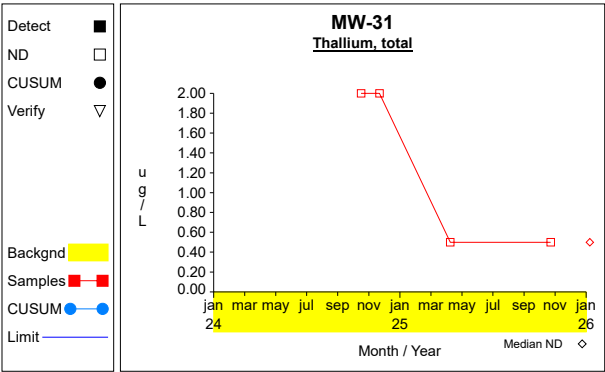
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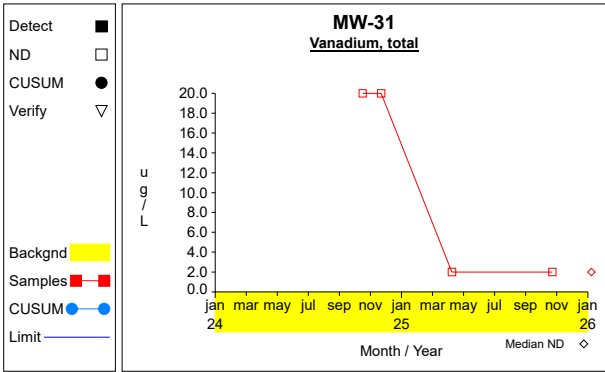
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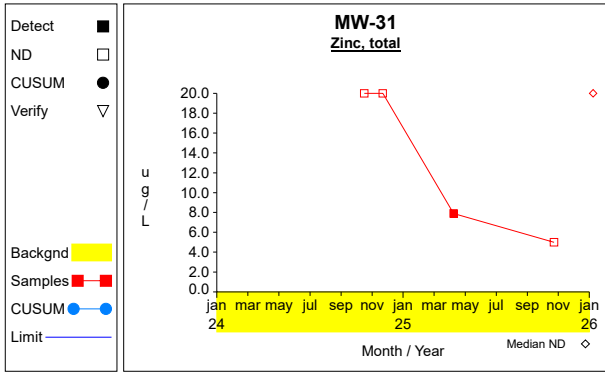
Graph 162



Graph 163

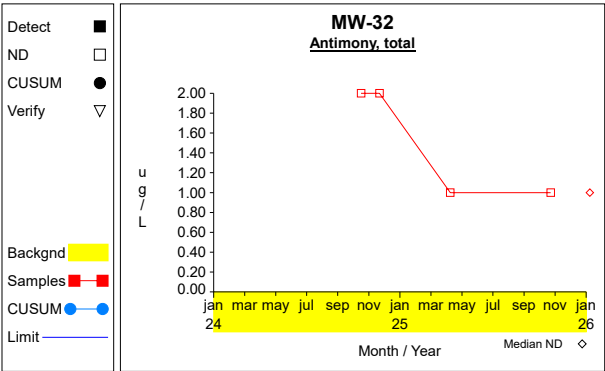


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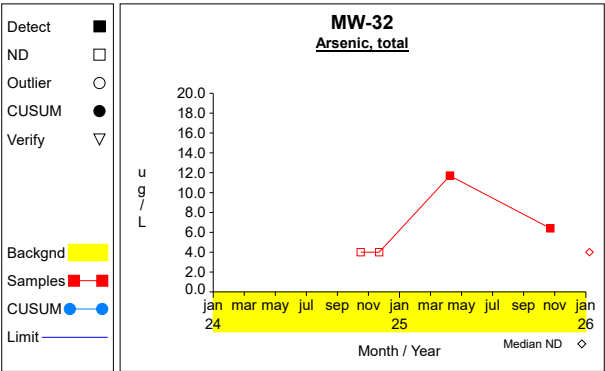


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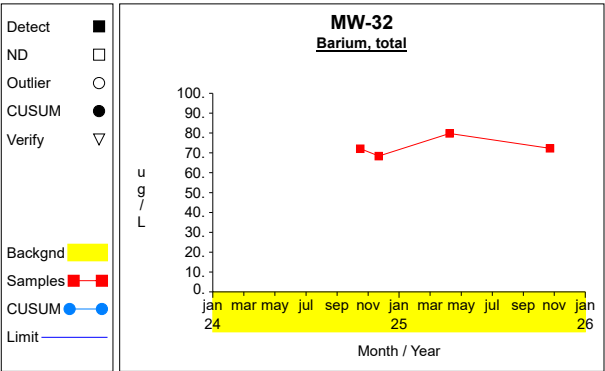
Intra-Well Control Charts / Prediction Limits



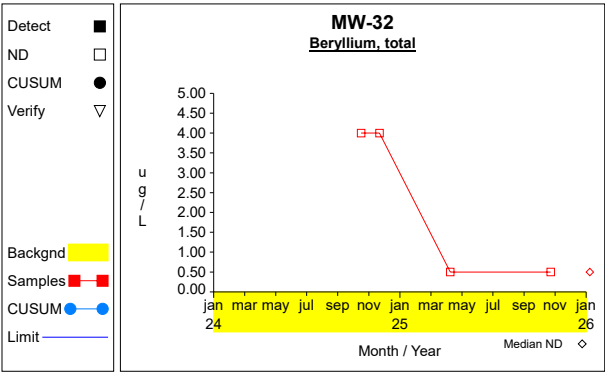
Graph 166



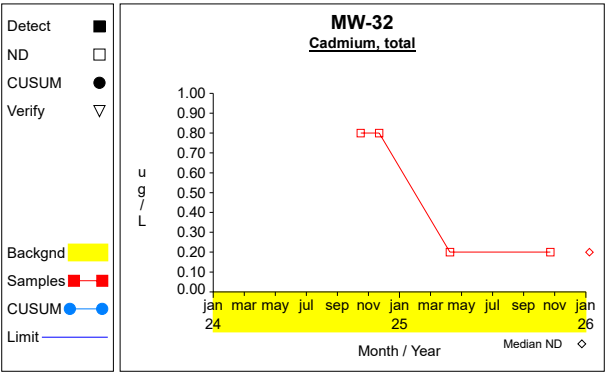
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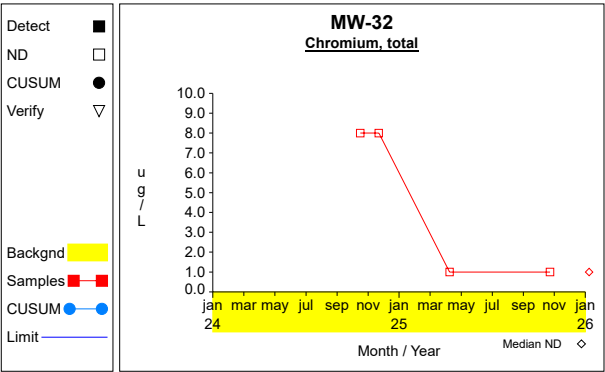
Graph 168



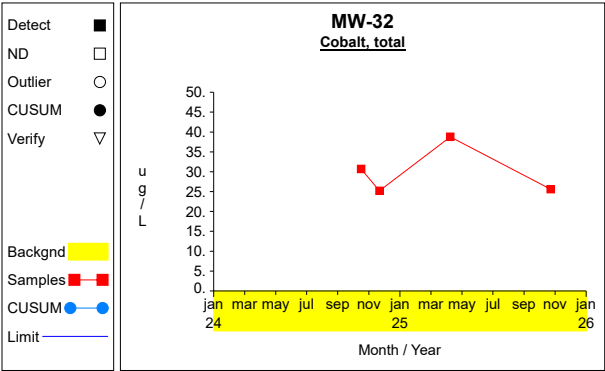
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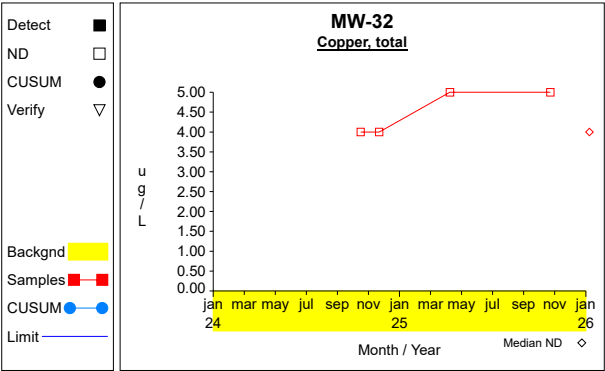
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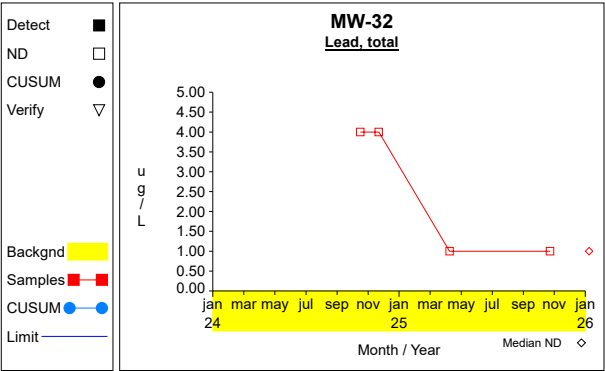
Graph 171



Graph 172

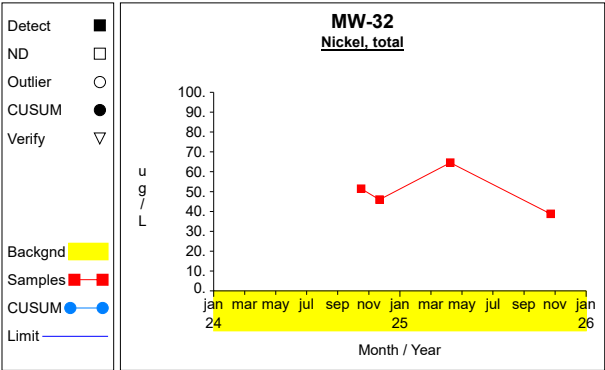


Graph 173

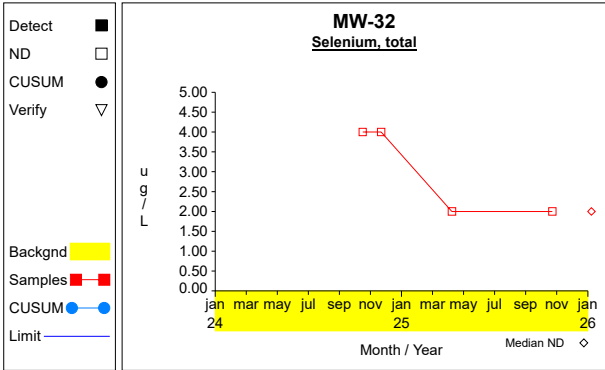


Graph 174

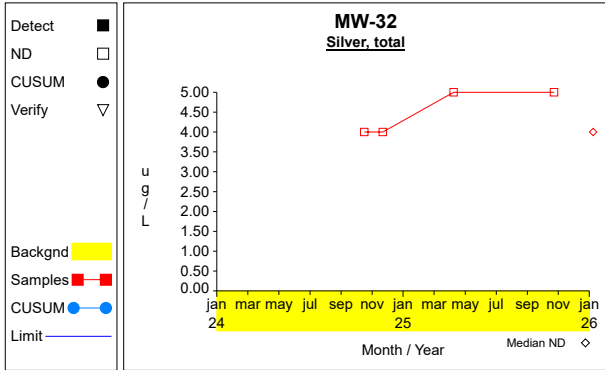
Intra-Well Control Charts / Prediction Limits



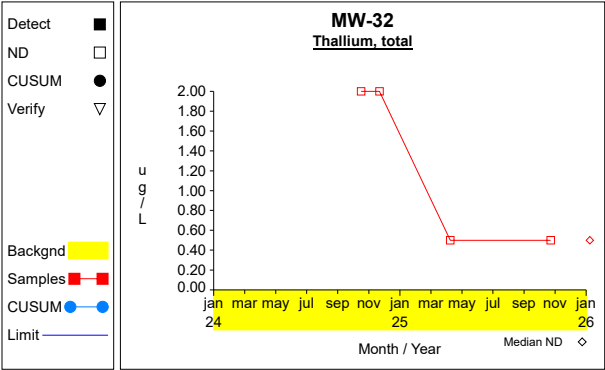
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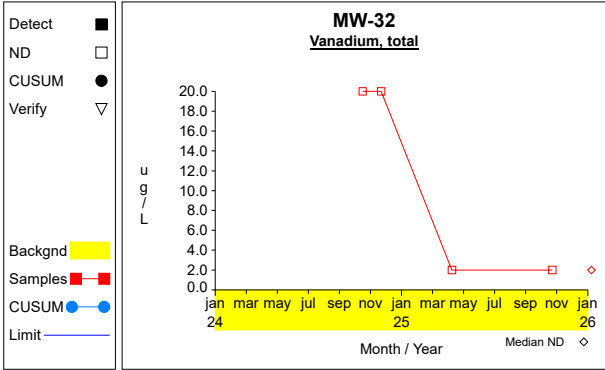
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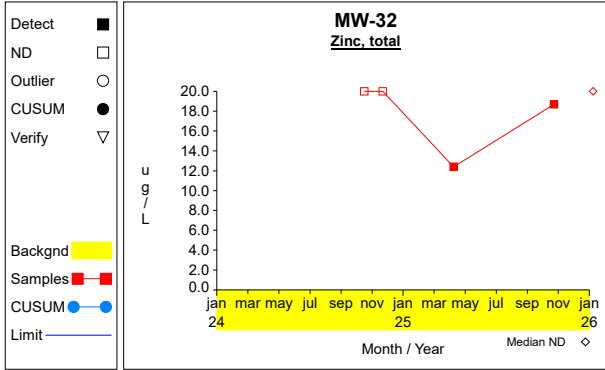
Graph 177



Graph 178

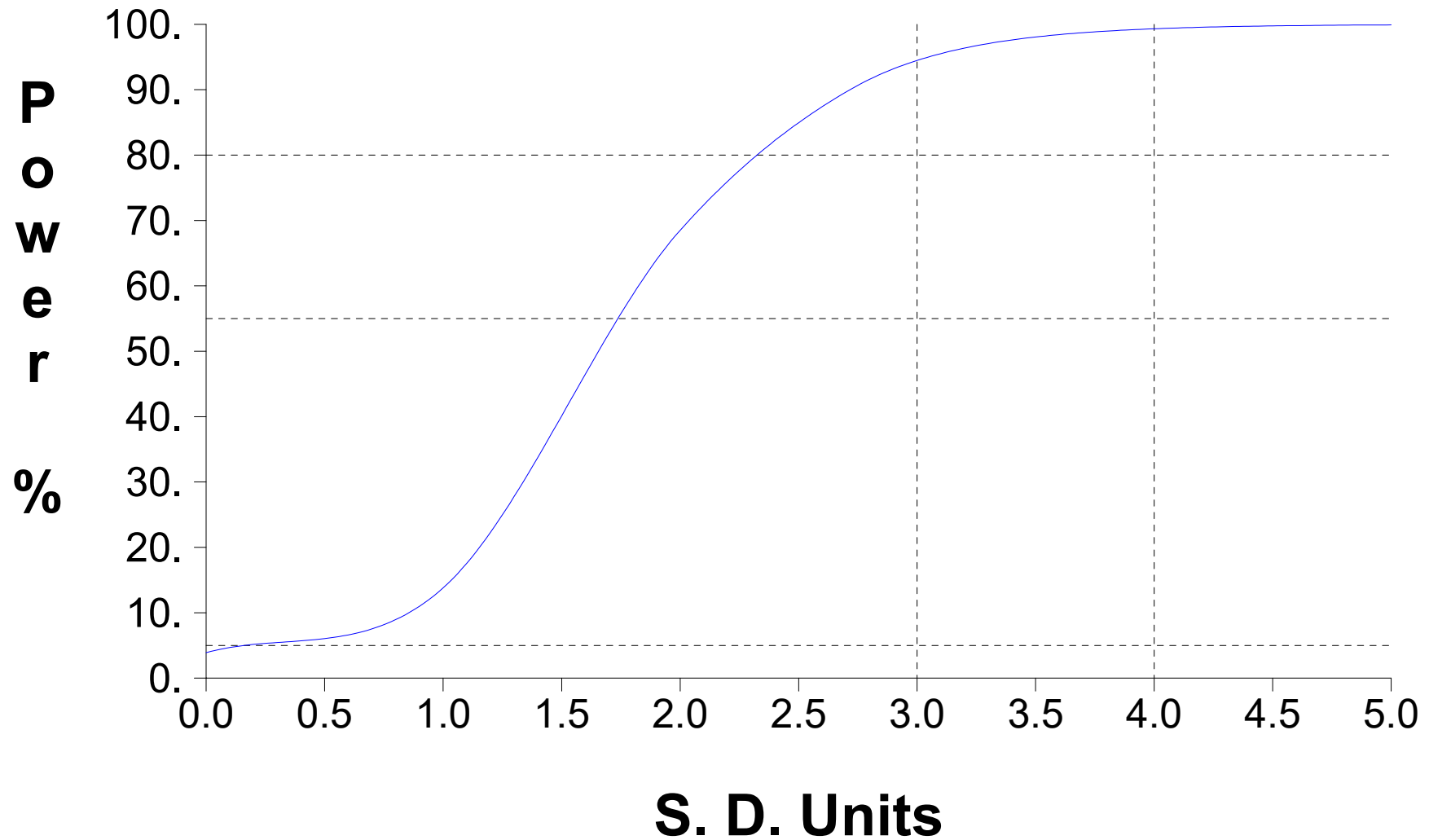


Graph 179



Graph 180

False Positive and False Negative Rates for Current Intra-Well Control Charts Monitoring Program



Attachment C

Assessment Statistics for Trace Metals

Table 1

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

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Arsenic, total	ug/L	MW-10A	4	7.275	9.895	1.176	0.000	18.914	10.000		
Cobalt, total	ug/L	MW-10A	4	1.250	0.619	1.176	0.522	1.978	2.100		
Nickel, total	ug/L	MW-10A	4	10.900	7.809	1.176	1.715	20.085	100.000		
Arsenic, total	ug/L	MW-20	4	13.425	8.638	1.176	3.264	23.586	10.000		
Cobalt, total	ug/L	MW-20	4	1.700	0.658	1.176	0.926	2.474	2.100	dec	
Nickel, total	ug/L	MW-20	4	3.250	0.866	1.176	2.231	4.269	100.000	dec	
Arsenic, total	ug/L	MW-21R	4	8.000	3.367	1.176	4.040	11.960	10.000		
Cobalt, total	ug/L	MW-21R	4	6.325	2.175	1.176	3.767	8.883	2.100		**
Nickel, total	ug/L	MW-21R	4	8.200	4.631	1.176	2.753	13.647	100.000	dec	
Arsenic, total	ug/L	MW-22	4	2.000	0.000	1.176	2.000	2.000	10.000		
Cobalt, total	ug/L	MW-22	4	0.400	0.000	1.176	0.400	0.400	2.100		
Nickel, total	ug/L	MW-22	4	5.325	4.576	1.176	0.000	10.708	100.000		
Arsenic, total	ug/L	MW-25	4	5.125	2.148	1.176	2.598	7.652	10.000		
Cobalt, total	ug/L	MW-25	4	2.438	2.105	1.176	0.000	4.913	2.100	dec	
Nickel, total	ug/L	MW-25	4	4.850	2.773	1.176	1.588	8.112	100.000	dec	
Arsenic, total	ug/L	MW-30	4	2.000	0.000	1.176	2.000	2.000	10.000		
Cobalt, total	ug/L	MW-30	4	4.625	1.987	1.176	2.287	6.963	2.100		**
Nickel, total	ug/L	MW-30	4	16.125	9.300	1.176	5.185	27.065	100.000		

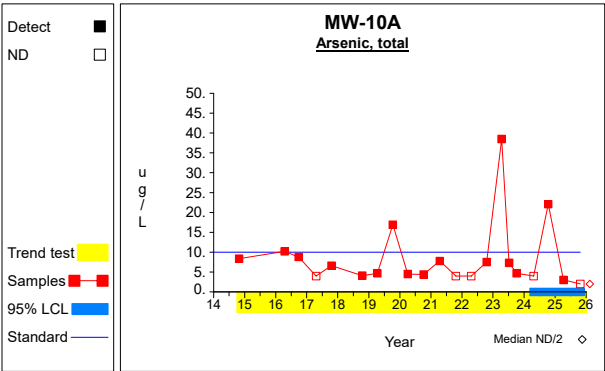
* - Insufficient Data

** - Significant Exceedance

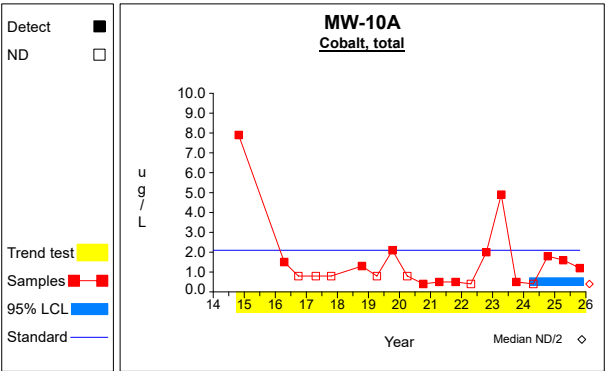
LCL = Lower Confidence Limit

UCL = Upper Confidence Limit

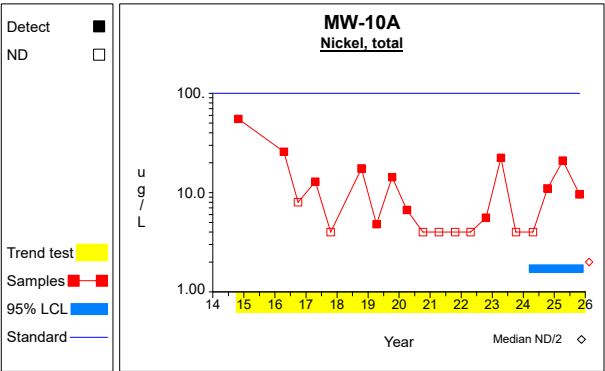
Confidence Limits (Assessment)



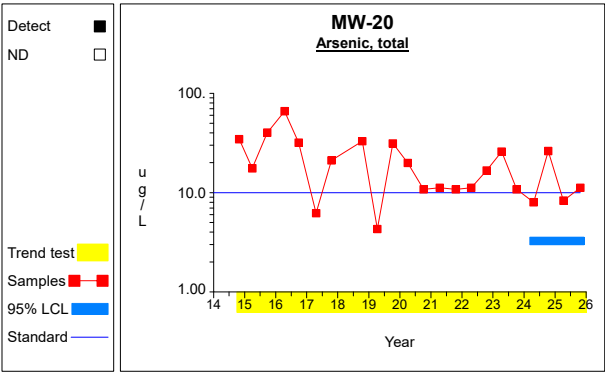
Graph 1



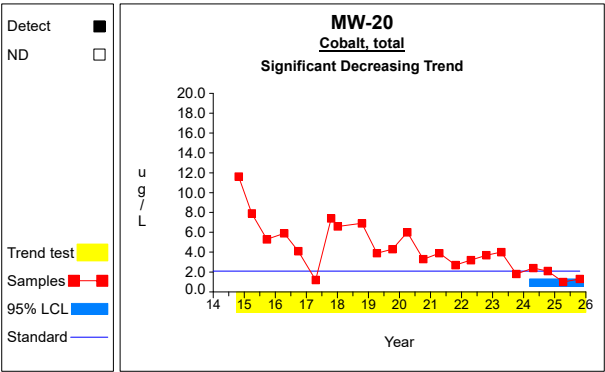
Graph 2



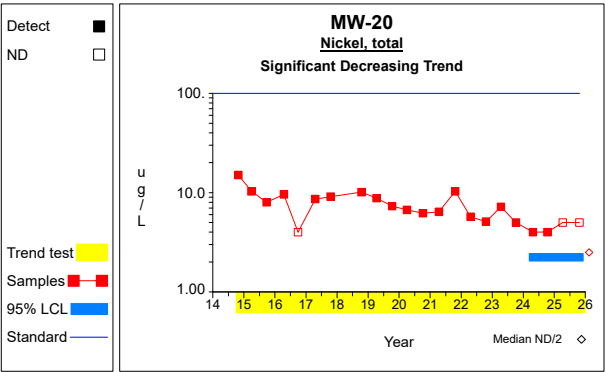
Graph 3



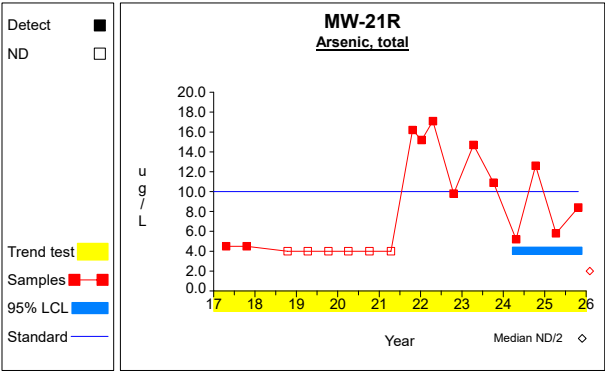
Graph 4



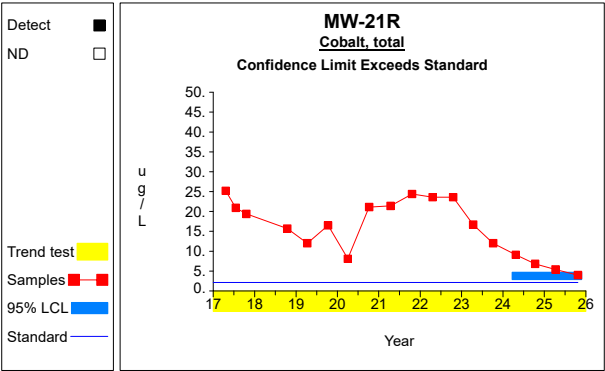
Graph 5



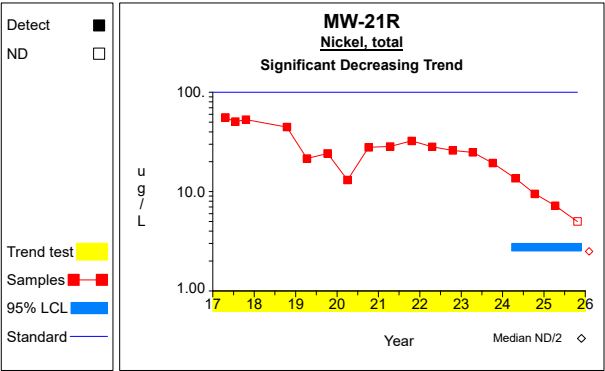
Graph 6



Graph 7

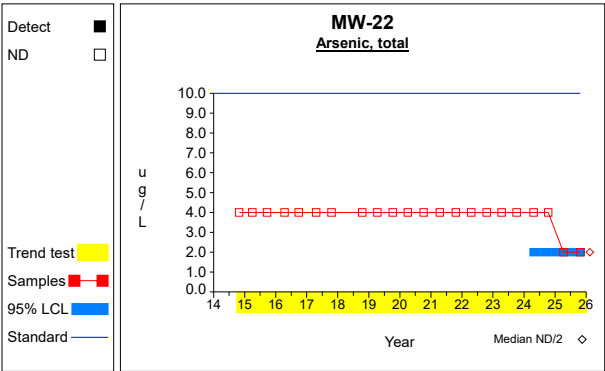


Graph 8

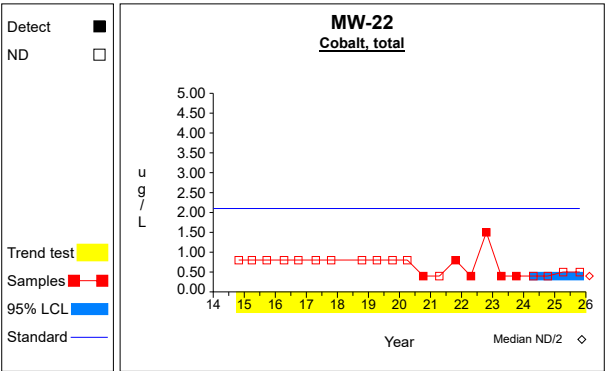


Graph 9

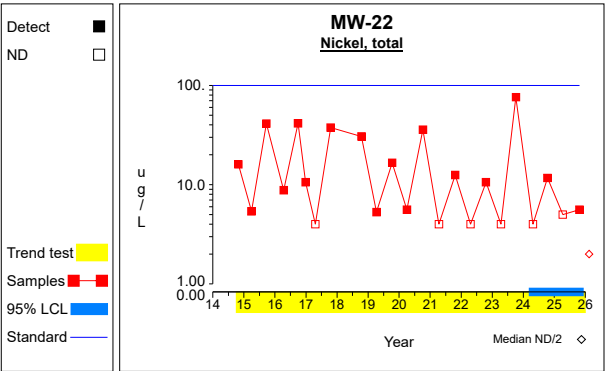
Confidence Limits (Assessment)



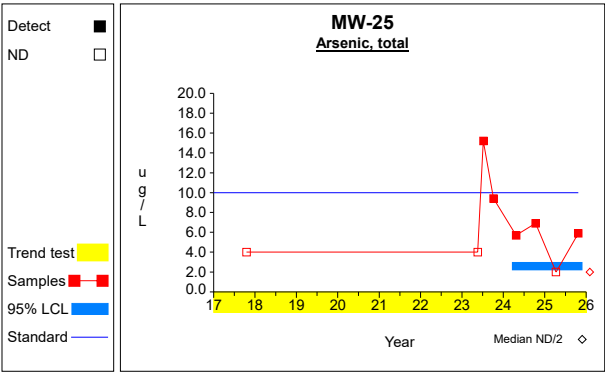
Graph 10



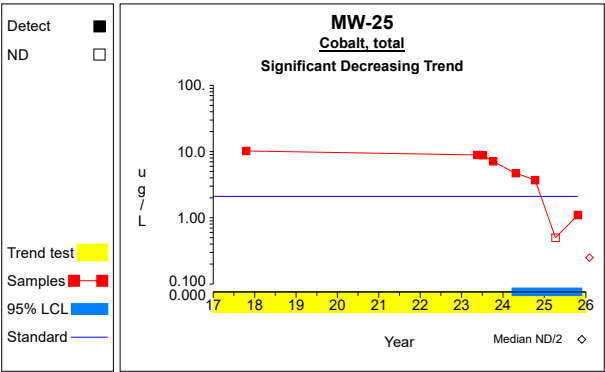
Graph 11



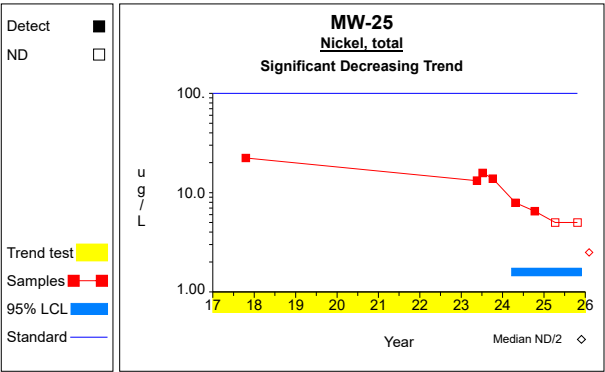
Graph 12



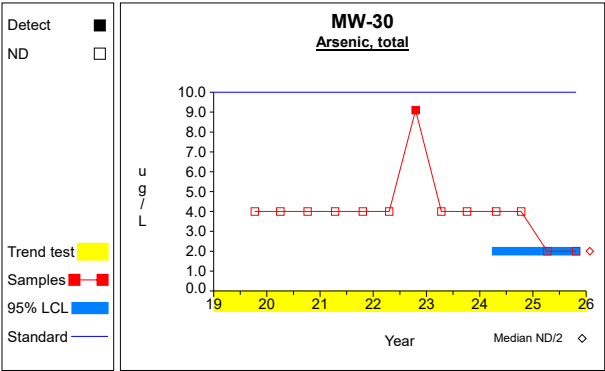
Graph 13



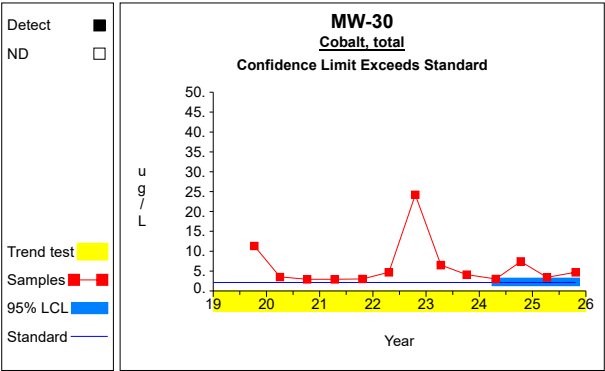
Graph 14



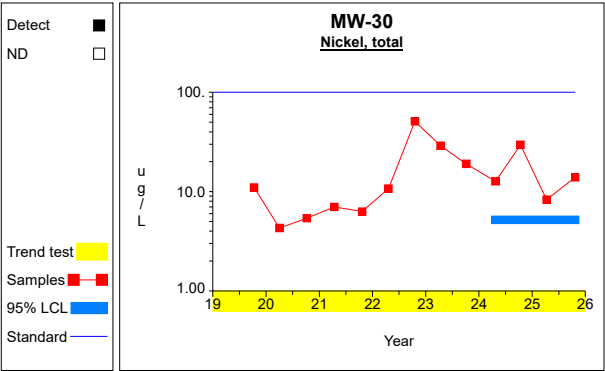
Graph 15



Graph 16



Graph 17



Graph 18

Attachment D

Historical VOC Detections

Table 1

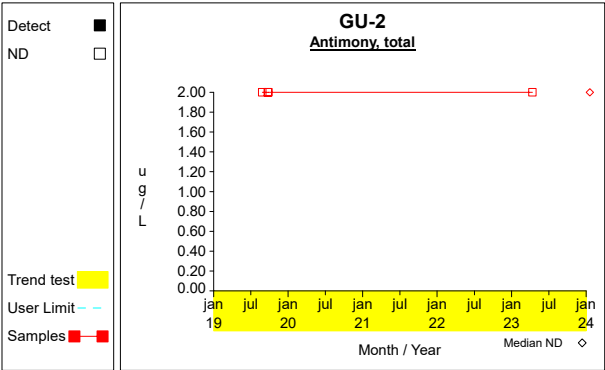
Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Acetone	GU-2	4/11/2023		10.7	10.0	ug/L
Acetone	MW-10A	7/29/2009		291.0	1.0	ug/L
Acetone	MW-10A	10/06/2009		164.0	1.0	ug/L
Acetone	MW-10A	5/17/2013		214.0	10.0	ug/L
Acetone	MW-10A	10/28/2014		18.1	10.0	ug/L
Acetone	MW-10A	10/18/2017		20.3	10.0	ug/L
Carbon disulfide	MW-10A	7/29/2009		1.65	1.00	ug/L
Carbon disulfide	MW-10A	7/12/2012		8.79	1.00	ug/L
Carbon disulfide	MW-10A	7/12/2012		8.79	1.00	ug/L
Carbon disulfide	MW-10A	5/17/2013		1.40	1.00	ug/L
Dieldrin	MW-10A	10/02/2012		.00248	.00200	ug/L
Acetone	MW-10B	10/18/2017		19.2	10.0	ug/L
Bis(2-ethylhexyl)phthalate	MW-10B	10/02/2012		.466	.390	ug/L
Carbon disulfide	MW-10B	12/29/2009		1.04	1.00	ug/L
Phorate	MW-10B	10/02/2012		.171	.170	ug/L
Acetone	MW-18	10/19/2017		21.1	10.0	ug/L
Arochlor 1016	MW-18	10/19/2017		2.36	.10	ug/L
Arochlor 1260	MW-18	10/19/2017		.2	.1	ug/L
Bromomethane	MW-18	10/04/2012		.60	.22	ug/L
Bromomethane	MW-18	10/05/2012		.60	.20	ug/L
Acetone	MW-19	10/19/2017		19.5	10.0	ug/L
Bis(2-ethylhexyl)phthalate	MW-19	10/03/2012		17.5	10.0	ug/L
Nitrobenzene	MW-19	10/03/2012		.224	.220	ug/L
Acetone	MW-20	4/11/2014		252.0	10.0	ug/L
Acetone	MW-20	10/18/2017		20.2	10.0	ug/L
Acetone	MW-20	4/09/2019		22.2	10.0	ug/L
Acetone	MW-21R	10/19/2017		21.5	10.0	ug/L
Bis(2-ethylhexyl)phthalate	MW-21R	10/19/2017		7	6	ug/L
Acetone	MW-22	10/18/2017		21.1	10.0	ug/L
Bromomethane	MW-22	10/04/2012		.41	.22	ug/L
Bromomethane	MW-22	10/05/2012		.41	.20	ug/L
1,1-dichloroethene	MW-25	10/11/2024		1	1	ug/L
Acetone	MW-25	5/18/2023		25.5	10.0	ug/L
Chloroform	MW-25	10/23/2025		2.9	1.0	ug/L

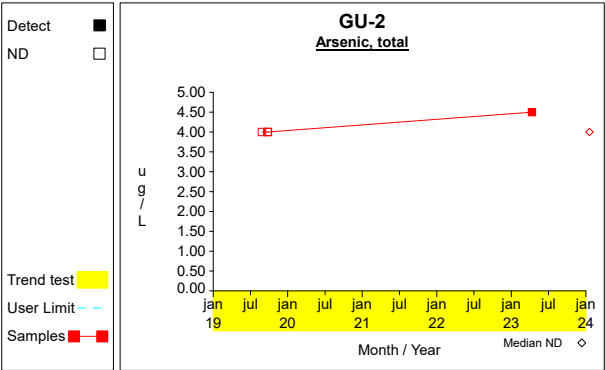
Detections are shown for the constituents and sample points selected for the analysis
The Limit column refers to the laboratory reporting limit

