2024 ANNUAL GROUNDWATER QUALITY REPORT

FOR THE
SOUTH DALLAS COUNTY SANITARY LANDFILL
25-SDP-01-75P
ADEL, IOWA

by:

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

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HLW
HLW Engineering Group
Engineering Management

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Certification

Prepared by: ___________________________________ Date: 2-19-2025

Typed: Todd Whipple, CPG

Section 1.0 Background Information

1.1 Report Format

This report is prepared and submitted in accordance with Special Provision 3.h. of the Permit, dated October 10, 2023 (Doc #107884). Table 1 through Table 12 are attached to this report to meet the IDNR format requirements. Note that the Tables may not be referenced in consecutive order in this report, and some Tables are not required.

1.2 Report Priority

No requests are made herein for priority review of this document.

1.3 Period of Report Coverage

Water quality data evaluation is based on a running compilation of data beginning on October 16, 2014. Statistical evaluations herein are based on the most recent water quality data collected September 12, 2024.

1.4 Current Site Map

Figure 1 illustrates the current site features, monitoring well locations, groundwater diversion lines, leachate wells, and subsurface gas probe locations.

1.5 Site Status and Applicable Rules

Site Location

The landfill property spans about 42.5 acres in an abandoned clay quarry in the S 1/2, N 1/2 sec. 30, T. 79 N., R. 27 W., on the northwest edge of the City of Adel in Dallas County, Iowa. The facility operates under the Iowa Department of Natural Resources (IDNR) Permit Number 25-SDP-1-75P. Under an agreement with the Metro Waste Authority (MWA) and the Metro West Landfill (formerly the North Dallas County Landfill) some waste is also accepted from the MWA service area. Asbestos and petroleum-contaminated soils are also periodically accepted by the landfill.

The site is generally described as being developed in glacial till that is overlying shale bedrock.

Landfill Layout

Originally, there were two areas receiving waste: the southwest and northeast fill areas. Based on the Horizontal Landfill Expansion Development and Operational Plans, dated May 1998, the two areas were developed into one expanded landfill. Approximately 8 acres of the expansion were developed as Phase 1 (1999) and Phase 2 (2005) utilizing an approved Subtitle-D alternative clay-liner. Phase 3 was constructed during the summer/fall of 2011 with a composite FML-liner resulting in an additional 6.5 acres. Phase 4 was constructed during the fall of 2017 and consists of approximately 4.5 acres. Phase 5 was completed during the fall of 2021 and includes an additional 3.3 acres.

The southwestern and northeastern fill areas received final cover, but during the past several years, excavation and removal of the waste and cover in the southwestern area has been ongoing and a portion is now Phase 5. The northeastern area remains closed.

Applicable Rules
Iowa Administrative Code (IAC) 567-113 is applicable to the site.

1.6 Summary of Hydrologic Monitoring System Plan (HMSP)

The HMSP includes upgradient monitoring points MW-2, MW-9, MW-17, MW-18, MW-19A, and MW-24. There are eight (8) downgradient monitoring points designated MW-10, MW-12, MW-15R, MW-20R, MW-4, MW-5, MW-21, and MW-22. Step-out Corrective Action Monitoring wells MW-25 and MW-26 are also part of the HMSP.

GWD-1 (groundwater diversion underdrain) was removed from the monitoring system when it was connected to the leachate collection system on August 15, 2023 (Doc #107672).

The current HMSP is summarized in Table 1. The HMSP Implementation Schedule for 2025 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.

High & Low Water Levels
Current year water elevation data is included on Table 4. Historic water elevation data (1992-2024) is included in the Table 4A. A Water Table Contour Map (Figure 2) dated September 12, 2024 is included with this report and illustrates the water table surface and the effects of the topography.

Review of the 2024 water elevation data does not indicate any remarkable water elevation conditions.

Well Depth & Sedimentation
Well depth measurements were made September 12, 2024. Review of the well depth data included on Table 4 indicates that well sedimentation is estimated to be less than one (1) foot at all site monitoring wells.

Well Recharge Rates & Chemistry
The most recent measured horizontal hydraulic conductivity testing results (1998-2003) for site monitoring wells is included on Table 4. Horizontal hydraulic conductivities ranged between 10^{-4} cm/sec and 10^{-6} cm/sec.

Field recovery data recorded on March 20, 2024 (also on Table 4) indicates that the monitoring wells recover to at least 90% recovery within 3 to 24 hours after purging. The exception is at MW-

5 and MW-19A where more than 24 hours was required for the well to recover. Well recovery information indicates that recharge to the individual wells remained sufficient to promote collection of representative water quality samples and the wells were functioning as intended. Monitoring well recharge reevaluation is due biennially according to 113.10(2)"f", and should be evaluated again in 2026.

Based on the apparent static condition of the water surfaces across the site, it appears that the semi-annual water elevation data is sufficient to adequately monitor the hydrologic condition of the site. Further, the wells are interpreted to be appropriately located to detect any impact, should it occur.

Section 2.0 Reporting Period Monitoring Activities

A summary of the planned 2025 sample collection events at each well is included on Table 2. A comprehensive summary of sampling episodes from 2014 to present is included on Table 2A.

Field sampling information for the March 20, 2024 and September 12, 2024 sampling episodes is included on the field forms (IDNR Form 542-1322) in Appendix A.

A comprehensive summary of Analytical Data for the episodes between October 16, 2014 and September 12, 2024 is included on Table 9.

2.1 Current Detection Monitoring Activities

Background wells are MW-2, MW-9, MW-17, MW-18, MW-19A, and MW-24.

Downgradient monitoring points include MW-10, MW-12, MW-15R, MW-20R, MW-4, MW-5, MW-21, and MW-22.

MW-10, MW-12, MW-15R, and MW-20R remain in the detection monitoring system.

MW-4, MW-5, MW-21, and MW-22 are in the assessment monitoring system.

MW-25 and MW-26 are in the Corrective Action Monitoring System as step-out wells.

2.2 Current Assessment Monitoring Activities

MW-4, MW-5, MW-21, and MW-22 are in the assessment monitoring system. A five (5) year frequency for full Appendix II sampling was approved in Special Provision X.3.e. of the Permit, dated October 10, 2023 (Doc #107884).

Two (2) rounds of full Appendix II sampling are completed at MW-4, MW-21, and MW-22. Four (4) rounds of full Appendix II sampling are completed at MW-5. The next full Appendix II sample collection event is scheduled to occur at MW-4, MW-21, and MW-22 in 2026 (Table 2).

2.3 Current Corrective Action Activities

An Assessment of Corrective Measures (ACM) report was submitted to IDNR on June 29, 2011. Two step-out wells (MW-25 and MW-26) were installed in February 2016 to determine the extent of the contamination and have subsequently been monitored for those constituents that were required as part of the ACM.

A selected remedy was presented in the Assessment of Corrective Measures dated June 29, 2011. To date, the portions of the remedy that have been implemented include the installation of the step-out wells (MW-25 and MW-26) and installation of the electric fans on the gas vents along the north portion of the NE area.

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

The Analytical Reports for the laboratory testing on samples collected March 20, 2024 and September 12, 2024 are included in Appendix C.

QUALITY ASSURANCE/QUALITY CONTROL

A blind duplicate sample was collected at MW-15R during the March 20, 2024 sampling episode. A blind duplicate sample was collected at MW-21 during the September 12, 2024 sampling episode.

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

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

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

The results of the blind duplicate and the monitoring well results for March 20, 2024 and September 12, 2024 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 # 80694). A TSS and Field Turbidity Evaluation Report was prepared and submitted on December 14, 2017 (Doc# 91108) and was approved by IDNR on December 27, 2017 (Doc #91169). A summary table of field measured turbidity is included in Appendix D.

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. No-purge sampling has been performed at the facility beginning with the October 16, 2014 sampling episode.

<u>Upgradient Data</u>, Table 1, Attachment B, to the October, 2024 Statistical Evaluation Report (Appendix B.2) includes a summary of the most current background data. Any water quality results tagged with an asterisk is a statistical outlier and is excluded from use in calculating the Prediction Limits. The calculated Prediction Limits are summarized in Table 5.

SITE SPECIFIC GWPS

Review of the information included on Table 5 indicates that the prediction limit for arsenic (167.0 ug/L), cobalt (38.185 ug/L), and thallium (2.3 ug/L) calculated from the background data exceeds the published IAC 567, Chapter 137 Statewide Standards (10 ug/L, 2.1 ug/L, and 2.0 ug/L, respectively). The Site-Specific GWPS should not be set lower than the Site Prediction Limit calculated from the site background data. For this report, the prediction limits for arsenic (167.0 ug/L), cobalt (38.185 ug/L), and thallium (2.3 ug/L) are utilized as the Site-Specific GWPS. For all other compounds the published IAC 567, Chapter 137 Statewide Standard are utilized as the GWPS.

STATISTICALLY SIGNIFICANT INCREASES (SSI)

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

Since the Prediction limit for VOC is set at the laboratory Reporting Level, any VOC detection is recorded as an SSI. Table 6 is a summary of all compounds at site monitoring wells that have exceeded a *current* prediction limit in 2024. There are *no verified prediction limit exceedances* recorded in the current *detection monitoring* system wells.

Prediction limit exceedances are again recorded at wells that are currently included in the *assessment monitoring* system (MW-4, MW-5, MW-21, and MW-22). Table 7 includes an on-going summary of compound detections that exceed the prediction limits (highlighted in light brown).

Exceedances of the Prediction Limit at a well that is in the assessment monitoring system or the corrective action monitoring system is not an SSI, instead the exceedance is further evaluated by Confidence Interval Statistics.

Exceedance of the Prediction Limits for the current year is summarized on Table 1. A running summary of recorded Prediction Limit exceedances by year since 2020 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

A five (5) year frequency for full Appendix II sampling was approved in Special Provision Special Provision X.3.e. of the Permit, dated October 10, 2023 (Doc #107884).

The full Appendix II (assessment) monitoring is current. Two (2) rounds of full Appendix II sampling are completed at MW-4, MW-21, and MW-22. Four (4) rounds of full Appendix II sampling are completed at MW-5.

The on-going supplemental sampling includes Appendix I plus all detected Appendix II compounds per 113.10(6)b.2. Compounds detected to date beyond the Appendix I list are limited to dichlorodifluoromethane and bis(2-ethylhexyl) phthalate.

The summary of assessment monitoring detections October 16, 2014 to date is presented in Appendix F. The full Appendix II sampling episodes are highlighted in green in the tables in Appendix F.

Based on the results to date, dichlorodifluoromethane and bis (2-ethylhexyl) phthalate will continue to be monitored as appropriate to findings during assessment monitoring episodes at assessment monitoring wells (see Table 2).

STATISTICALLY SIGNIFICANT LEVELS (SSL)

The compounds with detections that exceed site prediction limits (see summary in Tables 1 & 7) are utilized to calculate the Confidence Interval (the 95% lower confidence limits (LCL) and the 95% upper control limits (UCL)) in accordance with the 2009 Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities by US EPA. The 95% LCL values are compared to applicable GWPS. Any 95% LCL value that exceeds an applicable GWPS is recorded as an SSL. All wells with a recorded SSL required the plume of impact to be defined in the horizontal and vertical directions and required completion of an Assessment of Corrective Measures (ACM).

The SSL Evaluation is based on data collected since October 16, 2014. The Confidence Intervals (95% LCL and 95% UCL) are calculated during each statistical evaluation based on the most recent four (4) data points. The 95% LCL evaluation is presented in Table 7. *There are no exceedances recorded.* Any exceedance would be highlighted yellow on Table 7. Note that Table 8, Table 10, and Table 11 are not required for this report.

ASSESSMENT OF CORRECTIVE MEASURES (ACM)

Based on water quality findings prior to changes in sampling methods (October 16, 2014) an Assessment of Corrective Measures (ACM) report was submitted to IDNR on June 29, 2011. Two step-out wells (MW-25 and MW-26) were installed in February 2016 to determine the extent of the contamination and have subsequently been monitored as Corrective Action Monitoring Wells for those constituents that were required as part of the 2011 ACM.
The selected remedy was presented in the Assessment of Corrective Measures dated June 29, 2011. To date, the portions of the remedy that have been implemented include the installation of the step-out wells (MW-25 and MW-26) and installation of the electric fans on the gas vents along the north portion of the NE area.

CORRECTIVE MEASURES MONITORING

On-going semi-annual monitoring at MW-25 and MW-26 includes arsenic, barium, and vinyl chloride.

Results are tabulated below.

Review of the data indicates that vinyl chloride has not been detected to date at either MW-25 or MW-26 and is consistently reported as below the MRL of 1.0 ug/L.

Review of the results indicates that arsenic and barium detections are below the GWPS during each monitoring event, with the exception of arsenic at MW-26 on August 30, 2022. The reported result for arsenic at MW-26 on August 30, 2022 (203 ug/L) exceeds the GWPS (167.0 ug/L). Review of the field data on August 30, 2022 indicates that the sample was visibly orange and had a reported turbidity that exceeded the range of the meter (>1000.0 NTU). The elevated arsenic concentration on August 30, 2022 is attributed to the oxidized nature of the water existing in the monitoring well. Arsenic is below the GWPS at MW-25 and MW-26 2016 to 2024, except for the single result at MW-26 on August 30, 2022.

MW-26 was redeveloped on March 7, 2023. The 2023 and 2024 semi-annual sampling and analyses at MW-26 indicates that the 2022 result was likely anomalous and that redevelopment of the well successfully addressed the issue.

Monitoring Well	Date	Compound	Result (ug/L)	GWPS (ug/L)
MW-25	4/4/2016	Arsenic	<4.0	167.0
MW-25	9/20/2016	Arsenic	**4.2**	167.0
MW-25	4/24/2017	Arsenic	<4.0	167.0
MW-25	10/9/2017	Arsenic	**4.0**	167.0
MW-25	3/21/2018	Arsenic	<4.0	167.0
MW-25	9/7/2018	Arsenic	<4.0	167.0
MW-25	4/2/2019	Arsenic	<4.0	167.0
MW-25	9/18/2019	Arsenic	NT	167.0
MW-25	3/25/2020	Arsenic	<4.0	167.0
MW-25	9/15/2020	Arsenic	<4.0	167.0
MW-25	3/8/2021	Arsenic	<4.0	167.0
MW-25	9/28/2021	Arsenic	<4.0	167.0
MW-25	3/8/2022	Arsenic	<4.0	167.0
MW-25	8/30/2022	Arsenic	<4.0	167.0
MW-25	3/7/2023	Arsenic	<4.0	167.0
MW-25	9/11/2023	Arsenic	<4.0	167.0
MW-25	3/20/2024	Arsenic	**27.4**	167.0
MW-25	9/12/2024	Arsenic	**4.7**	167.0

Yellow = Exceeds GWPS

Monitoring Well	Date	Compound	Result (ug/L)	GWPS (ug/L)
MW-25	4/4/2016	Barium	**94.9**	4,179.77
MW-25	9/20/2016	Barium	**105.0**	4,179.77
MW-25	4/24/2017	Barium	**109.0**	4,179.77
MW-25	10/9/2017	Barium	**98.4**	4,179.77
MW-25	3/21/2018	Barium	**85.3**	4,179.77
MW-25	9/7/2018	Barium	**150.0**	4,179.77
MW-25	4/2/2019	Barium	**102.0**	4,179.77
MW-25	9/18/2019	Barium	NT	4,179.77
MW-25	3/25/2020	Barium	**84.5**	4,179.77
MW-25	9/15/2020	Barium	**102.0**	4,179.77
MW-25	3/8/2021	Barium	**91.4**	4,179.77
MW-25	9/28/2021	Barium	**107.0**	4,179.77
MW-25	3/8/2022	Barium	**71.4**	4,179.77
MW-25	8/30/2022	Barium	**113.0**	4,179.77
MW-25	3/7/2023	Barium	**105.0**	1,322.72
MW-25	9/11/2023	Barium	**118.0**	1,305.63
MW-25	3/20/2024	Barium	**515.0**	1,290.33
MW-25	9/12/2024	Barium	**131.0**	1,273.56

Yellow = Exceeds GWPS

Monitoring Well	Date	Compound	Result (ug/L)	GWPS (ug/L)
MW-25	4/4/2016	Vinyl Chloride	<1	2.0
MW-25	9/20/2016	Vinyl Chloride	<1	2.0
MW-25	4/24/2017	Vinyl Chloride	<1	2.0
MW-25	10/9/2017	Vinyl Chloride	<1	2.0
MW-25	3/21/2018	Vinyl Chloride	<1	2.0
MW-25	9/7/2018	Vinyl Chloride	<1	2.0
MW-25	4/2/2019	Vinyl Chloride	<1	2.0
MW-25	9/18/2019	Vinyl Chloride	NT	2.0
MW-25	3/25/2020	Vinyl Chloride	<1	2.0
MW-25	9/15/2020	Vinyl Chloride	<1	2.0
MW-25	3/8/2021	Vinyl Chloride	<1	2.0
MW-25	9/28/2021	Vinyl Chloride	<1	2.0
MW-25	3/8/2022	Vinyl Chloride	<1	2.0
MW-25	8/30/2022	Vinyl Chloride	<1	2.0
MW-25	3/7/2023	Vinyl Chloride	<1	2.0
MW-25	9/11/2023	Vinyl Chloride	<1	2.0
MW-25	3/20/2024	Vinyl Chloride	<1	2.0
MW-25	9/12/2024	Vinyl Chloride	<1	2.0

Yellow = Exceeds GWPS

Monitoring Well	Date	Compound	Result (ug/L)	GWPS (ug/L)
MW-26	4/4/2016	Arsenic	**17.7**	167.0
MW-26	9/20/2016	Arsenic	**19.7**	167.0
MW-26	4/24/2017	Arsenic	**19.8**	167.0
MW-26	10/9/2017	Arsenic	**26.2**	167.0
MW-26	3/21/2018	Arsenic	**31.6**	167.0
MW-26	9/7/2018	Arsenic	**72.6**	167.0
MW-26	4/2/2019	Arsenic	**74.9**	167.0
MW-26	9/18/2019	Arsenic	**44.2**	167.0
MW-26	3/25/2020	Arsenic	**55.0**	167.0
MW-26	9/15/2020	Arsenic	**59.0**	167.0
MW-26	3/8/2021	Arsenic	**17.0**	167.0
MW-26	9/28/2021	Arsenic	**81.9**	167.0
MW-26	3/8/2022	Arsenic	**7.2**	167.0
MW-26	8/30/2022	Arsenic	**203.0**	167.0
MW-26	3/7/2023	Arsenic	**23.8**	167.0
MW-26	9/11/2023	Arsenic	**101.0**	167.0
MW-26	3/20/2024	Arsenic	<4.0	167.0
MW-26	9/12/2024	Arsenic	**14.3**	167.0

Yellow = Exceeds GWPS

Monitoring Well	Date	Compound	Result (ug/L)	GWPS (ug/L)
MW-26	4/4/2016	Barium	**581**	4,179.77
MW-26	9/20/2016	Barium	**592**	4,179.77
MW-26	4/24/2017	Barium	**552**	4,179.77
MW-26	10/9/2017	Barium	**706**	4,179.77
MW-26	3/21/2018	Barium	**588**	4,179.77
MW-26	9/7/2018	Barium	**1170**	4,179.77
MW-26	4/2/2019	Barium	**986**	4,179.77
MW-26	9/18/2019	Barium	**879**	4,179.77
MW-26	3/25/2020	Barium	**692**	4,179.77
MW-26	9/15/2020	Barium	**1130**	4,179.77
MW-26	3/8/2021	Barium	**428**	4,179.77
MW-26	9/28/2021	Barium	**1250**	4,179.77
MW-26	3/8/2022	Barium	**232**	4,179.77
MW-26	8/30/2022	Barium	**1620**	4,179.77
MW-26	3/7/2023	Barium	**341**	1,322.72
MW-26	9/11/2023	Barium	**1,250**	1,305.63
MW-26	3/20/2024	Barium	**94.1**	1,290.33
MW-26	9/12/2024	Barium	**420.0**	1,273.56

Yellow = Exceeds GWPS

Monitoring Well	Date	Compound	Result (ug/L)	GWPS (ug/L)
MW-26	4/4/2016	Vinyl Chloride	<1	2.0
MW-26	9/20/2016	Vinyl Chloride	<1	2.0
MW-26	4/24/2017	Vinyl Chloride	<1	2.0
MW-26	10/9/2017	Vinyl Chloride	<1	2.0
MW-26	3/21/2018	Vinyl Chloride	<1	2.0
MW-26	9/7/2018	Vinyl Chloride	<1	2.0
MW-26	4/2/2019	Vinyl Chloride	<1	2.0
MW-26	9/18/2019	Vinyl Chloride	<1	2.0
MW-26	3/25/2020	Vinyl Chloride	<1	2.0
MW-26	9/15/2020	Vinyl Chloride	<1	2.0
MW-26	3/8/2021	Vinyl Chloride	<1	2.0
MW-26	9/28/2021	Vinyl Chloride	<1	2.0
MW-26	3/8/2022	Vinyl Chloride	<1	2.0
MW-26	8/30/2022	Vinyl Chloride	<1	2.0
MW-26	3/7/2023	Vinyl Chloride	<1	2.0
MW-26	9/11/2023	Vinyl Chloride	<1	2.0
MW-26	3/20/2024	Vinyl Chloride	<1	2.0
MW-26	9/12/2024	Vinyl Chloride	<1	2.0

Yellow = Exceeds GWPS

Section 4.0 Leachate Collection System Performance Evaluation

A revised Leachate Control Plan (LCP) for the South Dallas County SLF was submitted to the IDNR in March 1994 and approved April 1994.

Construction of five leachate collection/recovery wells occurred during March 1995. An enclosed load-out building was also constructed during that summer. Pumps and related controls were installed later in the year and the system became fully operational in January 1996. Construction certification documents were submitted in February 1996. Leachate was initially collected and hauled in a tank truck to the City of Adel Wastewater Plant for treatment and disposal.

During fall 1998, a Subtitle D-equivalent horizontal expansion with a leachate under-drain collection system and a groundwater drainage system was constructed in accordance with the approved plans. The design included the addition of a second leachate storage tank with a 10,000-gallon capacity. The placement of waste in this new expansion began in April 1999. An additional piezometer (PZ-12 on monthly report) was also installed to monitor the leachate head on the expansion liner.

During April and May of 2003, the original leachate storage tank was abandoned, and all piping and electrical components rerouted to the 10,000-gallon storage tank installed in 1998. The 10,000-gallon tank became the primary storage vessel with a new pump, piping, and electrical controls. Another identical 10,000-gallon storage tank was installed to act as an overflow and backup vessel. Total on-site storage capacity is 20,000 gallons.

In 2006, the leachate level measurements were believed to be inaccurate for some of the piezometers. It was determined that a more accurate method for measuring the leachate head in the unlined landfill was to measure the static levels in the leachate recovery wells. The wells were fitted with a port to allow for routine measurement of the leachate levels. In addition, the pump in each of the wells was pulled and replaced with a new unit and new control system. The top of the casing on each of the leachate recovery wells was surveyed.

In the fall of 2006, a force main was installed and connected directly to the City of Adel's sewer system. The volumes are metered and recorded regularly.

During the summer of 2007, an additional leachate well (LW-6) was installed in the NE area of the old site. This new leachate well is approximately 80-foot deep. A pump was installed and piped directly into the force main in 2008 and has been operated at a rate that will prevent blinding of the well casing screen.

A new control system was installed on all the leachate recovery wells during 2010. The new controls are designed to operate for two hours and then shut down for a short time period. The new controls have eliminated the problems the site was experiencing with typical level probes that malfunctioned. The system also significantly extend the life of the well pumps.

A letter dated July 15, 1998 approved a variance request allowing a reduction in the frequency of level measurements from monthly to quarterly. Monitoring ports were installed on the leachate recovery wells to allow for level measurements because several of the two-inch piezometers had become plugged, bent or damaged preventing the use of measuring equipment in them. During 2010, Agency staff conducted recovery well level readings at two-hour intervals to determine the recovery well recharge and static levels. This monitoring occurred over four months and was summarized for the IDNR to review. In a proposal dated August 4, 2010 and based upon the data provided, the Agency requested that the six leachate recovery wells be used for monthly leachate level measurements and that eight of the leachate piezometers be abandoned and removed from the leachate monitoring program due to their inability to function as accurate measuring devices. The proposed monitoring plan was approved by the IDNR in permit amendment #1 dated September 24, 2010.

During the summer of 2011, Phase 3 was constructed with a Subtitle D composite liner. The leachate line in Phase 3 was connected to the leachate lines installed during the Phase 1 and flow into the leachate pump station. LPZ-13 was installed at the north end of Phase 3 to monitor the leachate levels on the Subtitle D composite liner. LPZ-13 also serves as the leachate head monitoring point for Phase 4 and Phase 5.

During May of 2012, a new leachate force main was installed between the leachate wet well and the valve pit that connects to the storage tanks and to the force main going to the City of Adel sewer system. Replacing the line improved the pumping capacity of the system. As built documents were approved by IDNR in Permit Amendment #9 dated October 4, 2012.

Phase 4 was constructed during the fall of 2017. The leachate collection lines from this cell are connected to the Phase 3 collection lines.

Excavation of the old SW non-compliant cell began in 2016. LPZ-9A was abandoned early in this process. As the excavation continues, LW-1 will be removed in the future. The west portion of the SW area has been reconstructed as a Subtitle D composite lined cell (Phase 5) and began receiving waste in 2021. Leachate from this cell flows into the existing leachate collection system via Phases 3 and 4.

During October 2018, the pump in the leachate wet well malfunctioned and a replacement was delayed. To prevent an accumulation of leachate on the lined cells, staff recirculated the leachate over the intermediate cover of Phase 3. The leachate head was carefully monitored during recirculation. Once a new pump was installed, the leachate in Phase 4 began developing a hydrogen sulfide odor. Pumping to the City of Adel Wastewater Treatment Plant proved to be a problem due to the odor released when the landfill leachate force main entered the city manhole.

On November 5, 2018, a chemical treatment system using potassium permanganate was installed and pumping to the City of Adel sewer system was resumed. A permanent system has been installed and continues to be monitored and operated as needed to prevent any odors. The hydrogen sulfide odor was believed to be the result of heavy precipitation passing through gypsum wall board and becoming anaerobic in the waste cell.

As reported in the 2023 Semi-Annual Water Quality Notification Letter submitted on April 18, 2023 (Doc #106395), concentrations of vinyl chloride that exceeded the site's Prediction Limit were noted at GWD-1 during the March 7, 2023 sampling event. The exceedance was verified by sampling on May 10, 2023 and June 8, 2023. As a result, the groundwater diversion system was connected to the leachate conveyance system. This work was documented in the Construction Certification for the Groundwater Diversion Piping Modification dated September 11, 2023 (Doc #107672) and approved in the October 10, 2023 SDP Permit revision. GWD-1 was eliminated as a result of this work.

Leachate Treatment and Disposal

Between January 1, 2024, and December 31, 2024, approximately 28,673 gallons of leachate were pumped to the Adel Wastewater Treatment Facility for treatment and disposal. A summary of the leachate volume pumped by month is included in Appendix H.1. A copy of the current Leachate Treatment Agreement with the City of Adel with an effective date of January 1, 2021 is included in Appendix H.2. Leachate laboratory testing results in accordance with the treatment agreement are included in Appendix H.3.

A Permit Amendment Request to Recirculate Leachate was submitted on October 5, 2012 (Doc #74384) and approved on May 17, 2013. The approval covers leachate recirculation on the Subtitle D composite lined disposal areas (Phases 3, 4, and 5).

Leachate is recirculated either on the surface utilizing a 2,000 gallon tank with spray arm or directly into the waste mass utilizing a buried perforated pipe. The pipe was installed in 2022, details on the installation are below.

A leachate recirculation line was installed in July, 2022 to recirculate leachate by introducing it directly into the waste mass over the Subtitle D composite liner in Phase 3. The leachate recirculation piping is 2 inch diameter, HDPE SDR 7. The last 300' of the piping was perforated with a set of ¼" diameter holes at 15' horizontal spacing (20 sets of perforations total). The existing leachate pump is being used for recirculation - valving was installed at the existing leachate pump station to allow leachate to be directed either to the leachate force main for conveyance to the City of Adel Sanitary Sewer System or to the leachate recirculation piping. A Construction Certification Report for the piping installed during July, 2022 was submitted to IDNR on July 19, 2022 (Doc #103652).

The perforated recirculation piping was extended into Phase 4 during November, 2022. A Construction Certification Report for the piping installed during November, 2022 was submitted to IDNR on November 11, 2022 (Doc #104558).

Based on the data in Appendix H.4, approximately 1,168,850 gallons of leachate were recirculated using the tank and the buried pipe in 2024.

Leachate Level Monitoring – Closed Landfilling Areas

The permit requires quarterly monitoring of the leachate piezometers in the unlined areas at LW-1, LW-2, LW-3, LW-4, LW-5, LW-6, LPZ-1, and LPZ-3.

Prior to monitoring the leachate recovery wells (LW-1, LW-2, LW-3, LW-4, LW-5, and LW-6), the pumps are shut down and the wells allowed to recharge for a minimum of four hours before levels are measured.

Leachate level measurement data for the piezometers in the closed landfilling areas (NE Area and SW Area) is included in Appendix H.5. The data for the leachate wells in the Closed Landfilling Areas shows that leachate elevations have remained relatively consistent in 2024. The interpretation is made that the LCS (illustrated on the Figure in Appendix G) is effective in controlling the leachate head in the Closed Landfill Areas. Quarterly measurements of the leachate piezometers in the Closed Landfilling Areas will continue in 2025.

Leachate Level Monitoring – RCRA Subtitle D Lined Areas

Monitoring of the leachate piezometers in the lined Subtitle D cells is conducted monthly. LPZ-12 is the piezometer measuring leachate head on the liner in the Subtitle D alternative lined Phases 1 and 2. LPZ-13 is the piezometer measuring leachate head on the Subtitle D composite lined Phases 3, 4, and 5. The table in Appendix H.5 provides the results of the 2024 monitoring events and shows that all measurements recorded less than 12" of leachate thickness.

Based on the leachate head data, the leachate collection system appears to be operating as designed. No changes are recommended.

Separation of the base of solid waste and the groundwater table is evaluated through observation of groundwater elevation measurements collected from the groundwater piezometer (GPZ-1) located in the lowest end of the Phase 1-5 expansion.

Groundwater head measurements are required semiannually in accordance with the SDP Permit. Groundwater head measurements in 2024 are summarized as:

Date/Location	Phase 3 (GWPZ-1)
1/16/24	<1”
2/22/24	<1”
3/13/24	<1”
4/5/24	<1”
5/8/24	<1”
6/13/24	<1”
7/15/24	<1”
8/5/24	<1”
9/11/24	<1”
10/9/24	<1”
11/18/24	<1”
12/23/24	<1”

Based on the groundwater head data presented above separation is maintained between the base of solid waste and the groundwater surface. No changes are recommended.

Leachate Line Cleaning

IAC 567-113.7(5)b(5) requires that the leachate system be cleaned every three (3) years at a minimum. The leachate gravity collection lines were cleaned in 2/22/2024. The leachate lines should be cleaned again in 2027 in accordance with regulations.

Performance Evaluation

Staff may extend the leachate recirculation piping in 2025. No other modifications to the leachate collection system are recommended for 2025.

Section 5.0 Gas Monitoring

Explosive gas monitoring per 113.9(2) and the approved Gas Monitoring System Plan (GMSP) in Special Provision X.5. of the SDP Permit was conducted quarterly during the last reporting period (2024) except for MW-4, MW-5, MW-22, MW-25, and MW-26 in June 2024. Measurement at these points was inadvertently omitted in the 2nd Quarter of 2024. The monitoring includes both indoor ambient air monitoring in buildings and subsurface monitoring in dedicated gas probes, gas vents, and monitoring wells.

Monitoring points currently include five (5) buildings, ten (10) subsurface gas probes, four (4) gas vents, and five (5) monitoring wells. Figure 1 illustrates the monitoring points. A brief description of each monitoring point is below:

- GP-1 is in southwest corner of the site near MW-19A.
- GP-2 is located near MW-17 in the northwest corner of the site.
- GP-3 is located on the north side of the site near MW-22 and was damaged in 2023. The GP was repaired by staff on February 21, 2024.
- GP-3R is a step-out probe to GP-3 and was installed during spring 2011 approximately 50 ft. north and part way down the slope that drops to the creek. Since its installation, GP-3R has never had any landfill gas detected.
- GP-4 is located on the east side of the landfill near MW-21. Following periodical detections of methane in GP-4, another probe, GP-4R was installed during September 2011 at the east property line, about 50 ft southeast of GP-4. Since its installation, GP-4R has never had any landfill gas detected.
- GP-5 is the ground water wet well on the north side of the site. In January 2012, methane gas was detected in GP-5. At IDNR's suggestion, the solid manhole cover was replaced with a grated cover. This action corrected the methane gas problem at this location and no landfill gas detections have occurred since.
- GP-6 was placed in the leachate force main trench that runs from the leachate tanks across the creek on the south to a City of Adel lift station east of the landfill. After review of the deposited waste's proximity to GP-6, a step-out gas probe (GP-6R) was installed approximately 100 ft. east of GP-6 and across the leachate force main. Since its installation, GP-6R has never had any landfill gas detected.
- GP-7 was installed north of MW-16 (which was abandoned in 2021) along the north creek.
- GV-1, GV-2, GV-4, and GV-5 are vents for the gas venting system discussed below.
- MW-4, MW-5, MW-22, MW-25, and MW-26 are also monitored in accordance with the GMSP.
- In addition, all site structures are monitored. None of the structures have ever had a landfill gas detection.

Gas Venting System

The gas venting system was installed during October 2009. The system consists of excavated trenches approximately 10-12 ft in depth with a width of approximately 24 inches. The trench depth was intentionally kept above the water table to avoid exposing the groundwater to any methane gas. Approximately one foot of tire chips was placed in the bottom of the trench. A 4-inch perforated plastic drainage pipe with filter "sock" was laid in the trench and an additional foot of tire chips placed on top. The pipe was looped to the surface to vent. The trench was backfilled with dirt. The trenches and vents were surveyed during the fall of 2011.

Wind-driven turbines were installed on some of the vents during 2010. During June 2011, some of the vents were equipped with solar operated fans. Large wind-driven turbines were also installed on the leachate recovery wells.

Construction certification documents for the gas collection system were developed and submitted to IDNR on March 13, 2012 (Doc #69304). These documents were approved in Permit Amendment #9 dated October 4, 2012.

During July and August of 2013, explosion-proof electric fans were installed on gas vents GV-1, GV-2, GV-4, and GV-5 to provide a positive draw on the gas venting system 24 hours per day.

Results

Gas is periodically detected in GP-3 and MW-22. No gas was detected in the step-out probe (GP-3R) in 2024.

Explosive gas concentrations (%LEL) were undetected *or* were below action levels during the monitoring episodes. A summary table of gas monitoring is included as Table 12.

Section 6.0 Recommendations

It is recommended that the detection monitoring, assessment monitoring, and corrective action monitoring continue to be performed on a semi-annual basis at the monitoring points listed in Table 1 and Table 2.

It is recommended that the prediction limits for arsenic (167.0 ug/L), cobalt (38.185 ug/L), and thallium (2.3 ug/L) continue to be utilized as the Site-Specific GWPS. For all other compounds, it is recommended that the published IAC 567, Chapter 137 Statewide Standard be utilized as the GWPS.

Figures

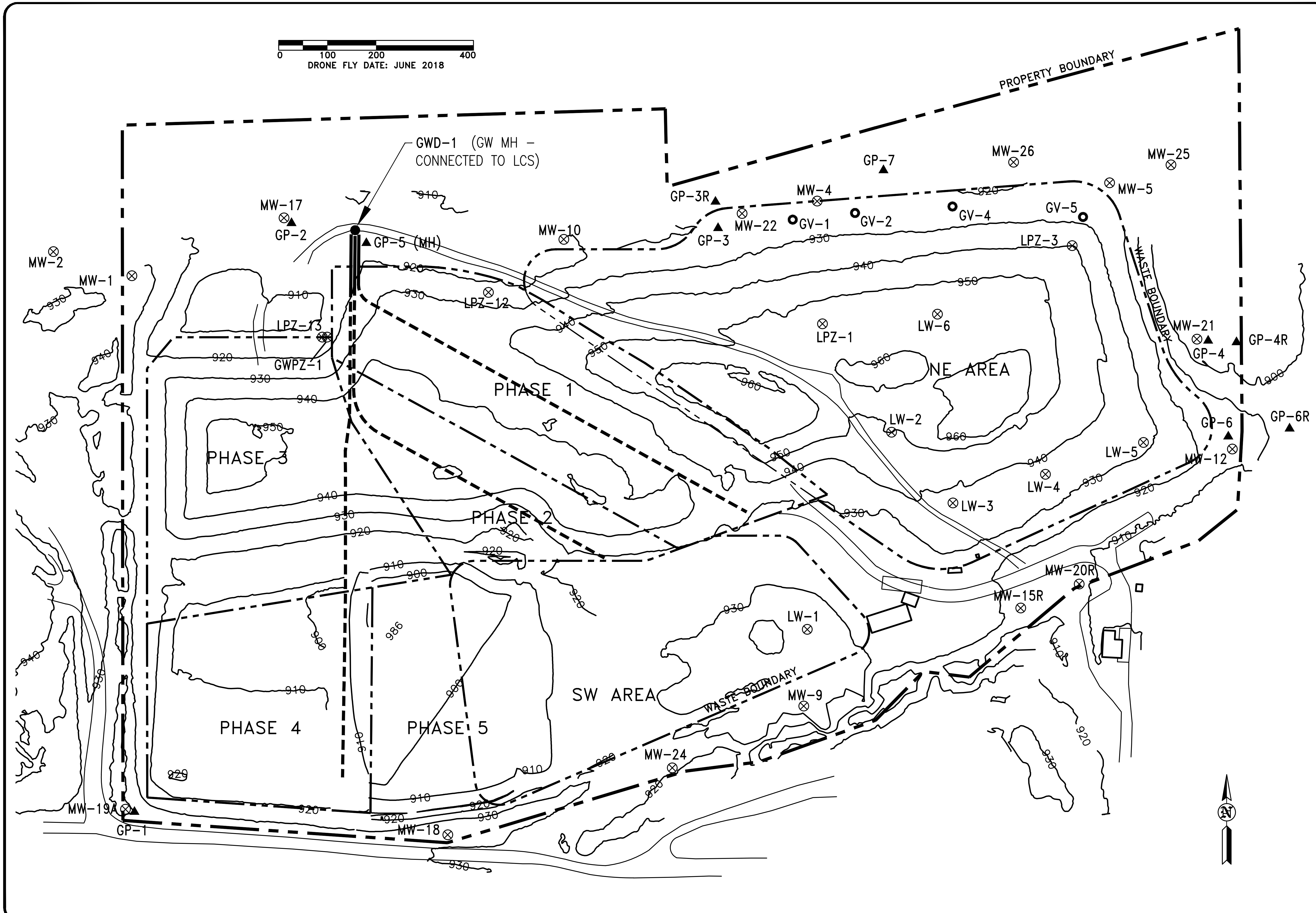

FIGURE: 1

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6045	DATE 1-18-25

SITE PLAN

SOUTH DALLAS COUNTY SANITARY LANDFILL
ADEL, IOWA

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

HLW
HLW Engineering Group

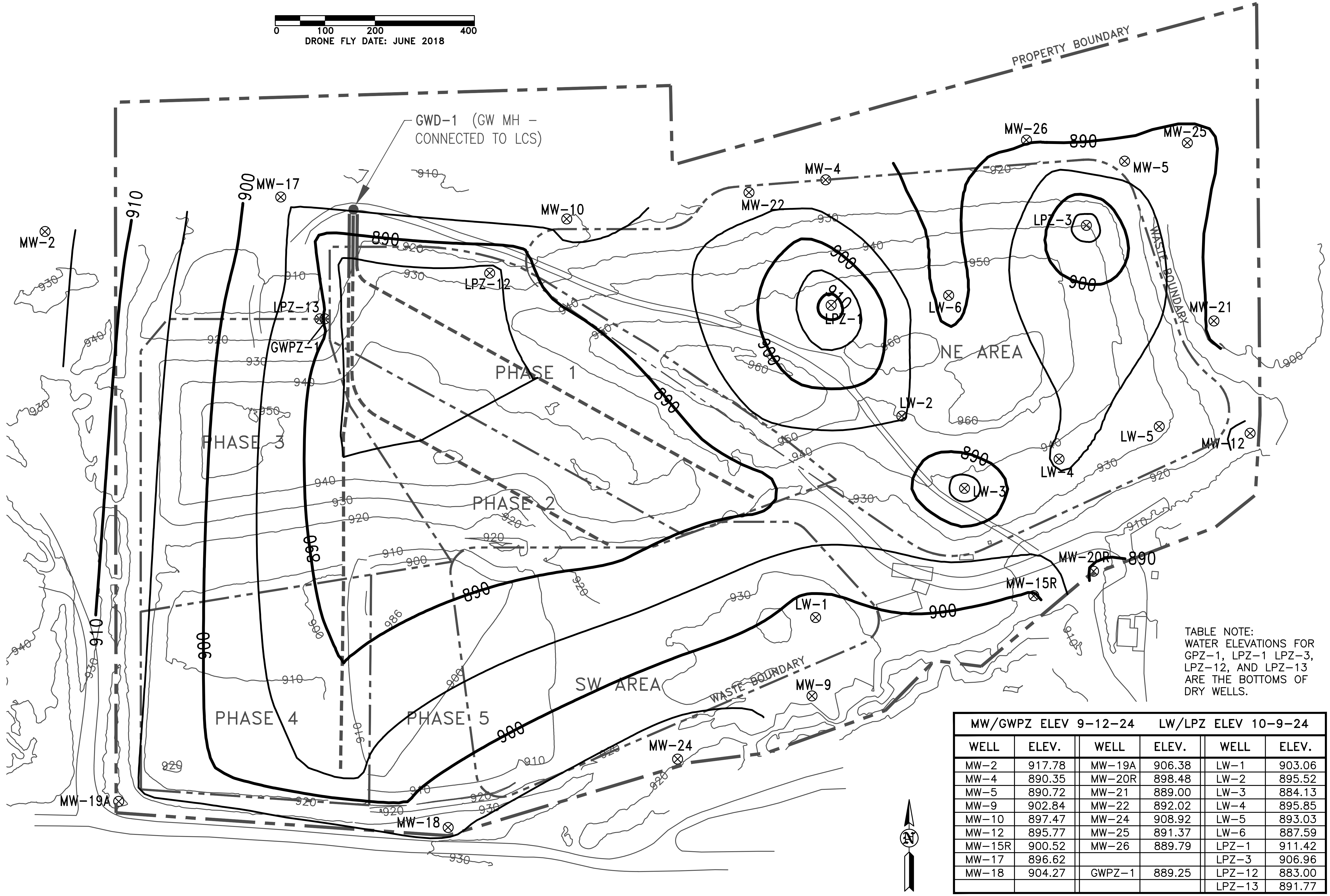

TABLE NOTE:
WATER ELEVATIONS FOR GPZ-1, LPZ-1, LPZ-3, LPZ-12, AND LPZ-13 ARE THE BOTTOMS OF DRY WELLS.