APPENDIX B.3 –Time Series Graphs

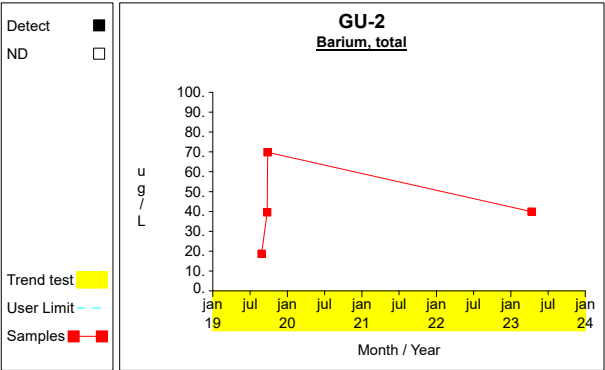
Time Series



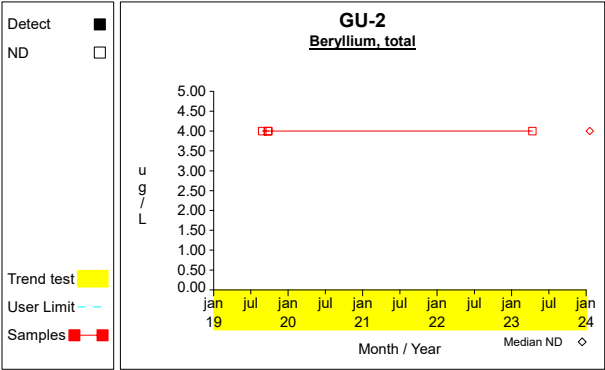
Graph 1



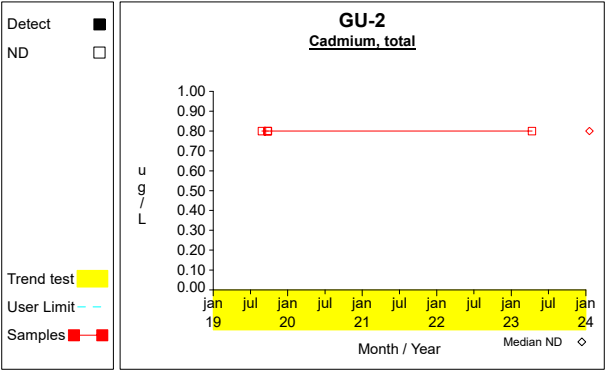
Graph 2



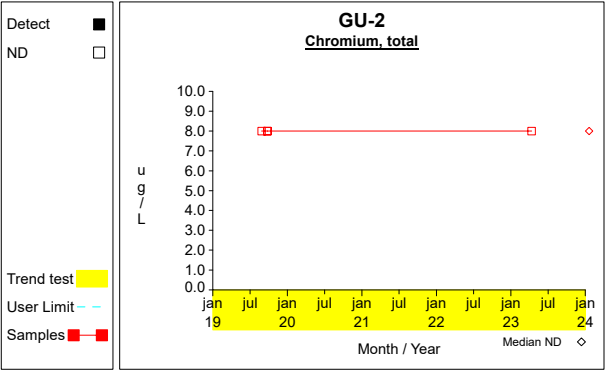
Graph 3



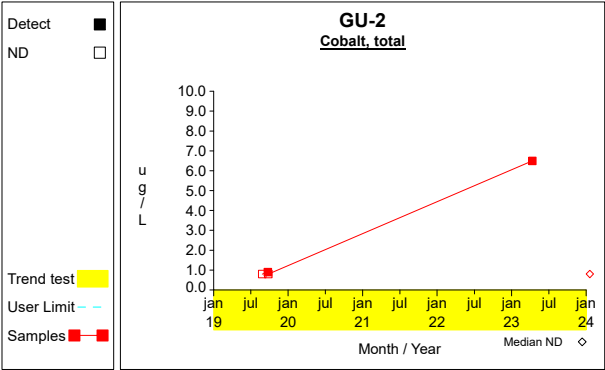
Graph 4



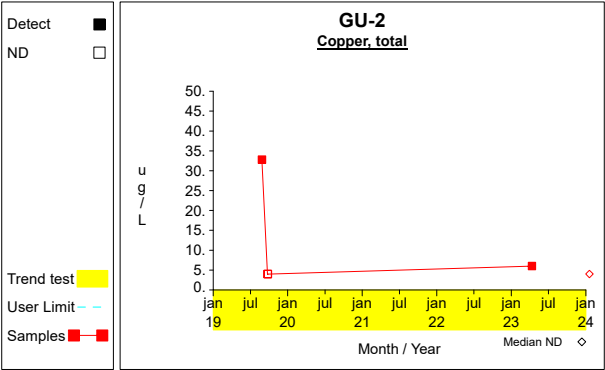
Graph 5



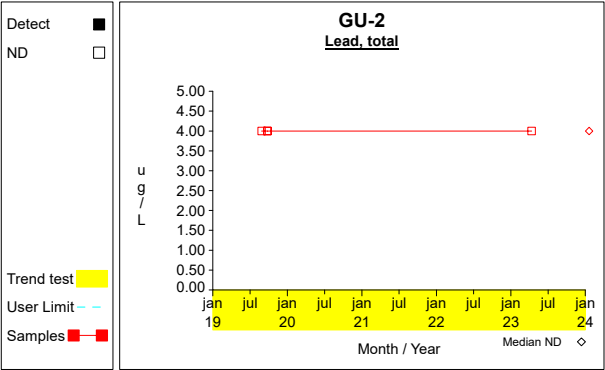
Graph 6



Graph 7

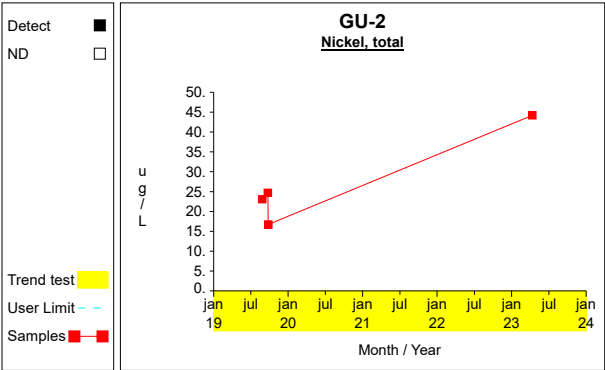


Graph 8

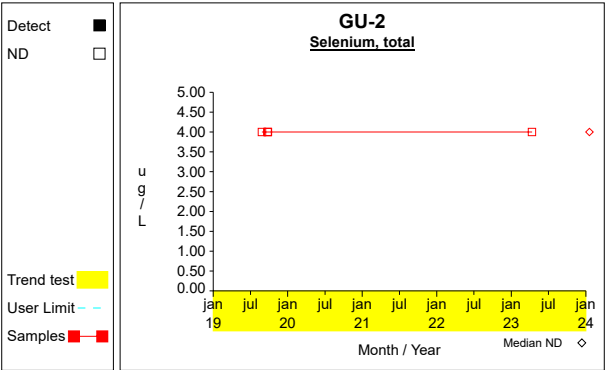


Graph 9

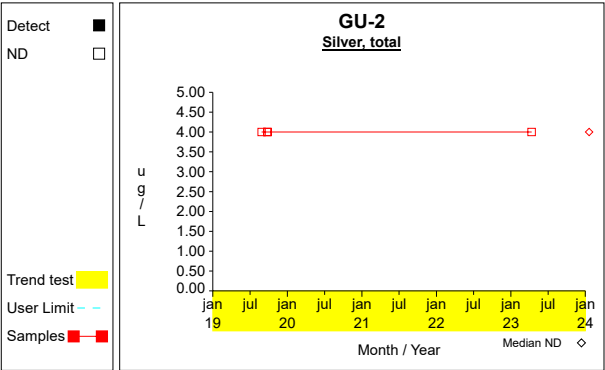
Time Series



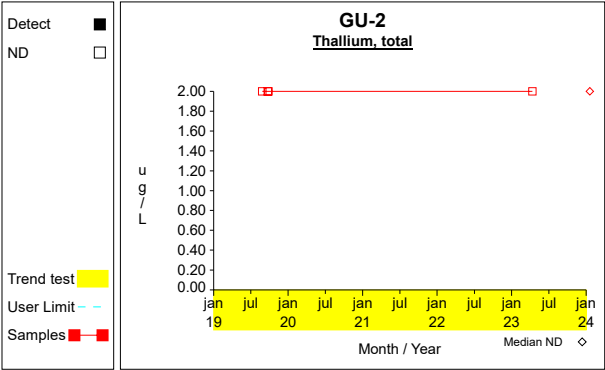
Graph 10



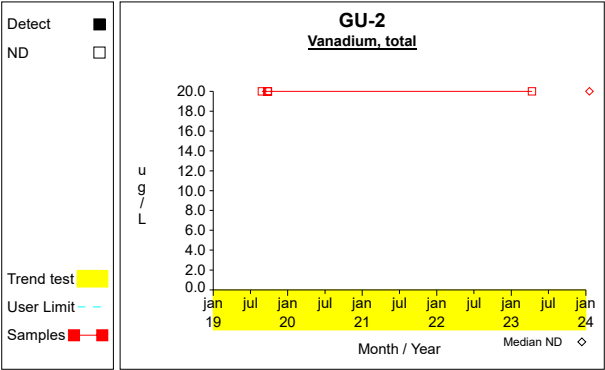
Graph 11



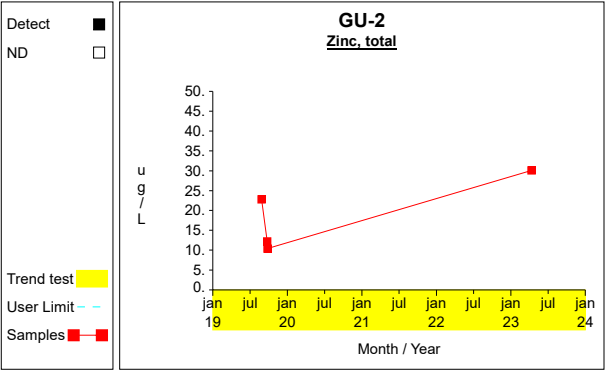
Graph 12



Graph 13

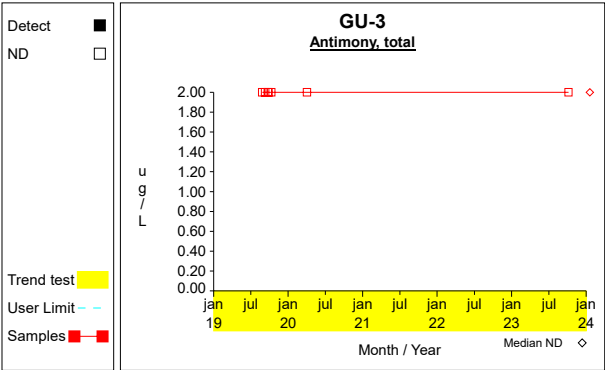


Graph 14

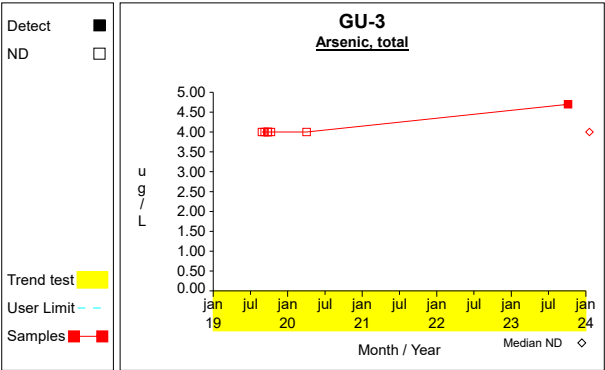


Graph 15

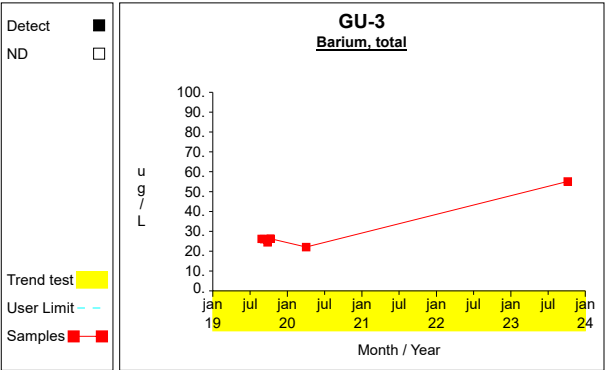
Time Series



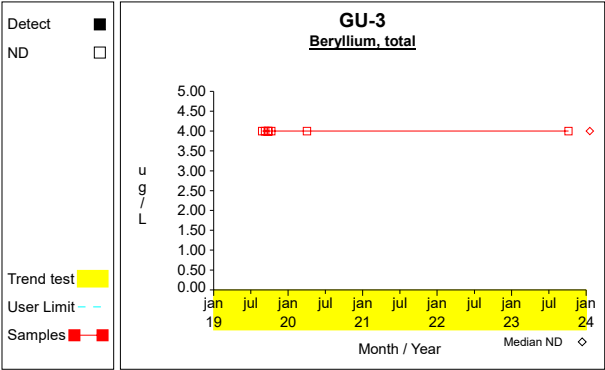
Graph 16



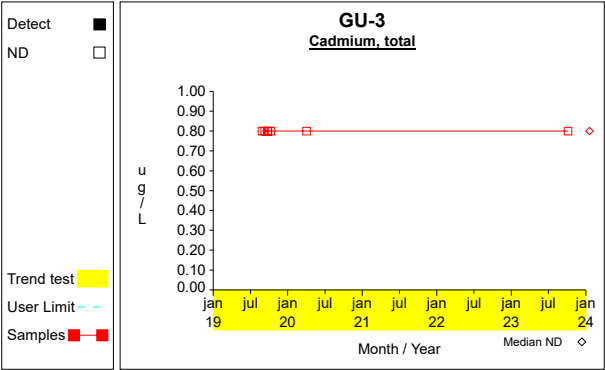
Graph 17



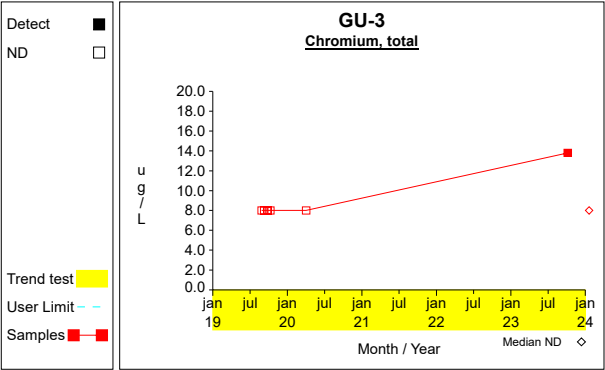
Graph 18



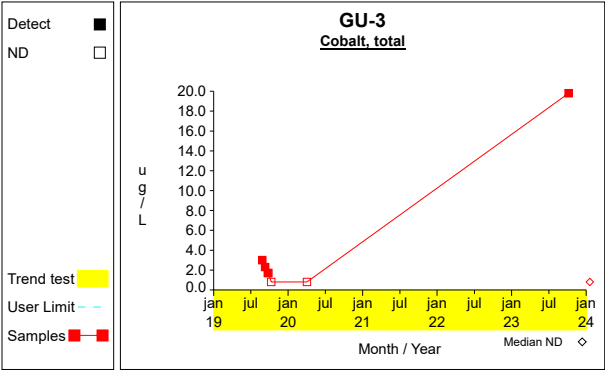
Graph 19



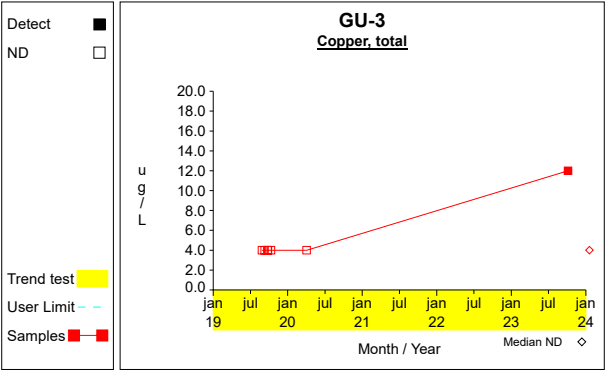
Graph 20



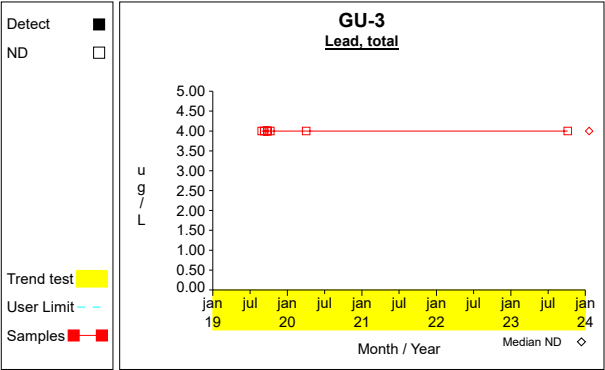
Graph 21



Graph 22

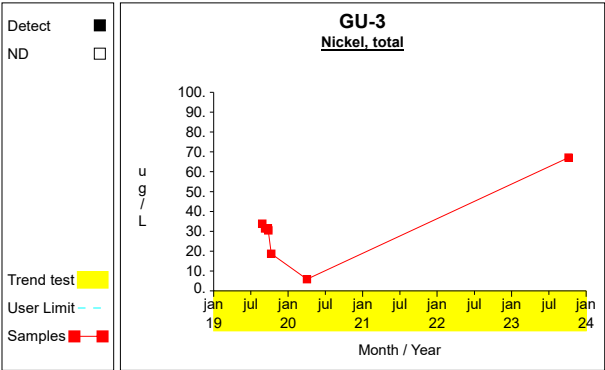


Graph 23

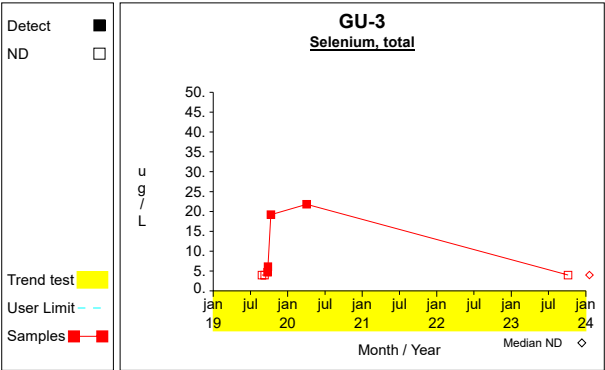


Graph 24

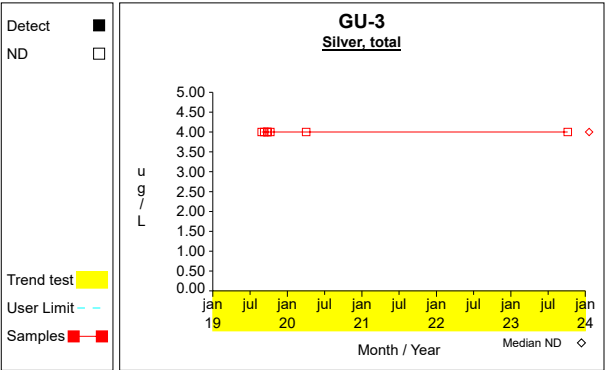
Time Series



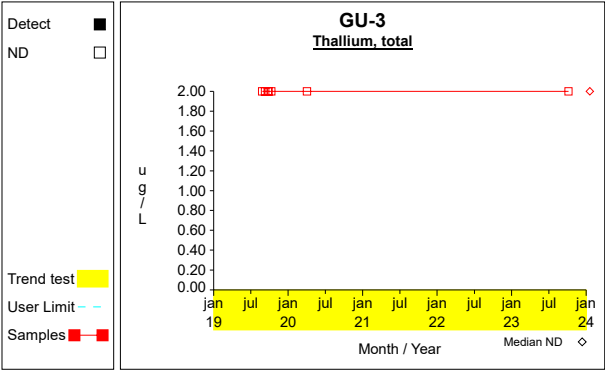
Graph 25



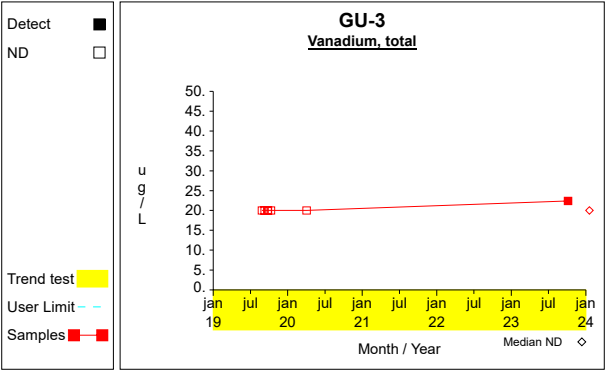
Graph 26



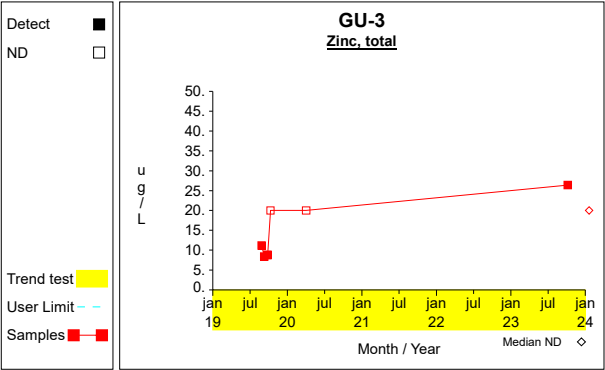
Graph 27



Graph 28

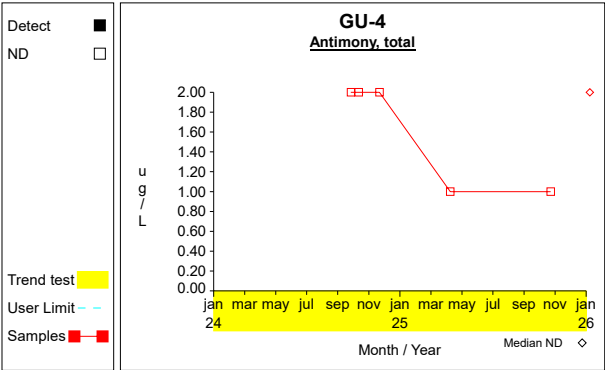


Graph 29

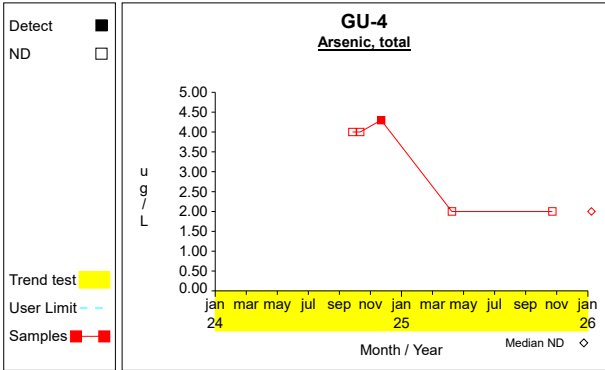


Graph 30

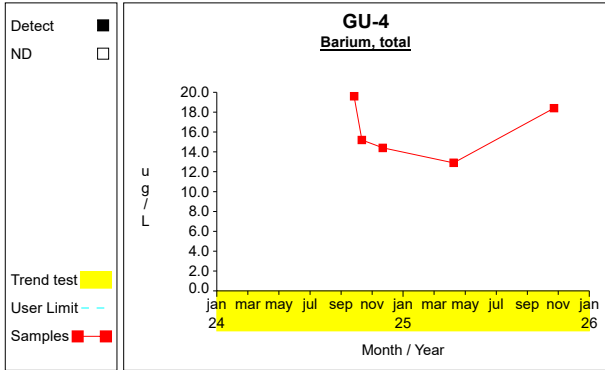
Time Series



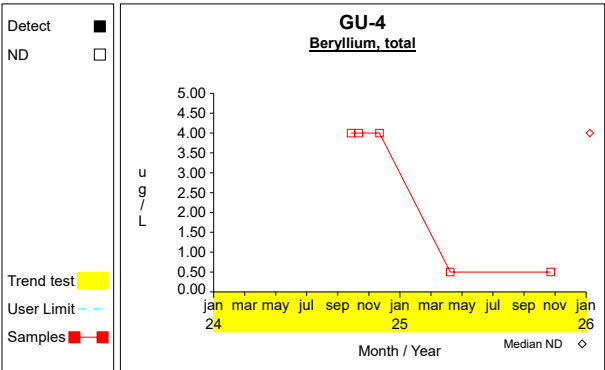
Graph 31



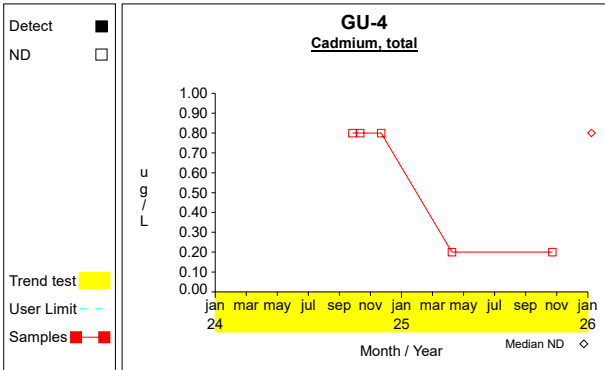
Graph 32



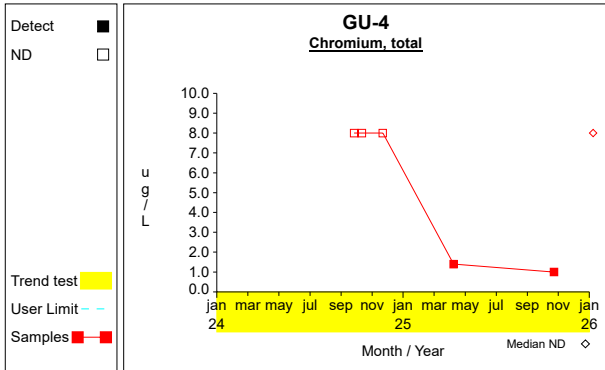
Graph 33



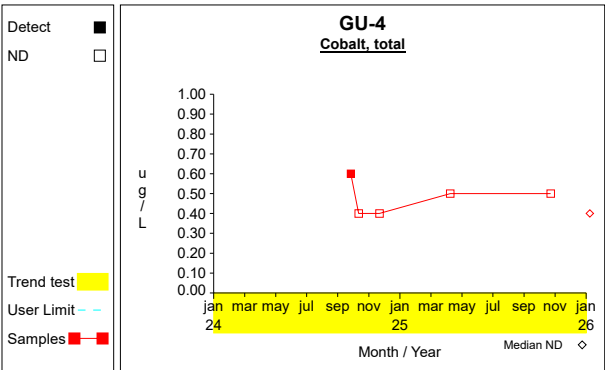
Graph 34



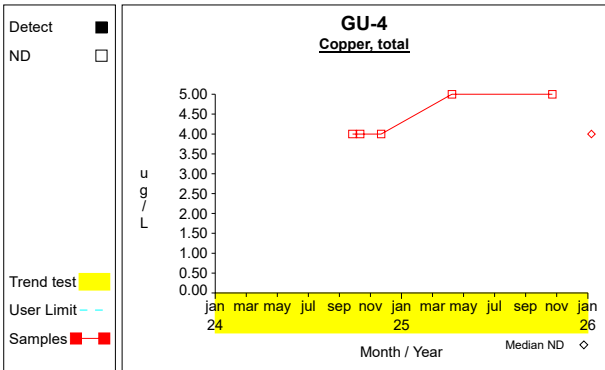
Graph 35



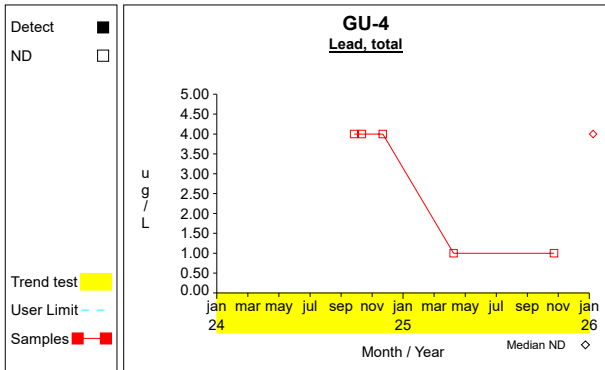
Graph 36



Graph 37

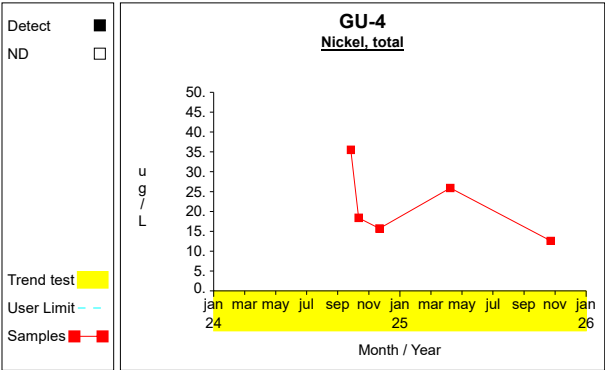


Graph 38

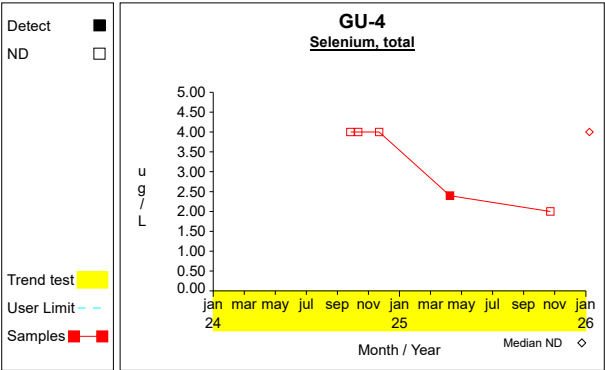


Graph 39

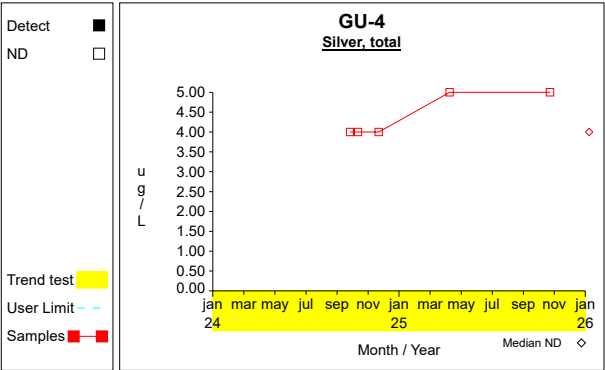
Time Series



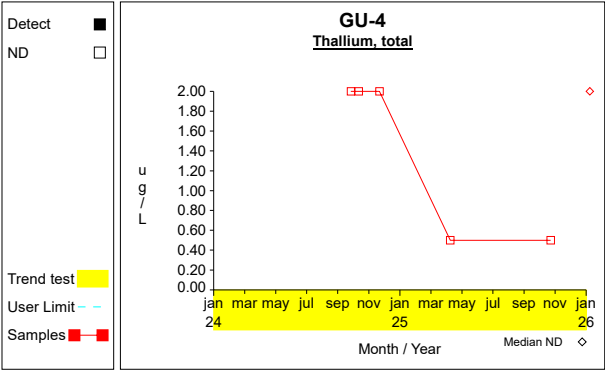
Graph 40



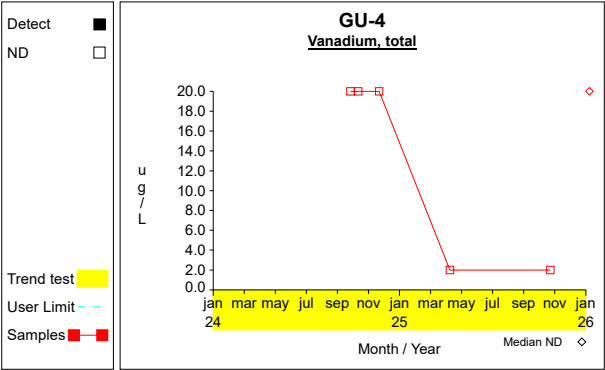
Graph 41



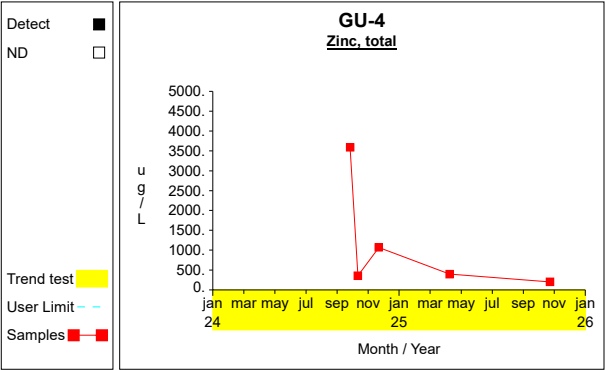
Graph 42



Graph 43

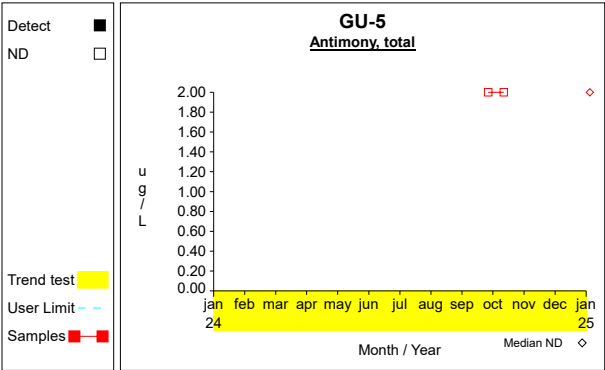


Graph 44

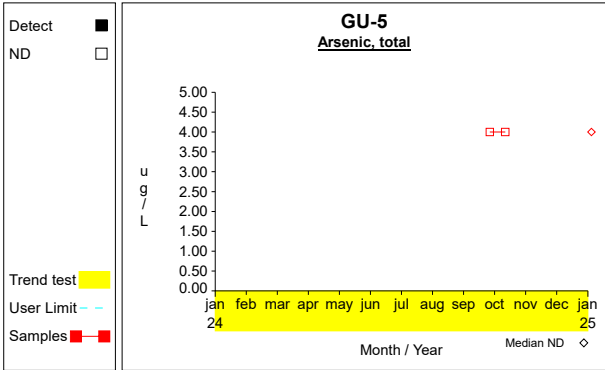


Graph 45

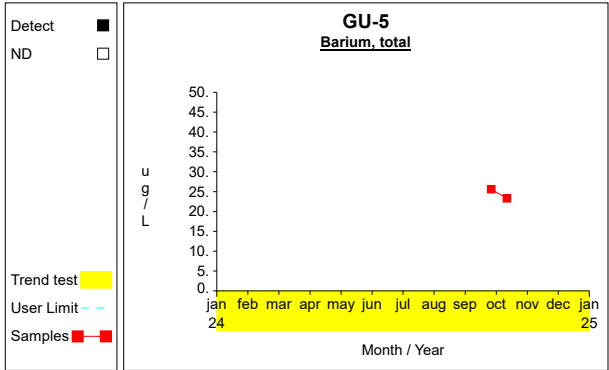
Time Series



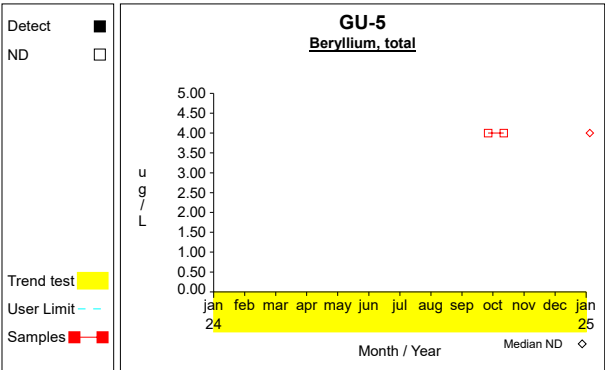
Graph 46



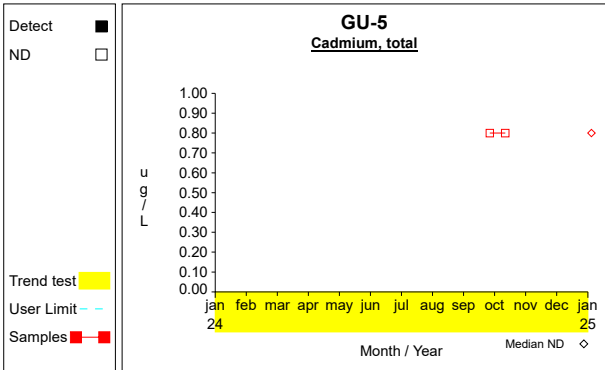
Graph 47



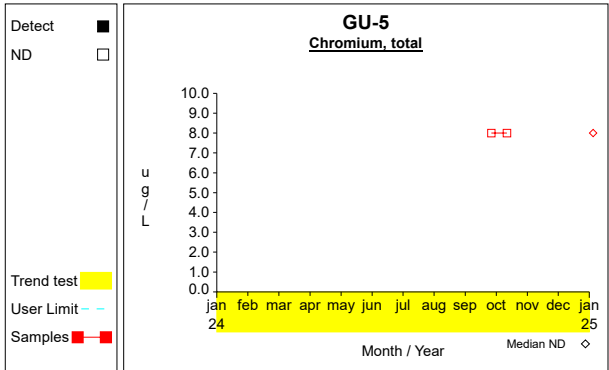
Graph 48



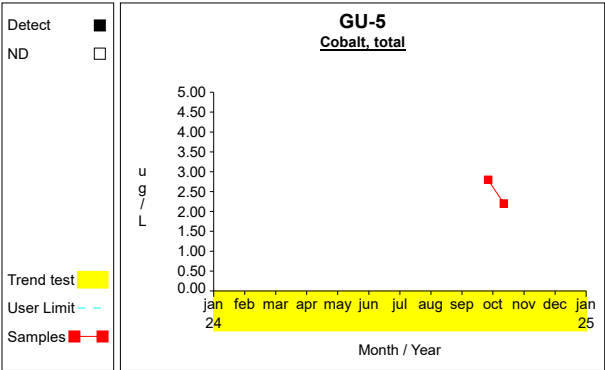
Graph 49



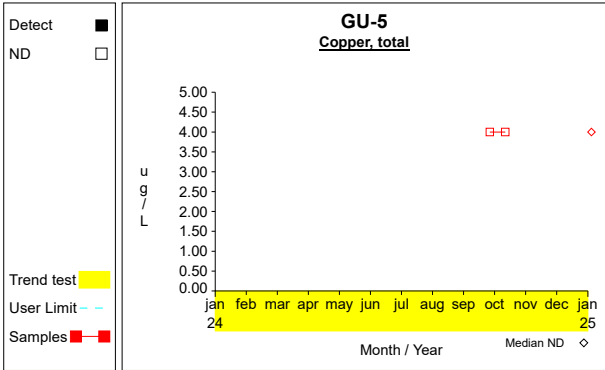
Graph 50



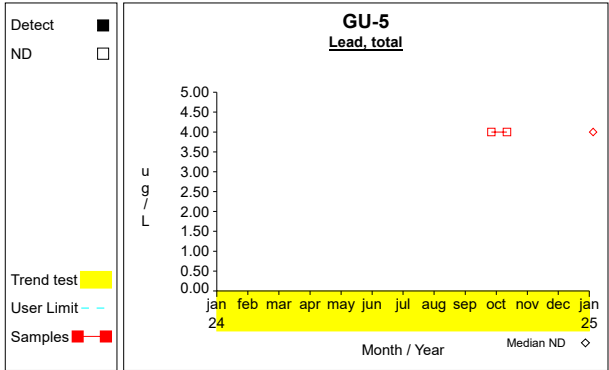
Graph 51



Graph 52

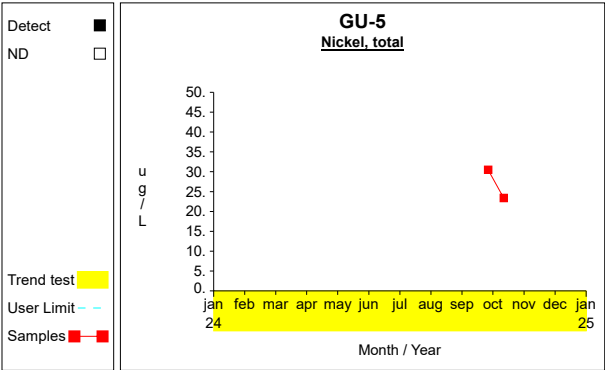


Graph 53

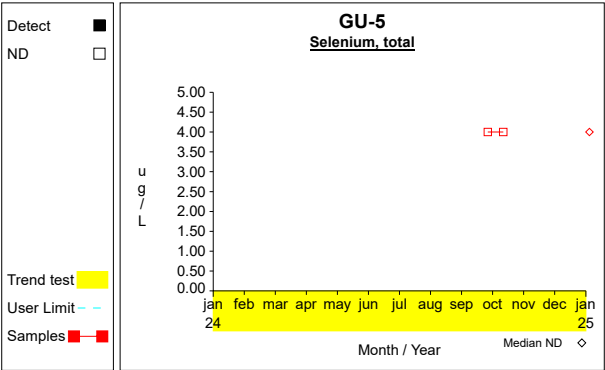


Graph 54

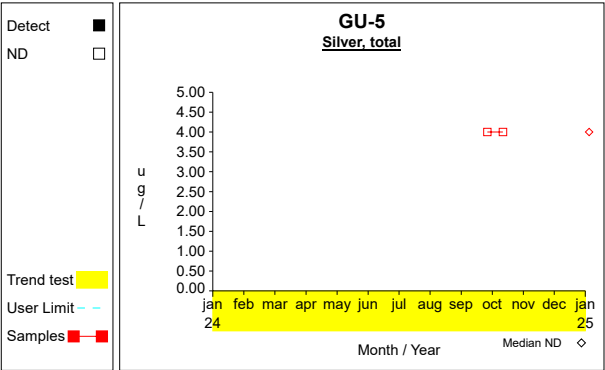
Time Series



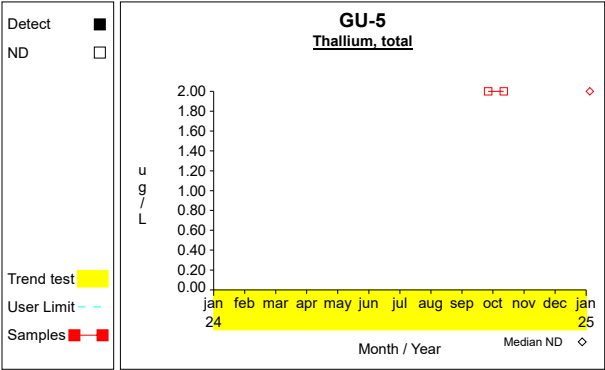
Graph 55



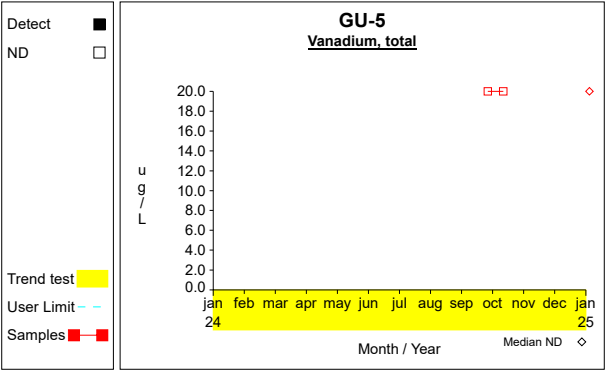
Graph 56



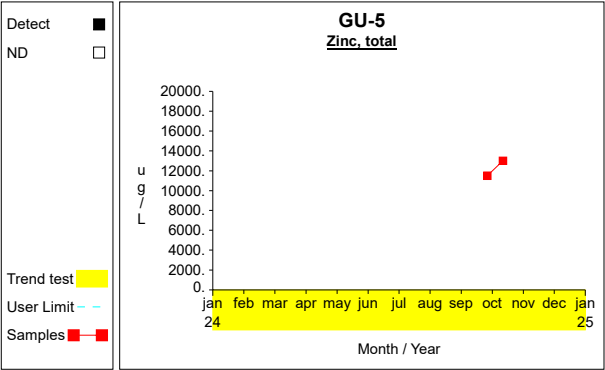
Graph 57



Graph 58

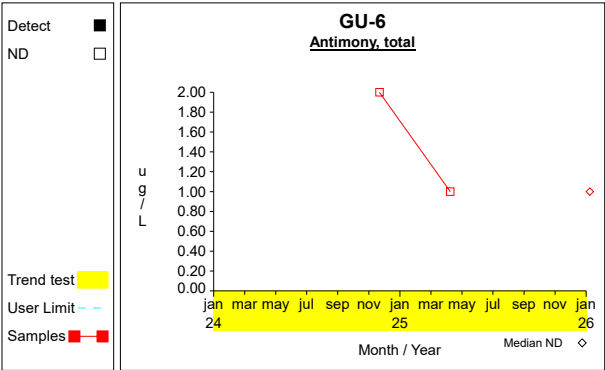


Graph 59

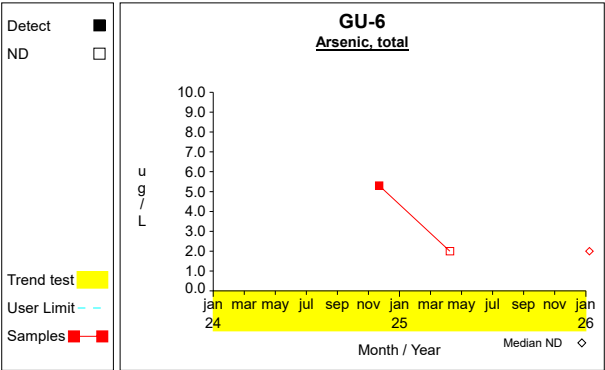


Graph 60

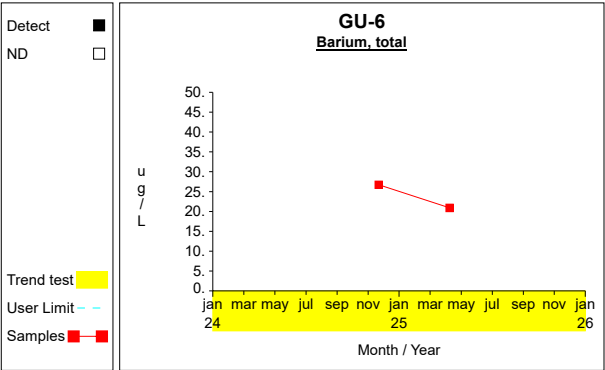
Time Series



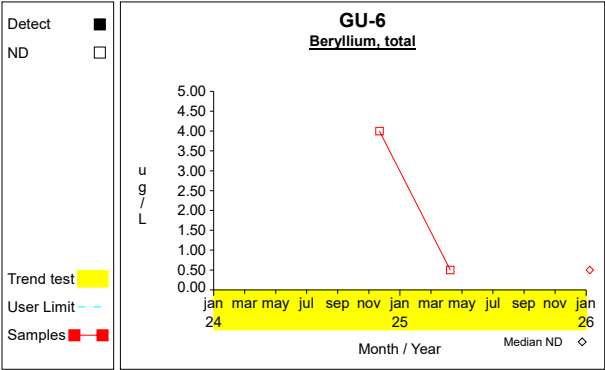
Graph 61



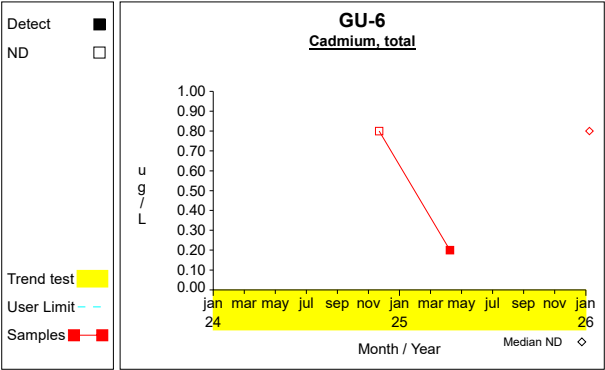
Graph 62



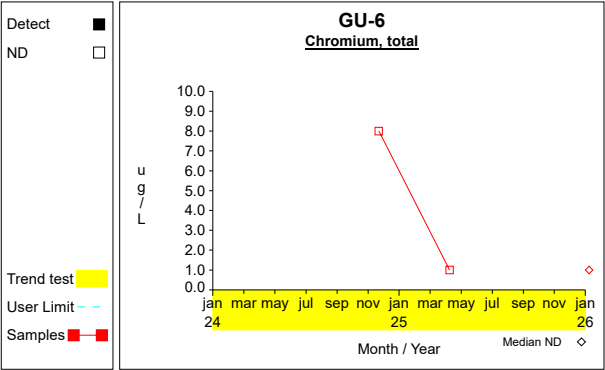
Graph 63



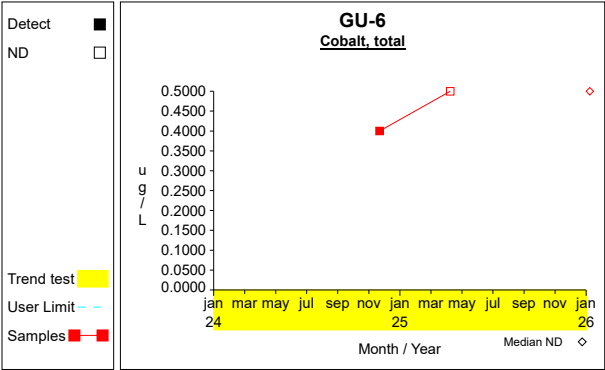
Graph 64



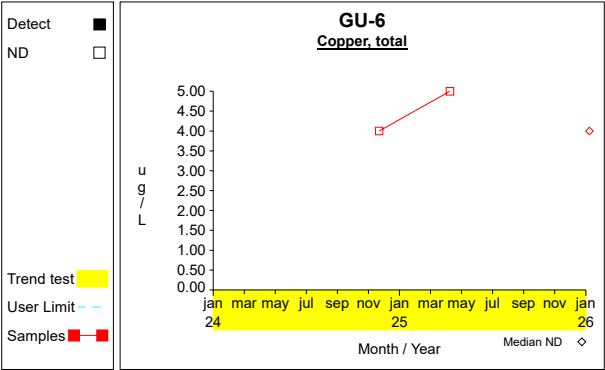
Graph 65



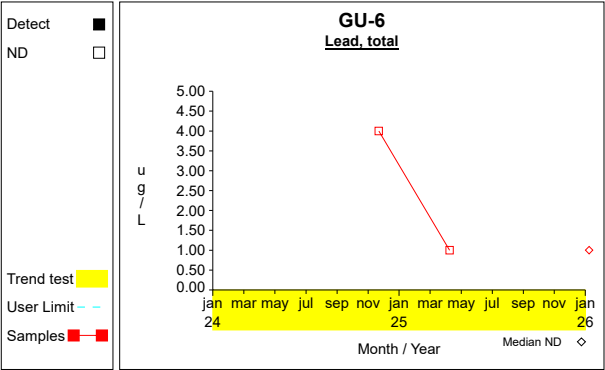
Graph 66



Graph 67

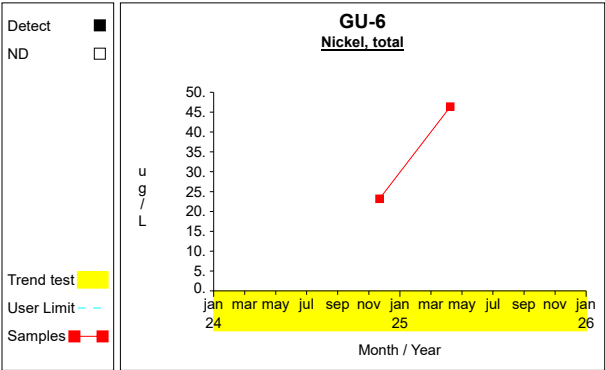


Graph 68

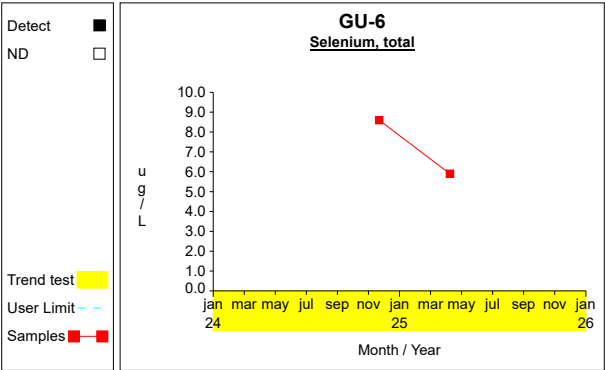


Graph 69

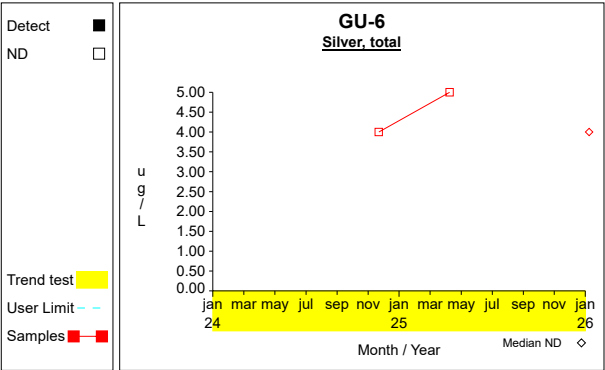
Time Series



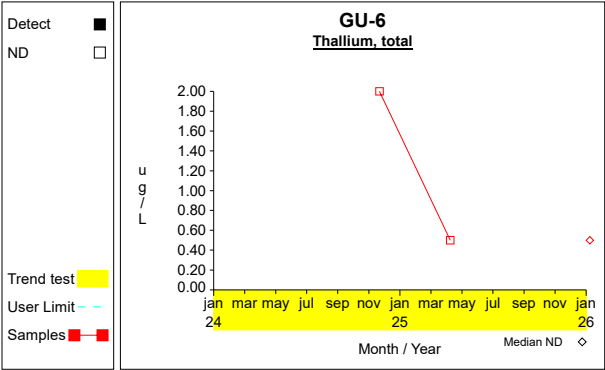
Graph 70



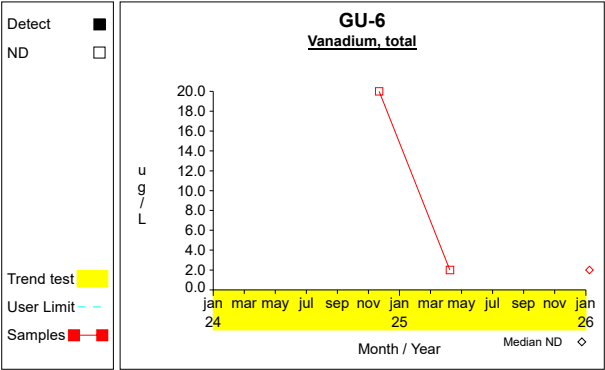
Graph 71



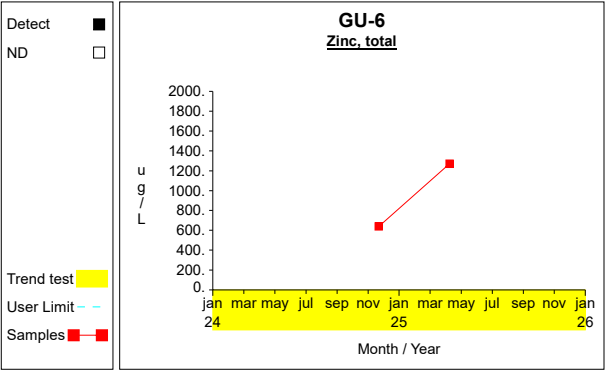
Graph 72



Graph 73

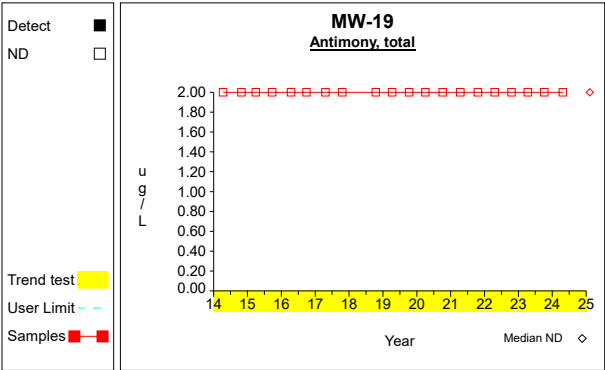


Graph 74

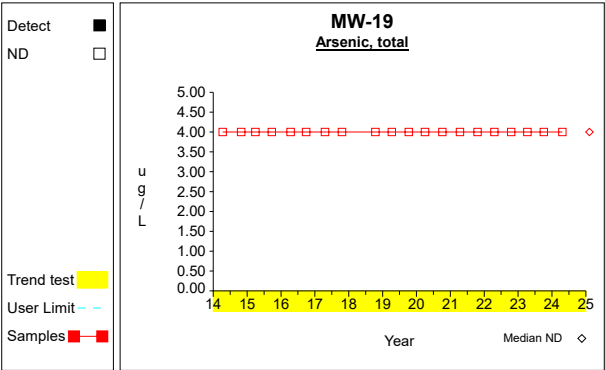


Graph 75

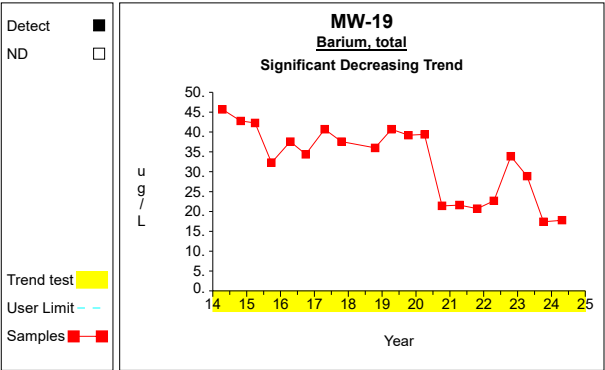
Time Series



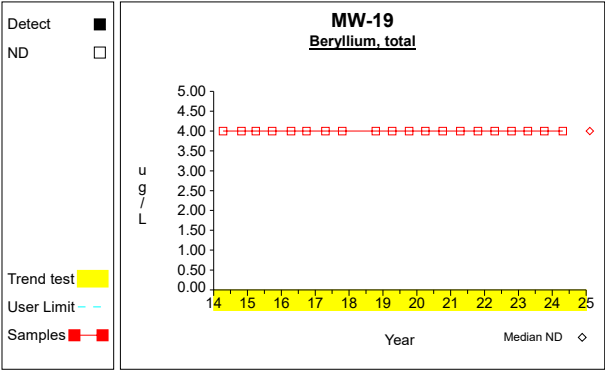
Graph 76



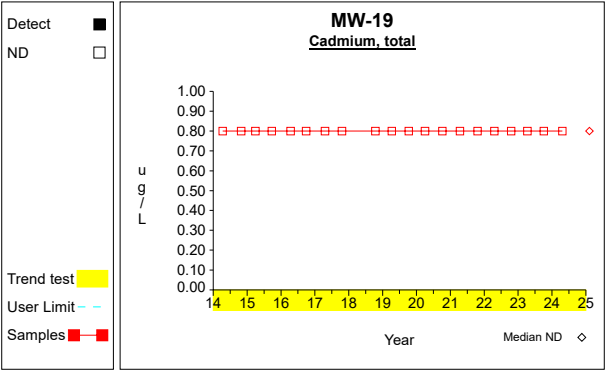
Graph 77



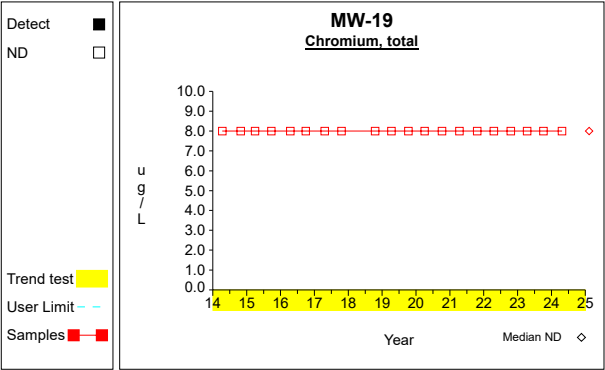
Graph 78



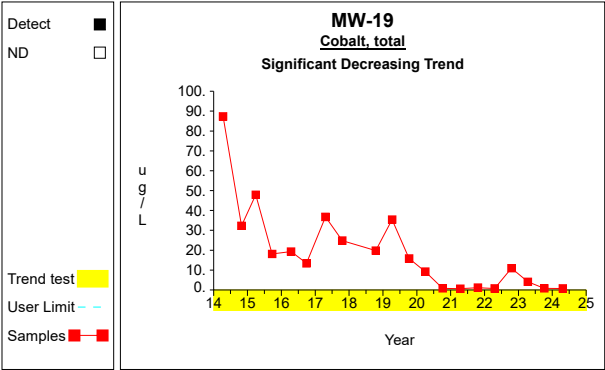
Graph 79



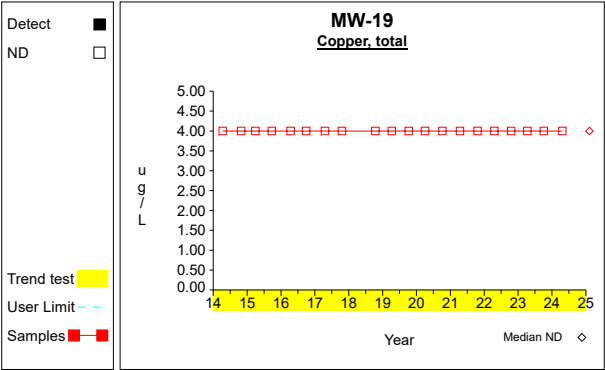
Graph 80



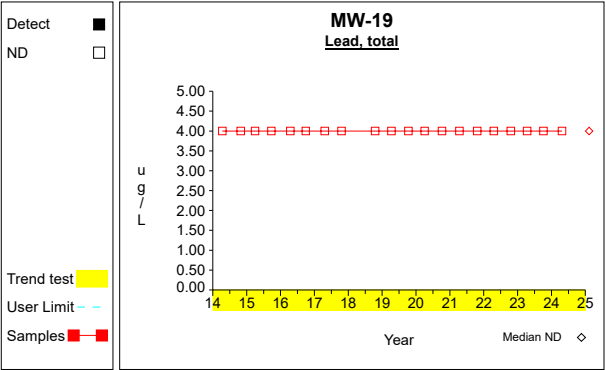
Graph 81



Graph 82

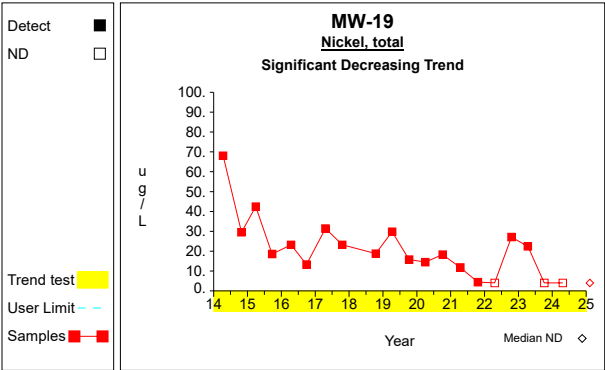


Graph 83

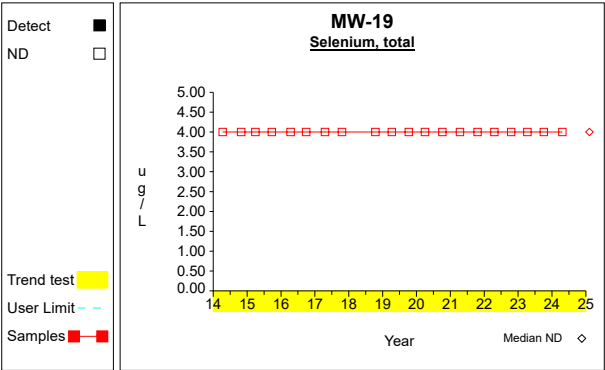


Graph 84

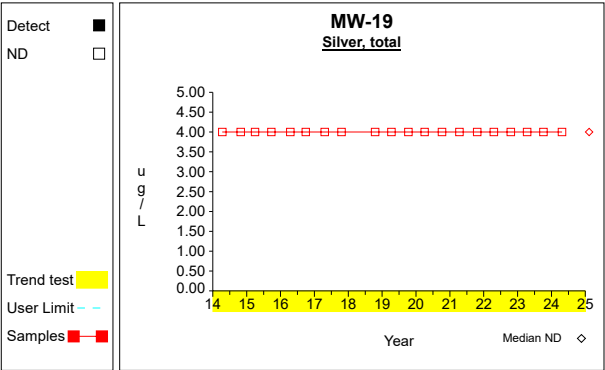
Time Series



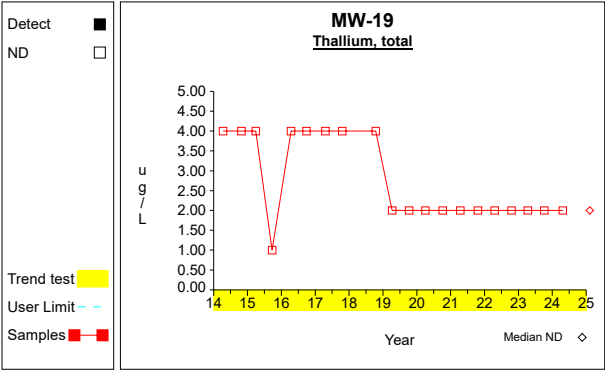
Graph 85



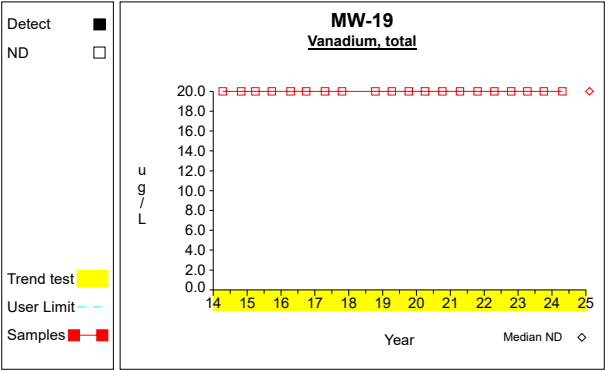
Graph 86



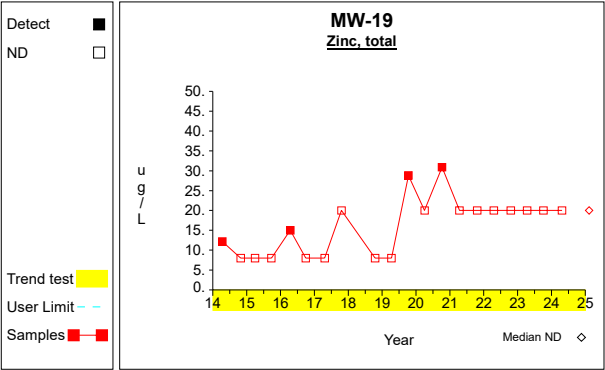
Graph 87



Graph 88

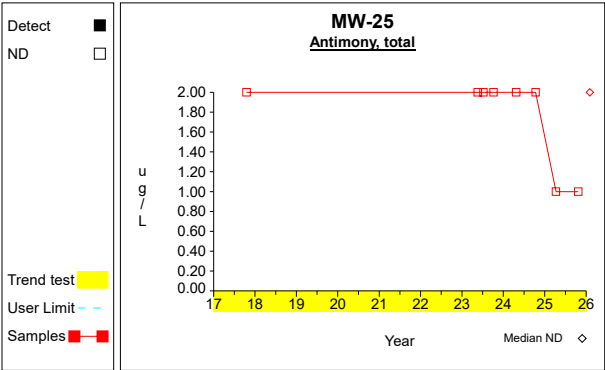


Graph 89

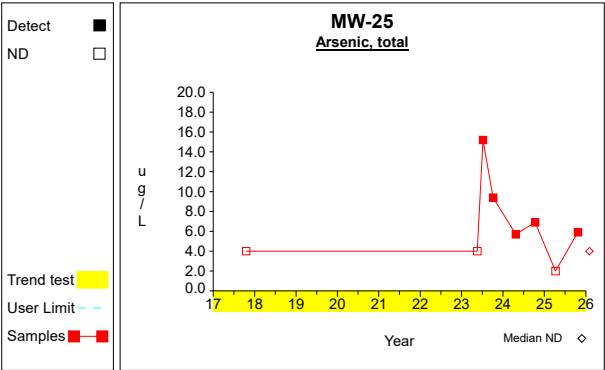


Graph 90

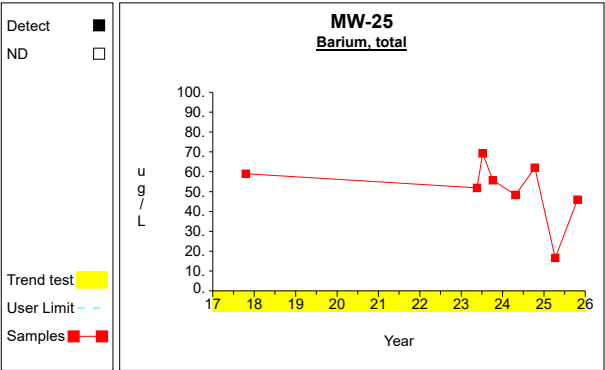
Time Series



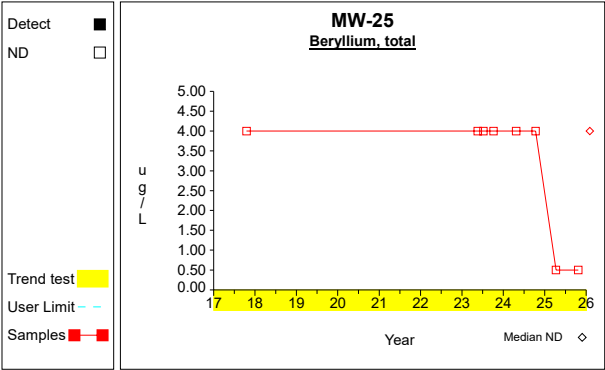
Graph 91



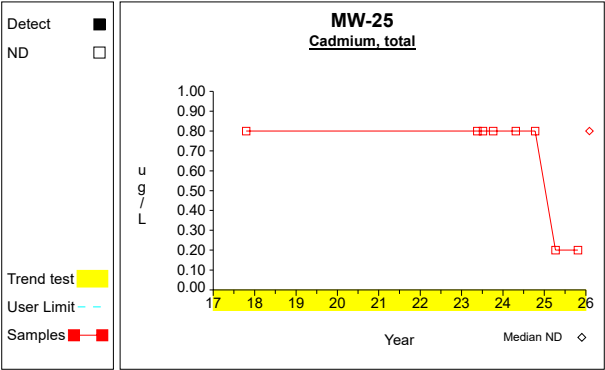
Graph 92



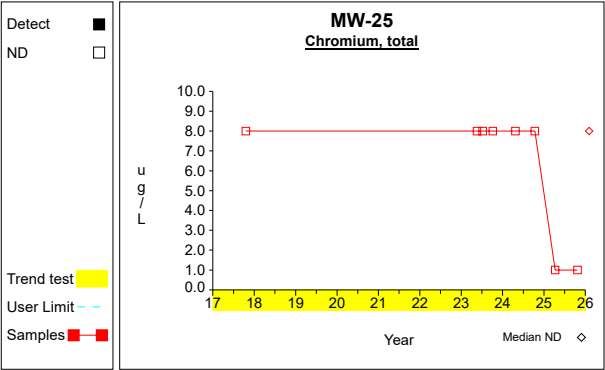
Graph 93



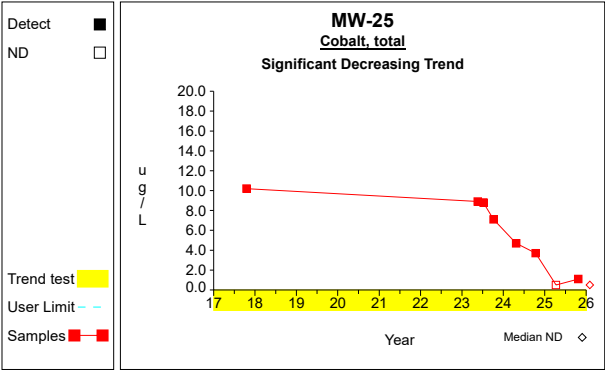
Graph 94



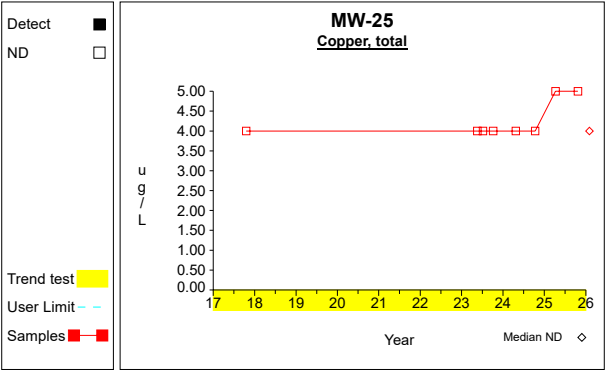
Graph 95



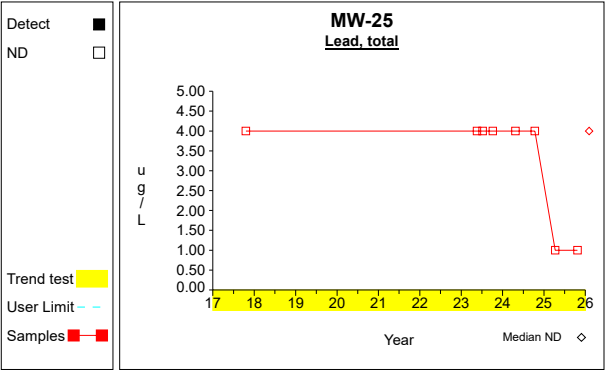
Graph 96



Graph 97

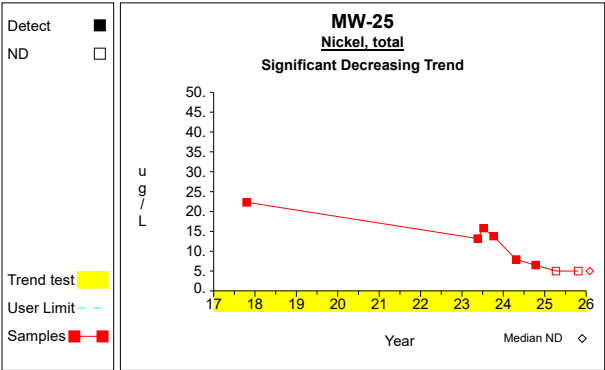


Graph 98

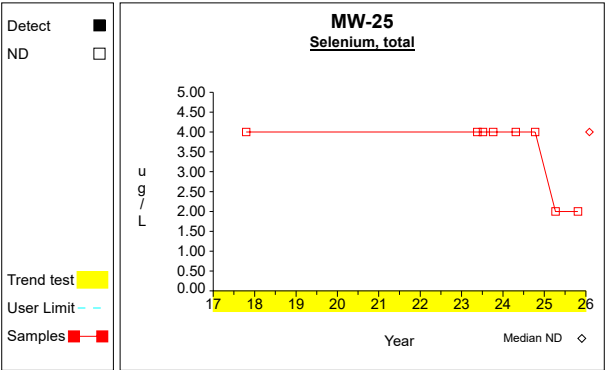


Graph 99

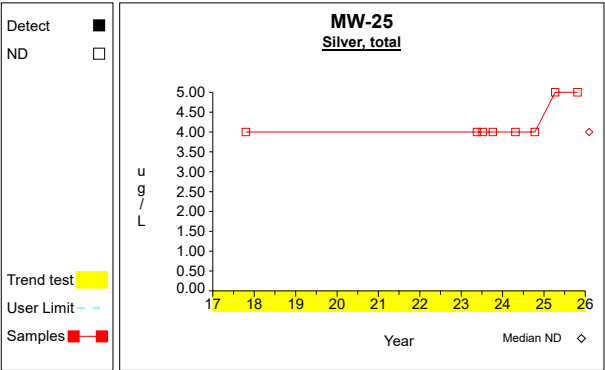
Time Series



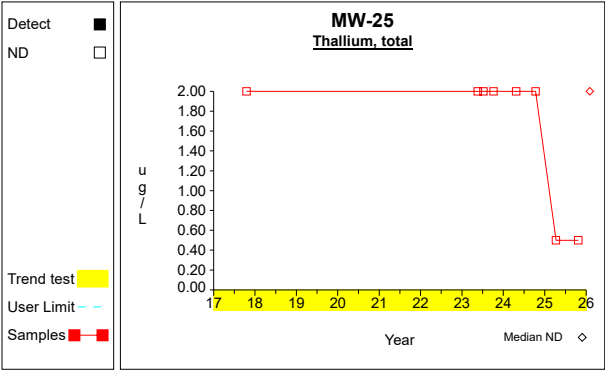
Graph 100



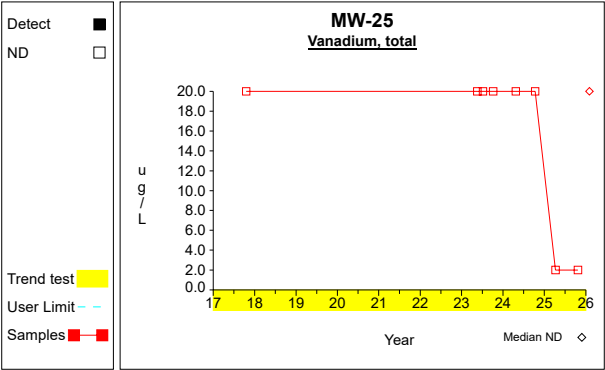
Graph 101



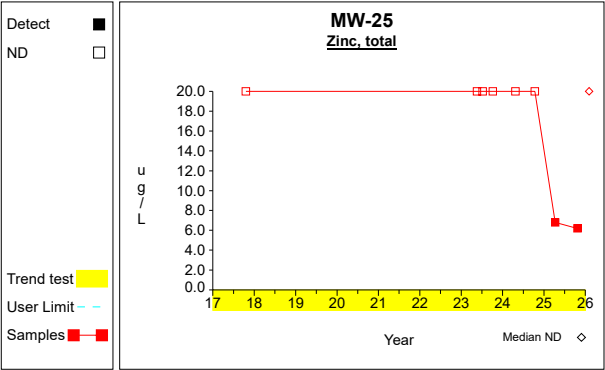
Graph 102



Graph 103

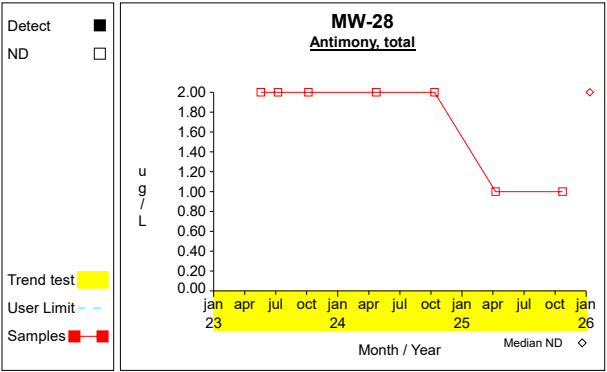


Graph 104

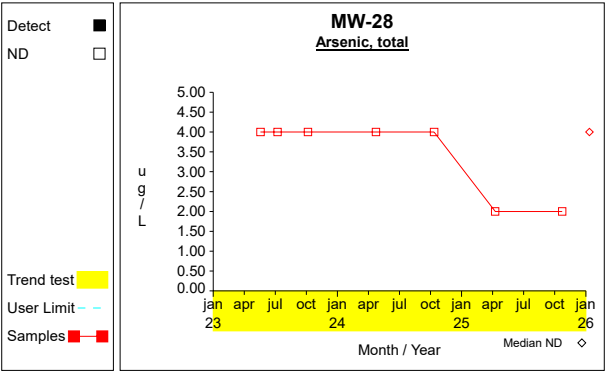


Graph 105

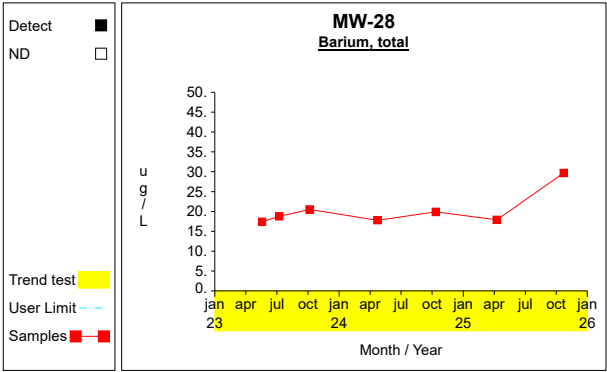
Time Series



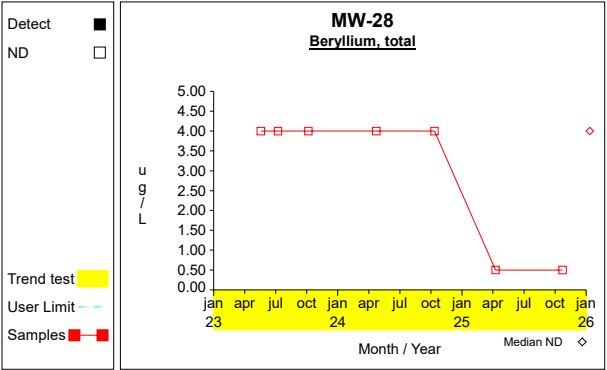
Graph 106



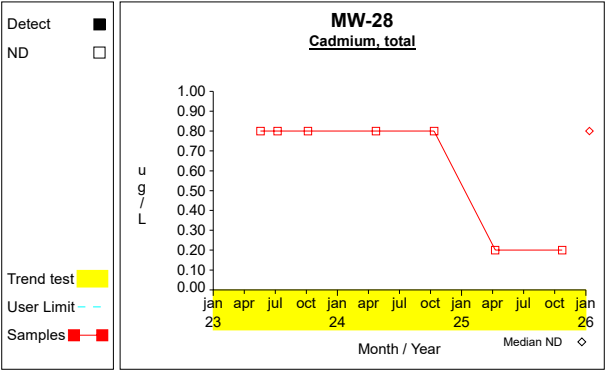
Graph 107



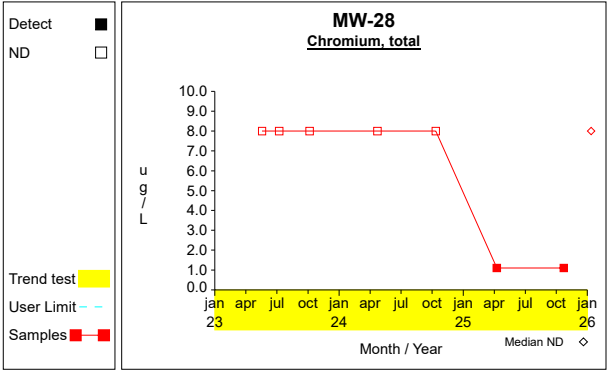
Graph 108



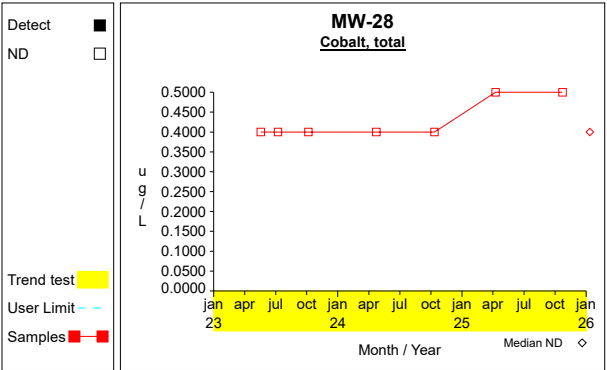
Graph 109



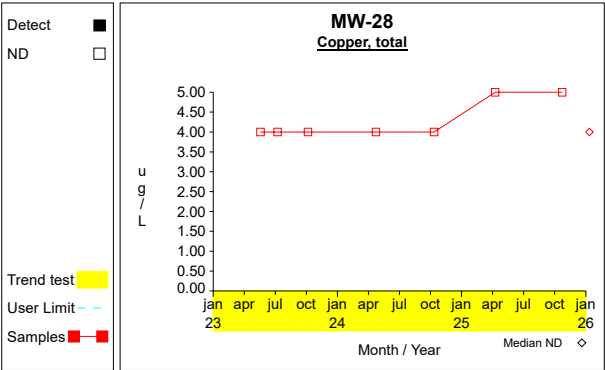
Graph 110



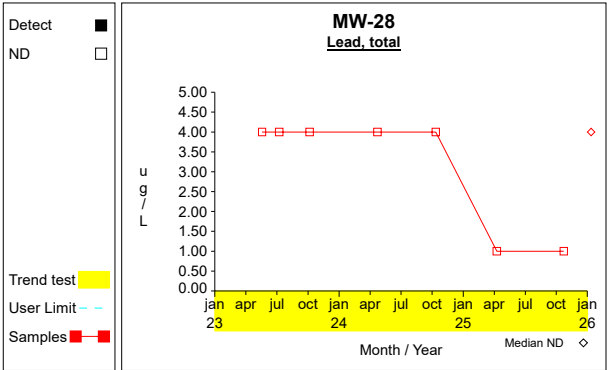
Graph 111



Graph 112

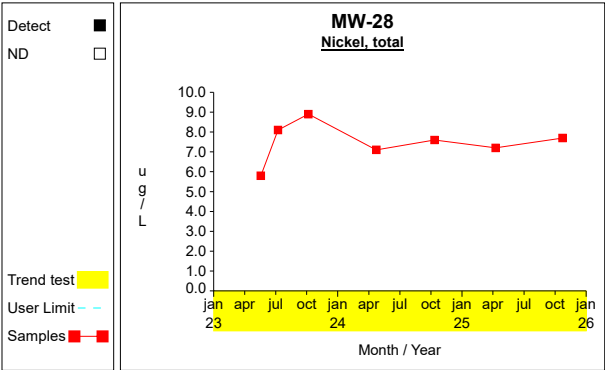


Graph 113

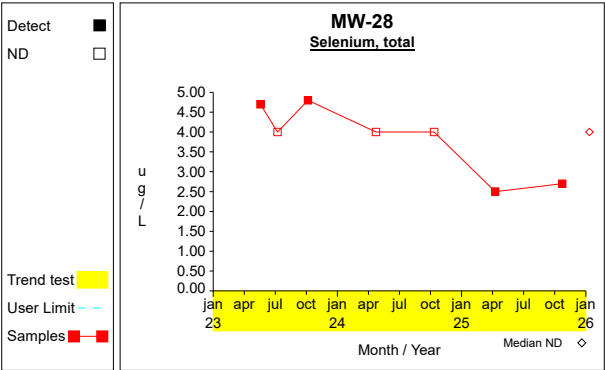


Graph 114

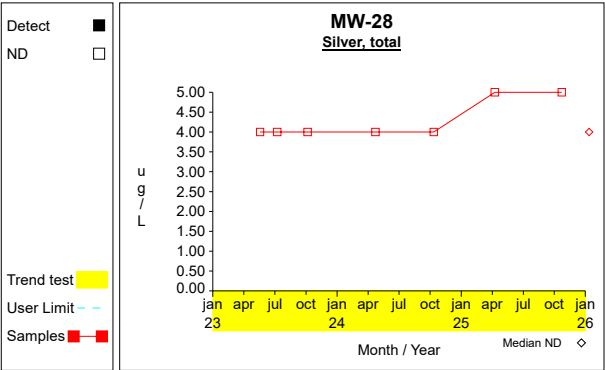
Time Series



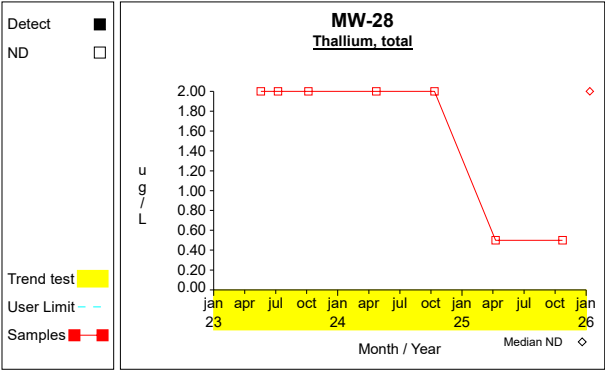
Graph 115



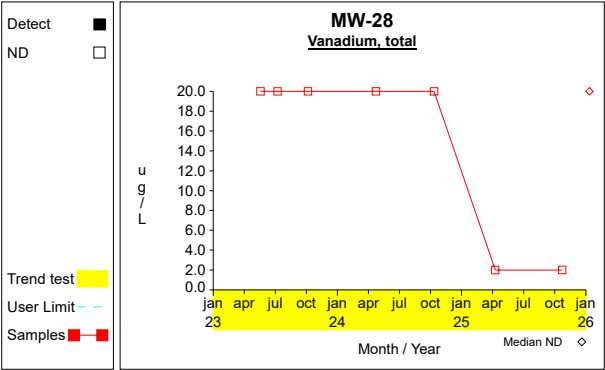
Graph 116



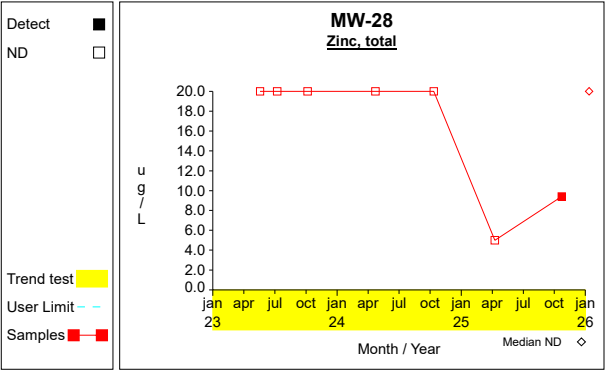
Graph 117



Graph 118

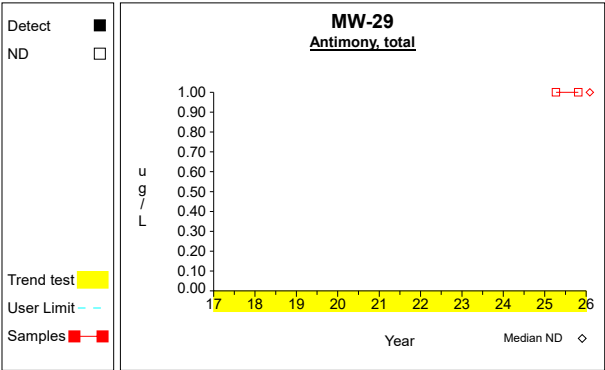


Graph 119

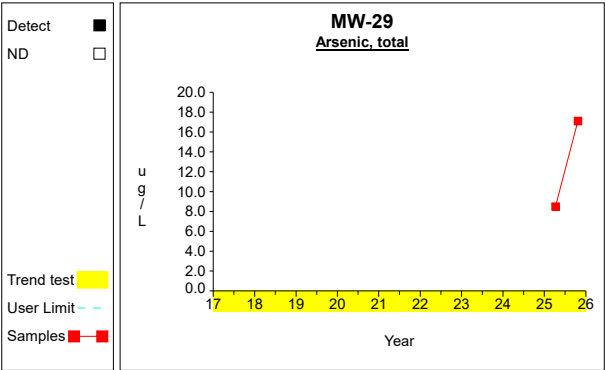


Graph 120

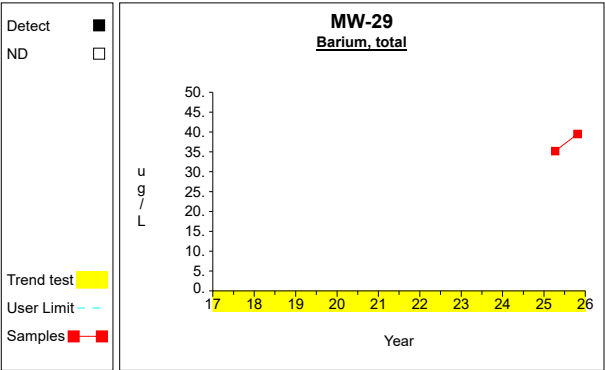
Time Series



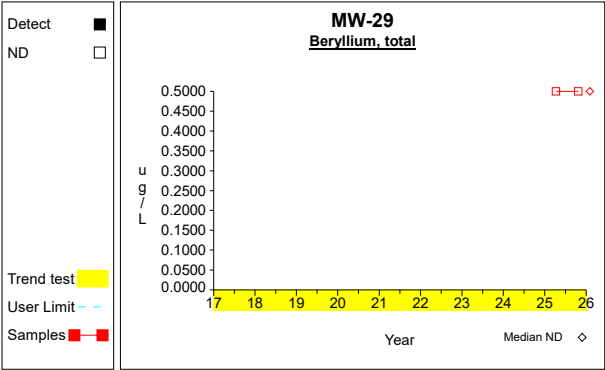
Graph 121



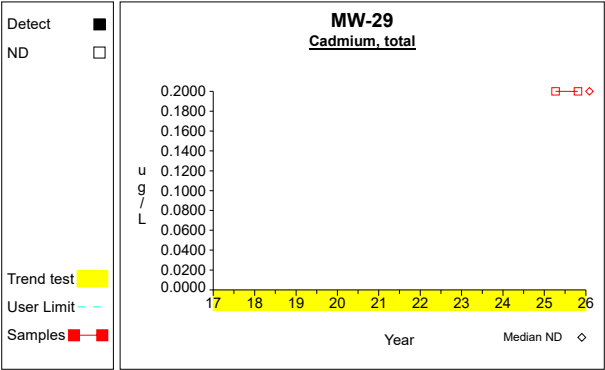
Graph 122



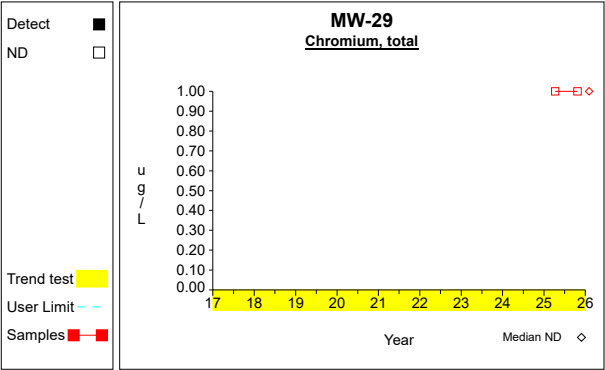
Graph 123



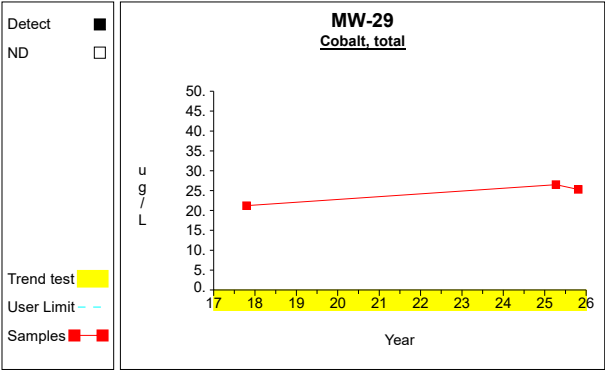
Graph 124



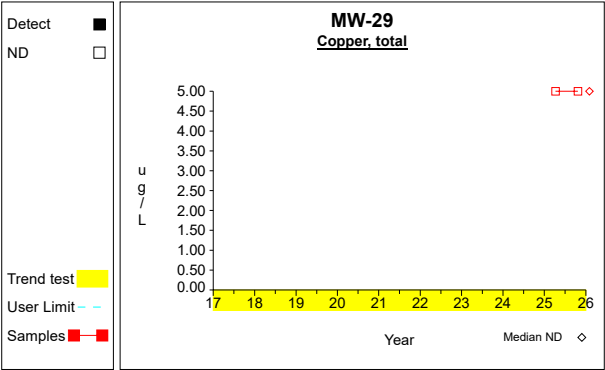
Graph 125



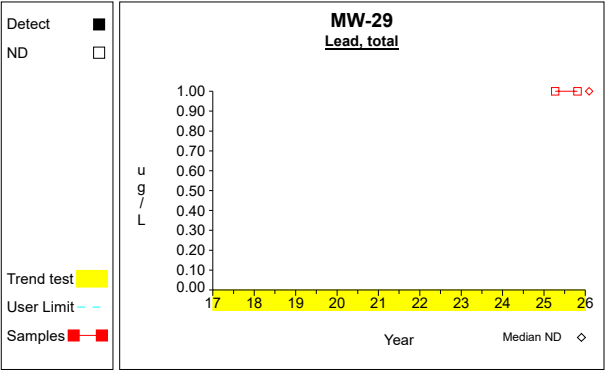
Graph 126



Graph 127

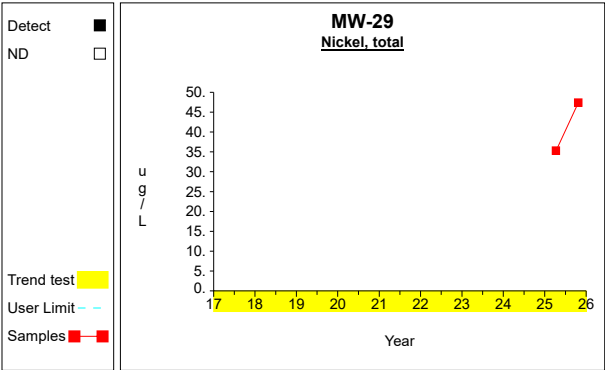


Graph 128

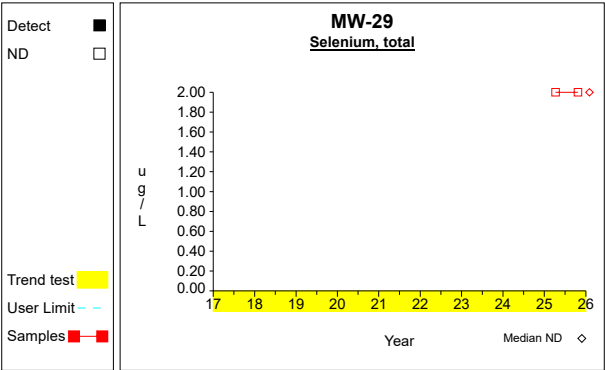


Graph 129

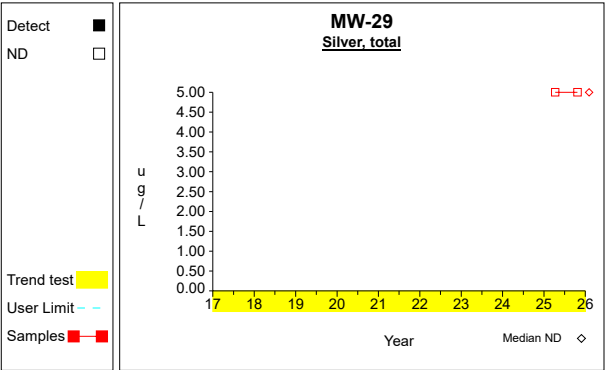
Time Series



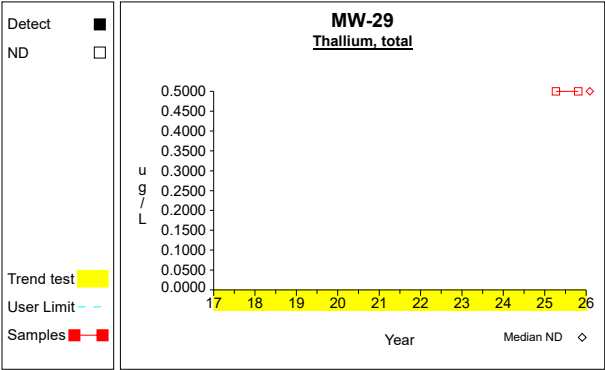
Graph 130



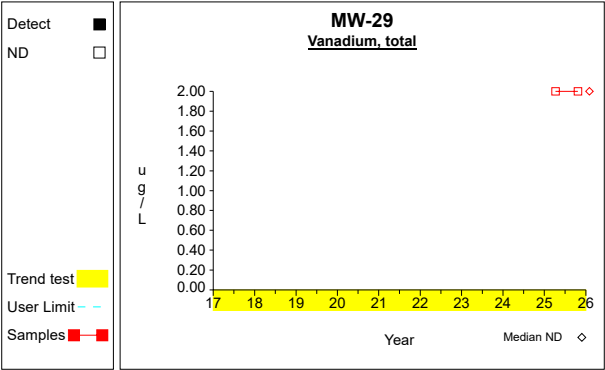
Graph 131



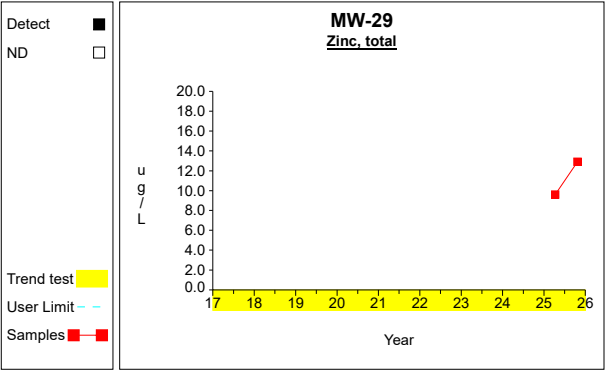
Graph 132



Graph 133

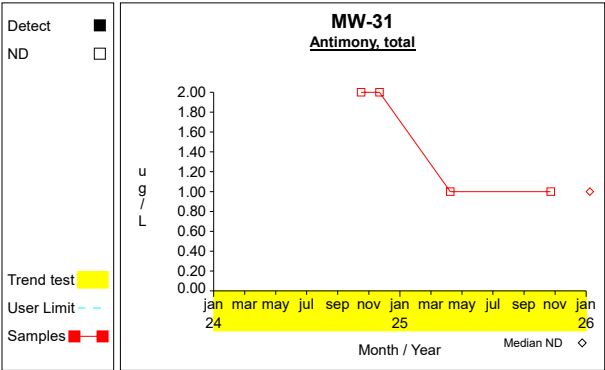


Graph 134

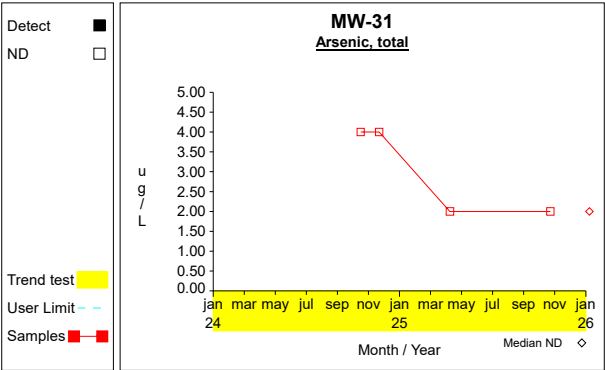


Graph 135

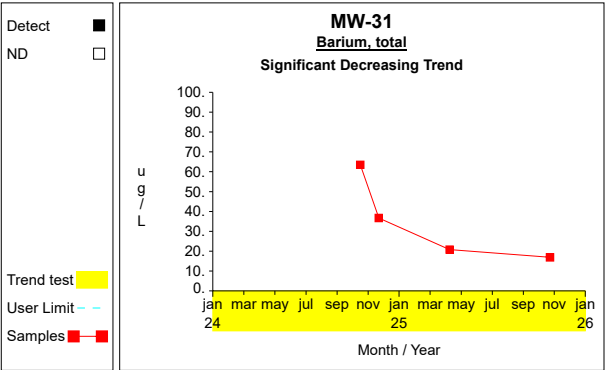
Time Series



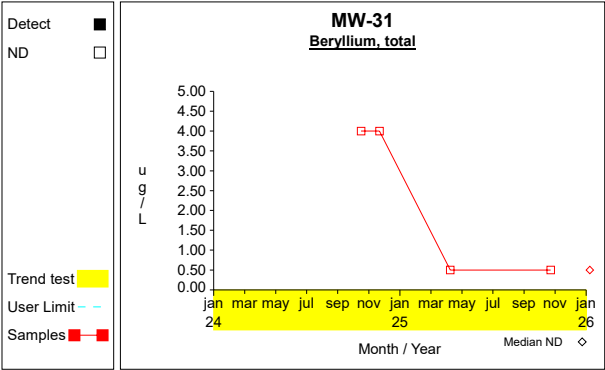
Graph 136



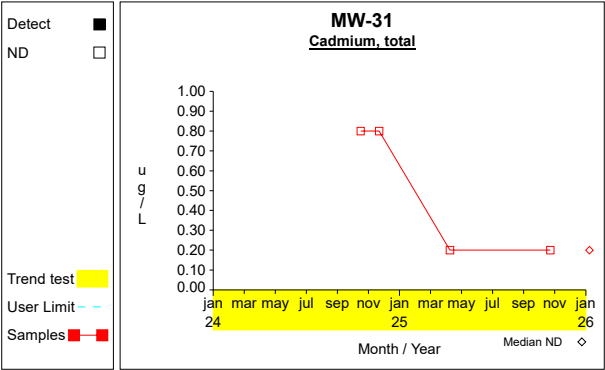
Graph 137



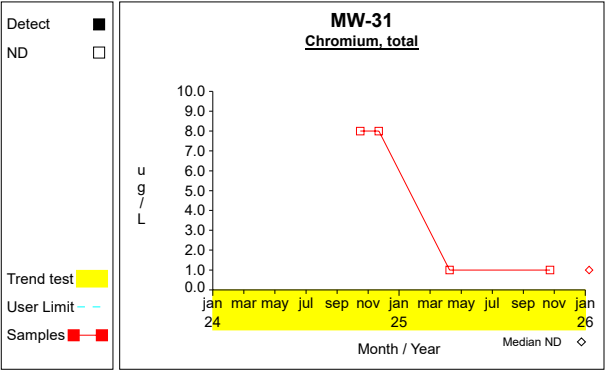
Graph 138



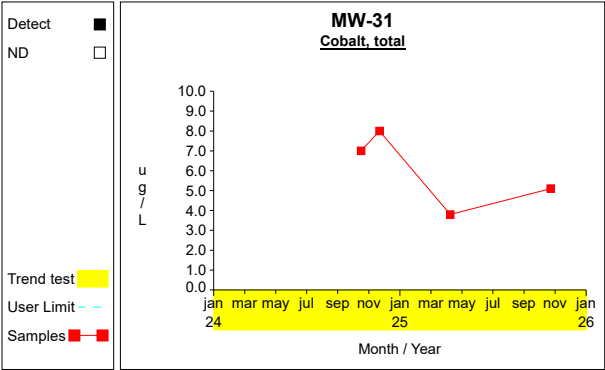
Graph 139



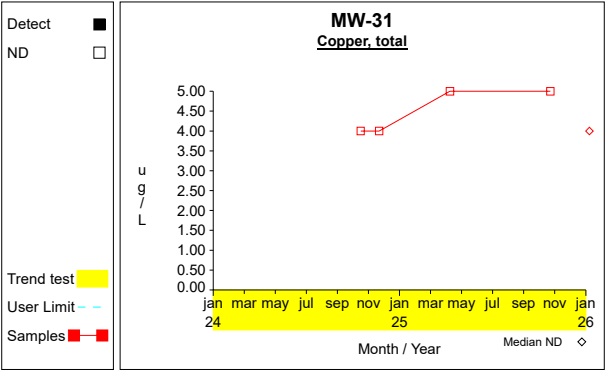
Graph 140



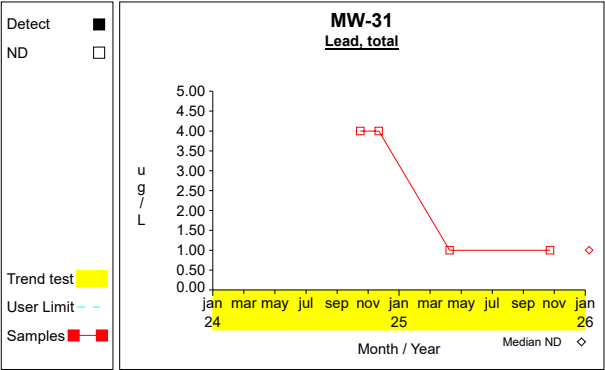
Graph 141



Graph 142

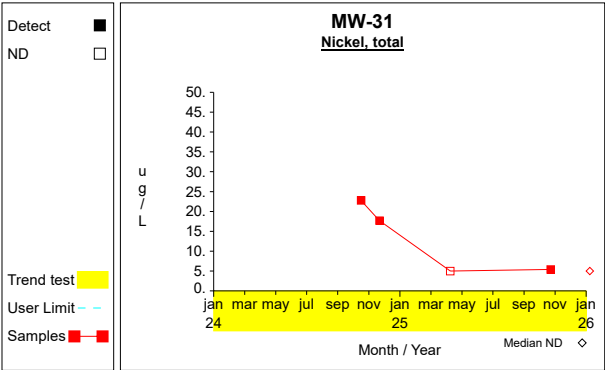


Graph 143

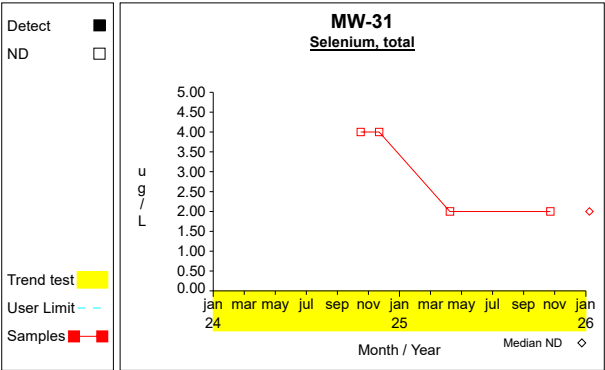


Graph 144

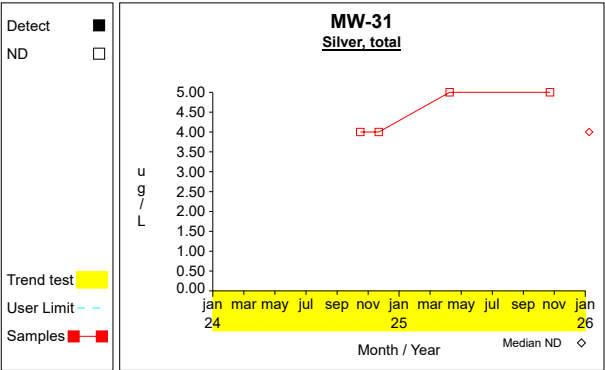
Time Series



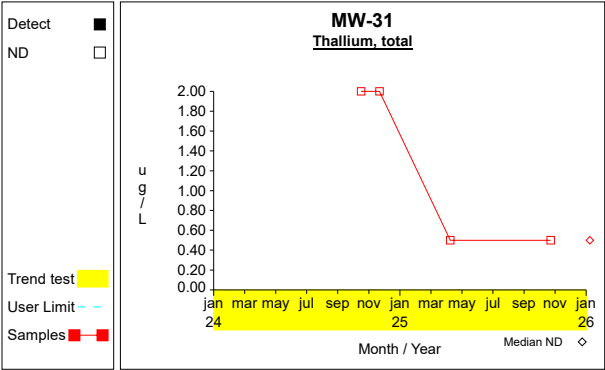
Graph 145



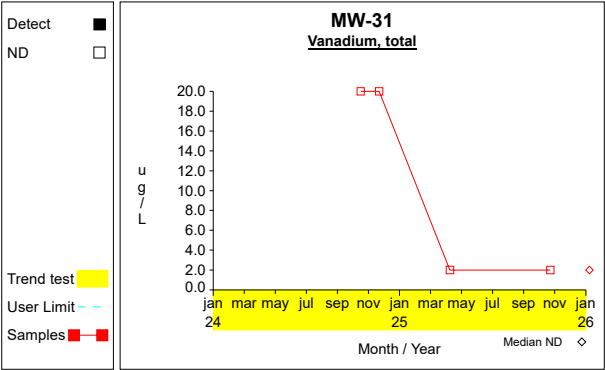
Graph 146



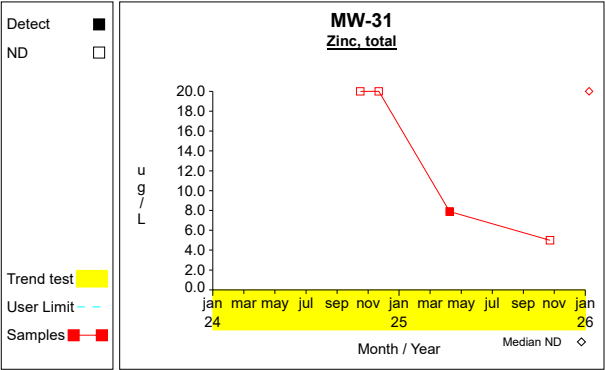
Graph 147



Graph 148

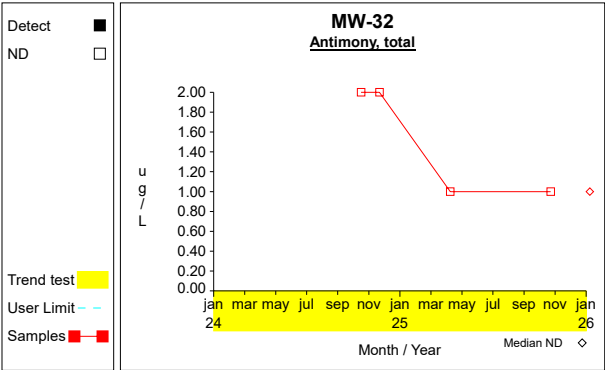


Graph 149

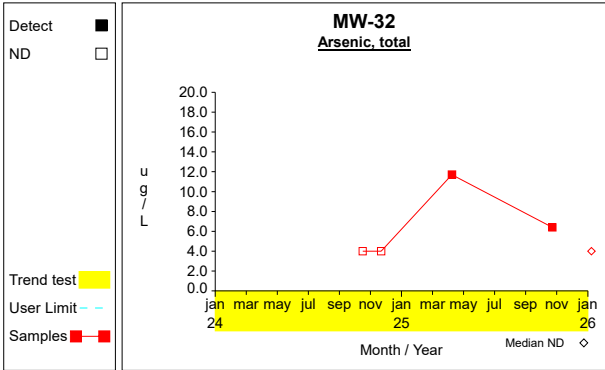


Graph 150

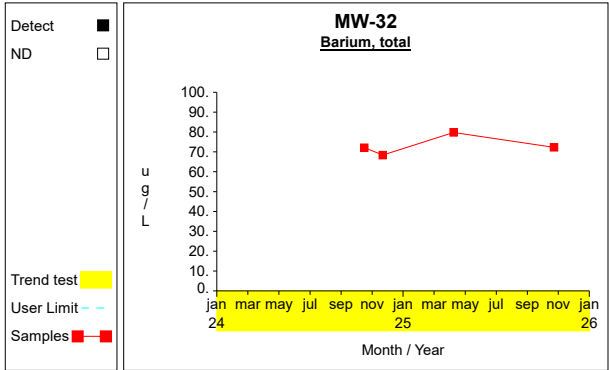
Time Series



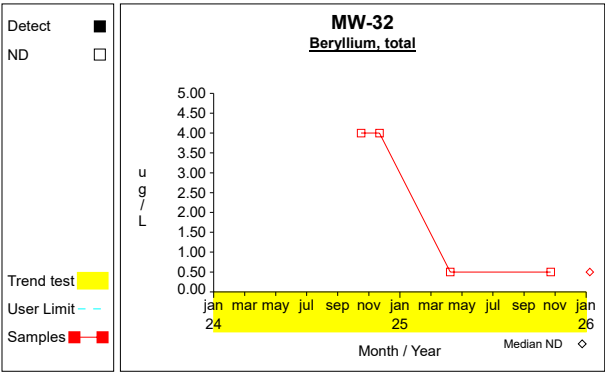
Graph 151



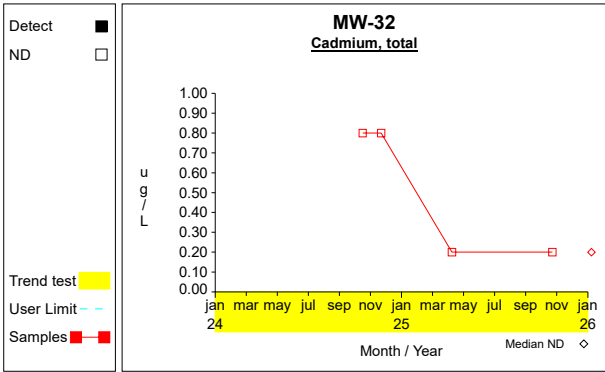
Graph 152



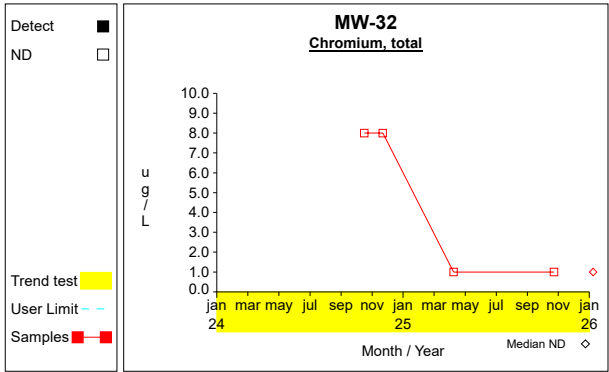
Graph 153



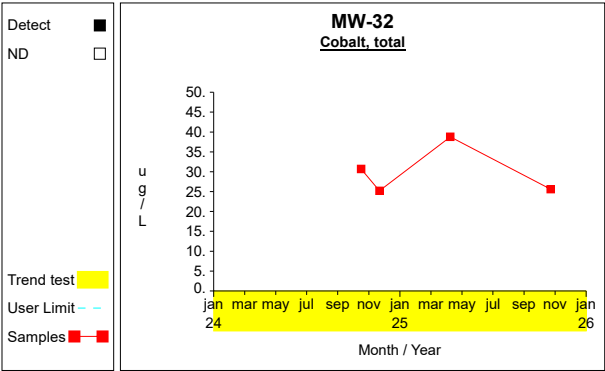
Graph 154



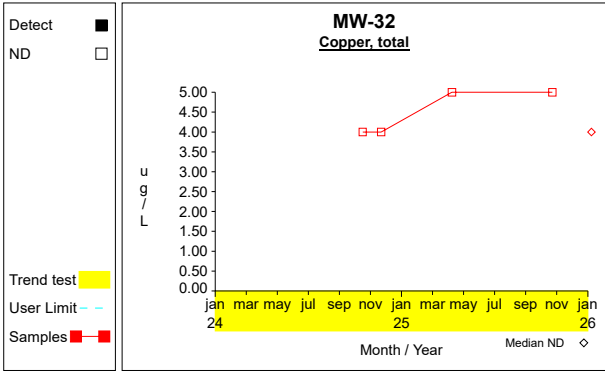
Graph 155



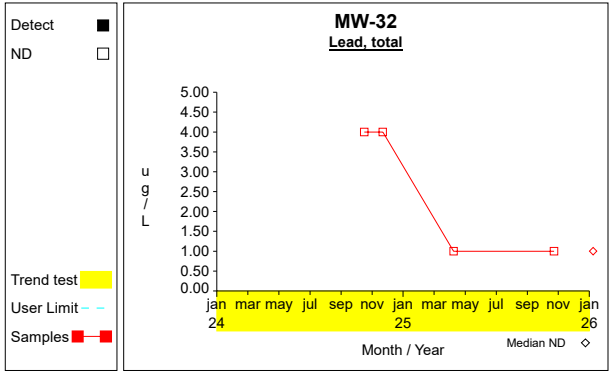
Graph 156



Graph 157

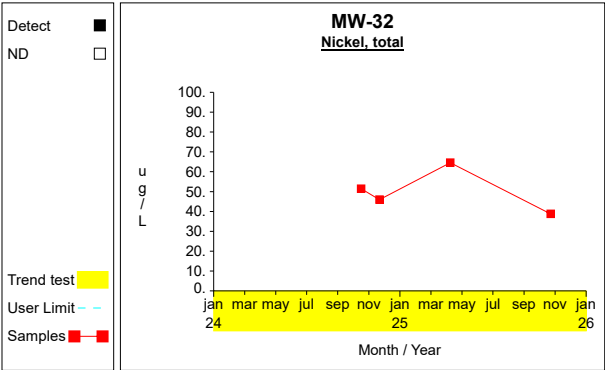


Graph 158

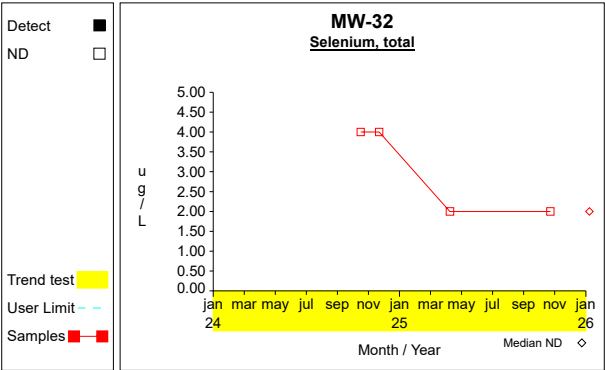


Graph 159

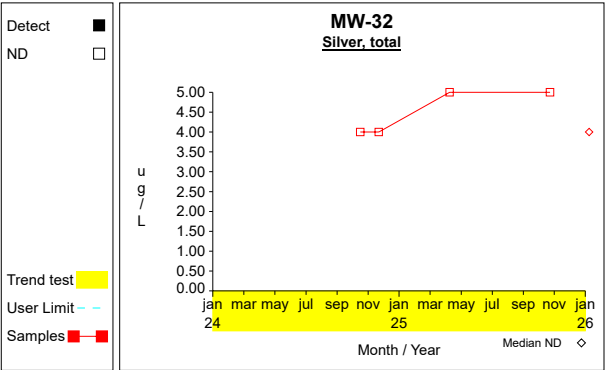
Time Series



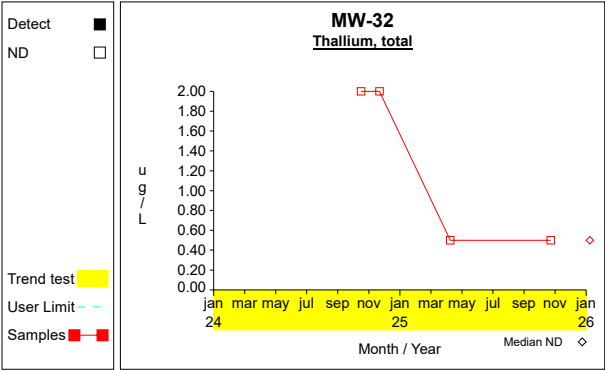
Graph 160



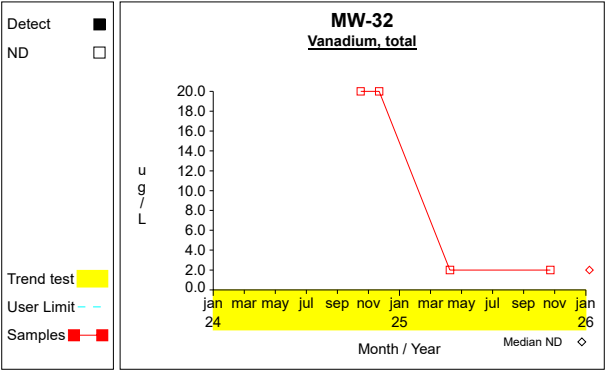
Graph 161



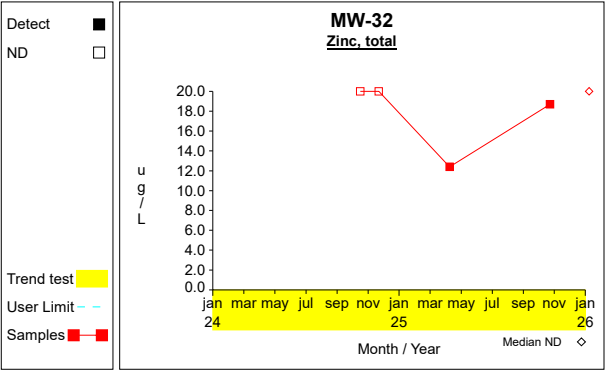
Graph 162



Graph 163



Graph 164



Graph 165

Appendix C

Laboratory Reports for Reporting Period *With Chain of Custody*



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID1083

Project Description

6030

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Tuesday, June 24, 2025

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

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

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID1083

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6030

Project / PO Number: N/A
Received: 04/09/2025
Reported: 06/24/2025

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
MW-10A	1ID1083-01	Aqueous	GRAB		04/08/25 11:07	04/09/25 09:07
MW-10B	1ID1083-02	Aqueous	GRAB		04/08/25 11:14	04/09/25 09:07
MW-18	1ID1083-03	Aqueous	GRAB		04/08/25 11:29	04/09/25 09:07
MW-20	1ID1083-04	Aqueous	GRAB		04/08/25 12:00	04/09/25 09:07
MW-21R	1ID1083-05	Aqueous	GRAB		04/08/25 12:13	04/09/25 09:07
MW-22	1ID1083-06	Aqueous	GRAB		04/08/25 12:31	04/09/25 09:07
MW-30	1ID1083-07	Aqueous	GRAB		04/08/25 09:55	04/09/25 09:07
Duplicate	1ID1083-08	Aqueous	GRAB		04/08/25 00:00	04/09/25 09:07
MW-25	1ID1083-09	Aqueous	GRAB		04/08/25 10:22	04/09/25 09:07
MW-28	1ID1083-10	Aqueous	GRAB		04/08/25 10:44	04/09/25 09:07
MW-29	1ID1083-11	Aqueous	GRAB		04/08/25 11:40	04/09/25 09:07
MW-31	1ID1083-12	Aqueous	GRAB		04/08/25 09:20	04/09/25 09:07
MW-32	1ID1083-13	Aqueous	GRAB		04/08/25 08:53	04/09/25 09:07
GU-4	1ID1083-14	Aqueous	GRAB		04/08/25 09:30	04/09/25 09:07
GU-6	1ID1083-15	Aqueous	GRAB		04/08/25 08:42	04/09/25 09:07