MW/GWPZ ELEV 9-12-24				LW/LPZ ELEV 10-9-24	
WELL	ELEV.	WELL	ELEV.	WELL	ELEV.
MW-2	917.78	MW-19A	906.38	LW-1	903.06
MW-4	890.35	MW-20R	898.48	LW-2	895.52
MW-5	890.72	MW-21	889.00	LW-3	884.13
MW-9	902.84	MW-22	892.02	LW-4	895.85
MW-10	897.47	MW-24	908.92	LW-5	893.03
MW-12	895.77	MW-25	891.37	LW-6	887.59
MW-15R	900.52	MW-26	889.79	LPZ-1	911.42
MW-17	896.62			LPZ-3	906.96
MW-18	904.27	GWPZ-1	889.25	LPZ-12	883.00
				LPZ-13	891.77

FIGURE: 2

REVISION | NO. | DATE

DRAWN DRA | PROJECT NO. 6045 | DATE 1-18-25

GROUNDWATER CONTOURS

SOUTH DALLAS COUNTY SANITARY LANDFILL
ADEL, IOWA

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

HLW
HLW Engineering Group

Tables
(in IDNR Format)

Table 1 – Monitoring Program Summary

Table 1
Monitoring Program Summary
Annual Water Quality Report
South Dallas County Sanitary Landfill
Permit No. 25-SDP-01-75P

Monitoring Well	Formation	Current Monitoring Program	Change for next sampling event	Historic - Constituents w/ SSI	Spring 2024 - Constituents w/ SSI	Fall 2024 - Constituents w/ SSI	Historic - Constituents w/ SSL	Spring 2024 - Constituents w/ SSL	Fall 2024 - Constituents w/ SSL	Total # of Samples in each monitoring program since October 16, 2014		
										Detection	Assessment	Corrective Action
MW-2	Glacial Till	Background	NC	None	None	None	None	None	None	**17**	**0**	**0**
MW-9	Glacial Till - silt & sand	Background	NC	None	None	None	None	None	None	**21**	**0**	**0**
MW-17	Sand and shale	Background	NC	None	None	None	None	None	None	**21**	**0**	**0**
MW-18	Glacial Till	Background	NC	None	None	None	None	None	None	**21**	**0**	**0**
MW-19A	Glacial Till	Background	NC	None	None	None	None	None	None	**21**	**0**	**0**
MW-24	Glacial Till	Background	NC	None	None	None	None	None	None	**21**	**0**	**0**
MW-10	Shale	Detection	NC	None	None	None	None	None	None	**17**	**0**	**0**
MW-12	Shale	Detection	NC	None	None	None	None	None	None	**19**	**0**	**0**
MW-15R	Glacial Till	Detection	NC	None	None	None	None	None	None	**21**	**0**	**0**
MW-20R	Glacial Till	Detection	NC	None	None	None	None	None	None	**21**	**0**	**0**
MW-4	Glacial Till and sand	Assessment	NC	**1,1-dichloroethane, 1,2-dichloropropane, 1,4-dichlorobenzene, acetone, benzene, bis (2-ethylhexyl)phthalate, chloroethane, cis-1,2-dichloroethylene, dichlorodifluoromethane, vinyl chloride**	**1,4-dichlorobenzene, benzene, chloroethane**	**1,4-dichlorobenzene, benzene, chloroethane, cis-1,2-dichloroethylene**	None	None	None	**0**	**21**	**0**
MW-5	Glacial Till and shale	Assessment	NC	**Arsenic, copper, bis (2-ethylhexyl)phthalate, chloroethane**	None	**bis (2-ethylhexyl)phthalate**	None	None	None	**0**	**21**	**0**
MW-21	Glacial Till and shale	Assessment	NC	**Barium, chloroethane**	None	None	None	None	None	**0**	**21**	**0**
MW-22	Glacial Till	Assessment	NC	**Benzene, chloroethane, vinyl chloride**	None	None	None	None	None	**0**	**20**	**0**
MW-25	Sand and shale	Step-Out - CAMP	NC	None	None	None	None	None	None	**0**	**0**	**17**
MW-26	Glacial Till	Step-Out - CAMP	NC	None	None	None	None	None	None	**0**	**0**	**17**

Table 2 – Monitoring Program Implementation Schedule

Table 2
Monitoring Program Implementation Schedule
Annual Water Quality Report
South Dallas County Sanitary Landfill
Permit No. 25-SDP-01-75P

Monitoring Well	Monitoring Program	Recent Sampling Dates and Constituents	Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
			March, 2025	September, 2025	Previously Collected	Next Event
MW-2	Background		Appendix I	Appendix I		N/A
MW-9	Background		Appendix I	Appendix I		N/A
MW-17	Background		Appendix I	Appendix I		N/A
MW-18	Background		Appendix I	Appendix I	4/4/2016	N/A
MW-19A	Background		Appendix I	Appendix I		N/A
MW-24	Background		Appendix I	Appendix I	4/4/2016	N/A
MW-10	Detection		Appendix I	Appendix I		N/A
MW-12	Detection	**See Table 2A**	Appendix I	Appendix I	9/20/2016	N/A
MW-15R	Detection		Appendix I	Appendix I	4/4/2016	N/A
MW-20R	Detection		Appendix I	Appendix I	4/4/2016	N/A
MW-4	Assessment		Appendix I	Appendix I	9/20/2016; 9/28/2021	2026
MW-5	Assessment		Appendix I (1)	Appendix I (1)	9/20/2016; 9/18/2019; 3/25/2020, 9/12/2024	2029
MW-21	Assessment		Appendix I	Appendix I	4/4/2016; 3/8/2021	2026
MW-22	Assessment		Appendix I	Appendix I	4/4/2016; 3/8/2021	2026
MW-25	Step-Out		vinyl chloride + As + Ba	vinyl chloride + As + Ba		N/A
MW-26	Step-Out		vinyl chloride + As + Ba	vinyl chloride + As + Ba		N/A
Duplicate	QA/QC		Appendix I	Appendix I		N/A

(1) = add bis(2-ethylhexyl)phthalte

Table 2A – Itemized Summary of Hydrologic Monitoring (2018-present)

Table 2A -- Itemized Summary of Hydrologic Monitoring (2018-present)

WELL	10/15/2014	4/14/2015	10/1/2015	4/4/2016
MW-2 (b)	Dry	Appendix I	Appendix I	Appendix I
MW-9 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-17 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-18 (b)	Appendix I	Appendix I	Appendix I	**Appendix II**
MW-19A (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-24 (b)	Appendix I	Appendix I	Appendix I	**Appendix II**
MW-10	Appendix I	Appendix I	Appendix I	Appendix I
MW-12	Appendix I	Appendix I	Appendix I	Appendix I
MW-15R	Appendix I	Appendix I	Appendix I	**Appendix II**
MW-20R	Appendix I	Appendix I	Appendix I	**Appendix II**
MW-25				As, Ba, V.C.
MW-26				As, Ba, V.C.
GWD-1	Appendix I	Appendix I	Appendix I	Appendix I
MW-4	Appendix I	Appendix I	Appendix I	Appendix I
MW-5	Appendix I	Appendix I	Appendix I	Appendix I
MW-21	Appendix I	Appendix I	Appendix I	**Appendix II**
MW-22	Appendix I	Appendix I	Appendix I	**Appendix II**
Duplicate	Appendix I	Appendix I	Appendix I	Appendix I

(1) Appendix I plus dichlorodifluoromethane — (R) = Resample
(2) Appendix I plus bis(2ethylhexyl)phthalate — V.C. = vinyl chloride

WELL	6/14/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
MW-2 (b)		Dry		Appendix I	Dry
MW-9 (b)		Appendix I		Appendix I	Appendix I
MW-17 (b)		Appendix I		Appendix I	Appendix I
MW-18 (b)		Appendix I	R- acetone	Appendix I	Appendix I
MW-19A (b)		Appendix I		Appendix I	Appendix I
MW-24 (b)		Appendix I		Appendix I	Appendix I
MW-10		Dry		Appendix I	Dry
MW-12		**Appendix II**	R- Bis	Appendix I	Appendix I
MW-15R		Appendix I		Appendix I	Appendix I
MW-20R		Appendix I		Appendix I	Appendix I
MW-25		As, Ba, V.C.		Appendix I	As, Ba, V.C.
MW-26		As, Ba, V.C.	R - As	Appendix I	As, Ba, V.C.
GWD-1	R- As	Appendix I	R- As	Appendix I	Appendix I
MW-4		**Appendix II**	R- Bis	Appendix I	Appendix I
MW-5		**Appendix II**	R- Bis	Appendix I	Appendix I
MW-21		Appendix I		Appendix I	Appendix I
MW-22		Appendix I		Appendix I	Appendix I
Duplicate		Appendix I		Appendix I	Appendix I

(1) Appendix I plus dichlorodifluoromethane — (R) = Resample
(2) Appendix I plus bis(2ethylhexyl)phthalate — V.C. = vinyl chloride
Bis = bis(2-ethylhexyl)phthalate

WELL	3/21/2018	6/11/2018	9/7/2018	4/2/2019	6/5/2019
MW-2 (b)	Dry		Dry	Appendix I	
MW-9 (b)	Appendix I	R - Cu	Appendix I	Appendix I	
MW-17 (b)	Appendix I		Appendix I	Appendix I	
MW-18 (b)	Appendix I		Appendix I	Appendix I	
MW-19A (b)	Appendix I		Appendix I	Appendix I	
MW-24 (b)	Appendix I		Appendix I	Appendix I	
MW-10	Appendix I		Dry	Appendix I	
MW-12	Appendix I		Appendix I	Appendix I	
MW-15R	Appendix I		Appendix I	Appendix I	
MW-20R	Appendix I		Appendix I	Appendix I	
MW-25	As, Ba, V.C.		As, Ba, V.C.	As, Ba, V.C.	
MW-26	As, Ba, V.C.		As, Ba, V.C.	As, Ba, V.C.	
GWD-1	Appendix I		R- As, Ba	Appendix I	Appendix I
MW-4	Appendix I		Appendix I	Appendix I	
MW-5	Appendix I		Appendix I	Appendix I	R - Ni, chloroethane
MW-21	Appendix I		Appendix I	Appendix I	
MW-22	Appendix I		Appendix I	Appendix I	
Duplicate	Appendix I		Appendix I	Appendix I	

(1) Appendix I plus dichlorodifluoromethane — (R) = Resample
(2) Appendix I plus bis(2ethylhexyl)phthalate — V.C. = vinyl chloride

WELL	9/18/2019	3/25/2020	9/15/2020	12/2/2020	3/8/2021
MW-2 (b)	Dry	Appendix I	Dry		Dry
MW-9 (b)	Appendix I	Appendix I	Appendix I		Appendix I
MW-17 (b)	Appendix I	Appendix I	Appendix I		Appendix I
MW-18 (b)	Appendix I	Appendix I	Appendix I		Appendix I
MW-19A (b)	Appendix I	Appendix I	Appendix I	R – Ni	Appendix I
MW-24 (b)	Appendix I	Appendix I	Appendix I		Appendix I
MW-10	Dry	Appendix I	Dry		Dry
MW-12	Appendix I	Appendix I	Appendix I		Appendix I
MW-15R	Appendix I	Appendix I	Appendix I		Appendix I
MW-20R	Appendix I	Appendix I	Appendix I		Appendix I
MW-25	No access	As, Ba, V.C.	As, Ba, V.C.		As, Ba, V.C.
MW-26	As, Ba, V.C.	As, Ba, V.C.	As, Ba, V.C.		As, Ba, V.C.
GWD-1	Appendix I	Appendix I	Appendix I		Appendix I
MW-4	Appendix I	Appendix I	Appendix I		Appendix I
MW-5	**Appendix II**	**Appendix II**	Appendix I		Appendix I
MW-21	Appendix I	Appendix I	Appendix I		**Appendix II**
MW-22	Appendix I	Appendix I	Appendix I		**Appendix II**
Duplicate	Appendix I	Appendix I	Appendix I		Appendix I

(1) Appendix I plus dichlorodifluoromethane — (R) = Resample
(2) Appendix I plus bis(2ethylhexyl)phthalate — V.C. = vinyl chloride

WELL	5/11/2021	9/28/2021	12/3/2021	3/8/2022	8/30/2022
MW-2 (b)		Dry		Dry	Dry
MW-9 (b)		Appendix I		Appendix I	Appendix I
MW-17 (b)		Appendix I		Appendix I	Appendix I
MW-18 (b)		Appendix I		Appendix I	Appendix I
MW-19A (b)		Appendix I		Appendix I	Appendix I
MW-24 (b)	R - acetone	Appendix I		Appendix I	Appendix I
MW-10		Dry		Dry	Dry
MW-12		Appendix I		Appendix I	Appendix I
MW-15R		Appendix I		Appendix I	Appendix I
MW-20R		Appendix I		Appendix I	Appendix I
MW-25		As, Ba, V.C.		As, Ba, V.C.	As, Ba, V.C.
MW-26		As, Ba, V.C.		As, Ba, V.C.	As, Ba, V.C.
GWD-1		Appendix I		Appendix I	Appendix I
MW-4		**Appendix II**	R-Cu	Appendix I	Appendix I
MW-5		Appendix I		Appendix I	Appendix I
MW-21		Appendix I		Appendix I	Appendix I
MW-22		Dry		Appendix I	Appendix I
Duplicate		Appendix I		Appendix I	Appendix I

WELL	3/7/2023	5/9/2023	6/7/2023	9/11/2023	
MW-2 (b)	Dry			Dry	
MW-9 (b)	Appendix I			Appendix I	
MW-17 (b)	Appendix I			Appendix I	
MW-18 (b)	Appendix I			Appendix I	
MW-19A (b)	Appendix I			Appendix I	
MW-24 (b)	Appendix I			Appendix I	
MW-10	Dry			Dry	
MW-12	Appendix I			Appendix I	
MW-15R	Appendix I			Appendix I	
MW-20R	Appendix I			Appendix I	
MW-25	As, Ba, V.C.			As, Ba, V.C.	
MW-26	As, Ba, V.C.			As, Ba, V.C.	
GWD-1	Appendix I	V.C.	V.C.	*Connected to LCS*	
MW-4	Appendix I			Appendix I	
MW-5	Appendix I			Appendix I	
MW-21	Appendix I			Appendix I	
MW-22	Appendix I			Dry	
Duplicate	Appendix I			Appendix I	

(1) Appendix I plus dichlorodifluoromethane — (R) = Resample
(2) Appendix I plus bis(2ethylhexyl)phthalate — V.C. = vinyl chloride

WELL	**3/20/2024**	**5/9/2024**	**9/12/2024**		
MW-2 (b)	Dry		Dry		
MW-9 (b)	Appendix I		Appendix I		
MW-17 (b)	Appendix I		Appendix I		
MW-18 (b)	Appendix I		Appendix I		
MW-19A (b)	Appendix I		Appendix I		
MW-24 (b)	Appendix I		Appendix I		
MW-10	Dry		Dry		
MW-12	Appendix I	R-As	Appendix I		
MW-15R	Appendix I		Appendix I		
MW-20R	Appendix I		Appendix I		
MW-25	As, Ba, V.C.		As, Ba, V.C.		
MW-26	As, Ba, V.C.		As, Ba, V.C.		
MW-4	Appendix I		Appendix I		
MW-5	Appendix I		**Appendix II**		
MW-21	Appendix I		Appendix I		
MW-22	Appendix I		Appendix I		
Duplicate	Appendix I		Appendix I		

(1) Appendix I plus dichlorodifluoromethane
(2) Appendix I plus bis(2ethylhexyl)phthalate

(R) = Resample
V.C. = vinyl chloride

Table 3 – Monitoring Well Maintenance Performance Reevaluation Schedule

Table 3
Monitoring Well Maintenance and Performance Revaluation Schedule
Annual Water Quality Report
South Dallas County Sanitary Landfill
Permit No. 25-SDP-01-75P

Compliance with:	Monitoring Calendar Years									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
567 IAC 113.10(2)"f"(1) high and low water levels (bi-annual)	X	X	X	X	X	X	P	P	P	P
567 IAC 113.10(2)"f"(2) changes in the hydrologic setting and flow paths (bi-annual)		X		X		X		P		P
567 IAC 113.10(2)"f"(3) well depths (annual)	X	X	X	X	X	X	P	P	P	P
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry (bi-annual)		X		X		X		P		P
Waste separation from ground water 113.6(2)"I"	X	X	X	X	X	X	P	P	P	P

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

Table 4 – Monitoring Well Maintenance Performance Reevaluation Summary

Table 4
Monitoring Well Maintenance and Performance Summary
Annual Water Quality Report
South Dallas County Sanitary Landfill
Permit No. 25-SDP-01-75P

Well	Top of casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth	Hydraulic Cond.	Most Recent Recharge Rate	
					3/20/2024	9/12/2024	Discrepancy (ft)	(cm/sec)/date	**3/202/2024**	Change
MW-2	937.53	927.78	19.75	Groundwater Level (ft)	19.75	19.75	0	0.000003 2003	dry	None percieved
				Groundwater Elevation (Ft MSL)	917.78	917.78				
				Measured Well Depth (ft)	19.75	19.75				
				Submerged (+) or Exposed screen (-)	-10	-10				
MW-4	924.35	897.15	37.2	Groundwater Level (ft)	33.2	34	0	0.00005 2003	Full recovery in 4 hour	None percieved
				Groundwater Elevation (Ft MSL)	891.15	890.35				
				Measured Well Depth (ft)	37.2	37.2				
				Submerged (+) or Exposed screen (-)	-6	-6.8				
MW-5	923.97	897.42	36.55	Groundwater Level (ft)	33.6	33.25	0	0.00001 1998	Full recovery in > 24 hour	None percieved
				Groundwater Elevation (Ft MSL)	890.37	890.72				
				Measured Well Depth (ft)	36.55	36.55				
				Submerged (+) or Exposed screen (-)	-7.05	-6.7				
MW-9	934.91	902.58	42.33	Groundwater Level (ft)	31.35	32.07	0	0.0003 2003	No Draw Down	None percieved
				Groundwater Elevation (Ft MSL)	903.56	902.84				
				Measured Well Depth (ft)	42.33	42.33				
				Submerged (+) or Exposed screen (-)	0.98	0.26				
MW-10	917.02	906.52	20.5	Groundwater Level (ft)	19.65	19.55	0	0.000001 1998	Dry	None percieved
				Groundwater Elevation (Ft MSL)	897.37	897.47				
				Measured Well Depth (ft)	20.5	20.5				
				Submerged (+) or Exposed screen (-)	-9.15	-9.05				
MW-12	908.7	895.6	23.1	Groundwater Level (ft)	12.63	12.93	0	0.000002 2003	Full recovery in 24 hour	None percieved
				Groundwater Elevation (Ft MSL)	896.07	895.77				
				Measured Well Depth (ft)	23.1	23.1				
				Submerged (+) or Exposed screen (-)	0.47	0.17				
MW-15R	919.38	899.03	30.35	Groundwater Level (ft)	17.9	18.86	-0.4	0.00008 2003	Full recovery in 5 hour	None percieved
				Groundwater Elevation (Ft MSL)	901.48	900.52				
				Measured Well Depth (ft)	30.75	30.75				
				Submerged (+) or Exposed screen (-)	2.45	1.49				
MW-17	916.22	903.17	23.05	Groundwater Level (ft)	19.38	19.6	0	pending	Full recovery in 4 hour	None percieved
				Groundwater Elevation (Ft MSL)	896.84	896.62				
				Measured Well Depth (ft)	23.05	23.05				
				Submerged (+) or Exposed screen (-)	-6.33	-6.55				
MW-18	940.87	911.17	39.7	Groundwater Level (ft)	35.37	36.6	0	pending	Full recovery in 24 hour	None percieved
				Groundwater Elevation (Ft MSL)	905.5	904.27				
				Measured Well Depth (ft)	39.7	39.7				
				Submerged (+) or Exposed screen (-)	-5.67	-6.9				
MW-19A	943.16	895.86	57.3	Groundwater Level (ft)	36.74	36.78	0	pending	Full recovery in > 24 hour	None percieved
				Groundwater Elevation (Ft MSL)	906.42	906.38				
				Measured Well Depth (ft)	57.3	57.3				
				Submerged (+) or Exposed screen (-)	10.56	10.52				
MW-20R	913.4	901.75	21.65	Groundwater Level (ft)	13.7	14.92	0	pending	Full recovery in 4 hour	None percieved
				Groundwater Elevation (Ft MSL)	899.7	898.48				
				Measured Well Depth (ft)	21.65	21.65				
				Submerged (+) or Exposed screen (-)	-2.05	-3.27				
MW-21	896.5	885	21.5	Groundwater Level (ft)	6.98	7.5	0	pending	Full recovery in 5 hour	None percieved
				Groundwater Elevation (Ft MSL)	889.52	889				
				Measured Well Depth (ft)	21.5	21.5				
				Submerged (+) or Exposed screen (-)	4.52	4				
MW-22	925.68	900.23	35.45	Groundwater Level (ft)	32.95	33.66	0	pending	Full recovery in 3 hour	None percieved
				Groundwater Elevation (Ft MSL)	892.73	892.02				
				Measured Well Depth (ft)	35.45	35.45				
				Submerged (+) or Exposed screen (-)	-7.5	-8.21				
MW-24	923.34	906.59	26.75	Groundwater Level (ft)	14.33	14.42	0	pending	Full recovery in 4 hour	None percieved
				Groundwater Elevation (Ft MSL)	909.01	908.92				
				Measured Well Depth (ft)	26.75	26.75				
				Submerged (+) or Exposed screen (-)	2.42	2.33				
MW-25	902.9	891.48	21.42	Groundwater Level (ft)	12.12	11.53	0	pending	Full recovery in 6 hour	None percieved
				Groundwater Elevation (Ft MSL)	890.78	891.37				
				Measured Well Depth (ft)	21.42	21.42				
				Submerged (+) or Exposed screen (-)	-0.7	-0.11				
MW-26	908.83	893.63	25.2	Groundwater Level (ft)	18.1	19.04	0	pending	No Draw Down	None percieved
				Groundwater Elevation (Ft MSL)	890.73	889.79				
				Measured Well Depth (ft)	25.2	25.2				
				Submerged (+) or Exposed screen (-)	-2.9	-3.84				

Table 4A – Historic Water Level & Elevation Summary

Table 4A--- Water levels in monitoring locations, South Dallas County Sanitary Landfill. TOC, top of casing except GWD-1.

Monitor Well/ TOC Elev. (ft)	Screened Interval Depth (ft)	Elev. (ft)	Water Level	Date 1/15/1992	7/7/1993	10/13/1993	4/26/1994	10/12/1994	4/24/1995	10/18/1995	4/26/1996	10/9/1996
MW-1	52.4	878.97	Depth (ft)									
934.07	67.4	863.97	Elev. (ft)									
MW-2	9.6	927.93	Depth (ft)	6.24	6.16	7.39	10.03	17.26	8.03	12.29	11.18	10.99
937.53	19.6	917.93	Elev. (ft)	931.29	931.37	930.14	927.50	920.27	929.50	925.24	926.35	926.54
MW-4	27.0	897.31	Depth (ft)	31.22	30.69	31.47	31.72	34.56	31.37	32.01	31.79	31.75
924.35	37.0	887.31	Elev. (ft)	893.13	893.66	892.88	892.63	889.79	892.98	892.34	892.56	892.60
MW-5	26.9	897.10	Depth (ft)	31.20	30.31	29.73	30.92	32.66	31.67	32.26	31.89	32.21
923.97	36.9	887.10	Elev. (ft)	892.77	893.66	894.24	893.05	891.31	892.30	891.71	892.08	891.76
MW-9	32.2	902.71	Depth (ft)	33.81	33.95	33.87	33.39	35.88	33.84	34.15	33.98	33.85
934.91	42.2	892.71	Elev. (ft)	901.10	900.96	901.04	901.52	899.03	901.07	900.76	900.93	901.06
MW-10	10.3	906.75	Depth (ft)	17.34	13.11	11.20	11.32	18.54	13.19	18.11	19.41	18.46
917.02	20.3	896.75	Elev. (ft)	899.68	903.91	905.82	905.70	898.48	903.83	898.91	897.61	898.56
MW-12	13.2	895.50	Depth (ft)	11.63	9.46	10.54	12.57	13.96	11.33	13.56	13.27	12.87
908.70	23.2	885.50	Elev. (ft)	897.07	899.24	898.16	896.13	894.74	897.37	895.14	895.43	895.83
MW-15R	20.0	899.38	Depth (ft)									
919.38	30.0	889.38	Elev. (ft)									
MW-16	32.2	889.29	Depth (ft)	---	---	---	---	---	---	---	---	31.91
921.46	42.2	879.26	Elev. (ft)	---	---	---	---	---	---	---	---	889.55
MW-17	14.32	901.90	Depth (ft)	---	---	---	---	---	---	---	---	---
916.22	24.32	891.90	Elev. (ft)	---	---	---	---	---	---	---	---	---
MW-18	30.87	910.00	Depth (ft)									
940.87	40.87	900.00	Elev. (ft)									
MW-19A	46.5	896.66	Depth (ft)									
943.16	56.5	886.66	Elev. (ft)									
MW-20R	11.50	901.90	Depth (ft)									
913.40	21.50	891.90	Elev. (ft)									
MW-21	11.18	885.32	Depth (ft)									
896.50	21.18	875.32	Elev. (ft)									
MW-22	25.28	900.40	Depth (ft)									
925.68	35.28	890.40	Elev. (ft)									
MW-23	6.40	907.47	Depth (ft)									
913.87	16.40	897.47	Elev. (ft)									
MW-24	16.70	906.64	Depth (ft)									
923.34	26.70	896.64	Elev. (ft)									

1/15/1992 7/7/1993 10/13/1993 4/26/1994 10/12/1994 4/24/1995 10/18/1995 4/26/1996 10/9/1996

Table 4A--- Water levels in monitoring locations, South Dallas County Sanitary Landfill. TOC, top of casing except GWD-1.

Monitor Well/ TOC Elev. (ft)	Date											
	4/25/1997	9/26/1997	4/26/1998	9/15/1998	3/30/1999	10/7/1999	4/12/2000	9/26/2000	4/5/2001	8/28/2001	3/29/2002	9/9/2002
MW-2	6.88	15.27	5.49	8.17	7.17	13.62	18.85	18.13	8.71	13.93	10.50	17.07
937.53	930.65	922.26	932.04	929.36	930.36	923.91	918.68	919.40	928.82	923.60	927.03	920.46
MW-4	31.42	32.98	31.12	31.80	31.51	32.11	31.94	34.19	31.42	33.86	31.86	34.02
924.35	892.93	891.37	893.23	892.55	892.84	892.24	892.41	890.16	892.93	890.49	892.49	890.33
MW-5	31.34	32.41	30.52	31.28	31.29	31.61	31.99	30.3	31.58	32.94	32.12	33.59
923.97	892.63	891.56	893.45	892.69	892.68	892.36	891.98	893.67	892.39	891.03	891.85	890.38
MW-9	33.41	34.63	32.98	33.29	32.73	33.1	32.98	35.19	32.43	33.86	32.60	37.70
934.91	901.50	900.28	901.93	901.62	902.18	901.81	901.93	899.72	902.48	901.05	902.31	897.21
MW-10	8.70	19.18	6.90	8.30	8.44	17.64	19.58	19.60	9.99	19.43	16.35	19.40
917.02	908.32	897.84	910.12	908.72	908.58	899.38	897.44	897.42	907.03	897.59	900.67	897.62
MW-12	11.97	13.13	11.12	12.58	11.98	12.64	12.73	13.99	10.03	13.01	12.60	12.83
908.70	896.73	895.57	897.58	896.12	896.72	896.06	895.97	894.71	898.67	895.69	896.10	895.87
MW-15R												
919.38												
MW-16	31.56	33.24	31.28	31.95	31.63	32.20	32.01	34.34	31.59	34.05	32.08	34.14
921.46	889.90	888.22	890.18	889.51	889.83	889.26	889.45	887.12	889.87	887.41	889.38	887.32
MW-17	---	---	---	---	---	---	17.59	19.35	16.07	19.09	17.33	19.34
916.22	---	---	---	---	---	---	898.63	896.87	900.15	897.13	898.89	896.88
MW-18												
940.87												
MW-19A												
943.16												
MW-20R												
913.40												
MW-21												
896.50												
MW-22												
925.68												
MW-23												
913.87												
MW-24												
923.34												
	4/25/1997	9/26/1997	4/26/1998	9/15/1998	3/30/1999	10/7/1999	4/12/2000	9/26/2000	4/5/2001	8/28/2001	3/29/2002	9/9/2002

Table 4A--- Water levels in monitoring locations, South Dallas County Sanitary Landfill. TOC, top of casing except GWD-1.

Monitor Well/ TOC Elev. (ft)	Date										
	4/15/2003	9/25/2003	4/3/2004	9/29/2004	4/9/2005	9/17/2005	4/9/2006	9/18/2006	4/21/2007	9/20/2007	4/23/2008	
MW-2	19.70	15.11	5.58	12.93	14.99	19.60	19.66	19.74	19.48	19.65		MW-2
937.53	917.83	922.42	931.95	924.60	922.54	917.93	917.87	917.79	918.05	917.88		
MW-4	31.86	34.35	33.09	32.02	31.69	34.1	31.68	31.84	31.10	31.64	30.19	MW-4
924.35	892.49	890.00	891.26	892.33	892.66	890.25	892.67	892.51	893.25	892.71	894.16	
MW-5	32.33	31.76	29.74	32.10	31.54	33.10	33.04	33.75	31.47	32.16	30.50	MW-5
923.97	891.64	892.21	894.23	891.87	892.43	890.87	890.93	890.22	892.50	891.81	893.47	
MW-9	32.28	34.60	31.14	31.94	31.28	33.42	31.07	31.37	30.59	30.86	29.79	MW-9
934.91	902.63	900.31	903.77	902.97	903.63	901.49	903.84	903.54	904.32	904.05	905.12	
MW-10	19.46	19.42	8.99	19.52	8.76	19.68	8.82	19.58	9.49	19.52	8.29	MW-10
917.02	897.56	897.60	908.03	897.50	908.26	897.34	908.20	897.44	907.53	897.50	908.73	
MW-12	12.11	12.82	10.33	12.98	12.94	13.14	10.18	11.34	11.55	11.93	9.79	MW-12
908.70	896.59	895.88	898.37	895.72	895.76	895.56	898.52	897.36	897.15	896.77	898.91	
MW-15R												
919.38												
MW-16	32.08	34.51	31.18	32.24	31.98	34.22	31.83	31.95	29.63	31.78	30.73	MW-16
921.46	889.38	886.95	890.28	889.22	889.48	887.24	889.63	889.51	891.83	889.68	890.73	
MW-17	17.61	18.57	16.32	17.86	17.41	19.47	17.18	17.74	17.16	17.71	16.60	MW-17
916.22	898.61	897.65	899.90	898.36	898.81	896.75	899.04	898.48	899.06	898.51	899.62	
MW-18											29.78	MW-18
940.87											911.09	
MW-19A									37.36	35.41	34.42	MW-19
943.16									905.80	907.75	908.74	
MW-20R												
913.40												
MW-21												
896.50												
MW-22												
925.68												
MW-23												
913.87												
MW-24												
923.34												
	4/15/2003	9/25/2003	4/3/2004	9/29/2004	4/9/2005	9/17/2005	4/9/2006	9/18/2006	4/21/2007	9/20/2007		

Table 4A--- Water levels in monitoring locations, South Dallas County Sanitary Landfill. TOC, top of casing except GWD-1.

Monitor Well/ TOC Elev. (ft)	Date 10/2/2008	3/4/2009	9/17/2009	4/5/2010	10/8/2010	4/13/2011	9/21/2011	4/9/2012	9/5/2012	4/26/2013	9/26/2013	
MW-1				38.69	37.42				46.57		43.91	MW-1
934.07				895.38	896.65				887.50		890.16	
MW-2					13.39	11.15	19.17	19.72	19.58	19.59	19.62	MW-2
937.53					924.14	926.38	918.36	917.81	917.95	917.94	917.91	
MW-4	31.71	31.68	32.89	31.32	31.42	31.64	32.02	31.71	34.23	31.47	36.57	MW-4
924.35	892.64	892.67	891.46	893.03	892.93	892.71	892.33	892.64	890.12	892.88	887.78	
MW-5	31.60	31.13	32.14	30.07	30.29	31.21	32.12	31.89	33.70	32.87	33.98	MW-5
923.97	892.37	892.84	891.83	893.90	893.68	892.76	891.85	892.08	890.27	891.10	889.99	
MW-9	30.29	30.16	31.48	30.15	30.32	30.41	31.49	30.72	33.62	30.31	32.03	MW-9
934.91	904.62	904.75	903.43	904.76	904.59	904.50	903.42	904.19	901.29	904.60	902.88	
MW-10	19.58	11.75	20.10	9.50	14.11	7.30	19.41	10.28	19.58	11.02	19.39	MW-10
917.02	897.44	905.27	896.92	907.52	902.91	909.72	897.61	906.74	897.44	906.00	897.63	
MW-12	11.99	12.74	12.31	11.98	11.68	12.18	12.92	12.13	13.60	9.28	12.51	MW-12
908.70	896.71	895.96	896.39	896.72	897.02	896.52	895.78	896.57	895.10	899.42	896.19	
MW-15R				17.37	17.75	17.94	18.64	18.08	20.14	17.50	19.43	MW-15R
919.38				902.01	901.63	901.44	900.74	901.30	899.24	901.88	899.95	
MW-16	30.99	31.88	32.96	31.57	31.84	32.07	32.39	32.03	34.39	31.71	33.71	MW-16
921.46	890.47	889.58	888.50	889.89	889.62	889.39	889.07	889.43	887.07	889.75	887.75	
MW-17	16.81	17.70	19.00	17.70	18.05	17.87	18.68	18.50	19.93	17.93	19.39	MW-17
916.22	899.41	898.52	897.22	898.52	898.17	898.35	897.54	897.72	896.29	898.29	896.83	
MW-18	35.13	33.50	31.85	31.27	31.02	30.71	32.40	32.20	33.49	32.75	34.02	MW-18
940.87	905.74	907.37	909.02	909.60	909.85	910.16	908.47	908.67	907.38	908.12	906.85	
MW-19A	46.20	38.99	33.69	31.42	30.41	30.70	31.69	33.42	35.49	36.18	36.97	MW-19A
943.16	896.96	904.17	909.47	911.74	912.75	912.46	911.47	909.74	907.67	906.98	906.19	
MW-20R				13.01	13.46	13.65	14.48	13.75	16.33	13.24	13.36	MW-20R
913.40				900.39	899.94	899.75	898.92	899.65	897.07	900.16	900.04	
MW-21				2.75	3.08	2.20	6.60	2.94	8.76	2.35	8.83	MW-21
896.50				893.75	893.42	894.30	889.90	893.56	887.74	894.15	887.67	
MW-22				31.29	31.34	31.41	32.15	31.53	34.00	30.35	33.47	MW-22
925.68				894.39	894.34	894.27	893.53	894.15	891.68	895.33	892.21	
MW-23					12.74	15.05	15.24	16.32	14.80	16.61	14.22	MW-23
913.87					901.13	898.82	898.63	897.55	899.07	897.26	899.65	
MW-24				15.49	14.46	14.67	15.37	14.29	16.94	14.08	14.83	MW-24
923.34				907.85	908.88	908.67	907.97	909.05	906.40	909.26	908.51	
GWD-1								0.00	0.00	0.00	0.00	GWD-1
889.25 Bottom elev.								889.25	889.25	889.25	889.25	
	10/2/2008	3/4/2009	9/17/2009	4/5/2010	10/8/2010	4/13/2011	9/21/2011	4/9/2012	9/5/2012	4/26/2013	9/26/2013	

Table 4A--- Water levels in monitoring locations, South Dallas County Sanitary Landfill. TOC, top of casing except GWD-1.

Monitor Well/ TOC Elev. (ft)	Date 4/10/2014	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018	4/2/2019	9/18/2019	Mean/ Std. Dev.	
MW-1		40.52		39.40	39.25	41.14							40.86	MW-1
934.07	934.07	893.55	934.07	894.67	894.82	892.93	934.07	934.07					2.69	
MW-2	19.60	19.69	15.02	13.61	8.50	19.67	8.20	19.65	19.65	19.55	12.60	19.00	14.34	MW-2
937.53	917.93	917.84	922.51	923.92	929.03	917.86	929.33	917.88	917.88	917.98	924.93	918.53	5.04	
MW-4	31.95	30.91	31.91	31.91	32.16	32.03	31.75	32.21	31.79	32.02	32.20	32.68	32.16	MW-4
924.35	892.40	893.44	892.44	892.44	892.19	892.32	892.60	892.14	892.56	892.33	892.15	891.67	1.13	
MW-5	33.65	31.27	31.64	30.86	30.70	31.54	30.50	32.33	31.73	30.70	29.11	29.50	31.63	MW-5
923.97	890.32	892.70	892.33	893.11	893.27	892.43	893.47	891.64	892.24	893.27	894.86	894.47	1.12	
MW-9	30.67	29.67	30.26	31.64	30.95	31.06	30.50	31.21	29.90	30.91	31.19	31.80	32.19	MW-9
934.91	904.24	905.24	904.65	903.27	903.96	903.85	904.41	903.70	905.01	904.00	903.72	903.11	1.75	
MW-10	19.45	9.61	8.68	7.63	7.62	18.90	7.72	19.50	9.10	19.55	9.57	19.40	14.44	MW-10
917.02	897.57	907.41	908.34	909.39	909.40	898.12	909.30	897.52	907.92	897.47	907.45	897.62	5.00	
MW-12	12.89	7.55	11.76	9.94	11.81	9.27	9.90	10.00	10.21	7.70	10.83	11.22	11.70	MW-12
908.70	895.81	901.15	896.94	898.76	896.89	899.43	898.80	898.70	898.49	901.00	897.87	897.48	1.48	
MW-15R	18.05	16.62	17.45	17.85	18.28	18.32	17.80	18.50	18.04	17.90	17.55	18.40	18.08	MW-15R
919.38	901.33	902.76	901.93	901.53	901.10	901.06	901.58	900.88	901.34	901.48	901.83	900.98	0.75	
MW-16	32.23	31.19	32.31	32.18	32.42	32.33	31.82	32.58	32.18	32.63	29.70	30.51	32.16	MW-16
921.46	889.23	890.27	889.15	889.28	889.04	889.13	889.64	888.88	889.28	888.83	891.76	890.95	1.10	
MW-17	18.52	17.05	18.05	18.15	18.50	18.38	18.00	18.50	18.36	17.97	18.43	18.76	18.07	MW-17
916.22	897.70	899.17	898.17	898.07	897.72	897.84	898.22	897.72	897.86	898.25	897.79	897.46	0.88	
MW-18	33.54	34.91	34.59	34.59	32.96	33.56	32.32	32.12	32.08	33.67	32.23	31.73	32.90	MW-18
940.87	907.33	905.96	906.28	906.28	907.91	907.31	908.55	908.75	908.79	907.20	908.64	909.14	1.25	
MW-19A	37.32	38.31	35.21	32.20	30.21	31.91	32.35	32.00	34.80	33.16	32.83	31.38	34.39	MW-19A
943.16	905.84	904.85	907.95	910.96	912.95	911.25	910.81	911.16	908.36	910.00	910.33	911.78	3.49	
MW-20R	13.86	11.92	13.13	13.14	13.45	13.59	12.45	13.69	13.27	12.95	13.09	13.47	13.46	MW-20R
913.40	899.54	901.48	900.27	900.26	899.95	899.81	900.95	899.71	900.13	900.45	900.31	899.93	0.86	
MW-21	3.91	1.13	2.10	2.06	2.46	3.49	1.90	3.46	1.95	2.30	1.55	3.21	3.35	MW-21
896.50	892.59	895.37	894.40	894.44	894.04	893.01	894.60	893.04	894.55	894.20	894.95	893.29	2.18	
MW-22	31.92	30.58	31.99	32.10	32.31	32.24	31.02	32.15	31.67	31.33	31.90	32.43	31.86	MW-22
925.68	893.76	895.10	893.69	893.58	893.37	893.44	894.66	893.53	894.01	894.35	893.78	893.25	0.86	
MW-23	NA	13.92	16.60	NA	NA	NA	abandoned						15.06	MW-23
913.87		899.95	897.27										1.33	
MW-24	13.96	13.19	14.04	13.50	13.40	13.56	13.17	14.02	13.45	13.65	13.95	15.41	14.27	MW-24
923.34	909.38	910.15	909.30	909.84	909.94	909.78	910.17	909.32	909.89	909.69	909.39	907.93	0.95	
GWD-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	GWD-1
889.25	889.25	889.25	889.25	889.25	889.25	889.25	889.25	889.25	889.25	889.25	889.25	889.25	0.00	
Bottom elev.														
	4/10/2014	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018	4/2/2019	9/18/2019		

GWD-1 base ele 889.25

Table 4A--- Water levels in monitoring locations, South Dallas County Sanitary Landfill. TOC, top of casing .