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CERTIFICATE OF ANALYSIS

1ID1083

Analytical Testing Parameters

Client Sample ID:	MW-10A	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/08/2025 11:07
Lab Sample ID:	1ID1083-01		

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Vinyl Chloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Bromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Chloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Acetone	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Methyl Iodide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Carbon Disulfide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Methylene Chloride	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Acrylonitrile	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Vinyl Acetate	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Bromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Chloroform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Benzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Trichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Dibromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Bromodichloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Toluene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Dibromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Chlorobenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Ethylbenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Xylenes, total	<2.0	2.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Styrene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: MW-10A
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-01

Collected By: Whipple, Todd
Collection Date: 04/08/2025 11:07

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
Bromoform		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,2,3-Trichloropropane		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1729	RAF
Surrogate: Dibromofluoromethane	77.8	Limit: 75-136	% Rec			04/10/25 0000	04/10/25 1729	RAF
Surrogate: Dibromofluoromethane	77.8	Limit: 57-134	% Rec			04/10/25 0000	04/10/25 1729	RAF
Surrogate: 1,2-Dichloroethane-d4	72.4	Limit: 61-142	% Rec			04/10/25 0000	04/10/25 1729	RAF
Surrogate: 1,2-Dichloroethane-d4	72.4	Limit: 53-140	% Rec			04/10/25 0000	04/10/25 1729	RAF
Surrogate: Toluene-d8	106	Limit: 82-121	% Rec			04/10/25 0000	04/10/25 1729	RAF
Surrogate: Toluene-d8	106	Limit: 86-114	% Rec			04/10/25 0000	04/10/25 1729	RAF
Surrogate: 4-Bromofluorobenzene	89.8	Limit: 80-116	% Rec			04/10/25 0000	04/10/25 1729	RAF
Surrogate: 4-Bromofluorobenzene	89.8	Limit: 78-121	% Rec			04/10/25 0000	04/10/25 1729	RAF

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1637	RVV
Arsenic, total	0.0030		0.0020	mg/L		04/28/25 1606	06/20/25 1637	RVV
Barium, total	0.0419		0.0010	mg/L		04/28/25 1606	06/20/25 1637	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1637	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1637	RVV
Chromium, total	0.0010		0.0010	mg/L		04/28/25 1606	06/20/25 1637	RVV
Cobalt, total	0.0016		0.0005	mg/L		04/28/25 1606	06/20/25 1637	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1637	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1637	RVV
Nickel, total	0.0210		0.0050	mg/L		04/28/25 1606	06/20/25 1637	RVV
Selenium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1637	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1637	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1637	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1637	RVV
Zinc, total	0.0427		0.0050	mg/L		04/28/25 1606	06/20/25 1637	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-10B
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-02

Collected By: Whipple, Todd
Collection Date: 04/08/2025 11:14

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Vinyl Chloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Bromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Chloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Acetone	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Methyl Iodide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Carbon Disulfide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Methylene Chloride	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Acrylonitrile	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Vinyl Acetate	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Bromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Chloroform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Benzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Trichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Dibromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Bromodichloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Toluene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Dibromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Chlorobenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Ethylbenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Xylenes, total	<2.0	2.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Styrene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Bromoform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-10B
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-02

Collected By: Whipple, Todd
Collection Date: 04/08/2025 11:14

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1751	RAF
Surrogate: Dibromofluoromethane	70.3	Limit: 75-136	% Rec		S1	04/10/25 0000	04/10/25 1751	RAF
Surrogate: Dibromofluoromethane	70.3	Limit: 57-134	% Rec			04/10/25 0000	04/10/25 1751	RAF
Surrogate: 1,2-Dichloroethane-d4	68.6	Limit: 61-142	% Rec			04/10/25 0000	04/10/25 1751	RAF
Surrogate: 1,2-Dichloroethane-d4	68.6	Limit: 53-140	% Rec			04/10/25 0000	04/10/25 1751	RAF
Surrogate: Toluene-d8	105	Limit: 86-114	% Rec			04/10/25 0000	04/10/25 1751	RAF
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec			04/10/25 0000	04/10/25 1751	RAF
Surrogate: 4-Bromofluorobenzene	89.1	Limit: 80-116	% Rec			04/10/25 0000	04/10/25 1751	RAF
Surrogate: 4-Bromofluorobenzene	89.1	Limit: 78-121	% Rec			04/10/25 0000	04/10/25 1751	RAF

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1640	RVV
Arsenic, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1640	RVV
Barium, total	0.0295		0.0010	mg/L		04/28/25 1606	06/20/25 1640	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1640	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1640	RVV
Chromium, total	0.0010		0.0010	mg/L		04/28/25 1606	06/20/25 1640	RVV
Cobalt, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1640	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1640	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1640	RVV
Nickel, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1640	RVV
Selenium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1640	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1640	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1640	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1640	RVV
Zinc, total	0.0076		0.0050	mg/L		04/28/25 1606	06/20/25 1640	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-18
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-03

Collected By: Whipple, Todd
Collection Date: 04/08/2025 11:29

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Vinyl Chloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Bromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Chloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Acetone	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Methyl Iodide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Carbon Disulfide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Methylene Chloride	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Acrylonitrile	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Vinyl Acetate	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Bromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Chloroform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Benzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Trichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Dibromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Bromodichloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Toluene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Dibromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Chlorobenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Ethylbenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Xylenes, total	<2.0	2.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Styrene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Bromoform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: MW-18
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-03

Collected By: Whipple, Todd
Collection Date: 04/08/2025 11:29

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1814	RAF
Surrogate: Dibromofluoromethane	72.8	Limit: 75-136	% Rec		S1	04/10/25 0000	04/10/25 1814	RAF
Surrogate: Dibromofluoromethane	72.8	Limit: 57-134	% Rec			04/10/25 0000	04/10/25 1814	RAF
Surrogate: 1,2-Dichloroethane-d4	66.8	Limit: 61-142	% Rec			04/10/25 0000	04/10/25 1814	RAF
Surrogate: 1,2-Dichloroethane-d4	66.8	Limit: 53-140	% Rec			04/10/25 0000	04/10/25 1814	RAF
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec			04/10/25 0000	04/10/25 1814	RAF
Surrogate: Toluene-d8	105	Limit: 86-114	% Rec			04/10/25 0000	04/10/25 1814	RAF
Surrogate: 4-Bromofluorobenzene	87.4	Limit: 80-116	% Rec			04/10/25 0000	04/10/25 1814	RAF
Surrogate: 4-Bromofluorobenzene	87.4	Limit: 78-121	% Rec			04/10/25 0000	04/10/25 1814	RAF

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0010	0.0010	mg/L	M1	04/28/25 1606	06/20/25 1543	RVV	
Arsenic, total	<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Barium, total	0.0279	0.0010	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Beryllium, total	<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Cadmium, total	<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Chromium, total	0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Cobalt, total	0.0303	0.0005	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Copper, total	<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Lead, total	<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Nickel, total	0.0311	0.0050	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Selenium, total	<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Silver, total	<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Thallium, total	<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Vanadium, total	<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1543	RVV	
Zinc, total	0.0185	0.0050	mg/L		04/28/25 1606	06/20/25 1543	RVV	

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-20
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-04

Collected By: Whipple, Todd
Collection Date: 04/08/2025 12:00

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Vinyl Chloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Bromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Chloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Acetone	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Methyl Iodide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Carbon Disulfide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Methylene Chloride	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Acrylonitrile	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Vinyl Acetate	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Bromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Chloroform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Benzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Trichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Dibromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Bromodichloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Toluene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Dibromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Chlorobenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Ethylbenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Xylenes, total	<2.0	2.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Styrene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Bromoform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: MW-20
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-04

Collected By: Whipple, Todd
Collection Date: 04/08/2025 12:00

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1836	RAF
Surrogate: Dibromofluoromethane	74.0	Limit: 75-136	% Rec		S1	04/10/25 0000	04/10/25 1836	RAF
Surrogate: Dibromofluoromethane	74.0	Limit: 57-134	% Rec			04/10/25 0000	04/10/25 1836	RAF
Surrogate: 1,2-Dichloroethane-d4	65.9	Limit: 53-140	% Rec			04/10/25 0000	04/10/25 1836	RAF
Surrogate: 1,2-Dichloroethane-d4	65.9	Limit: 61-142	% Rec			04/10/25 0000	04/10/25 1836	RAF
Surrogate: Toluene-d8	106	Limit: 82-121	% Rec			04/10/25 0000	04/10/25 1836	RAF
Surrogate: Toluene-d8	106	Limit: 86-114	% Rec			04/10/25 0000	04/10/25 1836	RAF
Surrogate: 4-Bromofluorobenzene	87.3	Limit: 78-121	% Rec			04/10/25 0000	04/10/25 1836	RAF
Surrogate: 4-Bromofluorobenzene	87.3	Limit: 80-116	% Rec			04/10/25 0000	04/10/25 1836	RAF

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1558	RVV
Arsenic, total	0.0083		0.0020	mg/L		04/28/25 1606	06/20/25 1558	RVV
Barium, total	0.0653		0.0010	mg/L		04/28/25 1606	06/20/25 1558	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1558	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1558	RVV
Chromium, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1558	RVV
Cobalt, total	0.0010		0.0005	mg/L		04/28/25 1606	06/20/25 1558	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1558	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1558	RVV
Nickel, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1558	RVV
Selenium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1558	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1558	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1558	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1558	RVV
Zinc, total	0.0120		0.0050	mg/L		04/28/25 1606	06/20/25 1558	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-21R
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-05

Collected By: Whipple, Todd
Collection Date: 04/08/2025 12:13

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Vinyl Chloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Bromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Chloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Acetone	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Methyl Iodide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Carbon Disulfide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Methylene Chloride	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Acrylonitrile	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Vinyl Acetate	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Bromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Chloroform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Benzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Trichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Dibromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Bromodichloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Toluene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Dibromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Chlorobenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Ethylbenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Xylenes, total	<2.0	2.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Styrene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Bromoform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: MW-21R
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-05

Collected By: Whipple, Todd
Collection Date: 04/08/2025 12:13

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1858	RAF
Surrogate: Dibromofluoromethane	72.8	Limit: 75-136	% Rec		S1	04/10/25 0000	04/10/25 1858	RAF
Surrogate: Dibromofluoromethane	72.8	Limit: 57-134	% Rec			04/10/25 0000	04/10/25 1858	RAF
Surrogate: 1,2-Dichloroethane-d4	67.1	Limit: 61-142	% Rec			04/10/25 0000	04/10/25 1858	RAF
Surrogate: 1,2-Dichloroethane-d4	67.1	Limit: 53-140	% Rec			04/10/25 0000	04/10/25 1858	RAF
Surrogate: Toluene-d8	106	Limit: 82-121	% Rec			04/10/25 0000	04/10/25 1858	RAF
Surrogate: Toluene-d8	106	Limit: 86-114	% Rec			04/10/25 0000	04/10/25 1858	RAF
Surrogate: 4-Bromofluorobenzene	87.3	Limit: 80-116	% Rec			04/10/25 0000	04/10/25 1858	RAF
Surrogate: 4-Bromofluorobenzene	87.3	Limit: 78-121	% Rec			04/10/25 0000	04/10/25 1858	RAF

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1601	RVV
Arsenic, total	0.0058		0.0020	mg/L		04/28/25 1606	06/20/25 1601	RVV
Barium, total	0.0268		0.0010	mg/L		04/28/25 1606	06/20/25 1601	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1601	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1601	RVV
Chromium, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1601	RVV
Cobalt, total	0.0054		0.0005	mg/L		04/28/25 1606	06/20/25 1601	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1601	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1601	RVV
Nickel, total	0.0072		0.0050	mg/L		04/28/25 1606	06/20/25 1601	RVV
Selenium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1601	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1601	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1601	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1601	RVV
Zinc, total	0.0126		0.0050	mg/L		04/28/25 1606	06/20/25 1601	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-22
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-06

Collected By: Whipple, Todd
Collection Date: 04/08/2025 12:31

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Vinyl Chloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Bromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Chloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Acetone	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Methyl Iodide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Carbon Disulfide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Methylene Chloride	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Acrylonitrile	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Vinyl Acetate	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Bromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Chloroform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Benzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Trichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Dibromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Bromodichloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Toluene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Dibromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Chlorobenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Ethylbenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Xylenes, total	<2.0	2.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Styrene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Bromoform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: MW-22
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-06

Collected By: Whipple, Todd
Collection Date: 04/08/2025 12:31

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1921	RAF
Surrogate: Dibromofluoromethane	70.1	Limit: 75-136	% Rec		S1	04/10/25 0000	04/10/25 1921	RAF
Surrogate: Dibromofluoromethane	70.1	Limit: 57-134	% Rec			04/10/25 0000	04/10/25 1921	RAF
Surrogate: 1,2-Dichloroethane-d4	64.0	Limit: 61-142	% Rec			04/10/25 0000	04/10/25 1921	RAF
Surrogate: 1,2-Dichloroethane-d4	64.0	Limit: 53-140	% Rec			04/10/25 0000	04/10/25 1921	RAF
Surrogate: Toluene-d8	107	Limit: 82-121	% Rec			04/10/25 0000	04/10/25 1921	RAF
Surrogate: Toluene-d8	107	Limit: 86-114	% Rec			04/10/25 0000	04/10/25 1921	RAF
Surrogate: 4-Bromofluorobenzene	87.0	Limit: 80-116	% Rec			04/10/25 0000	04/10/25 1921	RAF
Surrogate: 4-Bromofluorobenzene	87.0	Limit: 78-121	% Rec			04/10/25 0000	04/10/25 1921	RAF

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1603	RVV
Arsenic, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1603	RVV
Barium, total	0.0143		0.0010	mg/L		04/28/25 1606	06/20/25 1603	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1603	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1603	RVV
Chromium, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1603	RVV
Cobalt, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1603	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1603	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1603	RVV
Nickel, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1603	RVV
Selenium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1603	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1603	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1603	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1603	RVV
Zinc, total	0.0071		0.0050	mg/L		04/28/25 1606	06/20/25 1603	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-30
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-07

Collected By: Whipple, Todd
Collection Date: 04/08/2025 9:55

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Vinyl Chloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Bromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Chloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Acetone	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Methyl Iodide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Carbon Disulfide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Methylene Chloride	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Acrylonitrile	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Vinyl Acetate	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Bromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Chloroform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Benzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Trichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Dibromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Bromodichloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Toluene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Dibromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Chlorobenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Ethylbenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Xylenes, total	<2.0	2.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Styrene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Bromoform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-30
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-07

Collected By: Whipple, Todd
Collection Date: 04/08/2025 9:55

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 1943	RAF
Surrogate: Dibromofluoromethane	72.3	Limit: 75-136	% Rec		S1	04/10/25 0000	04/10/25 1943	RAF
Surrogate: Dibromofluoromethane	72.3	Limit: 57-134	% Rec			04/10/25 0000	04/10/25 1943	RAF
Surrogate: 1,2-Dichloroethane-d4	66.2	Limit: 61-142	% Rec			04/10/25 0000	04/10/25 1943	RAF
Surrogate: 1,2-Dichloroethane-d4	66.2	Limit: 53-140	% Rec			04/10/25 0000	04/10/25 1943	RAF
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec			04/10/25 0000	04/10/25 1943	RAF
Surrogate: Toluene-d8	104	Limit: 86-114	% Rec			04/10/25 0000	04/10/25 1943	RAF
Surrogate: 4-Bromofluorobenzene	88.4	Limit: 80-116	% Rec			04/10/25 0000	04/10/25 1943	RAF
Surrogate: 4-Bromofluorobenzene	88.4	Limit: 78-121	% Rec			04/10/25 0000	04/10/25 1943	RAF

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1606	RVV
Arsenic, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1606	RVV
Barium, total	0.0153	0.0010	mg/L			04/28/25 1606	06/20/25 1606	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1606	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1606	RVV
Chromium, total	0.0010	0.0010	mg/L			04/28/25 1606	06/20/25 1606	RVV
Cobalt, total	0.0034	0.0005	mg/L			04/28/25 1606	06/20/25 1606	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1606	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1606	RVV
Nickel, total	0.0083	0.0050	mg/L			04/28/25 1606	06/20/25 1606	RVV
Selenium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1606	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1606	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1606	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1606	RVV
Zinc, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1606	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID:	Duplicate	Collected By:	Whipple, Todd
Sample Matrix:	Aqueous	Collection Date:	04/08/2025
Lab Sample ID:	1ID1083-08		

Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony, total	<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1609	RVV
Arsenic, total	0.0126	0.0020	mg/L		04/28/25 1606	06/20/25 1609	RVV
Barium, total	0.0852	0.0010	mg/L		04/28/25 1606	06/20/25 1609	RVV
Beryllium, total	<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1609	RVV
Cadmium, total	<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1609	RVV
Chromium, total	<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1609	RVV
Cobalt, total	0.0386	0.0005	mg/L		04/28/25 1606	06/20/25 1609	RVV
Copper, total	<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1609	RVV
Lead, total	<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1609	RVV
Nickel, total	0.0647	0.0050	mg/L		04/28/25 1606	06/20/25 1609	RVV
Selenium, total	<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1609	RVV
Silver, total	<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1609	RVV
Thallium, total	<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1609	RVV
Vanadium, total	<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1609	RVV
Zinc, total	0.0129	0.0050	mg/L		04/28/25 1606	06/20/25 1609	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-25
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-09

Collected By: Whipple, Todd
Collection Date: 04/08/2025 10:22

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Vinyl Chloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Bromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Chloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Acetone	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Methyl Iodide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Carbon Disulfide	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Methylene Chloride	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Acrylonitrile	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Vinyl Acetate	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Bromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Chloroform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Benzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Trichloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Dibromomethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Bromodichloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Toluene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Dibromochloromethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Chlorobenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Ethylbenzene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Xylenes, total	<2.0	2.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Styrene	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Bromoform	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-25
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-09

Collected By: Whipple, Todd
Collection Date: 04/08/2025 10:22

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/10/25 0000	04/10/25 2006	RAF
Surrogate: Dibromofluoromethane	68.8	Limit: 57-134	% Rec			04/10/25 0000	04/10/25 2006	RAF
Surrogate: Dibromofluoromethane	68.8	Limit: 75-136	% Rec		S1	04/10/25 0000	04/10/25 2006	RAF
Surrogate: 1,2-Dichloroethane-d4	62.2	Limit: 53-140	% Rec			04/10/25 0000	04/10/25 2006	RAF
Surrogate: 1,2-Dichloroethane-d4	62.2	Limit: 61-142	% Rec			04/10/25 0000	04/10/25 2006	RAF
Surrogate: Toluene-d8	104	Limit: 86-114	% Rec			04/10/25 0000	04/10/25 2006	RAF
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec			04/10/25 0000	04/10/25 2006	RAF
Surrogate: 4-Bromofluorobenzene	84.7	Limit: 78-121	% Rec			04/10/25 0000	04/10/25 2006	RAF
Surrogate: 4-Bromofluorobenzene	84.7	Limit: 80-116	% Rec			04/10/25 0000	04/10/25 2006	RAF

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1611	RVV
Arsenic, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1611	RVV
Barium, total	0.0166		0.0010	mg/L		04/28/25 1606	06/20/25 1611	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1611	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1611	RVV
Chromium, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1611	RVV
Cobalt, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1611	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1611	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1611	RVV
Nickel, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1611	RVV
Selenium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1611	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1611	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1611	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1611	RVV
Zinc, total	0.0068		0.0050	mg/L		04/28/25 1606	06/20/25 1611	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-28
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-10

Collected By: Whipple, Todd
Collection Date: 04/08/2025 10:44

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Vinyl Chloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Bromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Chloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Acetone	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Methyl Iodide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Carbon Disulfide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Methylene Chloride	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Acrylonitrile	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Vinyl Acetate	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Bromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Chloroform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Benzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Trichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Dibromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Bromodichloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Toluene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Tetrachloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Dibromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Chlorobenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Ethylbenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Xylenes, total	<2.0	2.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Styrene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
Bromoform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: MW-28
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-10

Collected By: Whipple, Todd
Collection Date: 04/08/2025 10:44

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1716	CSM
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/15/25 0000	04/15/25 1616	RAF
Surrogate: Dibromofluoromethane	96.5	Limit: 75-136	% Rec			04/11/25 0000	04/11/25 1716	CSM
Surrogate: Dibromofluoromethane	84.7	Limit: 75-136	% Rec			04/15/25 0000	04/15/25 1616	RAF
Surrogate: Dibromofluoromethane	96.5	Limit: 57-134	% Rec			04/11/25 0000	04/11/25 1716	CSM
Surrogate: 1,2-Dichloroethane-d4	87.6	Limit: 61-142	% Rec			04/11/25 0000	04/11/25 1716	CSM
Surrogate: 1,2-Dichloroethane-d4	75.5	Limit: 61-142	% Rec			04/15/25 0000	04/15/25 1616	RAF
Surrogate: 1,2-Dichloroethane-d4	87.6	Limit: 53-140	% Rec			04/11/25 0000	04/11/25 1716	CSM
Surrogate: Toluene-d8	97.9	Limit: 82-121	% Rec			04/11/25 0000	04/11/25 1716	CSM
Surrogate: Toluene-d8	97.9	Limit: 86-114	% Rec			04/11/25 0000	04/11/25 1716	CSM
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec			04/15/25 0000	04/15/25 1616	RAF
Surrogate: 4-Bromofluorobenzene	94.1	Limit: 80-116	% Rec			04/11/25 0000	04/11/25 1716	CSM
Surrogate: 4-Bromofluorobenzene	90.4	Limit: 80-116	% Rec			04/15/25 0000	04/15/25 1616	RAF
Surrogate: 4-Bromofluorobenzene	94.1	Limit: 78-121	% Rec			04/11/25 0000	04/11/25 1716	CSM

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1614	RVV
Arsenic, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1614	RVV
Barium, total	0.0179		0.0010	mg/L		04/28/25 1606	06/20/25 1614	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1614	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1614	RVV
Chromium, total	0.0011		0.0010	mg/L		04/28/25 1606	06/20/25 1614	RVV
Cobalt, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1614	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1614	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1614	RVV
Nickel, total	0.0072		0.0050	mg/L		04/28/25 1606	06/20/25 1614	RVV
Selenium, total	0.0025		0.0020	mg/L		04/28/25 1606	06/20/25 1614	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1614	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1614	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1614	RVV
Zinc, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1614	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-29
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-11

Collected By: Whipple, Todd
Collection Date: 04/08/2025 11:40

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Vinyl Chloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Bromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Chloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Acetone	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Methyl Iodide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Carbon Disulfide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Methylene Chloride	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Acrylonitrile	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Vinyl Acetate	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Bromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Chloroform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Benzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Trichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Dibromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Bromodichloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Toluene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Tetrachloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Dibromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Chlorobenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Ethylbenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Xylenes, total	<2.0	2.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Styrene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
Bromoform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: MW-29
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-11

Collected By: Whipple, Todd
Collection Date: 04/08/2025 11:40

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1738	CSM
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/15/25 0000	04/15/25 1638	RAF
Surrogate: Dibromofluoromethane	98.5	Limit: 75-136	% Rec			04/11/25 0000	04/11/25 1738	CSM
Surrogate: Dibromofluoromethane	98.5	Limit: 57-134	% Rec			04/11/25 0000	04/11/25 1738	CSM
Surrogate: Dibromofluoromethane	91.5	Limit: 75-136	% Rec			04/15/25 0000	04/15/25 1638	RAF
Surrogate: 1,2-Dichloroethane-d4	89.5	Limit: 61-142	% Rec			04/11/25 0000	04/11/25 1738	CSM
Surrogate: 1,2-Dichloroethane-d4	89.5	Limit: 53-140	% Rec			04/11/25 0000	04/11/25 1738	CSM
Surrogate: 1,2-Dichloroethane-d4	84.3	Limit: 61-142	% Rec			04/15/25 0000	04/15/25 1638	RAF
Surrogate: Toluene-d8	100	Limit: 82-121	% Rec			04/11/25 0000	04/11/25 1738	CSM
Surrogate: Toluene-d8	100	Limit: 86-114	% Rec			04/11/25 0000	04/11/25 1738	CSM
Surrogate: Toluene-d8	106	Limit: 82-121	% Rec			04/15/25 0000	04/15/25 1638	RAF
Surrogate: 4-Bromofluorobenzene	92.3	Limit: 80-116	% Rec			04/11/25 0000	04/11/25 1738	CSM
Surrogate: 4-Bromofluorobenzene	90.4	Limit: 80-116	% Rec			04/15/25 0000	04/15/25 1638	RAF
Surrogate: 4-Bromofluorobenzene	92.3	Limit: 78-121	% Rec			04/11/25 0000	04/11/25 1738	CSM

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1616	RVV
Arsenic, total	0.0085		0.0020	mg/L		04/28/25 1606	06/20/25 1616	RVV
Barium, total	0.0352		0.0010	mg/L		04/28/25 1606	06/20/25 1616	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1616	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1616	RVV
Chromium, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1616	RVV
Cobalt, total	0.0265		0.0005	mg/L		04/28/25 1606	06/20/25 1616	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1616	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1616	RVV
Nickel, total	0.0353		0.0050	mg/L		04/28/25 1606	06/20/25 1616	RVV
Selenium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1616	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1616	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1616	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1616	RVV
Zinc, total	0.0096		0.0050	mg/L		04/28/25 1606	06/20/25 1616	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-31
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-12

Collected By: Whipple, Todd
Collection Date: 04/08/2025 9:20

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Vinyl Chloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Bromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Chloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Acetone	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Methyl Iodide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Carbon Disulfide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Methylene Chloride	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Acrylonitrile	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Vinyl Acetate	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Bromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Chloroform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Benzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Trichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Dibromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Bromodichloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Toluene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Tetrachloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Dibromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Chlorobenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Ethylbenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Xylenes, total	<2.0	2.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Styrene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
Bromoform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: MW-31
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-12

Collected By: Whipple, Todd
Collection Date: 04/08/2025 9:20

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1800	CSM
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/15/25 0000	04/15/25 1700	RAF
Surrogate: Dibromofluoromethane	99.9	Limit: 75-136	% Rec			04/11/25 0000	04/11/25 1800	CSM
Surrogate: Dibromofluoromethane	99.9	Limit: 57-134	% Rec			04/11/25 0000	04/11/25 1800	CSM
Surrogate: Dibromofluoromethane	84.9	Limit: 75-136	% Rec			04/15/25 0000	04/15/25 1700	RAF
Surrogate: 1,2-Dichloroethane-d4	78.4	Limit: 61-142	% Rec			04/15/25 0000	04/15/25 1700	RAF
Surrogate: 1,2-Dichloroethane-d4	91.2	Limit: 53-140	% Rec			04/11/25 0000	04/11/25 1800	CSM
Surrogate: 1,2-Dichloroethane-d4	91.2	Limit: 61-142	% Rec			04/11/25 0000	04/11/25 1800	CSM
Surrogate: Toluene-d8	99.0	Limit: 86-114	% Rec			04/11/25 0000	04/11/25 1800	CSM
Surrogate: Toluene-d8	99.0	Limit: 82-121	% Rec			04/11/25 0000	04/11/25 1800	CSM
Surrogate: Toluene-d8	108	Limit: 82-121	% Rec			04/15/25 0000	04/15/25 1700	RAF
Surrogate: 4-Bromofluorobenzene	91.0	Limit: 78-121	% Rec			04/11/25 0000	04/11/25 1800	CSM
Surrogate: 4-Bromofluorobenzene	90.2	Limit: 80-116	% Rec			04/15/25 0000	04/15/25 1700	RAF
Surrogate: 4-Bromofluorobenzene	91.0	Limit: 80-116	% Rec			04/11/25 0000	04/11/25 1800	CSM

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1619	RVV
Arsenic, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1619	RVV
Barium, total	0.0208		0.0010	mg/L		04/28/25 1606	06/20/25 1619	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1619	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1619	RVV
Chromium, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1619	RVV
Cobalt, total	0.0038		0.0005	mg/L		04/28/25 1606	06/20/25 1619	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1619	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1619	RVV
Nickel, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1619	RVV
Selenium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1619	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1619	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1619	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1619	RVV
Zinc, total	0.0079		0.0050	mg/L		04/28/25 1606	06/20/25 1619	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: MW-32
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-13

Collected By: Whipple, Todd
Collection Date: 04/08/2025 8:53

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Vinyl Chloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Bromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Chloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Acetone	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Methyl Iodide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Carbon Disulfide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Methylene Chloride	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Acrylonitrile	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Vinyl Acetate	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Bromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Chloroform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Benzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Trichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Dibromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Bromodichloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Toluene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Tetrachloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Dibromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Chlorobenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Ethylbenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Xylenes, total	<2.0	2.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Styrene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
Bromoform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: MW-32
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-13

Collected By: Whipple, Todd
Collection Date: 04/08/2025 8:53

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1822	CSM
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/15/25 0000	04/15/25 1723	RAF
Surrogate: Dibromofluoromethane	103	Limit: 57-134	% Rec			04/11/25 0000	04/11/25 1822	CSM
Surrogate: Dibromofluoromethane	103	Limit: 75-136	% Rec			04/11/25 0000	04/11/25 1822	CSM
Surrogate: Dibromofluoromethane	87.6	Limit: 75-136	% Rec			04/15/25 0000	04/15/25 1723	RAF
Surrogate: 1,2-Dichloroethane-d4	95.0	Limit: 53-140	% Rec			04/11/25 0000	04/11/25 1822	CSM
Surrogate: 1,2-Dichloroethane-d4	95.0	Limit: 61-142	% Rec			04/11/25 0000	04/11/25 1822	CSM
Surrogate: 1,2-Dichloroethane-d4	82.9	Limit: 61-142	% Rec			04/15/25 0000	04/15/25 1723	RAF
Surrogate: Toluene-d8	99.4	Limit: 86-114	% Rec			04/11/25 0000	04/11/25 1822	CSM
Surrogate: Toluene-d8	99.4	Limit: 82-121	% Rec			04/11/25 0000	04/11/25 1822	CSM
Surrogate: Toluene-d8	106	Limit: 82-121	% Rec			04/15/25 0000	04/15/25 1723	RAF
Surrogate: 4-Bromofluorobenzene	91.9	Limit: 78-121	% Rec			04/11/25 0000	04/11/25 1822	CSM
Surrogate: 4-Bromofluorobenzene	91.9	Limit: 80-116	% Rec			04/11/25 0000	04/11/25 1822	CSM
Surrogate: 4-Bromofluorobenzene	89.7	Limit: 80-116	% Rec			04/15/25 0000	04/15/25 1723	RAF

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1627	RVV
Arsenic, total	0.0117		0.0020	mg/L		04/28/25 1606	06/20/25 1627	RVV
Barium, total	0.0798		0.0010	mg/L		04/28/25 1606	06/20/25 1627	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1627	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1627	RVV
Chromium, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1627	RVV
Cobalt, total	0.0388		0.0005	mg/L		04/28/25 1606	06/20/25 1627	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1627	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1627	RVV
Nickel, total	0.0646		0.0050	mg/L		04/28/25 1606	06/20/25 1627	RVV
Selenium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1627	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1627	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1627	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1627	RVV
Zinc, total	0.0124		0.0050	mg/L		04/28/25 1606	06/20/25 1627	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: GU-4
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-14

Collected By: Whipple, Todd
Collection Date: 04/08/2025 9:30

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Vinyl Chloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Bromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Chloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Acetone	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Methyl Iodide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Carbon Disulfide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Methylene Chloride	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Acrylonitrile	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Vinyl Acetate	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Bromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Chloroform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Benzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Trichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Dibromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Bromodichloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Toluene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Tetrachloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Dibromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Chlorobenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Ethylbenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Xylenes, total	<2.0	2.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Styrene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
Bromoform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: GU-4
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-14

Collected By: Whipple, Todd
Collection Date: 04/08/2025 9:30

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1844	CSM
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/15/25 0000	04/15/25 1745	RAF
Surrogate: Dibromofluoromethane	105	Limit: 75-136	% Rec			04/11/25 0000	04/11/25 1844	CSM
Surrogate: Dibromofluoromethane	85.1	Limit: 75-136	% Rec			04/15/25 0000	04/15/25 1745	RAF
Surrogate: Dibromofluoromethane	105	Limit: 57-134	% Rec			04/11/25 0000	04/11/25 1844	CSM
Surrogate: 1,2-Dichloroethane-d4	79.9	Limit: 61-142	% Rec			04/15/25 0000	04/15/25 1745	RAF
Surrogate: 1,2-Dichloroethane-d4	95.1	Limit: 61-142	% Rec			04/11/25 0000	04/11/25 1844	CSM
Surrogate: 1,2-Dichloroethane-d4	95.1	Limit: 53-140	% Rec			04/11/25 0000	04/11/25 1844	CSM
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec			04/15/25 0000	04/15/25 1745	RAF
Surrogate: Toluene-d8	98.2	Limit: 86-114	% Rec			04/11/25 0000	04/11/25 1844	CSM
Surrogate: Toluene-d8	98.2	Limit: 82-121	% Rec			04/11/25 0000	04/11/25 1844	CSM
Surrogate: 4-Bromofluorobenzene	87.0	Limit: 80-116	% Rec			04/15/25 0000	04/15/25 1745	RAF
Surrogate: 4-Bromofluorobenzene	90.1	Limit: 78-121	% Rec			04/11/25 0000	04/11/25 1844	CSM
Surrogate: 4-Bromofluorobenzene	90.1	Limit: 80-116	% Rec			04/11/25 0000	04/11/25 1844	CSM

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1629	RVV
Arsenic, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1629	RVV
Barium, total	0.0129		0.0010	mg/L		04/28/25 1606	06/20/25 1629	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1629	RVV
Cadmium, total		<0.0002	0.0002	mg/L		04/28/25 1606	06/20/25 1629	RVV
Chromium, total	0.0014		0.0010	mg/L		04/28/25 1606	06/20/25 1629	RVV
Cobalt, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1629	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1629	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1629	RVV
Nickel, total	0.0259		0.0050	mg/L		04/28/25 1606	06/20/25 1629	RVV
Selenium, total	0.0024		0.0020	mg/L		04/28/25 1606	06/20/25 1629	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1629	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1629	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1629	RVV
Zinc, total	0.398		0.0050	mg/L		04/28/25 1606	06/20/25 1629	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Client Sample ID: GU-6
Sample Matrix: Aqueous
Lab Sample ID: 1ID1083-15

Collected By: Whipple, Todd
Collection Date: 04/08/2025 8:42

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Vinyl Chloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Bromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Chloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Acetone	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Methyl Iodide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Carbon Disulfide	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Methylene Chloride	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Acrylonitrile	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Vinyl Acetate	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Bromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Chloroform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Benzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Trichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Dibromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Bromodichloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Toluene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Tetrachloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Dibromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Chlorobenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Ethylbenzene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Xylenes, total	<2.0	2.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Styrene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
Bromoform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM

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CERTIFICATE OF ANALYSIS

11D1083

Client Sample ID: GU-6
Sample Matrix: Aqueous
Lab Sample ID: 11D1083-15

Collected By: Whipple, Todd
Collection Date: 04/08/2025 8:42

Determination of Volatile Organic Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene		<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,1,2,2-Tetrachloroethane		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,4-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,2-Dichlorobenzene		<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1907	CSM
1,2-Dibromo-3-chloropropane		<5.0	5.0	ug/L		04/15/25 0000	04/15/25 1808	RAF
Surrogate: Dibromofluoromethane	86.2	Limit: 75-136	% Rec			04/15/25 0000	04/15/25 1808	RAF
Surrogate: Dibromofluoromethane	103	Limit: 75-136	% Rec			04/11/25 0000	04/11/25 1907	CSM
Surrogate: Dibromofluoromethane	103	Limit: 57-134	% Rec			04/11/25 0000	04/11/25 1907	CSM
Surrogate: 1,2-Dichloroethane-d4	91.3	Limit: 61-142	% Rec			04/11/25 0000	04/11/25 1907	CSM
Surrogate: 1,2-Dichloroethane-d4	79.3	Limit: 61-142	% Rec			04/15/25 0000	04/15/25 1808	RAF
Surrogate: 1,2-Dichloroethane-d4	91.3	Limit: 53-140	% Rec			04/11/25 0000	04/11/25 1907	CSM
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec			04/15/25 0000	04/15/25 1808	RAF
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec			04/11/25 0000	04/11/25 1907	CSM
Surrogate: Toluene-d8	101	Limit: 86-114	% Rec			04/11/25 0000	04/11/25 1907	CSM
Surrogate: 4-Bromofluorobenzene	91.0	Limit: 80-116	% Rec			04/11/25 0000	04/11/25 1907	CSM
Surrogate: 4-Bromofluorobenzene	87.4	Limit: 80-116	% Rec			04/15/25 0000	04/15/25 1808	RAF
Surrogate: 4-Bromofluorobenzene	91.0	Limit: 78-121	% Rec			04/11/25 0000	04/11/25 1907	CSM

Determination of Total Metals		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1632	RVV
Arsenic, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1632	RVV
Barium, total	0.0209	0.0010	mg/L			04/28/25 1606	06/20/25 1632	RVV
Beryllium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1632	RVV
Cadmium, total	0.0002	0.0002	mg/L			04/28/25 1606	06/20/25 1632	RVV
Chromium, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1632	RVV
Cobalt, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1632	RVV
Copper, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1632	RVV
Lead, total		<0.0010	0.0010	mg/L		04/28/25 1606	06/20/25 1632	RVV
Nickel, total	0.0464	0.0050	mg/L			04/28/25 1606	06/20/25 1632	RVV
Selenium, total	0.0059	0.0020	mg/L			04/28/25 1606	06/20/25 1632	RVV
Silver, total		<0.0050	0.0050	mg/L		04/28/25 1606	06/20/25 1632	RVV
Thallium, total		<0.0005	0.0005	mg/L		04/28/25 1606	06/20/25 1632	RVV
Vanadium, total		<0.0020	0.0020	mg/L		04/28/25 1606	06/20/25 1632	RVV
Zinc, total	1.27	0.0050	mg/L			04/28/25 1606	06/20/25 1632	RVV

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CERTIFICATE OF ANALYSIS

1ID1083

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260D	1ID0589	1ID0589-BS1	
		1ID0589-BSD1	
		1ID0589-BLK1	
		1ID1083-01	MW-10A
		1ID1083-02	MW-10B
		1ID1083-03	MW-18
		1ID1083-04	MW-20
		1ID1083-05	MW-21R
		1ID1083-06	MW-22
		1ID1083-07	MW-30
		1ID1083-09	MW-25
		1ID0589-MS1	1ID0938-01
		1ID0589-MSD1	1ID0938-01
Method	Batch	Laboratory ID	Client / Source ID
EPA 8260D	1ID0673	1ID0673-BS1	
		1ID0673-BSD1	
		1ID0673-BLK1	
		1ID1083-10	MW-28
		1ID1083-11	MW-29
		1ID1083-12	MW-31
		1ID1083-13	MW-32
		1ID1083-14	GU-4
		1ID1083-15	GU-6
		1ID0673-MS1	1ID0938-05
		1ID0673-MSD1	1ID0938-05
Method	Batch	Laboratory ID	Client / Source ID
EPA 8260D	1ID0825	1ID0825-BS1	
		1ID0825-BSD1	
		1ID0825-BLK1	
		1ID1083-10RE1	MW-28
		1ID1083-11RE1	MW-29
		1ID1083-12RE1	MW-31
		1ID1083-13RE1	MW-32
		1ID1083-14RE1	GU-4
		1ID1083-15RE1	GU-6
		1ID0825-MS1	1ID0938-05RE1
		1ID0825-MSD1	1ID0938-05RE1



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CERTIFICATE OF ANALYSIS

1ID1083

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1ID1489	1ID1489-BLK1	
		1ID1489-BS1	
		1ID1083-03	MW-18
		1ID1489-MS1	1ID1083-01
		1ID1489-MSD1	1ID1083-01
		1ID1489-PS1	1ID1083-01
		1ID1083-04	MW-20
		1ID1083-05	MW-21R
		1ID1083-06	MW-22
		1ID1083-07	MW-30
		1ID1083-08	Duplicate
		1ID1083-09	MW-25
		1ID1083-10	MW-28
		1ID1083-11	MW-29
		1ID1083-12	MW-31
		1ID1083-13	MW-32
		1ID1083-14	GU-4
		1ID1083-15	GU-6
		1ID1083-01	MW-10A
		1ID1083-02	MW-10B

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 1ID0589 - EPA 5030B - EPA 8260D										
Blank (1ID0589-BLK1)				Prepared: 04/10/25 00:00 Analyzed: 04/10/25 11:53						
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
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							

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0589 - EPA 5030B - EPA 8260D										
Blank (1ID0589-BLK1)										
Prepared: 04/10/25 00:00 Analyzed: 04/10/25 11:53										
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	41.4		ug/L	50.2		82.6	57-134			
Surrogate: Dibromofluoromethane	41.4		ug/L	50.2		82.6	75-136			
Surrogate: 1,2-Dichloroethane-d4	38.9		ug/L	50.1		77.8	53-140			
Surrogate: 1,2-Dichloroethane-d4	38.9		ug/L	50.1		77.8	61-142			
Surrogate: Toluene-d8	53.5		ug/L	50.4		106	86-114			
Surrogate: Toluene-d8	53.5		ug/L	50.4		106	82-121			
Surrogate: 4-Bromofluorobenzene	46.8		ug/L	50.1		93.4	80-116			
Surrogate: 4-Bromofluorobenzene	46.8		ug/L	50.1		93.4	78-121			
LCS (1ID0589-BS1)										
Prepared: 04/10/25 00:00 Analyzed: 04/10/25 10:46										
Chloromethane	28.91	1.0	ug/L	30.3		95.3	63-155			
Vinyl Chloride	28.98	1.0	ug/L	30.2		95.8	70-154			
Bromomethane	27.63	1.0	ug/L	30.1		91.7	52-176			

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Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0589 - EPA 5030B - EPA 8260D										
LCS (1ID0589-BS1)				Prepared: 04/10/25 00:00 Analyzed: 04/10/25 10:46						
Chloroethane	29.66	1.0	ug/L	30.3		97.8	72-148			
Trichlorofluoromethane	30.75	1.0	ug/L	30.3		101	70-152			
1,1-Dichloroethylene	58.13	1.0	ug/L	50.1		116	70-148			
Acetone	119.5	10.0	ug/L	100		120	43-172			
Methyl Iodide	100.7	1.0	ug/L	100		101	69-170			
Carbon Disulfide	105.4	1.0	ug/L	100		105	72-162			
Methylene Chloride	48.34	5.0	ug/L	50.1		96.5	68-142			
Acrylonitrile	51.59	5.0	ug/L	50.2		103	56-135			
trans-1,2-Dichloroethylene	55.64	1.0	ug/L	50.1		111	66-148			
1,1-Dichloroethane	54.25	1.0	ug/L	50.1		108	66-143			
Vinyl Acetate	158.9	5.0	ug/L	140		114	43-153			
cis-1,2-Dichloroethylene	53.78	1.0	ug/L	50.4		107	71-149			
2-Butanone (MEK)	99.73	10.0	ug/L	100		99.7	52-159			
Bromochloromethane	54.77	1.0	ug/L	50.4		109	69-143			
Chloroform	53.19	1.0	ug/L	50.1		106	69-144			
1,1,1-Trichloroethane	55.30	1.0	ug/L	50.1		110	62-129			
Carbon Tetrachloride	53.82	1.0	ug/L	50.1		107	63-141			
Benzene	47.12	1.0	ug/L	50.4		93.4	71-134			
1,2-Dichloroethane	51.93	1.0	ug/L	50.1		104	72-132			
Trichloroethylene	49.35	1.0	ug/L	50.1		98.5	71-135			
1,2-Dichloropropane	48.79	1.0	ug/L	50.1		97.4	69-136			
Dibromomethane	51.65	1.0	ug/L	50.4		103	73-147			
Bromodichloromethane	52.72	1.0	ug/L	50.1		105	68-129			
cis-1,3-Dichloropropene	49.97	1.0	ug/L	50.1		99.8	65-134			
4-Methyl-2-pentanone (MIBK)	105.6	5.0	ug/L	100		106	58-147			
Toluene	51.96	1.0	ug/L	50.5		103	72-133			
trans-1,3-Dichloropropene	49.51	1.0	ug/L	50.1		98.9	67-130			
1,1,2-Trichloroethane	44.70	1.0	ug/L	50.1		89.2	69-135			
Tetrachloroethylene	47.03	1.0	ug/L	50.1		93.9	69-130			
2-Hexanone (MBK)	106.5	5.0	ug/L	100		107	55-144			
Dibromochloromethane	48.84	1.0	ug/L	50.1		97.5	73-127			
1,2-Dibromoethane	49.48	1.0	ug/L	50.2		98.5	67-132			
Chlorobenzene	46.13	1.0	ug/L	50.1		92.1	72-123			
1,1,1,2-Tetrachloroethane	44.67	1.0	ug/L	50.3		88.7	73-127			
Ethylbenzene	49.82	1.0	ug/L	50.2		99.3	71-127			
Xylenes, total	149.7	2.0	ug/L	151		99.1	74-127			
Styrene	50.67	1.0	ug/L	50.4		101	66-126			
Bromoform	46.22	1.0	ug/L	50.1		92.2	68-130			
1,2,3-Trichloropropane	40.93	1.0	ug/L	50.3		81.3	63-136			
trans-1,4-Dichloro-2-butene	95.53	5.0	ug/L	100		95.5	54-134			
1,1,2,2-Tetrachloroethane	46.86	1.0	ug/L	50.1		93.5	61-131			
1,4-Dichlorobenzene	43.91	1.0	ug/L	50.1		87.6	70-129			
1,2-Dichlorobenzene	40.85	1.0	ug/L	50.1		81.5	69-126			

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CERTIFICATE OF ANALYSIS

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Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0589 - EPA 5030B - EPA 8260D										
LCS (1ID0589-BS1) Prepared: 04/10/25 00:00 Analyzed: 04/10/25 10:46										
1,2-Dibromo-3-chloropropane	35.50	5.0	ug/L	50.1		70.8	50-143			
Surrogate: Dibromofluoromethane	53.2		ug/L	50.2		106	57-134			
Surrogate: Dibromofluoromethane	53.2		ug/L	50.2		106	75-136			
Surrogate: 1,2-Dichloroethane-d4	52.8		ug/L	50.1		105	53-140			
Surrogate: 1,2-Dichloroethane-d4	52.8		ug/L	50.1		105	61-142			
Surrogate: Toluene-d8	51.4		ug/L	50.4		102	86-114			
Surrogate: Toluene-d8	51.4		ug/L	50.4		102	82-121			
Surrogate: 4-Bromofluorobenzene	49.2		ug/L	50.1		98.2	78-121			
Surrogate: 4-Bromofluorobenzene	49.2		ug/L	50.1		98.2	80-116			
LCS Dup (1ID0589-BS1) Prepared: 04/10/25 00:00 Analyzed: 04/10/25 11:08										
Chloromethane	29.90	1.0	ug/L	30.3		98.6	63-155	3.37	24	
Vinyl Chloride	29.22	1.0	ug/L	30.2		96.6	70-154	0.825	25	
Bromomethane	29.64	1.0	ug/L	30.1		98.4	52-176	7.02	27	
Chloroethane	30.09	1.0	ug/L	30.3		99.2	72-148	1.44	25	
Trichlorofluoromethane	31.12	1.0	ug/L	30.3		103	70-152	1.20	26	
1,1-Dichloroethylene	58.07	1.0	ug/L	50.1		116	70-148	0.103	24	
Acetone	133.1	10.0	ug/L	100		133	43-172	10.8	30	
Methyl Iodide	105.7	1.0	ug/L	100		106	69-170	4.92	30	
Carbon Disulfide	105.7	1.0	ug/L	100		106	72-162	0.341	24	
Methylene Chloride	52.79	5.0	ug/L	50.1		105	68-142	8.80	21	
Acrylonitrile	60.69	5.0	ug/L	50.2		121	56-135	16.2	16	R1
trans-1,2-Dichloroethylene	57.34	1.0	ug/L	50.1		114	66-148	3.01	27	
1,1-Dichloroethane	56.85	1.0	ug/L	50.1		113	66-143	4.68	24	
Vinyl Acetate	180.8	5.0	ug/L	140		129	43-153	12.9	30	
cis-1,2-Dichloroethylene	55.79	1.0	ug/L	50.4		111	71-149	3.67	26	
2-Butanone (MEK)	119.3	10.0	ug/L	100		119	52-159	17.9	27	
Bromochloromethane	61.21	1.0	ug/L	50.4		121	69-143	11.1	23	
Chloroform	56.52	1.0	ug/L	50.1		113	69-144	6.07	23	
1,1,1-Trichloroethane	55.91	1.0	ug/L	50.1		112	62-129	1.10	24	
Carbon Tetrachloride	54.79	1.0	ug/L	50.1		109	63-141	1.79	25	
Benzene	48.97	1.0	ug/L	50.4		97.1	71-134	3.85	24	
1,2-Dichloroethane	56.59	1.0	ug/L	50.1		113	72-132	8.59	24	
Trichloroethylene	51.30	1.0	ug/L	50.1		102	71-135	3.87	24	
1,2-Dichloropropane	53.42	1.0	ug/L	50.1		107	69-136	9.06	24	
Dibromomethane	58.22	1.0	ug/L	50.4		116	73-147	12.0	25	
Bromodichloromethane	57.05	1.0	ug/L	50.1		114	68-129	7.89	22	
cis-1,3-Dichloropropene	55.69	1.0	ug/L	50.1		111	65-134	10.8	23	
4-Methyl-2-pentanone (MIBK)	125.7	5.0	ug/L	100		126	58-147	17.4	27	
Toluene	54.82	1.0	ug/L	50.5		109	72-133	5.36	24	
trans-1,3-Dichloropropene	57.31	1.0	ug/L	50.1		114	67-130	14.6	24	
1,1,2-Trichloroethane	53.92	1.0	ug/L	50.1		108	69-135	18.7	23	
Tetrachloroethylene	46.22	1.0	ug/L	50.1		92.3	69-130	1.74	25	
2-Hexanone (MBK)	127.8	5.0	ug/L	100		128	55-144	18.2	25	

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0589 - EPA 5030B - EPA 8260D										
LCS Dup (1ID0589-BSD1)										
Prepared: 04/10/25 00:00 Analyzed: 04/10/25 11:08										
Dibromochloromethane	54.58	1.0	ug/L	50.1		109	73-127	11.1	22	
1,2-Dibromoethane	56.14	1.0	ug/L	50.2		112	67-132	12.6	24	
Chlorobenzene	49.50	1.0	ug/L	50.1		98.8	72-123	7.05	23	
1,1,1,2-Tetrachloroethane	50.11	1.0	ug/L	50.3		99.5	73-127	11.5	24	
Ethylbenzene	51.40	1.0	ug/L	50.2		102	71-127	3.12	26	
Xylenes, total	155.2	2.0	ug/L	151		103	74-127	3.63	25	
Styrene	55.33	1.0	ug/L	50.4		110	66-126	8.79	23	
Bromoform	55.75	1.0	ug/L	50.1		111	68-130	18.7	23	
1,2,3-Trichloropropane	51.24	1.0	ug/L	50.3		102	63-136	22.4	24	
trans-1,4-Dichloro-2-butene	114.2	5.0	ug/L	100		114	54-134	17.8	27	
1,1,2,2-Tetrachloroethane	53.70	1.0	ug/L	50.1		107	61-131	13.6	29	
1,4-Dichlorobenzene	46.78	1.0	ug/L	50.1		93.3	70-129	6.33	24	
1,2-Dichlorobenzene	46.42	1.0	ug/L	50.1		92.7	69-126	12.8	26	
1,2-Dibromo-3-chloropropane	47.39	5.0	ug/L	50.1		94.5	50-143	28.7	30	
Surrogate: Dibromofluoromethane	55.8		ug/L	50.2		111	57-134			
Surrogate: Dibromofluoromethane	55.8		ug/L	50.2		111	75-136			
Surrogate: 1,2-Dichloroethane-d4	54.4		ug/L	50.1		109	53-140			
Surrogate: 1,2-Dichloroethane-d4	54.4		ug/L	50.1		109	61-142			
Surrogate: Toluene-d8	50.2		ug/L	50.4		99.6	86-114			
Surrogate: Toluene-d8	50.2		ug/L	50.4		99.6	82-121			
Surrogate: 4-Bromofluorobenzene	51.3		ug/L	50.1		102	78-121			
Surrogate: 4-Bromofluorobenzene	51.3		ug/L	50.1		102	80-116			
Matrix Spike (1ID0589-MS1)										
Source: 1ID0938-01 Prepared: 04/10/25 00:00 Analyzed: 04/10/25 20:28										
Chloromethane	273.4	10.0	ug/L	303	ND	90.2	61-152			
Vinyl Chloride	282.1	10.0	ug/L	302	ND	93.3	66-149			
Bromomethane	268.5	10.0	ug/L	301	ND	89.1	43-171			
Chloroethane	293.0	10.0	ug/L	303	ND	96.6	69-148			
Trichlorofluoromethane	288.0	10.0	ug/L	303	ND	95.0	62-163			
1,1-Dichloroethylene	541.9	10.0	ug/L	501	ND	108	70-148			
Acetone	1065	100	ug/L	1000	ND	106	45-173			
Methyl Iodide	949.6	10.0	ug/L	1000	ND	95.0	62-167			
Carbon Disulfide	968.6	10.0	ug/L	1000	ND	96.9	71-163			
Methylene Chloride	454.1	50.0	ug/L	501	ND	90.6	69-140			
Acrylonitrile	470.5	50.0	ug/L	502	ND	93.7	38-147			
trans-1,2-Dichloroethylene	528.7	10.0	ug/L	501	ND	106	69-144			
1,1-Dichloroethane	515.7	10.0	ug/L	501	ND	103	70-138			
Vinyl Acetate	1501	50.0	ug/L	1400	ND	107	58-142			
cis-1,2-Dichloroethylene	499.0	10.0	ug/L	504	ND	99.1	68-151			
2-Butanone (MEK)	1025	100	ug/L	1000	ND	102	50-160			
Bromochloromethane	495.6	10.0	ug/L	504	ND	98.3	65-143			
Chloroform	515.9	10.0	ug/L	501	ND	103	71-143			
1,1,1-Trichloroethane	555.5	10.0	ug/L	501	ND	111	63-133			
Carbon Tetrachloride	550.3	10.0	ug/L	501	ND	110	63-142			

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CERTIFICATE OF ANALYSIS

11D1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11D0589 - EPA 5030B - EPA 8260D										
Matrix Spike (11D0589-MS1)	Source: 11D0938-01			Prepared: 04/10/25 00:00 Analyzed: 04/10/25 20:28						
Benzene	508.2	10.0	ug/L	504	ND	101	69-133			
1,2-Dichloroethane	515.8	10.0	ug/L	501	ND	103	63-138			
Trichloroethylene	539.6	10.0	ug/L	501	ND	108	71-133			
1,2-Dichloropropane	501.3	10.0	ug/L	501	ND	100	69-132			
Dibromomethane	505.7	10.0	ug/L	504	ND	100	70-147			
Bromodichloromethane	529.8	10.0	ug/L	501	ND	106	67-130			
cis-1,3-Dichloropropene	494.1	10.0	ug/L	501	ND	98.7	61-126			
4-Methyl-2-pentanone (MIBK)	1101	50.0	ug/L	1000	ND	110	55-147			
Toluene	578.0	10.0	ug/L	505	ND	115	71-133			
trans-1,3-Dichloropropene	481.0	10.0	ug/L	501	ND	96.1	63-124			
1,1,2-Trichloroethane	471.7	10.0	ug/L	501	ND	94.2	69-133			
Tetrachloroethylene	546.9	10.0	ug/L	501	ND	109	70-124			
2-Hexanone (MBK)	1119	50.0	ug/L	1000	ND	112	53-141			
Dibromochloromethane	507.7	10.0	ug/L	501	ND	101	74-122			
1,2-Dibromoethane	502.4	10.0	ug/L	502	ND	100	66-127			
Chlorobenzene	507.2	10.0	ug/L	501	ND	101	76-116			
1,1,1,2-Tetrachloroethane	492.7	10.0	ug/L	503	ND	97.9	77-121			
Ethylbenzene	567.1	10.0	ug/L	502	ND	113	73-124			
Xylenes, total	1682	20.0	ug/L	1510	ND	111	75-123			
Styrene	560.5	10.0	ug/L	504	ND	111	70-120			
Bromoform	489.0	10.0	ug/L	501	ND	97.6	70-124			
1,2,3-Trichloropropane	432.4	10.0	ug/L	503	ND	85.9	62-135			
trans-1,4-Dichloro-2-butene	969.9	50.0	ug/L	1000	ND	97.0	50-120			
1,1,2,2-Tetrachloroethane	513.7	10.0	ug/L	501	ND	103	63-126			
1,4-Dichlorobenzene	493.6	10.0	ug/L	501	ND	98.5	72-119			
1,2-Dichlorobenzene	464.3	10.0	ug/L	501	ND	92.7	71-117			
1,2-Dibromo-3-chloropropane	387.7	50.0	ug/L	501	ND	77.3	49-134			
Surrogate: Dibromofluoromethane	442		ug/L	502		88.2	57-134			
Surrogate: Dibromofluoromethane	442		ug/L	502		88.2	75-136			
Surrogate: 1,2-Dichloroethane-d4	430		ug/L	501		85.8	53-140			
Surrogate: 1,2-Dichloroethane-d4	430		ug/L	501		85.8	61-142			
Surrogate: Toluene-d8	504		ug/L	504		99.9	86-114			
Surrogate: Toluene-d8	504		ug/L	504		99.9	82-121			
Surrogate: 4-Bromofluorobenzene	476		ug/L	501		94.9	78-121			
Surrogate: 4-Bromofluorobenzene	476		ug/L	501		94.9	80-116			
Matrix Spike Dup (11D0589-MSD1)	Source: 11D0938-01			Prepared: 04/10/25 00:00 Analyzed: 04/10/25 20:51						
Chloromethane	246.6	10.0	ug/L	303	ND	81.3	61-152	10.3	26	
Vinyl Chloride	250.2	10.0	ug/L	302	ND	82.7	66-149	12.0	23	
Bromomethane	237.7	10.0	ug/L	301	ND	78.9	43-171	12.2	29	
Chloroethane	253.2	10.0	ug/L	303	ND	83.5	69-148	14.6	25	
Trichlorofluoromethane	259.7	10.0	ug/L	303	ND	85.7	62-163	10.3	25	
1,1-Dichloroethylene	500.3	10.0	ug/L	501	ND	99.8	70-148	7.98	22	
Acetone	1042	100	ug/L	1000	ND	104	45-173	2.14	30	

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0589 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (1ID0589-MSD1) Source: 1ID0938-01 Prepared: 04/10/25 00:00 Analyzed: 04/10/25 20:51										
Methyl Iodide	849.6	10.0	ug/L	1000	ND	85.0	62-167	11.1	24	
Carbon Disulfide	875.9	10.0	ug/L	1000	ND	87.6	71-163	10.1	22	
Methylene Chloride	417.2	50.0	ug/L	501	ND	83.3	69-140	8.47	19	
Acrylonitrile	468.3	50.0	ug/L	502	ND	93.3	38-147	0.469	30	
trans-1,2-Dichloroethylene	496.0	10.0	ug/L	501	ND	99.0	69-144	6.38	22	
1,1-Dichloroethane	485.7	10.0	ug/L	501	ND	96.9	70-138	5.99	20	
Vinyl Acetate	1401	50.0	ug/L	1400	ND	100	58-142	6.89	24	
cis-1,2-Dichloroethylene	475.7	10.0	ug/L	504	ND	94.5	68-151	4.78	22	
2-Butanone (MEK)	973.0	100	ug/L	1000	ND	97.3	50-160	5.19	23	
Bromochloromethane	471.1	10.0	ug/L	504	ND	93.5	65-143	5.07	22	
Chloroform	485.7	10.0	ug/L	501	ND	97.0	71-143	6.03	21	
1,1,1-Trichloroethane	515.0	10.0	ug/L	501	ND	103	63-133	7.57	23	
Carbon Tetrachloride	506.2	10.0	ug/L	501	ND	101	63-142	8.35	22	
Benzene	465.0	10.0	ug/L	504	ND	92.2	69-133	8.88	18	
1,2-Dichloroethane	489.4	10.0	ug/L	501	ND	97.7	63-138	5.25	20	
Trichloroethylene	491.7	10.0	ug/L	501	ND	98.2	71-133	9.29	23	
1,2-Dichloropropane	472.8	10.0	ug/L	501	ND	94.4	69-132	5.85	20	
Dibromomethane	489.8	10.0	ug/L	504	ND	97.2	70-147	3.19	22	
Bromodichloromethane	500.0	10.0	ug/L	501	ND	99.8	67-130	5.79	21	
cis-1,3-Dichloropropene	457.9	10.0	ug/L	501	ND	91.4	61-126	7.61	21	
4-Methyl-2-pentanone (MIBK)	1062	50.0	ug/L	1000	ND	106	55-147	3.62	23	
Toluene	520.2	10.0	ug/L	505	ND	103	71-133	10.5	19	
trans-1,3-Dichloropropene	454.1	10.0	ug/L	501	ND	90.7	63-124	5.75	21	
1,1,2-Trichloroethane	440.6	10.0	ug/L	501	ND	88.0	69-133	6.82	19	
Tetrachloroethylene	492.7	10.0	ug/L	501	ND	98.3	70-124	10.4	24	
2-Hexanone (MBK)	1147	50.0	ug/L	1000	ND	115	53-141	2.50	24	
Dibromochloromethane	498.0	10.0	ug/L	501	ND	99.5	74-122	1.93	21	
1,2-Dibromoethane	497.9	10.0	ug/L	502	ND	99.1	66-127	0.900	23	
Chlorobenzene	475.6	10.0	ug/L	501	ND	95.0	76-116	6.43	21	
1,1,1,2-Tetrachloroethane	463.1	10.0	ug/L	503	ND	92.0	77-121	6.19	25	
Ethylbenzene	526.0	10.0	ug/L	502	ND	105	73-124	7.52	20	
Xylenes, total	1550	20.0	ug/L	1510	ND	103	75-123	8.18	20	
Styrene	518.1	10.0	ug/L	504	ND	103	70-120	7.86	23	
Bromoform	481.8	10.0	ug/L	501	ND	96.1	70-124	1.48	22	
1,2,3-Trichloropropane	416.0	10.0	ug/L	503	ND	82.6	62-135	3.87	28	
trans-1,4-Dichloro-2-butene	920.3	50.0	ug/L	1000	ND	92.0	50-120	5.25	26	
1,1,2,2-Tetrachloroethane	496.3	10.0	ug/L	501	ND	99.1	63-126	3.45	24	
1,4-Dichlorobenzene	464.0	10.0	ug/L	501	ND	92.6	72-119	6.18	24	
1,2-Dichlorobenzene	428.4	10.0	ug/L	501	ND	85.5	71-117	8.04	24	
1,2-Dibromo-3-chloropropane	497.3	50.0	ug/L	501	ND	99.2	49-134	24.8	28	
Surrogate: Dibromofluoromethane	447		ug/L	502		89.0	57-134			
Surrogate: Dibromofluoromethane	447		ug/L	502		89.0	75-136			

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0589 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (1ID0589-MSD1)	Source: 1ID0938-01			Prepared: 04/10/25 00:00 Analyzed: 04/10/25 20:51						
Surrogate: 1,2-Dichloroethane-d4	445		ug/L	501		88.8	53-140			
Surrogate: 1,2-Dichloroethane-d4	445		ug/L	501		88.8	61-142			
Surrogate: Toluene-d8	493		ug/L	504		97.8	86-114			
Surrogate: Toluene-d8	493		ug/L	504		97.8	82-121			
Surrogate: 4-Bromofluorobenzene	472		ug/L	501		94.2	78-121			
Surrogate: 4-Bromofluorobenzene	472		ug/L	501		94.2	80-116			

Batch 1ID0673 - EPA 5030B - EPA 8260D

Blank (1ID0673-BLK1)			Prepared: 04/11/25 00:00 Analyzed: 04/11/25 12:27							
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Methyl Iodide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
Vinyl Acetate	<5.0	5.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
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							

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0673 - EPA 5030B - EPA 8260D										
Blank (1ID0673-BLK1)										
Prepared: 04/11/25 00:00 Analyzed: 04/11/25 12:27										
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							
1,1,1,2-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							
Surrogate: Dibromofluoromethane										
	46.7		ug/L	50.2		93.1	57-134			
Surrogate: Dibromofluoromethane										
	46.7		ug/L	50.2		93.1	75-136			
Surrogate: 1,2-Dichloroethane-d4										
	41.8		ug/L	50.1		83.5	53-140			
Surrogate: 1,2-Dichloroethane-d4										
	41.8		ug/L	50.1		83.5	61-142			
Surrogate: Toluene-d8										
	46.6		ug/L	50.4		92.5	86-114			
Surrogate: Toluene-d8										
	46.6		ug/L	50.4		92.5	82-121			
Surrogate: 4-Bromofluorobenzene										
	47.8		ug/L	50.1		95.2	78-121			
Surrogate: 4-Bromofluorobenzene										
	47.8		ug/L	50.1		95.2	80-116			
LCS (1ID0673-BS1)										
Prepared: 04/11/25 00:00 Analyzed: 04/11/25 11:21										
Chloromethane	28.31	1.0	ug/L	30.3		93.4	63-155			
Vinyl Chloride	30.86	1.0	ug/L	30.2		102	70-154			
Bromomethane	28.48	1.0	ug/L	30.1		94.6	52-176			
Chloroethane	30.47	1.0	ug/L	30.3		101	72-148			
Trichlorofluoromethane	32.62	1.0	ug/L	30.3		108	70-152			
1,1-Dichloroethylene	58.70	1.0	ug/L	50.1		117	70-148			
Acetone	118.8	10.0	ug/L	100		119	43-172			
Methyl Iodide	128.8	1.0	ug/L	100		129	69-170			
Carbon Disulfide	108.8	1.0	ug/L	100		109	72-162			
Methylene Chloride	53.39	5.0	ug/L	50.1		107	68-142			
Acrylonitrile	47.49	5.0	ug/L	50.2		94.6	56-135			
trans-1,2-Dichloroethylene	58.90	1.0	ug/L	50.1		118	66-148			
1,1-Dichloroethane	56.18	1.0	ug/L	50.1		112	66-143			
Vinyl Acetate	174.5	5.0	ug/L	140		125	43-153			
cis-1,2-Dichloroethylene	54.52	1.0	ug/L	50.4		108	71-149			
2-Butanone (MEK)	91.52	10.0	ug/L	100		91.5	52-159			
Bromochloromethane	52.32	1.0	ug/L	50.4		104	69-143			
Chloroform	53.13	1.0	ug/L	50.1		106	69-144			
1,1,1-Trichloroethane	60.44	1.0	ug/L	50.1		121	62-129			
Carbon Tetrachloride	60.50	1.0	ug/L	50.1		121	63-141			
Benzene	54.70	1.0	ug/L	50.4		108	71-134			

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CERTIFICATE OF ANALYSIS

11D1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11D0673 - EPA 5030B - EPA 8260D										
LCS (11D0673-BS1)										
Prepared: 04/11/25 00:00 Analyzed: 04/11/25 11:21										
1,2-Dichloroethane	55.32	1.0	ug/L	50.1		110	72-132			
Trichloroethylene	59.36	1.0	ug/L	50.1		118	71-135			
1,2-Dichloropropane	57.74	1.0	ug/L	50.1		115	69-136			
Dibromomethane	51.18	1.0	ug/L	50.4		102	73-147			
Bromodichloromethane	60.65	1.0	ug/L	50.1		121	68-129			
cis-1,3-Dichloropropene	47.37	1.0	ug/L	50.1		94.6	65-134			
4-Methyl-2-pentanone (MIBK)	87.73	5.0	ug/L	100		87.7	58-147			
Toluene	56.44	1.0	ug/L	50.5		112	72-133			
trans-1,3-Dichloropropene	48.92	1.0	ug/L	50.1		97.7	67-130			
1,1,2-Trichloroethane	53.30	1.0	ug/L	50.1		106	69-135			
Tetrachloroethylene	55.61	1.0	ug/L	50.1		111	69-130			
2-Hexanone (MBK)	82.08	5.0	ug/L	100		82.1	55-144			
Dibromochloromethane	53.42	1.0	ug/L	50.1		107	73-127			
1,2-Dibromoethane	47.29	1.0	ug/L	50.2		94.2	67-132			
Chlorobenzene	51.81	1.0	ug/L	50.1		103	72-123			
1,1,1,2-Tetrachloroethane	52.91	1.0	ug/L	50.3		105	73-127			
Ethylbenzene	54.93	1.0	ug/L	50.2		109	71-127			
Xylenes, total	167.9	2.0	ug/L	151		111	74-127			
Styrene	51.21	1.0	ug/L	50.4		102	66-126			
Bromoform	51.89	1.0	ug/L	50.1		104	68-130			
1,2,3-Trichloropropane	49.58	1.0	ug/L	50.3		98.5	63-136			
trans-1,4-Dichloro-2-butene	95.01	5.0	ug/L	100		95.0	54-134			
1,1,2,2-Tetrachloroethane	41.54	1.0	ug/L	50.1		82.9	61-131			
1,4-Dichlorobenzene	47.32	1.0	ug/L	50.1		94.4	70-129			
1,2-Dichlorobenzene	49.52	1.0	ug/L	50.1		98.9	69-126			
Surrogate: Dibromofluoromethane	52.7		ug/L	50.2		105	57-134			
Surrogate: Dibromofluoromethane	52.7		ug/L	50.2		105	75-136			
Surrogate: 1,2-Dichloroethane-d4	50.1		ug/L	50.1		100	53-140			
Surrogate: 1,2-Dichloroethane-d4	50.1		ug/L	50.1		100	61-142			
Surrogate: Toluene-d8	52.6		ug/L	50.4		104	86-114			
Surrogate: Toluene-d8	52.6		ug/L	50.4		104	82-121			
Surrogate: 4-Bromofluorobenzene	53.2		ug/L	50.1		106	78-121			
Surrogate: 4-Bromofluorobenzene	53.2		ug/L	50.1		106	80-116			
LCS Dup (11D0673-BS1)										
Prepared: 04/11/25 00:00 Analyzed: 04/11/25 11:43										
Chloromethane	27.10	1.0	ug/L	30.3		89.4	63-155	4.37	24	
Vinyl Chloride	28.62	1.0	ug/L	30.2		94.6	70-154	7.53	25	
Bromomethane	26.52	1.0	ug/L	30.1		88.0	52-176	7.13	27	
Chloroethane	28.06	1.0	ug/L	30.3		92.6	72-148	8.24	25	
Trichlorofluoromethane	30.88	1.0	ug/L	30.3		102	70-152	5.48	26	
1,1-Dichloroethylene	55.70	1.0	ug/L	50.1		111	70-148	5.24	24	
Acetone	114.9	10.0	ug/L	100		115	43-172	3.39	30	
Methyl Iodide	121.1	1.0	ug/L	100		121	69-170	6.14	30	
Carbon Disulfide	101.8	1.0	ug/L	100		102	72-162	6.70	24	

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0673 - EPA 5030B - EPA 8260D										
LCS Dup (1ID0673-BSD1)										
Prepared: 04/11/25 00:00 Analyzed: 04/11/25 11:43										
Methylene Chloride	50.98	5.0	ug/L	50.1		102	68-142	4.62	21	
Acrylonitrile	45.13	5.0	ug/L	50.2		89.9	56-135	5.10	16	
trans-1,2-Dichloroethylene	55.82	1.0	ug/L	50.1		111	66-148	5.37	27	
1,1-Dichloroethane	54.39	1.0	ug/L	50.1		109	66-143	3.24	24	
Vinyl Acetate	170.0	5.0	ug/L	140		121	43-153	2.60	30	
cis-1,2-Dichloroethylene	51.97	1.0	ug/L	50.4		103	71-149	4.79	26	
2-Butanone (MEK)	91.00	10.0	ug/L	100		91.0	52-159	0.570	27	
Bromochloromethane	49.21	1.0	ug/L	50.4		97.6	69-143	6.13	23	
Chloroform	50.59	1.0	ug/L	50.1		101	69-144	4.90	23	
1,1,1-Trichloroethane	56.16	1.0	ug/L	50.1		112	62-129	7.34	24	
Carbon Tetrachloride	56.01	1.0	ug/L	50.1		112	63-141	7.71	25	
Benzene	52.74	1.0	ug/L	50.4		105	71-134	3.65	24	
1,2-Dichloroethane	55.02	1.0	ug/L	50.1		110	72-132	0.544	24	
Trichloroethylene	56.06	1.0	ug/L	50.1		112	71-135	5.72	24	
1,2-Dichloropropane	53.19	1.0	ug/L	50.1		106	69-136	8.20	24	
Dibromomethane	49.70	1.0	ug/L	50.4		98.7	73-147	2.93	25	
Bromodichloromethane	58.15	1.0	ug/L	50.1		116	68-129	4.21	22	
cis-1,3-Dichloropropene	46.35	1.0	ug/L	50.1		92.5	65-134	2.18	23	
4-Methyl-2-pentanone (MIBK)	85.66	5.0	ug/L	100		85.7	58-147	2.39	27	
Toluene	54.15	1.0	ug/L	50.5		107	72-133	4.14	24	
trans-1,3-Dichloropropene	45.72	1.0	ug/L	50.1		91.3	67-130	6.76	24	
1,1,2-Trichloroethane	50.17	1.0	ug/L	50.1		100	69-135	6.05	23	
Tetrachloroethylene	53.46	1.0	ug/L	50.1		107	69-130	3.94	25	
2-Hexanone (MBK)	81.83	5.0	ug/L	100		81.8	55-144	0.305	25	
Dibromochloromethane	52.35	1.0	ug/L	50.1		105	73-127	2.02	22	
1,2-Dibromoethane	46.74	1.0	ug/L	50.2		93.1	67-132	1.17	24	
Chlorobenzene	50.15	1.0	ug/L	50.1		100	72-123	3.26	23	
1,1,1,2-Tetrachloroethane	51.35	1.0	ug/L	50.3		102	73-127	2.99	24	
Ethylbenzene	52.58	1.0	ug/L	50.2		105	71-127	4.37	26	
Xylenes, total	161.2	2.0	ug/L	151		107	74-127	4.06	25	
Styrene	48.38	1.0	ug/L	50.4		96.0	66-126	5.68	23	
Bromoform	50.14	1.0	ug/L	50.1		100	68-130	3.43	23	
1,2,3-Trichloropropane	49.43	1.0	ug/L	50.3		98.2	63-136	0.303	24	
trans-1,4-Dichloro-2-butene	94.50	5.0	ug/L	100		94.5	54-134	0.538	27	
1,1,2,2-Tetrachloroethane	40.68	1.0	ug/L	50.1		81.2	61-131	2.09	29	
1,4-Dichlorobenzene	45.23	1.0	ug/L	50.1		90.2	70-129	4.52	24	
1,2-Dichlorobenzene	48.16	1.0	ug/L	50.1		96.1	69-126	2.78	26	
Surrogate: Dibromofluoromethane	50.7		ug/L	50.2		101	57-134			
Surrogate: Dibromofluoromethane	50.7		ug/L	50.2		101	75-136			
Surrogate: 1,2-Dichloroethane-d4	47.5		ug/L	50.1		94.8	53-140			
Surrogate: 1,2-Dichloroethane-d4	47.5		ug/L	50.1		94.8	61-142			
Surrogate: Toluene-d8	51.2		ug/L	50.4		102	86-114			
Surrogate: Toluene-d8	51.2		ug/L	50.4		102	82-121			

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CERTIFICATE OF ANALYSIS

11D1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 11D0673 - EPA 5030B - EPA 8260D									
LCS Dup (11D0673-BSD1)				Prepared: 04/11/25 00:00 Analyzed: 04/11/25 11:43					
Surrogate: 4-Bromofluorobenzene	52.6		ug/L	50.1		105 78-121			
Surrogate: 4-Bromofluorobenzene	52.6		ug/L	50.1		105 80-116			
Matrix Spike (11D0673-MS1)				Source: 11D0938-05 Prepared: 04/11/25 00:00 Analyzed: 04/11/25 19:29					
Chloromethane	288.5	10.0	ug/L	303	ND	95.1 61-152			
Vinyl Chloride	306.7	10.0	ug/L	302	ND	101 66-149			
Bromomethane	284.0	10.0	ug/L	301	ND	94.3 43-171			
Chloroethane	301.2	10.0	ug/L	303	ND	99.3 69-148			
Trichlorofluoromethane	346.1	10.0	ug/L	303	ND	114 62-163			
1,1-Dichloroethylene	604.8	10.0	ug/L	501	ND	121 70-148			
Acetone	1027	100	ug/L	1000	ND	103 45-173			
Methyl Iodide	1264	10.0	ug/L	1000	ND	126 62-167			
Carbon Disulfide	1080	10.0	ug/L	1000	ND	108 71-163			
Methylene Chloride	540.1	50.0	ug/L	501	ND	108 69-140			
Acrylonitrile	458.7	50.0	ug/L	502	ND	91.4 38-147			
trans-1,2-Dichloroethylene	590.4	10.0	ug/L	501	ND	118 69-144			
1,1-Dichloroethane	587.6	10.0	ug/L	501	ND	117 70-138			
Vinyl Acetate	1602	50.0	ug/L	1400	ND	114 58-142			
cis-1,2-Dichloroethylene	547.6	10.0	ug/L	504	ND	109 68-151			
2-Butanone (MEK)	905.0	100	ug/L	1000	ND	90.5 50-160			
Bromochloromethane	532.5	10.0	ug/L	504	ND	106 65-143			
Chloroform	546.4	10.0	ug/L	501	ND	109 71-143			
1,1,1-Trichloroethane	629.4	10.0	ug/L	501	ND	126 63-133			
Carbon Tetrachloride	623.3	10.0	ug/L	501	ND	124 63-142			
Benzene	586.4	10.0	ug/L	504	ND	116 69-133			
1,2-Dichloroethane	588.9	10.0	ug/L	501	ND	118 63-138			
Trichloroethylene	622.4	10.0	ug/L	501	ND	124 71-133			
1,2-Dichloropropane	590.6	10.0	ug/L	501	ND	118 69-132			
Dibromomethane	529.6	10.0	ug/L	504	ND	105 70-147			
Bromodichloromethane	632.3	10.0	ug/L	501	ND	126 67-130			
cis-1,3-Dichloropropene	486.8	10.0	ug/L	501	ND	97.2 61-126			
4-Methyl-2-pentanone (MIBK)	880.3	50.0	ug/L	1000	ND	88.0 55-147			
Toluene	598.8	10.0	ug/L	505	ND	119 71-133			
trans-1,3-Dichloropropene	477.7	10.0	ug/L	501	ND	95.4 63-124			
1,1,2-Trichloroethane	547.7	10.0	ug/L	501	ND	109 69-133			
Tetrachloroethylene	573.0	10.0	ug/L	501	ND	114 70-124			
2-Hexanone (MBK)	650.7	50.0	ug/L	1000	ND	65.1 53-141			
Dibromochloromethane	540.6	10.0	ug/L	501	ND	108 74-122			
1,2-Dibromoethane	482.2	10.0	ug/L	502	ND	96.0 66-127			
Chlorobenzene	529.1	10.0	ug/L	501	ND	106 76-116			
1,1,1,2-Tetrachloroethane	537.2	10.0	ug/L	503	ND	107 77-121			
Ethylbenzene	556.9	10.0	ug/L	502	ND	111 73-124			
Xylenes, total	1692	20.0	ug/L	1510	ND	112 75-123			

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0673 - EPA 5030B - EPA 8260D										
Matrix Spike (1ID0673-MS1)	Source: 1ID0938-05			Prepared: 04/11/25 00:00 Analyzed: 04/11/25 19:29						
Styrene	513.4	10.0	ug/L	504	ND	102	70-120			
Bromoform	514.0	10.0	ug/L	501	ND	103	70-124			
1,2,3-Trichloropropane	496.0	10.0	ug/L	503	ND	98.5	62-135			
trans-1,4-Dichloro-2-butene	812.2	50.0	ug/L	1000	ND	81.2	50-120			
1,1,2,2-Tetrachloroethane	420.4	10.0	ug/L	501	ND	83.9	63-126			
1,4-Dichlorobenzene	463.5	10.0	ug/L	501	ND	92.5	72-119			
1,2-Dichlorobenzene	508.8	10.0	ug/L	501	ND	102	71-117			
Surrogate: Dibromofluoromethane	513		ug/L	502		102	57-134			
Surrogate: Dibromofluoromethane	513		ug/L	502		102	75-136			
Surrogate: 1,2-Dichloroethane-d4	492		ug/L	501		98.2	53-140			
Surrogate: 1,2-Dichloroethane-d4	492		ug/L	501		98.2	61-142			
Surrogate: Toluene-d8	540		ug/L	504		107	86-114			
Surrogate: Toluene-d8	540		ug/L	504		107	82-121			
Surrogate: 4-Bromofluorobenzene	523		ug/L	501		104	78-121			
Surrogate: 4-Bromofluorobenzene	523		ug/L	501		104	80-116			
Matrix Spike Dup (1ID0673-MSD1)	Source: 1ID0938-05			Prepared: 04/11/25 00:00 Analyzed: 04/11/25 19:51						
Chloromethane	262.8	10.0	ug/L	303	ND	86.7	61-152	9.32	26	
Vinyl Chloride	282.1	10.0	ug/L	302	ND	93.3	66-149	8.36	23	
Bromomethane	263.3	10.0	ug/L	301	ND	87.4	43-171	7.56	29	
Chloroethane	273.3	10.0	ug/L	303	ND	90.1	69-148	9.71	25	
Trichlorofluoromethane	311.5	10.0	ug/L	303	ND	103	62-163	10.5	25	
1,1-Dichloroethylene	551.1	10.0	ug/L	501	ND	110	70-148	9.29	22	
Acetone	940.7	100	ug/L	1000	ND	94.1	45-173	8.75	30	
Methyl Iodide	1157	10.0	ug/L	1000	ND	116	62-167	8.81	24	
Carbon Disulfide	984.8	10.0	ug/L	1000	ND	98.5	71-163	9.25	22	
Methylene Chloride	512.2	50.0	ug/L	501	ND	102	69-140	5.30	19	
Acrylonitrile	457.1	50.0	ug/L	502	ND	91.1	38-147	0.349	30	
trans-1,2-Dichloroethylene	548.9	10.0	ug/L	501	ND	110	69-144	7.29	22	
1,1-Dichloroethane	527.9	10.0	ug/L	501	ND	105	70-138	10.7	20	
Vinyl Acetate	1603	50.0	ug/L	1400	ND	114	58-142	0.0499	24	
cis-1,2-Dichloroethylene	501.1	10.0	ug/L	504	ND	99.5	68-151	8.87	22	
2-Butanone (MEK)	919.5	100	ug/L	1000	ND	92.0	50-160	1.59	23	
Bromochloromethane	491.1	10.0	ug/L	504	ND	97.4	65-143	8.09	22	
Chloroform	506.2	10.0	ug/L	501	ND	101	71-143	7.64	21	
1,1,1-Trichloroethane	566.8	10.0	ug/L	501	ND	113	63-133	10.5	23	
Carbon Tetrachloride	568.4	10.0	ug/L	501	ND	113	63-142	9.21	22	
Benzene	509.0	10.0	ug/L	504	ND	101	69-133	14.1	18	
1,2-Dichloroethane	532.4	10.0	ug/L	501	ND	106	63-138	10.1	20	
Trichloroethylene	546.9	10.0	ug/L	501	ND	109	71-133	12.9	23	
1,2-Dichloropropane	536.6	10.0	ug/L	501	ND	107	69-132	9.58	20	
Dibromomethane	489.0	10.0	ug/L	504	ND	97.1	70-147	7.97	22	
Bromodichloromethane	583.8	10.0	ug/L	501	ND	117	67-130	7.98	21	
cis-1,3-Dichloropropene	448.3	10.0	ug/L	501	ND	89.5	61-126	8.23	21	

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0673 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (1ID0673-MSD1)		Source: 1ID0938-05		Prepared: 04/11/25 00:00 Analyzed: 04/11/25 19:51						
4-Methyl-2-pentanone (MIBK)	855.6	50.0	ug/L	1000	ND	85.6	55-147	2.85	23	
Toluene	527.5	10.0	ug/L	505	ND	105	71-133	12.7	19	
trans-1,3-Dichloropropene	453.9	10.0	ug/L	501	ND	90.6	63-124	5.11	21	
1,1,2-Trichloroethane	503.3	10.0	ug/L	501	ND	100	69-133	8.45	19	
Tetrachloroethylene	515.1	10.0	ug/L	501	ND	103	70-124	10.6	24	
2-Hexanone (MBK)	651.1	50.0	ug/L	1000	ND	65.1	53-141	0.0614	24	
Dibromochloromethane	510.5	10.0	ug/L	501	ND	102	74-122	5.73	21	
1,2-Dibromoethane	460.1	10.0	ug/L	502	ND	91.6	66-127	4.69	23	
Chlorobenzene	485.6	10.0	ug/L	501	ND	97.0	76-116	8.57	21	
1,1,1,2-Tetrachloroethane	492.4	10.0	ug/L	503	ND	97.8	77-121	8.70	25	
Ethylbenzene	509.1	10.0	ug/L	502	ND	101	73-124	8.97	20	
Xylenes, total	1563	20.0	ug/L	1510	ND	103	75-123	7.88	20	
Styrene	470.9	10.0	ug/L	504	ND	93.5	70-120	8.64	23	
Bromoform	496.9	10.0	ug/L	501	ND	99.2	70-124	3.38	22	
1,2,3-Trichloropropane	497.7	10.0	ug/L	503	ND	98.9	62-135	0.342	28	
trans-1,4-Dichloro-2-butene	930.0	50.0	ug/L	1000	ND	93.0	50-120	13.5	26	
1,1,2,2-Tetrachloroethane	403.5	10.0	ug/L	501	ND	80.5	63-126	4.10	24	
1,4-Dichlorobenzene	440.1	10.0	ug/L	501	ND	87.8	72-119	5.18	24	
1,2-Dichlorobenzene	463.4	10.0	ug/L	501	ND	92.5	71-117	9.34	24	
Surrogate: Dibromofluoromethane	514		ug/L	502		103	57-134			
Surrogate: Dibromofluoromethane	514		ug/L	502		103	75-136			
Surrogate: 1,2-Dichloroethane-d4	492		ug/L	501		98.2	53-140			
Surrogate: 1,2-Dichloroethane-d4	492		ug/L	501		98.2	61-142			
Surrogate: Toluene-d8	523		ug/L	504		104	86-114			
Surrogate: Toluene-d8	523		ug/L	504		104	82-121			
Surrogate: 4-Bromofluorobenzene	526		ug/L	501		105	78-121			
Surrogate: 4-Bromofluorobenzene	526		ug/L	501		105	80-116			
Batch 1ID0825 - EPA 5030B - EPA 8260D										
Blank (1ID0825-BLK1)		Prepared: 04/15/25 00:00 Analyzed: 04/15/25 13:39								
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	38.9		ug/L	50.2		77.6	75-136			
Surrogate: 1,2-Dichloroethane-d4	35.2		ug/L	50.1		70.3	61-142			
Surrogate: Toluene-d8	54.0		ug/L	50.4		107	82-121			
Surrogate: 4-Bromofluorobenzene	44.8		ug/L	50.1		89.4	80-116			
LCS (1ID0825-BS1)		Prepared: 04/15/25 00:00 Analyzed: 04/15/25 12:32								
1,2-Dibromo-3-chloropropane	26.37	5.0	ug/L	50.1		52.6	50-143			
Surrogate: Dibromofluoromethane	48.6		ug/L	50.2		96.8	75-136			
Surrogate: 1,2-Dichloroethane-d4	46.8		ug/L	50.1		93.5	61-142			
Surrogate: Toluene-d8	50.1		ug/L	50.4		99.5	82-121			
Surrogate: 4-Bromofluorobenzene	45.0		ug/L	50.1		89.7	80-116			

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0825 - EPA 5030B - EPA 8260D										
LCS Dup (1ID0825-BSD1)				Prepared: 04/15/25 00:00 Analyzed: 04/15/25 12:55						
1,2-Dibromo-3-chloropropane	37.19	5.0	ug/L	50.1		74.2	50-143	34.0	30	R1
Surrogate: 1,2-Dichloroethane-d4	52.9		ug/L	50.1		106	61-142			
Surrogate: Toluene-d8	49.9		ug/L	50.4		99.1	82-121			
Surrogate: 4-Bromofluorobenzene	48.9		ug/L	50.1		97.5	80-116			
Matrix Spike (1ID0825-MS1)				Source: 1ID0938-05RE1 Prepared: 04/15/25 00:00 Analyzed: 04/15/25 18:30						
1,2-Dibromo-3-chloropropane	399.6	50.0	ug/L	501	ND	79.7	49-134			
Surrogate: Dibromofluoromethane	535		ug/L	502		107	75-136			
Surrogate: 1,2-Dichloroethane-d4	533		ug/L	501		106	61-142			
Surrogate: Toluene-d8	504		ug/L	504		100	82-121			
Surrogate: 4-Bromofluorobenzene	490		ug/L	501		97.8	80-116			
Matrix Spike Dup (1ID0825-MSD1)				Source: 1ID0938-05RE1 Prepared: 04/15/25 00:00 Analyzed: 04/15/25 18:52						
1,2-Dibromo-3-chloropropane	478.8	50.0	ug/L	501	ND	95.5	49-134	18.0	28	
Surrogate: Dibromofluoromethane	542		ug/L	502		108	75-136			
Surrogate: 1,2-Dichloroethane-d4	537		ug/L	501		107	61-142			
Surrogate: Toluene-d8	509		ug/L	504		101	82-121			
Surrogate: 4-Bromofluorobenzene	503		ug/L	501		100	80-116			
Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID1489 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1ID1489-BLK1)				Prepared: 04/28/25 16:06 Analyzed: 06/20/25 15:38						
Antimony, total	<0.0010	0.0010	mg/L							
Arsenic, total	<0.0020	0.0020	mg/L							
Barium, total	<0.0010	0.0010	mg/L							
Beryllium, total	<0.0005	0.0005	mg/L							
Cadmium, total	<0.0002	0.0002	mg/L							
Chromium, total	<0.0010	0.0010	mg/L							B
Cobalt, total	<0.0005	0.0005	mg/L							
Copper, total	<0.0050	0.0050	mg/L							
Lead, total	<0.0010	0.0010	mg/L							
Nickel, total	<0.0050	0.0050	mg/L							
Selenium, total	<0.0020	0.0020	mg/L							
Silver, total	<0.0050	0.0050	mg/L							
Thallium, total	<0.0005	0.0005	mg/L							
Vanadium, total	<0.0020	0.0020	mg/L							
Zinc, total	<0.0050	0.0050	mg/L							
LCS (1ID1489-BS1)				Prepared: 04/28/25 16:06 Analyzed: 06/20/25 15:41						
Antimony, total	0.119	0.0010	mg/L	0.117		102	80-120			
Arsenic, total	0.100	0.0020	mg/L	0.117		85.7	80-120			
Barium, total	0.128	0.0010	mg/L	0.117		109	80-120			
Beryllium, total	0.102	0.0005	mg/L	0.117		87.5	80-120			

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID1489 - EPA 3005A Total Recoverable Metals - EPA 6020A									
LCS (1ID1489-BS1) Prepared: 04/28/25 16:06 Analyzed: 06/20/25 15:41									
Cadmium, total	0.110	0.0002	mg/L	0.117		94.0	80-120		
Chromium, total	0.118	0.0010	mg/L	0.117		101	80-120		
Cobalt, total	0.100	0.0005	mg/L	0.117		85.7	80-120		
Copper, total	0.0968	0.0050	mg/L	0.117		83.0	80-120		
Lead, total	0.108	0.0010	mg/L	0.117		92.9	80-120		
Nickel, total	0.0935	0.0050	mg/L	0.117		80.1	80-120		
Selenium, total	0.1059	0.0020	mg/L	0.117		90.8	80-120		
Silver, total	0.120	0.0050	mg/L	0.117		103	80-120		
Thallium, total	0.117	0.0005	mg/L	0.117		100	80-120		
Vanadium, total	0.101	0.0020	mg/L	0.117		86.5	80-120		
Zinc, total	0.0977	0.0050	mg/L	0.117		83.8	80-120		
Matrix Spike (1ID1489-MS1) Source: 1ID1083-01 Prepared: 04/28/25 16:06 Analyzed: 06/20/25 15:46									
Antimony, total	0.128	0.0010	mg/L	0.100	ND	128	75-125		M1
Arsenic, total	0.105	0.0020	mg/L	0.100	0.0030	102	75-125		
Barium, total	0.175	0.0010	mg/L	0.100	0.0419	134	75-125		M1
Beryllium, total	0.101	0.0005	mg/L	0.100	ND	101	75-125		
Cadmium, total	0.113	0.0002	mg/L	0.100	ND	113	75-125		
Chromium, total	0.122	0.0010	mg/L	0.100	0.0010	121	75-125		
Cobalt, total	0.0993	0.0005	mg/L	0.100	0.0016	97.7	75-125		
Copper, total	0.0945	0.0050	mg/L	0.100	0.0018	92.7	75-125		
Lead, total	0.111	0.0010	mg/L	0.100	0.0002	111	75-125		
Nickel, total	0.112	0.0050	mg/L	0.100	0.0210	90.6	75-125		
Selenium, total	0.1104	0.0020	mg/L	0.100	0.0010	109	75-125		
Silver, total	0.127	0.0050	mg/L	0.100	ND	127	75-125		M1
Thallium, total	0.120	0.0005	mg/L	0.100	ND	120	75-125		
Vanadium, total	0.106	0.0020	mg/L	0.100	0.0007	105	75-125		
Zinc, total	0.138	0.0050	mg/L	0.100	0.0427	95.3	75-125		
Matrix Spike Dup (1ID1489-MSD1) Source: 1ID1083-01 Prepared: 04/28/25 16:06 Analyzed: 06/20/25 15:48									
Antimony, total	0.122	0.0010	mg/L	0.100	ND	122	75-125	4.76	20
Arsenic, total	0.0986	0.0020	mg/L	0.100	0.0030	95.5	75-125	6.10	20
Barium, total	0.169	0.0010	mg/L	0.100	0.0419	128	75-125	3.48	20 M1
Beryllium, total	0.0924	0.0005	mg/L	0.100	ND	92.4	75-125	9.01	20
Cadmium, total	0.108	0.0002	mg/L	0.100	ND	108	75-125	4.23	20
Chromium, total	0.117	0.0010	mg/L	0.100	0.0010	116	75-125	3.83	20
Cobalt, total	0.0942	0.0005	mg/L	0.100	0.0016	92.5	75-125	5.29	20
Copper, total	0.0900	0.0050	mg/L	0.100	0.0018	88.2	75-125	4.89	20
Lead, total	0.107	0.0010	mg/L	0.100	0.0002	107	75-125	3.66	20
Nickel, total	0.108	0.0050	mg/L	0.100	0.0210	86.7	75-125	3.49	20
Selenium, total	0.1035	0.0020	mg/L	0.100	0.0010	102	75-125	6.46	20
Silver, total	0.120	0.0050	mg/L	0.100	ND	120	75-125	6.22	20
Thallium, total	0.114	0.0005	mg/L	0.100	ND	114	75-125	4.82	20
Vanadium, total	0.101	0.0020	mg/L	0.100	0.0007	100	75-125	4.53	20
Zinc, total	0.133	0.0050	mg/L	0.100	0.0427	90.1	75-125	3.83	20

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CERTIFICATE OF ANALYSIS

1ID1083

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID1489 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Post Spike (1ID1489-PS1) Source: 1ID1083-01 Prepared: 04/28/25 16:06 Analyzed: 06/20/25 15:56										
Antimony, total	0.0225		mg/L	0.0200	0.0004	111	80-120			
Arsenic, total	0.0217		mg/L	0.0200	0.0029	93.6	80-120			
Barium, total	0.0628		mg/L	0.0200	0.0411	108	80-120			
Beryllium, total	0.0180		mg/L	0.0200	0.00001	89.9	80-120			
Cadmium, total	0.0207		mg/L	0.0200	0.00009	103	80-120			
Chromium, total	0.0221		mg/L	0.0200	0.0010	105	80-120			
Cobalt, total	0.0184		mg/L	0.0200	0.0016	84.2	80-120			
Copper, total	0.0187		mg/L	0.0200	0.0018	84.9	80-120			
Lead, total	0.0201		mg/L	0.0200	0.0002	99.4	80-120			
Nickel, total	0.0372		mg/L	0.0200	0.0205	83.4	80-120			
Selenium, total	0.0211		mg/L	0.0200	0.0010	100	80-120			
Silver, total	0.0219		mg/L	0.0200	0.00001	110	80-120			
Thallium, total	0.0207		mg/L	0.0200	0.000002	104	80-120			
Vanadium, total	0.0186		mg/L	0.0200	0.0006	90.0	80-120			
Zinc, total	0.0597		mg/L	0.0200	0.0418	89.3	80-120			

Definitions

B:	The target analyte was detected in the blank at or above the method acceptance criteria.
M1:	Matrix spike recovery is above acceptance limits.
R1:	Duplicate RPD is outside acceptance criteria.
RL:	Reporting Limit
RPD:	Relative Percent Difference
S1:	Surrogate recovery is above acceptance limits.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 1.1°C

Cooler Inspection Checklist

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

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
06/24/25 13:27



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CHAIN OF CUSTODY



1 I D 1 0 8 3

HLW Engineering
PM: Heather Murphy

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SITE INFORMATION

Sampler: TODD WHIPPLE

Project: NCIRSWA - New Regs
6030

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

REPORT TO

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

INVOICE TO

Lori Lindstrom
NCIRSWA Landfill
2151 Gypsum Hollow Road
Fort Dodge, IA 50501

LAB USE ONLY

Work Order 1ID1083

Temperature 1.1

Turn-Cooler: No

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

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	MW-10A	Aqueous	GRAB	<u>4/8/25</u>	<u>11:07</u>	<u>7</u>	Indfill-appl-voc-group Indfill-appl-metals-6020	<u>01</u>
-001	MW-10B	Aqueous	GRAB	<u>4/8/25</u>	<u>11:14</u>	<u>7</u>	Indfill-appl-voc-group Indfill-appl-metals-6020	<u>02</u>
-001	MW-18	Aqueous	GRAB	<u>4/8/25</u>	<u>11:29</u>	<u>7</u>	Indfill-appl-voc-group Indfill-appl-metals-6020	<u>03</u>
-001	MW-20	Aqueous	GRAB	<u>4/8/25</u>	<u>12:00</u>	<u>7</u>	Indfill-appl-voc-group Indfill-appl-metals-6020	<u>04</u>
-001	MW-21R	Aqueous	GRAB	<u>4/8/25</u>	<u>12:13</u>	<u>7</u>	Indfill-appl-voc-group Indfill-appl-metals-6020	<u>05</u>
-001	MW-22	Aqueous	GRAB	<u>4/8/25</u>	<u>12:31</u>	<u>7</u>	Indfill-appl-voc-group Indfill-appl-metals-6020	<u>06</u>
-001	MW-30	Aqueous	GRAB	<u>4/8/25</u>	<u>9:55</u>	<u>7</u>	Indfill-appl-voc-group Indfill-appl-metals-6020	<u>07</u>

Relinquished By [Signature] Date/Time 4/9/25

Relinquished By _____ Date/Time _____

Received By _____ Date/Time _____

Received for Lab By [Signature] Date/Time 4/9/25 9:07

Original - Lab Copy Yellow - Sampler Copy

Remarks:



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CHAIN OF CUSTODY RECORD



HLW Engineering
PM: Heather Murphy

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SITE INFORMATION

Sampler: TODD WHIPPLE

Project: NCIRSWA - New Regs
6030

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

REPORT TO

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

CHOICE TO

Lori Lindstrom
NCIRSWA Landfill
2151 Gypsum Hollow Road
Fort Dodge, IA 50501

LAB USE ONLY

Work Order

Temperature

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	GU-2 Buried	Aqueous	GRAB	4/8/25	—	0	Indfill-app1-voc-group	Indfill-app1-metals-6020	—
-001	GU-3 Buried	Aqueous	GRAB	4/8/25	—	0	Indfill-app1-voc-group	Indfill-app1-metals-6020	—
-001	Duplicate	Aqueous	GRAB	4/8/25	✓	1	Indfill-app1-metals-6020		08
-001	MW-25	Aqueous	GRAB	4/8/25	10:22	7	Indfill-app1-voc-group	Indfill-app1-metals-6020	09
-001	MW-28	Aqueous	GRAB	4/8/25	10:44	7	Indfill-app1-voc-group	Indfill-app1-metals-6020	10
-001	MW-29	Aqueous	GRAB	4/8/25	11:40	7	Indfill-app1-voc-group	Indfill-app1-metals-6020	11
-001	MW-31	Aqueous	GRAB	4/8/25	9:20	7	Indfill-app1-voc-group	Indfill-app1-metals-6020	12

Relinquished By

Date/Time

Relinquished By

Date/Time

Received By

Date/Time

Received for Lab By

Date/Time

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Remarks:



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CHAIN OF CUSTODY



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HLW Engineering
PM: Heather Murphy

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Page 52 of 52

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: NCIRSWA - New Regs
6030

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

REPORT TO

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

INVOICE TO

Lori Lindstrom
NCIRSWA Landfill
2151 Gypsum Hollow Road
Fort Dodge, IA 50501

LAB USE ONLY

Work Order IID1083

Temperature 1.1

Turn-Cooler: No

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

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	MW-32	Aqueous	GRAB	<u>4/8/25</u>	<u>8:53</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>13</u>
-001	GU-4	Aqueous	GRAB	<u>4/8/25</u>	<u>9:30</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>14</u>
-001	GU-5 <u>DEY</u>	Aqueous	GRAB	<u>4/8/25</u>	<u>—</u>	<u>0</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>—</u>
-001	GU-6	Aqueous	GRAB	<u>4/8/25</u>	<u>8:42</u>	<u>7</u>	Indfill-app1-voc-group Indfill-app1-metals-6020	<u>15</u>

Relinquished By [Signature] Date/Time 4/9/25

Relinquished By _____ Date/Time _____

Received By _____ Date/Time _____

Received for Lab By [Signature] Date/Time 4/9/25 9:07

Original - Lab Copy Yellow - Sampler Copy

Remarks:



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1IJ2193

Project Description

6030

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Thursday, November 6, 2025

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

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

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CERTIFICATE OF ANALYSIS

1IJ2193

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6030

Project / PO Number: N/A
Received: 10/24/2025
Reported: 11/06/2025

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
MW-10A	1IJ2193-01	Aqueous	GRAB		10/23/25 11:11	10/24/25 10:15
MW-10B	1IJ2193-02	Aqueous	GRAB		10/23/25 11:19	10/24/25 10:15
MW-20	1IJ2193-03	Aqueous	GRAB		10/23/25 12:15	10/24/25 10:15
MW-21R	1IJ2193-04	Aqueous	GRAB		10/23/25 12:50	10/24/25 10:15
MW-22	1IJ2193-05	Aqueous	GRAB		10/23/25 13:00	10/24/25 10:15
MW-30	1IJ2193-06	Aqueous	GRAB		10/23/25 10:20	10/24/25 10:15
Duplicate	1IJ2193-07	Aqueous	GRAB		10/23/25 00:00	10/24/25 10:15
MW-25	1IJ2193-08	Aqueous	GRAB		10/23/25 10:38	10/24/25 10:15
MW-28	1IJ2193-09	Aqueous	GRAB		10/23/25 11:03	10/24/25 10:15
MW-29	1IJ2193-10	Aqueous	GRAB		10/23/25 12:01	10/24/25 10:15
MW-31	1IJ2193-11	Aqueous	GRAB		10/23/25 09:35	10/24/25 10:15
MW-32	1IJ2193-12	Aqueous	GRAB		10/23/25 09:15	10/24/25 10:15
GU-4	1IJ2193-13	Aqueous	GRAB		10/23/25 09:48	10/24/25 10:15



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1IJ2193

Analytical Testing Parameters

Client Sample ID: MW-10A
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-01

Collected By: Whipple, Todd
Collection Date: 10/23/2025 11:11

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Bromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Chloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Acetone	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Chloroform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Benzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Dibromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Toluene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Xylenes, total	<2.0	2.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Styrene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF

Microbac Laboratories, Inc., Newton

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-10A
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-01

Collected By: Whipple, Todd
Collection Date: 10/23/2025 11:11

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1427	RAF
Surrogate: Dibromofluoromethane	99.4	Limit: 75-136	% Rec		10/29/25 0000	10/29/25 1427	RAF
Surrogate: Dibromofluoromethane	99.4	Limit: 57-128	% Rec		10/29/25 0000	10/29/25 1427	RAF
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 49-135	% Rec		10/29/25 0000	10/29/25 1427	RAF
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 61-142	% Rec		10/29/25 0000	10/29/25 1427	RAF
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec		10/29/25 0000	10/29/25 1427	RAF
Surrogate: Toluene-d8	104	Limit: 82-116	% Rec		10/29/25 0000	10/29/25 1427	RAF
Surrogate: 4-Bromofluorobenzene	90.7	Limit: 77-114	% Rec		10/29/25 0000	10/29/25 1427	RAF
Surrogate: 4-Bromofluorobenzene	90.7	Limit: 80-116	% Rec		10/29/25 0000	10/29/25 1427	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1656	RVV
Arsenic	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1656	RVV
Barium	0.0330	0.0010	mg/L		10/28/25 1603	10/29/25 1656	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1656	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1656	RVV
Chromium	0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1656	RVV
Cobalt	0.0012	0.0005	mg/L		10/28/25 1603	10/29/25 1656	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1656	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1656	RVV
Nickel	0.0096	0.0050	mg/L		10/28/25 1603	10/29/25 1656	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1656	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1656	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1656	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1656	RVV
Zinc	0.0545	0.0050	mg/L		10/28/25 1603	10/29/25 1656	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-10B
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-02

Collected By: Whipple, Todd
Collection Date: 10/23/2025 11:19

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Bromomethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Chloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Acetone	<10.0	10.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Chloroform	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Benzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Dibromomethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Toluene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Xylenes, total	<2.0	2.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Styrene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Bromoform	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF

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1IJ2193

Client Sample ID: MW-10B
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-02