Monitor Well/ TOC Elev. (ft)	Screened Interval Depth (ft)	Elev. (ft)	Date 3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024	Mean/ Std. Dev.	
MW-2	9.6	927.93	7.66	19.75	NA	19.75	19.75	19.75	19.75	19.75	19.75	19.75	14.41	**MW-2**
937.53	19.6	917.93	929.87	917.78		917.78	917.78	917.78	917.78	917.78	917.78	917.78	5.10	
MW-4	27.0	897.31	32.34	33.26	32.67	34.50	32.75	33.45	37.2	34.65	33.20	34.00	32.23	**MW-4**
924.35	37.0	887.31	892.01	891.09	891.68	889.85	891.60	890.90	887.15	889.70	891.15	890.35	1.14	
MW-5	26.9	897.10	29.05	29.88	29.55	31.48	30.95	30.13	36.55	31.25	33.60	33.25	31.52	**MW-5**
923.97	36.9	887.10	894.92	894.09	894.42	892.49	893.02	893.84	887.42	892.72	890.37	890.72	1.19	
MW-9	32.2	902.71	31.14	32.15	31.40	31.77	31.15	31.62	42.33	32.65	31.35	32.07	32.16	**MW-9**
934.91	42.2	892.71	903.77	902.76	903.51	903.14	903.76	903.29	892.58	902.26	903.56	902.84	1.70	
MW-10	10.3	906.75	9.11	19.55	19.68	19.80	19.38	19.5	20.50	19.60	19.65	19.55	14.62	**MW-10**
917.02	20.3	896.75	907.91	897.47	897.34	897.22	897.64	897.52	896.52	897.42	897.37	897.47	5.02	
MW-12	13.2	895.50	9.22	11.00	10.06	12.47	12	11.75	23.10	12.68	12.63	12.93	11.63	**MW-12**
908.70	23.2	885.50	899.48	897.70	898.64	896.23	896.70	896.95	885.60	896.02	896.07	895.77	1.48	
MW-15R	20.0	899.38	17.74	19.13	17.81	18.19	16.95	18.26	30.75	19.44	17.90	18.86	18.10	**MW-15R**
919.38	30.0	889.38	901.64	900.25	901.57	901.19	902.43	901.12	888.63	899.94	901.48	900.52	0.72	
MW-17	14.32	901.90	18.06	18.85	18.47	20.30	18.61	19.08	23.05	20.48	19.38	19.60	18.14	**MW-17**
916.22	24.32	891.90	898.16	897.37	897.75	895.92	897.61	897.14	893.17	895.74	896.84	896.62	0.91	
MW-18	30.87	910.00	32.23	33.57	32.36	33.12	33.32	36.55	39.70	35.72	35.37	36.60	32.78	**MW-18**
940.87	40.87	900.00	908.64	907.30	908.51	907.75	907.55	904.32	901.17	905.15	905.50	904.27	1.27	
MW-19A	46.5	896.66	30.79	31.32	33.57	33.19	34.9	35.84	57.30	35.21	36.74	36.78	34.10	**MW-19A**
943.16	56.5	886.66	912.37	911.84	909.59	909.97	908.26	907.32	885.86	907.95	906.42	906.38	3.36	
MW-20R	11.50	901.90	12.92	14.17	13.31	13.90	12.78	13.92	21.65	15.01	13.70	14.92	13.48	**MW-20R**
913.40	21.50	891.90	900.48	899.23	900.09	899.50	900.62	899.48	891.75	898.39	899.70	898.48	0.79	
MW-21	11.18	885.32	1.00	5.40	1.47	7.31	2.77	6.38	21.50	7.92	6.98	7.50	3.42	**MW-21**
896.50	21.18	875.32	895.50	891.10	895.03	889.19	893.73	890.12	875.00	888.58	889.52	889.00	2.23	
MW-22	25.28	900.40	31.55	33.14	32.28	34.28	32.55	33.23	35.45	34.42	32.95	33.66	32.01	**MW-22**
925.68	35.28	890.40	894.13	892.54	893.40	891.40	893.13	892.45	890.23	891.26	892.73	892.02	0.94	
MW-24	16.70	906.64	13.78	15.12	14.41	15.00	13.98	14.71	26.75	16.01	14.33	14.42	13.75	**MW-24**
923.34	26.70	896.64	909.56	908.22	908.93	908.34	909.36	908.63	896.59	907.33	909.01	908.92	3.00	
MW-25	12.00	890.90	9.22	10.08	10.28	10.98	10.53	10.64	21.42	11.11	12.12	11.53	11.79	**MW-25**
902.9	22.00	880.90	893.68	892.82	892.62	891.92	892.37	892.26	881.48	891.79	890.78	891.37	3.48	
MW-26	15.50	893.33	17.37	18.43	17.86	19.57	17.9	18.51	25.2	19.67	18.1	19.04	18.31	**MW-26**
908.83	25.50	883.33	891.46	890.40	890.97	889.26	890.93	890.32	883.63	889.16	890.73	889.79	2.25	
GWD-1			0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	**GWD-1**
889.25			889.25	889.25	889.25	889.25	889.25	889.25	889.25				0.00	
Bottom elev.														
			3/25/2020	**9/15/2020**	**3/8/2021**	**9/28/2021**	**3/8/2022**	**8/30/2022**	**3/7/2023**	**9/11/2023**	**3/20/2024**	**9/12/2024**		

MW-23 abandoned 2017
MW-16 abandoned 2021

Table 5 – Background and GWPS Summary

Table 5
Background and GWPS Summary
Annual Water Quality Report
South Dallas County Sanitary Landfill
Permit No. 25-SDP-01-75P

Interwell Background Wells (MW-2, MW-9, MW-17, MW-18, MW-19A, MW-24)

Inorganics - Appendix I										
Constituent	**Units**	**Model Type**	**Samples - N**	**Detections**	**Mean**	**SD**	**Prediction Limit**	**Confidence**	**GWPS**	**Source**
Antimony (Sb)	µg/l	nonparametric	111	0			2.0000	0.99	6	SS
Arsenic (As)	µg/l	nonparametric	110	53			**167.0000**	0.99	**167**	**Site**
Barium (Ba)	µg/l	normal	110	**110**	425.1364	357.7221	1273.5634		**1305.6**	**Site**
Beryllium (Be)	µg/l	nonparametric	111	0			4.0000	0.99	4	SS
Cadmium (Cd)	µg/l	nonparametric	109	18			2.4000	0.99	5	SS
Chromium (Cr)	µg/l	nonparametric	109	2			11.6000	0.99	100	SS
Cobalt (Co)	µg/l	lognormal	106	87	1.1193	1.0631	**38.1853**		**38.1853**	**Site**
Copper (Cu)	µg/l	nonparametric	105	12			10.0000	0.99	1300	SS
Lead (Pb)	µg/l	nonparametric	107	2			6.8000	0.99	15	SS
Nickel (Ni)	µg/l	normal	107	83	8.0953	5.9619	22.2432		100	SS
Selenium (Se)	µg/l	nonparametric	110	2			7.5000	0.99	50	SS
Silver (Ag)	µg/l	nonparametric	111	0			4.0000	0.99	100	SS
Thallium (Tl)	µg/l	nonparametric	111	2			**2.3000**	0.99	**2.3**	SS
Vanadium (V)	µg/l	nonparametric	110	1			31.6000	0.99	35	SS
Zinc (Zn)	µg/l	nonparametric	108	21			267.0000	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	111	0	<1	<1	<1	<1	various	SS

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

Table 6 – Summary of Detections

Table 6
Summary of Well/Detected Constituent Pairs that Exceed the Prediction Limit
Annual Water Quality Report
South Dallas County Sanitary Landfill
Permit No. 25-SDP-01-75P

Well	Constituent	Date	Most recent result (ug/L)	Background Standard (ug/L)	Monitoring Program
MW-4	1,4-dichlorobenzene	3/20/2024	6.0	1.0	Assessment Monitoring Well
MW-4	1,4-dichlorobenzene	9/12/2024	5.9	1.0	Assessment Monitoring Well
MW-4	benzene	3/20/2024	1.40	1.0	Assessment Monitoring Well
MW-4	benzene	9/12/2024	1.30	1.0	Assessment Monitoring Well
MW-4	chloroethane	3/20/2024	1.40	1.0	Assessment Monitoring Well
MW-4	chloroethane	9/12/2024	1.30	1.0	Assessment Monitoring Well
MW-4	cis-1,2-dichloroethylene	9/12/2024	2.40	1.0	Assessment Monitoring Well
MW-5	copper*	3/20/2024	26.80	10.0	Assessment Monitoring Well
MW-5	nickel*	9/12/2024	33.30	22.243	Assessment Monitoring Well
MW-5	bis(2-ethylhexyl)phthalate	9/12/2024	9.00	6.0	Assessment Monitoring Well

* = not verified

Table 7 – Summary of Ongoing and Newly Identified SSI

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
South Dallas County Sanitary Landfill
Permit No. 25-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)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-4	chromium	10/16/2014	<8	11.6	---	100	*not verified*	NA	10/16/2014
MW-4	chromium	4/4/2015	<8	11.6	---	100	*not verified*	NA	10/16/2014
MW-4	chromium	10/1/2015	<8	11.6	---	100	*not verified*	NA	10/16/2014
MW-4	chromium	4/4/2016	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	9/20/2016	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	4/24/2017	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	10/9/2017	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	3/21/2018	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	9/7/2018	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	4/2/2019	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	9/18/2019	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	3/25/2020	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	9/15/2020	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	3/8/2021	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	9/28/2021	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	3/8/2022	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	8/30/2022	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	3/7/2023	<8	11.6	4.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	9/11/2023	33.9	11.6	0.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	3/20/2024	<8	11.6	0.000	100	*not verified*	NA	10/16/2014
MW-4	chromium	9/12/2024	<8	11.6	0.000	100	*not verified*	NA	10/16/2014

KEY:	SSI	SSL LCL>GWPS

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
South Dallas County Sanitary Landfill
Permit No. 25-SDP-01-75P

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

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-4	nickel	10/16/2014	11.3	67.5410	---	100	*not verified*	NA	10/16/2014
MW-4	nickel	4/4/2015	7.3	67.5410	---	100	*not verified*	NA	10/16/2014
MW-4	nickel	10/1/2015	<4	67.5410	---	100	*not verified*	NA	10/16/2014
MW-4	nickel	4/4/2016	7.5	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	9/20/2016	<4	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	4/24/2017	<4	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	10/9/2017	<4	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	3/21/2018	<4	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	9/7/2018	<4	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	4/2/2019	<4	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	9/18/2019	<4	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	3/25/2020	<4	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	9/15/2020	<4	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	3/8/2021	<4	67.5410	2.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	9/28/2021	26.4	67.5410	0.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	12/3/2021	5.2	67.5410	0.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	3/8/2022	4.5	67.5410	0.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	8/30/2022	4.6	67.5410	0.804	100	*not verified*	NA	10/16/2014
MW-4	nickel	3/7/2023	<4	67.5410	2.408	100	*not verified*	NA	10/16/2014
MW-4	nickel	9/11/2023	52.8	22.3381	0.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	3/20/2024	<4	22.2432	0.000	100	*not verified*	NA	10/16/2014
MW-4	nickel	9/12/2024	<4	22.2432	0.000	100	*not verified*	NA	10/16/2014

Table 7

Summary of Ongoing & Newly Identified SSI

Annual Water Quality Report

South Dallas County Sanitary Landfill

Permit No. 25-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)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-4	1,1-dichloroethane	10/16/2014	<1.0	1.0	---	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	4/4/2015	<1.0	1.0	---	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	10/1/2015	<1.0	1.0	---	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	4/4/2016	1.0	1.0	0.408	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	9/20/2016	<1.0	1.0	0.408	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	4/24/2017	1.7	1.0	0.433	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	10/9/2017	2.6	1.0	0.661	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	3/21/2018	2.6	1.0	0.988	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	9/7/2018	<1.0	1.0	0.988	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	4/2/2019	<1.0	1.0	0.500	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	9/18/2019	<1.0	1.0	0.116	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	3/25/2020	<1.0	1.0	0.500	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	9/15/2020	1.9	1.0	0.244	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	3/8/2021	<1.0	1.0	0.244	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	9/28/2021	1.1	1.0	0.426	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	3/8/2022	<1.0	1.0	0.220	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	8/30/2022	<1.0	1.0	0.297	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	3/7/2023	<1.0	1.0	0.297	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	9/11/2023	<1.0	1.0	0.500	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	3/20/2024	<1.0	1.0	0.500	140.0	4/4/2016	NA	10/16/2014
MW-4	1,1-dichloroethane	9/12/2024	<1.0	1.0	0.500	140.0	4/4/2016	NA	10/16/2014

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-4	1,2-dichloropropane	10/16/2014	1.2	1.0	---	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	4/4/2015	<1.0	1.0	---	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	10/1/2015	<1.0	1.0	---	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	4/4/2016	<1.0	1.0	0.372	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	9/20/2016	<1.0	1.0	0.500	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	4/24/2017	<1.0	1.0	0.500	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	10/9/2017	<1.0	1.0	0.500	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	3/21/2018	<1.0	1.0	0.500	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	9/7/2018	<1.0	1.0	0.500	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	4/2/2019	<1.0	1.0	0.500	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	9/18/2019	1.6	1.0	0.299	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	3/25/2020	<1.0	1.0	0.299	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	9/15/2020	<1.0	1.0	0.299	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	3/8/2021	<1.0	1.0	0.299	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	9/28/2021	1.4	1.0	0.196	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	3/8/2022	<1.0	1.0	0.196	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	8/30/2022	<1.0	1.0	0.196	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	3/7/2023	1.1	1.0	0.346	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	9/11/2023	1.0	1.0	0.398	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	3/20/2024	<1.0	1.0	0.398	5.0	10/16/2014	NA	10/16/2014
MW-4	1,2-dichloropropane	9/12/2024	<1.0	1.0	0.398	5.0	10/16/2014	NA	10/16/2014

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-4	1,4-dichlorobenzene	10/16/2014	6.8	1.0	---	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	4/4/2015	5.1	1.0	---	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	10/1/2015	3.9	1.0	---	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	4/4/2016	5.3	1.0	4.245	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	9/20/2016	3.5	1.0	3.684	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	4/24/2017	5.0	1.0	3.679	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	10/9/2017	6.5	1.0	4.006	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	3/21/2018	6.3	1.0	4.124	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	9/7/2018	4.9	1.0	4.946	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	4/2/2019	10.4	1.0	4.981	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	9/18/2019	7.5	1.0	5.250	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	3/25/2020	6.2	1.0	5.212	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	9/15/2020	<1.0	1.0	2.551	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	3/8/2021	6.3	1.0	2.406	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	9/28/2021	6.0	1.0	2.294	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	3/8/2022	5.8	1.0	5.814	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	8/30/2022	4.6	1.0	4.798	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	3/7/2023	5.7	1.0	4.785	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	9/11/2023	7.4	1.0	4.519	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	3/20/2024	6.0	1.0	4.569	75.0	10/16/2014	NA	10/16/2014
MW-4	1,4-dichlorobenzene	9/12/2024	5.9	1.0	5.336	75.0	10/16/2014	NA	10/16/2014

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MW-4	acetone	10/16/2014	<10.0	10.0	---	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	4/4/2015	<10.0	10.0	---	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	10/1/2015	<10.0	10.0	---	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	4/4/2016	<10.0	10.0	5.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	9/20/2016	<10.0	10.0	5.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	4/24/2017	<10.0	10.0	5.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	10/9/2017	11.2	10.0	3.865	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	3/21/2018	<10.0	10.0	3.865	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	9/7/2018	<10.0	10.0	3.865	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	4/2/2019	<10.0	10.0	3.865	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	9/18/2019	<10.0	10.0	5.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	3/25/2020	<10.0	10.0	5.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	9/15/2020	<10.0	10.0	5.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	3/8/2021	<10.0	10.0	5.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	9/28/2021	43.4	10.0	0.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	3/8/2022	<10.0	10.0	0.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	8/30/2022	<10.0	10.0	0.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	3/7/2023	<10.0	10.0	0.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	9/11/2023	<10.0	10.0	5.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	3/20/2024	<10.0	10.0	5.000	6300.0	10/9/2017	NA	10/16/2014
MW-4	acetone	9/12/2024	<10.0	10.0	5.000	6300.0	10/9/2017	NA	10/16/2014

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-4	benzene	10/16/2014	2.4	1.0	---	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	4/4/2015	1.6	1.0	---	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	10/1/2015	1.3	1.0	---	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	4/4/2016	1.4	1.0	1.243	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	9/20/2016	1.2	1.0	1.227	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	4/24/2017	1.2	1.0	1.192	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	10/9/2017	1.3	1.0	1.192	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	3/21/2018	1.5	1.0	1.178	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	9/7/2018	<1.0	1.0	0.748	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	4/2/2019	1.0	1.0	0.698	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	9/18/2019	<1.0	1.0	0.460	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	3/25/2020	1.2	1.0	0.492	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	9/15/2020	1.3	1.0	0.692	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	3/8/2021	1.6	1.0	0.747	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	9/28/2021	1.4	1.0	1.227	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	3/8/2022	1.7	1.0	1.285	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	8/30/2022	1.2	1.0	1.214	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	3/7/2023	1.5	1.0	1.205	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	9/11/2023	1.7	1.0	1.247	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	3/20/2024	1.4	1.0	1.205	5.0	10/16/2014	NA	10/16/2014
MW-4	benzene	9/12/2024	1.3	1.0	1.247	5.0	10/16/2014	NA	10/16/2014

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MW-4	bis(2-ethylhexyl)phthalate	10/16/2014	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	4/4/2015	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	10/1/2015	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	4/4/2016	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	9/20/2016	10.0	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	11/8/2016	<10.0	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	4/24/2017	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	10/9/2017	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	3/21/2018	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	9/7/2018	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	4/2/2019	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	9/18/2019	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	3/25/2020	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	9/15/2020	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	3/8/2021	NT	6.0	---	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	9/28/2021	12.0	6.0	3.814	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	3/8/2022	NT	6.0	3.814	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	8/30/2022	NT	6.0	3.814	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	3/7/2023	NT	6.0	3.814	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	9/11/2023	NT	6.0	3.814	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	3/20/2024	NT	6.0	3.814	6.0	9/28/2021	NA	10/16/2014
MW-4	bis(2-ethylhexyl)phthalate	9/12/2024	NT	6.0	3.814	6.0	9/28/2021	NA	10/16/2014

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MW-4	chloroethane	10/16/2014	4.7	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	4/4/2015	2.1	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	10/1/2015	3.0	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	4/4/2016	3.1	1.0	2.289	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	9/20/2016	3.9	1.0	2.387	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	4/24/2017	2.3	1.0	2.508	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	10/9/2017	3.0	1.0	2.508	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	3/21/2018	2.4	1.0	2.264	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	9/7/2018	2.5	1.0	2.281	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	4/2/2019	2.1	1.0	2.176	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	9/18/2019	2.9	1.0	2.189	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	3/25/2020	1.5	1.0	1.733	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	9/15/2020	5.0	1.0	1.551	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	3/8/2021	1.4	1.0	1.246	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	9/28/2021	2.4	1.0	1.122	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	3/8/2022	1.2	1.0	0.445	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	8/30/2022	1.9	1.0	1.092	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	3/7/2023	1.4	1.0	1.092	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	9/11/2023	2.0	1.0	1.171	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	3/20/2024	1.4	1.0	1.298	2800.0	10/16/2014	NA	10/16/2014
MW-4	chloroethane	9/12/2024	1.3	1.0	1.148	2800.0	10/16/2014	NA	10/16/2014

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KEY:	SSI	SSL LCL>GWPS

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

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-4	cis-1,2-dichloroethylene	10/16/2014	2.2	1.0	---	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	4/4/2015	<1.0	1.0	---	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	10/1/2015	2.1	1.0	---	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	4/4/2016	<1.0	1.0	0.499	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	9/20/2016	1.4	1.0	0.453	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	4/24/2017	<1.0	1.0	0.453	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	10/9/2017	2.0	1.0	0.464	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	3/21/2018	<1.0	1.0	0.464	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	9/7/2018	<1.0	1.0	0.225	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	4/2/2019	<1.0	1.0	0.225	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	9/18/2019	3.2	1.0	0.006	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	3/25/2020	<1.0	1.0	0.006	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	9/15/2020	1.6	1.0	0.344	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	3/8/2021	<1.0	1.0	0.344	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	9/28/2021	2.1	1.0	0.477	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	3/8/2022	<1.0	1.0	0.227	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	8/30/2022	4.5	1.0	0.000	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	3/7/2023	<1.0	1.0	0.000	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	9/11/2023	2.7	1.0	0.000	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	3/20/2024	<1.0	1.0	0.000	70.0	10/16/2014	NA	10/16/2014
MW-4	cis-1,2-dichloroethylene	9/12/2024	2.4	1.0	0.125	70.0	10/16/2014	NA	10/16/2014

Table 7
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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-4	dichlorodifluoromethane	10/16/2014	3.7	1.0	---	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	4/4/2015	1.1	1.0	---	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	10/1/2015	<1.0	1.0	---	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	4/4/2016	1.4	1.0	0.462	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	9/20/2016	1.1	1.0	0.698	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	4/24/2017	1.3	1.0	0.726	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	10/9/2017	1.0	1.0	1.042	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	3/21/2018	<1.0	1.0	0.680	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	9/7/2018	<1.0	1.0	0.483	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	4/2/2019	2.6	1.0	0.288	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	9/18/2019	<1.0	1.0	0.116	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	3/25/2020	1.1	1.0	0.317	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	9/15/2020	<1.0	1.0	0.317	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	3/8/2021	<1.0	1.0	0.390	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	9/28/2021	<1.0	1.0	0.390	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	3/8/2022	<1.0	1.0	0.500	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	8/30/2022	NT	1.0	0.500	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	3/7/2023	NT	1.0	0.500	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	9/11/2023	NT	1.0	0.500	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	3/20/2024	NT	1.0	0.500	1000.0	10/16/2014	NA	10/16/2014
MW-4	dichlorodifluoromethane	9/12/2024	NT	1.0	0.500	1000.0	10/16/2014	NA	10/16/2014

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-4	vinyl chloride	10/16/2014	4.9	1.0	---	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	4/4/2015	1.3	1.0	---	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	10/1/2015	2.3	1.0	---	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	4/4/2016	<1.0	1.0	0.592	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	9/20/2016	2.2	1.0	0.842	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	4/24/2017	<1.0	1.0	0.499	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	10/9/2017	1.8	1.0	0.487	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	3/21/2018	1.8	1.0	0.933	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	9/7/2018	1.9	1.0	0.921	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	4/2/2019	1.8	1.0	1.782	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	9/18/2019	1.8	1.0	1.782	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	3/25/2020	1.0	1.0	1.262	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	9/15/2020	3.3	1.0	1.143	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	3/8/2021	<1.0	1.0	0.591	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	9/28/2021	2.8	1.0	0.723	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	3/8/2022	<1.0	1.0	0.027	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	8/30/2022	1.8	1.0	0.087	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	3/7/2023	<1.0	1.0	0.087	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	9/11/2023	4.2	1.0	0.000	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	3/20/2024	<1.0	1.0	0.000	2.0	10/16/2014	NA	10/16/2014
MW-4	vinyl chloride	9/12/2024	<1.0	1.0	0.000	2.0	10/16/2014	NA	10/16/2014

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.*

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-5	Arsenic	10/16/2014	8.0	167.0	---	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	4/4/2015	4.3	167.0	---	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	10/1/2015	61.9	167.0	---	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	4/4/2016	11.9	167.0	0.000	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	9/20/2016	12.6	167.0	0.000	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	4/24/2017	17.4	167.0	5.087	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	10/9/2017	22.4	167.0	11.854	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	3/21/2018	<4.0	167.0	6.059	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	9/7/2018	10.1	167.0	5.276	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	4/2/2019	6.6	167.0	2.708	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	9/18/2019	18.7	167.0	3.235	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	3/25/2020	30.8	167.0	7.219	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	9/15/2020	41.9	167.0	11.304	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	3/8/2021	14.6	167.0	15.798	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	9/28/2021	76.7	167.0	18.217	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	3/8/2022	12.1	167.0	0.906	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	8/30/2022	412.0	167.0	0.000	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	3/7/2023	83.0	167.0	0.000	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	9/11/2023	71.1	167.0	0.000	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	3/20/2024	166.0	167.0	0.000	**167.0**	8/30/2022	NA	10/16/2014
MW-5	Arsenic	9/12/2024	9.7	167.0	6.818	**167.0**	8/30/2022	NA	10/16/2014

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-5	Copper	10/16/2014	4.0	31.3	---	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	4/4/2015	<4.0	31.3	---	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	10/1/2015	4.2	31.3	---	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	4/4/2016	<4.0	31.3	1.998	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	9/20/2016	7.7	31.3	1.644	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	4/24/2017	<4.0	31.3	1.644	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	10/9/2017	4.7	31.3	1.747	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	3/21/2018	<4.0	31.3	1.747	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	9/7/2018	<4.0	31.3	1.506	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	4/2/2019	<4.0	31.3	1.506	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	9/18/2019	<4.0	31.3	2.000	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	3/25/2020	<4.0	31.3	2.000	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	9/15/2020	4.4	31.3	1.561	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	3/8/2021	<4.0	31.3	1.561	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	9/28/2021	<4.0	31.3	1.561	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	3/8/2022	5.0	31.3	1.494	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	8/30/2022	45.5	31.3	0.000	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	3/7/2023	9.2	31.3	0.000	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	9/11/2023	9.6	10.0	0.000	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	3/20/2024	26.8	10.0	2.509	1300.0	8/30/2022	NA	10/16/2014
MW-5	Copper	9/12/2024	7.3	10.0	2.514	1300.0	8/30/2022	NA	10/16/2014

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MW-5	bis(2-ethylhexyl)phthalate	10/16/2014	10.0	8.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	4/4/2015	NT	6.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	10/1/2015	NT	6.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	4/4/2016	NT	6.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	9/20/2016	NT	6.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	4/24/2017	NT	6.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	10/9/2017	NT	6.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	3/21/2018	NT	6.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	9/7/2018	NT	6.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	4/2/2019	NT	6.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	9/18/2019	NT	6.0	---	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	3/25/2020	8.0	6.0	1.309	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	9/15/2020	NT	6.0	1.309	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	3/8/2021	NT	6.0	1.309	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	9/28/2021	NT	6.0	1.309	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	3/8/2022	NT	6.0	1.309	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	8/30/2022	NT	6.0	1.309	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	3/7/2023	NT	6.0	1.309	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	9/11/2023	NT	6.0	1.309	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	3/20/2024	NT	6.0	1.309	6.0	10/16/2014	NA	10/16/2014
MW-5	bis(2-ethylhexyl)phthalate	9/12/2024	9.0	6.0	0.971	6.0	10/16/2014	NA	10/16/2014

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MW-5	chloroethane	10/16/2014	3.2	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	4/4/2015	<1.0	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	10/1/2015	2.0	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	4/4/2016	2.7	1.0	1.083	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	9/20/2016	<1.0	1.0	0.467	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	4/24/2017	1.9	1.0	0.977	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	10/9/2017	<1.0	1.0	0.457	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	3/21/2018	<1.0	1.0	0.244	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	9/7/2018	<1.0	1.0	0.244	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	4/2/2019	1.0	1.0	0.408	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	6/5/2019	1.3	1.0	0.483	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	9/18/2019	2.0	1.0	0.657	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	3/25/2020	2.0	1.0	1.137	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	9/15/2020	1.9	1.0	1.508	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	3/8/2021	1.8	1.0	1.842	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	9/28/2021	<1.0	1.0	0.940	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	3/8/2022	<1.0	1.0	0.257	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	8/30/2022	2.7	1.0	0.110	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	3/7/2023	<1.0	1.0	0.059	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	9/11/2023	3.1	1.0	0.059	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	3/20/2024	<1.0	1.0	0.059	2800.0	10/16/2014	NA	10/16/2014
MW-5	chloroethane	9/12/2024	<1.0	1.0	0.000	2800.0	10/16/2014	NA	10/16/2014

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

Table 7	KEY:	SSI	SSL LCL>GWPS

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
South Dallas County Sanitary Landfill
Permit No. 25-SDP-01-75P

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

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-21	Barium	10/16/2014	354.0	1500.0	---	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	4/4/2015	461.0	1500.0	---	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	10/1/2015	451.0	1500.0	---	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	4/4/2016	392.0	1500.0	370.736	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	9/20/2016	630.0	1500.0	394.904	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	4/24/2017	806.0	1500.0	407.623	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	10/9/2017	472.0	1500.0	416.504	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	3/21/2018	875.0	1500.0	538.689	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	9/7/2018	598.0	1500.0	526.777	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	4/2/2019	1420.0	1500.0	476.693	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	9/18/2019	307.0	1500.0	389.550	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	3/25/2020	1730.0	1500.0	224.556	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	9/15/2020	469.0	1500.0	158.059	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	3/8/2021	1020.0	1500.0	125.453	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	9/28/2021	498.0	1500.0	234.263	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	3/8/2022	803.0	4278.1	388.403	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	8/30/2022	450.0	4179.8	377.044	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	3/7/2023	1420.0	1322.7	267.618	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	9/11/2023	465.0	1305.6	250.541	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	3/20/2024	369.0	1290.3	256.069	2000.0	3/25/2020	NA	10/16/2014
MW-21	Barium	9/12/2024	517.0	1273.6	117.905	2000.0	3/25/2020	NA	10/16/2014

Table 7	KEY:	SSI	SSL LCL>GWPS

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South Dallas County Sanitary Landfill
Permit No. 25-SDP-01-75P

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

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-21	chloroethane	10/16/2014	1.4	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	4/4/2015	1.1	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	10/1/2015	1.7	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	4/4/2016	2.4	1.0	1.168	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	9/20/2016	1.4	1.0	1.168	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	4/24/2017	2.6	1.0	1.533	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	10/9/2017	1.0	1.0	1.181	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	3/21/2018	<1.0	1.0	0.599	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	9/7/2018	1.6	1.0	0.643	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	4/2/2019	1.8	1.0	0.713	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	9/18/2019	1.7	1.0	0.876	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	3/25/2020	1.2	1.0	1.347	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	9/15/2020	<1.0	1.0	0.785	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	3/8/2021	1.3	1.0	0.743	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	9/28/2021	<1.0	1.0	0.498	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	3/8/2022	1.0	1.0	0.361	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	8/30/2022	<1.0	1.0	0.361	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	3/7/2023	1.4	1.0	0.337	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	9/11/2023	<1.0	1.0	0.337	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	3/20/2024	<1.0	1.0	0.196	2800.0	10/16/2014	NA	10/16/2014
MW-21	chloroethane	9/12/2024	<1.0	1.0	0.196	2800.0	10/16/2014	NA	10/16/2014

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

Table 7
Summary of Ongoing & Newly Identified SSI
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South Dallas County Sanitary Landfill
Permit No. 25-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)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-22	benzene	10/16/2014	<1.0	1.0	---	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	4/4/2015	1.6	1.0	---	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	10/1/2015	<1.0	1.0	---	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	4/4/2016	<1.0	1.0	0.299	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	9/20/2016	<1.0	1.0	0.299	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	4/24/2017	1.7	1.0	0.280	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	10/9/2017	<1.0	1.0	0.280	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	3/21/2018	2.3	1.0	0.471	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	9/7/2018	1.5	1.0	0.852	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	4/2/2019	2.2	1.0	0.906	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	9/18/2019	2.3	1.0	1.741	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	3/25/2020	2.4	1.0	1.746	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	9/15/2020	1.5	1.0	1.746	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	3/8/2021	1.4	1.0	1.447	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	9/28/2021	<1.0	1.0	0.777	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	3/8/2022	1.0	1.0	0.880	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	8/30/2022	<1.0	1.0	0.565	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	3/7/2023	2.0	1.0	0.479	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	9/11/2023	<1.0	1.0	0.479	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	3/20/2024	<1.0	1.0	0.479	5.0	4/4/2015	NA	10/16/2014
MW-22	benzene	9/12/2024	<1.0	1.0	0.479	5.0	4/4/2015	NA	10/16/2014

Table 7

KEY:	SSI	SSL LCL>GWPS

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

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-22	chloroethane	10/16/2014	1.0	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	4/4/2015	1.1	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	10/1/2015	<1.0	1.0	---	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	4/4/2016	<1.0	1.0	0.498	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	9/20/2016	<1.0	1.0	0.390	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	4/24/2017	1.5	1.0	0.317	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	10/9/2017	<1.0	1.0	0.317	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	3/21/2018	<1.0	1.0	0.317	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	9/7/2018	<1.0	1.0	0.317	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	4/2/2019	<1.0	1.0	0.500	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	9/18/2019	<1.0	1.0	0.500	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	3/25/2020	<1.0	1.0	0.500	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	9/15/2020	1.7	1.0	0.280	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	3/8/2021	1.2	1.0	0.468	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	9/28/2021	<1.0	1.0	0.468	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	3/8/2022	<1.0	1.0	0.287	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	8/30/2022	<1.0	1.0	0.287	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	3/7/2023	<1.0	1.0	0.500	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	9/11/2023	<1.0	1.0	0.500	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	3/20/2024	<1.0	1.0	0.500	2800.0	10/16/2014	NA	10/16/2014
MW-22	chloroethane	9/12/2024	<1.0	1.0	0.500	2800.0	10/16/2014	NA	10/16/2014

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KEY:	SSI	SSL LCL>GWPS

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

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	SSI Initial Exceedance	Resamples Due	5th Background Sample
MW-22	vinyl chloride	10/16/2014	<1.0	1.0	---	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	4/4/2015	1.6	1.0	---	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	10/1/2015	1.0	1.0	---	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	4/4/2016	<1.0	1.0	0.447	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	9/20/2016	<1.0	1.0	0.447	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	4/24/2017	2.9	1.0	0.237	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	10/9/2017	<1.0	1.0	0.061	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	3/21/2018	<1.0	1.0	0.061	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	9/7/2018	1.5	1.0	0.366	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	4/2/2019	1.4	1.0	0.499	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	9/18/2019	1.8	1.0	0.815	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	3/25/2020	1.8	1.0	1.446	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	9/15/2020	1.3	1.0	1.347	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	3/8/2021	1.1	1.0	1.192	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	9/28/2021	<1.0	1.0	0.709	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	3/8/2022	<1.0	1.0	0.542	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	8/30/2022	<1.0	1.0	0.365	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	3/7/2023	1.3	1.0	0.037	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	9/11/2023	<1.0	1.0	0.037	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	3/20/2024	<1.0	1.0	0.037	2.0	10/16/2014	NA	10/16/2014
MW-22	vinyl chloride	9/12/2024	<1.0	1.0	0.037	2.0	10/16/2014	NA	10/16/2014

Bold GWPS *= A Site Specific GWPS that is equal to the Prediction Limit. All other GWPS are IAC 567-137 Statewaide 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 GWD-1

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	6/14/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1		<1		<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1		<1		<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1		<1		<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1		<1		<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1		<1		<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1		<1		<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1		<1		<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1		<1		<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1		<1		<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1		<1		<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1		<1		<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1		<1		<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1		<1		<1	<1
2-butanone (mek)	ug/L	<5	<5	<5	<5		<5		<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5		<5		<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5		<5		<5	<5
Acetone	ug/L	<10	<10	<10	<10		<10		<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5		<5		<5	<5
Antimony, total	ug/L	<2	<2	<2	<2		<2		<2	<2
Arsenic, total	ug/L	<4.0	5.4	<4.0	4.7	<4.0	4.6	5.7	5.6	5.0
Barium, total	ug/L	118.0	170.0	95.5	114.0		102.0		96.9	232.0
Benzene	ug/L	<1	<1	<1	<1		<1		<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4		<4		<4	<4
Bromochloromethane	ug/L	<1	<1	<1	<1		<1		<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1		<1		<1	<1
Bromoform	ug/L	<1	<1	<1	<1		<1		<1	<1
Bromomethane	ug/L	<1	<1	<1	<1		<1		<1	<1
Cadmium, total	ug/L	<.8	<.8	<.8	<.8		<.8		<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1		<1		<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1		<1		<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1		<1		<1	<1
Chloroethane	ug/L	<1.0	<1.0	<1.0	<1.0		<1.0		<1.0	<1.0
Chloroform	ug/L	<1	<1	<1	<1		<1		<1	<1
Chloromethane	ug/L	<1	<1	<1	<1		<1		<1	<1
Chromium, total	ug/L	<8	<8	<8	<8		<8		<8	<8
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1		<1		<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1		<1		<1	<1
Cobalt, total	ug/L	<.8	1.0	1.3	1.1		3.8		4.6	3.0
Copper, total	ug/L	<4.0	<4.0	<4.0	<4.0		<4.0		<4.0	<4.0
Dibromochloromethane	ug/L	<1	<1	<1	<1		<1		<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1		<1		<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1		<1		<1	<1
Lead, total	ug/L	<4	<4	<4	<4		<4		<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1		<1		<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5		<5		<5	<5
Nickel, total	ug/L	<4.0	<4.0	4.3	<4.0		8.3		11.3	9.8
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	<2	12	11	10		10		40	30
Styrene	ug/L	<1	<1	<1	<1		<1		<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1		<1		<1	<1
Thallium, total	ug/L	<4	<4	<1	<4		<4		<4	<4
Toluene	ug/L	<1	<1	<1	<1		<1		<1	<1
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1		<1		<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1		<1		<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5		<5		<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1		<1		<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1		<1		<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20		<20		<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5		<5		<5	<5
Vinyl chloride	ug/L	<1.0	<1.0	<1.0	<1.0		<1.0		<1.0	<1.0
Xylenes, total	ug/L	<2	<2	<2	<2		<2		<2	<2
Zinc, total	ug/L	<20	<8	<8	<8		<8		<8	<8

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

Table 9

Analytical Data Summary for GWD-1

Constituents	3/21/2018	6/11/2018	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	12/2/2020	3/8/2021
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-dichloroethylene	<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	<1	<5	<5		<5
1,2-dibromoethane	<1		<1	<1	<1	<1	<1		<1
1,2-dichlorobenzene	<1		<1	<1	<1	<1	<1		<1
1,2-dichloroethane	<1		<1	<1	<1	<1	<1		<1
1,2-dichloropropane	<1		<1	<1	<1	<1	<1		<1
1,4-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		<10	<10	<10	<10	<10		<10
Acrylonitrile	<5		<5	<5	<5	<5	<5		<5
Antimony, total	<2		<2	<2	<2	<2	<2		<2
Arsenic, total	9.6	10.4	6.0	<4.0	5.6	5.3	7.0		10.2
Barium, total	205.0	254.0	148.0	112.0	139.0	123.0	136.0		148.0
Benzene	<1		<1	<1	<1	<1	<1		<1
Beryllium, total	<4		<4	<4	<4	<4	<4		<4
Bromochloromethane	<1		<1	<1	<1	<1	<1		<1
Bromodichloromethane	<1		<1	<1	<1	<1	<1		<1
Bromoform	<1		<1	<1	<1	<1	<1		<1
Bromomethane	<1		<1	<1	<1	<1	<1		<1
Cadmium, total	<.8		<.8	<.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	<1.0		<1.0	<1.0	<1.0	<1.0	1.6	<1.0	<1.0
Chloroform	<1		<1	<1	<1	<1	<1		<1
Chloromethane	<1		<1	<1	<1	<1	<1		<1
Chromium, total	<8		<8	<8	<8	<8	<8		<8
Cis-1,2-dichloroethylene	<1		<1	<1	<1	<1	<1		<1
Cis-1,3-dichloropropene	<1		<1	<1	<1	<1	<1		<1
Cobalt, total	<2.0		1.1	1.7	1.0	3.7	3.2		2.9
Copper, total	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0		<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
Lead, total	<4		<4	<4	<4	<4	<4		<4
Methyl iodide	<1		<1	<1	<1	<1	<1		<1
Methylene chloride	<5		<5	<5	<5	<5	<5		<5
Nickel, total	<20.0		<4.0	5.9	<4.0	10.3	8.4		7.4
Selenium, total	<4		<4	<4	<4	<4	<4		<4
Silver, total	<4		<8	<4	<4	<4	<4		<4
Solids, total suspended									
Styrene	<1		<1	<1	<1	<1	<1		<1
Tetrachloroethylene	<1		<1	<1	<1	<1	<1		<1
Thallium, total	<4		<4	<2	<2	<2	<2		<2
Toluene	<1		<1	<1	<1	<1	<1		<1
Trans-1,2-dichloroethylene	<1		<1	<1	<1	<1	<1		<1
Trans-1,3-dichloropropene	<1		<1	<1	<1	<1	<1		<1
Trans-1,4-dichloro-2-butene	<5		<5	<5	<5	<5	<5		<5
Trichloroethylene	<1		<1	<1	<1	<1	<1		<1
Trichlorofluoromethane	<1		<1	<1	<1	<1	<1		<1
Vanadium, total	<20		<20	<20	<20	<20	<20		<20
Vinyl acetate	<5		<5	<5	<5	<5	<5		<5
Vinyl chloride	<1.0		<1.0	<1.0	<1.0	<1.0	<1.0		<1.0
Xylenes, total	<2		<2	<2	<2	<2	<2		<2
Zinc, total	<8		<8	<8	<8	<20	<20		<20

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

Table 9

Analytical Data Summary for GWD-1

Constituents	9/28/2021	3/8/2022	8/30/2022	3/7/2023	5/9/2023	6/7/2023
1,1,1,2-tetrachloroethane	<1	<1	<1	<1		
1,1,1-trichloroethane	<1	<1	<1	<1		
1,1,2,2-tetrachloroethane	<1	<1	<1	<1		
1,1,2-trichloroethane	<1	<1	<1	<1		
1,1-dichloroethane	<1	<1	<1	<1		
1,1-dichloroethylene	<1	<1	<1	<1		
1,2,3-trichloropropane	<1	<1	<1	<1		
1,2-dibromo-3-chloropropane	<5	<5	<5	<5		
1,2-dibromoethane	<1	<1	<1	<1		
1,2-dichlorobenzene	<1	<1	<1	<1		
1,2-dichloroethane	<1	<1	<1	<1		
1,2-dichloropropane	<1	<1	<1	<1		
1,4-dichlorobenzene	<1	<1	<1	<1		
2-butanone (mek)	<5	<10	<10	<10		
2-hexanone (mbk)	<5	<5	<5	<5		
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5		
Acetone	<10	<10	<10	<10		
Acrylonitrile	<5	<5	<5	<5		
Antimony, total	<2	<2	<2	<2		
Arsenic, total	5.7	4.3	5.8	5.3		
Barium, total	136.0	182.0	252.0	199.0		
Benzene	<1	<1	<1	<1		
Beryllium, total	<4	<4	<4	<4		
Bromochloromethane	<1	<1	<1	<1		
Bromodichloromethane	<1	<1	<1	<1		
Bromoform	<1	<1	<1	<1		
Bromomethane	<1	<1	<1	<1		
Cadmium, total	<.8	<.8	<.8	<.8		
Carbon disulfide	<1	<1	<1	<1		
Carbon tetrachloride	<1	<1	<1	<1		
Chlorobenzene	<1	<1	<1	<1		
Chloroethane	<1.0	<1.0	<1.0	<1.0		
Chloroform	<1	<1	<1	<1		
Chloromethane	<1	<1	<1	<1		
Chromium, total	<8	<8	<8	<8		
Cis-1,2-dichloroethylene	<1	<1	<1	<1		
Cis-1,3-dichloropropene	<1	<1	<1	<1		
Cobalt, total	.4	.8	.5	.6		
Copper, total	<4.0	<4.0	11.3	<4.0		
Dibromochloromethane	<1	<1	<1	<1		
Dibromomethane	<1	<1	<1	<1		
Ethylbenzene	<1	<1	<1	<1		
Lead, total	<4	<4	<4	<4		
Methyl iodide	<1	<1	<1	<1		
Methylene chloride	<5	<5	<5	<5		
Nickel, total	<4.0	<4.0	<4.0	<4.0		
Selenium, total	<4	<4	<4	<4		
Silver, total	<4	<4	<4	<4		
Solids, total suspended						
Styrene	<1	<1	<1	<1		
Tetrachloroethylene	<1	<1	<1	<1		
Thallium, total	<2	<2	<2	<2		
Toluene	<1	<1	<1	<1		
Trans-1,2-dichloroethylene	<1	<1	<1	<1		
Trans-1,3-dichloropropene	<1	<1	<1	<1		
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5		
Trichloroethylene	<1	<1	<1	<1		
Trichlorofluoromethane	<1	<1	<1	<1		
Vanadium, total	<20	<20	<20	<20		
Vinyl acetate	<5	<5	<5	<5		
Vinyl chloride	<1.0	<1.0	<1.0	1.3	1.5	1.2
Xylenes, total	<2	<2	<2	<2		
Zinc, total	<20	<20	<20	<20		

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

Table 9

Analytical Data Summary for MW-10

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	4/24/2017	3/21/2018	4/2/2019	3/25/2020
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<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	<5	<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	ug/L	189	169	205	170	129	112	135	174
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	2.2	.9	<.8	1.6	<.8	<.8	<.8	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	5.0	<4.0	4.1	7.9	<4.0	<4.0	<4.0	<4.0
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	12	4	3	14	28			
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4	<4	<2	<2
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20.0	<8.0	<8.0	8.6	<8.0	<8.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-12

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
(34) -methylphenol	ug/L					<8			
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1-dichloropropene	ug/L					<1			
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2,4,5-tetrachlorobenzene	ug/L					<8			
1,2,4-trichlorobenzene	ug/L					<1			
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dinitrobenzene	ug/L					<8			
1,3,5-trinitrobenzene	ug/L					<8			
1,3-dichlorobenzene	ug/L					<1			
1,3-dichloropropane	ug/L					<1			
1,3-dinitrobenzene	ug/L					<8			
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,4-naphthoquinone	ug/L					<8			
1,4-phenylenediamine	ug/L					<8			
1-naphthylamine	ug/L					<8			
2,2-dichloropropane	ug/L					<1			
2,3,4,6-tetrachlorophenol	ug/L					<8			
2,4,5-t	ug/L					<.5			
2,4,5-tp (silvex)	ug/L					<.5			
2,4,5-trichlorophenol	ug/L					<8			
2,4,6-trichlorophenol	ug/L					<8			
2,4-d	ug/L					<2			
2,4-dichlorophenol	ug/L					<8			
2,4-dimethylphenol	ug/L					<8			
2,4-dinitrophenol	ug/L					<8			
2,4-dinitrotoluene	ug/L					<8			
2,6-dichlorophenol	ug/L					<8			
2,6-dinitrotoluene	ug/L					<8			
2-acetylaminofluorene	ug/L					<8			
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene	ug/L					<8			
2-chlorophenol	ug/L					<8			
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene	ug/L					<8			
2-methylphenol	ug/L					<8			
2-naphthylamine	ug/L					<8			
2-nitroaniline	ug/L					<8			
2-nitrophenol	ug/L					<8			
3,3´-dichlorobenzidine	ug/L					<8			
3,3'-dimethylbenzidine	ug/L					<8			
3-methylcholanthrene	ug/L					<8			
3-nitroaniline	ug/L					<8			
4,4´-ddd	ug/L					<.05			
4,4´-dde	ug/L					<.05			
4,4´-ddt	ug/L					<.05			
4,6-dinitro-2-methylphenol	ug/L					<8			
4-aminobiphenyl	ug/L					<8			
4-bromophenyl phenyl ether	ug/L					<8			
4-chloro-3-methylphenol	ug/L					<8			
4-chloroaniline	ug/L					<8			
4-chlorophenyl phenyl ether	ug/L					<8			
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5		<5	<5
4-nitroaniline	ug/L					<8			
4-nitrophenol	ug/L					<8			
5-nitro-o-toluidine	ug/L					<8			
7,12-dimethylbenz(a)anthracene	ug/L					<8			
Acenaphthene	ug/L					<8			
Acenaphthylene	ug/L					<8			
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0	12.9
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-12

Constituents	3/21/2018	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	12/2/2020	3/8/2021	9/28/2021
(34) -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-dichloroethylene	<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	<1	<5	<5		<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dinitrobenzene									
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	<5
2-chloronaphthalene									
2-chlorophenol									
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene									
2-methylphenol									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3´-dichlorobenzidine									
3,3'-dimethylbenzidine									
3-methylcholanthrene									
3-nitroaniline									
4,4´-ddd									
4,4´-dde									
4,4´-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5		<5	<5
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-12