Collected By: Whipple, Todd
Collection Date: 10/23/2025 11:19

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1820	RAF
Surrogate: Dibromofluoromethane	102	Limit: 57-128	% Rec		10/30/25 0000	10/30/25 1820	RAF
Surrogate: Dibromofluoromethane	102	Limit: 75-136	% Rec		10/30/25 0000	10/30/25 1820	RAF
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 49-135	% Rec		10/30/25 0000	10/30/25 1820	RAF
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec		10/30/25 0000	10/30/25 1820	RAF
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec		10/30/25 0000	10/30/25 1820	RAF
Surrogate: Toluene-d8	105	Limit: 82-116	% Rec		10/30/25 0000	10/30/25 1820	RAF
Surrogate: 4-Bromofluorobenzene	86.5	Limit: 77-114	% Rec		10/30/25 0000	10/30/25 1820	RAF
Surrogate: 4-Bromofluorobenzene	86.5	Limit: 80-116	% Rec		10/30/25 0000	10/30/25 1820	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1705	RVV
Arsenic	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1705	RVV
Barium	0.0267	0.0010	mg/L		10/28/25 1603	10/29/25 1705	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1705	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1705	RVV
Chromium	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1705	RVV
Cobalt	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1705	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1705	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1705	RVV
Nickel	0.0056	0.0050	mg/L		10/28/25 1603	10/29/25 1705	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1705	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1705	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1705	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1705	RVV
Zinc	0.0081	0.0050	mg/L		10/28/25 1603	10/29/25 1705	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-20
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-03

Collected By: Whipple, Todd
Collection Date: 10/23/2025 12:15

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Bromomethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Chloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Acetone	<10.0	10.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Chloroform	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Benzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Dibromomethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Toluene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Xylenes, total	<2.0	2.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Styrene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Bromoform	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-20
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-03

Collected By: Whipple, Todd
Collection Date: 10/23/2025 12:15

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1843	RAF
Surrogate: Dibromofluoromethane	99.9	Limit: 57-128	% Rec		10/30/25 0000	10/30/25 1843	RAF
Surrogate: Dibromofluoromethane	99.9	Limit: 75-136	% Rec		10/30/25 0000	10/30/25 1843	RAF
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 49-135	% Rec		10/30/25 0000	10/30/25 1843	RAF
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec		10/30/25 0000	10/30/25 1843	RAF
Surrogate: Toluene-d8	105	Limit: 82-116	% Rec		10/30/25 0000	10/30/25 1843	RAF
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec		10/30/25 0000	10/30/25 1843	RAF
Surrogate: 4-Bromofluorobenzene	90.2	Limit: 77-114	% Rec		10/30/25 0000	10/30/25 1843	RAF
Surrogate: 4-Bromofluorobenzene	90.2	Limit: 80-116	% Rec		10/30/25 0000	10/30/25 1843	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1708	RVV
Arsenic	0.0112	0.0020	mg/L		10/28/25 1603	10/29/25 1708	RVV
Barium	0.0591	0.0010	mg/L		10/28/25 1603	10/29/25 1708	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1708	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1708	RVV
Chromium	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1708	RVV
Cobalt	0.0013	0.0005	mg/L		10/28/25 1603	10/29/25 1708	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1708	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1708	RVV
Nickel	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1708	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1708	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1708	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1708	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1708	RVV
Zinc	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1708	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-21R
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-04

Collected By: Whipple, Todd
Collection Date: 10/23/2025 12:50

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Bromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Chloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Acetone	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Chloroform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Benzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Dibromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Toluene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Xylenes, total	<2.0	2.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Styrene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Bromoform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-21R
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-04

Collected By: Whipple, Todd
Collection Date: 10/23/2025 12:50

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1536	RAF
Surrogate: Dibromofluoromethane	96.2	Limit: 57-128	% Rec		10/29/25 0000	10/29/25 1536	RAF
Surrogate: Dibromofluoromethane	96.2	Limit: 75-136	% Rec		10/29/25 0000	10/29/25 1536	RAF
Surrogate: 1,2-Dichloroethane-d4	87.5	Limit: 49-135	% Rec		10/29/25 0000	10/29/25 1536	RAF
Surrogate: 1,2-Dichloroethane-d4	87.5	Limit: 61-142	% Rec		10/29/25 0000	10/29/25 1536	RAF
Surrogate: Toluene-d8	99.3	Limit: 82-121	% Rec		10/29/25 0000	10/29/25 1536	RAF
Surrogate: Toluene-d8	99.3	Limit: 82-116	% Rec		10/29/25 0000	10/29/25 1536	RAF
Surrogate: 4-Bromofluorobenzene	93.0	Limit: 77-114	% Rec		10/29/25 0000	10/29/25 1536	RAF
Surrogate: 4-Bromofluorobenzene	93.0	Limit: 80-116	% Rec		10/29/25 0000	10/29/25 1536	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1711	RVV
Arsenic	0.0084	0.0020	mg/L		10/28/25 1603	10/29/25 1711	RVV
Barium	0.0288	0.0010	mg/L		10/28/25 1603	10/29/25 1711	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1711	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1711	RVV
Chromium	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1711	RVV
Cobalt	0.0040	0.0005	mg/L		10/28/25 1603	10/29/25 1711	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1711	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1711	RVV
Nickel	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1711	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1711	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1711	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1711	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1711	RVV
Zinc	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1711	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-22
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-05

Collected By: Whipple, Todd
Collection Date: 10/23/2025 13:00

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Bromomethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Chloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Acetone	<10.0	10.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Chloroform	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Benzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Dibromomethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Toluene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Xylenes, total	<2.0	2.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Styrene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Bromoform	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-22
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-05

Collected By: Whipple, Todd
Collection Date: 10/23/2025 13:00

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1906	RAF
Surrogate: Dibromofluoromethane	94.2	Limit: 75-136	% Rec		10/30/25 0000	10/30/25 1906	RAF
Surrogate: Dibromofluoromethane	94.2	Limit: 57-128	% Rec		10/30/25 0000	10/30/25 1906	RAF
Surrogate: 1,2-Dichloroethane-d4	86.3	Limit: 49-135	% Rec		10/30/25 0000	10/30/25 1906	RAF
Surrogate: 1,2-Dichloroethane-d4	86.3	Limit: 61-142	% Rec		10/30/25 0000	10/30/25 1906	RAF
Surrogate: Toluene-d8	97.4	Limit: 82-121	% Rec		10/30/25 0000	10/30/25 1906	RAF
Surrogate: Toluene-d8	97.4	Limit: 82-116	% Rec		10/30/25 0000	10/30/25 1906	RAF
Surrogate: 4-Bromofluorobenzene	93.3	Limit: 77-114	% Rec		10/30/25 0000	10/30/25 1906	RAF
Surrogate: 4-Bromofluorobenzene	93.3	Limit: 80-116	% Rec		10/30/25 0000	10/30/25 1906	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1713	RVV
Arsenic	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1713	RVV
Barium	0.0127	0.0010	mg/L		10/28/25 1603	10/29/25 1713	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1713	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1713	RVV
Chromium	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1713	RVV
Cobalt	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1713	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1713	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1713	RVV
Nickel	0.0056	0.0050	mg/L		10/28/25 1603	10/29/25 1713	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1713	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1713	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1713	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1713	RVV
Zinc	0.0084	0.0050	mg/L		10/28/25 1603	10/29/25 1713	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-30
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-06

Collected By: Whipple, Todd
Collection Date: 10/23/2025 10:20

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Bromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Chloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Acetone	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Chloroform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Benzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Dibromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Toluene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Xylenes, total	<2.0	2.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Styrene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Bromoform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-30
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-06

Collected By: Whipple, Todd
Collection Date: 10/23/2025 10:20

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1622	RAF
Surrogate: Dibromofluoromethane	96.3	Limit: 57-128	% Rec		10/29/25 0000	10/29/25 1622	RAF
Surrogate: Dibromofluoromethane	96.3	Limit: 75-136	% Rec		10/29/25 0000	10/29/25 1622	RAF
Surrogate: 1,2-Dichloroethane-d4	86.8	Limit: 61-142	% Rec		10/29/25 0000	10/29/25 1622	RAF
Surrogate: 1,2-Dichloroethane-d4	86.8	Limit: 49-135	% Rec		10/29/25 0000	10/29/25 1622	RAF
Surrogate: Toluene-d8	100	Limit: 82-116	% Rec		10/29/25 0000	10/29/25 1622	RAF
Surrogate: Toluene-d8	100	Limit: 82-121	% Rec		10/29/25 0000	10/29/25 1622	RAF
Surrogate: 4-Bromofluorobenzene	93.1	Limit: 80-116	% Rec		10/29/25 0000	10/29/25 1622	RAF
Surrogate: 4-Bromofluorobenzene	93.1	Limit: 77-114	% Rec		10/29/25 0000	10/29/25 1622	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1715	RVV
Arsenic	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1715	RVV
Barium	0.0153	0.0010	mg/L		10/28/25 1603	10/29/25 1715	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1715	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1715	RVV
Chromium	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1715	RVV
Cobalt	0.0047	0.0005	mg/L		10/28/25 1603	10/29/25 1715	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1715	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1715	RVV
Nickel	0.0139	0.0050	mg/L		10/28/25 1603	10/29/25 1715	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1715	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1715	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1715	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1715	RVV
Zinc	0.0079	0.0050	mg/L		10/28/25 1603	10/29/25 1715	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: Duplicate
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-07

Collected By: Whipple, Todd
Collection Date: 10/23/2025

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1718	RVV
Arsenic	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1718	RVV
Barium	0.0186	0.0010	mg/L		10/28/25 1603	10/29/25 1718	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1718	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1718	RVV
Chromium	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1718	RVV
Cobalt	0.0055	0.0005	mg/L		10/28/25 1603	10/29/25 1718	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1718	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1718	RVV
Nickel	0.0060	0.0050	mg/L		10/28/25 1603	10/29/25 1718	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1718	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1718	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1718	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1718	RVV
Zinc	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1718	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-25
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-08

Collected By: Whipple, Todd
Collection Date: 10/23/2025 10:38

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Bromomethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Chloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Acetone	<10.0	10.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Chloroform	2.9	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Benzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Dibromomethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Toluene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Xylenes, total	<2.0	2.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Styrene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Bromoform	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-25
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-08

Collected By: Whipple, Todd
Collection Date: 10/23/2025 10:38

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/30/25 0000	10/30/25 1929	RAF
Surrogate: Dibromofluoromethane	93.6	Limit: 57-128	% Rec		10/30/25 0000	10/30/25 1929	RAF
Surrogate: Dibromofluoromethane	93.6	Limit: 75-136	% Rec		10/30/25 0000	10/30/25 1929	RAF
Surrogate: 1,2-Dichloroethane-d4	84.0	Limit: 61-142	% Rec		10/30/25 0000	10/30/25 1929	RAF
Surrogate: 1,2-Dichloroethane-d4	84.0	Limit: 49-135	% Rec		10/30/25 0000	10/30/25 1929	RAF
Surrogate: Toluene-d8	98.7	Limit: 82-121	% Rec		10/30/25 0000	10/30/25 1929	RAF
Surrogate: Toluene-d8	98.7	Limit: 82-116	% Rec		10/30/25 0000	10/30/25 1929	RAF
Surrogate: 4-Bromofluorobenzene	91.8	Limit: 80-116	% Rec		10/30/25 0000	10/30/25 1929	RAF
Surrogate: 4-Bromofluorobenzene	91.8	Limit: 77-114	% Rec		10/30/25 0000	10/30/25 1929	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1726	RVV
Arsenic	0.0059	0.0020	mg/L		10/28/25 1603	10/29/25 1726	RVV
Barium	0.0459	0.0010	mg/L		10/28/25 1603	10/29/25 1726	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1726	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1726	RVV
Chromium	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1726	RVV
Cobalt	0.0011	0.0005	mg/L		10/28/25 1603	10/29/25 1726	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1726	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1726	RVV
Nickel	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1726	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1726	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1726	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1726	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1726	RVV
Zinc	0.0062	0.0050	mg/L		10/28/25 1603	10/29/25 1726	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-28
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-09

Collected By: Whipple, Todd
Collection Date: 10/23/2025 11:03

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Bromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Chloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Acetone	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Chloroform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Benzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Dibromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Toluene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Xylenes, total	<2.0	2.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Styrene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Bromoform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-28
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-09

Collected By: Whipple, Todd
Collection Date: 10/23/2025 11:03

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1708	RAF
Surrogate: Dibromofluoromethane	98.4	Limit: 75-136	% Rec		10/29/25 0000	10/29/25 1708	RAF
Surrogate: Dibromofluoromethane	98.4	Limit: 57-128	% Rec		10/29/25 0000	10/29/25 1708	RAF
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 49-135	% Rec		10/29/25 0000	10/29/25 1708	RAF
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec		10/29/25 0000	10/29/25 1708	RAF
Surrogate: Toluene-d8	129	Limit: 82-121	% Rec	S1	10/29/25 0000	10/29/25 1708	RAF
Surrogate: Toluene-d8	129	Limit: 82-116	% Rec	S1	10/29/25 0000	10/29/25 1708	RAF
Surrogate: 4-Bromofluorobenzene	92.1	Limit: 80-116	% Rec		10/29/25 0000	10/29/25 1708	RAF
Surrogate: 4-Bromofluorobenzene	92.1	Limit: 77-114	% Rec		10/29/25 0000	10/29/25 1708	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1728	RVV
Arsenic	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1728	RVV
Barium	0.0297	0.0010	mg/L		10/28/25 1603	10/29/25 1728	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1728	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1728	RVV
Chromium	0.0011	0.0010	mg/L		10/28/25 1603	10/29/25 1728	RVV
Cobalt	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1728	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1728	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1728	RVV
Nickel	0.0077	0.0050	mg/L		10/28/25 1603	10/29/25 1728	RVV
Selenium	0.0027	0.0020	mg/L		10/28/25 1603	10/29/25 1728	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1728	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1728	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1728	RVV
Zinc	0.0094	0.0050	mg/L		10/28/25 1603	10/29/25 1728	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-29
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-10

Collected By: Whipple, Todd
Collection Date: 10/23/2025 12:01

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Bromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Chloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Acetone	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Chloroform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Benzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Dibromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Toluene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Xylenes, total	<2.0	2.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Styrene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Bromoform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-29
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-10

Collected By: Whipple, Todd
Collection Date: 10/23/2025 12:01

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1730	RAF
Surrogate: Dibromofluoromethane	96.5	Limit: 57-128	% Rec		10/29/25 0000	10/29/25 1730	RAF
Surrogate: Dibromofluoromethane	96.5	Limit: 75-136	% Rec		10/29/25 0000	10/29/25 1730	RAF
Surrogate: 1,2-Dichloroethane-d4	88.2	Limit: 49-135	% Rec		10/29/25 0000	10/29/25 1730	RAF
Surrogate: 1,2-Dichloroethane-d4	88.2	Limit: 61-142	% Rec		10/29/25 0000	10/29/25 1730	RAF
Surrogate: Toluene-d8	98.4	Limit: 82-116	% Rec		10/29/25 0000	10/29/25 1730	RAF
Surrogate: Toluene-d8	98.4	Limit: 82-121	% Rec		10/29/25 0000	10/29/25 1730	RAF
Surrogate: 4-Bromofluorobenzene	93.3	Limit: 77-114	% Rec		10/29/25 0000	10/29/25 1730	RAF
Surrogate: 4-Bromofluorobenzene	93.3	Limit: 80-116	% Rec		10/29/25 0000	10/29/25 1730	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1731	RVV
Arsenic	0.0171	0.0020	mg/L		10/28/25 1603	10/29/25 1731	RVV
Barium	0.0395	0.0010	mg/L		10/28/25 1603	10/29/25 1731	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1731	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1731	RVV
Chromium	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1731	RVV
Cobalt	0.0253	0.0005	mg/L		10/28/25 1603	10/29/25 1731	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1731	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1731	RVV
Nickel	0.0474	0.0050	mg/L		10/28/25 1603	10/29/25 1731	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1731	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1731	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1731	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1731	RVV
Zinc	0.0129	0.0050	mg/L		10/28/25 1603	10/29/25 1731	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-31
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-11

Collected By: Whipple, Todd
Collection Date: 10/23/2025 9:35

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Bromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Chloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Acetone	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Chloroform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Benzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Dibromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Toluene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Xylenes, total	<2.0	2.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Styrene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Bromoform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-31
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-11

Collected By: Whipple, Todd
Collection Date: 10/23/2025 9:35

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1753	RAF
Surrogate: Dibromofluoromethane	102	Limit: 75-136	% Rec		10/29/25 0000	10/29/25 1753	RAF
Surrogate: Dibromofluoromethane	102	Limit: 57-128	% Rec		10/29/25 0000	10/29/25 1753	RAF
Surrogate: 1,2-Dichloroethane-d4	74.8	Limit: 61-142	% Rec		10/29/25 0000	10/29/25 1753	RAF
Surrogate: 1,2-Dichloroethane-d4	74.8	Limit: 49-135	% Rec		10/29/25 0000	10/29/25 1753	RAF
Surrogate: Toluene-d8	106	Limit: 82-121	% Rec		10/29/25 0000	10/29/25 1753	RAF
Surrogate: Toluene-d8	106	Limit: 82-116	% Rec		10/29/25 0000	10/29/25 1753	RAF
Surrogate: 4-Bromofluorobenzene	92.3	Limit: 80-116	% Rec		10/29/25 0000	10/29/25 1753	RAF
Surrogate: 4-Bromofluorobenzene	92.3	Limit: 77-114	% Rec		10/29/25 0000	10/29/25 1753	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1733	RVV
Arsenic	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1733	RVV
Barium	0.0169	0.0010	mg/L		10/28/25 1603	10/29/25 1733	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1733	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1733	RVV
Chromium	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1733	RVV
Cobalt	0.0051	0.0005	mg/L		10/28/25 1603	10/29/25 1733	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1733	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1733	RVV
Nickel	0.0054	0.0050	mg/L		10/28/25 1603	10/29/25 1733	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1733	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1733	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1733	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1733	RVV
Zinc	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1733	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-32
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-12

Collected By: Whipple, Todd
Collection Date: 10/23/2025 9:15

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Bromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Chloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Acetone	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Chloroform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Benzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Dibromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Toluene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Xylenes, total	<2.0	2.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Styrene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Bromoform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: MW-32
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-12

Collected By: Whipple, Todd
Collection Date: 10/23/2025 9:15

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1816	RAF
Surrogate: Dibromofluoromethane	101	Limit: 57-128	% Rec		10/29/25 0000	10/29/25 1816	RAF
Surrogate: Dibromofluoromethane	101	Limit: 75-136	% Rec		10/29/25 0000	10/29/25 1816	RAF
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 61-142	% Rec		10/29/25 0000	10/29/25 1816	RAF
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 49-135	% Rec		10/29/25 0000	10/29/25 1816	RAF
Surrogate: Toluene-d8	62.6	Limit: 82-121	% Rec	S2	10/29/25 0000	10/29/25 1816	RAF
Surrogate: Toluene-d8	62.6	Limit: 82-116	% Rec	S2	10/29/25 0000	10/29/25 1816	RAF
Surrogate: 4-Bromofluorobenzene	93.0	Limit: 80-116	% Rec		10/29/25 0000	10/29/25 1816	RAF
Surrogate: 4-Bromofluorobenzene	93.0	Limit: 77-114	% Rec		10/29/25 0000	10/29/25 1816	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1736	RVV
Arsenic	0.0064	0.0020	mg/L		10/28/25 1603	10/29/25 1736	RVV
Barium	0.0723	0.0010	mg/L		10/28/25 1603	10/29/25 1736	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1736	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1736	RVV
Chromium	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1736	RVV
Cobalt	0.0256	0.0005	mg/L		10/28/25 1603	10/29/25 1736	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1736	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1736	RVV
Nickel	0.0388	0.0050	mg/L		10/28/25 1603	10/29/25 1736	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1736	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1736	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1736	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1736	RVV
Zinc	0.0187	0.0050	mg/L		10/28/25 1603	10/29/25 1736	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: GU-4
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-13

Collected By: Whipple, Todd
Collection Date: 10/23/2025 9:48

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Bromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Chloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Acetone	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Chloroform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Benzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Dibromomethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Toluene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Xylenes, total	<2.0	2.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Styrene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Bromoform	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF

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CERTIFICATE OF ANALYSIS

1IJ2193

Client Sample ID: GU-4
Sample Matrix: Aqueous
Lab Sample ID: 1IJ2193-13

Collected By: Whipple, Todd
Collection Date: 10/23/2025 9:48

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/29/25 0000	10/29/25 1839	RAF
Surrogate: Dibromofluoromethane	101	Limit: 57-128	% Rec		10/29/25 0000	10/29/25 1839	RAF
Surrogate: Dibromofluoromethane	101	Limit: 75-136	% Rec		10/29/25 0000	10/29/25 1839	RAF
Surrogate: 1,2-Dichloroethane-d4	59.8	Limit: 61-142	% Rec	S2	10/29/25 0000	10/29/25 1839	RAF
Surrogate: 1,2-Dichloroethane-d4	59.8	Limit: 49-135	% Rec		10/29/25 0000	10/29/25 1839	RAF
Surrogate: Toluene-d8	106	Limit: 82-116	% Rec		10/29/25 0000	10/29/25 1839	RAF
Surrogate: Toluene-d8	106	Limit: 82-121	% Rec		10/29/25 0000	10/29/25 1839	RAF
Surrogate: 4-Bromofluorobenzene	91.6	Limit: 80-116	% Rec		10/29/25 0000	10/29/25 1839	RAF
Surrogate: 4-Bromofluorobenzene	91.6	Limit: 77-114	% Rec		10/29/25 0000	10/29/25 1839	RAF
Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1738	RVV
Arsenic	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1738	RVV
Barium	0.0184	0.0010	mg/L		10/28/25 1603	10/29/25 1738	RVV
Beryllium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1738	RVV
Cadmium	<0.0002	0.0002	mg/L		10/28/25 1603	10/29/25 1738	RVV
Chromium	0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1738	RVV
Cobalt	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1738	RVV
Copper	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1738	RVV
Lead	<0.0010	0.0010	mg/L		10/28/25 1603	10/29/25 1738	RVV
Nickel	0.0126	0.0050	mg/L		10/28/25 1603	10/29/25 1738	RVV
Selenium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1738	RVV
Silver	<0.0050	0.0050	mg/L		10/28/25 1603	10/29/25 1738	RVV
Thallium	<0.0005	0.0005	mg/L		10/28/25 1603	10/29/25 1738	RVV
Vanadium	<0.0020	0.0020	mg/L		10/28/25 1603	10/29/25 1738	RVV
Zinc	0.203	0.0050	mg/L		10/28/25 1603	10/29/25 1738	RVV

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CERTIFICATE OF ANALYSIS

1IJ2193

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1IJ1630	1IJ1630-BLK1	
		1IJ1630-BS1	
		1IJ2193-01	MW-10A
		1IJ1630-MS1	1IJ2193-01
		1IJ1630-MSD1	1IJ2193-01
		1IJ1630-PS1	1IJ2193-01
		1IJ2193-02	MW-10B
		1IJ2193-03	MW-20
		1IJ2193-04	MW-21R
		1IJ2193-05	MW-22
		1IJ2193-06	MW-30
		1IJ2193-07	Duplicate
		1IJ2193-08	MW-25
		1IJ2193-09	MW-28
		1IJ2193-10	MW-29
		1IJ2193-11	MW-31
EPA 8260D	1IJ1715	1IJ2193-12	MW-32
		1IJ2193-13	GU-4
		1IJ1715-BS1	
		1IJ1715-BLK1	
		1IJ2193-01	MW-10A
		1IJ2193-04	MW-21R
		1IJ2193-06	MW-30
		1IJ2193-09	MW-28
		1IJ2193-10	MW-29
		1IJ2193-11	MW-31
		1IJ2193-12	MW-32
		1IJ2193-13	GU-4
		1IJ1715-MS1	1IJ2193-01
		1IJ1715-MSD1	1IJ2193-01
		1IJ1790-BS1	
		1IJ1790-BSD1	
EPA 8260D	1IJ1790	1IJ1790-BLK1	
		1IJ2193-02RE1	MW-10B
		1IJ2193-03RE1	MW-20
		1IJ2193-03RE1	MW-20
		1IJ2193-05RE1	MW-22
		1IJ2193-08RE1	MW-25
		1IJ2193-08RE1	MW-25
		1IJ1790-MS1	1IJ2324-01
		1IJ1790-MSD1	1IJ2324-01

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

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

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CERTIFICATE OF ANALYSIS

1IJ2193

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1715 - EPA 5030B - EPA 8260D										
Blank (1IJ1715-BLK1)				Prepared: 10/29/25 00:00 Analyzed: 10/29/25 11:02						
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	1.21	1.0	ug/L							B
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							

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CERTIFICATE OF ANALYSIS

1IJ2193

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1715 - EPA 5030B - EPA 8260D									
Blank (1IJ1715-BLK1)									
Prepared: 10/29/25 00:00 Analyzed: 10/29/25 11:02									
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	50.3		ug/L	50.2		100	57-128		
Surrogate: Dibromofluoromethane	50.3		ug/L	50.2		100	75-136		
Surrogate: 1,2-Dichloroethane-d4	51.2		ug/L	50.4		102	49-135		
Surrogate: 1,2-Dichloroethane-d4	51.2		ug/L	50.4		102	61-142		
Surrogate: Toluene-d8	52.5		ug/L	50.5		104	82-116		
Surrogate: Toluene-d8	52.5		ug/L	50.5		104	82-121		
Surrogate: 4-Bromofluorobenzene	46.4		ug/L	50.2		92.5	77-114		
Surrogate: 4-Bromofluorobenzene	46.4		ug/L	50.2		92.5	80-116		
LCS (1IJ1715-BS1)									
Prepared: 10/29/25 00:00 Analyzed: 10/29/25 10:16									
Chloromethane	28.08	1.0	ug/L	30.3		92.6	63-155		
Vinyl Chloride	32.61	1.0	ug/L	30.2		108	70-154		
Bromomethane	23.68	1.0	ug/L	30.1		78.6	52-176		
Chloroethane	32.25	1.0	ug/L	30.3		106	72-148		
Trichlorofluoromethane	31.60	1.0	ug/L	30.3		104	70-152		
1,1-Dichloroethylene	49.80	1.0	ug/L	50.1		99.4	70-148		
Acetone	92.88	10.0	ug/L	100		92.9	43-172		
Methyl Iodide	131.4	1.0	ug/L	100		131	69-170		
Carbon Disulfide	103.9	1.0	ug/L	100		104	72-162		
Methylene Chloride	49.55	5.0	ug/L	50.1		98.9	68-142		
Acrylonitrile	47.51	5.0	ug/L	50.4		94.4	33-163		
trans-1,2-Dichloroethylene	53.88	1.0	ug/L	50.1		108	66-148		
1,1-Dichloroethane	49.75	1.0	ug/L	50.1		99.3	66-143		
Vinyl Acetate	139.6	5.0	ug/L	142		98.0	43-153		
cis-1,2-Dichloroethylene	46.83	1.0	ug/L	50.4		93.0	71-149		
2-Butanone (MEK)	98.53	10.0	ug/L	100		98.5	52-159		
Bromochloromethane	48.20	1.0	ug/L	50.4		95.6	69-143		
Chloroform	49.18	1.0	ug/L	50.1		98.2	69-144		
1,1,1-Trichloroethane	48.43	1.0	ug/L	50.1		96.6	62-129		
Carbon Tetrachloride	52.42	1.0	ug/L	50.1		105	63-141		
Benzene	47.59	1.0	ug/L	50.4		94.4	71-134		
1,2-Dichloroethane	49.08	1.0	ug/L	50.1		98.0	72-132		
Trichloroethylene	48.34	1.0	ug/L	50.1		96.5	71-135		
1,2-Dichloropropane	50.41	1.0	ug/L	50.1		101	69-136		
Dibromomethane	48.64	1.0	ug/L	50.4		96.6	73-147		
Bromodichloromethane	49.93	1.0	ug/L	50.1		99.7	68-129		
cis-1,3-Dichloropropene	46.19	1.0	ug/L	50.1		92.2	65-134		
4-Methyl-2-pentanone (MIBK)	94.08	5.0	ug/L	100		94.1	58-147		
Toluene	49.84	1.0	ug/L	50.5		98.7	72-133		
trans-1,3-Dichloropropene	47.14	1.0	ug/L	50.1		94.1	67-130		

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CERTIFICATE OF ANALYSIS

1IJ2193

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1715 - EPA 5030B - EPA 8260D										
LCS (1IJ1715-BS1)										
Prepared: 10/29/25 00:00 Analyzed: 10/29/25 10:16										
1,1,2-Trichloroethane	49.51	1.0	ug/L	50.1		98.8	69-135			
Tetrachloroethylene	45.65	1.0	ug/L	50.1		91.1	69-130			
2-Hexanone (MBK)	96.90	5.0	ug/L	100		96.9	55-144			
Dibromochloromethane	44.54	1.0	ug/L	50.1		89.0	73-127			
1,2-Dibromoethane	45.85	1.0	ug/L	50.2		91.3	67-132			
Chlorobenzene	45.35	1.0	ug/L	50.1		90.6	72-123			
1,1,1,2-Tetrachloroethane	49.46	1.0	ug/L	50.3		98.2	73-127			
Ethylbenzene	48.26	1.0	ug/L	50.2		96.2	71-127			
Xylenes, total	146.7	2.0	ug/L	151		97.1	74-127			
Styrene	54.70	1.0	ug/L	50.4		109	66-126			
Bromoform	48.82	1.0	ug/L	50.1		97.4	68-130			
1,2,3-Trichloropropane	45.77	1.0	ug/L	50.3		90.9	63-136			
trans-1,4-Dichloro-2-butene	84.79	5.0	ug/L	100		84.8	54-134			
1,1,2,2-Tetrachloroethane	45.94	1.0	ug/L	50.1		91.7	61-131			
1,4-Dichlorobenzene	48.52	1.0	ug/L	50.1		96.8	70-129			
1,2-Dichlorobenzene	46.55	1.0	ug/L	50.1		92.9	69-126			
1,2-Dibromo-3-chloropropane	44.19	5.0	ug/L	50.1		88.2	50-143			
Surrogate: Dibromofluoromethane	51.8		ug/L	50.2		103	57-128			
Surrogate: Dibromofluoromethane	51.8		ug/L	50.2		103	75-136			
Surrogate: 1,2-Dichloroethane-d4	52.0		ug/L	50.4		103	49-135			
Surrogate: 1,2-Dichloroethane-d4	52.0		ug/L	50.4		103	61-142			
Surrogate: Toluene-d8	53.7		ug/L	50.5		106	82-116			
Surrogate: Toluene-d8	53.7		ug/L	50.5		106	82-121			
Surrogate: 4-Bromofluorobenzene	51.2		ug/L	50.2		102	77-114			
Surrogate: 4-Bromofluorobenzene	51.2		ug/L	50.2		102	80-116			
Matrix Spike (1IJ1715-MS1)										
Source: 1IJ2193-01 Prepared: 10/29/25 00:00 Analyzed: 10/29/25 19:02										
Chloromethane	226.0	10.0	ug/L	303	ND	74.5	61-152			
Vinyl Chloride	257.4	10.0	ug/L	302	ND	85.1	66-149			
Bromomethane	404.7	10.0	ug/L	301	ND	134	43-171			
Chloroethane	247.8	10.0	ug/L	303	ND	81.7	69-148			
Trichlorofluoromethane	247.6	10.0	ug/L	303	ND	81.7	62-163			
1,1-Dichloroethylene	382.2	10.0	ug/L	501	ND	76.2	70-148			
Acetone	852.9	100	ug/L	1000	ND	85.3	45-173			
Methyl Iodide	867.1	10.0	ug/L	1000	ND	86.7	62-167			
Carbon Disulfide	776.5	10.0	ug/L	1000	ND	77.6	71-163			
Methylene Chloride	398.2	50.0	ug/L	501	ND	79.5	69-140			
Acrylonitrile	373.4	50.0	ug/L	504	ND	74.2	32-159			
trans-1,2-Dichloroethylene	415.0	10.0	ug/L	501	ND	82.9	69-144			
1,1-Dichloroethane	382.5	10.0	ug/L	501	ND	76.3	70-138			
Vinyl Acetate	1281	50.0	ug/L	1420	ND	89.9	58-142			
cis-1,2-Dichloroethylene	543.5	10.0	ug/L	504	ND	108	68-151			
2-Butanone (MEK)	1214	100	ug/L	1000	ND	121	50-160			
Bromochloromethane	462.1	10.0	ug/L	504	ND	91.7	65-143			

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CERTIFICATE OF ANALYSIS

1IJ2193

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1715 - EPA 5030B - EPA 8260D										
Matrix Spike (1IJ1715-MS1)	Source: 1IJ2193-01			Prepared: 10/29/25 00:00 Analyzed: 10/29/25 19:02						
Chloroform	625.7	10.0	ug/L	501	ND	125	71-143			
1,1,1-Trichloroethane	550.9	10.0	ug/L	501	ND	110	63-133			
Carbon Tetrachloride	416.3	10.0	ug/L	501	ND	83.1	63-142			
Benzene	488.1	10.0	ug/L	504	ND	96.8	69-133			
1,2-Dichloroethane	506.0	10.0	ug/L	501	ND	101	63-138			
Trichloroethylene	508.4	10.0	ug/L	501	ND	101	71-133			
1,2-Dichloropropane	505.7	10.0	ug/L	501	ND	101	69-132			
Dibromomethane	485.3	10.0	ug/L	504	ND	96.4	70-147			
Bromodichloromethane	503.8	10.0	ug/L	501	ND	101	67-130			
cis-1,3-Dichloropropene	459.5	10.0	ug/L	501	ND	91.7	61-126			
4-Methyl-2-pentanone (MIBK)	940.7	50.0	ug/L	1000	ND	94.1	55-147			
Toluene	511.8	10.0	ug/L	505	ND	101	71-133			
trans-1,3-Dichloropropene	467.8	10.0	ug/L	501	ND	93.4	63-124			
1,1,2-Trichloroethane	501.1	10.0	ug/L	501	ND	100	69-133			
Tetrachloroethylene	498.7	10.0	ug/L	501	ND	99.5	70-124			
2-Hexanone (MBK)	1013	50.0	ug/L	1000	ND	101	53-141			
Dibromochloromethane	466.3	10.0	ug/L	501	ND	93.1	74-122			
1,2-Dibromoethane	475.4	10.0	ug/L	502	ND	94.7	66-127			
Chlorobenzene	472.8	10.0	ug/L	501	ND	94.4	76-116			
1,1,1,2-Tetrachloroethane	505.7	10.0	ug/L	503	ND	100	77-121			
Ethylbenzene	508.7	10.0	ug/L	502	ND	101	73-124			
Xylenes, total	1549	20.0	ug/L	1510	ND	103	75-123			
Styrene	573.9	10.0	ug/L	504	ND	114	70-120			
Bromoform	503.5	10.0	ug/L	501	ND	100	70-124			
1,2,3-Trichloropropane	503.3	10.0	ug/L	503	ND	100	62-135			
trans-1,4-Dichloro-2-butene	878.2	50.0	ug/L	1000	ND	87.8	50-120			
1,1,2,2-Tetrachloroethane	457.1	10.0	ug/L	501	ND	91.2	63-126			
1,4-Dichlorobenzene	492.0	10.0	ug/L	501	ND	98.2	72-119			
1,2-Dichlorobenzene	476.8	10.0	ug/L	501	ND	95.2	71-117			
1,2-Dibromo-3-chloropropane	614.4	50.0	ug/L	501	ND	123	49-134			
Surrogate: Dibromofluoromethane	586		ug/L	502		117	57-128			
Surrogate: Dibromofluoromethane	586		ug/L	502		117	75-136			
Surrogate: 1,2-Dichloroethane-d4	396		ug/L	504		78.6	49-135			
Surrogate: 1,2-Dichloroethane-d4	396		ug/L	504		78.6	61-142			
Surrogate: Toluene-d8	532		ug/L	505		105	82-116			
Surrogate: Toluene-d8	532		ug/L	505		105	82-121			
Surrogate: 4-Bromofluorobenzene	523		ug/L	502		104	77-114			
Surrogate: 4-Bromofluorobenzene	523		ug/L	502		104	80-116			
Matrix Spike Dup (1IJ1715-MSD1)	Source: 1IJ2193-01			Prepared: 10/29/25 00:00 Analyzed: 10/29/25 19:25						
Chloromethane	289.9	10.0	ug/L	303	ND	95.6	61-152	24.8	26	
Vinyl Chloride	314.0	10.0	ug/L	302	ND	104	66-149	19.8	23	
Bromomethane	463.3	10.0	ug/L	301	ND	154	43-171	13.5	29	
Chloroethane	304.7	10.0	ug/L	303	ND	101	69-148	20.6	25	

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CERTIFICATE OF ANALYSIS

1IJ2193

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1715 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (1IJ1715-MSD1) Source: 1IJ2193-01 Prepared: 10/29/25 00:00 Analyzed: 10/29/25 19:25										
Trichlorofluoromethane	308.9	10.0	ug/L	303	ND	102	62-163	22.0	25	
1,1-Dichloroethylene	478.8	10.0	ug/L	501	ND	95.5	70-148	22.4	22	R1
Acetone	1049	100	ug/L	1000	ND	105	45-173	20.6	30	
Methyl Iodide	1045	10.0	ug/L	1000	ND	105	62-167	18.6	24	
Carbon Disulfide	970.9	10.0	ug/L	1000	ND	97.1	71-163	22.3	22	R1
Methylene Chloride	511.9	50.0	ug/L	501	ND	102	69-140	25.0	19	R1
Acrylonitrile	492.0	50.0	ug/L	504	ND	97.7	32-159	27.4	30	
trans-1,2-Dichloroethylene	512.0	10.0	ug/L	501	ND	102	69-144	20.9	22	
1,1-Dichloroethane	495.3	10.0	ug/L	501	ND	98.9	70-138	25.7	20	R1
Vinyl Acetate	1631	50.0	ug/L	1420	ND	114	58-142	24.0	24	
cis-1,2-Dichloroethylene	469.8	10.0	ug/L	504	ND	93.3	68-151	14.5	22	
2-Butanone (MEK)	1043	100	ug/L	1000	ND	104	50-160	15.2	23	
Bromochloromethane	477.8	10.0	ug/L	504	ND	94.8	65-143	3.34	22	
Chloroform	492.2	10.0	ug/L	501	ND	98.3	71-143	23.9	21	R1
1,1,1-Trichloroethane	472.7	10.0	ug/L	501	ND	94.3	63-133	15.3	23	
Carbon Tetrachloride	526.2	10.0	ug/L	501	ND	105	63-142	23.3	22	R1
Benzene	460.1	10.0	ug/L	504	ND	91.2	69-133	5.91	18	
1,2-Dichloroethane	482.1	10.0	ug/L	501	ND	96.3	63-138	4.84	20	
Trichloroethylene	476.0	10.0	ug/L	501	ND	95.0	71-133	6.58	23	
1,2-Dichloropropane	490.2	10.0	ug/L	501	ND	97.9	69-132	3.11	20	
Dibromomethane	471.9	10.0	ug/L	504	ND	93.7	70-147	2.80	22	
Bromodichloromethane	484.4	10.0	ug/L	501	ND	96.7	67-130	3.93	21	
cis-1,3-Dichloropropene	461.1	10.0	ug/L	501	ND	92.1	61-126	0.348	21	
4-Methyl-2-pentanone (MIBK)	934.5	50.0	ug/L	1000	ND	93.4	55-147	0.661	23	
Toluene	480.0	10.0	ug/L	505	ND	95.1	71-133	6.41	19	
trans-1,3-Dichloropropene	455.1	10.0	ug/L	501	ND	90.9	63-124	2.75	21	
1,1,2-Trichloroethane	476.8	10.0	ug/L	501	ND	95.2	69-133	4.97	19	
Tetrachloroethylene	369.9	10.0	ug/L	501	ND	73.8	70-124	29.7	24	R1
2-Hexanone (MBK)	782.2	50.0	ug/L	1000	ND	78.2	53-141	25.7	24	R1
Dibromochloromethane	360.7	10.0	ug/L	501	ND	72.0	74-122	25.5	21	R1
1,2-Dibromoethane	369.8	10.0	ug/L	502	ND	73.6	66-127	25.0	23	R1
Chlorobenzene	456.6	10.0	ug/L	501	ND	91.2	76-116	3.49	21	
1,1,1,2-Tetrachloroethane	388.6	10.0	ug/L	503	ND	77.2	77-121	26.2	25	R1
Ethylbenzene	382.6	10.0	ug/L	502	ND	76.3	73-124	28.3	20	R1
Xylenes, total	1152	20.0	ug/L	1510	ND	76.3	75-123	29.4	20	R1
Styrene	452.4	10.0	ug/L	504	ND	89.8	70-120	23.7	23	R1
Bromoform	377.6	10.0	ug/L	501	ND	75.3	70-124	28.6	22	R1
1,2,3-Trichloropropane	379.6	10.0	ug/L	503	ND	75.4	62-135	28.0	28	
trans-1,4-Dichloro-2-butene	682.4	50.0	ug/L	1000	ND	68.2	50-120	25.1	26	
1,1,2,2-Tetrachloroethane	458.7	10.0	ug/L	501	ND	91.6	63-126	0.349	24	
1,4-Dichlorobenzene	465.9	10.0	ug/L	501	ND	92.9	72-119	5.45	24	
1,2-Dichlorobenzene	462.9	10.0	ug/L	501	ND	92.4	71-117	2.96	24	
1,2-Dibromo-3-chloropropane	441.2	50.0	ug/L	501	ND	88.0	49-134	32.8	28	R1

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Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1715 - EPA 5030B - EPA 8260D									
Matrix Spike Dup (1IJ1715-MSD1)		Source: 1IJ2193-01		Prepared: 10/29/25 00:00 Analyzed: 10/29/25 19:25					
Surrogate: Dibromofluoromethane	508		ug/L	502		101 57-128			
Surrogate: Dibromofluoromethane	508		ug/L	502		101 75-136			
Surrogate: 1,2-Dichloroethane-d4	523		ug/L	504		104 49-135			
Surrogate: 1,2-Dichloroethane-d4	523		ug/L	504		104 61-142			
Surrogate: Toluene-d8	531		ug/L	505		105 82-116			
Surrogate: Toluene-d8	531		ug/L	505		105 82-121			
Surrogate: 4-Bromofluorobenzene	401		ug/L	502		79.9 77-114			
Surrogate: 4-Bromofluorobenzene	401		ug/L	502		79.9 80-116			S2

Batch 1IJ1790 - EPA 5030B - EPA 8260D

Blank (1IJ1790-BLK1)		Prepared: 10/30/25 00:00 Analyzed: 10/30/25 12:14							
Chloromethane	<1.0	1.0	ug/L						
Vinyl Chloride	<1.0	1.0	ug/L						
Bromomethane	<1.0	1.0	ug/L						
Chloroethane	<1.0	1.0	ug/L						
Trichlorofluoromethane	<1.0	1.0	ug/L						
1,1-Dichloroethylene	<1.0	1.0	ug/L						
Acetone	<10.0	10.0	ug/L						
Methyl Iodide	<1.0	1.0	ug/L						
Carbon Disulfide	<1.0	1.0	ug/L						
Methylene Chloride	<5.0	5.0	ug/L						
Acrylonitrile	<5.0	5.0	ug/L						
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L						
1,1-Dichloroethane	<1.0	1.0	ug/L						
Vinyl Acetate	<5.0	5.0	ug/L						
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L						
2-Butanone (MEK)	<10.0	10.0	ug/L						
Bromochloromethane	<1.0	1.0	ug/L						
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						

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CERTIFICATE OF ANALYSIS

1IJ2193

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1790 - EPA 5030B - EPA 8260D										
Blank (1IJ1790-BLK1)				Prepared: 10/30/25 00:00 Analyzed: 10/30/25 12:14						
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							
1,1,1,2-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	50.7		ug/L	50.2		101	57-128			
Surrogate: Dibromofluoromethane	50.7		ug/L	50.2		101	75-136			
Surrogate: 1,2-Dichloroethane-d4	51.7		ug/L	50.4		103	49-135			
Surrogate: 1,2-Dichloroethane-d4	51.7		ug/L	50.4		103	61-142			
Surrogate: Toluene-d8	52.9		ug/L	50.5		105	82-116			
Surrogate: Toluene-d8	52.9		ug/L	50.5		105	82-121			
Surrogate: 4-Bromofluorobenzene	46.0		ug/L	50.2		91.6	77-114			
Surrogate: 4-Bromofluorobenzene	46.0		ug/L	50.2		91.6	80-116			
LCS (1IJ1790-BS1)				Prepared: 10/30/25 00:00 Analyzed: 10/30/25 11:06						
Chloromethane	17.23	1.0	ug/L	30.3		56.8	63-155			Q3
Vinyl Chloride	14.62	1.0	ug/L	30.2		48.3	70-154			Q3
Bromomethane	26.54	1.0	ug/L	30.1		88.1	52-176			
Chloroethane	26.31	1.0	ug/L	30.3		86.8	72-148			
Trichlorofluoromethane	30.32	1.0	ug/L	30.3		100	70-152			
1,1-Dichloroethylene	41.57	1.0	ug/L	50.1		82.9	70-148			
Acetone	80.39	10.0	ug/L	100		80.4	43-172			
Methyl Iodide	118.3	1.0	ug/L	100		118	69-170			
Carbon Disulfide	90.11	1.0	ug/L	100		90.1	72-162			
Methylene Chloride	45.58	5.0	ug/L	50.1		91.0	68-142			
Acrylonitrile	40.37	5.0	ug/L	50.4		80.2	33-163			
trans-1,2-Dichloroethylene	44.81	1.0	ug/L	50.1		89.5	66-148			
1,1-Dichloroethane	40.14	1.0	ug/L	50.1		80.1	66-143			
Vinyl Acetate	129.8	5.0	ug/L	142		91.1	43-153			
cis-1,2-Dichloroethylene	43.43	1.0	ug/L	50.4		86.3	71-149			
2-Butanone (MEK)	87.25	10.0	ug/L	100		87.2	52-159			
Bromochloromethane	38.56	1.0	ug/L	50.4		76.5	69-143			
Chloroform	41.44	1.0	ug/L	50.1		82.7	69-144			
1,1,1-Trichloroethane	43.08	1.0	ug/L	50.1		86.0	62-129			

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CERTIFICATE OF ANALYSIS

1IJ2193

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1790 - EPA 5030B - EPA 8260D										
LCS (1IJ1790-BS1)										
Prepared: 10/30/25 00:00 Analyzed: 10/30/25 11:06										
Carbon Tetrachloride	51.21	1.0	ug/L	50.1		102	63-141			
Benzene	43.88	1.0	ug/L	50.4		87.0	71-134			
1,2-Dichloroethane	41.66	1.0	ug/L	50.1		83.2	72-132			
Trichloroethylene	48.58	1.0	ug/L	50.1		97.0	71-135			
1,2-Dichloropropane	45.02	1.0	ug/L	50.1		89.9	69-136			
Dibromomethane	43.29	1.0	ug/L	50.4		85.9	73-147			
Bromodichloromethane	45.91	1.0	ug/L	50.1		91.7	68-129			
cis-1,3-Dichloropropene	42.03	1.0	ug/L	50.1		83.9	65-134			
4-Methyl-2-pentanone (MIBK)	79.47	5.0	ug/L	100		79.5	58-147			
Toluene	45.36	1.0	ug/L	50.5		89.9	72-133			
trans-1,3-Dichloropropene	41.82	1.0	ug/L	50.1		83.5	67-130			
1,1,2-Trichloroethane	46.31	1.0	ug/L	50.1		92.5	69-135			
Tetrachloroethylene	54.06	1.0	ug/L	50.1		108	69-130			
2-Hexanone (MBK)	85.96	5.0	ug/L	100		86.0	55-144			
Dibromochloromethane	48.59	1.0	ug/L	50.1		97.0	73-127			
1,2-Dibromoethane	47.86	1.0	ug/L	50.2		95.3	67-132			
Chlorobenzene	46.89	1.0	ug/L	50.1		93.6	72-123			
1,1,1,2-Tetrachloroethane	52.54	1.0	ug/L	50.3		104	73-127			
Ethylbenzene	46.81	1.0	ug/L	50.2		93.3	71-127			
Xylenes, total	137.7	2.0	ug/L	151		91.2	74-127			
Styrene	54.06	1.0	ug/L	50.4		107	66-126			
Bromoform	53.41	1.0	ug/L	50.1		107	68-130			
1,2,3-Trichloropropane	47.66	1.0	ug/L	50.3		94.7	63-136			
trans-1,4-Dichloro-2-butene	75.17	5.0	ug/L	100		75.2	54-134			
1,1,2,2-Tetrachloroethane	39.76	1.0	ug/L	50.1		79.4	61-131			
1,4-Dichlorobenzene	49.04	1.0	ug/L	50.1		97.8	70-129			
1,2-Dichlorobenzene	47.24	1.0	ug/L	50.1		94.3	69-126			
1,2-Dibromo-3-chloropropane	49.15	5.0	ug/L	50.1		98.0	50-143			
Surrogate: Dibromofluoromethane	45.3		ug/L	50.2		90.2	57-128			
Surrogate: Dibromofluoromethane	45.3		ug/L	50.2		90.2	75-136			
Surrogate: 1,2-Dichloroethane-d4	40.2		ug/L	50.4		79.8	49-135			
Surrogate: 1,2-Dichloroethane-d4	40.2		ug/L	50.4		79.8	61-142			
Surrogate: Toluene-d8	49.0		ug/L	50.5		97.1	82-116			
Surrogate: Toluene-d8	49.0		ug/L	50.5		97.1	82-121			
Surrogate: 4-Bromofluorobenzene	48.3		ug/L	50.2		96.3	77-114			
Surrogate: 4-Bromofluorobenzene	48.3		ug/L	50.2		96.3	80-116			
LCS Dup (1IJ1790-BSD1)										
Prepared: 10/30/25 00:00 Analyzed: 10/30/25 11:29										
Chloromethane	50.95	1.0	ug/L	30.3		168	63-155	98.9	24	Q2, R1
Vinyl Chloride	31.47	1.0	ug/L	30.2		104	70-154	73.1	25	R1
Bromomethane	30.60	1.0	ug/L	30.1		102	52-176	14.2	27	
Chloroethane	30.99	1.0	ug/L	30.3		102	72-148	16.3	25	
Trichlorofluoromethane	31.31	1.0	ug/L	30.3		103	70-152	3.21	26	
1,1-Dichloroethylene	48.35	1.0	ug/L	50.1		96.5	70-148	15.1	24	

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CERTIFICATE OF ANALYSIS

1IJ2193

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1790 - EPA 5030B - EPA 8260D										
LCS Dup (1IJ1790-BSD1)				Prepared: 10/30/25 00:00 Analyzed: 10/30/25 11:29						
Acetone	95.11	10.0	ug/L	100		95.1	43-172	16.8	30	
Methyl Iodide	115.5	1.0	ug/L	100		116	69-170	2.43	30	
Carbon Disulfide	100.8	1.0	ug/L	100		101	72-162	11.2	24	
Methylene Chloride	50.85	5.0	ug/L	50.1		101	68-142	10.9	21	
Acrylonitrile	48.20	5.0	ug/L	50.4		95.7	33-163	17.7	28	
trans-1,2-Dichloroethylene	53.15	1.0	ug/L	50.1		106	66-148	17.0	27	
1,1-Dichloroethane	49.14	1.0	ug/L	50.1		98.1	66-143	20.2	24	
Vinyl Acetate	148.6	5.0	ug/L	142		104	43-153	13.5	30	
cis-1,2-Dichloroethylene	48.60	1.0	ug/L	50.4		96.5	71-149	11.2	26	
2-Butanone (MEK)	100.2	10.0	ug/L	100		100	52-159	13.8	27	
Bromochloromethane	47.82	1.0	ug/L	50.4		94.9	69-143	21.4	23	
Chloroform	49.32	1.0	ug/L	50.1		98.5	69-144	17.4	23	
1,1,1-Trichloroethane	47.69	1.0	ug/L	50.1		95.2	62-129	10.2	24	
Carbon Tetrachloride	52.97	1.0	ug/L	50.1		106	63-141	3.38	25	
Benzene	46.99	1.0	ug/L	50.4		93.2	71-134	6.84	24	
1,2-Dichloroethane	49.56	1.0	ug/L	50.1		99.0	72-132	17.3	24	
Trichloroethylene	49.55	1.0	ug/L	50.1		98.9	71-135	1.98	24	
1,2-Dichloropropane	50.71	1.0	ug/L	50.1		101	69-136	11.9	24	
Dibromomethane	47.71	1.0	ug/L	50.4		94.7	73-147	9.71	25	
Bromodichloromethane	50.09	1.0	ug/L	50.1		100	68-129	8.71	22	
cis-1,3-Dichloropropene	46.64	1.0	ug/L	50.1		93.1	65-134	10.4	23	
4-Methyl-2-pentanone (MIBK)	95.74	5.0	ug/L	100		95.7	58-147	18.6	27	
Toluene	48.96	1.0	ug/L	50.5		97.0	72-133	7.63	24	
trans-1,3-Dichloropropene	48.32	1.0	ug/L	50.1		96.5	67-130	14.4	24	
1,1,2-Trichloroethane	49.79	1.0	ug/L	50.1		99.4	69-135	7.24	23	
Tetrachloroethylene	46.94	1.0	ug/L	50.1		93.7	69-130	14.1	25	
2-Hexanone (MBK)	158.1	5.0	ug/L	100		158	55-144	59.1	25	Q2, R1
Dibromochloromethane	47.02	1.0	ug/L	50.1		93.9	73-127	3.28	22	
1,2-Dibromoethane	48.78	1.0	ug/L	50.2		97.1	67-132	1.90	24	
Chlorobenzene	46.20	1.0	ug/L	50.1		92.2	72-123	1.48	23	
1,1,1,2-Tetrachloroethane	51.19	1.0	ug/L	50.3		102	73-127	2.60	24	
Ethylbenzene	49.41	1.0	ug/L	50.2		98.5	71-127	5.40	26	
Xylenes, total	148.5	2.0	ug/L	151		98.3	74-127	7.53	25	
Styrene	55.71	1.0	ug/L	50.4		111	66-126	3.01	23	
Bromoform	52.14	1.0	ug/L	50.1		104	68-130	2.41	23	
1,2,3-Trichloropropane	49.48	1.0	ug/L	50.3		98.3	63-136	3.75	24	
trans-1,4-Dichloro-2-butene	92.37	5.0	ug/L	100		92.4	54-134	20.5	27	
1,1,2,2-Tetrachloroethane	46.61	1.0	ug/L	50.1		93.0	61-131	15.9	29	
1,4-Dichlorobenzene	48.53	1.0	ug/L	50.1		96.8	70-129	1.05	24	
1,2-Dichlorobenzene	47.49	1.0	ug/L	50.1		94.8	69-126	0.528	26	
1,2-Dibromo-3-chloropropane	46.73	5.0	ug/L	50.1		93.2	50-143	5.05	30	
Surrogate: Dibromofluoromethane	50.5		ug/L	50.2		101	57-128			