Constituents	3/8/2022	8/30/2022	3/7/2023	9/11/2023	3/20/2024	5/9/2024	9/12/2024
(34) -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-dichloroethylene	<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							
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-12

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
Antimony, total	ug/L	<2	<2	<2	<2	<2		<2	<2
Arochlor 1016	ug/L					<.1			
Arochlor 1221	ug/L					<.2			
Arochlor 1232	ug/L					<.2			
Arochlor 1242	ug/L					<.2			
Arochlor 1248	ug/L					<.2			
Arochlor 1254	ug/L					<.1			
Arochlor 1260	ug/L					<.1			
Arsenic, total	ug/L	7.2	7.5	<4.0	5.4	4.9		5.3	<4.0
Azobenzene	ug/L					<8			
Barium, total	ug/L	342	319	512	414	313		375	392
Benzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Benzo(a)anthracene	ug/L					<8			
Benzo(a)pyrene	ug/L					<8			
Benzo(b)fluoranthene	ug/L					<8			
Benzo(g,h,i)perylene	ug/L					<8			
Benzo(k)fluoranthene	ug/L					<8			
Benzyl alcohol	ug/L					<8			
Beryllium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Beta-bhc	ug/L					<.05			
Bis (2-chloroethoxy) methane	ug/L					<8			
Bis(2-chloroethyl) ether	ug/L					<8			
Bis(2-chloroisopropyl) ether	ug/L					<8			
Bis(2-ethylhexyl) phthalate	ug/L	<10				10	<10		
Bromochloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Butyl benzyl phthalate	ug/L					<8			
Cadmium, total	ug/L	<.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	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0
Chloroform	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloroprene	ug/L					<1			
Chromium, total	ug/L	<8	<8	<8	<8	<8		<8	<8
Chrysene	ug/L					<8			
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	ug/L	13.5	15.6	<.8	6.3	14.4		7.4	1.0
Copper, total	ug/L	<4.0	<4.0	<4.0	6.3	<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-12

Constituents	3/21/2018	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	12/2/2020	3/8/2021	9/28/2021
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	12.7	<4.0	<4.0	11.5	<4.0	5.9		<4.0	13.7
Azobenzene									
Barium, total	548	420	289	492	369	374		361	332
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	<4	<4	<4	<4	<4		<4	<4
Beta-bhc									
Bis (2-chloroethoxy) methane									
Bis(2-chloroethyl) ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl) phthalate									
Bromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
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	1.6	<.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	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<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									
Chromium, total	<8	<8	<8	<8	<8	<8		<8	<8
Chrysene									
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1		<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	5.5	3.7	5.3	1.4	6.9	2.3		4.7	2.3
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0
Cyanide, total									
Delta-bhc									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
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-12

Constituents	3/8/2022	8/30/2022	3/7/2023	9/11/2023	3/20/2024	5/9/2024	9/12/2024
Antimony, total	<2	<2	<2	<2	<2		<2
Arochlor 1016							
Arochlor 1221							
Arochlor 1232							
Arochlor 1242							
Arochlor 1248							
Arochlor 1254							
Arochlor 1260							
Arsenic, total	8.3	18.5	10.2	8.7	12.0	5.0	5.6
Azobenzene							
Barium, total	382	311	450	285	324		310
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	<4	<4	<4	<4		<4
Beta-bhc							
Bis (2-chloroethoxy) methane							
Bis(2-chloroethyl) ether							
Bis(2-chloroisopropyl) ether							
Bis(2-ethylhexyl) phthalate							
Bromochloromethane	<1	<1	<1	<1	<1		<1
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		<.8
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	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0
Chloroform	<1	<1	<1	<1	<1		<1
Chloromethane	<1	<1	<1	<1	<1		<1
Chloroprene							
Chromium, total	<8	<8	<8	<8	<8		<8
Chrysene							
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1		<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1		<1
Cobalt, total	5.1	1.7	4.4	1.8	3.4		1.1
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0
Cyanide, total							
Delta-bhc							
Diallate							
Dibenzo(a,h)anthracene							
Dibenzofuran							
Dibromochloromethane	<1	<1	<1	<1	<1		<1
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-12

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
Hexachlorobutadiene	ug/L					<8			
Hexachlorocyclopentadiene	ug/L					<8			
Hexachloroethane	ug/L					<8			
Hexachloropropene	ug/L					<8			
Indeno(1,2,3-cd)pyrene	ug/L					<8			
Isobutanol	ug/L					<1000			
Isodrin	ug/L					<8			
Isophorone	ug/L					<8			
Isosafrole	ug/L					<8			
Kepone	ug/L					<8			
Lead, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Mercury, total	ug/L					<.5			
Methacrylonitrile	ug/L					<1			
Methapyrilene	ug/L					<8			
Methoxychlor	ug/L					<.05			
Methyl iodide	ug/L	<1	<1	<1	<1	<1		<1	<1
Methyl methacrylate	ug/L					<1			
Methyl methanesulfonate	ug/L					<8			
Methyl parathion	ug/L					<.4			
Methylene chloride	ug/L	<5	<5	<5	<5	<5		<5	<5
Naphthalene	ug/L					<8			
Nickel, total	ug/L	15.7	18.4	<4.0	9.6	11.8		12.9	<4.0
Nitrobenzene	ug/L					<8			
N-nitrosodiethylamine	ug/L					<8			
N-nitrosodimethylamine	ug/L					<8			
N-nitrosodi-n-butylamine	ug/L					<8			
N-nitroso-di-n-propylamine	ug/L					<8			
N-nitrosodiphenylamine	ug/L					<8			
N-nitrosomethylethylamine	ug/L					<8			
N-nitrosopiperidine	ug/L					<8			
N-nitrosopyrrolidine	ug/L					<8			
O,o,o-triethyl phosphorothioate	ug/L					<.4			
O-toluidine	ug/L					<8			
Parathion	ug/L					<.4			
P-dimethylaminoazobenzene	ug/L					<8			
Pentachlorobenzene	ug/L					<8			
Pentachloronitrobenzene (pcnb)	ug/L					<8			
Pentachlorophenol	ug/L					<8			
Phenacetin	ug/L					<8			
Phenanthrene	ug/L					<8			
Phenol	ug/L					<8			
Phorate	ug/L					<.4			
Pronamide	ug/L					<8			
Propionitrile	ug/L					<10			
Pyrene	ug/L					<8			
Safrole	ug/L					<8			
Selenium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Solids, total suspended	mg/L	62	41	79	47	59		100	87
Styrene	ug/L	<1	<1	<1	<1	<1		<1	<1
Sulfide, total	mg/L					<.1			
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Thallium, total	ug/L	<4.0	<4.0	<1.0	<4.0	<4.0		<4.0	<4.0
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-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5		<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20		<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5		<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1		<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2		<2	<2
Zinc, total	ug/L	<20.0	<8.0	<8.0	<8.0	<8.0		<8.0	<8.0

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

Table 9

Analytical Data Summary for MW-12

Constituents	3/21/2018	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	12/2/2020	3/8/2021	9/28/2021
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total	<4	<4	<4	<4	<4	<4		<4	<4
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl iodide	<1	<1	<1	<1	<1	<1		<1	<1
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5	<5	<5	<5		<5	<5
Naphthalene									
Nickel, total	<20.0	5.6	7.6	<4.0	10.5	4.8		7.5	4.5
Nitrobenzene									
N-nitrosodiethylamine									
N-nitrosodimethylamine									
N-nitrosodi-n-butylamine									
N-nitroso-di-n-propylamine									
N-nitrosodiphenylamine									
N-nitrosomethylethylamine									
N-nitrosopiperidine									
N-nitrosopyrrolidine									
O,o,o-triethyl phosphorothioate									
O-toluidine									
Parathion									
P-dimethylaminoazobenzene									
Pentachlorobenzene									
Pentachloronitrobenzene (pcnb)									
Pentachlorophenol									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium, total	<4	<4	<4	<4	<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									
Tetrachloroethylene	<1	<1	<1	<1	<1	<1		<1	<1
Thallium, total	<4.0	<4.0	2.8	<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-dichloroethylene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5		<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1		<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20		<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5		<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1		<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2		<2	<2
Zinc, total	<8.0	98.8	<8.0	27.2	<20.0	<20.0		<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-12

Constituents	3/8/2022	8/30/2022	3/7/2023	9/11/2023	3/20/2024	5/9/2024	9/12/2024
Hexachlorobutadiene							
Hexachlorocyclopentadiene							
Hexachloroethane							
Hexachloropropene							
Indeno(1,2,3-cd)pyrene							
Isobutanol							
Isodrin							
Isophorone							
Isosafrole							
Kepone							
Lead, total	<4	<4	<4	<4	<4		<4
Mercury, total							
Methacrylonitrile							
Methapyrilene							
Methoxychlor							
Methyl iodide	<1	<1	<1	<1	<1		<1
Methyl methacrylate							
Methyl methanesulfonate							
Methyl parathion							
Methylene chloride	<5	<5	<5	<5	<5		<5
Naphthalene							
Nickel, total	8.0	4.2	8.2	4.1	6.1		<4.0
Nitrobenzene							
N-nitrosodiethylamine							
N-nitrosodimethylamine							
N-nitrosodi-n-butylamine							
N-nitroso-di-n-propylamine							
N-nitrosodiphenylamine							
N-nitrosomethylethylamine							
N-nitrosopiperidine							
N-nitrosopyrrolidine							
O,o,o-triethyl phosphorothioate							
O-toluidine							
Parathion							
P-dimethylaminoazobenzene							
Pentachlorobenzene							
Pentachloronitrobenzene (pcnb)							
Pentachlorophenol							
Phenacetin							
Phenanthrene							
Phenol							
Phorate							
Pronamide							
Propionitrile							
Pyrene							
Safrole							
Selenium, total	<4	<4	<4	<4	<4		<4
Silver, total	<4	<4	<4	<4	<4		<4
Solids, total suspended							
Styrene	<1	<1	<1	<1	<1		<1
Sulfide, total							
Tetrachloroethylene	<1	<1	<1	<1	<1		<1
Thallium, total	<2.0	<2.0	<2.0	<2.0	<2.0		<2.0
Thionazin							
Tin, total							
Toluene	<1	<1	<1	<1	<1		<1
Toxaphene							
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1		<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1		<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5		<5
Trichloroethylene	<1	<1	<1	<1	<1		<1
Trichlorofluoromethane	<1	<1	<1	<1	<1		<1
Vanadium, total	<20	<20	<20	<20	<20		<20
Vinyl acetate	<5	<5	<5	<5	<5		<5
Vinyl chloride	<1	<1	<1	<1	<1		<1
Xylenes, total	<2	<2	<2	<2	<2		<2
Zinc, total	<20.0	<20.0	<20.0	<20.0	<20.0		<20.0

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

Table 9

Analytical Data Summary for MW-15R

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
(34) -methylphenol	ug/L				<8					
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L				<1					
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L				<8					
1,2,4-trichlorobenzene	ug/L				<1					
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L				<8					
1,3,5-trinitrobenzene	ug/L				<8					
1,3-dichlorobenzene	ug/L				<1					
1,3-dichloropropane	ug/L				<1					
1,3-dinitrobenzene	ug/L				<8					
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L				<8					
1,4-phenylenediamine	ug/L				<8					
1-naphthylamine	ug/L				<8					
2,2-dichloropropane	ug/L				<1					
2,3,4,6-tetrachlorophenol	ug/L				<8					
2,4,5-t	ug/L				<.5					
2,4,5-tp (silvex)	ug/L				<.5					
2,4,5-trichlorophenol	ug/L				<8					
2,4,6-trichlorophenol	ug/L				<8					
2,4-d	ug/L				<2					
2,4-dichlorophenol	ug/L				<8					
2,4-dimethylphenol	ug/L				<8					
2,4-dinitrophenol	ug/L				<8					
2,4-dinitrotoluene	ug/L				<8					
2,6-dichlorophenol	ug/L				<8					
2,6-dinitrotoluene	ug/L				<8					
2-acetylaminofluorene	ug/L				<8					
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L				<8					
2-chlorophenol	ug/L				<8					
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L				<8					
2-methylphenol	ug/L				<8					
2-naphthylamine	ug/L				<8					
2-nitroaniline	ug/L				<8					
2-nitrophenol	ug/L				<8					
3,3´-dichlorobenzidine	ug/L				<8					
3,3'-dimethylbenzidine	ug/L				<8					
3-methylcholanthrene	ug/L				<8					
3-nitroaniline	ug/L				<8					
4,4´-ddd	ug/L				<.05					
4,4´-dde	ug/L				<.05					
4,4´-ddt	ug/L				<.05					
4,6-dinitro-2-methylphenol	ug/L				<8					
4-aminobiphenyl	ug/L				<8					
4-bromophenyl phenyl ether	ug/L				<8					
4-chloro-3-methylphenol	ug/L				<8					
4-chloroaniline	ug/L				<8					
4-chlorophenyl phenyl ether	ug/L				<8					
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L				<8					
4-nitrophenol	ug/L				<8					
5-nitro-o-toluidine	ug/L				<8					
7,12-dimethylbenz(a)anthracene	ug/L				<8					
Acenaphthene	ug/L				<8					
Acenaphthylene	ug/L				<8					
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	10.4	<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	<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-15R

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
(34) -methylphenol									
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene									
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene									
1,2,4-trichlorobenzene									
1,2-dibromo-3-chloropropane	<1	<1	<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									
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-15R

Constituents	9/11/2023	3/20/2024	9/12/2024
(34) -methylphenol			
1,1,1,2-tetrachloroethane	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1
1,1-dichloroethane	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1
1,1-dichloropropene			
1,2,3-trichloropropane	<1	<1	<1
1,2,4,5-tetrachlorobenzene			
1,2,4-trichlorobenzene			
1,2-dibromo-3-chloropropane	<5	<5	<5
1,2-dibromoethane	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1
1,2-dichloroethane	<1	<1	<1
1,2-dichloropropane	<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
1,4-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
2-chloronaphthalene			
2-chlorophenol			
2-hexanone (mbk)	<5	<5	<5
2-methylnaphthalene			
2-methylphenol			
2-naphthylamine			
2-nitroaniline			
2-nitrophenol			
3,3´-dichlorobenzidine			
3,3'-dimethylbenzidine			
3-methylcholanthrene			
3-nitroaniline			
4,4´-ddd			
4,4´-dde			
4,4´-ddt			
4,6-dinitro-2-methylphenol			
4-aminobiphenyl			
4-bromophenyl phenyl ether			
4-chloro-3-methylphenol			
4-chloroaniline			
4-chlorophenyl phenyl ether			
4-methyl-2-pentanone (mibk)	<5	<5	<5
4-nitroaniline			
4-nitrophenol			
5-nitro-o-toluidine			
7,12-dimethylbenz(a)anthracene			
Acenaphthene			
Acenaphthylene			
Acetone	<10.0	<10.0	<10.0
Acetonitrile			
Acetophenone			
Acrolein			
Acrylonitrile	<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-15R

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L				<.1					
Arochlor 1221	ug/L				<.2					
Arochlor 1232	ug/L				<.2					
Arochlor 1242	ug/L				<.2					
Arochlor 1248	ug/L				<.2					
Arochlor 1254	ug/L				<.1					
Arochlor 1260	ug/L				<.1					
Arsenic, total	ug/L	36.6	44.5	29.0	41.1	24.2	28.3	20.6	21.5	23.9
Azobenzene	ug/L				<8					
Barium, total	ug/L	645	552	436	461	543	469	461	466	471
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L				<8					
Benzo(a)pyrene	ug/L				<8					
Benzo(b)fluoranthene	ug/L				<8					
Benzo(g,h,i)perylene	ug/L				<8					
Benzo(k)fluoranthene	ug/L				<8					
Benzyl alcohol	ug/L				<8					
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc	ug/L				<.05					
Bis (2-chloroethoxy) methane	ug/L				<8					
Bis(2-chloroethyl) ether	ug/L				<8					
Bis(2-chloroisopropyl) ether	ug/L				<8					
Bis(2-ethylhexyl) phthalate	ug/L				<8					
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L				<8					
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L				<.1					
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L				<8					
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	2	<1	<1
Chloroprene	ug/L				<1					
Chromium, total	ug/L	13.7	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene	ug/L				<8					
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	6.5	4.4	3.7	3.8	3.0	2.6	3.8	2.6	3.3
Copper, total	ug/L	14.2	8.5	<4.0	4.7	5.5	<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	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L				1					
Dieldrin	ug/L				<.05					
Diethyl phthalate	ug/L				<8					
Dimethoate	ug/L				<.4					
Dimethylphthalate	ug/L				<8					
Di-n-butyl phthalate	ug/L				<8					
Di-n-octyl phthalate	ug/L				<8					
Dinoseb	ug/L				<.5					
Diphenylamine	ug/L				<8					
Disulfoton	ug/L				<.4					
Endosulfan i	ug/L				<.05					
Endosulfan ii	ug/L				<.05					
Endosulfan sulfate	ug/L				<.05					
Endrin	ug/L				<.05					
Endrin aldehyde	ug/L				<.05					
Ethyl methacrylate	ug/L				<10					
Ethyl methanesulfonate	ug/L				<8					
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur	ug/L				<.4					
Fluoranthene	ug/L				<8					
Fluorene	ug/L				<8					
Gamma-bhc (lindane)	ug/L				<.05					
Heptachlor	ug/L				<.05					
Heptachlor epoxide	ug/L				<.05					
Hexachlorobenzene	ug/L				<.05					

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

Table 9

Analytical Data Summary for MW-15R

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
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	19.0	22.7	31.3	29.6	35.0	25.2	18.4	19.7	21.5
Azobenzene									
Barium, total	405	476	606	505	575	474	384	384	393
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Benzyl alcohol									
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc									
Bis (2-chloroethoxy) methane									
Bis(2-chloroethyl) ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl) phthalate									
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate									
Cadmium, total	<.8	<.8	<.8	<.8	.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate									
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene									
Chromium, total	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene									
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	2.9	4.2	3.4	5.8	2.9	3.1	2.7	3.3	1.8
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total									
Delta-bhc									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethylphthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur									
Fluoranthene									
Fluorene									
Gamma-bhc (lindane)									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									

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

Table 9

Analytical Data Summary for MW-15R

Constituents	9/11/2023	3/20/2024	9/12/2024
Antimony, total	<2	<2	<2
Arochlor 1016			
Arochlor 1221			
Arochlor 1232			
Arochlor 1242			
Arochlor 1248			
Arochlor 1254			
Arochlor 1260			
Arsenic, total	20.1	13.3	17.3
Azobenzene			
Barium, total	354	318	332
Benzene	<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
Beta-bhc			
Bis (2-chloroethoxy) methane			
Bis(2-chloroethyl) ether			
Bis(2-chloroisopropyl) ether			
Bis(2-ethylhexyl) phthalate			
Bromochloromethane	<1	<1	<1
Bromodichloromethane	<1	<1	<1
Bromoform	<1	<1	<1
Bromomethane	<1	<1	<1
Butyl benzyl phthalate			
Cadmium, total	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1
Carbon tetrachloride	<1	<1	<1
Chlordane			
Chlorobenzene	<1	<1	<1
Chlorobenzilate			
Chloroethane	<1	<1	<1
Chloroform	<1	<1	<1
Chloromethane	<1	<1	<1
Chloroprene			
Chromium, total	<8.0	<8.0	<8.0
Chrysene			
Cis-1,2-dichloroethylene	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1
Cobalt, total	3.8	2.2	3.3
Copper, total	<4.0	<4.0	<4.0
Cyanide, total			
Delta-bhc			
Diallate			
Dibenzo(a,h)anthracene			
Dibenzofuran			
Dibromochloromethane	<1	<1	<1
Dibromomethane	<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
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-15R

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Hexachlorobutadiene	ug/L				<8					
Hexachlorocyclopentadiene	ug/L				<8					
Hexachloroethane	ug/L				<8					
Hexachloropropene	ug/L				<8					
Indeno(1,2,3-cd)pyrene	ug/L				<8					
Isobutanol	ug/L				<1000					
Isodrin	ug/L				<8					
Isophorone	ug/L				<8					
Isosafrole	ug/L				<8					
Kepone	ug/L				<8					
Lead, total	ug/L	10.0	6.5	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Mercury, total	ug/L				<.5					
Methacrylonitrile	ug/L				<1					
Methapyrilene	ug/L				<8					
Methoxychlor	ug/L				<.05					
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate	ug/L				<1					
Methyl methanesulfonate	ug/L				<8					
Methyl parathion	ug/L				<.4					
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L				<8					
Nickel, total	ug/L	15.0	10.5	4.5	5.2	<4.0	<4.0	4.1	<20.0	4.3
Nitrobenzene	ug/L				<8					
N-nitrosodiethylamine	ug/L				<8					
N-nitrosodimethylamine	ug/L				<8					
N-nitrosodi-n-butylamine	ug/L				<8					
N-nitroso-di-n-propylamine	ug/L				<8					
N-nitrosodiphenylamine	ug/L				<8					
N-nitrosomethylethylamine	ug/L				<8					
N-nitrosopiperidine	ug/L				<8					
N-nitrosopyrrolidine	ug/L				<8					
O,o,o-triethyl phosphorothioate	ug/L				<.4					
O-toluidine	ug/L				<8					
Parathion	ug/L				<.4					
P-dimethylaminoazobenzene	ug/L				<8					
Pentachlorobenzene	ug/L				<8					
Pentachloronitrobenzene (pcnb)	ug/L				<8					
Pentachlorophenol	ug/L				<8					
Phenacetin	ug/L				<8					
Phenanthrene	ug/L				<8					
Phenol	ug/L				<8					
Phorate	ug/L				<.4					
Pronamide	ug/L				<8					
Propionitrile	ug/L				<40					
Pyrene	ug/L				<8					
Safrole	ug/L				<8					
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	748	380	89	274	293	308	1050		
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L				.14					
Tetrachloroethylene	ug/L	<1	<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	<4.0
Thionazin	ug/L				<.4					
Tin, total	ug/L				<20					
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L				<.2					
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	27.9	<20.0	<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	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	38.1	29.4	<8.0	<8.0	14.1	<8.0	<8.0	<8.0	91.2

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

Table 9

Analytical Data Summary for MW-15R

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene									
Nickel, total	<4.0	4.5	4.0	6.1	<4.0	<4.0	<4.0	4.2	<4.0
Nitrobenzene									
N-nitrosodiethylamine									
N-nitrosodimethylamine									
N-nitrosodi-n-butylamine									
N-nitroso-di-n-propylamine									
N-nitrosodiphenylamine									
N-nitrosomethylethylamine									
N-nitrosopiperidine									
N-nitrosopyrrolidine									
O,o,o-triethyl phosphorothioate									
O-toluidine									
Parathion									
P-dimethylaminoazobenzene									
Pentachlorobenzene									
Pentachloronitrobenzene (pcnb)									
Pentachlorophenol									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total									
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	2.4	<2.0	<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	<1
Toxaphene									
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<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	13.7	22.4	<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-15R

Constituents	9/11/2023	3/20/2024	9/12/2024
Hexachlorobutadiene			
Hexachlorocyclopentadiene			
Hexachloroethane			
Hexachloropropene			
Indeno(1,2,3-cd)pyrene			
Isobutanol			
Isodrin			
Isophorone			
Isosafrole			
Kepone			
Lead, total	<4.0	<4.0	<4.0
Mercury, total			
Methacrylonitrile			
Methapyrilene			
Methoxychlor			
Methyl iodide	<1	<1	<1
Methyl methacrylate			
Methyl methanesulfonate			
Methyl parathion			
Methylene chloride	<5	<5	<5
Naphthalene			
Nickel, total	4.2	<4.0	4.1
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			
Parathion			
P-dimethylaminoazobenzene			
Pentachlorobenzene			
Pentachloronitrobenzene (pcnb)			
Pentachlorophenol			
Phenacetin			
Phenanthrene			
Phenol			
Phorate			
Pronamide			
Propionitrile			
Pyrene			
Safrole			
Selenium, total	<4	<4	<4
Silver, total	<4	<4	<4
Solids, total suspended			
Styrene	<1	<1	<1
Sulfide, total			
Tetrachloroethylene	<1	<1	<1
Thallium, total	<2.0	<2.0	<2.0
Thionazin			
Tin, total			
Toluene	<1	<1	<1
Toxaphene			
Trans-1,2-dichloroethylene	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5
Trichloroethylene	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5
Vinyl chloride	<1	<1	<1
Xylenes, total	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-16

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
(34) -methylphenol	ug/L					<8				
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L					<1				
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L					<8				
1,2,4-trichlorobenzene	ug/L					<1				
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L					<8				
1,3,5-trinitrobenzene	ug/L					<8				
1,3-dichlorobenzene	ug/L					<1				
1,3-dichloropropane	ug/L					<1				
1,3-dinitrobenzene	ug/L					<8				
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L					<8				
1,4-phenylenediamine	ug/L					<8				
1-naphthylamine	ug/L					<8				
2,2-dichloropropane	ug/L					<1				
2,3,4,6-tetrachlorophenol	ug/L					<8				
2,4,5-t	ug/L					<.5				
2,4,5-tp (silvex)	ug/L					<.5				
2,4,5-trichlorophenol	ug/L					<8				
2,4,6-trichlorophenol	ug/L					<8				
2,4-d	ug/L					<2				
2,4-dichlorophenol	ug/L					<8				
2,4-dimethylphenol	ug/L					<8				
2,4-dinitrophenol	ug/L					<8				
2,4-dinitrotoluene	ug/L					<8				
2,6-dichlorophenol	ug/L					<8				
2,6-dinitrotoluene	ug/L					<8				
2-acetylaminofluorene	ug/L					<8				
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L					<8				
2-chlorophenol	ug/L					<8				
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L					<8				
2-methylphenol	ug/L					<8				
2-naphthylamine	ug/L					<8				
2-nitroaniline	ug/L					<8				
2-nitrophenol	ug/L					<8				
3,3´-dichlorobenzidine	ug/L					<8				
3,3'-dimethylbenzidine	ug/L					<8				
3-methylcholanthrene	ug/L					<8				
3-nitroaniline	ug/L					<8				
4,4´-ddd	ug/L					<.05				
4,4´-dde	ug/L					<.05				
4,4´-ddt	ug/L					<.05				
4,6-dinitro-2-methylphenol	ug/L					<8				
4-aminobiphenyl	ug/L					<8				
4-bromophenyl phenyl ether	ug/L					<8				
4-chloro-3-methylphenol	ug/L					<8				
4-chloroaniline	ug/L					<8				
4-chlorophenyl phenyl ether	ug/L					<8				
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L					<8				
4-nitrophenol	ug/L					<8				
5-nitro-o-toluidine	ug/L					<8				
7,12-dimethylbenz(a)anthracene	ug/L					<8				
Acenaphthene	ug/L					<8				
Acenaphthylene	ug/L					<8				
Acetone	ug/L	124.0	14.1	13.1	<10.0	26.8	134.0	17.0	24.5	72.3
Acetonitrile	ug/L					<10				
Acetophenone	ug/L					<8				
Acrolein	ug/L					<10				
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin	ug/L					<.05				
Allyl chloride	ug/L					<1				
Alpha-bhc	ug/L					<.05				
Anthracene	ug/L					<8				

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

Table 9

Analytical Data Summary for MW-16

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021
(34) -methylphenol					
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<5
1,1,1-trichloroethane	<1	<1	<1	<1	<5
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<5
1,1,2-trichloroethane	<1	<1	<1	<1	<5
1,1-dichloroethane	<1	<1	<1	<1	<5
1,1-dichloroethylene	<1	<1	<1	<1	<5
1,1-dichloropropene					
1,2,3-trichloropropane	<1	<1	<1	<1	<5
1,2,4,5-tetrachlorobenzene					
1,2,4-trichlorobenzene					
1,2-dibromo-3-chloropropane	<1	<1	<5	<5	<25
1,2-dibromoethane	<1	<1	<1	<1	<5
1,2-dichlorobenzene	<1	<1	<1	<1	<5
1,2-dichloroethane	<1	<1	<1	<1	<5
1,2-dichloropropane	<1	<1	<1	<1	<5
1,2-dinitrobenzene					
1,3,5-trinitrobenzene					
1,3-dichlorobenzene					
1,3-dichloropropane					
1,3-dinitrobenzene					
1,4-dichlorobenzene	<1	<1	<1	<1	<5
1,4-naphthoquinone					
1,4-phenylenediamine					
1-naphthylamine					
2,2-dichloropropane					
2,3,4,6-tetrachlorophenol					
2,4,5-t					
2,4,5-tp (silvex)					
2,4,5-trichlorophenol					
2,4,6-trichlorophenol					
2,4-d					
2,4-dichlorophenol					
2,4-dimethylphenol					
2,4-dinitrophenol					
2,4-dinitrotoluene					
2,6-dichlorophenol					
2,6-dinitrotoluene					
2-acetylaminofluorene					
2-butanone (mek)	<5	35	<5	<5	<25
2-chloronaphthalene					
2-chlorophenol					
2-hexanone (mbk)	<5	<5	<5	<5	<25
2-methylnaphthalene					
2-methylphenol					
2-naphthylamine					
2-nitroaniline					
2-nitrophenol					
3,3´-dichlorobenzidine					
3,3'-dimethylbenzidine					
3-methylcholanthrene					
3-nitroaniline					
4,4´-ddd					
4,4´-dde					
4,4´-ddt					
4,6-dinitro-2-methylphenol					
4-aminobiphenyl					
4-bromophenyl phenyl ether					
4-chloro-3-methylphenol					
4-chloroaniline					
4-chlorophenyl phenyl ether					
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<25
4-nitroaniline					
4-nitrophenol					
5-nitro-o-toluidine					
7,12-dimethylbenz(a)anthracene					
Acenaphthene					
Acenaphthylene					
Acetone	34.2	196.0	51.2	109.0	1140.0
Acetonitrile					
Acetophenone					
Acrolein					
Acrylonitrile	<5	<5	<5	<5	<25
Aldrin					
Allyl chloride					
Alpha-bhc					
Anthracene					

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Table 9

Analytical Data Summary for MW-16

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L					<.1				
Arochlor 1221	ug/L					<.2				
Arochlor 1232	ug/L					<.2				
Arochlor 1242	ug/L					<.2				
Arochlor 1248	ug/L					<.2				
Arochlor 1254	ug/L					<.1				
Arochlor 1260	ug/L					<.1				
Arsenic, total	ug/L	29.7	<4.0	26.1	34.2	27.4	32.5	17.1	29.5	25.8
Azobenzene	ug/L					<8				
Barium, total	ug/L	927	609	751	807	750	912	785	765	683
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L					<8				
Benzo(a)pyrene	ug/L					<8				
Benzo(b)fluoranthene	ug/L					<8				
Benzo(g,h,i)perylene	ug/L					<8				
Benzo(k)fluoranthene	ug/L					<8				
Benzyl alcohol	ug/L					<8				
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc	ug/L					<.05				
Bis (2-chloroethoxy) methane	ug/L					<8				
Bis(2-chloroethyl) ether	ug/L					<8				
Bis(2-chloroisopropyl) ether	ug/L					<8				
Bis(2-ethylhexyl) phthalate	ug/L					<8				
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L					<8				
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	.9	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L					<.1				
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L					<8				
Chloroethane	ug/L	<1	<1	<1	1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.3	<1.0	<1.0
Chloroprene	ug/L					<1				
Chromium, total	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	11.8	<8.0	<8.0	<8.0
Chrysene	ug/L					<8				
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	2.8	1.6	1.3	3.7	9.5	16.3	1.9	2.4	2.7
Copper, total	ug/L	4.1	<4.0	<4.0	7.7	13.7	24.2	<4.0	<4.0	4.8
Cyanide, total	mg/L					<.005				
Delta-bhc	ug/L					<.05				
Diallate	ug/L					<8				
Dibenzo(a,h)anthracene	ug/L					<8				
Dibenzofuran	ug/L					<8				
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	1	<1	<1	<1	<1	<1
Dieldrin	ug/L					<.05				
Diethyl phthalate	ug/L					<8				
Dimethoate	ug/L					<.4				
Dimethylphthalate	ug/L					<8				
Di-n-butyl phthalate	ug/L					<8				
Di-n-octyl phthalate	ug/L					<8				
Dinoseb	ug/L					<.5				
Diphenylamine	ug/L					<8				
Disulfoton	ug/L					<.4				
Endosulfan i	ug/L					<.05				
Endosulfan ii	ug/L					<.05				
Endosulfan sulfate	ug/L					<.05				
Endrin	ug/L					<.05				
Endrin aldehyde	ug/L					<.05				
Ethyl methacrylate	ug/L					<10				
Ethyl methanesulfonate	ug/L					<8				
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur	ug/L					<.4				
Fluoranthene	ug/L					<8				
Fluorene	ug/L					<8				
Gamma-bhc (lindane)	ug/L					<.05				
Heptachlor	ug/L					<.05				
Heptachlor epoxide	ug/L					<.05				
Hexachlorobenzene	ug/L					<.05				

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

Table 9

Analytical Data Summary for MW-16

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021
Antimony, total	<2	<2	<2	<2	<2
Arochlor 1016					
Arochlor 1221					
Arochlor 1232					
Arochlor 1242					
Arochlor 1248					
Arochlor 1254					
Arochlor 1260					
Arsenic, total	16.0	30.0	27.1	47.2	82.7
Azobenzene					
Barium, total	705	944	900	844	1520
Benzene	<1	<1	<1	<1	<5
Benzo(a)anthracene					
Benzo(a)pyrene					
Benzo(b)fluoranthene					
Benzo(g,h,i)perylene					
Benzo(k)fluoranthene					
Benzyl alcohol					
Beryllium, total	<4	<4	<4	<4	<4
Beta-bhc					
Bis (2-chloroethoxy) methane					
Bis(2-chloroethyl) ether					
Bis(2-chloroisopropyl) ether					
Bis(2-ethylhexyl) phthalate					
Bromochloromethane	<1	<1	<1	<1	<5
Bromodichloromethane	<1	<1	<1	<1	<5
Bromoform	<1	<1	<1	<1	<5
Bromomethane	<1	<1	<1	<1	<5
Butyl benzyl phthalate					
Cadmium, total	<.8	1.5	<.8	1.1	3.3
Carbon disulfide	<1	<1	<1	<1	<5
Carbon tetrachloride	<1	<1	<1	<1	<5
Chlordane					
Chlorobenzene	<1	<1	<1	<1	<5
Chlorobenzilate					
Chloroethane	<1	<1	<1	<1	<5
Chloroform	<1	<1	<1	<1	<5
Chloromethane	<1.0	<1.0	<1.0	<1.0	<5.0
Chloroprene					
Chromium, total	<8.0	10.3	<8.0	19.5	52.3
Chrysene					
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<5
Cis-1,3-dichloropropene	<1	<1	<1	<1	<5
Cobalt, total	5.0	7.0	3.1	14.2	36.1
Copper, total	<4.0	16.4	6.8	50.8	130.0
Cyanide, total					
Delta-bhc					
Diallate					
Dibenzo(a,h)anthracene					
Dibenzofuran					
Dibromochloromethane	<1	<1	<1	<1	<5
Dibromomethane	<1	<1	<1	<1	<5
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	<5
Famphur					
Fluoranthene					
Fluorene					
Gamma-bhc (lindane)					
Heptachlor					
Heptachlor epoxide					
Hexachlorobenzene					

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

Table 9

Analytical Data Summary for MW-16

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Hexachlorobutadiene	ug/L					<8				
Hexachlorocyclopentadiene	ug/L					<8				
Hexachloroethane	ug/L					<8				
Hexachloropropene	ug/L					<8				
Indeno(1,2,3-cd)pyrene	ug/L					<8				
Isobutanol	ug/L					<1000				
Isodrin	ug/L					<8				
Isophorone	ug/L					<8				
Isosafrole	ug/L					<8				
Kepone	ug/L					<8				
Lead, total	ug/L	<4.0	<4.0	<4.0	<4.0	4.8	10.8	<4.0	<4.0	<4.0
Mercury, total	ug/L					<.5				
Methacrylonitrile	ug/L					<1				
Methapyrilene	ug/L					<8				
Methoxychlor	ug/L					<.05				
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate	ug/L					<1				
Methyl methanesulfonate	ug/L					<8				
Methyl parathion	ug/L					<.4				
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L					<8				
Nickel, total	ug/L	7.4	<4.0	<4.0	11.1	21.8	46.8	5.8	<20.0	7.5
Nitrobenzene	ug/L					<8				
N-nitrosodiethylamine	ug/L					<8				
N-nitrosodimethylamine	ug/L					<8				
N-nitrosodi-n-butylamine	ug/L					<8				
N-nitroso-di-n-propylamine	ug/L					<8				
N-nitrosodiphenylamine	ug/L					<8				
N-nitrosomethylethylamine	ug/L					<8				
N-nitrosopiperidine	ug/L					<8				
N-nitrosopyrrolidine	ug/L					<8				
O,o,o-triethyl phosphorothioate	ug/L					<.4				
O-toluidine	ug/L					<8				
Parathion	ug/L					<.4				
P-dimethylaminoazobenzene	ug/L					<8				
Pentachlorobenzene	ug/L					<8				
Pentachloronitrobenzene (pcnb)	ug/L					<8				
Pentachlorophenol	ug/L					<8				
Phenacetin	ug/L					<8				
Phenanthrene	ug/L					<8				
Phenol	ug/L					<8				
Phorate	ug/L					<.4				
Pronamide	ug/L					<8				
Propionitrile	ug/L					<10				
Pyrene	ug/L					<8				
Safrole	ug/L					<8				
Selenium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	232	90	160	200	192	1120	2140		
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L					<.1				
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4	<4	<4	<4	<4
Thionazin	ug/L					<.4				
Tin, total	ug/L					<20				
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L					<.2				
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20.0	<20.0	<20.0	<20.0	<20.0	28.0	<20.0	<20.0	<20.0
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20.0	13.1	11.4	22.6	35.8	56.5	13.4	<8.0	129.0

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Table 9

Analytical Data Summary for MW-16

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021
Hexachlorobutadiene					
Hexachlorocyclopentadiene					
Hexachloroethane					
Hexachloropropene					
Indeno(1,2,3-cd)pyrene					
Isobutanol					
Isodrin					
Isophorone					
Isosafrole					
Kepone					
Lead, total	<4.0	8.5	<4.0	24.2	81.9
Mercury, total					
Methacrylonitrile					
Methapyrilene					
Methoxychlor					
Methyl iodide	<1	<1	<1	<1	<5
Methyl methacrylate					
Methyl methanesulfonate					
Methyl parathion					
Methylene chloride	<5	<5	<5	<5	<25
Naphthalene					
Nickel, total	11.2	26.4	12.1	50.1	120.0
Nitrobenzene					
N-nitrosodiethylamine					
N-nitrosodimethylamine					
N-nitrosodi-n-butylamine					
N-nitroso-di-n-propylamine					
N-nitrosodiphenylamine					
N-nitrosomethylethylamine					
N-nitrosopiperidine					
N-nitrosopyrrolidine					
O,o,o-triethyl phosphorothioate					
O-toluidine					
Parathion					
P-dimethylaminoazobenzene					
Pentachlorobenzene					
Pentachloronitrobenzene (pcnb)					
Pentachlorophenol					
Phenacetin					
Phenanthrene					
Phenol					
Phorate					
Pronamide					
Propionitrile					
Pyrene					
Safrole					
Selenium, total	<4.0	<4.0	<4.0	<4.0	11.1
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					
Styrene	<1	<1	<1	<1	<5
Sulfide, total					
Tetrachloroethylene	<1	<1	<1	<1	<5
Thallium, total	<2	<2	<2	<2	<2
Thionazin					
Tin, total					
Toluene	<1	<1	<1	<1	<5
Toxaphene					
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<5
Trans-1,3-dichloropropene	<1	<1	<1	<1	<5
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<25
Trichloroethylene	<1	<1	<1	<1	<5
Trichlorofluoromethane	<1	<1	<1	<1	<5
Vanadium, total	<20.0	38.8	<20.0	55.5	166.0
Vinyl acetate	<5	<5	<5	<5	<25
Vinyl chloride	<1	<1	<1	<1	<5
Xylenes, total	<2	<2	<2	<2	<10
Zinc, total	15.7	119.0	28.1	94.4	239.0

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

Table 9

Analytical Data Summary for MW-17

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	5.0	<4.0
Barium, total	ug/L	173	185	142	143	174	172	182	233	131
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	<.8	<.8	<.8	1.0	<.8	.9	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	8.1	9.7	7.0	4.6	4.3	5.2	6.9	23.0	8.6
Copper, total	ug/L	4.6	<4.0	<4.0	<4.0	<4.0	<4.0	5.3	4.3	<4.0
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	9.9	7.8	13.7	4.7	<4.0	6.3	8.0	<20.0	7.2
Selenium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	46	26	33	28	156	693	404		
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4.0	<4.0	<1.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20.0	<8.0	10.9	<8.0	<8.0	<8.0	<8.0	<8.0	67.4

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

Table 9

Analytical Data Summary for MW-17

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023	9/11/2023
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<10	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	4.4	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Barium, total	179	138	123	180	160	179	192	137	162	149
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	.8	<.8	1.1	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	46.5	54.8	7.2	11.3	7.4	13.4	5.5	1.5	13.0	.6
Copper, total	<4.0	<4.0	4.2	4.3	<4.0	7.4	4.0	<4.0	<4.0	<4.0
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	15.9	10.9	8.2	10.7	12.0	16.7	6.4	6.1	9.1	5.9
Selenium, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended										
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.3	<2.0
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	33.3	61.5	<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-17

Constituents	3/20/2024	9/12/2024
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-dichloroethylene	<1	<1
1,2,3-trichloropropane	<1	<1
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
1,4-dichlorobenzene	<1	<1
2-butanone (mek)	<10	<10
2-hexanone (mbk)	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5
Acetone	<10	<10
Acrylonitrile	<5	<5
Antimony, total	<2	<2
Arsenic, total	<4.0	<4.0
Barium, total	149	153
Benzene	<1	<1
Beryllium, total	<4	<4
Bromochloromethane	<1	<1
Bromodichloromethane	<1	<1
Bromoform	<1	<1
Bromomethane	<1	<1
Cadmium, total	<.8	<.8
Carbon disulfide	<1	<1
Carbon tetrachloride	<1	<1
Chlorobenzene	<1	<1
Chloroethane	<1	<1
Chloroform	<1	<1
Chloromethane	<1	<1
Chromium, total	<8	<8
Cis-1,2-dichloroethylene	<1	<1
Cis-1,3-dichloropropene	<1	<1
Cobalt, total	.7	3.6
Copper, total	<4.0	<4.0
Dibromochloromethane	<1	<1
Dibromomethane	<1	<1
Ethylbenzene	<1	<1
Lead, total	<4	<4
Methyl iodide	<1	<1
Methylene chloride	<5	<5
Nickel, total	4.9	6.6
Selenium, total	7.5	6.8
Silver, total	<4	<4
Solids, total suspended		
Styrene	<1	<1
Tetrachloroethylene	<1	<1
Thallium, total	<2.0	<2.0
Toluene	<1	<1
Trans-1,2-dichloroethylene	<1	<1
Trans-1,3-dichloropropene	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5
Trichloroethylene	<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-18

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
(34) -methylphenol	ug/L				<8				
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1-dichloropropene	ug/L				<1				
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2,4,5-tetrachlorobenzene	ug/L				<8				
1,2,4-trichlorobenzene	ug/L				<1				
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dinitrobenzene	ug/L				<8				
1,3,5-trinitrobenzene	ug/L				<8				
1,3-dichlorobenzene	ug/L				<1				
1,3-dichloropropane	ug/L				<1				
1,3-dinitrobenzene	ug/L				<8				
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,4-naphthoquinone	ug/L				<8				
1,4-phenylenediamine	ug/L				<8				
1-naphthylamine	ug/L				<8				
2,2-dichloropropane	ug/L				<1				
2,3,4,6-tetrachlorophenol	ug/L				<8				
2,4,5-t	ug/L				<.5				
2,4,5-tp (silvex)	ug/L				<.5				
2,4,5-trichlorophenol	ug/L				<8				
2,4,6-trichlorophenol	ug/L				<8				
2,4-d	ug/L				<2				
2,4-dichlorophenol	ug/L				<8				
2,4-dimethylphenol	ug/L				<8				
2,4-dinitrophenol	ug/L				<8				
2,4-dinitrotoluene	ug/L				<8				
2,6-dichlorophenol	ug/L				<8				
2,6-dinitrotoluene	ug/L				<8				
2-acetylaminofluorene	ug/L				<8				
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene	ug/L				<8				
2-chlorophenol	ug/L				<8				
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene	ug/L				<8				
2-methylphenol	ug/L				<8				
2-naphthylamine	ug/L				<8				
2-nitroaniline	ug/L				<8				
2-nitrophenol	ug/L				<8				
3,3´-dichlorobenzidine	ug/L				<8				
3,3'-dimethylbenzidine	ug/L				<8				
3-methylcholanthrene	ug/L				<8				
3-nitroaniline	ug/L				<8				
4,4´-ddd	ug/L				<.05				
4,4´-dde	ug/L				<.05				
4,4´-ddt	ug/L				<.05				
4,6-dinitro-2-methylphenol	ug/L				<8				
4-aminobiphenyl	ug/L				<8				
4-bromophenyl phenyl ether	ug/L				<8				
4-chloro-3-methylphenol	ug/L				<8				
4-chloroaniline	ug/L				<8				
4-chlorophenyl phenyl ether	ug/L				<8				
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5		<5	<5
4-nitroaniline	ug/L				<8				
4-nitrophenol	ug/L				<8				
5-nitro-o-toluidine	ug/L				<8				
7,12-dimethylbenz(a)anthracene	ug/L				<8				
Acenaphthene	ug/L				<8				
Acenaphthylene	ug/L				<8				
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	11.7	<10.0	<10.0	16.8
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-18

Constituents	3/21/2018	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022
(34) -methylphenol									
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene									
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene									
1,2,4-trichlorobenzene									
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene									
1,3,5-trinitrobenzene									
1,3-dichlorobenzene									
1,3-dichloropropane									
1,3-dinitrobenzene									
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone									
1,4-phenylenediamine									
1-naphthylamine									
2,2-dichloropropane									
2,3,4,6-tetrachlorophenol									
2,4,5-t									
2,4,5-tp (silvex)									
2,4,5-trichlorophenol									
2,4,6-trichlorophenol									
2,4-d									
2,4-dichlorophenol									
2,4-dimethylphenol									
2,4-dinitrophenol									
2,4-dinitrotoluene									
2,6-dichlorophenol									
2,6-dinitrotoluene									
2-acetylaminofluorene									
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<10
2-chloronaphthalene									
2-chlorophenol									
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene									
2-methylphenol									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3´-dichlorobenzidine									
3,3'-dimethylbenzidine									
3-methylcholanthrene									
3-nitroaniline									
4,4´-ddd									
4,4´-dde									
4,4´-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz(a)anthracene									
Acenaphthene									
Acenaphthylene									
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin									
Allyl chloride									
Alpha-bhc									
Anthracene									

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

Table 9

Analytical Data Summary for MW-18

Constituents	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024
(34) -methylphenol					
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1
1,1-dichloropropene					
1,2,3-trichloropropane	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					
1,2,4-trichlorobenzene					
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1
1,2-dinitrobenzene					
1,3,5-trinitrobenzene					
1,3-dichlorobenzene					
1,3-dichloropropane					
1,3-dinitrobenzene					
1,4-dichlorobenzene	<1	<1	<1	<1	<1
1,4-naphthoquinone					
1,4-phenylenediamine					
1-naphthylamine					
2,2-dichloropropane					
2,3,4,6-tetrachlorophenol					
2,4,5-t					
2,4,5-tp (silvex)					
2,4,5-trichlorophenol					
2,4,6-trichlorophenol					
2,4-d					
2,4-dichlorophenol					
2,4-dimethylphenol					
2,4-dinitrophenol					
2,4-dinitrotoluene					
2,6-dichlorophenol					
2,6-dinitrotoluene					
2-acetylaminofluorene					
2-butanone (mek)	<10	<10	<10	<10	<10
2-chloronaphthalene					
2-chlorophenol					
2-hexanone (mbk)	<5	<5	<5	<5	<5
2-methylnaphthalene					
2-methylphenol					
2-naphthylamine					
2-nitroaniline					
2-nitrophenol					
3,3´-dichlorobenzidine					
3,3'-dimethylbenzidine					
3-methylcholanthrene					
3-nitroaniline					
4,4´-ddd					
4,4´-dde					
4,4´-ddt					
4,6-dinitro-2-methylphenol					
4-aminobiphenyl					
4-bromophenyl phenyl ether					
4-chloro-3-methylphenol					
4-chloroaniline					
4-chlorophenyl phenyl ether					
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5
4-nitroaniline					
4-nitrophenol					
5-nitro-o-toluidine					
7,12-dimethylbenz(a)anthracene					
Acenaphthene					
Acenaphthylene					
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile					
Acetophenone					
Acrolein					
Acrylonitrile	<5	<5	<5	<5	<5
Aldrin					
Allyl chloride					
Alpha-bhc					
Anthracene					

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

Table 9

Analytical Data Summary for MW-18

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
Antimony, total	ug/L	<2	<2	<2	<2	<2		<2	<2
Arochlor 1016	ug/L				<.1				
Arochlor 1221	ug/L				<.2				
Arochlor 1232	ug/L				<.2				
Arochlor 1242	ug/L				<.2				
Arochlor 1248	ug/L				<.2				
Arochlor 1254	ug/L				<.1				
Arochlor 1260	ug/L				<.1				
Arsenic, total	ug/L	25.7	34.2	21.1	26.2	23.4		22.3	23.5
Azobenzene	ug/L				<8				
Barium, total	ug/L	903	1140	822	860	877		827	868
Benzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Benzo(a)anthracene	ug/L				<8				
Benzo(a)pyrene	ug/L				<8				
Benzo(b)fluoranthene	ug/L				<8				
Benzo(g,h,i)perylene	ug/L				<8				
Benzo(k)fluoranthene	ug/L				<8				
Benzyl alcohol	ug/L				<8				
Beryllium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Beta-bhc	ug/L				<.05				
Bis (2-chloroethoxy) methane	ug/L				<8				
Bis(2-chloroethyl) ether	ug/L				<8				
Bis(2-chloroisopropyl) ether	ug/L				<8				
Bis(2-ethylhexyl) phthalate	ug/L				<8				
Bromochloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Butyl benzyl phthalate	ug/L				<8				
Cadmium, total	ug/L	1.7	3.9	<.8	1.0	.9		<.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	11.6	26.4	<8.0	<8.0	10.5		<8.0	<8.0
Chrysene	ug/L				<8				
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	ug/L	23.5	35.1	9.8	12.0	17.1		8.5	7.1
Copper, total	ug/L	31.3	69.3	<4.0	<4.0	16.0		<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-18

Constituents	3/21/2018	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016									
Arochlor 1221									
Arochlor 1232									
Arochlor 1242									
Arochlor 1248									
Arochlor 1254									
Arochlor 1260									
Arsenic, total	21.1	19.4	21.5	21.7	19.4	23.4	23.3	19.9	21.3
Azobenzene									
Barium, total	863	831	862	823	897	898	840	741	792
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Benzyl alcohol									
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc									
Bis (2-chloroethoxy) methane									
Bis(2-chloroethyl) ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl) phthalate									
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate									
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	1.2	<.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	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene									
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	5.5	5.8	4.1	3.9	3.6	17.8	9.2	4.9	4.0
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total									
Delta-bhc									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethylphthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur									
Fluoranthene									
Fluorene									
Gamma-bhc (lindane)									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									

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

Table 9

Analytical Data Summary for MW-18

Constituents	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024
Antimony, total	<2	<2	<2	<2	<2
Arochlor 1016					
Arochlor 1221					
Arochlor 1232					
Arochlor 1242					
Arochlor 1248					
Arochlor 1254					
Arochlor 1260					
Arsenic, total	27.3	18.3	18.7	16.8	16.2
Azobenzene					
Barium, total	760	702	709	623	621
Benzene	<1	<1	<1	<1	<1
Benzo(a)anthracene					
Benzo(a)pyrene					
Benzo(b)fluoranthene					
Benzo(g,h,i)perylene					
Benzo(k)fluoranthene					
Benzyl alcohol					
Beryllium, total	<4	<4	<4	<4	<4
Beta-bhc					
Bis (2-chloroethoxy) methane					
Bis(2-chloroethyl) ether					
Bis(2-chloroisopropyl) ether					
Bis(2-ethylhexyl) phthalate					
Bromochloromethane	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1
Butyl benzyl phthalate					
Cadmium, total	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1
Chlordane					
Chlorobenzene	<1	<1	<1	<1	<1
Chlorobenzilate					
Chloroethane	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1
Chloroprene					
Chromium, total	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene					
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	9.1	9.2	11.3	12.2	5.8
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total					
Delta-bhc					
Diallate					
Dibenzo(a,h)anthracene					
Dibenzofuran					
Dibromochloromethane	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1
Dichlorodifluoromethane					
Dieldrin					
Diethyl phthalate					
Dimethoate					
Dimethylphthalate					
Di-n-butyl phthalate					
Di-n-octyl phthalate					
Dinoseb					
Diphenylamine					
Disulfoton					
Endosulfan i					
Endosulfan ii					
Endosulfan sulfate					
Endrin					
Endrin aldehyde					
Ethyl methacrylate					
Ethyl methanesulfonate					
Ethylbenzene	<1	<1	<1	<1	<1
Famphur					
Fluoranthene					
Fluorene					
Gamma-bhc (lindane)					
Heptachlor					
Heptachlor epoxide					
Hexachlorobenzene					

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

Table 9

Analytical Data Summary for MW-18

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
Hexachlorobutadiene	ug/L				<8				
Hexachlorocyclopentadiene	ug/L				<8				
Hexachloroethane	ug/L				<8				
Hexachloropropene	ug/L				<8				
Indeno(1,2,3-cd)pyrene	ug/L				<8				
Isobutanol	ug/L				<1000				
Isodrin	ug/L				<8				
Isophorone	ug/L				<8				
Isosafrole	ug/L				<8				
Kepone	ug/L				<8				
Lead, total	ug/L	12.4	27.2	<4.0	<4.0	6.2		<4.0	<4.0
Mercury, total	ug/L				<.5				
Methacrylonitrile	ug/L				<1				
Methapyrilene	ug/L				<8				
Methoxychlor	ug/L				<.05				
Methyl iodide	ug/L	<1	<1	<1	<1	<1		<1	<1
Methyl methacrylate	ug/L				<1				
Methyl methanesulfonate	ug/L				<8				
Methyl parathion	ug/L				<.4				
Methylene chloride	ug/L	<5	<5	<5	<5	<5		<5	<5
Naphthalene	ug/L				<8				
Nickel, total	ug/L	35.4	67.7	12.7	16.0	25.3		11.9	10.8
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				
Parathion	ug/L				<.4				
P-dimethylaminoazobenzene	ug/L				<8				
Pentachlorobenzene	ug/L				<8				
Pentachloronitrobenzene (pcnb)	ug/L				<8				
Pentachlorophenol	ug/L				<8				
Phenacetin	ug/L				<8				
Phenanthrene	ug/L				<8				
Phenol	ug/L				<8				
Phorate	ug/L				<.4				
Pronamide	ug/L				<8				
Propionitrile	ug/L				<40				
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	1710	1500	85	82	309		164	625
Styrene	ug/L	<1	<1	<1	<1	<1		<1	<1
Sulfide, total	mg/L				.17				
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4		<4	<4
Thionazin	ug/L				<.4				
Tin, total	ug/L				<20				
Toluene	ug/L	<1	<1	<1	<1	<1		<1	<1
Toxaphene	ug/L				<.2				
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5		<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Vanadium, total	ug/L	<20.0	31.6	<20.0	<20.0	<20.0		<20.0	<20.0
Vinyl acetate	ug/L	<5	<5	<5	<5	<5		<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1		<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2		<2	<2
Zinc, total	ug/L	107.0	267.0	<8.0	<8.0	56.2		<8.0	<8.0

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

Table 9

Analytical Data Summary for MW-18

Constituents	3/21/2018	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene									
Nickel, total	<20.0	9.2	7.2	10.7	6.6	29.7	12.4	8.5	7.2
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									
Parathion									
P-dimethylaminoazobenzene									
Pentachlorobenzene									
Pentachloronitrobenzene (pcnb)									
Pentachlorophenol									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total									
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<2	<2	<2	<2	<2	<2	<2
Thionazin									
Tin, total									
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene									
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<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	42.5	29.3	42.8	<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-18

Constituents	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024
Hexachlorobutadiene					
Hexachlorocyclopentadiene					
Hexachloroethane					
Hexachloropropene					
Indeno(1,2,3-cd)pyrene					
Isobutanol					
Isodrin					
Isophorone					
Isosafrole					
Kepone					
Lead, total	<4.0	<4.0	<4.0	<4.0	<4.0
Mercury, total					
Methacrylonitrile					
Methapyrilene					
Methoxychlor					
Methyl iodide	<1	<1	<1	<1	<1
Methyl methacrylate					
Methyl methanesulfonate					
Methyl parathion					
Methylene chloride	<5	<5	<5	<5	<5
Naphthalene					
Nickel, total	16.9	19.8	19.5	21.6	10.6
Nitrobenzene					
N-nitrosodiethylamine					
N-nitrosodimethylamine					
N-nitrosodi-n-butylamine					
N-nitroso-di-n-propylamine					
N-nitrosodiphenylamine					
N-nitrosomethylethylamine					
N-nitrosopiperidine					
N-nitrosopyrrolidine					
O,o,o-triethyl phosphorothioate					
O-toluidine					
Parathion					
P-dimethylaminoazobenzene					
Pentachlorobenzene					
Pentachloronitrobenzene (pcnb)					
Pentachlorophenol					
Phenacetin					
Phenanthrene					
Phenol					
Phorate					
Pronamide					
Propionitrile					
Pyrene					
Safrole					
Selenium, total	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					
Styrene	<1	<1	<1	<1	<1
Sulfide, total					
Tetrachloroethylene	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2
Thionazin					
Tin, total					
Toluene	<1	<1	<1	<1	<1
Toxaphene					
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0
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	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-19A

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	ug/L	48.9	55.5	30.0	30.4	29.5	42.1	35.1	46.9	38.7
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	<.8	<.8	<.8	.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<2.0	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	4.6	6.9	5.2	4.3	<4.0	<4.0	5.2	<20.0	6.4
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	9	8	10	6	5	40	35		
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4	<4	<4	<4	<4
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20.0	<8.0	11.2	15.2	<8.0	<8.0	<8.0	<8.0	40.8

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

Table 9

Analytical Data Summary for MW-19A

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	12/2/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
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-dichloroethylene	<1	<1	<1	<1		<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1		<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<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	<5	<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	<10	<10	<10		<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5		<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2		<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4		<4	<4	<4	<4	<4
Barium, total	37.9	42.5	34.2	35.8		35.2	36.1	40.1	38.3	32.5
Benzene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4		<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1		<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1		<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1		<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1		<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8		<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1		<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1		<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1		<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1		<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1		<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8		<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Cobalt, total	<.8	.8	.8	<.4		.4	.4	.6	<.4	.4
Copper, total	<4	<4	<4	<4		<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1		<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1		<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4		<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1		<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5		<5	<5	<5	<5	<5
Nickel, total	7.7	11.8	10.5	11.5	10.5	9.5	8.0	8.0	10.4	11.4
Selenium, total	<4	<4	<4	<4		<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4		<4	<4	<4	<4	<4
Solids, total suspended										
Styrene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2		<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5		<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1		<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1		<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20		<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5		<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1		<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2		<2	<2	<2	<2	<2
Zinc, total	35.8	29.9	<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-19A

Constituents	9/11/2023	3/20/2024	9/12/2024
1,1,1,2-tetrachloroethane	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1
1,1-dichloroethane	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5
1,2-dibromoethane	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1
1,2-dichloroethane	<1	<1	<1
1,2-dichloropropane	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1
2-butanone (mek)	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5
Acetone	<10	<10	<10
Acrylonitrile	<5	<5	<5
Antimony, total	<2	<2	<2
Arsenic, total	<4	4	<4
Barium, total	32.1	622.0	38.2
Benzene	<1	<1	<1
Beryllium, total	<4	<4	<4
Bromochloromethane	<1	<1	<1
Bromodichloromethane	<1	<1	<1
Bromoform	<1	<1	<1
Bromomethane	<1	<1	<1
Cadmium, total	9.0	<.8	1.0
Carbon disulfide	<1	<1	<1
Carbon tetrachloride	<1	<1	<1
Chlorobenzene	<1	<1	<1
Chloroethane	<1	<1	<1
Chloroform	<1	<1	<1
Chloromethane	<1	<1	<1
Chromium, total	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1
Cobalt, total	<.4	6.9	.4
Copper, total	<4	<4	<4
Dibromochloromethane	<1	<1	<1
Dibromomethane	<1	<1	<1
Ethylbenzene	<1	<1	<1
Lead, total	<4	<4	<4
Methyl iodide	<1	<1	<1
Methylene chloride	<5	<5	<5
Nickel, total	9.6	6.6	9.0
Selenium, total	<4	<4	<4
Silver, total	<4	<4	<4
Solids, total suspended			
Styrene	<1	<1	<1
Tetrachloroethylene	<1	<1	<1
Thallium, total	<2	<2	<2
Toluene	<1	<1	<1
Trans-1,2-dichloroethylene	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5
Trichloroethylene	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1
Vanadium, total	<20	<20	<20
Vinyl acetate	<5	<5	<5
Vinyl chloride	<1	<1	<1
Xylenes, total	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-2

Constituents	Units	4/4/2015	10/1/2015	4/4/2016	4/24/2017	4/2/2019	3/25/2020
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<5
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	<10	<10	<10	<10	<10
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	418	491	424	125	290	137
Benzene	ug/L	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4
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-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	7.4	6.4	8.2	<.8	<.8	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4	117
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
Lead, total	ug/L	<4.0	<4.0	<4.0	<4.0	13.6	<4.0
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	21.1	7.8	16.6	<4.0	8.8	<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	5	17	6	19		
Styrene	ug/L	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<1	<4	<4	<2	<2
Toluene	ug/L	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<8.0	9.1	<8.0	<8.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-20R

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
(34) -methylphenol	ug/L				<8					
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L				<1					
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L				<8					
1,2,4-trichlorobenzene	ug/L				<1					
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L				<8					
1,3,5-trinitrobenzene	ug/L				<8					
1,3-dichlorobenzene	ug/L				<1					
1,3-dichloropropane	ug/L				<1					
1,3-dinitrobenzene	ug/L				<8					
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L				<8					
1,4-phenylenediamine	ug/L				<8					
1-naphthylamine	ug/L				<8					
2,2-dichloropropane	ug/L				<1					
2,3,4,6-tetrachlorophenol	ug/L				<8					
2,4,5-t	ug/L				<.5					
2,4,5-tp (silvex)	ug/L				<.5					
2,4,5-trichlorophenol	ug/L				<8					
2,4,6-trichlorophenol	ug/L				<8					
2,4-d	ug/L				<2					
2,4-dichlorophenol	ug/L				<8					
2,4-dimethylphenol	ug/L				<8					
2,4-dinitrophenol	ug/L				<8					
2,4-dinitrotoluene	ug/L				<8					
2,6-dichlorophenol	ug/L				<8					
2,6-dinitrotoluene	ug/L				<8					
2-acetylaminofluorene	ug/L				<8					
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L				<8					
2-chlorophenol	ug/L				<8					
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L				<8					
2-methylphenol	ug/L				<8					
2-naphthylamine	ug/L				<8					
2-nitroaniline	ug/L				<8					
2-nitrophenol	ug/L				<8					
3,3´-dichlorobenzidine	ug/L				<8					
3,3'-dimethylbenzidine	ug/L				<8					
3-methylcholanthrene	ug/L				<8					
3-nitroaniline	ug/L				<8					
4,4´-ddd	ug/L				<.05					
4,4´-dde	ug/L				<.05					
4,4´-ddt	ug/L				<.05					
4,6-dinitro-2-methylphenol	ug/L				<8					
4-aminobiphenyl	ug/L				<8					
4-bromophenyl phenyl ether	ug/L				<8					
4-chloro-3-methylphenol	ug/L				<8					
4-chloroaniline	ug/L				<8					
4-chlorophenyl phenyl ether	ug/L				<8					
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L				<8					
4-nitrophenol	ug/L				<8					
5-nitro-o-toluidine	ug/L				<8					
7,12-dimethylbenz(a)anthracene	ug/L				<8					
Acenaphthene	ug/L				<8					
Acenaphthylene	ug/L				<8					
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile	ug/L				<10					
Acetophenone	ug/L				<8					
Acrolein	ug/L				<10					
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin	ug/L				<.05					
Allyl chloride	ug/L				<1					
Alpha-bhc	ug/L				<.05					
Anthracene	ug/L				<8					

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

Table 9

Analytical Data Summary for MW-20R

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
(34) -methylphenol									
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene									
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene									
1,2,4-trichlorobenzene									
1,2-dibromo-3-chloropropane	<1	<1	<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									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3´-dichlorobenzidine									
3,3'-dimethylbenzidine									
3-methylcholanthrene									
3-nitroaniline									
4,4´-ddd									
4,4´-dde									
4,4´-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz(a)anthracene									
Acenaphthene									
Acenaphthylene									
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin									
Allyl chloride									
Alpha-bhc									
Anthracene									

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

Table 9

Analytical Data Summary for MW-20R

Constituents	9/11/2023	3/20/2024	9/12/2024
(34) -methylphenol			
1,1,1,2-tetrachloroethane	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1
1,1-dichloroethane	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1
1,1-dichloropropene			
1,2,3-trichloropropane	<1	<1	<1
1,2,4,5-tetrachlorobenzene			
1,2,4-trichlorobenzene			
1,2-dibromo-3-chloropropane	<5	<5	<5
1,2-dibromoethane	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1
1,2-dichloroethane	<1	<1	<1
1,2-dichloropropane	<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
1,4-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
2-chloronaphthalene			
2-chlorophenol			
2-hexanone (mbk)	<5	<5	<5
2-methylnaphthalene			
2-methylphenol			
2-naphthylamine			
2-nitroaniline			
2-nitrophenol			
3,3´-dichlorobenzidine			
3,3'-dimethylbenzidine			
3-methylcholanthrene			
3-nitroaniline			
4,4´-ddd			
4,4´-dde			
4,4´-ddt			
4,6-dinitro-2-methylphenol			
4-aminobiphenyl			
4-bromophenyl phenyl ether			
4-chloro-3-methylphenol			
4-chloroaniline			
4-chlorophenyl phenyl ether			
4-methyl-2-pentanone (mibk)	<5	<5	<5
4-nitroaniline			
4-nitrophenol			
5-nitro-o-toluidine			
7,12-dimethylbenz(a)anthracene			
Acenaphthene			
Acenaphthylene			
Acetone	<10	<10	<10
Acetonitrile			
Acetophenone			
Acrolein			
Acrylonitrile	<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-20R

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L				<.1					
Arochlor 1221	ug/L				<.2					
Arochlor 1232	ug/L				<.2					
Arochlor 1242	ug/L				<.2					
Arochlor 1248	ug/L				<.2					
Arochlor 1254	ug/L				<.1					
Arochlor 1260	ug/L				<.1					
Arsenic, total	ug/L	51.9	53.1	21.0	49.9	43.5	100.0	45.5	34.6	5.9
Azobenzene	ug/L				<8					
Barium, total	ug/L	806	939	664	928	841	1200	706	831	580
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L				<8					
Benzo(a)pyrene	ug/L				<8					
Benzo(b)fluoranthene	ug/L				<8					
Benzo(g,h,i)perylene	ug/L				<8					
Benzo(k)fluoranthene	ug/L				<8					
Benzyl alcohol	ug/L				<8					
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc	ug/L				<.05					
Bis (2-chloroethoxy) methane	ug/L				<8					
Bis(2-chloroethyl) ether	ug/L				<8					
Bis(2-chloroisopropyl) ether	ug/L				<8					
Bis(2-ethylhexyl) phthalate	ug/L				25		<6	<6	<6	7
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L				<8					
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L				<.1					
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L				<8					
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L				<1					
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene	ug/L				<8					
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	.9	1.1	1.3	1.2	1.3	1.4	.9	<2.0	<.8
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cyanide, total	mg/L				<.005					
Delta-bhc	ug/L				<.05					
Diallate	ug/L				<8					
Dibenzo(a,h)anthracene	ug/L				<8					
Dibenzofuran	ug/L				<8					
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L				<1					
Dieldrin	ug/L				<.05					
Diethyl phthalate	ug/L				<8					
Dimethoate	ug/L				<.4					
Dimethylphthalate	ug/L				<8					
Di-n-butyl phthalate	ug/L				<8					
Di-n-octyl phthalate	ug/L				<8					
Dinoseb	ug/L				<.5					
Diphenylamine	ug/L				<8					
Disulfoton	ug/L				<.4					
Endosulfan i	ug/L				<.05					
Endosulfan ii	ug/L				<.05					
Endosulfan sulfate	ug/L				<.05					
Endrin	ug/L				<.05					
Endrin aldehyde	ug/L				<.05					
Ethyl methacrylate	ug/L				<10					
Ethyl methanesulfonate	ug/L				<8					
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur	ug/L				<.4					
Fluoranthene	ug/L				<8					
Fluorene	ug/L				<8					
Gamma-bhc (lindane)	ug/L				<.05					
Heptachlor	ug/L				<.05					
Heptachlor epoxide	ug/L				<.05					
Hexachlorobenzene	ug/L				<.05					

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

Table 9

Analytical Data Summary for MW-20R

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
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	31.7	37.1	29.5	49.0	77.1	49.1	52.0	49.0	43.0
Azobenzene									
Barium, total	851	954	701	755	994	620	691	599	599
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Benzyl alcohol									
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc									
Bis (2-chloroethoxy) methane									
Bis(2-chloroethyl) ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl) phthalate									
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate									
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate									
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene									
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene									
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	1.0	.9	1.0	.7	.4	.7	.7	1.0	.5
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-20R

Constituents	9/11/2023	3/20/2024	9/12/2024
Antimony, total	<2	<2	<2
Arochlor 1016			
Arochlor 1221			
Arochlor 1232			
Arochlor 1242			
Arochlor 1248			
Arochlor 1254			
Arochlor 1260			
Arsenic, total	41.8	75.0	21.5
Azobenzene			
Barium, total	650	821	657
Benzene	<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
Beta-bhc			
Bis (2-chloroethoxy) methane			
Bis(2-chloroethyl) ether			
Bis(2-chloroisopropyl) ether			
Bis(2-ethylhexyl) phthalate			
Bromochloromethane	<1	<1	<1
Bromodichloromethane	<1	<1	<1
Bromoform	<1	<1	<1
Bromomethane	<1	<1	<1
Butyl benzyl phthalate			
Cadmium, total	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1
Carbon tetrachloride	<1	<1	<1
Chlordane			
Chlorobenzene	<1	<1	<1
Chlorobenzilate			
Chloroethane	<1	<1	<1
Chloroform	<1	<1	<1
Chloromethane	<1	<1	<1
Chloroprene			
Chromium, total	<8	<8	<8
Chrysene			
Cis-1,2-dichloroethylene	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1
Cobalt, total	.4	.4	.6
Copper, total	<4	<4	<4
Cyanide, total			
Delta-bhc			
Diallate			
Dibenzo(a,h)anthracene			
Dibenzofuran			
Dibromochloromethane	<1	<1	<1
Dibromomethane	<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
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-20R

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Hexachlorobutadiene	ug/L				<8					
Hexachlorocyclopentadiene	ug/L				<8					
Hexachloroethane	ug/L				<8					
Hexachloropropene	ug/L				<8					
Indeno(1,2,3-cd)pyrene	ug/L				<8					
Isobutanol	ug/L				<1000					
Isodrin	ug/L				<8					
Isophorone	ug/L				<8					
Isosafrole	ug/L				<8					
Kepone	ug/L				<8					
Lead, total	ug/L	<4.0	<4.0	<4.0	4.1	<4.0	<4.0	<4.0	<4.0	<4.0
Mercury, total	ug/L				<.5					
Methacrylonitrile	ug/L				<1					
Methapyrilene	ug/L				<8					
Methoxychlor	ug/L				<.05					
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate	ug/L				<1					
Methyl methanesulfonate	ug/L				<8					
Methyl parathion	ug/L				<.4					
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L				<8					
Nickel, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<20	<4
Nitrobenzene	ug/L				<8					
N-nitrosodiethylamine	ug/L				<8					
N-nitrosodimethylamine	ug/L				<8					
N-nitrosodi-n-butylamine	ug/L				<8					
N-nitroso-di-n-propylamine	ug/L				<8					
N-nitrosodiphenylamine	ug/L				<8					
N-nitrosomethylethylamine	ug/L				<8					
N-nitrosopiperidine	ug/L				<8					
N-nitrosopyrrolidine	ug/L				<8					
O,o,o-triethyl phosphorothioate	ug/L				<.4					
O-toluidine	ug/L				<8					
Parathion	ug/L				<.4					
P-dimethylaminoazobenzene	ug/L				<8					
Pentachlorobenzene	ug/L				<8					
Pentachloronitrobenzene (pcnb)	ug/L				<8					
Pentachlorophenol	ug/L				<8					
Phenacetin	ug/L				<8					
Phenanthrene	ug/L				<8					
Phenol	ug/L				<8					
Phorate	ug/L				<.4					
Pronamide	ug/L				<8					
Propionitrile	ug/L				<40					
Pyrene	ug/L				<8					
Safrole	ug/L				<8					
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	115	137	106	139	147	413	226		
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L				<.1					
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4	<4	<4	<4	<4
Thionazin	ug/L				<.4					
Tin, total	ug/L				<20					
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L				<.2					
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20.0	<8.0	10.8	8.4	9.6	<8.0	<8.0	<8.0	115.0

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

Table 9

Analytical Data Summary for MW-20R

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene									
Nickel, total	<4	<4	<4	<4	<4	<4	<4	<4	<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									
Parathion									
P-dimethylaminoazobenzene									
Pentachlorobenzene									
Pentachloronitrobenzene (pcnb)									
Pentachlorophenol									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total									
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<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-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	14.5	18.1	<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-20R

Constituents	9/11/2023	3/20/2024	9/12/2024
Hexachlorobutadiene			
Hexachlorocyclopentadiene			
Hexachloroethane			
Hexachloropropene			
Indeno(1,2,3-cd)pyrene			
Isobutanol			
Isodrin			
Isophorone			
Isosafrole			
Kepone			
Lead, total	<4.0	<4.0	<4.0
Mercury, total			
Methacrylonitrile			
Methapyrilene			
Methoxychlor			
Methyl iodide	<1	<1	<1
Methyl methacrylate			
Methyl methanesulfonate			
Methyl parathion			
Methylene chloride	<5	<5	<5
Naphthalene			
Nickel, total	<4	<4	<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			
Parathion			
P-dimethylaminoazobenzene			
Pentachlorobenzene			
Pentachloronitrobenzene (pcnb)			
Pentachlorophenol			
Phenacetin			
Phenanthrene			
Phenol			
Phorate			
Pronamide			
Propionitrile			
Pyrene			
Safrole			
Selenium, total	<4	<4	<4
Silver, total	<4	<4	<4
Solids, total suspended			
Styrene	<1	<1	<1
Sulfide, total			
Tetrachloroethylene	<1	<1	<1
Thallium, total	<2	<2	<2
Thionazin			
Tin, total			
Toluene	<1	<1	<1
Toxaphene			
Trans-1,2-dichloroethylene	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5
Trichloroethylene	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1
Vanadium, total	<20	<20	<20
Vinyl acetate	<5	<5	<5
Vinyl chloride	<1	<1	<1
Xylenes, total	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-21

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
(3 4)-Methylphenol	ug/L									
(34) -methylphenol	ug/L				<8					
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L				<1					
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L				<8					
1,2,4-trichlorobenzene	ug/L				<1					
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L				<8					
1,3,5-trinitrobenzene	ug/L				<8					
1,3-dichlorobenzene	ug/L				<1					
1,3-dichloropropane	ug/L				<1					
1,3-dinitrobenzene	ug/L				<8					
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L				<8					
1,4-phenylenediamine	ug/L				<8					
1-naphthylamine	ug/L				<8					
2,2-dichloropropane	ug/L				<1					
2,3,4,6-tetrachlorophenol	ug/L				<8					
2,4,5-t	ug/L				<.5					
2,4,5-tp (silvex)	ug/L				<.5					
2,4,5-trichlorophenol	ug/L				<8					
2,4,6-trichlorophenol	ug/L				<8					
2,4-d	ug/L				<2					
2,4-dichlorophenol	ug/L				<8					
2,4-dimethylphenol	ug/L				<8					
2,4-dinitrophenol	ug/L				<8					
2,4-dinitrotoluene	ug/L				<8					
2,6-dichlorophenol	ug/L				<8					
2,6-dinitrotoluene	ug/L				<8					
2-acetylaminofluorene	ug/L				<8					
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L				<8					
2-chlorophenol	ug/L				<8					
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L				<8					
2-methylphenol	ug/L				<8					
2-naphthylamine	ug/L				<8					
2-nitroaniline	ug/L				<8					
2-nitrophenol	ug/L				<8					
3,3´-dichlorobenzidine	ug/L				<8					
3,3'-dimethylbenzidine	ug/L				<8					
3-methylcholanthrene	ug/L				<8					
3-nitroaniline	ug/L				<8					
4,4´-ddd	ug/L				<.05					
4,4´-dde	ug/L				<.05					
4,4´-ddt	ug/L				<.05					
4,6-dinitro-2-methylphenol	ug/L				<8					
4-aminobiphenyl	ug/L				<8					
4-bromophenyl phenyl ether	ug/L				<8					
4-chloro-3-methylphenol	ug/L				<8					
4-chloroaniline	ug/L				<8					
4-chlorophenyl phenyl ether	ug/L				<8					
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L				<8					
4-nitrophenol	ug/L				<8					
5-nitro-o-toluidine	ug/L				<8					
7,12-dimethylbenz(a)anthracene	ug/L				<8					
Acenaphthene	ug/L				<8					
Acenaphthylene	ug/L				<8					
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile	ug/L				<10					
Acetophenone	ug/L				<8					
Acrolein	ug/L				<10					
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin	ug/L				<.05					
Allyl chloride	ug/L				<1					
Alpha-bhc	ug/L				<.05					

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

Table 9

Analytical Data Summary for MW-21

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
(3 4)-Methylphenol					<21				
(34) -methylphenol									
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene					<1				
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					<21				
1,2,4-trichlorobenzene					<1				
1,2-dibromo-3-chloropropane	<1	<1	<5	<5	<1	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene					<21				
1,3,5-trinitrobenzene					<21				
1,3-dichlorobenzene					<1				
1,3-dichloropropane					<1				
1,3-dinitrobenzene					<21				
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone					<21				
1,4-phenylenediamine					<21				
1-naphthylamine					<21				
2,2-dichloropropane					<1				
2,3,4,6-tetrachlorophenol					<21				
2,4,5-t					<.5				
2,4,5-tp (silvex)					<.5				
2,4,5-trichlorophenol					<21				
2,4,6-trichlorophenol					<21				
2,4-d					<2				
2,4-dichlorophenol					<21				
2,4-dimethylphenol					<21				
2,4-dinitrophenol					<21				
2,4-dinitrotoluene					<21				
2,6-dichlorophenol					<21				
2,6-dinitrotoluene					<21				
2-acetylaminofluorene					<21				
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<10	<10	<10
2-chloronaphthalene					<21				
2-chlorophenol					<21				
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene					<21				
2-methylphenol					<21				
2-naphthylamine					<21				
2-nitroaniline					<21				
2-nitrophenol					<21				
3,3´-dichlorobenzidine					<21				
3,3'-dimethylbenzidine					<21				
3-methylcholanthrene					<21				
3-nitroaniline					<21				
4,4´-ddd					<.05				
4,4´-dde					<.05				
4,4´-ddt					<.05				
4,6-dinitro-2-methylphenol					<21				
4-aminobiphenyl					<21				
4-bromophenyl phenyl ether					<21				
4-chloro-3-methylphenol					<21				
4-chloroaniline					<21				
4-chlorophenyl phenyl ether					<21				
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline					<21				
4-nitrophenol					<21				
5-nitro-o-toluidine					<21				
7,12-dimethylbenz(a)anthracene					<21				
Acenaphthene					<21				
Acenaphthylene					<21				
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile					<10				
Acetophenone					<21				
Acrolein					<10				
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin					<.05				
Allyl chloride					<1				
Alpha-bhc					<.05				

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

Table 9

Analytical Data Summary for MW-21

Constituents	9/11/2023	3/20/2024	9/11/2024
(3 4)-Methylphenol			
(34) -methylphenol			
1,1,1,2-tetrachloroethane	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1
1,1-dichloroethane	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1
1,1-dichloropropene			
1,2,3-trichloropropane	<1	<1	<1
1,2,4,5-tetrachlorobenzene			
1,2,4-trichlorobenzene			
1,2-dibromo-3-chloropropane	<5	<5	<5
1,2-dibromoethane	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1
1,2-dichloroethane	<1	<1	<1
1,2-dichloropropane	<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
1,4-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
2-chloronaphthalene			
2-chlorophenol			
2-hexanone (mbk)	<5	<5	<5
2-methylnaphthalene			
2-methylphenol			
2-naphthylamine			
2-nitroaniline			
2-nitrophenol			
3,3´-dichlorobenzidine			
3,3'-dimethylbenzidine			
3-methylcholanthrene			
3-nitroaniline			
4,4´-ddd			
4,4´-dde			
4,4´-ddt			
4,6-dinitro-2-methylphenol			
4-aminobiphenyl			
4-bromophenyl phenyl ether			
4-chloro-3-methylphenol			
4-chloroaniline			
4-chlorophenyl phenyl ether			
4-methyl-2-pentanone (mibk)	<5	<5	<5
4-nitroaniline			
4-nitrophenol			
5-nitro-o-toluidine			
7,12-dimethylbenz(a)anthracene			
Acenaphthene			
Acenaphthylene			
Acetone	<10	<10	<10
Acetonitrile			
Acetophenone			
Acrolein			
Acrylonitrile	<5	<5	<5
Aldrin			
Allyl chloride			
Alpha-bhc			

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

Table 9

Analytical Data Summary for MW-21

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Anthracene	ug/L				<8					
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L				<.1					
Arochlor 1221	ug/L				<.2					
Arochlor 1232	ug/L				<.2					
Arochlor 1242	ug/L				<.2					
Arochlor 1248	ug/L				<.2					
Arochlor 1254	ug/L				<.1					
Arochlor 1260	ug/L				<.1					
Arsenic, total	ug/L	6.2	7.8	<4.0	7.2	4.2	5.8	<4.0	6.7	<4.0
Azobenzene	ug/L				<8					
Barium, total	ug/L	354	461	451	392	630	806	472	875	598
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L				<8					
Benzo(a)pyrene	ug/L				<8					
Benzo(b)fluoranthene	ug/L				<8					
Benzo(g,h,i)perylene	ug/L				<8					
Benzo(k)fluoranthene	ug/L				<8					
Benzyl alcohol	ug/L				<8					
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc	ug/L				<.05					
Bis (2-chloroethoxy) methane	ug/L				<8					
Bis(2-chloroethyl) ether	ug/L				<8					
Bis(2-chloroisopropyl) ether	ug/L				<8					
Bis(2-ethylhexyl) phthalate	ug/L				<8					
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L				<8					
Cadmium, total	ug/L	<.8	<.8	.8	<.8	<.8	1.8	<.8	<.8	1.0
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L				<.1					
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L				<8					
Chloroethane	ug/L	1.4	1.1	1.7	2.4	1.4	2.6	1.0	<1.0	1.6
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L				<1					
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene	ug/L				<8					
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	5.3	5.9	<.8	7.0	<.8	1.1	<.8	<2.0	<.8
Copper, total	ug/L	4.1	4.9	<4.0	5.6	<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	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L				1					
Dieldrin	ug/L				<.05					
Diethyl phthalate	ug/L				<8					
Dimethoate	ug/L				<.4					
Dimethylphthalate	ug/L				<8					
Di-n-butyl phthalate	ug/L				<8					
Di-n-octyl phthalate	ug/L				<8					
Dinoseb	ug/L				<.5					
Diphenylamine	ug/L				<8					
Disulfoton	ug/L				<.4					
Endosulfan i	ug/L				<.05					
Endosulfan ii	ug/L				<.05					
Endosulfan sulfate	ug/L				<.05					
Endrin	ug/L				<.05					
Endrin aldehyde	ug/L				<.05					
Ethyl methacrylate	ug/L				<10					
Ethyl methanesulfonate	ug/L				<8					
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur	ug/L				<.4					
Fluoranthene	ug/L				<8					
Fluorene	ug/L				<8					
Gamma-bhc (lindane)	ug/L				<.05					
Heptachlor	ug/L				<.05					
Heptachlor epoxide	ug/L				<.05					

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

Table 9

Analytical Data Summary for MW-21

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
Anthracene					<21				
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016					<.1				
Arochlor 1221					<.2				
Arochlor 1232					<.2				
Arochlor 1242					<.2				
Arochlor 1248					<.2				
Arochlor 1254					<.1				
Arochlor 1260					<.1				
Arsenic, total	9.7	<4.0	10.1	<4.0	8.1	<4.0	10.5	<4.0	30.5
Azobenzene					<21				
Barium, total	1420	307	1730	469	1020	498	803	450	1420
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene					<21				
Benzo(a)pyrene					<21				
Benzo(b)fluoranthene					<21				
Benzo(g,h,i)perylene					<21				
Benzo(k)fluoranthene					<21				
Benzyl alcohol					<21				
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc					<.05				
Bis (2-chloroethoxy) methane					<21				
Bis(2-chloroethyl) ether					<21				
Bis(2-chloroisopropyl) ether					<21				
Bis(2-ethylhexyl) phthalate					<15				
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					<21				
Cadmium, total	.9	<.8	<.8	.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane					<.1				
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate					<21				
Chloroethane	1.8	1.7	1.2	<1.0	1.3	<1.0	1.0	<1.0	1.4
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene					<1				
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene					<21				
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<.8	<.8	.4	.4	.4	.6	.4	.9
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total					<.005				
Delta-bhc					<.05				
Diallate					<21				
Dibenzo(a,h)anthracene					<21				
Dibenzofuran					<21				
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane					<1				
Dieldrin					<.05				
Diethyl phthalate					<21				
Dimethoate					<.7				
Dimethylphthalate					<21				
Di-n-butyl phthalate					<21				
Di-n-octyl phthalate					<21				
Dinoseb					<.5				
Diphenylamine					<21				
Disulfoton					<.7				
Endosulfan i					<.05				
Endosulfan ii					<.05				
Endosulfan sulfate					<.05				
Endrin					<.05				
Endrin aldehyde					<.05				
Ethyl methacrylate					<10				
Ethyl methanesulfonate					<21				
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur					<.7				
Fluoranthene					<21				
Fluorene					<21				
Gamma-bhc (lindane)					<.05				
Heptachlor					<.05				
Heptachlor epoxide					<.05				

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

Table 9

Analytical Data Summary for MW-21

Constituents	9/11/2023	3/20/2024	9/11/2024
Anthracene			
Antimony, total	<2	<2	<2
Arochlor 1016			
Arochlor 1221			
Arochlor 1232			
Arochlor 1242			
Arochlor 1248			
Arochlor 1254			
Arochlor 1260			
Arsenic, total	<4.0	<4.0	6.5
Azobenzene			
Barium, total	465	369	517
Benzene	<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
Beta-bhc			
Bis (2-chloroethoxy) methane			
Bis(2-chloroethyl) ether			
Bis(2-chloroisopropyl) ether			
Bis(2-ethylhexyl) phthalate			
Bromochloromethane	<1	<1	<1
Bromodichloromethane	<1	<1	<1
Bromoform	<1	<1	<1
Bromomethane	<1	<1	<1
Butyl benzyl phthalate			
Cadmium, total	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1
Carbon tetrachloride	<1	<1	<1
Chlordane			
Chlorobenzene	<1	<1	<1
Chlorobenzilate			
Chloroethane	<1.0	<1.0	<1.0
Chloroform	<1	<1	<1
Chloromethane	<1	<1	<1
Chloroprene			
Chromium, total	<8	<8	<8
Chrysene			
Cis-1,2-dichloroethylene	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1
Cobalt, total	.4	<.4	1.0
Copper, total	<4.0	<4.0	<4.0
Cyanide, total			
Delta-bhc			
Diallate			
Dibenzo(a,h)anthracene			
Dibenzofuran			
Dibromochloromethane	<1	<1	<1
Dibromomethane	<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
Famphur			
Fluoranthene			
Fluorene			
Gamma-bhc (lindane)			
Heptachlor			
Heptachlor epoxide			