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CERTIFICATE OF ANALYSIS

11J2193

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J1790 - EPA 5030B - EPA 8260D										
LCS Dup (11J1790-BSD1)				Prepared: 10/30/25 00:00 Analyzed: 10/30/25 11:29						
Surrogate: Dibromofluoromethane	50.5		ug/L	50.2		101	75-136			
Surrogate: 1,2-Dichloroethane-d4	51.9		ug/L	50.4		103	49-135			
Surrogate: 1,2-Dichloroethane-d4	51.9		ug/L	50.4		103	61-142			
Surrogate: Toluene-d8	53.6		ug/L	50.5		106	82-116			
Surrogate: Toluene-d8	53.6		ug/L	50.5		106	82-121			
Surrogate: 4-Bromofluorobenzene	51.7		ug/L	50.2		103	77-114			
Surrogate: 4-Bromofluorobenzene	51.7		ug/L	50.2		103	80-116			
Matrix Spike (11J1790-MS1)				Source: 11J2324-01 Prepared: 10/30/25 00:00 Analyzed: 10/30/25 20:15						
Chloromethane	267.6	10.0	ug/L	303	ND	88.3	61-152			M2
Vinyl Chloride	159.3	10.0	ug/L	302	ND	52.7	66-149			
Bromomethane	277.9	10.0	ug/L	301	ND	92.3	43-171			
Chloroethane	272.1	10.0	ug/L	303	ND	89.7	69-148			
Trichlorofluoromethane	304.8	10.0	ug/L	303	ND	101	62-163			
1,1-Dichloroethylene	422.3	10.0	ug/L	501	ND	84.2	70-148			
Acetone	872.0	100	ug/L	1000	ND	87.2	45-173			
Methyl Iodide	1010	10.0	ug/L	1000	ND	101	62-167			
Carbon Disulfide	882.9	10.0	ug/L	1000	ND	88.3	71-163			
Methylene Chloride	457.1	50.0	ug/L	501	ND	91.2	69-140			
Acrylonitrile	411.1	50.0	ug/L	504	ND	81.6	32-159			
trans-1,2-Dichloroethylene	446.1	10.0	ug/L	501	ND	89.1	69-144			
1,1-Dichloroethane	407.3	10.0	ug/L	501	ND	81.3	70-138			
Vinyl Acetate	1388	50.0	ug/L	1420	ND	97.4	58-142			
cis-1,2-Dichloroethylene	435.2	10.0	ug/L	504	ND	86.4	68-151			
2-Butanone (MEK)	866.6	100	ug/L	1000	ND	86.7	50-160			
Bromochloromethane	395.1	10.0	ug/L	504	ND	78.4	65-143			
Chloroform	428.5	10.0	ug/L	501	ND	85.6	71-143			
1,1,1-Trichloroethane	431.3	10.0	ug/L	501	ND	86.1	63-133			
Carbon Tetrachloride	503.5	10.0	ug/L	501	ND	101	63-142			
Benzene	435.1	10.0	ug/L	504	ND	86.3	69-133			
1,2-Dichloroethane	429.4	10.0	ug/L	501	ND	85.7	63-138			
Trichloroethylene	471.5	10.0	ug/L	501	ND	94.1	71-133			
1,2-Dichloropropane	459.6	10.0	ug/L	501	ND	91.8	69-132			
Dibromomethane	443.8	10.0	ug/L	504	ND	88.1	70-147			
Bromodichloromethane	462.8	10.0	ug/L	501	ND	92.4	67-130			
cis-1,3-Dichloropropene	406.3	10.0	ug/L	501	ND	81.1	61-126			
4-Methyl-2-pentanone (MIBK)	805.0	50.0	ug/L	1000	ND	80.5	55-147			
Toluene	459.9	10.0	ug/L	505	ND	91.1	71-133			
trans-1,3-Dichloropropene	400.3	10.0	ug/L	501	ND	79.9	63-124			
1,1,2-Trichloroethane	469.3	10.0	ug/L	501	ND	93.7	69-133			
Tetrachloroethylene	532.2	10.0	ug/L	501	ND	106	70-124			
2-Hexanone (MBK)	866.8	50.0	ug/L	1000	ND	86.7	53-141			
Dibromochloromethane	482.2	10.0	ug/L	501	ND	96.3	74-122			
1,2-Dibromoethane	481.3	10.0	ug/L	502	ND	95.8	66-127			

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CERTIFICATE OF ANALYSIS

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Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J1790 - EPA 5030B - EPA 8260D										
Matrix Spike (11J1790-MS1)	Source: 11J2324-01			Prepared: 10/30/25 00:00 Analyzed: 10/30/25 20:15						
Chlorobenzene	467.7	10.0	ug/L	501	ND	93.4	76-116			
1,1,1,2-Tetrachloroethane	520.9	10.0	ug/L	503	ND	103	77-121			
Ethylbenzene	462.6	10.0	ug/L	502	ND	92.2	73-124			
Xylenes, total	1374	20.0	ug/L	1510	ND	90.9	75-123			
Styrene	541.5	10.0	ug/L	504	ND	108	70-120			
Bromoform	514.2	10.0	ug/L	501	ND	103	70-124			
1,2,3-Trichloropropane	492.0	10.0	ug/L	503	ND	97.7	62-135			
trans-1,4-Dichloro-2-butene	670.3	50.0	ug/L	1000	ND	67.0	50-120			
1,1,2,2-Tetrachloroethane	397.9	10.0	ug/L	501	ND	79.4	63-126			
1,4-Dichlorobenzene	492.0	10.0	ug/L	501	ND	98.2	72-119			
1,2-Dichlorobenzene	485.3	10.0	ug/L	501	ND	96.9	71-117			
1,2-Dibromo-3-chloropropane	489.6	50.0	ug/L	501	ND	97.7	49-134			
Surrogate: Dibromofluoromethane	466		ug/L	502		92.7	57-128			
Surrogate: Dibromofluoromethane	466		ug/L	502		92.7	75-136			
Surrogate: 1,2-Dichloroethane-d4	414		ug/L	504		82.2	49-135			
Surrogate: 1,2-Dichloroethane-d4	414		ug/L	504		82.2	61-142			
Surrogate: Toluene-d8	494		ug/L	505		97.8	82-116			
Surrogate: Toluene-d8	494		ug/L	505		97.8	82-121			
Surrogate: 4-Bromofluorobenzene	495		ug/L	502		98.7	77-114			
Surrogate: 4-Bromofluorobenzene	495		ug/L	502		98.7	80-116			
Matrix Spike Dup (11J1790-MSD1)	Source: 11J2324-01			Prepared: 10/30/25 00:00 Analyzed: 10/30/25 20:38						
Chloromethane	257.3	10.0	ug/L	303	ND	84.9	61-152	3.92	26	
Vinyl Chloride	152.8	10.0	ug/L	302	ND	50.5	66-149	4.17	23	M2
Bromomethane	259.2	10.0	ug/L	301	ND	86.1	43-171	6.96	29	
Chloroethane	249.7	10.0	ug/L	303	ND	82.4	69-148	8.59	25	
Trichlorofluoromethane	291.5	10.0	ug/L	303	ND	96.2	62-163	4.46	25	
1,1-Dichloroethylene	401.5	10.0	ug/L	501	ND	80.1	70-148	5.05	22	
Acetone	849.8	100	ug/L	1000	ND	85.0	45-173	2.58	30	
Methyl Iodide	1066	10.0	ug/L	1000	ND	107	62-167	5.36	24	
Carbon Disulfide	842.5	10.0	ug/L	1000	ND	84.2	71-163	4.68	22	
Methylene Chloride	438.6	50.0	ug/L	501	ND	87.5	69-140	4.13	19	
Acrylonitrile	407.0	50.0	ug/L	504	ND	80.8	32-159	1.00	30	
trans-1,2-Dichloroethylene	422.3	10.0	ug/L	501	ND	84.3	69-144	5.48	22	
1,1-Dichloroethane	388.0	10.0	ug/L	501	ND	77.4	70-138	4.85	20	
Vinyl Acetate	1357	50.0	ug/L	1420	ND	95.3	58-142	2.21	24	
cis-1,2-Dichloroethylene	413.1	10.0	ug/L	504	ND	82.0	68-151	5.21	22	
2-Butanone (MEK)	822.3	100	ug/L	1000	ND	82.2	50-160	5.25	23	
Bromochloromethane	379.3	10.0	ug/L	504	ND	75.3	65-143	4.08	22	
Chloroform	405.2	10.0	ug/L	501	ND	80.9	71-143	5.59	21	
1,1,1-Trichloroethane	409.0	10.0	ug/L	501	ND	81.6	63-133	5.31	23	
Carbon Tetrachloride	486.5	10.0	ug/L	501	ND	97.1	63-142	3.43	22	
Benzene	413.4	10.0	ug/L	504	ND	82.0	69-133	5.11	18	
1,2-Dichloroethane	412.0	10.0	ug/L	501	ND	82.3	63-138	4.14	20	

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CERTIFICATE OF ANALYSIS

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Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J1790 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (11J1790-MSD1) Source: 11J2324-01 Prepared: 10/30/25 00:00 Analyzed: 10/30/25 20:38										
Trichloroethylene	454.0	10.0	ug/L	501	ND	90.6	71-133	3.78	23	
1,2-Dichloropropane	438.9	10.0	ug/L	501	ND	87.6	69-132	4.61	20	
Dibromomethane	431.4	10.0	ug/L	504	ND	85.7	70-147	2.83	22	
Bromodichloromethane	442.6	10.0	ug/L	501	ND	88.4	67-130	4.46	21	
cis-1,3-Dichloropropene	402.8	10.0	ug/L	501	ND	80.4	61-126	0.865	21	
4-Methyl-2-pentanone (MIBK)	779.3	50.0	ug/L	1000	ND	77.9	55-147	3.24	23	
Toluene	435.0	10.0	ug/L	505	ND	86.2	71-133	5.56	19	
trans-1,3-Dichloropropene	390.4	10.0	ug/L	501	ND	78.0	63-124	2.50	21	
1,1,2-Trichloroethane	451.6	10.0	ug/L	501	ND	90.2	69-133	3.84	19	
Tetrachloroethylene	509.8	10.0	ug/L	501	ND	102	70-124	4.30	24	
2-Hexanone (MBK)	847.0	50.0	ug/L	1000	ND	84.7	53-141	2.31	24	
Dibromochloromethane	476.9	10.0	ug/L	501	ND	95.2	74-122	1.11	21	
1,2-Dibromoethane	468.5	10.0	ug/L	502	ND	93.3	66-127	2.70	23	
Chlorobenzene	449.6	10.0	ug/L	501	ND	89.8	76-116	3.95	21	
1,1,1,2-Tetrachloroethane	512.5	10.0	ug/L	503	ND	102	77-121	1.63	25	
Ethylbenzene	446.5	10.0	ug/L	502	ND	89.0	73-124	3.54	20	
Xylenes, total	1326	20.0	ug/L	1510	ND	87.8	75-123	3.50	20	
Styrene	526.6	10.0	ug/L	504	ND	105	70-120	2.79	23	
Bromoform	527.4	10.0	ug/L	501	ND	105	70-124	2.53	22	
1,2,3-Trichloropropane	477.9	10.0	ug/L	503	ND	94.9	62-135	2.91	28	
trans-1,4-Dichloro-2-butene	681.6	50.0	ug/L	1000	ND	68.2	50-120	1.67	26	
1,1,2,2-Tetrachloroethane	384.8	10.0	ug/L	501	ND	76.8	63-126	3.35	24	
1,4-Dichlorobenzene	464.8	10.0	ug/L	501	ND	92.7	72-119	5.69	24	
1,2-Dichlorobenzene	463.6	10.0	ug/L	501	ND	92.5	71-117	4.57	24	
1,2-Dibromo-3-chloropropane	480.0	50.0	ug/L	501	ND	95.8	49-134	1.98	28	
Surrogate: Dibromofluoromethane	468		ug/L	502		93.2	57-128			
Surrogate: Dibromofluoromethane	468		ug/L	502		93.2	75-136			
Surrogate: 1,2-Dichloroethane-d4	416		ug/L	504		82.6	49-135			
Surrogate: 1,2-Dichloroethane-d4	416		ug/L	504		82.6	61-142			
Surrogate: Toluene-d8	493		ug/L	505		97.6	82-116			
Surrogate: Toluene-d8	493		ug/L	505		97.6	82-121			
Surrogate: 4-Bromofluorobenzene	486		ug/L	502		97.0	77-114			
Surrogate: 4-Bromofluorobenzene	486		ug/L	502		97.0	80-116			

Metals Total by ICPMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J1630 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (11J1630-BLK1) Prepared: 10/28/25 16:03 Analyzed: 10/29/25 16:45										
Antimony	<0.0010	0.0010	mg/L							B
Arsenic	<0.0020	0.0020	mg/L							
Barium	<0.0010	0.0010	mg/L							
Beryllium	<0.0005	0.0005	mg/L							
Cadmium	<0.0002	0.0002	mg/L							

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1IJ2193

Metals Total by ICPMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1630 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1IJ1630-BLK1)				Prepared: 10/28/25 16:03 Analyzed: 10/29/25 16:45						
Chromium	<0.0010	0.0010	mg/L							B
Cobalt	<0.0005	0.0005	mg/L							
Copper	<0.0050	0.0050	mg/L							
Lead	<0.0010	0.0010	mg/L							
Nickel	<0.0050	0.0050	mg/L							
Selenium	<0.0020	0.0020	mg/L							
Silver	<0.0050	0.0050	mg/L							
Thallium	<0.0005	0.0005	mg/L							
Vanadium	<0.0020	0.0020	mg/L							
Zinc	<0.0050	0.0050	mg/L							
LCS (1IJ1630-BS1)				Prepared: 10/28/25 16:03 Analyzed: 10/29/25 16:48						
Antimony	0.101	0.0010	mg/L	0.100		101	80-120			
Arsenic	0.0996	0.0020	mg/L	0.100		99.6	80-120			
Barium	0.111	0.0010	mg/L	0.100		111	80-120			
Beryllium	0.100	0.0005	mg/L	0.100		100	80-120			
Cadmium	0.102	0.0002	mg/L	0.100		102	80-120			
Chromium	0.102	0.0010	mg/L	0.100		102	80-120			
Cobalt	0.109	0.0005	mg/L	0.100		109	80-120			
Copper	0.0998	0.0050	mg/L	0.100		99.8	80-120			
Lead	0.106	0.0010	mg/L	0.100		106	80-120			
Nickel	0.0980	0.0050	mg/L	0.100		98.0	80-120			
Selenium	0.1016	0.0020	mg/L	0.100		102	80-120			
Silver	0.103	0.0050	mg/L	0.100		103	80-120			
Thallium	0.103	0.0005	mg/L	0.100		103	80-120			
Vanadium	0.114	0.0020	mg/L	0.100		114	80-120			
Zinc	0.103	0.0050	mg/L	0.100		103	80-120			
Matrix Spike (1IJ1630-MS1)				Source: 1IJ2193-01 Prepared: 10/28/25 16:03 Analyzed: 10/29/25 16:58						
Antimony	0.105	0.0010	mg/L	0.100	0.0007	104	75-125			
Arsenic	0.101	0.0020	mg/L	0.100	0.0017	99.3	75-125			
Barium	0.149	0.0010	mg/L	0.100	0.0330	116	75-125			
Beryllium	0.106	0.0005	mg/L	0.100	ND	106	75-125			
Cadmium	0.102	0.0002	mg/L	0.100	ND	102	75-125			
Chromium	0.101	0.0010	mg/L	0.100	0.0010	100	75-125			
Cobalt	0.105	0.0005	mg/L	0.100	0.0012	103	75-125			
Copper	0.0962	0.0050	mg/L	0.100	0.0016	94.6	75-125			
Lead	0.105	0.0010	mg/L	0.100	ND	105	75-125			
Nickel	0.104	0.0050	mg/L	0.100	0.0096	94.4	75-125			
Selenium	0.0996	0.0020	mg/L	0.100	ND	99.6	75-125			
Silver	0.104	0.0050	mg/L	0.100	ND	104	75-125			
Thallium	0.105	0.0005	mg/L	0.100	ND	105	75-125			
Vanadium	0.114	0.0020	mg/L	0.100	ND	114	75-125			
Zinc	0.151	0.0050	mg/L	0.100	0.0545	96.6	75-125			
Matrix Spike Dup (1IJ1630-MSD1)				Source: 1IJ2193-01 Prepared: 10/28/25 16:03 Analyzed: 10/29/25 17:00						

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1IJ2193

Metals Total by ICPMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ1630 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Matrix Spike Dup (1IJ1630-MSD1) Source: 1IJ2193-01 Prepared: 10/28/25 16:03 Analyzed: 10/29/25 17:00										
Antimony	0.104	0.0010	mg/L	0.100	0.0007	103	75-125	0.843	20	
Arsenic	0.103	0.0020	mg/L	0.100	0.0017	101	75-125	1.64	20	
Barium	0.147	0.0010	mg/L	0.100	0.0330	114	75-125	1.02	20	
Beryllium	0.105	0.0005	mg/L	0.100	ND	105	75-125	0.201	20	
Cadmium	0.100	0.0002	mg/L	0.100	ND	100	75-125	1.40	20	
Chromium	0.102	0.0010	mg/L	0.100	0.0010	101	75-125	1.03	20	
Cobalt	0.105	0.0005	mg/L	0.100	0.0012	104	75-125	0.823	20	
Copper	0.0948	0.0050	mg/L	0.100	0.0016	93.1	75-125	1.50	20	
Lead	0.106	0.0010	mg/L	0.100	ND	106	75-125	0.610	20	
Nickel	0.103	0.0050	mg/L	0.100	0.0096	93.2	75-125	1.19	20	
Selenium	0.1023	0.0020	mg/L	0.100	ND	102	75-125	2.67	20	
Silver	0.103	0.0050	mg/L	0.100	ND	103	75-125	1.24	20	
Thallium	0.104	0.0005	mg/L	0.100	ND	104	75-125	0.400	20	
Vanadium	0.112	0.0020	mg/L	0.100	ND	112	75-125	1.85	20	
Zinc	0.162	0.0050	mg/L	0.100	0.0545	108	75-125	7.19	20	
Post Spike (1IJ1630-PS1) Source: 1IJ2193-01 Prepared: 10/28/25 16:03 Analyzed: 10/29/25 17:03										
Antimony	0.0214		mg/L	0.0200	0.0007	104	80-120			
Arsenic	0.0216		mg/L	0.0200	0.0017	99.7	80-120			
Barium	0.0530		mg/L	0.0200	0.0330	100	80-120			
Beryllium	0.0214		mg/L	0.0200	0.000004	107	80-120			
Cadmium	0.0195		mg/L	0.0200	0.00001	97.5	80-120			
Chromium	0.0201		mg/L	0.0200	0.0010	95.7	80-120			
Cobalt	0.0201		mg/L	0.0200	0.0012	94.6	80-120			
Copper	0.0197		mg/L	0.0200	0.0016	90.2	80-120			
Lead	0.0204		mg/L	0.0200	0.0001	102	80-120			
Nickel	0.0274		mg/L	0.0200	0.0096	89.3	80-120			
Selenium	0.0206		mg/L	0.0200	0.0004	101	80-120			
Silver	0.0202		mg/L	0.0200	0.00008	101	80-120			
Thallium	0.0206		mg/L	0.0200	0.000003	103	80-120			
Vanadium	0.0209		mg/L	0.0200	0.0002	104	80-120			
Zinc	0.0720		mg/L	0.0200	0.0545	87.8	80-120			

Definitions

B:	The target analyte was detected in the blank at or above the method acceptance criteria.
M2:	Matrix spike recovery is below acceptance limits.
Q2:	LCS recovery is above acceptance limits.
Q3:	LCS recovery is below acceptance limits. The reported value is estimated.
R1:	Duplicate RPD is outside acceptance criteria.
RL:	Reporting Limit
RPD:	Relative Percent Difference
S1:	Surrogate recovery is above acceptance limits.
S2:	Surrogate recovery is below acceptance limits.



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS
1IJ2193

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 2.0°C

Cooler Inspection Checklist

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

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
11/06/25 08:07

CHAIN OF CUSTODY RECORD



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

Page 1 of 1

Printed: 9/24/2025 11:16:24AM

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SITE INFORMATION

Sampler: TODD WHIPPLEProject: **NCIRSWA - New Regs**
6030

REPORT TO

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

INVOICE TO

~~Lori Lindstrom~~ Deena McCauley, CFO
NCIRSWA Landfill
2151 Gypsum Hollow Road
Fort Dodge, IA 50501

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

1 I J 2 1 9 3

HLW Engineering
PM: Heather MurphyTemperature: 2.0 °C

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	# Containers	Analyses	Lab Sample Number
01-001	MW-10A	Aqueous	GRAB	10/23/25	11:11	7	Indfil-app1-metals-6020dfill-app1-voc-group	01
02-001	MW-10B	Aqueous	GRAB	10/23/25	11:19	7	Indfil-app1-metals-6020dfill-app1-voc-group	02
03-001	MW-18 <u>BROKEN</u>	Aqueous	GRAB	10/23/25	—	0	Indfil-app1-metals-6020dfill-app1-voc-group	
04-001	MW-20	Aqueous	GRAB	10/23/25	12:15	7	Indfil-app1-metals-6020dfill-app1-voc-group	03
05-001	MW-21R	Aqueous	GRAB	10/23/25	12:50	7	Indfil-app1-metals-6020dfill-app1-voc-group	04
06-001	MW-22	Aqueous	GRAB	10/23/25	13:00	7	Indfil-app1-metals-6020dfill-app1-voc-group	05
07-001	MW-30	Aqueous	GRAB	10/23/25	10:20	7	Indfil-app1-metals-6020dfill-app1-voc-group	06
08-001	GU-2 <u>dry</u>	Aqueous	GRAB	10/23/25	—	0	Indfil-app1-metals-6020dfill-app1-voc-group	
09-001	GU-3 <u>dry</u>	Aqueous	GRAB	10/23/25	—	0	Indfil-app1-metals-6020dfill-app1-voc-group	
10-001	Duplicate	Aqueous	GRAB	10/23/25	✓	1	Indfil-app1-metals-6020	07

Relinquished By Todd Whipple Date/Time 10/24/25

Received By _____ Date/Time _____

Relinquished By _____ Date/Time _____

Received for Lab By Schaker Date/Time 10/24/25 10:15

Remarks:

CHAIN OF CUSTODY RECORD



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Phone: 641-792-8451

Page 2 of 6

Printed: 9/24/2025 11:16:24AM

Page 45 of 45

SITE INFORMATION

Sampler: TODD WHIPPLE
Project: NCIRSWA - New Regs
6030

REPORT TO

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

INVOICE TO

Lori Lindstrom Deena McCauley, CEO
NCIRSWA Landfill
2151 Gypsum Hollow Road
Fort Dodge, IA 50501

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

LAB USE ONLY



1 I J 2 1 9 3

HLW Engineering
PM: Heather Murphy

Temperature: 2.0 °C

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	# Containers	Analyses	Lab Sample Number
11-001	MW-25	Aqueous	GRAB	10/23/25	10:38	7	Indfil-app1-metals-6020dfill-app1-voc-group	08
12-001	MW-28	Aqueous	GRAB	10/23/25	11:03	7	Indfil-app1-metals-6020dfill-app1-voc-group	09
13-001	MW-29	Aqueous	GRAB	10/23/25	12:01	7	Indfil-app1-metals-6020dfill-app1-voc-group	10
14-001	MW-31	Aqueous	GRAB	10/23/25	9:35	7	Indfil-app1-metals-6020dfill-app1-voc-group	11
15-001	MW-32	Aqueous	GRAB	10/23/25	9:15	7	Indfil-app1-metals-6020dfill-app1-voc-group	12
16-001	GU-4	Aqueous	GRAB	10/23/25	9:48	7	Indfil-app1-metals-6020dfill-app1-voc-group	13
17-001	GU-5 <u>dry</u>	Aqueous	GRAB	10/23/25	—	0	Indfil-app1-metals-6020dfill-app1-voc-group	
18-001	GU-6 <u>dry</u>	Aqueous	GRAB	10/23/25	—	0	Indfil-app1-metals-6020dfill-app1-voc-group	

Relinquished By

Date/Time

Relinquished By

Date/Time

Remarks:

Received By

Date/Time

Received for Lab By

Date/Time



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1JA1320

Project Description

6030

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Friday, January 23, 2026

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

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

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1JA1320

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6030

Project / PO Number: N/A
Received: 01/16/2026
Reported: 01/23/2026

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
MW 25	1JA1320-01	Aqueous	GRAB		01/14/26 10:42	01/16/26 09:50



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1JA1320

Analytical Testing Parameters

Client Sample ID:	MW 25	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	01/14/2026 10:42
Lab Sample ID:	1JA1320-01		

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloroform	<1.0	1.0	ug/L		01/21/26 0000	01/21/26 1304	RAF
Surrogate: Dibromofluoromethane	95.9	Limit: 57-128	% Rec		01/21/26 0000	01/21/26 1304	RAF
Surrogate: 1,2-Dichloroethane-d4	95.4	Limit: 49-135	% Rec		01/21/26 0000	01/21/26 1304	RAF
Surrogate: Toluene-d8	99.0	Limit: 82-116	% Rec		01/21/26 0000	01/21/26 1304	RAF
Surrogate: 4-Bromofluorobenzene	95.6	Limit: 77-114	% Rec		01/21/26 0000	01/21/26 1304	RAF



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CERTIFICATE OF ANALYSIS

1JA1320

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260D	1JA1005	1JA1005-BS1	
		1JA1005-BS1	
		1JA1005-BSD1	
		1JA1005-BSD1	
		1JA1005-BLK1	
		1JA1005-BLK1	
		1JA1320-01	MW 25
		1JA1320-01	MW 25
		1JA1005-MS1	1JA1314-01
		1JA1005-MS1	1JA1314-01
		1JA1005-MSD1	1JA1314-01
		1JA1005-MSD1	1JA1314-01

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

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JA1005 - EPA 5030B - EPA 8260D										
Blank (1JA1005-BLK1)				Prepared: 01/21/26 00:00 Analyzed: 01/21/26 10:23						
Chloroform	<1.0	1.0	ug/L							
Surrogate: Dibromofluoromethane	45.6		ug/L	50.2		90.8	57-128			
Surrogate: 1,2-Dichloroethane-d4	52.7		ug/L	50.4		105	49-135			
Surrogate: Toluene-d8	36.6		ug/L	50.5		72.5	82-116			S2
Surrogate: 4-Bromofluorobenzene	49.0		ug/L	50.2		97.7	77-114			
LCS (1JA1005-BS1)				Prepared: 01/21/26 00:00 Analyzed: 01/21/26 09:14						
Chloroform	45.93	1.0	ug/L	50.1		91.7	67-130			
Surrogate: Dibromofluoromethane	48.1		ug/L	50.2		95.8	57-128			
Surrogate: 1,2-Dichloroethane-d4	46.8		ug/L	50.4		92.9	49-135			
Surrogate: Toluene-d8	49.7		ug/L	50.5		98.4	82-116			
Surrogate: 4-Bromofluorobenzene	50.2		ug/L	50.2		100	77-114			
LCS Dup (1JA1005-BSD1)				Prepared: 01/21/26 00:00 Analyzed: 01/21/26 09:37						
Chloroform	49.52	1.0	ug/L	50.1		98.9	67-130	7.52	13	
Surrogate: Dibromofluoromethane	48.7		ug/L	50.2		96.9	57-128			
Surrogate: 1,2-Dichloroethane-d4	46.6		ug/L	50.4		92.5	49-135			
Surrogate: Toluene-d8	50.2		ug/L	50.5		99.5	82-116			
Surrogate: 4-Bromofluorobenzene	51.5		ug/L	50.2		103	77-114			
Matrix Spike (1JA1005-MS1)				Source: 1JA1314-01		Prepared: 01/21/26 00:00 Analyzed: 01/21/26 13:27				
Chloroform	460.2	10.0	ug/L	501	ND	91.9	64-133			
Surrogate: Dibromofluoromethane	458		ug/L	502		91.3	57-128			
Surrogate: 1,2-Dichloroethane-d4	481		ug/L	504		95.6	49-135			
Surrogate: Toluene-d8	486		ug/L	505		96.3	82-116			
Surrogate: 4-Bromofluorobenzene	509		ug/L	502		102	77-114			
Matrix Spike Dup (1JA1005-MSD1)				Source: 1JA1314-01		Prepared: 01/21/26 00:00 Analyzed: 01/21/26 13:50				

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CERTIFICATE OF ANALYSIS

1JA1320

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JA1005 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (1JA1005-MSD1) Source: 1JA1314-01 Prepared: 01/21/26 00:00 Analyzed: 01/21/26 13:50										
Chloroform	473.1	10.0	ug/L	501	ND	94.5	64-133	2.76	14	
Surrogate: Dibromofluoromethane	488		ug/L	502		97.3	57-128			
Surrogate: 1,2-Dichloroethane-d4	470		ug/L	504		93.2	49-135			
Surrogate: Toluene-d8	495		ug/L	505		98.1	82-116			
Surrogate: 4-Bromofluorobenzene	502		ug/L	502		100	77-114			

Definitions

RL: Reporting Limit
RPD: Relative Percent Difference
S2: Surrogate recovery is below acceptance limits.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 0.2°C

Cooler Inspection Checklist

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

Report Comments

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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
01/23/26 08:27

☒ 600 E. 17th St. S.
Newton, IA 5020
Phone: 641-792-
Fax: 641-792-



1 J A 1 3 2 0

HLW Engineering
PM: Heather Murphy

5 S St Paul
Kansas City, KS 66105
Phone: 913-321-7856
Fax: 913-831-6778

☐ 205 E VanBuren St
Centerville, IA 52544
Phone: 641-437-7023
Fax: 641-437-7040

PAGE 1 OF 1

PRINT OR TYPE INFORMATION BELOW

SAMPLER: JGH
SITE NAME: NCIRSWA SLE
ADDRESS: _____
CITY/ST/ZIP: _____
PHONE: _____

REPORT TO:

NAME: TODD WHIPPLE
COMPANY NAME: HLW ENGINEERING
ADDRESS: PO Box 314
CITY/ST/ZIP: STORY CITY, IA 50248
PHONE: 515-733-4144
FAX: 515-733-4146

BILL TO:

NAME: DEENA MCCAULLY, CFO
COMPANY NAME: NCIRSWA
ADDRESS: PO Box 578
CITY/ST/ZIP: FORT DODGE, IA 50501
PHONE: _____

Keystone Quote No: _____
(If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED										LAB USE ONLY	
							CHLOROPH										LABORATORY WORK ORDER NO.	LABORATORY SAMPLE NUMBER
<u>MIN 25</u>	<u>1/14/26</u>	<u>10:42</u>		<u>3</u>	<u>WATER</u>	<u>G</u>	<u>X</u>										<u>15A1320</u>	

Relinquished by: (Signature)	Date	Received by: (Signature)	Date	Turn-Around:
	Time		Time	☐ Standard ☐ Rush
				Contact Lab Prior to Submission
Relinquished by: (Signature)	Date	Received for Lab by: (Signature)	Date	Remarks:
	Time	<u>Dave Swick</u>	<u>1/15/26</u>	
			Time <u>9:50</u>	

Appendix D

Field Turbidity Measurements

NCIRSWA Sanitary Landfill

Field Turbidity Over Time

No-Purge Sampling

Date	Unit	10A	10B	18	19	20	21R	22	25	28	29	30	31	32	GU-2	GU-3	GU-4	GU-5	GU-6	Max	Min	Median	Average
10/28/14	NTU	246	86.1	8.41	5.87	11.9		4.7												246.00	4.70	11.90	59.20
12/3/14	NTU		77.40																	77.40	77.40	77.40	77.40
3/30/15	NTU			0.21	15.43	14.03		0.52												15.43	0.21	0.82	6.20
9/25/15	NTU			8.52	24.5	13.1		1.22												94.50	1.22	10.81	23.98
10/16/15	NTU	62.08	9.71																	62.08	9.71	35.90	35.90
4/13/16	NTU	139.00	7.67	3.37	18.70	9.80		2.31												139.00	2.11	6.48	23.53
9/29/16	NTU	157.30	9.19	1.54	46.79	3.93		5.06												157.30	1.54	7.13	31.72
12/28/16	NTU							3.37												3.37	3.37	3.37	3.37
4/20/17	NTU	22.20	1.54	0.46	27.72	10.93	4.57	0.52												27.72	0.46	1.54	7.75
7/17/17	NTU						3.29	0.95												3.29	0.95	2.12	2.12
10/18/17	NTU	102.70	1.72	1.33	3.50	47.32	1.37	0.32												102.70	0.32	1.55	19.86
1/15/18	NTU					30.00														30.00	30.00	30.00	30.00
10/15/18	NTU	37.46	0.60	0.69	32.87	0.77	27.13	0.83												37.46	0.60	1.30	13.16
4/9/19	NTU	99.07	0.72	0.81	29.49	18.17	14.71	0.88												99.07	0.72	4.09	18.76
8/27/19	NTU														1.50	0.62				1.50	0.62	1.06	1.06
9/9/19	NTU															0.70				0.70	0.70	0.70	0.70
9/24/19	NTU														9.34	0.85				9.34	0.85	5.10	5.10
9/26/19	NTU														36.74	0.92				36.74	0.92	18.83	18.83
10/9/19	NTU	170.00	5.52	3.67	8.32	1.55	9.96	1.88				7.87				0.50				170.00	0.50	3.67	19.47
1/8/20	NTU			1.66		7.30		2.82												7.30	1.39	2.24	3.29
4/1/20	NTU	40.98	2.50	2.31	28.69	1.38	6.66	1.26				48.84				1.01				51.51	1.01	2.50	17.05
10/5/20	NTU	12.24	7.04	2.92	4.38	4.91	14.76	1.16				4.64								15.22	1.16	4.78	6.89
4/13/21	NTU	59.50	2.53	1.08	2.89	2.61	49.70	1.43				66.70								66.70	0.84	2.61	20.81
10/21/21	NTU	12.38	2.35	1.42	19.26	7.43	10.20	5.17				3.94								19.26	1.42	7.43	7.73
1/10/22	NTU						7.31													7.31	7.31	7.31	7.31
4/19/22	NTU	97.20	1.08	9.58	1.99	8.54	44.60	3.29				45.10								97.20	1.08	8.54	23.63
10/18/22	NTU	240.00	9.42	3.89	5.51	4.31	13.80	2.09				605.00								605.00	2.09	9.42	99.37
4/11/23	NTU	1000.00	13.10	34.30	41.30	4.68	12.60	5.86				17.80			47.50					1000.00	2.92	15.45	118.01
5/18/23	NTU								14.50	1.13										14.50	1.13	7.82	7.82
7/7/23	NTU	145.00							30.80	3.78										145.00	3.78	30.80	59.86
10/5/23	NTU	9.34	19.57	3.65	3.06	13.23	23.40	2.21	29.67	1.86		2.59				182.70				182.70	1.86	9.34	26.48
12/19/23	NTU			1.67		1.39		2.20												2.20	1.39	1.67	1.75
4/23/24	NTU	4.92	2.62	3.13	3.02	4.32	23.34	3.26	35.27	4.92		7.58								35.27	2.62	4.62	9.24
9/27/24	NTU																2.02	2.26		2.26	2.02	2.14	2.14
10/11/24	NTU	48.57	4.63	2.10		8.10	19.05	2.24	9.42	2.01		3.65				1.89	1.89			48.57	1.89	3.65	9.41
10/16/24	NTU												2.30	5.25						5.25	2.30	3.78	3.78
11/22/24	NTU												2.24	8.60			0.57		3.87	8.60	0.57	3.06	3.82
4/8/25	NTU	32.19	2.78	3.34		30.49	21.49	2.77	8.97	2.35	12.91	2.24	3.26	78.42			2.08		2.43	78.42	2.08	3.30	14.69
10/23/25	NTU	15.04	0.93			15.72	19.08	0.89	16.71	0.52	22.40	0.96	0.56	23.00			12.87			23.00	0.52	13.96	10.72
Max		1000.00	86.10	34.30	46.79	47.32	49.70	5.86	35.27	4.92		605.00	3.26	78.42	47.50	182.70	12.87	2.26	3.87				
Min		4.92	0.60	0.21	1.99	0.77	1.37	0.32	8.97	0.52		0.96	0.56	5.25	1.50	0.50	0.57	1.89	2.43				
Ave		125.14	12.21	4.35	17.02	11.04	17.21	2.28	20.76	2.37		62.84	2.09	28.82	23.77	26.76	3.89	2.08	3.15				
Std Dev		208.44	23.04	7.02	14.32	10.92	12.84	1.56	10.91	1.52		164.33	1.12	33.95	21.87	68.76	5.06	0.26	1.02				

Appendix E

Summary of Control Limit Exceedances

Spring 2014†		Fall 2014†	
MW-17	1,1-dichloroethane	MW-17	1,1-dichloroethane

Spring 2015†		Fall 2015†	
MW-15A1**	Dry	MW-15A1**	1,1-dichloroethane
			Benzene
			Bis(2-ethylhexyl)phthalate
			Chloroethane
			cis-1,2-dichloroethene
			Vinyl chloride
MW-17	1,1-dichloroethane	MW-17	1,1-dichloroethane
			Chloroethane

Spring 2016 †		Fall 2016 †	
MW-15A1**	1,1-dichloroethane	MW-15A1**	1,1-dichloroethane
	Benzene		Benzene
	Bis(2-ethylhexyl)phthalate		Chloroethane
	Chloroethane		cis-1,2-dichloroethene
	cis-1,2-dichloroethene		Vinyl chloride
	Vinyl chloride		
MW-17**	1,1-dichloroethane	MW-17**	1,1-dichloroethane
			Chloroethane

Spring 2017†		Fall 2017†	
MW-15A1**	1,1-dichloroethane	MW-15A1**	Dry
	Benzene		
	Chloroethane		
	cis-1,2-dichloroethene		
	Vinyl chloride		
MW-17**	1,1-dichloroethane	MW-17**	1,1-dichloroethane
	Chloroethane		Bis(2-ethylhexyl)phthalate

Spring 2018†		Fall 2018†	
MW-15A1**	Not Sampled in Spring	MW-15A1**	1,1-dichloroethane
			Benzene
			Chloroethane
			cis-1,2-dichloroethene
			Vinyl chloride
MW-17**	Not Sampled in Spring	MW-17**	1,1-dichloroethane

Spring 2019†		Fall 2019†	
MW-15A1**	1,1-dichloroethane	MW-15A1**	1,1-dichloroethane
	Benzene		Chloroethane
	Chloroethane		cis-1,2-dichloroethene
	cis-1,2-dichloroethene		Vinyl chloride
	Vinyl chloride		
MW-17**	1,1-dichloroethane	MW-17**	none

Spring 2020†		Fall 2020†	
MW-15A1**	1,1-dichloroethane	MW-15A1**	1,1-dichloroethane
	Benzene		Benzene
	Chloroethane		Chloroethane
	cis-1,2-dichloroethene		cis-1,2-dichloroethene
	Vinyl chloride		Vinyl chloride
MW-17**	none	MW-17**	none

Spring 2021†		Fall 2021†	
MW-15A1**	dry	MW-15A1**	dry
MW-17**	none	MW-17**	none
MW-21R	none	MW-21R	arsenic

Spring 2022†		Fall 2022	
MW-15A1**	dry	MW-15A1**	dry
MW-17**	1,1-dichloroethane	MW-17**	1,1-dichloroethane
	cis-1,2-dichloroethene		Bis(2-ethylhexyl)phthalate
			cis-1,2-dichloroethene
MW-21R**	arsenic	MW-21R**	arsenic

Spring 2023		Fall 2023	
MW-21R**	arsenic	MW-21R**	arsenic

Spring 2024		Fall 2024	
MW-21R**	none	MW-21R**	arsenic

Spring 2025		Fall 2025	
MW-21R**	arsenic	MW-21R**	arsenic

** Monitoring well is an Assessment or Interim Corrective Action monitoring point and water quality should be compared to GWPS, rather than site control limits.

† = Control Limits are not yet established for all inorganic compounds. Only VOC information is considered accurate at this time.

Appendix F

Assessment Monitoring Results Summary

Bis (2-ethylhexyl)phthalate (ug/L *)

Date	MW-21R
4/11/14	NT
10/28/14	NT
3/31/15	NT
9/25/15	NT
4/13/16	NT
9/30/16	NT
4/20/17	NT
10/19/2017	NT
10/15/2018	NT
4/9/2019	NT
10/9/2019	NT
4/1/2020	NT
10/5/2020	NT
4/13/2021	NT
10/21/2021	NT
4/19/2022	<6
10/18/2022	NT
4/11/2023	<6
10/5/2023	NT
4/23/2024	NT
10/11/2024	NT
4/8/2025	NT
10/23/2025	NT

ND = Non-detected

NT = Not Tested

Appendix G

Leachate Collection System Information

Appendix G.1- Leachate Volume, Pumped to POTW

	NCIRSWA Flow		NCIRSWA Flow		NCIRSWA Flow		NCIRSWA Flow		NCIRSWA Flow		NCIRSWA Flow		NCIRSWA Flow		NCIRSWA Flow		NCIRSWA Flow		NCIRSWA Flow		NCIRSWA Flow		
Date	MGD	Date	MGD	Date	MGD	Date	MGD	Date	MGD	Date	MGD	Date	MGD	Date	MGD	Date	MGD	Date	MGD	Date	MGD	Date	MGD
01/01/25	0.006100	02/01/25	0.007200	03/01/25	0.006700	04/01/25	0.019000	05/01/25	0.010500	06/01/25	0.008400	07/01/25	0.014900	08/01/25	0.012200	09/01/25	0.014600	10/01/25	0.007100	11/01/25	0.001200	12/01/25	0.008900
01/02/25	0.006100	02/02/25	0.007200	03/02/25	0.006700	04/02/25	0.019000	05/02/25	0.010500	06/02/25	0.005200	07/02/25	0.014900	08/02/25	0.012200	09/02/25	0.014500	10/02/25	0.007100	11/02/25	0.001200	12/02/25	0.006700
01/03/25	0.006100	02/03/25	0.005000	03/03/25	0.002800	04/03/25	0.019000	05/03/25	0.010500	06/03/25	0.010600	07/03/25	0.014900	08/03/25	0.012200	09/03/25	0.014500	10/03/25	0.007100	11/03/25	0.008100	12/03/25	0.006700
01/04/25	0.006100	02/04/25	0.005000	03/04/25	0.002800	04/04/25	0.019000	05/04/25	0.010500	06/04/25	0.010600	07/04/25	0.014900	08/04/25	0.005800	09/04/25	0.014500	10/04/25	0.007100	11/04/25	0.005000	12/04/25	0.006700
01/05/25	0.006100	02/05/25	0.005000	03/05/25	0.002800	04/05/25	0.019000	05/05/25	0.005800	06/05/25	0.010600	07/05/25	0.014900	08/05/25	0.018800	09/05/25	0.014500	10/05/25	0.007100	11/05/25	0.005000	12/05/25	0.006700
01/06/25	0.003200	02/06/25	0.003500	03/06/25	0.002800	04/06/25	0.019000	05/06/25	0.005800	06/06/25	0.010600	07/06/25	0.014900	08/06/25	0.018800	09/06/25	0.014500	10/06/25	0.004300	11/06/25	0.005000	12/06/25	0.006700
01/07/25	0.002300	02/07/25	0.003700	03/07/25	0.002800	04/07/25	0.008900	05/07/25	0.005800	06/07/25	0.010600	07/07/25	0.019700	08/07/25	0.018800	09/07/25	0.014500	10/07/25	0.005300	11/07/25	0.005000	12/07/25	0.006700
01/08/25	0.001600	02/08/25	0.003700	03/08/25	0.002800	04/08/25	0.008900	05/08/25	0.005800	06/08/25	0.010600	07/08/25	0.019700	08/08/25	0.018800	09/08/25	0.002200	10/08/25	0.005300	11/08/25	0.005000	12/08/25	0.008900
01/09/25	0.001600	02/09/25	0.003700	03/09/25	0.002800	04/09/25	0.008900	05/09/25	0.005800	06/09/25	0.004500	07/09/25	0.019700	08/09/25	0.018800	09/09/25	0.002200	10/09/25	0.005300	11/09/25	0.005000	12/09/25	0.008900
01/10/25	0.001600	02/10/25	0.005300	03/10/25	0.002300	04/10/25	0.007400	05/10/25	0.005800	06/10/25	0.004500	07/10/25	0.019700	08/10/25	0.018800	09/10/25	0.002200	10/10/25	0.005300	11/10/25	0.005200	12/10/25	0.008900
01/11/25	0.001600	02/11/25	0.005300	03/11/25	0.002300	04/11/25	0.006700	05/11/25	0.005800	06/11/25	0.004500	07/11/25	0.019700	08/11/25	0.013100	09/11/25	0.002200	10/11/25	0.005300	11/11/25	0.005200	12/11/25	0.008900
01/12/25	0.001600	02/12/25	0.005300	03/12/25	0.001200	04/12/25	0.006700	05/12/25	0.005800	06/12/25	0.004500	07/12/25	0.019700	08/12/25	0.013100	09/12/25	0.002200	10/12/25	0.005300	11/12/25	0.005200	12/12/25	0.008900
01/13/25	0.001600	02/13/25	0.005300	03/13/25	0.001400	04/13/25	0.006700	05/13/25	0.005800	06/13/25	0.004500	07/13/25	0.019700	08/13/25	0.013100	09/13/25	0.002200	10/13/25	0.004600	11/13/25	0.005200	12/13/25	0.008900
01/14/25	0.001600	02/14/25	0.005300	03/14/25	0.001400	04/14/25	0.005600	05/14/25	0.005800	06/14/25	0.004500	07/14/25	0.005300	08/14/25	0.013100	09/14/25	0.002200	10/14/25	0.004600	11/14/25	0.005200	12/14/25	0.008900
01/15/25	0.001600	02/15/25	0.005300	03/15/25	0.001400	04/15/25	0.005600	05/15/25	0.003200	06/15/25	0.004500	07/15/25	0.005300	08/15/25	0.013100	09/15/25	0.024600	10/15/25	0.004600	11/15/25	0.005200	12/15/25	0.016500
01/16/25	0.001600	02/16/25	0.005300	03/16/25	0.001400	04/16/25	0.005600	05/16/25	0.004200	06/16/25	0.005300	07/16/25	0.005300	08/16/25	0.013100	09/16/25	0.024600	10/16/25	0.004600	11/16/25	0.005200	12/16/25	0.016500
01/17/25	0.001600	02/17/25	0.005800	03/17/25	0.023900	04/17/25	0.007500	05/17/25	0.004200	06/17/25	0.005300	07/17/25	0.005300	08/17/25	0.013100	09/17/25	0.024600	10/17/25	0.004600	11/17/25	0.006100	12/17/25	0.016500
01/18/25	0.001600	02/18/25	0.005800	03/18/25	0.023900	04/18/25	0.004500	05/18/25	0.004200	06/18/25	0.005300	07/18/25	0.005300	08/18/25	0.009500	09/18/25	0.024600	10/18/25	0.004600	11/18/25	0.006100	12/18/25	0.016500
01/19/25	0.001600	02/19/25	0.005800	03/19/25	0.023900	04/19/25	0.004500	05/19/25	0.016800	06/19/25	0.005300	07/19/25	0.005300	08/19/25	0.008600	09/19/25	0.024600	10/19/25	0.004600	11/19/25	0.006100	12/19/25	0.016500
01/20/25	0.001800	02/20/25	0.005800	03/20/25	0.023900	04/20/25	0.004500	05/20/25	0.016800	06/20/25	0.005300	07/20/25	0.005300	08/20/25	0.005500	09/20/25	0.024600	10/20/25	0.010300	11/20/25	0.006100	12/20/25	0.016500
01/21/25	0.001800	02/21/25	0.005800	03/21/25	0.023900	04/21/25	0.018000	05/21/25	0.016800	06/21/25	0.005300	07/21/25	0.010100	08/21/25	0.004000	09/21/25	0.024600	10/21/25	0.010300	11/21/25	0.006100	12/21/25	0.016500
01/22/25	0.001800	02/22/25	0.005800	03/22/25	0.023900	04/22/25	0.018000	05/22/25	0.016800	06/22/25	0.005300	07/22/25	0.010100	08/22/25	0.004000	09/22/25	0.018100	10/22/25	0.010300	11/22/25	0.006100	12/22/25	0.020600
01/23/25	0.001800	02/23/25	0.005800	03/23/25	0.023900	04/23/25	0.018000	05/23/25	0.016800	06/23/25	0.015000	07/23/25	0.010100	08/23/25	0.004000	09/23/25	0.027600	10/23/25	0.010300	11/23/25	0.006100	12/23/25	0.020600
01/24/25	0.001800	02/24/25	0.006700	03/24/25	0.023400	04/24/25	0.018000	05/24/25	0.016800	06/24/25	0.015000	07/24/25	0.010100	08/24/25	0.004000	09/24/25	0.015800	10/24/25	0.010300	11/24/25	0.005900	12/24/25	0.020600
01/25/25	0.001800	02/25/25	0.006700	03/25/25	0.023400	04/25/25	0.018000	05/25/25	0.016800	06/25/25	0.015000	07/25/25	0.010100	08/25/25	0.004000	09/25/25	0.009300	10/25/25	0.010300	11/25/25	0.005900	12/25/25	0.020600
01/26/25	0.001800	02/26/25	0.006700	03/26/25	0.023400	04/26/25	0.021600	05/26/25	0.016800	06/26/25	0.015000	07/26/25	0.010100	08/26/25	0.004000	09/26/25	0.009300	10/26/25	0.010300	11/26/25	0.005900	12/26/25	0.020600
01/27/25	0.007200	02/27/25	0.006700	03/27/25	0.023400	04/27/25	0.021600	05/27/25	0.008400	06/27/25	0.015000	07/27/25	0.010100	08/27/25	0.004000	09/27/25	0.009300	10/27/25	0.001200	11/27/25	0.005900	12/27/25	0.020600
01/28/25	0.007200	02/28/25	0.006700	03/28/25	0.023400	04/28/25	0.010500	05/28/25	0.008400	06/28/25	0.015000	07/28/25	0.012200	08/28/25	0.014600	09/28/25	0.009300	10/28/25	0.001200	11/28/25	0.005900	12/28/25	0.020600
01/29/25	0.007200			03/29/25	0.023400	04/29/25	0.010500	05/29/25	0.008400	06/29/25	0.015000	07/29/25	0.012200	08/29/25	0.014600	09/29/25	0.007100	10/29/25	0.001200	11/29/25	0.005900	12/29/25	0.011700
01/30/25	0.007200			03/30/25	0.023400	04/30/25	0.010500	05/30/25	0.008400	06/30/25	0.014900	07/30/25	0.012200	08/30/25	0.014600	09/30/25	0.007100	10/30/25	0.001200	11/30/25	0.005900	12/30/25	0.011700
01/31/25	0.007200			03/31/25	0.019000			05/31/25	0.008400			07/31/25	0.012200	08/31/25	0.014600			10/31/25	0.001200			12/31/25	0.011700
Minimum:	0.001600		0.003500		0.001200		0.004500		0.003200		0.004500		0.005300		0.004000		0.002200		0.001200		0.001200		0.006700
Maximum:	0.007200		0.007200		0.023900		0.021600		0.016800		0.015000		0.019700		0.018800		0.027600		0.010300		0.008100		0.020600
Total:	0.103800		0.155200		0.394500		0.370700		0.292200		0.265700		0.383900		0.356900		0.402100		0.181900		0.160900		0.406200
Average:	0.003348		0.005543		0.012726		0.012357		0.009426		0.008857		0.012384		0.011513		0.013403		0.005868		0.005363		0.013103
Data Points:	31		28		31		30		31		30		31		31		30		31		30		31

3,474,000 Gallons

Appendix G.2 - Leachate Analyses by POTW

Date	NCIRSWA BOD mg/l	NCIRSWA BOD lbs/day	NCIRSWA COD mg/l	NCIRSWA COD lbs/day	NCIRSWA COD Correction Factor	NCIRSWA COD moving CF	NCIRSWA est		NCIRSWA TSS mg/l	NCIRSWA TSS lbs/day	NCIRSWA NH3 mg/l	NCIRSWA NH3 lbs/day	NCIRSWA ph SU
							BOD from COD	NCIRSWA COD to					
2025-01-08	34	0	201	3	0.17	0.18	36	5.91	43.8	1	23.750	0.32	7.59
2025-02-07	533	16	1,610	50	0.33	0.25	403	3.02	144.4	4	152.500	4.71	7.43
2025-03-13	33	0	170	2	0.19	0.19	33	5.15	46.8	1	22.000	0.26	7.22
2025-04-11	712	40	1,440	80	0.49	0.34	496	2.02	76.2	4	148.000	8.27	7.29
2025-04-26	993	149	1,475	266	0.67	0.58	861	1.49	103.1	19	95.000	17.11	6.78
2025-05-16	294	10	1,095	38	0.27	0.47	516	3.72	113.8	4	159.000	5.57	7.23
2025-06-03	178	16	790	70	0.23	0.25	195	4.44	134.1	12	159.500	14.10	7.32
2025-07-01	597	74	1,453	181	0.41	0.32	462	2.43	175.0	22	21.500	2.67	6.91
2025-08-05	-	-	-	-	-	-	-	-	-	-	-	-	7.13
2025-08-19	-	-	-	-	-	-	-	-	-	-	-	-	6.87
2025-09-24	-	-	-	-	-	-	-	-	-	-	-	-	7.28
2025-09-25	177	14	630	49	0.28	0.28	177	3.56	223.5	17	114.500	8.88	-
2025-10-07	257	11	1,100	49	0.23	0.26	283	4.28	94.0	4	175.000	7.74	7.48
2025-10-28	-	-	-	-	-	0.23	-	-	-	-	-	-	-
2025-11-04	191	8	980	41	0.19	0.21	210	5.13	46.7	2	149.000	6.21	7.35
2025-12-02	158	9	810	45	0.20	0.19	158	5.13	46.4	3	187.000	10.45	-
2025-12-11	-	-	-	-	-	0.20	-	-	-	-	-	-	-
Minimum:	33	0	170	2	0.17	0.18	33	1.49	43.8	1	21.500	0.26	6.78
Maximum:	993	149	1,610	266	0.67	0.58	861	5.91	223.5	22	187.000	17.11	7.59
Total:	4,157	348	11,754	873	3.67	3.97	3,830	46.29	1,247.8	92	1,406.750	86.28	93.88
Average:	346	29	980	73	0.31	0.28	319	3.86	104.0	8	117.229	7.19	7.22
Data Points:	12	12	12	12	12	14	12	12	12	12	12	12	13