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

Table 9

Analytical Data Summary for MW-21

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Hexachlorobenzene	ug/L				<.05					
Hexachlorobutadiene	ug/L				<8					
Hexachlorocyclopentadiene	ug/L				<8					
Hexachloroethane	ug/L				<8					
Hexachloropropene	ug/L				<8					
Indeno(1,2,3-cd)pyrene	ug/L				<8					
Isobutanol	ug/L				<1000					
Isodrin	ug/L				<8					
Isophorone	ug/L				<8					
Isosafrole	ug/L				<8					
Kepone	ug/L				<8					
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, total	ug/L				<.5					
Methacrylonitrile	ug/L				<1					
Methapyrilene	ug/L				<8					
Methoxychlor	ug/L				<.05					
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate	ug/L				<1					
Methyl methanesulfonate	ug/L				<8					
Methyl parathion	ug/L				<.4					
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L				<8					
Nickel, total	ug/L	12.5	15.1	<4.0	17.3	<4.0	7.5	4.3	<20.0	5.7
Nitrobenzene	ug/L				<8					
N-nitrosodiethylamine	ug/L				<8					
N-nitrosodimethylamine	ug/L				<8					
N-nitrosodi-n-butylamine	ug/L				<8					
N-nitroso-di-n-propylamine	ug/L				<8					
N-nitrosodiphenylamine	ug/L				<8					
N-nitrosomethylethylamine	ug/L				<8					
N-nitrosopiperidine	ug/L				<8					
N-nitrosopyrrolidine	ug/L				<8					
O,o,o-triethyl phosphorothioate	ug/L				<.4					
O-toluidine	ug/L				<8					
Parathion	ug/L				<.4					
P-dimethylaminoazobenzene	ug/L				<8					
Pentachlorobenzene	ug/L				<8					
Pentachloronitrobenzene (pcnb)	ug/L				<8					
Pentachlorophenol	ug/L				<8					
Phenacetin	ug/L				<8					
Phenanthrene	ug/L				<8					
Phenol	ug/L				<8					
Phorate	ug/L				<.4					
Pronamide	ug/L				<8					
Propionitrile	ug/L				<40					
Pyrene	ug/L				<8					
Safrole	ug/L				<8					
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	198	254	108	251	142	950	238		
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L				<.1					
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4	<4	<4	<4	<4
Thionazin	ug/L				<.4					
Tin, total	ug/L				<20					
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L				<.2					
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20.0	18.0	<8.0	23.5	<8.0	8.3	<8.0	<8.0	38.3

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

Table 9

Analytical Data Summary for MW-21

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
Hexachlorobenzene					<.05				
Hexachlorobutadiene					<21				
Hexachlorocyclopentadiene					<21				
Hexachloroethane					<21				
Hexachloropropene					<21				
Indeno(1,2,3-cd)pyrene					<21				
Isobutanol					<1000				
Isodrin					<21				
Isophorone					<21				
Isosafrole					<21				
Kepone					<21				
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, total					<.5				
Methacrylonitrile					<1				
Methapyrilene					<21				
Methoxychlor					<.05				
Methyl iodide	<1	<1	<1	<1	<2	<1	<1	<1	<1
Methyl methacrylate					<1				
Methyl methanesulfonate					<21				
Methyl parathion					<.7				
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene					<21				
Nickel, total	5.7	<4.0	6.3	5.8	5.6	5.4	5.7	6.1	6.8
Nitrobenzene					<21				
N-nitrosodiethylamine					<21				
N-nitrosodimethylamine					<21				
N-nitrosodi-n-butylamine					<21				
N-nitroso-di-n-propylamine					<21				
N-nitrosodiphenylamine					<21				
N-nitrosomethylethylamine					<21				
N-nitrosopiperidine					<21				
N-nitrosopyrrolidine					<21				
O,o,o-triethyl phosphorothioate					<.7				
O-toluidine					<21				
Parathion					<.7				
P-dimethylaminoazobenzene					<21				
Pentachlorobenzene					<21				
Pentachloronitrobenzene (pcnb)					<21				
Pentachlorophenol					<21				
Phenacetin					<21				
Phenanthrene					<21				
Phenol					<21				
Phorate					<.7				
Pronamide					<21				
Propionitrile					<10				
Pyrene					<21				
Safrole					<21				
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total					<.1				
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Thionazin					<.7				
Tin, total					<20				
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene					<.2				
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	14.3	<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-21

Constituents	9/11/2023	3/20/2024	9/11/2024
Hexachlorobenzene			
Hexachlorobutadiene			
Hexachlorocyclopentadiene			
Hexachloroethane			
Hexachloropropene			
Indeno(1,2,3-cd)pyrene			
Isobutanol			
Isodrin			
Isophorone			
Isosafrole			
Kepone			
Lead, total	<4	<4	<4
Mercury, total			
Methacrylonitrile			
Methapyrilene			
Methoxychlor			
Methyl iodide	<1	<1	<1
Methyl methacrylate			
Methyl methanesulfonate			
Methyl parathion			
Methylene chloride	<5	<5	<5
Naphthalene			
Nickel, total	5.3	<4.0	8.5
Nitrobenzene			
N-nitrosodiethylamine			
N-nitrosodimethylamine			
N-nitrosodi-n-butylamine			
N-nitroso-di-n-propylamine			
N-nitrosodiphenylamine			
N-nitrosomethylethylamine			
N-nitrosopiperidine			
N-nitrosopyrrolidine			
O,o,o-triethyl phosphorothioate			
O-toluidine			
Parathion			
P-dimethylaminoazobenzene			
Pentachlorobenzene			
Pentachloronitrobenzene (pcnb)			
Pentachlorophenol			
Phenacetin			
Phenanthrene			
Phenol			
Phorate			
Pronamide			
Propionitrile			
Pyrene			
Safrole			
Selenium, total	<4	<4	<4
Silver, total	<4	<4	<4
Solids, total suspended			
Styrene	<1	<1	<1
Sulfide, total			
Tetrachloroethylene	<1	<1	<1
Thallium, total	<2	<2	<2
Thionazin			
Tin, total			
Toluene	<1	<1	<1
Toxaphene			
Trans-1,2-dichloroethylene	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5
Trichloroethylene	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1
Vanadium, total	<20	<20	<20
Vinyl acetate	<5	<5	<5
Vinyl chloride	<1	<1	<1
Xylenes, total	<2	<2	<2
Zinc, total	<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	Units	10/15/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
(3 4)-Methylphenol	ug/L									
(34) -methylphenol	ug/L				<8					
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L				<1					
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L				<8					
1,2,4-trichlorobenzene	ug/L				<1					
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L				<8					
1,3,5-trinitrobenzene	ug/L				<8					
1,3-dichlorobenzene	ug/L				<1					
1,3-dichloropropane	ug/L				<1					
1,3-dinitrobenzene	ug/L				<8					
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L				<8					
1,4-phenylenediamine	ug/L				<8					
1-naphthylamine	ug/L				<8					
2,2-dichloropropane	ug/L				<1					
2,3,4,6-tetrachlorophenol	ug/L				<8					
2,4,5-t	ug/L				<.5					
2,4,5-tp (silvex)	ug/L				<.5					
2,4,5-trichlorophenol	ug/L				<8					
2,4,6-trichlorophenol	ug/L				<8					
2,4-d	ug/L				<2					
2,4-dichlorophenol	ug/L				<8					
2,4-dimethylphenol	ug/L				<8					
2,4-dinitrophenol	ug/L				<8					
2,4-dinitrotoluene	ug/L				<8					
2,6-dichlorophenol	ug/L				<8					
2,6-dinitrotoluene	ug/L				<8					
2-acetylaminofluorene	ug/L				<8					
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L				<8					
2-chlorophenol	ug/L				<8					
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L				<8					
2-methylphenol	ug/L				<8					
2-naphthylamine	ug/L				<8					
2-nitroaniline	ug/L				<8					
2-nitrophenol	ug/L				<8					
3,3´-dichlorobenzidine	ug/L				<8					
3,3'-dimethylbenzidine	ug/L				<8					
3-methylcholanthrene	ug/L				<8					
3-nitroaniline	ug/L				<8					
4,4´-ddd	ug/L				<.05					
4,4´-dde	ug/L				<.05					
4,4´-ddt	ug/L				<.05					
4,6-dinitro-2-methylphenol	ug/L				<8					
4-aminobiphenyl	ug/L				<8					
4-bromophenyl phenyl ether	ug/L				<8					
4-chloro-3-methylphenol	ug/L				<8					
4-chloroaniline	ug/L				<8					
4-chlorophenyl phenyl ether	ug/L				<8					
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L				<8					
4-nitrophenol	ug/L				<8					
5-nitro-o-toluidine	ug/L				<8					
7,12-dimethylbenz(a)anthracene	ug/L				<8					
Acenaphthene	ug/L				<8					
Acenaphthylene	ug/L				<8					
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	14.6	<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	<5	<5
Aldrin	ug/L				<.05					
Allyl chloride	ug/L				<1					
Alpha-bhc	ug/L				<.05					

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

Table 9

Analytical Data Summary for MW-22

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	3/8/2022	8/30/2022	3/7/2023	3/20/2024
(3 4)-Methylphenol					<8				
(34) -methylphenol									
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene					<1				
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					<8				
1,2,4-trichlorobenzene					<1				
1,2-dibromo-3-chloropropane	<1	<1	<5	<5	<1	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene					<8				
1,3,5-trinitrobenzene					<8				
1,3-dichlorobenzene					<1				
1,3-dichloropropane					<1				
1,3-dinitrobenzene					<8				
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone					<8				
1,4-phenylenediamine					<8				
1-naphthylamine					<8				
2,2-dichloropropane					<1				
2,3,4,6-tetrachlorophenol					<8				
2,4,5-t					<.5				
2,4,5-tp (silvex)					<.5				
2,4,5-trichlorophenol					<8				
2,4,6-trichlorophenol					<8				
2,4-d					<2				
2,4-dichlorophenol					<8				
2,4-dimethylphenol					<8				
2,4-dinitrophenol					<8				
2,4-dinitrotoluene					<8				
2,6-dichlorophenol					<8				
2,6-dinitrotoluene					<8				
2-acetylaminofluorene					<8				
2-butanone (mek)	<5	<5	<5	<5	<5	<10	<10	<10	<10
2-chloronaphthalene					<8				
2-chlorophenol					<8				
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene					<8				
2-methylphenol					<8				
2-naphthylamine					<8				
2-nitroaniline					<8				
2-nitrophenol					<8				
3,3´-dichlorobenzidine					<8				
3,3'-dimethylbenzidine					<8				
3-methylcholanthrene					<8				
3-nitroaniline					<8				
4,4´-ddd					<.05				
4,4´-dde					<.05				
4,4´-ddt					<.05				
4,6-dinitro-2-methylphenol					<8				
4-aminobiphenyl					<8				
4-bromophenyl phenyl ether					<8				
4-chloro-3-methylphenol					<8				
4-chloroaniline					<8				
4-chlorophenyl phenyl ether					<8				
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline					<8				
4-nitrophenol					<8				
5-nitro-o-toluidine					<8				
7,12-dimethylbenz(a)anthracene					<8				
Acenaphthene					<8				
Acenaphthylene					<8				
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile					<10				
Acetophenone					<8				
Acrolein					<10				
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin					<.05				
Allyl chloride					<1				
Alpha-bhc					<.05				

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

Table 9

Analytical Data Summary for MW-22

Constituents	9/12/2024
(3 4)-Methylphenol	
(34) -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
1,1-dichloroethylene	<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	
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	

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

Table 9

Analytical Data Summary for MW-22

Constituents	Units	10/15/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Anthracene	ug/L				<8					
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L				<.1					
Arochlor 1221	ug/L				<.2					
Arochlor 1232	ug/L				<.2					
Arochlor 1242	ug/L				<.2					
Arochlor 1248	ug/L				<.2					
Arochlor 1254	ug/L				<.1					
Arochlor 1260	ug/L				<.1					
Arsenic, total	ug/L	15.9	398.0	138.0	34.5	18.5	86.7	19.3	82.8	77.6
Azobenzene	ug/L				<8					
Barium, total	ug/L	353	426	441	383	295	325	294	287	278
Benzene	ug/L	<1.0	1.6	<1.0	<1.0	<1.0	1.7	<1.0	2.3	1.5
Benzo(a)anthracene	ug/L				<8					
Benzo(a)pyrene	ug/L				<8					
Benzo(b)fluoranthene	ug/L				<8					
Benzo(g,h,i)perylene	ug/L				<8					
Benzo(k)fluoranthene	ug/L				<8					
Benzyl alcohol	ug/L				<8					
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc	ug/L				<.05					
Bis (2-chloroethoxy) methane	ug/L				<8					
Bis(2-chloroethyl) ether	ug/L				<8					
Bis(2-chloroisopropyl) ether	ug/L				<8					
Bis(2-ethylhexyl) phthalate	ug/L				<8					
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	2.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Butyl benzyl phthalate	ug/L				<8					
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	.8	1.2	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L				<.1					
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L				<8					
Chloroethane	ug/L	1.0	1.1	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	<1.0
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L				<1					
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene	ug/L				<8					
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	4.0	5.0	4.5	5.1	4.4	3.5	4.0	2.6	2.2
Copper, total	ug/L	<4	4	<4	<4	<4	<4	<4	<4	<4
Cyanide, total	mg/L				<.005					
Delta-bhc	ug/L				<.05					
Diallate	ug/L				<8					
Dibenzo(a,h)anthracene	ug/L				<8					
Dibenzofuran	ug/L				<8					
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L				<1					
Dieldrin	ug/L				<.05					
Diethyl phthalate	ug/L				<8					
Dimethoate	ug/L				<.4					
Dimethylphthalate	ug/L				<8					
Di-n-butyl phthalate	ug/L				<8					
Di-n-octyl phthalate	ug/L				<8					
Dinoseb	ug/L				<.5					
Diphenylamine	ug/L				<8					
Disulfoton	ug/L				<.4					
Endosulfan i	ug/L				<.05					
Endosulfan ii	ug/L				<.05					
Endosulfan sulfate	ug/L				<.05					
Endrin	ug/L				<.05					
Endrin aldehyde	ug/L				<.05					
Ethyl methacrylate	ug/L				<10					
Ethyl methanesulfonate	ug/L				<8					
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur	ug/L				<.4					
Fluoranthene	ug/L				<8					
Fluorene	ug/L				<8					
Gamma-bhc (lindane)	ug/L				<.05					
Heptachlor	ug/L				<.05					
Heptachlor epoxide	ug/L				<.05					

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

Table 9

Analytical Data Summary for MW-22

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	3/8/2022	8/30/2022	3/7/2023	3/20/2024
Anthracene					<8				
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016					<.1				
Arochlor 1221					<.2				
Arochlor 1232					<.2				
Arochlor 1242					<.2				
Arochlor 1248					<.2				
Arochlor 1254					<.1				
Arochlor 1260					<.1				
Arsenic, total	86.4	76.3	77.3	68.7	82.7	65.2	36.0	95.5	59.8
Azobenzene					<8				
Barium, total	329	302	296	351	298	452	307	367	439
Benzene	2.2	2.3	2.4	1.5	1.4	1.0	<1.0	2.0	<1.0
Benzo(a)anthracene					<8				
Benzo(a)pyrene					<8				
Benzo(b)fluoranthene					<8				
Benzo(g,h,i)perylene					<8				
Benzo(k)fluoranthene					<8				
Benzyl alcohol					<8				
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc					<.05				
Bis (2-chloroethoxy) methane					<8				
Bis(2-chloroethyl) ether					<8				
Bis(2-chloroisopropyl) ether					<8				
Bis(2-ethylhexyl) phthalate					<6				
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Butyl benzyl phthalate					<8				
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	1.0	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane					<.1				
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate					<8				
Chloroethane	<1.0	<1.0	<1.0	1.7	1.2	<1.0	<1.0	<1.0	<1.0
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene					<1				
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene					<8				
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	2.5	2.7	2.1	3.7	2.5	4.6	4.1	4.2	1.8
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cyanide, total					<.005				
Delta-bhc					<.05				
Diallate					<8				
Dibenzo(a,h)anthracene					<8				
Dibenzofuran					<8				
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane					<1				
Dieldrin					<.05				
Diethyl phthalate					<8				
Dimethoate					<.4				
Dimethylphthalate					<8				
Di-n-butyl phthalate					<8				
Di-n-octyl phthalate					<8				
Dinoseb					<.5				
Diphenylamine					<8				
Disulfoton					<.4				
Endosulfan i					<.05				
Endosulfan ii					<.05				
Endosulfan sulfate					<.05				
Endrin					<.05				
Endrin aldehyde					<.05				
Ethyl methacrylate					<10				
Ethyl methanesulfonate					<8				
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur					<.4				
Fluoranthene					<8				
Fluorene					<8				
Gamma-bhc (lindane)					<.05				
Heptachlor					<.05				
Heptachlor epoxide					<.05				

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

Table 9

Analytical Data Summary for MW-22

Constituents	9/12/2024
Anthracene	
Antimony, total	<2
Arochlor 1016	
Arochlor 1221	
Arochlor 1232	
Arochlor 1242	
Arochlor 1248	
Arochlor 1254	
Arochlor 1260	
Arsenic, total	63.1
Azobenzene	
Barium, total	418
Benzene	<1.0
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-chloroisopropyl) ether	
Bis(2-ethylhexyl) phthalate	
Bromochloromethane	<1
Bromodichloromethane	<1
Bromoform	<1
Bromomethane	<1.0
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
Chrysene	
Cis-1,2-dichloroethylene	<1
Cis-1,3-dichloropropene	<1
Cobalt, total	4.0
Copper, total	<4
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	

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

Table 9

Analytical Data Summary for MW-22

Constituents	Units	10/15/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Hexachlorobenzene	ug/L				<.05					
Hexachlorobutadiene	ug/L				<8					
Hexachlorocyclopentadiene	ug/L				<8					
Hexachloroethane	ug/L				<8					
Hexachloropropene	ug/L				<8					
Indeno(1,2,3-cd)pyrene	ug/L				<8					
Isobutanol	ug/L				<1000					
Isodrin	ug/L				<8					
Isophorone	ug/L				<8					
Isosafrole	ug/L				<8					
Kepone	ug/L				<8					
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, total	ug/L				<.5					
Methacrylonitrile	ug/L				<1					
Methapyrilene	ug/L				<8					
Methoxychlor	ug/L				<.05					
Methyl iodide	ug/L	11.8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl methacrylate	ug/L				<1					
Methyl methanesulfonate	ug/L				<8					
Methyl parathion	ug/L				<.4					
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L				<8					
Nickel, total	ug/L	6.9	9.8	6.8	9.6	4.4	7.4	8.2	<20.0	6.5
Nitrobenzene	ug/L				<8					
N-nitrosodiethylamine	ug/L				<8					
N-nitrosodimethylamine	ug/L				<8					
N-nitrosodi-n-butylamine	ug/L				<8					
N-nitroso-di-n-propylamine	ug/L				<8					
N-nitrosodiphenylamine	ug/L				<8					
N-nitrosomethylethylamine	ug/L				<8					
N-nitrosopiperidine	ug/L				<8					
N-nitrosopyrrolidine	ug/L				<8					
O,o,o-triethyl phosphorothioate	ug/L				<.4					
O-toluidine	ug/L				<8					
Parathion	ug/L				<.4					
P-dimethylaminoazobenzene	ug/L				<8					
Pentachlorobenzene	ug/L				<8					
Pentachloronitrobenzene (pcnb)	ug/L				<8					
Pentachlorophenol	ug/L				<8					
Phenacetin	ug/L				<8					
Phenanthrene	ug/L				<8					
Phenol	ug/L				<8					
Phorate	ug/L				<.4					
Pronamide	ug/L				<8					
Propionitrile	ug/L				<40					
Pyrene	ug/L				<8					
Safrole	ug/L				<8					
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	39	106	101	54	36	108	135		
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L				<.1					
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4	<4	<4	<4	<4
Thionazin	ug/L				<.4					
Tin, total	ug/L				<20					
Toluene	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	1.5	<1.0
Toxaphene	ug/L				<.2					
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1.0	1.6	1.0	<1.0	<1.0	2.9	<1.0	<1.0	1.5
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20	<8	<8	<8	<8	<8	<8	<8	37

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

Table 9

Analytical Data Summary for MW-22

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	3/8/2022	8/30/2022	3/7/2023	3/20/2024
Hexachlorobenzene					.08	<.05			
Hexachlorobutadiene					<8				
Hexachlorocyclopentadiene					<8				
Hexachloroethane					<8				
Hexachloropropene					<8				
Indeno(1,2,3-cd)pyrene					<8				
Isobutanol					<1000				
Isodrin					<8				
Isophorone					<8				
Isosafrole					<8				
Kepone					<8				
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, total					<.5				
Methacrylonitrile					<1				
Methapyrilene					<8				
Methoxychlor					<.05				
Methyl iodide	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0
Methyl methacrylate					<1				
Methyl methanesulfonate					<8				
Methyl parathion					<.4				
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene					<8				
Nickel, total	6.1	6.8	5.4	7.5	5.8	8.7	7.6	7.7	<4.0
Nitrobenzene					<8				
N-nitrosodiethylamine					<8				
N-nitrosodimethylamine					<8				
N-nitrosodi-n-butylamine					<8				
N-nitroso-di-n-propylamine					<8				
N-nitrosodiphenylamine					<8				
N-nitrosomethylethylamine					<8				
N-nitrosopiperidine					<8				
N-nitrosopyrrolidine					<8				
O,o,o-triethyl phosphorothioate					<.4				
O-toluidine					<8				
Parathion					<.4				
P-dimethylaminoazobenzene					<8				
Pentachlorobenzene					<8				
Pentachloronitrobenzene (pcnb)					<8				
Pentachlorophenol					<8				
Phenacetin					<8				
Phenanthrene					<8				
Phenol					<8				
Phorate					<.4				
Pronamide					<8				
Propionitrile					<10				
Pyrene					<8				
Safrole					<8				
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total					<.1				
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Thionazin					<.4				
Tin, total					<20				
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toxaphene					<.2				
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	1.4	1.8	1.8	1.3	1.1	<1.0	<1.0	1.3	<1.0
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8	<8	<20	<20	<20	<20	<20	<20	<20

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

Table 9

Analytical Data Summary for MW-22

Constituents	9/12/2024
Hexachlorobenzene	
Hexachlorobutadiene	
Hexachlorocyclopentadiene	
Hexachloroethane	
Hexachloropropene	
Indeno(1,2,3-cd)pyrene	
Isobutanol	
Isodrin	
Isophorone	
Isosafrole	
Kepone	
Lead, total	<4
Mercury, total	
Methacrylonitrile	
Methapyrilene	
Methoxychlor	
Methyl iodide	<1.0
Methyl methacrylate	
Methyl methanesulfonate	
Methyl parathion	
Methylene chloride	<5
Naphthalene	
Nickel, total	7.4
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	
Parathion	
P-dimethylaminoazobenzene	
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	
Tetrachloroethylene	<1
Thallium, total	<2
Thionazin	
Tin, total	
Toluene	<1.0
Toxaphene	
Trans-1,2-dichloroethylene	<1
Trans-1,3-dichloropropene	<1
Trans-1,4-dichloro-2-butene	<5
Trichloroethylene	<1
Trichlorofluoromethane	<1
Vanadium, total	<20
Vinyl acetate	<5
Vinyl chloride	<1.0
Xylenes, total	<2
Zinc, total	<20

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

Table 9

Analytical Data Summary for MW-23

Constituents	Units	10/16/2014
1,1,1,2-tetrachloroethane	ug/L	<1
1,1,1-trichloroethane	ug/L	<1
1,1,2,2-tetrachloroethane	ug/L	<1
1,1,2-trichloroethane	ug/L	<1
1,1-dichloroethane	ug/L	<1
1,1-dichloroethylene	ug/L	<1
1,2,3-trichloropropane	ug/L	<1
1,2-dibromo-3-chloropropane	ug/L	<1
1,2-dibromoethane	ug/L	<1
1,2-dichlorobenzene	ug/L	<1
1,2-dichloroethane	ug/L	<1
1,2-dichloropropane	ug/L	<1
1,4-dichlorobenzene	ug/L	<1
2-butanone (mek)	ug/L	<5
2-hexanone (mbk)	ug/L	<5
4-methyl-2-pentanone (mibk)	ug/L	<5
Acetone	ug/L	<10
Acrylonitrile	ug/L	<5
Antimony, total	ug/L	<2
Arsenic, total	ug/L	<4
Barium, total	ug/L	48.3
Benzene	ug/L	<1
Beryllium, total	ug/L	<4
Bromochloromethane	ug/L	<1
Bromodichloromethane	ug/L	<1
Bromoform	ug/L	<1
Bromomethane	ug/L	<1
Cadmium, total	ug/L	<.8
Carbon disulfide	ug/L	<1
Carbon tetrachloride	ug/L	<1
Chlorobenzene	ug/L	<1
Chloroethane	ug/L	<1
Chloroform	ug/L	<1
Chloromethane	ug/L	<1
Chromium, total	ug/L	<8
Cis-1,2-dichloroethylene	ug/L	<1
Cis-1,3-dichloropropene	ug/L	<1
Cobalt, total	ug/L	<.8
Copper, total	ug/L	<4
Dibromochloromethane	ug/L	<1
Dibromomethane	ug/L	<1
Ethylbenzene	ug/L	<1
Lead, total	ug/L	<4
Methyl iodide	ug/L	<1
Methylene chloride	ug/L	<5
Nickel, total	ug/L	<4
Selenium, total	ug/L	<4
Silver, total	ug/L	<4
Solids, total suspended	mg/L	400
Styrene	ug/L	<1
Tetrachloroethylene	ug/L	<1
Thallium, total	ug/L	<4
Toluene	ug/L	<1
Trans-1,2-dichloroethylene	ug/L	<1
Trans-1,3-dichloropropene	ug/L	<1
Trans-1,4-dichloro-2-butene	ug/L	<5
Trichloroethylene	ug/L	<1
Trichlorofluoromethane	ug/L	<1
Vanadium, total	ug/L	<20
Vinyl acetate	ug/L	<5
Vinyl chloride	ug/L	<1
Xylenes, total	ug/L	<2
Zinc, total	ug/L	<20

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

Table 9

Analytical Data Summary for MW-24

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
(34) -methylphenol	ug/L				<8					
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L				<1					
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L				<8					
1,2,4-trichlorobenzene	ug/L				<1					
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L				<8					
1,3,5-trinitrobenzene	ug/L				<8					
1,3-dichlorobenzene	ug/L				<1					
1,3-dichloropropane	ug/L				<1					
1,3-dinitrobenzene	ug/L				<8					
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L				<8					
1,4-phenylenediamine	ug/L				<8					
1-naphthylamine	ug/L				<8					
2,2-dichloropropane	ug/L				<1					
2,3,4,6-tetrachlorophenol	ug/L				<8					
2,4,5-t	ug/L				<.5					
2,4,5-tp (silvex)	ug/L				<.5					
2,4,5-trichlorophenol	ug/L				<8					
2,4,6-trichlorophenol	ug/L				<8					
2,4-d	ug/L				<2					
2,4-dichlorophenol	ug/L				<8					
2,4-dimethylphenol	ug/L				<8					
2,4-dinitrophenol	ug/L				<8					
2,4-dinitrotoluene	ug/L				<8					
2,6-dichlorophenol	ug/L				<8					
2,6-dinitrotoluene	ug/L				<8					
2-acetylaminofluorene	ug/L				<8					
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene	ug/L				<8					
2-chlorophenol	ug/L				<8					
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L				<8					
2-methylphenol	ug/L				<8					
2-naphthylamine	ug/L				<8					
2-nitroaniline	ug/L				<8					
2-nitrophenol	ug/L				<8					
3,3´-dichlorobenzidine	ug/L				<8					
3,3'-dimethylbenzidine	ug/L				<8					
3-methylcholanthrene	ug/L				<8					
3-nitroaniline	ug/L				<8					
4,4´-ddd	ug/L				<.05					
4,4´-dde	ug/L				<.05					
4,4´-ddt	ug/L				<.05					
4,6-dinitro-2-methylphenol	ug/L				<8					
4-aminobiphenyl	ug/L				<8					
4-bromophenyl phenyl ether	ug/L				<8					
4-chloro-3-methylphenol	ug/L				<8					
4-chloroaniline	ug/L				<8					
4-chlorophenyl phenyl ether	ug/L				<8					
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L				<8					
4-nitrophenol	ug/L				<8					
5-nitro-o-toluidine	ug/L				<8					
7,12-dimethylbenz(a)anthracene	ug/L				<8					
Acenaphthene	ug/L				<8					
Acenaphthylene	ug/L				<8					
Acetone	ug/L	58.4	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile	ug/L				<10					
Acetophenone	ug/L				<8					
Acrolein	ug/L				<10					
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<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-24

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	5/11/2021	9/28/2021	3/8/2022	8/30/2022
(34) -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-dichloroethylene	<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	<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
1,2-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	<10	<10
2-chloronaphthalene									
2-chlorophenol									
2-hexanone (mbk)	<5	<5	<5	<5	<5		<5	<5	<5
2-methylnaphthalene									
2-methylphenol									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3´-dichlorobenzidine									
3,3'-dimethylbenzidine									
3-methylcholanthrene									
3-nitroaniline									
4,4´-ddd									
4,4´-dde									
4,4´-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5		<5	<5	<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz(a)anthracene									
Acenaphthene									
Acenaphthylene									
Acetone	<10.0	<10.0	13.8	<10.0	62.4	<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-24

Constituents	3/7/2023	9/11/2023	3/20/2024	9/12/2024
(34) -methylphenol				
1,1,1,2-tetrachloroethane	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1
1,1-dichloropropene				
1,2,3-trichloropropane	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene				
1,2,4-trichlorobenzene				
1,2-dibromo-3-chloropropane	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1
1,2-dinitrobenzene				
1,3,5-trinitrobenzene				
1,3-dichlorobenzene				
1,3-dichloropropane				
1,3-dinitrobenzene				
1,4-dichlorobenzene	<1	<1	<1	<1
1,4-naphthoquinone				
1,4-phenylenediamine				
1-naphthylamine				
2,2-dichloropropane				
2,3,4,6-tetrachlorophenol				
2,4,5-t				
2,4,5-tp (silvex)				
2,4,5-trichlorophenol				
2,4,6-trichlorophenol				
2,4-d				
2,4-dichlorophenol				
2,4-dimethylphenol				
2,4-dinitrophenol				
2,4-dinitrotoluene				
2,6-dichlorophenol				
2,6-dinitrotoluene				
2-acetylaminofluorene				
2-butanone (mek)	<10	<10	<10	<10
2-chloronaphthalene				
2-chlorophenol				
2-hexanone (mbk)	<5	<5	<5	<5
2-methylnaphthalene				
2-methylphenol				
2-naphthylamine				
2-nitroaniline				
2-nitrophenol				
3,3´-dichlorobenzidine				
3,3'-dimethylbenzidine				
3-methylcholanthrene				
3-nitroaniline				
4,4´-ddd				
4,4´-dde				
4,4´-ddt				
4,6-dinitro-2-methylphenol				
4-aminobiphenyl				
4-bromophenyl phenyl ether				
4-chloro-3-methylphenol				
4-chloroaniline				
4-chlorophenyl phenyl ether				
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5
4-nitroaniline				
4-nitrophenol				
5-nitro-o-toluidine				
7,12-dimethylbenz(a)anthracene				
Acenaphthene				
Acenaphthylene				
Acetone	<10.0	<10.0	<10.0	<10.0
Acetonitrile				
Acetophenone				
Acrolein				
Acrylonitrile	<5	<5	<5	<5
Aldrin				
Allyl chloride				
Alpha-bhc				
Anthracene				

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

Table 9

Analytical Data Summary for MW-24

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016	ug/L				<.1					
Arochlor 1221	ug/L				<.2					
Arochlor 1232	ug/L				<.2					
Arochlor 1242	ug/L				<.2					
Arochlor 1248	ug/L				<.2					
Arochlor 1254	ug/L				<.1					
Arochlor 1260	ug/L				<.1					
Arsenic, total	ug/L	65.9	25.0	47.2	88.5	51.1	139.0	72.0	155.0	129.0
Azobenzene	ug/L				<8					
Barium, total	ug/L	1150	671	772	975	641	1260	713	1140	968
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L				<8					
Benzo(a)pyrene	ug/L				<8					
Benzo(b)fluoranthene	ug/L				<8					
Benzo(g,h,i)perylene	ug/L				<8					
Benzo(k)fluoranthene	ug/L				<8					
Benzyl alcohol	ug/L				<8					
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc	ug/L				<.05					
Bis (2-chloroethoxy) methane	ug/L				<8					
Bis(2-chloroethyl) ether	ug/L				<8					
Bis(2-chloroisopropyl) ether	ug/L				<8					
Bis(2-ethylhexyl) phthalate	ug/L				<8					
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L				<8					
Cadmium, total	ug/L	1.6	<.8	<.8	.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L				<.1					
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L				<8					
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L				<1					
Chromium, total	ug/L	37.5	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene	ug/L				<8					
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	37.2	14.0	2.0	3.7	5.6	2.2	1.2	<2.0	.9
Copper, total	ug/L	67.1	10.0	<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	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L				<1					
Dieldrin	ug/L				<.05					
Diethyl phthalate	ug/L				<8					
Dimethoate	ug/L				<.4					
Dimethylphthalate	ug/L				<8					
Di-n-butyl phthalate	ug/L				<8					
Di-n-octyl phthalate	ug/L				<8					
Dinoseb	ug/L				<.5					
Diphenylamine	ug/L				<8					
Disulfoton	ug/L				<.4					
Endosulfan i	ug/L				<.05					
Endosulfan ii	ug/L				<.05					
Endosulfan sulfate	ug/L				<.05					
Endrin	ug/L				<.05					
Endrin aldehyde	ug/L				<.05					
Ethyl methacrylate	ug/L				<10					
Ethyl methanesulfonate	ug/L				<8					
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur	ug/L				<.4					
Fluoranthene	ug/L				<8					
Fluorene	ug/L				<8					
Gamma-bhc (lindane)	ug/L				<.05					
Heptachlor	ug/L				<.05					
Heptachlor epoxide	ug/L				<.05					
Hexachlorobenzene	ug/L				<.05					

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

Table 9

Analytical Data Summary for MW-24

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	5/11/2021	9/28/2021	3/8/2022	8/30/2022
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	210.0	117.0	167.0	61.6	133.0		142.0	115.0	101.0
Azobenzene									
Barium, total	1500	1100	1080	638	901		824	801	579
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	<4	<4	<4	<4		<4	<4	<4
Beta-bhc									
Bis (2-chloroethoxy) methane									
Bis(2-chloroethyl) ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl) phthalate									
Bromochloromethane	<1	<1	<1	<1	<1		<1	<1	<1
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	1.8	1.0	<.8	<.8	2.4		<.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	<8.0	<8.0	<8.0	<8.0	<8.0		<8.0	<8.0	<8.0
Chrysene									
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1		<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1		<1	<1	<1
Cobalt, total	2.0	1.6	2.1	.8	1.1		1.0	1.7	.6
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0
Cyanide, total									
Delta-bhc									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1	<1	<1		<1	<1	<1
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-24

Constituents	3/7/2023	9/11/2023	3/20/2024	9/12/2024
Antimony, total	<2	<2	<2	<2
Arochlor 1016				
Arochlor 1221				
Arochlor 1232				
Arochlor 1242				
Arochlor 1248				
Arochlor 1254				
Arochlor 1260				
Arsenic, total	12.9	57.9	13.3	13.6
Azobenzene				
Barium, total	385	508	459	509
Benzene	<1	<1	<1	<1
Benzo(a)anthracene				
Benzo(a)pyrene				
Benzo(b)fluoranthene				
Benzo(g,h,i)perylene				
Benzo(k)fluoranthene				
Benzyl alcohol				
Beryllium, total	<4	<4	<4	<4
Beta-bhc				
Bis (2-chloroethoxy) methane				
Bis(2-chloroethyl) ether				
Bis(2-chloroisopropyl) ether				
Bis(2-ethylhexyl) phthalate				
Bromochloromethane	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Butyl benzyl phthalate				
Cadmium, total	<.8	<.8	<.8	.9
Carbon disulfide	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1
Chlordane				
Chlorobenzene	<1	<1	<1	<1
Chlorobenzilate				
Chloroethane	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1
Chloroprene				
Chromium, total	<8.0	<8.0	<8.0	<8.0
Chrysene				
Cis-1,2-dichloroethylene	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1
Cobalt, total	<.4	1.2	<.4	.6
Copper, total	<4.0	<4.0	<4.0	<4.0
Cyanide, total				
Delta-bhc				
Diallate				
Dibenzo(a,h)anthracene				
Dibenzofuran				
Dibromochloromethane	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1
Dichlorodifluoromethane				
Dieldrin				
Diethyl phthalate				
Dimethoate				
Dimethylphthalate				
Di-n-butyl phthalate				
Di-n-octyl phthalate				
Dinoseb				
Diphenylamine				
Disulfoton				
Endosulfan i				
Endosulfan ii				
Endosulfan sulfate				
Endrin				
Endrin aldehyde				
Ethyl methacrylate				
Ethyl methanesulfonate				
Ethylbenzene	<1	<1	<1	<1
Famphur				
Fluoranthene				
Fluorene				
Gamma-bhc (lindane)				
Heptachlor				
Heptachlor epoxide				
Hexachlorobenzene				

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

Table 9

Analytical Data Summary for MW-24

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018
Hexachlorobutadiene	ug/L				<8					
Hexachlorocyclopentadiene	ug/L				<8					
Hexachloroethane	ug/L				<8					
Hexachloropropene	ug/L				<8					
Indeno(1,2,3-cd)pyrene	ug/L				<8					
Isobutanol	ug/L				<1000					
Isodrin	ug/L				<8					
Isophorone	ug/L				<8					
Isosafrole	ug/L				<8					
Kepone	ug/L				<8					
Lead, total	ug/L	27.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Mercury, total	ug/L				<.5					
Methacrylonitrile	ug/L				<1					
Methapyrilene	ug/L				<8					
Methoxychlor	ug/L				<.05					
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate	ug/L				<1					
Methyl methanesulfonate	ug/L				<8					
Methyl parathion	ug/L				<.4					
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L				<8					
Nickel, total	ug/L	81.2	25.1	<4.0	4.0	<4.0	4.3	<4.0	<20.0	<4.0
Nitrobenzene	ug/L				<8					
N-nitrosodiethylamine	ug/L				<8					
N-nitrosodimethylamine	ug/L				<8					
N-nitrosodi-n-butylamine	ug/L				<8					
N-nitroso-di-n-propylamine	ug/L				<8					
N-nitrosodiphenylamine	ug/L				<8					
N-nitrosomethylethylamine	ug/L				<8					
N-nitrosopiperidine	ug/L				<8					
N-nitrosopyrrolidine	ug/L				<8					
O,o,o-triethyl phosphorothioate	ug/L				<.4					
O-toluidine	ug/L				<8					
Parathion	ug/L				<.4					
P-dimethylaminoazobenzene	ug/L				<8					
Pentachlorobenzene	ug/L				<8					
Pentachloronitrobenzene (pcnb)	ug/L				<8					
Pentachlorophenol	ug/L				<8					
Phenacetin	ug/L				<8					
Phenanthrene	ug/L				<8					
Phenol	ug/L				<8					
Phorate	ug/L				<.4					
Pronamide	ug/L				<8					
Propionitrile	ug/L				<40					
Pyrene	ug/L				<8					
Safrole	ug/L				<8					
Selenium, total	ug/L	16.4	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L	966	182	59	111	110	2410	141		
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L				.1					
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4	<4	<4	<4	<4
Thionazin	ug/L				<.4					
Tin, total	ug/L				<20					
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L				<.2					
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	72.3	<20.0	<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	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	117.0	16.2	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	106.0

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

Table 9

Analytical Data Summary for MW-24

Constituents	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	5/11/2021	9/28/2021	3/8/2022	8/30/2022
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total	6.8	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl iodide	<1	<1	<1	<1	<1		<1	<1	<1
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5	<5	<5		<5	<5	<5
Naphthalene									
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0
Nitrobenzene									
N-nitrosodiethylamine									
N-nitrosodimethylamine									
N-nitrosodi-n-butylamine									
N-nitroso-di-n-propylamine									
N-nitrosodiphenylamine									
N-nitrosomethylethylamine									
N-nitrosopiperidine									
N-nitrosopyrrolidine									
O,o,o-triethyl phosphorothioate									
O-toluidine									
Parathion									
P-dimethylaminoazobenzene									
Pentachlorobenzene									
Pentachloronitrobenzene (pcnb)									
Pentachlorophenol									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium, total	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4	<4		<4	<4	<4
Solids, total suspended									
Styrene	<1	<1	<1	<1	<1		<1	<1	<1
Sulfide, total									
Tetrachloroethylene	<1	<1	<1	<1	<1		<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2		<2	<2	<2
Thionazin									
Tin, total									
Toluene	<1	<1	<1	<1	<1		<1	<1	<1
Toxaphene									
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1		<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1		<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5		<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1		<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1		<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0		<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5		<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1		<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2		<2	<2	<2
Zinc, total	39.2	56.9	<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-24

Constituents	3/7/2023	9/11/2023	3/20/2024	9/12/2024
Hexachlorobutadiene				
Hexachlorocyclopentadiene				
Hexachloroethane				
Hexachloropropene				
Indeno(1,2,3-cd)pyrene				
Isobutanol				
Isodrin				
Isophorone				
Isosafrole				
Kepone				
Lead, total	<4.0	<4.0	<4.0	<4.0
Mercury, total				
Methacrylonitrile				
Methapyrilene				
Methoxychlor				
Methyl iodide	<1	<1	<1	<1
Methyl methacrylate				
Methyl methanesulfonate				
Methyl parathion				
Methylene chloride	<5	<5	<5	<5
Naphthalene				
Nickel, total	<4.0	<4.0	<4.0	<4.0
Nitrobenzene				
N-nitrosodiethylamine				
N-nitrosodimethylamine				
N-nitrosodi-n-butylamine				
N-nitroso-di-n-propylamine				
N-nitrosodiphenylamine				
N-nitrosomethylethylamine				
N-nitrosopiperidine				
N-nitrosopyrrolidine				
O,o,o-triethyl phosphorothioate				
O-toluidine				
Parathion				
P-dimethylaminoazobenzene				
Pentachlorobenzene				
Pentachloronitrobenzene (pcnb)				
Pentachlorophenol				
Phenacetin				
Phenanthrene				
Phenol				
Phorate				
Pronamide				
Propionitrile				
Pyrene				
Safrole				
Selenium, total	<4.0	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4
Solids, total suspended				
Styrene	<1	<1	<1	<1
Sulfide, total				
Tetrachloroethylene	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2
Thionazin				
Tin, total				
Toluene	<1	<1	<1	<1
Toxaphene				
Trans-1,2-dichloroethylene	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-25