Date	NCIRSWA FOG	NCIRSWA FOG	NCIRSWA	NCIRSWA	NCIRSWA	NCIRSWA	NCIRSWA Arsenic	NCIRSWA Arsenic	NCIRSWA	NCIRSWA	NCIRSWA	NCIRSWA	NCIRSWA Lead
	mg/l	lbs/day	Temperature Deg	Temperature Deg	Mercury Hg mg/l	Mercury Id	As mg/l	Id lbs/day	Cadmium Cd	Cadmium Id	Chromium (VI) Cr	Chromium (VI) Id	Pb mg/l
2025-01-08	9.30	0	8.3	46.9	0.000200	0.000003	0.0800	0.0011	0.020000	0.000267	-	-	0.10000
2025-02-07	29.60	1	8.0	46.4	0.000200	0.000006	-	-	-	-	-	-	-
2025-03-13	9.30	0	6.1	43.0	0.000200	0.000002	-	-	-	-	-	-	-
2025-04-11	9.30	1	8.6	47.5	0.000200	0.000011	-	-	-	-	-	-	-
2025-04-26	11.70	2	11.6	52.9	-	-	-	-	-	-	-	-	-
2025-05-16	15.70	1	14.8	58.6	0.000200	0.000007	-	-	-	-	-	-	-
2025-06-03	15.20	1	15.7	60.3	0.000200	0.000018	-	-	-	-	-	-	-
2025-07-01	15.60	2	19.3	66.7	0.000200	0.000025	0.0020	0.0002	0.000200	0.000025	-	-	0.00050
2025-08-05	15.70	2	19.7	67.5	-	-	-	-	-	-	-	-	-
2025-08-19	10.60	1	22.5	72.5	-	-	-	-	-	-	-	-	-
2025-09-24	9.70	1	19.7	67.5	-	-	-	-	-	-	-	-	-
2025-09-25	-	-	-	-	0.000200	0.000016	-	-	-	-	-	-	-
2025-10-07	33.20	1	16.8	62.2	0.000200	0.000009	-	-	-	-	-	-	-
2025-10-28	-	-	-	-	0.002000	0.000020	0.1160	0.0012	0.020000	0.000200	0.0291	0.0003	0.10000
2025-11-04	17.00	1	14.7	58.5	0.000200	0.000008	-	-	-	-	-	-	-
2025-12-02	9.60	1	-	-	0.000200	0.000011	-	-	-	-	-	-	-
2025-12-11	13.10	1	-	-	-	-	-	-	-	-	-	-	-
Minimum:	9.30	0	6.1	43.0	0.000200	0.000002	0.0020	0.0002	0.000200	0.000025	0.0291	0.0003	0.00050
Maximum:	33.20	2	22.5	72.5	0.002000	0.000025	0.1160	0.0012	0.020000	0.000267	0.0291	0.0003	0.10000
Total:	224.60	16	185.8	750.4	0.004200	0.000136	0.1980	0.0025	0.040200	0.000492	0.0291	0.0003	0.20050
Average:	14.97	1	14.3	57.7	0.000350	0.000011	0.0660	0.0008	0.013400	0.000164	0.0291	0.0003	0.06683
Data Points:	15	15	13	13	12	12	3	3	3	3	1	1	3

Date	NCIRSWA Lead Id	NCIRSWA Silver	NCIRSWA Silver	NCIRSWA Zinc Zn	NCIRSWA Zinc Id	NCIRSWA	NCIRSWA	NCIRSWA Sulfate	NCIRSWA Sulfate	NCIRSWA Barium	NCIRSWA Carbon		
						Molybdenum Mo	Molybdenum Id				NCIRSWA	Tetrachloride	NCIRSWA
	lbs/day	Ag mg/l	Id lbs/day	mg/l	lbs/day	mg/l	lbs/day	mg/l	Id lbs/day	mg/l	Benzene mg/l	mg/l	Chlordane mg/l
2025-01-08	0.00133	0.02000	0.00027	0.0400	0.0005	0.0500	0.0007	410.00	5.47	-	-	-	-
2025-02-07	-	-	-	0.1140	0.0035	-	-	-	-	-	-	-	-
2025-03-13	-	-	-	0.0400	0.0005	-	-	-	-	-	-	-	-
2025-04-11	-	-	-	0.0400	0.0022	-	-	-	-	-	-	-	-
2025-04-26	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-05-16	-	-	-	0.0730	0.0026	-	-	-	-	-	-	-	-
2025-06-03	-	-	-	0.0999	0.0088	-	-	-	-	-	-	-	-
2025-07-01	0.00006	0.00100	0.00012	0.1270	0.0158	0.0020	0.0002	480.00	59.65	-	-	-	-
2025-08-05	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-08-19	-	-	-	-	-	-	-	-	-	-	0.1000	0.1000	0.00188
2025-09-24	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-09-25	-	-	-	0.1000	0.0078	-	-	-	-	-	-	-	-
2025-10-07	-	-	-	0.0686	0.0030	-	-	-	-	-	-	-	-
2025-10-28	0.00100	0.05000	0.00050	-	-	-	-	-	-	0.546	-	-	-
2025-11-04	-	-	-	0.0433	0.0018	-	-	-	-	-	-	-	-
2025-12-02	-	-	-	0.0295	0.0016	-	-	-	-	-	-	-	-
2025-12-11	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum:	0.00006	0.00100	0.00012	0.0295	0.0005	0.0020	0.0002	410.00	5.47	0.546	0.1000	0.1000	0.00188
Maximum:	0.00133	0.05000	0.00050	0.1270	0.0158	0.0500	0.0007	480.00	59.65	0.546	0.1000	0.1000	0.00188
Total:	0.00240	0.07100	0.00089	0.7753	0.0482	0.0520	0.0009	890.00	65.12	0.546	0.1000	0.1000	0.00188
Average:	0.00080	0.02367	0.00030	0.0705	0.0044	0.0260	0.0005	445.00	32.56	0.546	0.1000	0.1000	0.00188
Data Points:	3	3	3	11	11	2	2	2	2	1	1	1	1

Date	NCIRSWA Hexachlorobenze mg/l	NCIRSWA Hexachlorobutadiene mg/l	NCIRSWA Hexachloroethane mg/l	NCIRSWA Lindane mg/l	NCIRSWA Methoxychlor mg/l	NCIRSWA Methyl Ethyl Ketone mg/l	NCIRSWA Nitrobenzene mg/l	NCIRSWA Pentachlorophenol mg/l	NCIRSWA Pyridine mg/l	NCIRSWA Selenium mg/l	NCIRSWA Tetrachloroethylene mg/l	NCIRSWA Toxaphene mg/l	NCIRSWA Trichloroethylene mg/l
2025-01-08	-	-	-	-	-	-	-	-	-	0.10000	-	-	-
2025-02-07	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-03-13	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-04-11	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-04-26	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-05-16	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-06-03	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-07-01	-	-	-	-	-	-	-	-	-	0.00500	-	-	-
2025-08-05	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-08-19	0.0500	0.0500	0.0500	0.00	0.00094	3.40	0.0500	0.050	0.0500	-	0.2000	0.00188	0.2000
2025-09-24	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-09-25	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-10-07	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-10-28	-	-	-	-	-	-	-	-	-	0.10000	-	-	-
2025-11-04	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-12-02	-	-	-	-	-	-	-	-	-	-	-	-	-
2025-12-11	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum:	0.0500	0.0500	0.0500	0.00	0.00094	3.40	0.0500	0.050	0.0500	0.00500	0.2000	0.00188	0.2000
Maximum:	0.0500	0.0500	0.0500	0.00	0.00094	3.40	0.0500	0.050	0.0500	0.10000	0.2000	0.00188	0.2000
Total:	0.0500	0.0500	0.0500	0.00	0.00094	3.40	0.0500	0.050	0.0500	0.20500	0.2000	0.00188	0.2000
Average:	0.0500	0.0500	0.0500	0.00	0.00094	3.40	0.0500	0.050	0.0500	0.06833	0.2000	0.00188	0.2000
Data Points:	1	1	1	1	1	1	1	1	1	3	1	1	1

Date	NCIRSWA 2,4,5-	NCIRSWA 2,4,6-	NCIRSWA 2,4,5- TP (Silvex) mg/l	NCIRSWA Vinyl Chloride mg/l	NCIRSWA Chloride Id lbs/day	NCIRSWA Selenium lbs/day	NCIRSWA Chloride composite mg/l	NCIRSWA Sampler
	Trichlorophenol mg/l	Trichlorophenol mg/l						Refrigerator Temperature Deg C
2025-01-08	-	-	-	-	1.47	0.001	110.00	0.8
2025-02-07	-	-	-	-	10.58	-	343.00	1.3
2025-03-13	-	-	-	-	1.04	-	89.10	0.6
2025-04-11	-	-	-	-	21.40	-	383.00	3.7
2025-04-26	-	-	-	-	-	-	-	1.0
2025-05-16	-	-	-	-	14.64	-	418.00	0.6
2025-06-03	-	-	-	-	38.19	-	432.00	4.4
2025-07-01	-	-	-	-	13.05	0.001	105.00	-
2025-08-05	-	-	-	-	-	-	-	-
2025-08-19	0.0500	0.0500	0.00002	0.1000	-	-	-	-
2025-09-24	-	-	-	-	-	-	-	-
2025-09-25	-	-	-	-	29.78	-	384.00	-
2025-10-07	-	-	-	-	23.56	-	533.00	4.3
2025-10-28	-	-	-	-	-	0.001	-	-
2025-11-04	-	-	-	-	22.35	-	536.00	2.8
2025-12-02	-	-	-	-	23.58	-	422.00	1.1
2025-12-11	-	-	-	-	-	-	-	-
Minimum:	0.0500	0.0500	0.00002	0.1000	1.04	0.001	89.10	0.6
Maximum:	0.0500	0.0500	0.00002	0.1000	38.19	0.001	536.00	4.4
Total:	0.0500	0.0500	0.00002	0.1000	199.65	0.003	3,755.10	20.6
Average:	0.0500	0.0500	0.00002	0.1000	18.15	0.001	341.37	2.1
Data Points:	1	1	1	1	11	3	11	10

Appendix G.3 – Industrial User Wastewater Discharge Permit with Fort Dodge



INDUSTRIAL USER WASTEWATER DISCHARGE PERMIT
CITY OF FORT DODGE, IOWA

<u>Name / Address of Permittee</u>	<u>Location of Facility</u>
<u>North Central Iowa Regional Solid Waste Agency</u>	<u>North Central Iowa Regional Solid Waste Agency</u>
<u>2150 South 22nd Street</u>	<u>2150 South 22nd Street</u>
<u>Fort Dodge, IA 50501</u>	<u>Fort Dodge, IA 50501</u>

SIC Code: 4953 – REFUSE SYSTEMS

Permit Number: NCSIU-2021-05

Issue Date: January 1, 2021

Expiration Date: December 31, 2025

Renewal Application Date: July 1, 2025

Permit term shall not exceed five (5) years post issue date, per 40 CFR 403.8(f)(1). This permit is issued for a period of five (5) years.

Renewal application must be received in the Pretreatment Office at least 180 days prior to expiration, per City Code 13.24.270.

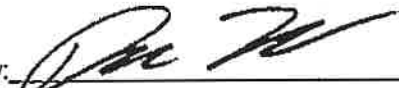
The City of Fort Dodge hereby authorizes the above-named Permittee to discharge wastewater into the City's sanitary sewer system in accordance with the effluent limitations, monitoring requirements, and other terms set forth in this permit. The Permittee will be responsible for providing appropriate wastewater pretreatment and wastewater monitoring facilities as required to comply with this permit.

This permit is issued pursuant to City Code Section 13.24.250, City Ordinance No. 1863, Iowa Administrative Code [567] Chapter 62, and Title 40, Part 403 of the Code of Federal Regulations. The permit is non-transferable and shall not be sold or reassigned to a new owner or different user without

prior approval from the City as per City Code Section 13.24.275. The City reserves the right to modify this permit for good cause at any time as provided in City Code Section 13.24.260.

Compliance with this permit does not relieve the Permittee from its obligation to comply with other applicable regulations under local, state, or federal laws, including any such regulations or laws that may become effective during the term of this permit. Noncompliance with any term or condition of this permit shall constitute a violation of City Ordinance No. 1863 and may result in revocation of the permit as provided in City Code Section 13.24.315.

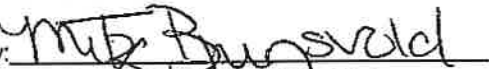
Authorized by:



David Fierke, City Manager, City of Fort Dodge, IA

Date: 1/13/2021

Authorized by:



Mitzi Brunsvold, Signatory Authority, NCIRSWA

Date:

1/14/2021

1. DESCRIPTION OF FACILITY AND PRETREATMENT PROCESS

The North Central Iowa Regional Solid Waste Agency (NCIRSWA) operates a landfill with leachate collection. The leachate gravity flows from the waste to a lift station which pumps it to a manhole. The manhole, which also receives domestic wastewater from the office/shop facilities, drains to a small lift station that pumps the waste to the POTW.

2. DISCHARGE LOCATION

Effluent Sampling Station

3. CLASSIFICATION OF FACILITY (check one)



Non-Categorical Significant Industrial User (NCSIU). Includes users that discharge an average of 25,000 gallons per day or more of process wastewater to the City's wastewater treatment plant; users with waste streams that make up 5 percent or more of the hydraulic or organic load capacity of the City's wastewater treatment plant; and any other users determined by the City to have a reasonable potential for adversely affecting the City's wastewater treatment plant or for violating any pretreatment standard.



Categorical Industrial User (CIU). Includes users subject to Categorical Pretreatment Standards per 40 CFR 403.6. Specific categories are listed in 40 CFR Parts 405-471.



Middle Tier Categorical Industrial User. Includes categorical users designated by the City as a middle tier CIU per 40 CFR 403.12(e)(3). To qualify, the user's discharge must be less than 5,000 gpd and must not exceed 0.01 percent of the hydraulic, organic, or pollutant load capacity of the City's wastewater treatment plant. In addition, the user must not have been in significant noncompliance at any time in the past two years and must not have significant variations in flows or pollutant levels that would cause unrepresentative data during the reporting period.



Non-Significant Categorical Industrial User (NSCIU). Includes categorical users designated by the City as a non-significant CIU per 40 CFR 403.3(v)(2). To qualify, the user must never discharge more than 100 gallons per day of categorical wastewater (excludes sanitary, non-contact cooling, and boiler blowdown wastewater unless specifically included in the categorical standard). In addition, the user must have consistently met all applicable pretreatment standards; and must never discharge any untreated concentrated wastewater; and must submit an annual certification per 40 CFR 403.12(q).

4. CATEGORICAL PRETREATMENT STANDARDS

This facility is subject to the following Categorical Pretreatment Standards:

National Categorical Pretreatment Standard	Code Section of 40 CFR Rules
N/A	

5. EFFLUENT LIMITATIONS

You are prohibited from discharging wastewater to the City's wastewater collection system and treatment plant except in compliance with the following effluent limits:

Conventional Pollutant Effluent Limitations

Parameter	30-Day Average	Daily Maximum	Location
Flow	0.00936 MGD	0.02400 MGD	Effluent Sampling Station
BOD	50.0 lb/day	150 lb/day	Effluent Sampling Station
TSS	72.0 lb/day	180 lb/day	Effluent Sampling Station
Ammonia Nitrogen (NH ₃)	14.4 lb/day	21.6 lb/day	Effluent Sampling Station
pH	NA	5.5 – 9.5 S.U.	Effluent Sampling Station
Fats, Oils, and Greases (FOG)	150 mg/L	200 mg/L	Effluent Sampling Station

Concentrations of BOD₅, TSS, Ammonia Nitrogen, and Fats, Oils, and Greases in excess of the limits are subject to surcharge fees per City Code Chapter 13.12.

NOTE: Permittee must also comply with the "Prohibited Discharge Standards" in City Code 13.24.180 and "Local Limits" for metals and other specific pollutants in City Code 13.24.210.

Local Limits Effluent Limitations

Parameter	30-Day Average (lb/day)	Daily Maximum (lb/day)	Location
Mercury	0.0004	0.0006	Effluent Sampling Station
Zinc	0.2737	0.4147	Effluent Sampling Station
Chlorides**	*Will monitor compliance with 13.24.210	*Will monitor compliance with 13.24.210	Effluent Sampling Station
Arsenic	*Will monitor compliance with 13.24.210	*Will monitor compliance with 13.24.210	Effluent Sampling Station
Cadmium	*Will monitor compliance with 13.24.210	*Will monitor compliance with 13.24.210	Effluent Sampling Station
Lead	*Will monitor compliance with 13.24.210	*Will monitor compliance with 13.24.210	Effluent Sampling Station
Molybdenum	*Will monitor compliance with 13.24.210	*Will monitor compliance with 13.24.210	Effluent Sampling Station
Selenium	*Will monitor compliance with 13.24.210	*Will monitor compliance with 13.24.210	Effluent Sampling Station
Silver	*Will monitor compliance with 13.24.210	*Will monitor compliance with 13.24.210	Effluent Sampling Station
*13.24.210 Specific pollutant limitations No industry shall discharge wastewater containing pollutants which in combination with other discharges would cause the loadings at the introduction into the treatment plant to exceed the limits in 13.24.210. **Chlorides mass limit will be determined after startup of the City's Reverse Osmosis system. Compliance will be enforced when limits are applied.			

Sulfates Effluent Limitations

Parameter	30-Day Average (mg/L)	Daily Maximum (lb/day)	Location
Sulfates	Monitor Only	Monitor Only	Effluent Sampling Station

Toxicity Characteristics Leaching Procedure (TCLP)

Parameter	EPA Hazardous Waste No.	CAS No.	Regulatory Limit (mg/L)
Arsenic	D004	7440-38-2	5.0
Barium	D005	7440-38-3	100.0
Benzene	D018	71-43-2	0.5
Cadmium	D004	7440-43-9	1.0

Carbon Tetrachloride	D019	56-23-5	0.5
Chlordane	D020	57-74-9	0.03
Chlorobenzene	D021	108-90-7	100.0
Chloroform	D022	67-66-3	6.0
Chromium	D007	7440-47-3	5.0
o-Cresol	D023	95-48-7	200.0
m-Cresol	D024	108-39-4	200.0
p-Cresol	D025	106-44-5	200.0
Cresol	D026	-	200.0
2,4-D Acid	D016	94-75-7	10.0
1,4-Dichlorobenzene	D027	106-46-7	7.5
1,2-Dichloroethane	D028	107-06-2	0.5
1,1-Dichloroethylene	D029	75-35-4	0.7
2,4-Dinitrotoluene	D030	121-14-2	0.1
Endrin	D012	72-20-8	0.02
Heptachlor (and its epoxide)	D031	76-44-8	0.008
Hexachlorobenzene	D032	118-74-1	0.13
Hexachlorobutadiene	D033	87-68-3	0.5
Hexachloroethane	D034	67-72-1	3.0
Lead	D008	7439-92-1	5.0
Lindane	D013	58-89-9	0.4
Mercury	D009	7439-97-6	0.2
Methoxchior	D014	72-43-5	10.0
Methyl Ethyl Ketone	D035	78-93-3	200.0
Nitrobenzene	D036	98-95-3	2.0
Pentachlorophenol	D037	87-86-5	100.0
Pyridine	D038	110-86-1	5.0
Selenium	D010	7782-49-2	1.0
Silver	D011	7440-22-4	5.0
Tetrachloroethylene	D039	127-18-4	0.7
Toxaphene	D015	8001-35-2	0.5
Trichloroethylene	D040	79-01-6	0.5
2,4,5-Trichlorophenol	D041	95-95-4	400.0
2,4,6-Trichlorophenol	D042	88-06-2	2.0
2,4,5-TP (Silvex)	D017	93-72-1	1.0
Vinyl Chloride	D043	75-01-4	0.2

6. MONITORING REQUIREMENTS

The monitoring requirements under this permit are summarized as follows:

Conventional Pollutant Monitoring

Parameter	Monitoring Frequency	Sample Type	Monitoring Location
Flow*	Weekly - derived from Weekly Pump Run Time Data, multiplied by average pumping rate, divided across number of days of week, or time since last pump reading	Calculated (as derived by dividing Weekly Pump Run Time Data, multiplied by average pumping rate, divided across number of days of week, or time since last pump reading)	Effluent Sampling Station
BOD	One (1) time per month	24-Hour Composite	Effluent Sampling Station
TSS	One (1) time per month	24-Hour Composite	Effluent Sampling Station
Ammonia Nitrogen (NH ₃)	One (1) time per month	24-Hour Composite	Effluent Sampling Station
Fats, Oils, and Greases (FOG)	One (1) time per month	Grab	Effluent Sampling Station
pH	One (1) time per month	Grab	Effluent Sampling Station

* Permittee shall report annual pump rate test information to City for use in this calculation.

Local Limits Effluent Monitoring

Parameter	Monitoring Frequency	Sample Type	Monitoring Location
Mercury	One (1) time per month	24-Hour Composite	Effluent Sampling Station
Zinc	One (1) time per month	24-Hour Composite	Effluent Sampling Station
Chlorides*	One (1) time per month	24-Hour Composite	Effluent Sampling Station
Arsenic	Two (2) times per year	24-Hour Composite	Effluent Sampling Station
Cadmium	Two (2) times per year	24-Hour Composite	Effluent Sampling Station
Lead	Two (2) times per year	24-Hour Composite	Effluent Sampling Station
Molybdenum	Two (2) times per year	24-Hour Composite	Effluent Sampling Station

Selenium	Two (2) times per year	24-Hour Composite	Effluent Sampling Station
Silver	Two (2) times per year	24-Hour Composite	Effluent Sampling Station

*Chlorides mass limit will be determined after startup of the City's Reverse Osmosis system. Compliance will be enforced when limits are applied.

Sulfates Effluent Monitoring

Parameter	Monitoring Frequency	Sample Type	Location
Sulfates	One (1) time per month	24-Hour Composite	Effluent Sampling Station

Toxicity Characteristics Leaching Procedure (TCLP)

Parameter	Monitoring Frequency	Sample Type	Monitoring Location
Arsenic	One (1) time per year	24-Hour Composite	Effluent Sampling Station
Barium	One (1) time per year	24-Hour Composite	Effluent Sampling Station
Benzene	One (1) time per year	Grab	Effluent Sampling Station
Cadmium	One (1) time per year	24-Hour Composite	Effluent Sampling Station
Carbon Tetrachloride	One (1) time per year	Grab	Effluent Sampling Station
Chlordane	One (1) time per year	Grab	Effluent Sampling Station
Chlorobenzene	One (1) time per year	Grab	Effluent Sampling Station
Chloroform	One (1) time per year	Grab	Effluent Sampling Station
Chromium	One (1) time per year	24-Hour Composite	Effluent Sampling Station
o-Creosol	One (1) time per year	Grab	Effluent Sampling Station
m-Creosol	One (1) time per year	Grab	Effluent Sampling Station
p-Creosol	One (1) time per year	Grab	Effluent Sampling Station
Creosol	One (1) time per year	Grab	Effluent Sampling Station
2,4-D Acid	One (1) time per year	Grab	Effluent Sampling Station
1,4-Dichlorobenzene	One (1) time per year	Grab	Effluent Sampling Station
1,2-Dichloroethane	One (1) time per year	Grab	Effluent Sampling Station
1,1-Dichloroethylene	One (1) time per year	Grab	Effluent Sampling Station
2,4-Dinitrotoluene	One (1) time per year	Grab	Effluent Sampling Station
Endrin	One (1) time per year	Grab	Effluent Sampling Station
Heptachlor (and its epoxide)	One (1) time per year	Grab	Effluent Sampling Station
Hexachlorobenzene	One (1) time per year	Grab	Effluent Sampling Station
Hexachlorobutadiene	One (1) time per year	Grab	Effluent Sampling Station

Hexachloroethane	One (1) time per year	Grab	Effluent Sampling Station
Lead	One (1) time per year	24-Hour Composite	Effluent Sampling Station
Lindane	One (1) time per year	Grab	Effluent Sampling Station
Mercury	One (1) time per year	24-Hour Composite	Effluent Sampling Station
Methoxchlor	One (1) time per year	Grab	Effluent Sampling Station
Methyl Ethyl Ketone	One (1) time per year	Grab	Effluent Sampling Station
Nitrobenzene	One (1) time per year	Grab	Effluent Sampling Station
Pentachlorophenol	One (1) time per year	Grab	Effluent Sampling Station
Pyridine	One (1) time per year	Grab	Effluent Sampling Station
Selenium	One (1) time per year	24-Hour Composite	Effluent Sampling Station
Silver	One (1) time per year	24-Hour Composite	Effluent Sampling Station
Tetrachloroethylene	One (1) time per year	Grab	Effluent Sampling Station
Toxaphene	One (1) time per year	Grab	Effluent Sampling Station
Trichloroethylene	One (1) time per year	Grab	Effluent Sampling Station
2,4,5-Trichlorophenol	One (1) time per year	Grab	Effluent Sampling Station
2,4,6-Trichlorophenol	One (1) time per year	Grab	Effluent Sampling Station
2,4,5-TP (Silvex)	One (1) time per year	Grab	Effluent Sampling Station
Vinyl Chloride	One (1) time per year	Grab	Effluent Sampling Station

1. RESPONSIBILITY FOR SAMPLING, MONITORING AND ANALYSIS

Monitoring samples shall be collected downstream of any pretreatment facilities, prior to dilution with any non-regulated wastewater stream and prior to discharge to the City's sanitary sewer system.

Sampling, monitoring, and analysis under this permit will be as follows (check all that apply):

- ☐ **Sampling and monitoring are not required because this is a Non-Significant Categorical user.**
- ☐ **Sampling, monitoring, and analysis shall be performed by the Permittee.**
- ☒ **Sampling, monitoring, and analysis shall be performed by the City in lieu of Permittee as provided in 40 CFR 403.12(g)(1).** In the event the City is unable to perform the sampling, the Permittee shall be responsible for sampling at the frequencies specified in **40 CFR 403.12(h).**
- ☒ **Flow monitoring equipment shall be provided and maintained by** the Permittee **at the following location (s):** Effluent Sampling Station.
- ☒ **Composite sampler(s) shall be provided and maintained by** the Permittee **at the following location(s):** Effluent Sampling Station.

If routine sampling, monitoring, or analysis is performed by the City in lieu of Permittee, the Permittee may be required to reimburse the City for expenses incurred. The Permittee may also be required to reimburse the City for the costs of providing and maintaining flow monitoring equipment or composite samplers. All samples and measurements shall be taken at the monitoring locations specified in this permit (unless otherwise noted) and must be representative of the conditions being monitored. The Permittee shall not change, alter, or remove any monitoring or sampling equipment without prior approval from the City. Sampling and monitoring equipment provided by the Permittee shall be maintained by the Permittee in good working order at Permittee's own expense. The Permittee shall immediately notify the City of any problems and promptly repair or replace any sampling or monitoring equipment that is not functioning properly. Spare parts shall be kept available at the Permittee's facility as necessary to make routine repairs. Flow monitoring equipment shall be calibrated at least once a year to ensure accuracy. The calibration shall be performed by a qualified third party acceptable to the City. The Permittee will be responsible for securing the third party to perform the calibration. The calibration shall ensure that accuracy is consistent with the accepted capability for that type of flow monitoring device and does not deviate by more than ten percent from true discharge rates throughout the range of expected discharge volumes. Calibration reports shall be submitted to the Pretreatment Office at least annually and more often if monitoring problems indicate the need for more frequent calibration.

Permittee shall be equipped with a sampling station at a point of effluent discharge. The sampling station shall have a sink, running hot water, locking sampler, flow meter, drain and light source. The station maybe in-house or at an exterior location. An exterior location must be enclosed, heated and adequately accessible. All samples shall be kept refrigerated at 4 degrees Celsius. If Permittee is out of compliance with this ordinance, the Control Authority may request renovations or relocation of said sampling stations.

8. TEST METHODS. *40 CFR 403.12(g)(5)*

Samples must be analyzed using approved methods specified in 40 CFR Part 136 and amendments thereto. Recognized laboratory manuals such as "Standard Methods for the Examination of Water and Wastewater" (current edition) may be used as a reference.

9. USE OF CERTIFIED LABORATORIES. *IAC 567-63.1(4)*

All testing must be done by laboratories certified by the State of Iowa under one or more of Iowa's environmental laboratory certification programs in accordance with IAC 567 Chapter 83. Routine on-site monitoring for pH, temperature, dissolved oxygen, total residual chlorine, and settleable solids, are excluded from this requirement (reference IAC 567-63.1(4)).

10. RECORDKEEPING. *40 CFR 403.12(o)* and *IAC 567-63.2*

The City shall maintain records of all monitoring activities in accordance with 40 CFR 403.12(o) and IAC 567-63.2. The records shall include: (1) Date, time, and place of sampling; (2) Name of person who collected the samples or took the measurements; (3) Method of sampling used; (4) Dates when samples were analyzed; (5) Name of person who performed the analysis; (6) Analytical techniques used; (7) Results of the analysis; and (8) Name and identification number of Iowa-

certified testing laboratory that did the analysis. The City shall keep these records on-site at its facility and retain them for a minimum of three years. These records shall be available for the Permittee to review during normal working hours but do not need to be submitted to the Permittee unless specifically requested. Permittee shall keep Operation and Maintenance Records of their wastewater treatment facility, and shall furnish them at City's request, in order to establish Permittee's adequacy in operating and maintaining their facility to meet the discharge requirements specified herein.

11. PERIODIC MONITORING REPORTS. 40 CFR 403.12(e) and (h)

The Permittee will be responsible for periodic monitoring reports as follows (check one):

- ☒ **Periodic monitoring reports are not required.** Permittee is exempt under 40 CFR 403.12(g)(1) and is not required to submit periodic monitoring reports to the City because either: (1) the Facility is a Non-Significant Industrial User; or (2) Sampling and analysis is performed by the City in lieu of the Permittee and the information for the reports is collected by the City itself
- ☐ **Periodic monitoring reports are required.** Permittee is required to submit periodic monitoring reports to the City as specified in 40 CFR 403.12(e) for Categorical Industrial Users, or 40 CFR 403.12(h), for Non-Categorical Significant Industrial Users. These code sections require the reports to be submitted once every six months on June 30 and December 31. The reports may be required more frequently if deemed necessary by the City or may be reduced to not less than once a year for a "Middle Tier" Categorical Industrial User as allowed under CFR 403.12(e)(3). For this permit, it has been determined that the monitoring reports will be required at intervals of one time per month. The reports shall be due no later than 15 days following the end of each monthly monitoring period.

Monitoring reports may be submitted by any means acceptable to the City. The reports shall include a summary of the monitoring data collected during each month. The data shall be arranged in tabular form with column headings similar to the forms used by the Iowa Department of Natural Resources. Days should be listed in the left-hand column with the first day of the month at the top and last day at the bottom. Flow data should be reported in the next column. The rest of the columns are to be used for reporting test data for other parameters such as CBOD and TSS. The data in each column shall be tabulated at the bottom of the page to show the average, maximum, and minimum values for each parameter. If the Permittee monitors any pollutants more frequently than required by this permit, the data from such monitoring shall be included in the monitoring reports per 40 CFR 403.12(g)(6) and shall be used in determining the average, maximum, and minimum values.

All monitoring reports must be signed and dated and include the following certification statement found in 40 CFR 403.6(a)(2)(ii):

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and

belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

The above certification must be signed by a responsible corporate officer or manager at the facility in accordance with 40 CFR 403.12(l) unless the Permittee provides the City with written authorization for other individuals to sign on behalf of the corporate officer or manager as specified in 40 CFR 403.12(l)(3).

12. SAMPLING AND SURVEILLANCE BY CITY. 40 CFR 403.8(f)(2)(v)

The City will randomly sample and analyze effluent from the Permittee's facility and conduct surveillance inspections to identify noncompliance with pretreatment standards as specified in 40 CFR 403.8(F)(2)(f). The sampling and surveillance will be done at least one time per year but may be done more frequently if deemed necessary by the City or may be reduced to once every two years for a "Middle Tier" Categorical Industrial User as allowed under 40 CFR 403.8(f)(2)(v)(c). The City may choose not perform sampling and surveillance of this facility if it is classified as a Non Significant Categorical Industrial User, however, the City must conduct an evaluation one time per year to determine if the facility continues to meet the criteria for this classification as specified in 40 CFR 403.8(f)(2)(v)(B). The City reserves the right to do random sampling and surveillance at any time it deems necessary. The Permittee may be required to reimburse the City for expenses incurred in performing the random sampling, analysis, and surveillance inspections.

13. ACCESS BY CITY.

The City or its duly authorized representative(s) shall be allowed to enter the Permittee's premises at reasonable times as necessary to collect effluent samples or conduct surveillance inspections. The City shall be allowed access to all sampling and monitoring locations, areas where wastewater treatment is performed, and any areas where pollutants could enter the sewer. The Permittee is responsible for maintaining access to all sampling and monitoring locations and shall keep the sampling and monitoring locations cleared of snow and ice, as necessary. Permittee may also be required to erect shelter buildings over sampling manholes, flow monitoring structures, and other outdoor monitoring locations where deemed necessary by the City.

14. SLUG CONTROL PLAN. 40 CFR 403.8(f)(2)(vi) and City Code 13.24.240

A slug discharge is an accidental spill, release, bypass, or other non-routine discharge that has a reasonable potential to cause interference or pass through at the City's wastewater treatment plant causing or contributing to noncompliance resulting in violate of any regulation or National Pollution Discharge Elimination System (NPDES) permit limit by the City. A slug control plan is a management strategy to prevent slug discharges and mitigate adverse impacts. Federal code Section 40 CFR 403.8(f)(2)(vi) requires the City to evaluate each industrial user at least one time to determine if the facility is required to have a slug control plan or implement other measures to prevent slug discharges. This evaluation has resulted in the following determination under this permit (check one):

☐

This facility does not need a slug control plan. The facility does not have a reasonable

potential to cause slug discharges or has implemented appropriate measures to prevent slug discharges.



This facility already has a satisfactory slug control plan on file with the City.



This facility must submit a slug control plan. The Permittee is required to submit a slug control plan to the City within 120 days after this permit is issued.

Slug control plans are required to contain the following elements: (1) Description of discharge practices including non-routine batch discharges; (2) Description of storage facilities for all chemicals; (3) Procedures for immediately notifying the City of any slug discharge with follow-up written notification within five days; and (4) Procedures for preventing adverse impacts from spills including inspection and maintenance of chemical storage areas, material handling areas, loading and unloading operations, control of site run-off, worker training, spill containment structures and/or measures and equipment for emergency response. If the facility has other plans or reports that contain the information needed for a slug control plan these other plans or reports may be used as attachments to the slug control plan. Examples of other plans or reports that may be used include "Spill Prevention and Countermeasure (SPCC) Plans" and "Hazardous Chemical Inventory Reports".

The Permittee is required to notify the City immediately of any changes at its facility that could affect the potential for a slug discharge so the City may re-evaluate slug control measures if necessary.

15. NOTICE OF POTENTIAL PROBLEMS, INCLUDING SLUG LOADING. *40 CFR 403.12(f)*

Permit holder must immediately notify the City of any discharges that could cause problems with the City's wastewater treatment facilities including spills, slug loadings, and discharges that would violate a prohibited discharge standard under 40 CFR 403.5. The Permittee shall additionally provide follow-up written notification of such problems to the City within five (5) days as required in 40 CFR 403.8(f)(2)(vi)(c).

16. NOTICE OF VIOLATION AND REPEAT SAMPLING. *40 CFR 403.12(g) (2)*

If sampling performed by the Permittee indicates a violation, the Permittee shall notify the City within 24 hours of becoming aware of the violation as provided in 40 CFR 403.12(g)(2). The Permittee shall also repeat the sampling and analysis for the parameter that had the violation and submit the results of the repeat analysis to the City within 30 days after becoming aware of the violation. If the sampling was performed by the City in lieu of the Permittee, the repeat sampling and analysis will be done by the City unless it notifies the Permittee of the violation and requires the Permittee to perform the repeat analysis. Repeat sampling will not be required if the parameter that had the violation is regularly sampled and tested at least once a month.

17. NOTIFICATION OF CHANGED DISCHARGE. *40 CFR 403.12(j) and City Code 13.24.230*

The Permittee shall promptly notify the City in advance of any substantial change in the volume or character of any pollutants in its effluent discharge. This includes pollutants subject to the hazardous waste notification requirements in 40 CFR 403.12(p) as described below.

18. NOTIFICATION OF HAZARDOUS WASTE DISCHARGE. *40 CFR 403.12(p) City Code 13.24.235*

If the Permittee discharges more than fifteen kilograms per month of any substance to the City's treatment plant that would be considered hazardous waste under 40 CFR 261, the Permittee must submit a one-time written notification to the City of Fort Dodge, the EPA Regional Waste Management Division, and the Iowa Department of Natural Resources. Written notification is also required if the Permittee discharges any amount of any substance that would be considered "acute" hazardous waste as specified in 40 CFR 261.30(d) or 261.33(e). The notification must include the name of the hazardous waste as set forth in 40 CFR 261, the EPA hazardous waste number, and type of discharge (continuous, batch, or other). If the amount of hazardous waste exceeds 100 kilograms per month, the notification shall also include: (1) an identification of the hazardous constituents in the wastes; (2) an estimate of the mass and concentration of hazardous constituents discharged during that calendar month; and (3) an estimate of the mass of constituents expected to be discharged during the following twelve months. All notifications must be accompanied by a certification that the Permittee has a waste reduction program in place to reduce the volume and toxicity of hazardous wastes generated to a degree it has determined to be economically practical. The notification must be submitted within 180 days after the discharge of hazardous waste begins and is also required within 90 days after the effective date of any rule changes that reclassify existing wastes as hazardous wastes. The notification needs to be submitted only once for each hazardous waste that is discharged, however, if there are any changes in the volume or character of the waste a notification of "changed discharge" must be submitted as specified in 40 CFR 403.12(j). Pollutants already reported under the self-monitoring requirements of 40 CFR 403.12(b), (d), and (e) are exempt from the notification requirements.

19. UPSET NOTIFICATION. *40 CFR 403.16*

An Upset is defined as an exceptional incident in which there is unintentional and temporary noncompliance with pretreatment standards due to factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed or inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation. If the Permittee experiences an upset that results in temporary noncompliance, the Permittee shall inform the City within 24 hours of becoming aware of the upset and provide a follow-up written report to the City within five (5) days. The report shall contain: (1) a description of the upset and its cause; (2) the duration of noncompliance including exact dates and times and/or anticipated time the noncompliance is expected to continue if the problem has not yet been corrected; (3) steps taken or planned to reduce, eliminate, and prevent any further upsets or noncompliance. An upset may be used as an affirmative defense in enforcement proceedings if the Permittee can establish that the noncompliance was caused by an upset and can also demonstrate that the pretreatment facility was being operated in a prudent and workman-like manner at the time the upset occurred. The Permittee shall have the burden of proof in establishing that an upset occurred.

20. BYPASS NOTIFICATION. 40 CFR 403.17

A bypass is an intentional diversion of a waste stream from any portion of a treatment facility. All bypasses are prohibited except for emergency bypasses and planned bypasses. Emergency bypasses will only be permitted if they are essential to prevent loss of life, personal injury, or severe property damage and there is no feasible alternative to the bypass. Planned bypasses will only be permitted if they are essential for maintenance purposes and do not cause any violations of pretreatment standards. If the Permittee knows in advance of the need for a bypass, it shall submit written notice to the City at least ten (10) days prior to the date of the bypass if possible. If a bypass results in noncompliance (even a planned bypass for maintenance purposes) or an unanticipated bypass occurs, the Permittee must inform the City within 24 hours after becoming aware of the noncompliance and must submit a follow-up written report to the City within five days. The report shall contain: (1) a description of the bypass and its cause; (2) the duration of bypass including exact dates and times and/or anticipated time the bypass is expected to continue if the problem has not yet been corrected; (3) steps taken or planned to reduce, eliminate, and prevent any further bypasses.

21. SPECIAL REPORTS FOR CATEGORICAL USERS. 40 CFR 403.12(b), (c), and (d)

Categorical Industrial Users are required to submit the following reports:

Baseline Monitoring Report (BMR). 40 CFR 403.12(b). New facilities that will be subject to a categorical standard must submit a baseline monitoring report to the City at least 90 days prior to commencement of discharge. Existing facilities that become subject to a new categorical standard after the facility was built must submit a baseline report to the City within 180 days after the effective date of the new standard. Baseline reports shall contain all the information listed in 40 CFR 403.12(b) (1) through (5).

For existing facilities, the baseline reports shall additionally contain a certification by a qualified professional as required in 40 CFR 403.12(b) (60). The certification shall indicate whether applicable pretreatment standards are being met, and, if not, specify whether additional pretreatment facilities are required to meet the standards. If the facility is unable to meet the pretreatment standards, it must submit a compliance schedule to the City as required in 40 CFR 403.12(b) (7). The compliance schedule shall contain dates for major events leading to the construction of a new wastewater pretreatment facility or upgrade of an existing facility as necessary to achieve compliance. Examples of major events include hiring of an engineer, begin design, complete design, start construction, complete construction, performance testing, and final compliance.

Compliance Schedule Progress Reports. 40 CFR 403.12(c). If an existing facility is subject to a compliance schedule under 40 CFR 403.12(b)(7), it must submit progress reports to the City no later than 14 days after each date in the schedule and no more than 9 months apart. Progress reports shall indicate the status of the project and whether or not it is on schedule. If the project is falling behind, the report shall indicate the reason for the delay, steps being taken to return to schedule, and a statement of when the project is expected to be back on schedule. The City will review these reports to track the progress of the work.

90-Day Compliance Report. 40 CFR 403.12(d). New facilities that are subject to a categorical standard must submit a compliance report to the City within 90 days after commencement of discharge. Existing facilities that became subject to a new categorical standard must submit a

compliance report to the City within 90 days after the final compliance date specified in a categorical standard or within 90 days after the compliance date specified by the City, whichever is earlier. Compliance reports shall include flow measurements and pollutant measurements along with their applicable pretreatment limits and certification by a qualified professional indicating whether the pretreatment standards are being met. If the standards are not being met, the report must specify how compliance will be achieved.

The Baseline Monitoring Report and 90-Day Compliance Report must include the certification statement in 40 CFR 403.6(a) (2) (ii) and be signed in accordance with the signatory requirements in 40 CFR 403.12(l).

22. CERTIFICATION BY NON-SIGNIFICANT CATEGORICAL USERS. 40 CFR 403.12(q)

Non-Significant Categorical Industrial Users must submit an annual certification to the City as follows:

Based on my inquiry of the person or persons directly responsible for managing compliance with the categorical Pretreatment Standards under 40 CFR_____. I certify that, to the best of my knowledge and belief that during the period from_____, to_____ [months, days, year]:

- (a) The facility described as_____ (facility name) met the definition of a Non-Significant Categorical Industrial User as described in §403.3(v)(2);*
- (b) The facility complied with all applicable Pretreatment Standards and requirements during this reporting period; and*
- (c) The facility did not discharge more than 100 gallons of total categorical wastewater on any given day during this reporting period. This compliance certification is based upon the following information:*

The certification statement for non-significant categorical users must be signed in accordance with the signatory requirements in 40 CFR 403.12(l).

23. PROHIBITED DISCHARGES. 40 CFR 403.5 and City Code 13.24.180

The Permittee shall not discharge any pollutants prohibited under 40 CFR 403.5 or City Code 13.24.180. Prohibited discharges include, but are not limited to, the following:

- (a) Pollutants which create a fire or explosion hazard including gasoline, benzene, solvents, and other substances with a closed cup flashpoint of less than 60 degrees Centigrade (140 degrees Fahrenheit).
- (b) Corrosive substances or wastewater having a pH above 9.5 or less than 5.5.
- (c) Solid or viscous pollutants including grease, sludge, garbage, fax, wax, tar, rags, wood, etc., which may obstruct flow or interfere with the treatment works.

- (d) Any pollutant in an amount that will cause interference at the City's treatment works, including oxygen demanding pollutants such as BOD.
- (e) Heat in amounts which will inhibit biological activity at the treatment works or cause the temperature at the treatment works to exceed 40 degrees Centigrade (104 degrees Fahrenheit), but in no case wastewater having a temperature higher than 65 degrees Centigrade (150 degrees Fahrenheit).
- (f) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through the treatment works.
- (g) Toxic liquids, solids, gases, vapors, or fumes that may cause health or safety problems.
- (h) Any wastewater containing medical wastes or radioactive wastes.
- (i) Any wastewater with an objectionable color not removed in the treatment process including dyes.
- (j) Any trucked or hauled pollutants, except at discharge points designated by the City.
- (k) Any substance that may interfere with the City's treatment works or cause violation of its NPDES permit.

24. SIGNIFICANT NONCOMPLIANCE. *40 CFR 403.8(f)(2)(viii)*

The Permittee will be considered to be in "significant non-compliance" for any of the following:

- (a) Chronic Permit Violations. These are violations in which 66 percent or more of the measurements for the same parameter during a 6-month period exceeded the discharge limit for that parameter.
- (b) Technical Review Criteria (TRC) Violations. These are violations in which 33 percent or more of the measurements for the same parameter during a 6-month period were equal to or greater than the discharge limit multiplied by the applicable TRC factor (TRC = 1.4 for BOD, TSS, fats, oil, and grease, and 1.2 for all other pollutants except pH).
- (c) Any other serious violation of a pretreatment standard or requirement if the City determines that the violation caused significant interference or noncompliance at the City's wastewater treatment plant.
- (d) Any discharge of a pollutant that has caused imminent risk to human health or welfare, or endangered the environment, or resulted in the City exercising its emergency authority to halt or prevent such a discharge under 40 CFR 403.8(f)(1)(vi)(B).
- (e) Failure to meet a compliance schedule deadline within 90 days after the completion date in the schedule.
- (f) Failure to submit a required report within 45 days after the due date.

- (g) Failure to accurately report noncompliance or violations.
- (h) Any other violation or group of violations that adversely affect the operation of the City's treatment plant.

25. ANNUAL PUBLICATION. *40 CFR 403.8(f)(2)(viii)*

The public notification requirement in 40 CFR 403.8(f) (2) (viii) requires the City to annually publish a list of Industrial Users who were in significant noncompliance at any time during the previous twelve (12) months. The list must be published in a newspaper having the largest circulation in the area. The Permittee is hereby advised that significant noncompliance with this permit may result in publication of its name in a newspaper.

26. DUTY TO HALT OR PREVENT DISCHARGE. *40 CFR 403.8(f)(1)(vi)(B)*

The Permittee shall immediately halt and/or prevent discharge of pollutants to the City upon informal notice by the City that the discharge presents an imminent risk to the health or welfare of persons, endangers the environment, or threatens to interfere with the operation of the City's wastewater treatment plant.

27. DILUTION.

The Permittee shall not dilute its effluent with potable water or any other water in an attempt to meet the effluent limits in this permit. Dilution will not be allowed as a substitute for proper treatment.

28. ENFORCEMENT PROCEDURE. *40 CFR 403.8(f)(l)(vi)(A) and City Code 13.12, 13.24.350*

- (a) Surcharges: The Program Administrator shall levy surcharges for any discharge(s) that exceed BOD, TSS, Ammonia, Nitrogen, or FOG per City Code 13.12.
- (b) Surcharge Rates: The rates for BOD, TSS, Ammonia Nitrogen or FOG shall be according to those rates found per City Code 13.12.
- (c) Violations and Enforcement: Noncompliance with this permit shall constitute a violation of City Ordinance No. 1863 and may result in assessment of penalties or fines in amounts of up to \$1,000 per day per violation as provided in City Code Section 13.24.350 and 40 CFR 403.8(f)(l)(vi)(A). Continued noncompliance may result in enforcement proceedings, administrative orders, compliance schedules, and/or renovation of this permit as provided in City Code Section 13.24.315.

The attached chart (provided at the end of this permit) further outlines types of violations and specifies POTW actions (initial and escalated), timeframes, and the officials

responsible for completing the actions. This chart shall be considered a part of this Discharge Permit.

29. RECOVERY OF COSTS.

In addition to basic charges for normal sewer service, the Permittee shall be responsible for the following additional costs:

- (a) Costs for the City to provide or maintain flow meters or composite samplers on behalf of the Permittee.
- (b) Costs for the City to perform routine sampling, monitoring, or analysis on behalf of the Permittee.
- (c) Costs for the City to perform random sampling, analysis, and surveillance per 40 CFR 403.8(f) (2) (v).
- (d) Costs of any loss, damage, or expense incurred by the City because of Permittee's discharge.
- (e) Costs of any cleaning or repair work required because of Permittee's discharge.
- (f) Assessment of penalties or fines for violations of this permit or City Ordinance.
- (g) Costs incurred to publish permittee's name in a newspaper as required in 40 CFR 403.8(f)(2)(viii) if the Permittee was in significant noncompliance at any time during the previous 12 months.
- (h) Surcharges for CBOD5 or Total Suspended Solids (TSS) in excess of 250 mg/L per City Code 13.12.
- (i) Surcharges for Oil/Grease in excess of 100 mg/L per City Code 13.12.
- (j) Surcharges for Ammonia Nitrogen in excess of 20 mg/L per City Code 13.12.

30. CONTINUATION OF EXPIRED PERMITS.

An expired permit will continue to be effective and enforceable until a new permit is issued if the Permittee filed for renewal at least 180 days prior to the permit's expiration date and the delay in reissuing a new permit was not caused by any fault of the Permittee.

ANTICIPATED ENFORCEMENT ACTIONS/PROCEDURES

Unpermitted Discharge					
Type of Violation	Industrial Pretreatment Program Action	Timeframe	Responsible Official	Expected Action from User	Escalated Action if Needed
Unpermitted Discharge (Unaware of Requirement)	Notice of Non-Compliance	Within 30 Days of Discovery of Discharge	Pretreatment Coordinator	File Permit Application	Notice of Violation; Suspend Service Until Permit Is Issued
Unpermitted Discharge (Aware of Requirement)	Notice of Violation with Penalty Assessed	Within 30 Days of Discovery of Discharge	Director	File Permit Application	Suspend Service Until Permit Is Issued
Unpermitted Discharge (Resulting in Violation at WPCF)	Order to Cease Process Causing Violation; Notice of Violation with penalty per day per violation per established tiered penalty structure	Order to Cease Immediately; Notice of Violation within 15 days	Director	File Permit Application; Report Steps Taken to Prevent Violation	Suspend Service Until Permit Issued
Unpermitted Discharge (Resulting in Endangerment)	Suspend Service; Notice of Violation with penalty per day per violation per established tiered penalty structure	Suspend Service Immediately; Notice of Violation within 15 days	Director	File Permit Application; Report Steps Taken to Prevent Future Endangerment	Not Applicable

Permit Limit Violations

Type of Violation	Industrial Pretreatment Program Action	Timeframe	Responsible Official	Expected Action from User	Escalated Action if Needed
Permit Limits Violation Single Event (Minor)	Notice of Non-Compliance or Notice of Violation	Within 30 days of receiving data	Pretreatment Coordinator or Director	Conduct Additional Monitoring and Return to Compliance	Notice of Violation with Penalty
Permit Limits Violation	Notice of Violation with penalty per day per violation per established tiered penalty structure	Within 30 days of Receiving Data	Director	Conduct Additional Monitoring and Return to Compliance	Second Notice of Violation with Increased Penalty
Permit Limits Violation Significant Non-Compliance	Notice of Violation with penalty per day per violation per established tiered penalty structure	Within 30 days of Receiving Data	Director	Report cause of Non-Compliance and Steps Taken to Prevent Violation	Enforceable Schedule; Suspend Service if Inadequate Action is Taken
Permit Limits Violation (Resulting in Violation at WPCF)	Order to Cease Process Causing Violation Notice of Violation with penalty per day per violation per established tiered penalty structure	Order to Cease Immediately Notice of Violation Within 15 days of Discovering Violation	Director	Report cause of Non-Compliance and Steps Taken to Prevent Violation	Suspend Service Until Resolved; Enforceable Schedule

Other Violations

Type of Violation	Industrial Pretreatment Program Action	Timeframe	Responsible Official	Expected Action from User	Escalated Action if Needed
Permit Limits Violation results in Endangerment	Suspend Service Notice of Violation penalty per day per violation per established tiered penalty structure	Suspend Service Immediately Notice of Violation within 15 days of Discovering Violation	Director	File for Reissuance of Permit	Not Applicable
Self-Monitoring Violations	Notice of Non-Compliance or Notice of Violation	Within 30 Days of Discovery	Pretreatment Coordinator or Director	Conduct Missed Sampling	Second Notice of Violation with minimum Penalty equal to Cost of Missed Testing
Reporting Violations Late Report	Notice of Non-Compliance	Within 30 days of the Report Due Date	Pretreatment Coordinator	Submit Report	Notice of Violation Penalty Assessed Possible SNC if over 30 days
Reporting Violations Incomplete or Inaccurate Reports	Notice of Non-Compliance	Within 30 days of Report Submission	Pretreatment Coordinator	Submit Revised Report	Notice of Violation Penalty Assessed
Reporting Violations Intentional Falsification	Referred to District Attorney	As soon as suspected	Director	Not Applicable	Not Applicable

Other Violations (Continued)

Type of Violation	Industrial Pretreatment Program Action	Timeframe	Responsible Official	Expected Action from User	Escalated Action if Needed
Violation of Permit Conditions	Notice of Violation with penalty per day per violation per established tiered penalty structure	Within 30 Days of Discovery	Director	Varies	Second Notice of Violation with Increased Penalty
Violation of Permit Conditions (Resulting in Violation at WPCF or Endangerment of WPCF Personnel)	Suspend Service Notice of Violation with penalty per day per violation per established tiered penalty structure	Suspend Service Immediately Notice of Violation Within 715 days	Director	Steps taken to Avoid Reoccurrence	Not Applicable