Constituents	Units	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018	4/2/2019	3/25/2020
1,1,1,2-tetrachloroethane	ug/L			<1					
1,1,1-trichloroethane	ug/L			<1					
1,1,2,2-tetrachloroethane	ug/L			<1					
1,1,2-trichloroethane	ug/L			<1					
1,1-dichloroethane	ug/L			<1					
1,1-dichloroethylene	ug/L			<1					
1,2,3-trichloropropane	ug/L			<1					
1,2-dibromo-3-chloropropane	ug/L			<1					
1,2-dibromoethane	ug/L			<1					
1,2-dichlorobenzene	ug/L			<1					
1,2-dichloroethane	ug/L			<1					
1,2-dichloropropane	ug/L			<1					
1,4-dichlorobenzene	ug/L			<1					
2-butanone (mek)	ug/L			<5					
2-hexanone (mbk)	ug/L			<5					
4-methyl-2-pentanone (mibk)	ug/L			<5					
Acetone	ug/L			<10					
Acrylonitrile	ug/L			<5					
Antimony, total	ug/L			<2					
Arsenic, total	ug/L	<4.0	4.2	<4.0	4.0	<4.0	<4.0	<4.0	<4.0
Barium, total	ug/L	94.90000	105.00000	109.00000	98.40000	85.30000	150.00000	102.00000	84.50000
Benzene	ug/L			<1					
Beryllium, total	ug/L			<4					
Bromochloromethane	ug/L			<1					
Bromodichloromethane	ug/L			<1					
Bromoform	ug/L			<1					
Bromomethane	ug/L			<1					
Cadmium, total	ug/L			<.8					
Carbon disulfide	ug/L			<1					
Carbon tetrachloride	ug/L			<1					
Chlorobenzene	ug/L			<1					
Chloroethane	ug/L			<1					
Chloroform	ug/L			<1					
Chloromethane	ug/L			<1					
Chromium, total	ug/L			<8					
Cis-1,2-dichloroethylene	ug/L			<1					
Cis-1,3-dichloropropene	ug/L			<1					
Cobalt, total	ug/L			.8					
Copper, total	ug/L			<4					
Dibromochloromethane	ug/L			<1					
Dibromomethane	ug/L			<1					
Ethylbenzene	ug/L			<1					
Lead, total	ug/L			<4					
Methyl iodide	ug/L			<1					
Methylene chloride	ug/L			<5					
Nickel, total	ug/L			<4					
Selenium, total	ug/L			<4					
Silver, total	ug/L			<4					
Solids, total suspended	mg/L	31	36	373	611				
Styrene	ug/L			<1					
Tetrachloroethylene	ug/L			<1					
Thallium, total	ug/L			<4					
Toluene	ug/L			<1					
Trans-1,2-dichloroethylene	ug/L			<1					
Trans-1,3-dichloropropene	ug/L			<1					
Trans-1,4-dichloro-2-butene	ug/L			<5					
Trichloroethylene	ug/L			<1					
Trichlorofluoromethane	ug/L			<1					
Vanadium, total	ug/L			<20					
Vinyl acetate	ug/L			<5					
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L			<2					
Zinc, total	ug/L			<8					

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

Table 9

Analytical Data Summary for MW-25

Constituents	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024
1,1,1,2-tetrachloroethane									
1,1,1-trichloroethane									
1,1,2,2-tetrachloroethane									
1,1,2-trichloroethane									
1,1-dichloroethane									
1,1-dichloroethylene									
1,2,3-trichloropropane									
1,2-dibromo-3-chloropropane									
1,2-dibromoethane									
1,2-dichlorobenzene									
1,2-dichloroethane									
1,2-dichloropropane									
1,4-dichlorobenzene									
2-butanone (mek)									
2-hexanone (mbk)									
4-methyl-2-pentanone (mibk)									
Acetone									
Acrylonitrile									
Antimony, total									
Arsenic, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	27.4	4.7
Barium, total	102.00000	91.39999	107.00000	71.40000	113.00000	105.00000	118.00000	515.00000	131.00000
Benzene									
Beryllium, total									
Bromochloromethane									
Bromodichloromethane									
Bromoform									
Bromomethane									
Cadmium, total									
Carbon disulfide									
Carbon tetrachloride									
Chlorobenzene									
Chloroethane									
Chloroform									
Chloromethane									
Chromium, total									
Cis-1,2-dichloroethylene									
Cis-1,3-dichloropropene									
Cobalt, total									
Copper, total									
Dibromochloromethane									
Dibromomethane									
Ethylbenzene									
Lead, total									
Methyl iodide									
Methylene chloride									
Nickel, total									
Selenium, total									
Silver, total									
Solids, total suspended									
Styrene									
Tetrachloroethylene									
Thallium, total									
Toluene									
Trans-1,2-dichloroethylene									
Trans-1,3-dichloropropene									
Trans-1,4-dichloro-2-butene									
Trichloroethylene									
Trichlorofluoromethane									
Vanadium, total									
Vinyl acetate									
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total									
Zinc, total									

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

Table 9

Analytical Data Summary for MW-26

Constituents	Units	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017	3/21/2018	9/7/2018	4/2/2019	9/18/2019
1,1,1,2-tetrachloroethane	ug/L				<1					
1,1,1-trichloroethane	ug/L				<1					
1,1,2,2-tetrachloroethane	ug/L				<1					
1,1,2-trichloroethane	ug/L				<1					
1,1-dichloroethane	ug/L				<1					
1,1-dichloroethylene	ug/L				<1					
1,2,3-trichloropropane	ug/L				<1					
1,2-dibromo-3-chloropropane	ug/L				<1					
1,2-dibromoethane	ug/L				<1					
1,2-dichlorobenzene	ug/L				<1					
1,2-dichloroethane	ug/L				<1					
1,2-dichloropropane	ug/L				<1					
1,4-dichlorobenzene	ug/L				<1					
2-butanone (mek)	ug/L				<5					
2-hexanone (mbk)	ug/L				<5					
4-methyl-2-pentanone (mibk)	ug/L				<5					
Acetone	ug/L				<10					
Acrylonitrile	ug/L				<5					
Antimony, total	ug/L				<2					
Arsenic, total	ug/L	17.7	19.7	10.7	19.8	26.2	31.6	72.6	74.9	44.2
Barium, total	ug/L	581.0	592.0		552.0	706.0	588.0	1170.0	986.0	879.0
Benzene	ug/L				<1					
Beryllium, total	ug/L				<4					
Bromochloromethane	ug/L				<1					
Bromodichloromethane	ug/L				<1					
Bromoform	ug/L				<1					
Bromomethane	ug/L				<1					
Cadmium, total	ug/L				<.8					
Carbon disulfide	ug/L				<1					
Carbon tetrachloride	ug/L				<1					
Chlorobenzene	ug/L				<1					
Chloroethane	ug/L				1.6					
Chloroform	ug/L				<1					
Chloromethane	ug/L				<1					
Chromium, total	ug/L				<8					
Cis-1,2-dichloroethylene	ug/L				<1					
Cis-1,3-dichloropropene	ug/L				<1					
Cobalt, total	ug/L				3.6					
Copper, total	ug/L				<4					
Dibromochloromethane	ug/L				<1					
Dibromomethane	ug/L				<1					
Ethylbenzene	ug/L				<1					
Lead, total	ug/L				<4					
Methyl iodide	ug/L				<1					
Methylene chloride	ug/L				<5					
Nickel, total	ug/L				<4					
Selenium, total	ug/L				<4					
Silver, total	ug/L				<4					
Solids, total suspended	mg/L	472	331		1100	1070				
Styrene	ug/L				<1					
Tetrachloroethylene	ug/L				<1					
Thallium, total	ug/L				<4					
Toluene	ug/L				<1					
Trans-1,2-dichloroethylene	ug/L				<1					
Trans-1,3-dichloropropene	ug/L				<1					
Trans-1,4-dichloro-2-butene	ug/L				<5					
Trichloroethylene	ug/L				<1					
Trichlorofluoromethane	ug/L				<1					
Vanadium, total	ug/L				<20					
Vinyl acetate	ug/L				<5					
Vinyl chloride	ug/L	<1	<1		<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L				<2					
Zinc, total	ug/L				<8					

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

Table 9

Analytical Data Summary for MW-26

Constituents	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023	9/11/2023	3/20/2024
1,1,1,2-tetrachloroethane									
1,1,1-trichloroethane									
1,1,2,2-tetrachloroethane									
1,1,2-trichloroethane									
1,1-dichloroethane									
1,1-dichloroethylene									
1,2,3-trichloropropane									
1,2-dibromo-3-chloropropane									
1,2-dibromoethane									
1,2-dichlorobenzene									
1,2-dichloroethane									
1,2-dichloropropane									
1,4-dichlorobenzene									
2-butanone (mek)									
2-hexanone (mbk)									
4-methyl-2-pentanone (mibk)									
Acetone									
Acrylonitrile									
Antimony, total									
Arsenic, total	55.0	59.0	17.0	81.9	7.2	203.0	23.8	101.0	<4.0
Barium, total	692.0	1130.0	428.0	1250.0	232.0	1620.0	341.0	1250.0	94.1
Benzene									
Beryllium, total									
Bromochloromethane									
Bromodichloromethane									
Bromoform									
Bromomethane									
Cadmium, total									
Carbon disulfide									
Carbon tetrachloride									
Chlorobenzene									
Chloroethane									
Chloroform									
Chloromethane									
Chromium, total									
Cis-1,2-dichloroethylene									
Cis-1,3-dichloropropene									
Cobalt, total									
Copper, total									
Dibromochloromethane									
Dibromomethane									
Ethylbenzene									
Lead, total									
Methyl iodide									
Methylene chloride									
Nickel, total									
Selenium, total									
Silver, total									
Solids, total suspended									
Styrene									
Tetrachloroethylene									
Thallium, total									
Toluene									
Trans-1,2-dichloroethylene									
Trans-1,3-dichloropropene									
Trans-1,4-dichloro-2-butene									
Trichloroethylene									
Trichlorofluoromethane									
Vanadium, total									
Vinyl acetate									
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total									
Zinc, total									

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

Table 9

Analytical Data Summary for MW-26

Constituents	9/12/2024
1,1,1,2-tetrachloroethane	
1,1,1-trichloroethane	
1,1,2,2-tetrachloroethane	
1,1,2-trichloroethane	
1,1-dichloroethane	
1,1-dichloroethylene	
1,2,3-trichloropropane	
1,2-dibromo-3-chloropropane	
1,2-dibromoethane	
1,2-dichlorobenzene	
1,2-dichloroethane	
1,2-dichloropropane	
1,4-dichlorobenzene	
2-butanone (mek)	
2-hexanone (mbk)	
4-methyl-2-pentanone (mibk)	
Acetone	
Acrylonitrile	
Antimony, total	
Arsenic, total	14.3
Barium, total	420.0
Benzene	
Beryllium, total	
Bromochloromethane	
Bromodichloromethane	
Bromoform	
Bromomethane	
Cadmium, total	
Carbon disulfide	
Carbon tetrachloride	
Chlorobenzene	
Chloroethane	
Chloroform	
Chloromethane	
Chromium, total	
Cis-1,2-dichloroethylene	
Cis-1,3-dichloropropene	
Cobalt, total	
Copper, total	
Dibromochloromethane	
Dibromomethane	
Ethylbenzene	
Lead, total	
Methyl iodide	
Methylene chloride	
Nickel, total	
Selenium, total	
Silver, total	
Solids, total suspended	
Styrene	
Tetrachloroethylene	
Thallium, total	
Toluene	
Trans-1,2-dichloroethylene	
Trans-1,3-dichloropropene	
Trans-1,4-dichloro-2-butene	
Trichloroethylene	
Trichlorofluoromethane	
Vanadium, total	
Vinyl acetate	
Vinyl chloride	<1
Xylenes, total	
Zinc, total	

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

Table 9

Analytical Data Summary for MW-4

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
(3 4)-Methylphenol	ug/L								
(34) -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	<1.0	<1.0	<1.0	1.0	<1.0		1.7	2.6
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1-dichloropropene	ug/L					<1			
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2,4,5-tetrachlorobenzene	ug/L					<8			
1,2,4-trichlorobenzene	ug/L					<1			
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane	ug/L	1.2	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0
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	6.8	5.1	3.9	5.3	3.5		5.0	6.5
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					<2.0			
2,4-dichlorophenol	ug/L					<8			
2,4-dimethylphenol	ug/L					<8			
2,4-dinitrophenol	ug/L					<8			
2,4-dinitrotoluene	ug/L					<8			
2,6-dichlorophenol	ug/L					<8			
2,6-dinitrotoluene	ug/L					<8			
2-acetylaminofluorene	ug/L					<8			
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene	ug/L					<8			
2-chlorophenol	ug/L					<8			
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene	ug/L					<8			
2-methylphenol	ug/L					<8			
2-naphthylamine	ug/L					<8			
2-nitroaniline	ug/L					<8			
2-nitrophenol	ug/L					<8			
3,3´-dichlorobenzidine	ug/L					<8			
3,3'-dimethylbenzidine	ug/L					<8			
3-methylcholanthrene	ug/L					<8			
3-nitroaniline	ug/L					<8			
4,4´-ddd	ug/L					<.07			
4,4´-dde	ug/L					<.07			
4,4´-ddt	ug/L					<.07			
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	<10.0	<10.0	<10.0	<10.0		<10.0	11.2
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					<.07			
Allyl chloride	ug/L					<1			
Alpha-bhc	ug/L					<.07			

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

Table 9

Analytical Data Summary for MW-4

Constituents	3/21/2018	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	12/3/2021
(3 4)-Methylphenol								<8	
(34) -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	2.6	<1.0	<1.0	<1.0	<1.0	1.9	<1.0	1.1	
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	
1,1-dichloropropene								<1	
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	
1,2,4,5-tetrachlorobenzene								<8	
1,2,4-trichlorobenzene								<1	
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<5	<5	<5	<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	<1.0	<1.0	<1.0	1.6	<1.0	<1.0	<1.0	1.4	
1,2-dinitrobenzene								<8	
1,3,5-trinitrobenzene								<8	
1,3-dichlorobenzene								<1	
1,3-dichloropropane								<1	
1,3-dinitrobenzene								<8	
1,4-dichlorobenzene	6.3	4.9	10.4	7.5	<1.0	6.2	6.3	6.0	
1,4-naphthoquinone								<8	
1,4-phenylenediamine								<8	
1-naphthylamine								<8	
2,2-dichloropropane								<1	
2,3,4,6-tetrachlorophenol								<8	
2,4,5-t								<.7	
2,4,5-tp (silvex)								<.7	
2,4,5-trichlorophenol								<8	
2,4,6-trichlorophenol								<8	
2,4-d								<2.7	
2,4-dichlorophenol								<8	
2,4-dimethylphenol								<8	
2,4-dinitrophenol								<8	
2,4-dinitrotoluene								<8	
2,6-dichlorophenol								<8	
2,6-dinitrotoluene								<8	
2-acetylaminofluorene								<8	
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	
2-chloronaphthalene								<8	
2-chlorophenol								<8	
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	
2-methylnaphthalene								<8	
2-methylphenol								<8	
2-naphthylamine								<8	
2-nitroaniline								<8	
2-nitrophenol								<8	
3,3´-dichlorobenzidine								<8	
3,3'-dimethylbenzidine								<8	
3-methylcholanthrene								<8	
3-nitroaniline								<8	
4,4´-ddd								<.05	
4,4´-dde								<.05	
4,4´-ddt								<.05	
4,6-dinitro-2-methylphenol								<8	
4-aminobiphenyl								<8	
4-bromophenyl phenyl ether								<8	
4-chloro-3-methylphenol								<8	
4-chloroaniline								<8	
4-chlorophenyl phenyl ether								<8	
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	
4-nitroaniline								<8	
4-nitrophenol								<8	
5-nitro-o-toluidine								<8	
7,12-dimethylbenz(a)anthracene								<8	
Acenaphthene								<8	
Acenaphthylene								<8	
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	43.4	
Acetonitrile								<10	
Acetophenone								<8	
Acrolein								<10	
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	
Aldrin								<.05	
Allyl chloride								<1	
Alpha-bhc								<.05	

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

Table 9

Analytical Data Summary for MW-4

Constituents	3/8/2022	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024
(3 4)-Methylphenol						
(34) -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	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethylene	<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	<1.0	<1.0	1.1	1.0	<1.0	<1.0
1,2-dinitrobenzene						
1,3,5-trinitrobenzene						
1,3-dichlorobenzene						
1,3-dichloropropane						
1,3-dinitrobenzene						
1,4-dichlorobenzene	5.8	4.6	5.7	7.4	6.0	5.9
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						
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						

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

Table 9

Analytical Data Summary for MW-4

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
Anthracene	ug/L					<8			
Antimony, total	ug/L	<2	<2	<2	<2	<2		<2	<2
Arochlor 1016	ug/L					<.15			
Arochlor 1221	ug/L					<.29			
Arochlor 1232	ug/L					<.29			
Arochlor 1242	ug/L					<.29			
Arochlor 1248	ug/L					<.29			
Arochlor 1254	ug/L					<.15			
Arochlor 1260	ug/L					<.15			
Arsenic, total	ug/L	51.7	70.6	57.6	65.0	61.4		58.5	55.1
Azobenzene	ug/L					<8			
Barium, total	ug/L	1780	1570	1480	1370	1440		1120	1120
Benzene	ug/L	2.4	1.6	1.3	1.4	1.2		1.2	1.3
Benzo(a)anthracene	ug/L					<8			
Benzo(a)pyrene	ug/L					<8			
Benzo(b)fluoranthene	ug/L					<8			
Benzo(g,h,i)perylene	ug/L					<8			
Benzo(k)fluoranthene	ug/L					<8			
Benzyl alcohol	ug/L					<8			
Beryllium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Beta-bhc	ug/L					<.07			
Bis (2-chloroethoxy) methane	ug/L					<8			
Bis(2-chloroethyl) ether	ug/L					<8			
Bis(2-chloroisopropyl) ether	ug/L					<8			
Bis(2-ethylhexyl) phthalate	ug/L	<10				10	<10		
Bromochloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Butyl benzyl phthalate	ug/L					<8			
Cadmium, total	ug/L	<.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					<.15			
Chlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Chlorobenzilate	ug/L					<8			
Chloroethane	ug/L	4.7	2.1	3.0	3.1	3.9		2.3	3.0
Chloroform	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloroprene	ug/L					<1			
Chromium, total	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0		<8.0	<8.0
Chrysene	ug/L					<8			
Cis-1,2-dichloroethylene	ug/L	2.2	<1.0	2.1	<1.0	1.4		<1.0	2.0
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	ug/L	4.1	2.9	1.1	3.0	2.8		1.5	1.3
Copper, total	ug/L	4.6	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0
Cyanide, total	mg/L					<.005			
Delta-bhc	ug/L					<.07			
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	3.7	1.1	<1.0	1.4	1.1		1.3	1.0
Dieldrin	ug/L					<.07			
Diethyl phthalate	ug/L					<8			
Dimethoate	ug/L					<.5			
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					<.5			
Endosulfan i	ug/L					<.07			
Endosulfan ii	ug/L					<.07			
Endosulfan sulfate	ug/L					<.07			
Endrin	ug/L					<.07			
Endrin aldehyde	ug/L					<.07			
Ethyl methacrylate	ug/L					<10			
Ethyl methanesulfonate	ug/L					<8			
Ethylbenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Famphur	ug/L					<.5			
Fluoranthene	ug/L					<8			
Fluorene	ug/L					<8			
Gamma-bhc (lindane)	ug/L					<.07			
Heptachlor	ug/L					<.07			
Heptachlor epoxide	ug/L					<.07			

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

Table 9

Analytical Data Summary for MW-4

Constituents	3/21/2018	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	12/3/2021
Anthracene								<8	
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	
Arochlor 1016								<.10	
Arochlor 1221								<.20	
Arochlor 1232								<.20	
Arochlor 1242								<.20	
Arochlor 1248								<.20	
Arochlor 1254								<.10	
Arochlor 1260								<.10	
Arsenic, total	88.0	62.2	27.1	74.2	62.7	57.0	61.6	69.7	
Azobenzene								<8	
Barium, total	1120	1100	1070	1270	1220	1220	1100	1140	
Benzene	1.5	<1.0	1.0	<1.0	1.2	1.3	1.6	1.4	
Benzo(a)anthracene								<8	
Benzo(a)pyrene								<8	
Benzo(b)fluoranthene								<8	
Benzo(g,h,i)perylene								<8	
Benzo(k)fluoranthene								<8	
Benzyl alcohol								<8	
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	
Beta-bhc								<.05	
Bis (2-chloroethoxy) methane								<8	
Bis(2-chloroethyl) ether								<8	
Bis(2-chloroisopropyl) ether								<8	
Bis(2-ethylhexyl) phthalate								12	
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	1.7	<.8	<.8	<.8	<.8	<.8	1.3	
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	
Chlordane								<.10	
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	
Chlorobenzilate								<8	
Chloroethane	2.4	2.5	2.1	2.9	1.5	5.0	1.4	2.4	
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	
Chloroprene								<1	
Chromium, total	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	
Chrysene								<8	
Cis-1,2-dichloroethylene	<1.0	<1.0	<1.0	3.2	<1.0	1.6	<1.0	2.1	
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	
Cobalt, total	1.4	1.4	<.8	1.2	1.3	1.7	1.3	7.5	
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	6.7	<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	<1.0	<1.0	2.6	<1.0	1.1	<1.0	<1.0	<1.0	
Dieldrin								<.05	
Diethyl phthalate								<8	
Dimethoate								<.4	
Dimethylphthalate								<8	
Di-n-butyl phthalate								<8	
Di-n-octyl phthalate								<8	
Dinoseb								<.7	
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	

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

Table 9

Analytical Data Summary for MW-4

Constituents	3/8/2022	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024
Anthracene						
Antimony, total	<2	<2	<2	<2	<2	<2
Arochlor 1016						
Arochlor 1221						
Arochlor 1232						
Arochlor 1242						
Arochlor 1248						
Arochlor 1254						
Arochlor 1260						
Arsenic, total	59.6	93.6	50.8	60.7	57.2	58.4
Azobenzene						
Barium, total	931	995	890	1010	1010	1020
Benzene	1.7	1.2	1.5	1.7	1.4	1.3
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
Beta-bhc						
Bis (2-chloroethoxy) methane						
Bis(2-chloroethyl) ether						
Bis(2-chloroisopropyl) ether						
Bis(2-ethylhexyl) phthalate						
Bromochloromethane	<1	<1	<1	<1	<1	<1
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	1.8	<.8	<.8
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	1.2	1.9	1.4	2.0	1.4	1.3
Chloroform	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1
Chloroprene						
Chromium, total	<8.0	<8.0	<8.0	33.9	<8.0	<8.0
Chrysene						
Cis-1,2-dichloroethylene	<1.0	4.5	<1.0	2.7	<1.0	2.4
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1
Cobalt, total	1.7	1.4	1.6	10.9	1.5	1.5
Copper, total	<4.0	<4.0	<4.0	8.7	<4.0	<4.0
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	<1.0					
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						

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

Table 9

Analytical Data Summary for MW-4

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
Hexachlorobenzene	ug/L					<.07			
Hexachlorobutadiene	ug/L					<8			
Hexachlorocyclopentadiene	ug/L					<8			
Hexachloroethane	ug/L					<8			
Hexachloropropene	ug/L					<8			
Indeno(1,2,3-cd)pyrene	ug/L					<8			
Isobutanol	ug/L					<1000			
Isodrin	ug/L					<8			
Isophorone	ug/L					<8			
Isosafrole	ug/L					<8			
Kepone	ug/L					<8			
Lead, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Mercury, total	ug/L					<.5			
Methacrylonitrile	ug/L					<1			
Methapyrilene	ug/L					<8			
Methoxychlor	ug/L					<.07			
Methyl iodide	ug/L	<1	<1	<1	<1	<1		<1	<1
Methyl methacrylate	ug/L					<1			
Methyl methanesulfonate	ug/L					<8			
Methyl parathion	ug/L					<.5			
Methylene chloride	ug/L	<5	<5	<5	<5	<5		<5	<5
Naphthalene	ug/L					<8			
Nickel, total	ug/L	11.3	7.3	<4.0	7.5	<4.0		<4.0	<4.0
Nitrobenzene	ug/L					<8			
N-nitrosodiethylamine	ug/L					<8			
N-nitrosodimethylamine	ug/L					<8			
N-nitrosodi-n-butylamine	ug/L					<8			
N-nitroso-di-n-propylamine	ug/L					<8			
N-nitrosodiphenylamine	ug/L					<8			
N-nitrosomethylethylamine	ug/L					<8			
N-nitrosopiperidine	ug/L					<8			
N-nitrosopyrrolidine	ug/L					<8			
O,o,o-triethyl phosphorothioate	ug/L					<.5			
O-toluidine	ug/L					<8			
Parathion	ug/L					<.5			
P-dimethylaminoazobenzene	ug/L					<8			
Pentachlorobenzene	ug/L					<8			
Pentachloronitrobenzene (pcnb)	ug/L					<8			
Pentachlorophenol	ug/L					<8			
Phenacetin	ug/L					<8			
Phenanthrene	ug/L					<8			
Phenol	ug/L					<8			
Phorate	ug/L					<.5			
Pronamide	ug/L					<8			
Propionitrile	ug/L					<10			
Pyrene	ug/L					<8			
Safrole	ug/L					<8			
Selenium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Solids, total suspended	mg/L	198	166	151	98	227		136	218
Styrene	ug/L	<1	<1	<1	<1	<1		<1	<1
Sulfide, total	mg/L					<.1			
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4		<4	<4
Thionazin	ug/L					<.5			
Tin, total	ug/L					<20			
Toluene	ug/L	<1	<1	<1	<1	<1		<1	<1
Toxaphene	ug/L					<.29			
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5		<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20		<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5		<5	<5
Vinyl chloride	ug/L	4.9	1.3	2.3	<1.0	2.2		<1.0	1.8
Xylenes, total	ug/L	<2	<2	<2	<2	<2		<2	<2
Zinc, total	ug/L	<20.0	<8.0	11.1	10.9	10.7		<8.0	<8.0

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

Table 9

Analytical Data Summary for MW-4

Constituents	3/21/2018	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	12/3/2021
Hexachlorobenzene								<.05	
Hexachlorobutadiene								<8	
Hexachlorocyclopentadiene								<8	
Hexachloroethane								<8	
Hexachloropropene								<8	
Indeno(1,2,3-cd)pyrene								<8	
Isobutanol								<1000	
Isodrin								<8	
Isophorone								<8	
Isosafrole								<8	
Kepone								<8	
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	
Mercury, total								<.5	
Methacrylonitrile								<1	
Methapyrilene								<8	
Methoxychlor								<.05	
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<2	
Methyl methacrylate								<1	
Methyl methanesulfonate								<8	
Methyl parathion								<.4	
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	
Naphthalene								<8	
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	26.4	5.2
Nitrobenzene								<8	
N-nitrosodiethylamine								<8	
N-nitrosodimethylamine								<8	
N-nitrosodi-n-butylamine								<8	
N-nitroso-di-n-propylamine								<8	
N-nitrosodiphenylamine								<8	
N-nitrosomethylethylamine								<8	
N-nitrosopiperidine								<8	
N-nitrosopyrrolidine								<8	
O,o,o-triethyl phosphorothioate								<.4	
O-toluidine								<8	
Parathion								<.4	
P-dimethylaminoazobenzene								<8	
Pentachlorobenzene								<8	
Pentachloronitrobenzene (pcnb)								<8	
Pentachlorophenol								<8	
Phenacetin								<8	
Phenanthrene								<8	
Phenol								<8	
Phorate								<.4	
Pronamide								<8	
Propionitrile								<10	
Pyrene								<8	
Safrole								<8	
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	
Solids, total suspended									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	
Sulfide, total								<.1	
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	
Thallium, total	<4	<4	<2	<2	<2	<2	<2	<2	
Thionazin								<.4	
Tin, total								<20	
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	
Toxaphene								<.20	
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	
Vinyl chloride	1.8	1.9	1.8	1.8	1.0	3.3	<1.0	2.8	
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	
Zinc, total	<8.0	109.0	40.9	86.5	<20.0	<20.0	<20.0	29.2	

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

Table 9

Analytical Data Summary for MW-4

Constituents	3/8/2022	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024
Hexachlorobenzene						
Hexachlorobutadiene						
Hexachlorocyclopentadiene						
Hexachloroethane						
Hexachloropropene						
Indeno(1,2,3-cd)pyrene						
Isobutanol						
Isodrin						
Isophorone						
Isosafrole						
Kepone						
Lead, total	<4	<4	<4	<4	<4	<4
Mercury, total						
Methacrylonitrile						
Methapyrilene						
Methoxychlor						
Methyl iodide	<1	<1	<1	<1	<1	<1
Methyl methacrylate						
Methyl methanesulfonate						
Methyl parathion						
Methylene chloride	<5	<5	<5	<5	<5	<5
Naphthalene						
Nickel, total	4.5	4.6	<4.0	52.8	<4.0	<4.0
Nitrobenzene						
N-nitrosodiethylamine						
N-nitrosodimethylamine						
N-nitrosodi-n-butylamine						
N-nitroso-di-n-propylamine						
N-nitrosodiphenylamine						
N-nitrosomethylethylamine						
N-nitrosopiperidine						
N-nitrosopyrrolidine						
O,o,o-triethyl phosphorothioate						
O-toluidine						
Parathion						
P-dimethylaminoazobenzene						
Pentachlorobenzene						
Pentachloronitrobenzene (pcnb)						
Pentachlorophenol						
Phenacetin						
Phenanthrene						
Phenol						
Phorate						
Pronamide						
Propionitrile						
Pyrene						
Safrole						
Selenium, total	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4
Solids, total suspended						
Styrene	<1	<1	<1	<1	<1	<1
Sulfide, total						
Tetrachloroethylene	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2
Thionazin						
Tin, total						
Toluene	<1	<1	<1	<1	<1	<1
Toxaphene						
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1.0	1.8	<1.0	4.2	<1.0	<1.0
Xylenes, total	<2	<2	<2	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0	75.7	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-5

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
(3 4)-Methylphenol	ug/L								
(34) -methylphenol	ug/L					<8			
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,1-dichloropropene	ug/L					<1			
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2,4,5-tetrachlorobenzene	ug/L					<8			
1,2,4-trichlorobenzene	ug/L					<1			
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1		<1	<1
1,2-dinitrobenzene	ug/L					<8			
1,3,5-trinitrobenzene	ug/L					<8			
1,3-dichlorobenzene	ug/L					<1			
1,3-dichloropropane	ug/L					<1			
1,3-dinitrobenzene	ug/L					<8			
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1		<1	<1
1,4-naphthoquinone	ug/L					<8			
1,4-phenylenediamine	ug/L					<8			
1-naphthylamine	ug/L					<8			
2,2-dichloropropane	ug/L					<1			
2,3,4,6-tetrachlorophenol	ug/L					<8			
2,4,5-t	ug/L					<.5			
2,4,5-tp (silvex)	ug/L					<.5			
2,4,5-trichlorophenol	ug/L					<8			
2,4,6-trichlorophenol	ug/L					<8			
2,4-d	ug/L					<2			
2,4-dichlorophenol	ug/L					<8			
2,4-dimethylphenol	ug/L					<8			
2,4-dinitrophenol	ug/L					<8			
2,4-dinitrotoluene	ug/L					<8			
2,6-dichlorophenol	ug/L					<8			
2,6-dinitrotoluene	ug/L					<8			
2-acetylaminofluorene	ug/L					<8			
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene	ug/L					<8			
2-chlorophenol	ug/L					<8			
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene	ug/L					<8			
2-methylphenol	ug/L					<8			
2-naphthylamine	ug/L					<8			
2-nitroaniline	ug/L					<8			
2-nitrophenol	ug/L					<8			
3,3´-dichlorobenzidine	ug/L					<8			
3,3'-dimethylbenzidine	ug/L					<8			
3-methylcholanthrene	ug/L					<8			
3-nitroaniline	ug/L					<8			
4,4´-ddd	ug/L					<.05			
4,4´-dde	ug/L					<.05			
4,4´-ddt	ug/L					<.05			
4,6-dinitro-2-methylphenol	ug/L					<8			
4-aminobiphenyl	ug/L					<8			
4-bromophenyl phenyl ether	ug/L					<8			
4-chloro-3-methylphenol	ug/L					<8			
4-chloroaniline	ug/L					<8			
4-chlorophenyl phenyl ether	ug/L					<8			
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5		<5	<5
4-nitroaniline	ug/L					<8			
4-nitrophenol	ug/L					<8			
5-nitro-o-toluidine	ug/L					<8			
7,12-dimethylbenz(a)anthracene	ug/L					<8			
Acenaphthene	ug/L					<8			
Acenaphthylene	ug/L					<8			
Acetone	ug/L	<10	<10	<10	<10	<10		<10	<10
Acetonitrile	ug/L					<10			
Acetophenone	ug/L					<8			
Acrolein	ug/L					<10			
Acrylonitrile	ug/L	<5	<5	<5	<5	<5		<5	<5
Aldrin	ug/L					<.05			
Allyl chloride	ug/L					<1			
Alpha-bhc	ug/L					<.05			

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

Table 9

Analytical Data Summary for MW-5

Constituents	3/21/2018	9/7/2018	4/2/2019	6/5/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022
(3 4)-Methylphenol						<8				
(34) -methylphenol					<8					
1,1,1,2-tetrachloroethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,1-dichloropropene					<1	<1				
1,2,3-trichloropropane	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					<8	<8				
1,2,4-trichlorobenzene					<1	<1				
1,2-dibromo-3-chloropropane	<1	<1	<1		<1	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1		<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene					<8	<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
1,4-naphthoquinone					<8	<8				
1,4-phenylenediamine					<8	<8				
1-naphthylamine					<8	<8				
2,2-dichloropropane					<1	<1				
2,3,4,6-tetrachlorophenol					<8	<8				
2,4,5-t					<.5	<.5				
2,4,5-tp (silvex)					<.5	<.5				
2,4,5-trichlorophenol					<8	<8				
2,4,6-trichlorophenol					<8	<8				
2,4-d					<2	<2				
2,4-dichlorophenol					<8	<8				
2,4-dimethylphenol					<8	<8				
2,4-dinitrophenol					<8	<8				
2,4-dinitrotoluene					<8	<8				
2,6-dichlorophenol					<8	<8				
2,6-dinitrotoluene					<8	<8				
2-acetylaminofluorene					<8	<8				
2-butanone (mek)	<5	<5	<5		<5	<5	<5	<5	<5	<10
2-chloronaphthalene					<8	<8				
2-chlorophenol					<8	<8				
2-hexanone (mbk)	<5	<5	<5		<5	<5	<5	<5	<5	<5
2-methylnaphthalene					<8	<8				
2-methylphenol					<8	<8				
2-naphthylamine					<8	<8				
2-nitroaniline					<8	<8				
2-nitrophenol					<8	<8				
3,3´-dichlorobenzidine					<8	<8				
3,3'-dimethylbenzidine					<8	<8				
3-methylcholanthrene					<8	<8				
3-nitroaniline					<8	<8				
4,4´-ddd					<.05	<.05	<.05			
4,4´-dde					<.05	<.05	<.05			
4,4´-ddt					<.05	<.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	<5
4-nitroaniline					<8	<8				
4-nitrophenol					<8	<8				
5-nitro-o-toluidine					<8	<8				
7,12-dimethylbenz(a)anthracene					<8	<8				
Acenaphthene					<8	<8				
Acenaphthylene					<8	<8				
Acetone	<10	<10	<10		<10	<10	<10	<10	<10	<10
Acetonitrile					<10	<10				
Acetophenone					<8	<8				
Acrolein					<10	<10				
Acrylonitrile	<5	<5	<5		<5	<5	<5	<5	<5	<5
Aldrin					<.05	<.05	<.05			
Allyl chloride					<1	<1				
Alpha-bhc					<.05	8.52	<.05			

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

Table 9

Analytical Data Summary for MW-5

Constituents	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024
(3 4)-Methylphenol					<8
(34) -methylphenol					
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1
1,1-dichloropropene					<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					<8
1,2,4-trichlorobenzene					<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<1
1,2-dibromoethane	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1
1,2-dinitrobenzene					<8
1,3,5-trinitrobenzene					<8
1,3-dichlorobenzene					<1
1,3-dichloropropane					<1
1,3-dinitrobenzene					<8
1,4-dichlorobenzene	<1	<1	<1	<1	<1
1,4-naphthoquinone					<8
1,4-phenylenediamine					<8
1-naphthylamine					<8
2,2-dichloropropane					<1
2,3,4,6-tetrachlorophenol					<8
2,4,5-t					<.5
2,4,5-tp (silvex)					<.5
2,4,5-trichlorophenol					<8
2,4,6-trichlorophenol					<8
2,4-d					<2
2,4-dichlorophenol					<8
2,4-dimethylphenol					<8
2,4-dinitrophenol					<8
2,4-dinitrotoluene					<8
2,6-dichlorophenol					<8
2,6-dinitrotoluene					<8
2-acetylaminofluorene					<8
2-butanone (mek)	<10	<10	<10	<10	<5
2-chloronaphthalene					<8
2-chlorophenol					<8
2-hexanone (mbk)	<5	<5	<5	<5	<5
2-methylnaphthalene					<8
2-methylphenol					<8
2-naphthylamine					<8
2-nitroaniline					<8
2-nitrophenol					<8
3,3´-dichlorobenzidine					<8
3,3'-dimethylbenzidine					<8
3-methylcholanthrene					<8
3-nitroaniline					<8
4,4´-ddd					<.05
4,4´-dde					<.05
4,4´-ddt					<.05
4,6-dinitro-2-methylphenol					<8
4-aminobiphenyl					<8
4-bromophenyl phenyl ether					<8
4-chloro-3-methylphenol					<8
4-chloroaniline					<8
4-chlorophenyl phenyl ether					<8
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5
4-nitroaniline					<8
4-nitrophenol					<8
5-nitro-o-toluidine					<8
7,12-dimethylbenz(a)anthracene					<8
Acenaphthene					<8
Acenaphthylene					<8
Acetone	<10	<10	<10	<10	<10
Acetonitrile					<10
Acetophenone					<8
Acrolein					<10
Acrylonitrile	<5	<5	<5	<5	<5
Aldrin					<.05
Allyl chloride					<1
Alpha-bhc					<.05

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

Table 9

Analytical Data Summary for MW-5

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
Anthracene	ug/L					<8			
Antimony, total	ug/L	<2	<2	<2	<2	<2		<2	<2
Arochlor 1016	ug/L					<.1			
Arochlor 1221	ug/L					<.2			
Arochlor 1232	ug/L					<.2			
Arochlor 1242	ug/L					<.2			
Arochlor 1248	ug/L					<.2			
Arochlor 1254	ug/L					<.1			
Arochlor 1260	ug/L					<.1			
Arsenic, total	ug/L	8.0	4.3	61.9	11.9	12.6		17.4	22.4
Azobenzene	ug/L					<8			
Barium, total	ug/L	154	158	174	179	194		207	155
Benzene	ug/L	<1	<1	<1	<1	<1		<1	<1
Benzo(a)anthracene	ug/L					<8			
Benzo(a)pyrene	ug/L					<8			
Benzo(b)fluoranthene	ug/L					<8			
Benzo(g,h,i)perylene	ug/L					<8			
Benzo(k)fluoranthene	ug/L					<8			
Benzyl alcohol	ug/L					<8			
Beryllium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Beta-bhc	ug/L					<.05			
Bis (2-chloroethoxy) methane	ug/L					<8			
Bis(2-chloroethyl) ether	ug/L					<8			
Bis(2-chloroisopropyl) ether	ug/L					<8			
Bis(2-ethylhexyl) phthalate	ug/L					10	<10		
Bromochloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1		<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Butyl benzyl phthalate	ug/L					<8			
Cadmium, total	ug/L	<.8	<.8	<.8	.9	<.8		<.8	2.6
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	3.2	<1.0	2.0	2.7	<1.0		1.9	<1.0
Chloroform	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Chloroprene	ug/L					<1			
Chromium, total	ug/L	<8	<8	<8	<8	<8		<8	<8
Chrysene	ug/L					<8			
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	ug/L	9.7	5.5	5.0	5.2	8.7		6.0	4.8
Copper, total	ug/L	4.0	<4.0	4.2	<4.0	7.7		<4.0	4.7
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					64	<10		
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			

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

Table 9

Analytical Data Summary for MW-5

Constituents	3/21/2018	9/7/2018	4/2/2019	6/5/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022
Anthracene					<8	<8				
Antimony, total	<2	<2	<2		<2	<2	<2	<2	<2	<2
Arochlor 1016					<.1	<.1				
Arochlor 1221					<.2	<.2				
Arochlor 1232					<.2	<.2				
Arochlor 1242					<.2	<.2				
Arochlor 1248					<.2	<.2				
Arochlor 1254					<.1	<.1				
Arochlor 1260					<.1	<.1				
Arsenic, total	<4.0	10.1	6.6		18.7	30.8	41.9	14.6	76.7	12.1
Azobenzene					<8	<8				
Barium, total	144	186	197		225	255	221	227	260	201
Benzene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Benzo(a)anthracene					<8	<8				
Benzo(a)pyrene					<8	<8				
Benzo(b)fluoranthene					<8	<8				
Benzo(g,h,i)perylene					<8	<8				
Benzo(k)fluoranthene					<8	<8				
Benzyl alcohol					<8	<8				
Beryllium, total	<4	<4	<4		<4	<4	<4	<4	<4	<4
Beta-bhc					<.05	<.05	<.05			
Bis (2-chloroethoxy) methane					<8	<8				
Bis(2-chloroethyl) ether					<8	<8				
Bis(2-chloroisopropyl) ether					<8	<8				
Bis(2-ethylhexyl) phthalate					<6	8		<6	<6	<6
Bromochloromethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1		<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate					<8	<8				
Cadmium, total	<.8	<.8	.8		<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1		<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1		<1	<1	<1	<1	<1	<1
Chlordane					<.1	<.1	<.1			
Chlorobenzene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Chlorobenzilate					<8	<8				
Chloroethane	<1.0	<1.0	1.0	1.3	2.0	2.0	1.9	1.8	<1.0	<1.0
Chloroform	<1	<1	<1		<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
Chloroprene					<1	<1				
Chromium, total	<8	<8	<8		<8	<8	<8	<8	<8	<8
Chrysene					<8	<8				
Cis-1,2-dichloroethylene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Cobalt, total	4.3	4.9	9.3		3.8	4.1	2.4	5.3	3.1	1.6
Copper, total	<4.0	<4.0	<4.0		<4.0	<4.0	4.4	<4.0	<4.0	5.0
Cyanide, total					<.005	<.005				
Delta-bhc					<.05	<.05	<.05			
Diallate					<8	<8				
Dibenzo(a,h)anthracene					<8	<8				
Dibenzofuran					<8	<8				
Dibromochloromethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane					<1	<1				
Dieldrin					<.05	<.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	<.05			
Endosulfan ii					<.05	<.05	<.05			
Endosulfan sulfate					<.05	<.05	<.05			
Endrin					<.05	<.05	<.05			
Endrin aldehyde					<.05	<.05	<.05			
Ethyl methacrylate					<10	<10				
Ethyl methanesulfonate					<8	<8				
Ethylbenzene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Famphur					<.4	<.4				
Fluoranthene					<8	<8				
Fluorene					<8	<8				
Gamma-bhc (lindane)					<.05	<.05	<.05			
Heptachlor					<.05	<.05	<.05			
Heptachlor epoxide					<.05	<.05	<.05			

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

Table 9

Analytical Data Summary for MW-5

Constituents	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024
Anthracene					<8
Antimony, total	<2	<2	<2	<2	<2
Arochlor 1016					<.2
Arochlor 1221					<.2
Arochlor 1232					<.2
Arochlor 1242					<.2
Arochlor 1248					<.2
Arochlor 1254					<.2
Arochlor 1260					<.2
Arsenic, total	412.0	83.0	71.1	166.0	9.7
Azobenzene					<8
Barium, total	400	460	302	415	269
Benzene	<1	<1	<1	<1	<1
Benzo(a)anthracene					<8
Benzo(a)pyrene					<8
Benzo(b)fluoranthene					<8
Benzo(g,h,i)perylene					<8
Benzo(k)fluoranthene					<8
Benzyl alcohol					<8
Beryllium, total	<4	<4	<4	<4	<4
Beta-bhc					<.05
Bis (2-chloroethoxy) methane					<8
Bis(2-chloroethyl) ether					<8
Bis(2-chloroisopropyl) ether					<8
Bis(2-ethylhexyl) phthalate					9
Bromochloromethane	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1
Butyl benzyl phthalate					<8
Cadmium, total	1.5	<.8	<.8	<.8	.9
Carbon disulfide	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1
Chlordane					<.1
Chlorobenzene	<1	<1	<1	<1	<1
Chlorobenzilate					<8
Chloroethane	2.7	3.1	<1.0	<1.0	<1.0
Chloroform	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1
Chloroprene					<1
Chromium, total	<8	<8	<8	<8	<8
Chrysene					<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1
Cobalt, total	3.4	5.2	2.7	2.6	10.6
Copper, total	45.5	9.2	9.6	26.8	7.3
Cyanide, total					<.010
Delta-bhc					<.05
Diallate					<8
Dibenzo(a,h)anthracene					<8
Dibenzofuran					<8
Dibromochloromethane	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1
Dichlorodifluoromethane					<1
Dieldrin					<.05
Diethyl phthalate					<8
Dimethoate					<.4
Dimethylphthalate					<8
Di-n-butyl phthalate					<8
Di-n-octyl phthalate					<8
Dinoseb					<.5
Diphenylamine					<8
Disulfoton					<.4
Endosulfan i					<.05
Endosulfan ii					<.05
Endosulfan sulfate					<.05
Endrin					<.05
Endrin aldehyde					<.05
Ethyl methacrylate					<10
Ethyl methanesulfonate					<8
Ethylbenzene	<1	<1	<1	<1	<1
Famphur					<.4
Fluoranthene					<8
Fluorene					<8
Gamma-bhc (lindane)					<.05
Heptachlor					<.05
Heptachlor epoxide					<.05

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

Table 9

Analytical Data Summary for MW-5

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	11/8/2016	4/24/2017	10/9/2017
Hexachlorobenzene	ug/L					<.05			
Hexachlorobutadiene	ug/L					<8			
Hexachlorocyclopentadiene	ug/L					<8			
Hexachloroethane	ug/L					<8			
Hexachloropropene	ug/L					<8			
Indeno(1,2,3-cd)pyrene	ug/L					<8			
Isobutanol	ug/L					<1000			
Isodrin	ug/L					<8			
Isophorone	ug/L					<8			
Isosafrole	ug/L					<8			
Kepone	ug/L					<8			
Lead, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Mercury, total	ug/L					<.5			
Methacrylonitrile	ug/L					<1			
Methapyrilene	ug/L					<8			
Methoxychlor	ug/L					<.05			
Methyl iodide	ug/L	<1	<1	<1	<1	<1		<1	<1
Methyl methacrylate	ug/L					<1			
Methyl methanesulfonate	ug/L					<8			
Methyl parathion	ug/L					<.4			
Methylene chloride	ug/L	<5	<5	<5	<5	<5		<5	<5
Naphthalene	ug/L					<8			
Nickel, total	ug/L	11.5	7.0	5.7	5.3	9.5		6.5	7.9
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			
Parathion	ug/L					<.4			
P-dimethylaminoazobenzene	ug/L					<8			
Pentachlorobenzene	ug/L					<8			
Pentachloronitrobenzene (pcnb)	ug/L					<8			
Pentachlorophenol	ug/L					<8			
Phenacetin	ug/L					<8			
Phenanthrene	ug/L					<8			
Phenol	ug/L					<8			
Phorate	ug/L					<.4			
Pronamide	ug/L					<8			
Propionitrile	ug/L					<10			
Pyrene	ug/L					<8			
Safrole	ug/L					<8			
Selenium, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4		<4	<4
Solids, total suspended	mg/L	33	13	57	43	34		48	90
Styrene	ug/L	<1	<1	<1	<1	<1		<1	<1
Sulfide, total	mg/L					<.1			
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Thallium, total	ug/L	<4	<4	<1	<4	<4		<4	<4
Thionazin	ug/L					<.4			
Tin, total	ug/L					<20			
Toluene	ug/L	<1	<1	<1	<1	<1		<1	<1
Toxaphene	ug/L					<.2			
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5		<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1		<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20		<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5		<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1		<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2		<2	<2
Zinc, total	ug/L	<20.0	<8.0	8.9	<8.0	9.2		<8.0	<8.0

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

Table 9

Analytical Data Summary for MW-5

Constituents	3/21/2018	9/7/2018	4/2/2019	6/5/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022
Hexachlorobenzene					<.05	<.05	<.05			
Hexachlorobutadiene					<8	<8				
Hexachlorocyclopentadiene					<8	<8				
Hexachloroethane					<8	<8				
Hexachloropropene					<8	<8				
Indeno(1,2,3-cd)pyrene					<8	<8				
Isobutanol					<1000	<1000				
Isodrin					<8	<8				
Isophorone					<8	<8				
Isosafrole					<8	<8				
Kepone					<8	<8				
Lead, total	<4	<4	<4		<4	<4	<4	<4	<4	<4
Mercury, total					<.5	<.5				
Methacrylonitrile					<1	<1				
Methapyrilene					<8	<8				
Methoxychlor					<.05	<.05	<.05			
Methyl iodide	<1	<1	<1		<1	<1	<1	<1	<1	<1
Methyl methacrylate					<1	<1				
Methyl methanesulfonate					<8	<8				
Methyl parathion					<.4	<.4				
Methylene chloride	<5	<5	<5		<5	<5	<5	<5	<5	<5
Naphthalene					<8	<8				
Nickel, total	6.3	5.8	21.4	13.7	5.1	6.3	4.8	8.5	4.9	6.1
Nitrobenzene					<8	<8				
N-nitrosodiethylamine					<8	<8				
N-nitrosodimethylamine					<8	<8				
N-nitrosodi-n-butylamine					<8	<8				
N-nitroso-di-n-propylamine					<8	<8				
N-nitrosodiphenylamine					<8	<8				
N-nitrosomethylethylamine					<8	<8				
N-nitrosopiperidine					<8	<8				
N-nitrosopyrrolidine					<8	<8				
O,o,o-triethyl phosphorothioate					<.4	<.4				
O-toluidine					<8	<8				
Parathion					<.4	<.4				
P-dimethylaminoazobenzene					<8	<8				
Pentachlorobenzene					<8	<8				
Pentachloronitrobenzene (pcnb)					<8	<8				
Pentachlorophenol					<8	<8				
Phenacetin					<8	<8				
Phenanthrene					<8	<8				
Phenol					<8	<8				
Phorate					<.4	<.4				
Pronamide					<8	<8				
Propionitrile					<10	<10				
Pyrene					<8	<8				
Safrole					<8	<8				
Selenium, total	<4	<4	<4		<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4		<4	<4	<4	<4	<4	<4
Solids, total suspended										
Styrene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Sulfide, total					<.1	<.1				
Tetrachloroethylene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<2		<2	<2	<2	<2	<2	<2
Thionazin					<.4	<.4				
Tin, total					<20	<20				
Toluene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Toxaphene					<.2	<.2	<.2			
Trans-1,2-dichloroethylene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5		<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1		<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1		<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20		<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5		<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1		<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2		<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	81.1	21.1		16.4	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-5

Constituents	8/30/2022	3/7/2023	9/11/2023	3/20/2024	9/12/2024
Hexachlorobenzene					<.05
Hexachlorobutadiene					<8
Hexachlorocyclopentadiene					<8
Hexachloroethane					<8
Hexachloropropene					<8
Indeno(1,2,3-cd)pyrene					<8
Isobutanol					<1000
Isodrin					<8
Isophorone					<8
Isosafrole					<8
Kepone					<8
Lead, total	<4	<4	<4	<4	<4
Mercury, total					<.5
Methacrylonitrile					<1
Methapyrilene					<8
Methoxychlor					<.05
Methyl iodide	<1	<1	<1	<1	<2
Methyl methacrylate					<1
Methyl methanesulfonate					<8
Methyl parathion					<.4
Methylene chloride	<5	<5	<5	<5	<5
Naphthalene					<8
Nickel, total	5.6	8.7	<4.0	9.0	33.3
Nitrobenzene					<8
N-nitrosodiethylamine					<8
N-nitrosodimethylamine					<8
N-nitrosodi-n-butylamine					<8
N-nitroso-di-n-propylamine					<8
N-nitrosodiphenylamine					<8
N-nitrosomethylethylamine					<8
N-nitrosopiperidine					<8
N-nitrosopyrrolidine					<8
O,o,o-triethyl phosphorothioate					<.4
O-toluidine					<8
Parathion					<.4
P-dimethylaminoazobenzene					<8
Pentachlorobenzene					<8
Pentachloronitrobenzene (pcnb)					<8
Pentachlorophenol					<8
Phenacetin					<8
Phenanthrene					<8
Phenol					<8
Phorate					<.4
Pronamide					<8
Propionitrile					<10
Pyrene					<8
Safrole					<8
Selenium, total	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4
Solids, total suspended					
Styrene	<1	<1	<1	<1	<1
Sulfide, total					<.1
Tetrachloroethylene	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2
Thionazin					<.4
Tin, total					<20
Toluene	<1	<1	<1	<1	<1
Toxaphene					<.2
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	
Vinyl chloride	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-9

Constituents	Units	10/16/2014	4/4/2015	10/1/2015	4/4/2016	9/20/2016	4/24/2017	10/9/2017	3/21/2018	6/11/2018
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-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
2-butanone (mek)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	
Arsenic, total	ug/L	6.1	8.4	8.9	5.9	<4.0	<4.0	<4.0	<4.0	
Barium, total	ug/L	271	291	291	259	267	264	253	266	
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Cadmium, total	ug/L	<.8	<.8	<.8	1.5	<.8	<.8	<.8	<.8	
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Cobalt, total	ug/L	5.8	6.0	4.6	5.7	6.4	5.2	4.9	5.3	
Copper, total	ug/L	4.3	26.3	<4.0	5.3	8.4	<4.0	<4.0	18.0	<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	
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	
Nickel, total	ug/L	12.4	11.8	8.6	11.2	8.2	10.9	11.0	10.9	
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	28	15	12	7	18	51	41		
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Thallium, total	ug/L	<4	<4	<1	<4	<4	<4	<4	<4	
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	
Zinc, total	ug/L	<20.0	<8.0	9.8	<8.0	<8.0	<8.0	<8.0	<8.0	

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

Table 9

Analytical Data Summary for MW-9

Constituents	9/7/2018	4/2/2019	9/18/2019	3/25/2020	9/15/2020	3/8/2021	9/28/2021	3/8/2022	8/30/2022	3/7/2023
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	12.2	<4.0	19.4	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Barium, total	290	270	332	272	285	292	259	291	241	269
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	5.4	5.4	5.7	5.3	5.8	5.1	4.8	5.1	5.0	4.8
Copper, total	<4.0	<4.0	7.1	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	10.6	11.0	11.6	11.0	11.2	10.1	9.5	10.6	9.8	10.0
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended										
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<2	<2	<2	<2	<2	<2	<2	<2	2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	73.9	<20.0	27.7	<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-9

Constituents	9/11/2023	3/20/2024	9/12/2024
1,1,1,2-tetrachloroethane	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1
1,1-dichloroethane	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5
1,2-dibromoethane	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1
1,2-dichloroethane	<1	<1	<1
1,2-dichloropropane	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1
2-butanone (mek)	<10	<10	<10
2-hexanone (mbk)	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5
Acetone	<10	<10	<10
Acrylonitrile	<5	<5	<5
Antimony, total	<2	<2	<2
Arsenic, total	7.2	7.0	4.3
Barium, total	288	295	305
Benzene	<1	<1	<1
Beryllium, total	<4	<4	<4
Bromochloromethane	<1	<1	<1
Bromodichloromethane	<1	<1	<1
Bromoform	<1	<1	<1
Bromomethane	<1	<1	<1
Cadmium, total	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1
Carbon tetrachloride	<1	<1	<1
Chlorobenzene	<1	<1	<1
Chloroethane	<1	<1	<1
Chloroform	<1	<1	<1
Chloromethane	<1	<1	<1
Chromium, total	<8	<8	<8
Cis-1,2-dichloroethylene	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1
Cobalt, total	5.3	4.5	4.5
Copper, total	<4.0	<4.0	<4.0
Dibromochloromethane	<1	<1	<1
Dibromomethane	<1	<1	<1
Ethylbenzene	<1	<1	<1
Lead, total	<4	<4	<4
Methyl iodide	<1	<1	<1
Methylene chloride	<5	<5	<5
Nickel, total	9.8	9.2	9.5
Selenium, total	<4	<4	<4
Silver, total	<4	<4	<4
Solids, total suspended			
Styrene	<1	<1	<1
Tetrachloroethylene	<1	<1	<1
Thallium, total	<2	<2	<2
Toluene	<1	<1	<1
Trans-1,2-dichloroethylene	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5
Trichloroethylene	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1
Vanadium, total	<20	<20	<20
Vinyl acetate	<5	<5	<5
Vinyl chloride	<1	<1	<1
Xylenes, total	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0

* - 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 – Gas Monitoring Summary

Table 12
South Dallas County Sanitary Landfill
25-SDP-01-75P
EXPLOSIVE GAS MONITORING

	3/4/2024	6/10/2024	10/9/2024	12/23/2024
	% LEL	% LEL	% LEL	% LEL
Old office/shop	0	0	0	0
Leachate pump control building	0	0	0	0
Office	0	0	0	0
New Shop	0	0	0	0
Leachate treatment building	0	0	0	0
GP-1	0	0	0	0
GP-2	0	0	0	0
GP-3	0	0	0	**10**
GP-3R	0	0	0	0
GP-4	0	0	0	0
GP-4R	0	0	0	0
GP-5	0	0	0	0
GP-6	0	0	0	0
GP-6R	0	0	0	0
GP-7	0	0	0	0
GV-1	0	0	0	0
GV-2	**5**	**12**	0	0
GV-4	0	0	0	0
GV-5	**25**	**23**	**18**	**21**
MW-4	0	NM	0	0
MW-5	0	NM	0	0
MW-22	**50**	NM	**50.1**	0
MW-25	0	NM	0	0
MW-26	0	NM	0	0

NM - Not Measured

Appendix A

Field Sampling Forms

SOUTH DALLAS COUNTY SANITARY LANDFILL
PERMIT # 25-SDP-01-75P

3/20/2024 Sampled by: Todd Whipple Weather Conditions: Partly clear, breezy, 32 - 46 degrees

IDNR Form 542-1322

Monitoring Well: MW-2 (ug)

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

GENERAL INFORMATION

TOC	937.53
Well Depth	19.75
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	937.53
Well Depth	19.75
Top Screen	927.78
Bottom Screen	917.78
Bottom Well	917.78
Sampler Length (ft)	
Sampler Volume (mL)	440.00
Feet cordage	
Top sample	937.53
Bottom sample	937.53
Turbidity(NTU)	

Date	Time	Water Level	Water Elevation	Notes
3/20/2024		19.75	917.78	Dry - No Sample

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	0		0.00
Appendix I	Metals	150	0		0.00
Appendix I	VOC	240	0		0.00
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			0	0	

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

TOC	937.53
Well Depth	19.75

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/20/2024	0:00	19.75	917.78		#DIV/0!	
After purging				937.53			
Top of Screen January 1990				927.78			
				-10.00	feet above (+) or below (-) top screen		
Bottom of Well January 1990				917.78			
Bottom of Well	3/20/2024		19.75	917.78			
				0.00	feet sedimentation		
Before Sampling				937.53			
Recovery				937.53			
Recovery				937.53			
Recovery				937.53			
Recovery				937.53			

IDNR Form 542-1322

Monitoring Well:	MW-4 (dg)
Primary Sampling Method:	No-Purge for Appendix I
Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	924.35
Well Depth	37.20
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	924.35
Well Depth	37.20
Top Screen	897.15
Bottom Screen	887.15
Bottom Well	887.15
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	33.20
Top sample	891.15
Bottom sample	887.15
Turbidity(NTU)	5.80

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	10:47	33.20	891.15	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		5.80
Appendix I	Metals	150	150		5.80
Appendix I	VOC	240	240		5.80
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	924.35	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	37.20	Before purging	3/20/2024	10:47	33.20	891.15	2	3.1	Yes
		After purging				924.35			
		Top of Screen January 1990				897.15			
						-6.00	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				887.15			
		Bottom of Well	3/20/2024		37.20	887.15			
						0.00	feet sedimentation		
		Before Sampling				924.35			
		Recovery	3/20/2024	10:54	36.10	888.25			
		Recovery	3/20/2024	14:25	33.15	891.20			
		Recovery				924.35			
		Recovery				924.35			

IDNR Form 542-1322

Primary Sampling Method: No-Purge for Appendix I
Monitoring Well: MW-5 (dg) **Secondary Sampling Method:** Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	923.97
Well Depth	36.55
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	923.97	
Well Depth	36.55	
Top Screen	897.42	
Bottom Screen	887.42	
Bottom Well	887.42	
Sampler Length (ft)	4.00	
Sampler Volume (mL)	440.00	
Feet cordage	33.60	
Top sample	890.37	
Bottom sample	886.37	
Turbidity(NTU)	40.45	Orange

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	9:36	33.60	890.37	

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		40.45
Appendix I	Metals	150	150		40.45
Appendix I	VOC	240	240		40.45
Full Appendix II	10 more containers	5620			
Supplemental	bis (2)	945			
Supplemental	Minerals	750			
Total			400	0	

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

		2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
TOC	923.97								
Well Depth	36.55	Before purging	3/20/2024	9:36	33.60	890.37	2	4.2	Yes
		After purging				923.97			
		Top of Screen January 1990				897.42			
						-7.05	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				887.42			
		Bottom of Well	3/20/2024		36.55	887.42			
						0.00	feet sedimentation		
		Before Sampling				923.97			
		Recovery	3/20/2024	9:49	35.90	888.07			
		Recovery	3/20/2024	14:22	35.11	888.86			
		Recovery				923.97			
		Recovery				923.97			

IDNR Form 542-1322

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

Monitoring Well: MW-9 (ug)
Background Well

GENERAL INFORMATION

TOC	934.91
Well Depth	42.33
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	934.91
Well Depth	42.33
Top Screen	902.58
Bottom Screen	892.58
Bottom Well	892.58
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	36.00
Top sample	898.91
Bottom sample	894.91
Turbidity(NTU)	6.83

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	13:08	31.35	903.56	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		6.83
Appendix I	Metals	150	150		6.83
Appendix I	VOC	240	240		6.83
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	934.91	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	42.33	Before purging	3/20/2024	13:08	31.35	903.56	4	2.2	No
		After purging				934.91			
		Top of Screen January 1990				902.58			
						0.98	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				892.58			
		Bottom of Well	3/20/2024		42.33	892.58			
						0.00	feet sedimentation		
		Before Sampling				934.91			
		Recovery	3/20/2024	13:21	31.60	903.31			
		Recovery	3/20/2024	13:22	31.35	903.56			
		Recovery				934.91			
		Recovery				934.91			

IDNR Form 542-1322

Monitoring Well: MW-12 (dg)

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

GENERAL INFORMATION

TOC	908.7
Well Depth	23.10
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	908.7
Well Depth	23.10
Top Screen	895.60
Bottom Screen	885.60
Bottom Well	885.60
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	17.00
Top sample	891.70
Bottom sample	887.70
Turbidity(NTU)	88.49

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	8:55	12.63	896.07	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		88.49
Appendix I	Metals	150	150		88.49
Appendix I	VOC	240	240		88.49
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	908.7	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	23.10	Before purging	3/20/2024	8:55	12.63	896.07	3	1.8	no
		After purging				908.70			
		Top of Screen January 1990				895.60			
						0.47	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				885.60			
		Bottom of Well	3/20/2024		23.10	885.60			
						0.00	feet sedimentation		
		Before Sampling				908.70			
		Recovery	3/20/2024	9:06	15.25	893.45			
		Recovery	3/20/2024	14:15	14.41	894.29			
		Recovery				908.70			
		Recovery				908.70			

IDNR Form 542-1322

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

Monitoring Well: MW-15R (dg)

GENERAL INFORMATION

TOC	919.38
Well Depth	30.35
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	919.38
Well Depth	30.35
Top Screen	899.03
Bottom Screen	889.03
Bottom Well	889.03
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	25.00
Top sample	894.38
Bottom sample	890.38
Turbidity(NTU)	11.00

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	8:09	17.90	901.48	

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		11.00
Appendix I	Metals	150	150		11.00
Appendix I	VOC	240	240		11.00
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	919.38	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	30.35	Before purging	3/20/2024	8:09	17.90	901.48	3	1.5	No
		After purging				919.38			
		Top of Screen January 1990				899.03			
						2.45	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				889.03			
		Bottom of Well	3/20/2024		30.75	888.63			
						-0.40	feet sedimentation		
		Before Sampling				919.38			
		Recovery	3/20/2024	8:26	18.50	900.88			
		Recovery	3/20/2024	14:08	17.92	901.46			
		Recovery				919.38			
		Recovery				919.38			

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Monitoring Well:	MW-17 (ug)
Primary Sampling Method:	No-Purge for Appendix I
Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	916.22
Well Depth	23.05
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	916.22
Well Depth	23.05
Top Screen	903.17
Bottom Screen	893.17
Bottom Well	893.17
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	19.40
Top sample	896.82
Bottom sample	892.82
Turbidity(NTU)	7.35

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	11:28	19.38	896.84	

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		7.35
Appendix I	Metals	150	150		7.35
Appendix I	VOC	240	240		7.35
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	916.22	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	23.05	Before purging	3/20/2024	11:28	19.38	896.84	2	3.3	No
		After purging				916.22			
		Top of Screen January 1990				903.17			
						-6.33	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				893.17			
		Bottom of Well	3/20/2024		23.05	893.17			
						0.00	feet sedimentation		
		Before Sampling				916.22			
		Recovery	3/20/2024	11:39	20.40	895.82			
		Recovery	3/20/2024	14:32	19.33	896.89			
		Recovery				916.22			
		Recovery				916.22			

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Monitoring Well: MW-18 (ug)

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

GENERAL INFORMATION

TOC	940.87
Well Depth	39.70
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	940.87
Well Depth	39.70
Top Screen	911.17
Bottom Screen	901.17
Bottom Well	901.17
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	36.00
Top sample	904.87
Bottom sample	900.87
Turbidity(NTU)	12.26

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	13:42	35.37	905.50	

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		12.26
Appendix I	Metals	150	150		12.26
Appendix I	VOC	240	240		12.26
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	940.87	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	39.70	Before purging	3/20/2024	13:42	35.37	905.50	2	2.8	Yes
		After purging				940.87			
		Top of Screen January 1990				911.17			
						-5.67	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				901.17			
		Bottom of Well	3/20/2024		39.70	901.17			
						0.00	feet sedimentation		
		Before Sampling				940.87			
		Recovery	3/20/2024	13:51	37.23	903.64			
		Recovery	3/20/2024	14:40	36.91	903.96			
		Recovery				940.87			
		Recovery				940.87			

IDNR Form 542-1322

Monitoring Well: MW-19A (ug)

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

GENERAL INFORMATION

TOC	943.16
Well Depth	57.30
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	943.16
Well Depth	57.30
Top Screen	895.86
Bottom Screen	885.86
Bottom Well	885.86
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	51.00
Top sample	892.16
Bottom sample	888.16
Turbidity(NTU)	2.41

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	11:59	36.74	906.42	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.41
Appendix I	Metals	150	150		2.41
Appendix I	VOC	240	240		2.41
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	943.16	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	57.30	Before purging	3/20/2024	11:59	36.74	906.42	3	0.9	No
		After purging				943.16			
		Top of Screen January 1990				895.86			
						10.56	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				885.86			
		Bottom of Well	3/20/2024		57.30	885.86			
						0.00	feet sedimentation		
		Before Sampling				943.16			
		Recovery	3/20/2024	12:10	45.30	897.86			
		Recovery	3/20/2024	14:37	43.63	899.53			
		Recovery				943.16			
		Recovery				943.16			

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Monitoring Well: MW-20R (dg)

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

GENERAL INFORMATION

TOC	913.4
Well Depth	21.65
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	913.4
Well Depth	21.65
Top Screen	901.75
Bottom Screen	891.75
Bottom Well	891.75
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.00
Top sample	897.40
Bottom sample	893.40
Turbidity(NTU)	53.88

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	8:35	13.70	899.70	

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		53.88
Appendix I	Metals	150	150		53.88
Appendix I	VOC	240	240		53.88
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	913.4	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	21.65	Before purging	3/20/2024	8:35	13.70	899.70	3	2.3	No
		After purging				913.40			
		Top of Screen January 1990				901.75			
						-2.05	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				891.75			
		Bottom of Well	3/20/2024		21.65	891.75			
						0.00	feet sedimentation		
		Before Sampling				913.40			
		Recovery	3/20/2024	8:43	14.20	899.20			
		Recovery	3/20/2024	14:13	13.70	899.70			
		Recovery				913.40			
		Recovery				913.40			

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Primary Sampling Method: No-Purge for Appendix I

Monitoring Well: MW-21 (dg)

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

GENERAL INFORMATION

TOC	896.50
Well Depth	21.50
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	896.5	
Well Depth	21.50	
Top Screen	885.00	
Bottom Screen	875.00	
Bottom Well	875.00	
Sampler Length (ft)	4.00	
Sampler Volume (mL)	440.00	
Feet cordage	16.00	
Top sample	880.50	
Bottom sample	876.50	
Turbidity(NTU)	215.10	orange

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	9:15	6.98	889.52	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		215.10
Appendix I	Metals	150	150		215.10
Appendix I	VOC	240	240		215.10
Full Appendix II	10 more containers	5620			
Supplemental	bis (2)	945			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	896.5	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	21.50	Before purging	3/20/2024	9:15	6.98	889.52	3	1.3	No
		After purging				896.50			
		Top of Screen January 1990				885.00			
						4.52	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				875.00			
		Bottom of Well	3/20/2024		21.50	875.00			
						0.00	feet sedimentation		
		Before Sampling				896.50			
		Recovery	3/20/2024	9:25	10.10	886.40			
		Recovery	3/20/2024	14:19	7.05	889.45			
		Recovery				896.50			
		Recovery				896.50			

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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	925.68
Well Depth	35.45
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	925.68
Well Depth	35.45
Top Screen	900.23
Bottom Screen	890.23
Bottom Well	890.23
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	33.00
Top sample	892.68
Bottom sample	888.68
Turbidity(NTU)	2.22

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	11:01	32.95	892.73	

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			2.22
Appendix I	Metals	150			2.22
Appendix I	VOC	240			2.22
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			0	0	

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

		2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
TOC	925.68								
Well Depth	35.45	Before purging	3/20/2024	11:01	32.95	892.73	2	4.9	Yes
		After purging				925.68			
		Top of Screen January 1990				900.23			
						-7.50	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				890.23			
		Bottom of Well	3/20/2024		35.45	890.23			
						0.00	feet sedimentation		
		Before Sampling				925.68			
		Recovery	3/20/2024	11:14	34.31	891.37			
		Recovery	3/20/2024	14:28	32.94	892.74			
		Recovery				925.68			
		Recovery				925.68			

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Monitoring Well: MW-24 (ug)

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

GENERAL INFORMATION

TOC	923.34
Well Depth	26.75
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	923.34
Well Depth	26.75
Top Screen	906.59
Bottom Screen	896.59
Bottom Well	896.59
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	21.00
Top sample	902.34
Bottom sample	898.34
Turbidity(NTU)	12.22

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	12:48	14.33	909.01	

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		12.22
Appendix I	Metals	150	150		12.22
Appendix I	VOC	240	240		12.22
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	923.34
Well Depth	26.75

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/20/2024	12:48	14.33	909.01	4	2.0	No
After purging				923.34			
Top of Screen January 1990				906.59			
				2.42	feet above (+) or below (-) top screen		
Bottom of Well January 1990				896.59			
Bottom of Well	3/20/2024		26.75	896.59			
				0.00	feet sedimentation		
Before Sampling				923.34			
Recovery	3/20/2024	12:59	15.20	908.14			
Recovery	3/20/2024	14:45	14.31	909.03			
Recovery				923.34			
Recovery				923.34			

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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	902.9
Well Depth	21.42
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	902.9
Well Depth	21.42
Top Screen	891.48
Bottom Screen	881.48
Bottom Well	881.48
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.00
Top sample	886.90
Bottom sample	882.90
Turbidity(NTU)	12.12

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	9:58	12.12	890.78	

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		12.12
Appendix I	Metals	150	150		12.12
Appendix I	VOC	240	240		12.12
Full Appendix II	10 more containers	5620			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			400	0	

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

TOC	902.9	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	21.42	Before purging	3/20/2024	9:58	12.12	890.78	3	2.0	No
		After purging				902.90			
		Top of Screen January 1990				891.48			
						-0.70	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				881.48			
		Bottom of Well	3/20/2024		21.42	881.48			
						0.00	feet sedimentation		
		Before Sampling				902.90			
		Recovery	3/20/2024	10:11	14.12	888.78			
		Recovery	3/20/2024	14:23	12.12	890.78			
		Recovery				902.90			
		Recovery				902.90			

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Monitoring Well: MW-26 (dg)

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

GENERAL INFORMATION

TOC	908.83
Well Depth	25.20
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	908.83	
Well Depth	25.20	
Top Screen	893.63	
Bottom Screen	883.63	
Bottom Well	883.63	
Sampler Length (ft)	4.00	
Sampler Volume (mL)	440.00	
Feet cordage	19.00	
Top sample	889.83	
Bottom sample	885.83	
Turbidity(NTU)	26.81	orange

Date	Time	Water Level	Water Elevation	Notes
3/20/2024	10:21	18.10	890.73	

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		26.81
Appendix I	Metals	150	150		26.81
Appendix I	VOC	240	240		26.81
Full Appendix II	10 more containers	5620			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			400	0	

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

TOC	908.83	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	25.20	Before purging	3/20/2024	10:21	18.10	890.73	3	2.6	No
		After purging				908.83			
		Top of Screen January 1990				893.63			
						-2.90	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				883.63			
		Bottom of Well	3/20/2024		25.20	883.63			
						0.00	feet sedimentation		
		Before Sampling				908.83			
		Recovery	3/20/2024	10:32	18.23	890.60			
		Recovery	3/20/2024	10:33	18.10	890.73			
		Recovery				908.83			
		Recovery				908.83			

SOUTH DALLAS COUNTY SANITARY LANDFILL
PERMIT # 25-SDP-01-75P

9/12/2024 Sampled by: Glenn Hunter Weather Conditions: Hazy, calm, 75 degrees

IDNR Form 542-1322

Primary Sampling Method: No-Purge for Appendix I
Monitoring Well: MW-2 (ug) **Secondary Sampling Method:** Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	937.53
Well Depth	19.75
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	937.53
Well Depth	19.75
Top Screen	927.78
Bottom Screen	917.78
Bottom Well	917.78
Sampler Length (ft)	
Sampler Volume (mL)	440.00
Feet cordage	
Top sample	937.53
Bottom sample	937.53
Turbidity(NTU)	

Date	Time	Water Level	Water Elevation	Notes
9/12/2024		19.75	917.78	Dry - No Sample

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	0		0.00
Appendix I	Metals	150	0		0.00
Appendix I	VOC	240	0		0.00
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			0	0	

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

TOC	937.53
Well Depth	19.75

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/12/2024	0:00	19.75	917.78		#DIV/0!	
After purging				937.53			
Top of Screen January 1990				927.78			
				-10.00	feet above (+) or below (-) top screen		
Bottom of Well January 1990				917.78			
Bottom of Well	9/12/2024		19.75	917.78			
				0.00	feet sedimentation		
Before Sampling				937.53			
Recovery				937.53			
Recovery				937.53			
Recovery				937.53			
Recovery				937.53			

IDNR Form 542-1322

Monitoring Well: MW-4 (dg)

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

GENERAL INFORMATION

TOC	924.35
Well Depth	37.20
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	924.35
Well Depth	37.20
Top Screen	897.15
Bottom Screen	887.15
Bottom Well	887.15
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	33.00
Top sample	891.35
Bottom sample	887.35
Turbidity(NTU)	5.03

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	12:11	34.00	890.35	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		5.03
Appendix I	Metals	150	150		5.03
Appendix I	VOC	240	240		5.03
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	924.35	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	37.20	Before purging	9/12/2024	12:11	34.00	890.35		0.0	
		After purging				924.35			
		Top of Screen January 1990				897.15			
						-6.80	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				887.15			
		Bottom of Well	9/12/2024		37.20	887.15			
						0.00	feet sedimentation		
		Before Sampling				924.35			
		Recovery				924.35			
		Recovery				924.35			
		Recovery				924.35			
		Recovery				924.35			

IDNR Form 542-1322

Monitoring Well: MW-5 (dg)

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

GENERAL INFORMATION

TOC	923.97
Well Depth	36.55
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	923.97
Well Depth	36.55
Top Screen	897.42
Bottom Screen	887.42
Bottom Well	887.42
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	33.00
Top sample	890.97
Bottom sample	886.97
Turbidity(NTU)	5.81

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	13:17	33.25	890.72	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		5.81
Appendix I	Metals	150	150		5.81
Appendix I	VOC	240	240		5.81
Full Appendix II	10 more containers	5620			
Supplemental	bis (2)	945			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	923.97	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	36.55	Before purging	9/12/2024	13:17	33.25	890.72		0.0	
		After purging				923.97			
		Top of Screen January 1990				897.42			
						-6.70	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				887.42			
		Bottom of Well	9/12/2024		36.55	887.42			
						0.00	feet sedimentation		
		Before Sampling				923.97			
		Recovery				923.97			
		Recovery				923.97			
		Recovery				923.97			
		Recovery				923.97			

IDNR Form 542-1322

Monitoring Well: MW-9 (ug)

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

GENERAL INFORMATION

TOC	934.91
Well Depth	42.33
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	934.91
Well Depth	42.33
Top Screen	902.58
Bottom Screen	892.58
Bottom Well	892.58
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	36.00
Top sample	898.91
Bottom sample	894.91
Turbidity(NTU)	3.80

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	10:12	32.07	902.84	

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		3.80
Appendix I	Metals	150	150		3.80
Appendix I	VOC	240	240		3.80
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	934.91	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	42.33	Before purging	9/12/2024	10:12	32.07	902.84		0.0	
		After purging				934.91			
		Top of Screen January 1990				902.58			
						0.26	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				892.58			
		Bottom of Well	9/12/2024		42.33	892.58			
						0.00	feet sedimentation		
		Before Sampling				934.91			
		Recovery				934.91			
		Recovery				934.91			
		Recovery				934.91			
		Recovery				934.91			

IDNR Form 542-1322

Monitoring Well: MW-12 (dg)

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

GENERAL INFORMATION

TOC	908.7
Well Depth	23.10
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	908.7
Well Depth	23.10
Top Screen	895.60
Bottom Screen	885.60
Bottom Well	885.60
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	17.00
Top sample	891.70
Bottom sample	887.70
Turbidity(NTU)	17.30

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	14:58	12.93	895.77	

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		17.30
Appendix I	Metals	150	150		17.30
Appendix I	VOC	240	240		17.30
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	908.7	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	23.10	Before purging	9/12/2024	14:58	12.93	895.77		0.0	
		After purging				908.70			
		Top of Screen January 1990				895.60			
						0.17	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				885.60			
		Bottom of Well	9/12/2024		23.10	885.60			
						0.00	feet sedimentation		
		Before Sampling				908.70			
		Recovery				908.70			
		Recovery				908.70			
		Recovery				908.70			
		Recovery				908.70			

IDNR Form 542-1322

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

Monitoring Well: MW-15R (dg)

GENERAL INFORMATION

TOC	919.38
Well Depth	30.35
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	919.38
Well Depth	30.35
Top Screen	899.03
Bottom Screen	889.03
Bottom Well	889.03
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	24.00
Top sample	895.38
Bottom sample	891.38
Turbidity(NTU)	24.10

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	14:40	18.86	900.52	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		24.10
Appendix I	Metals	150	150		24.10
Appendix I	VOC	240	240		24.10
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	919.38	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	30.35	Before purging	9/12/2024	14:40	18.86	900.52		0.0	
		After purging				919.38			
		Top of Screen January 1990				899.03			
						1.49	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				889.03			
		Bottom of Well	9/12/2024		30.75	888.63			
						-0.40	feet sedimentation		
		Before Sampling				919.38			
		Recovery				919.38			
		Recovery				919.38			
		Recovery				919.38			
		Recovery				919.38			

IDNR Form 542-1322

Monitoring Well:	MW-17 (ug)
Primary Sampling Method:	No-Purge for Appendix I
Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	916.22
Well Depth	23.05
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	916.22
Well Depth	23.05
Top Screen	903.17
Bottom Screen	893.17
Bottom Well	893.17
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	19.00
Top sample	897.22
Bottom sample	893.22
Turbidity(NTU)	9.34

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	11:35	19.60	896.62	

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		9.34
Appendix I	Metals	150	150		9.34
Appendix I	VOC	240	240		9.34
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	916.22
Well Depth	23.05

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/12/2024	11:35	19.60	896.62		0.0	
After purging				916.22			
Top of Screen January 1990				903.17			
				-6.55	feet above (+) or below (-) top screen		
Bottom of Well January 1990				893.17			
Bottom of Well	9/12/2024		23.05	893.17			
				0.00	feet sedimentation		
Before Sampling				916.22			
Recovery				916.22			
Recovery				916.22			
Recovery				916.22			
Recovery				916.22			

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Monitoring Well:	MW-18 (ug)	**Primary Sampling Method:**	No-Purge for Appendix I
		Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	940.87
Well Depth	39.70
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	940.87
Well Depth	39.70
Top Screen	911.17
Bottom Screen	901.17
Bottom Well	901.17
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	36.00
Top sample	904.87
Bottom sample	900.87
Turbidity(NTU)	9.29

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	10:49	36.60	904.27	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		9.29
Appendix I	Metals	150	150		9.29
Appendix I	VOC	240	240		9.29
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	940.87	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	39.70	Before purging	9/12/2024	10:49	36.60	904.27		0.0	
		After purging				940.87			
		Top of Screen January 1990				911.17			
						-6.90	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				901.17			
		Bottom of Well	9/12/2024		39.70	901.17			
						0.00	feet sedimentation		
		Before Sampling				940.87			
		Recovery				940.87			
		Recovery				940.87			
		Recovery				940.87			
		Recovery				940.87			

IDNR Form 542-1322

Monitoring Well: MW-19A (ug)

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

GENERAL INFORMATION

TOC	943.16
Well Depth	57.30
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	943.16
Well Depth	57.30
Top Screen	895.86
Bottom Screen	885.86
Bottom Well	885.86
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	51.00
Top sample	892.16
Bottom sample	888.16
Turbidity(NTU)	1.69

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	11:07	36.78	906.38	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		1.69
Appendix I	Metals	150	150		1.69
Appendix I	VOC	240	240		1.69
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	943.16	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	57.30	Before purging	9/12/2024	11:07	36.78	906.38		0.0	
		After purging				943.16			
		Top of Screen January 1990				895.86			
						10.52	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				885.86			
		Bottom of Well	9/12/2024		57.30	885.86			
						0.00	feet sedimentation		
		Before Sampling				943.16			
		Recovery				943.16			
		Recovery				943.16			
		Recovery				943.16			
		Recovery				943.16			

IDNR Form 542-1322

Monitoring Well: MW-20R (dg)

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

GENERAL INFORMATION

TOC	913.4
Well Depth	21.65
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	913.4
Well Depth	21.65
Top Screen	901.75
Bottom Screen	891.75
Bottom Well	891.75
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	15.00
Top sample	898.40
Bottom sample	894.40
Turbidity(NTU)	5.46

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	14:31	14.92	898.48	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		5.46
Appendix I	Metals	150	150		5.46
Appendix I	VOC	240	240		5.46
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	913.4	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	21.65	Before purging	9/12/2024	14:31	14.92	898.48		0.0	
		After purging				913.40			
		Top of Screen January 1990				901.75			
						-3.27	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				891.75			
		Bottom of Well	9/12/2024		21.65	891.75			
						0.00	feet sedimentation		
		Before Sampling				913.40			
		Recovery				913.40			
		Recovery				913.40			
		Recovery				913.40			
		Recovery				913.40			

IDNR Form 542-1322

Monitoring Well: MW-21 (dg)

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

GENERAL INFORMATION

TOC	896.50
Well Depth	21.50
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	896.5
Well Depth	21.50
Top Screen	885.00
Bottom Screen	875.00
Bottom Well	875.00
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	15.00
Top sample	881.50
Bottom sample	877.50
Turbidity(NTU)	7.28

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	13:47	7.50	889.00	

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		7.28
Appendix I	Metals	150	150		7.28
Appendix I	VOC	240	240		7.28
Full Appendix II	10 more containers	5620			
Supplemental	bis (2)	945			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	896.5
Well Depth	21.50

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	9/12/2024	13:47	7.50	889.00		0.0	
After purging				896.50			
Top of Screen January 1990				885.00			
				4.00	feet above (+) or below (-) top screen		
Bottom of Well January 1990				875.00			
Bottom of Well	9/12/2024		21.50	875.00			
				0.00	feet sedimentation		
Before Sampling				896.50			
Recovery				896.50			
Recovery				896.50			
Recovery				896.50			
Recovery				896.50			

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	925.68
Well Depth	35.45
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	925.68
Well Depth	35.45
Top Screen	900.23
Bottom Screen	890.23
Bottom Well	890.23
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	31.00
Top sample	894.68
Bottom sample	890.68
Turbidity(NTU)	5.56

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	11:56	33.66	892.02	

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			5.56
Appendix I	Metals	150			5.56
Appendix I	VOC	240			5.56
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			0	0	

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

TOC	925.68	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	35.45	Before purging	9/12/2024	11:56	33.66	892.02		0.0	
		After purging				925.68			
		Top of Screen January 1990				900.23			
						-8.21	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				890.23			
		Bottom of Well	9/12/2024		35.45	890.23			
						0.00	feet sedimentation		
		Before Sampling				925.68			
		Recovery				925.68			
		Recovery				925.68			
		Recovery				925.68			
		Recovery				925.68			

IDNR Form 542-1322

Monitoring Well: MW-24 (ug)

Primary Sampling Method: No-Purge for Appendix I

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

GENERAL INFORMATION

TOC	923.34
Well Depth	26.75
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	923.34
Well Depth	26.75
Top Screen	906.59
Bottom Screen	896.59
Bottom Well	896.59
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	20.00
Top sample	903.34
Bottom sample	899.34
Turbidity(NTU)	3.52

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	10:30	14.42	908.92	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		3.52
Appendix I	Metals	150	150		3.52
Appendix I	VOC	240	240		3.52
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			400	0	

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

TOC	923.34	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	26.75	Before purging	9/12/2024	10:30	14.42	908.92		0.0	
		After purging				923.34			
		Top of Screen January 1990				906.59			
						2.33	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				896.59			
		Bottom of Well	9/12/2024		26.75	896.59			
						0.00	feet sedimentation		
		Before Sampling				923.34			
		Recovery				923.34			
		Recovery				923.34			
		Recovery				923.34			
		Recovery				923.34			

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	902.9
Well Depth	21.42
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	902.9
Well Depth	21.42
Top Screen	891.48
Bottom Screen	881.48
Bottom Well	881.48
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	15.00
Top sample	887.90
Bottom sample	883.90
Turbidity(NTU)	6.01

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	12:40	11.53	891.37	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		6.01
Appendix I	Metals	150	150		6.01
Appendix I	VOC	240	240		6.01
Full Appendix II	10 more containers	5620			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			400	0	

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

TOC	902.9	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	21.42	Before purging	9/12/2024	12:40	11.53	891.37		0.0	
		After purging				902.90			
		Top of Screen January 1990				891.48			
						-0.11	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				881.48			
		Bottom of Well	9/12/2024		21.42	881.48			
						0.00	feet sedimentation		
		Before Sampling				902.90			
		Recovery				902.90			
		Recovery				902.90			
		Recovery				902.90			
		Recovery				902.90			

IDNR Form 542-1322

Monitoring Well: MW-26 (dg)

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

GENERAL INFORMATION

TOC	908.83
Well Depth	25.20
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	908.83
Well Depth	25.20
Top Screen	893.63
Bottom Screen	883.63
Bottom Well	883.63
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	19.00
Top sample	889.83
Bottom sample	885.83
Turbidity(NTU)	16.50

Date	Time	Water Level	Water Elevation	Notes
9/12/2024	12:26	19.04	889.79	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		16.50
Appendix I	Metals	150	150		16.50
Appendix I	VOC	240	240		16.50
Full Appendix II	10 more containers	5620			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			400	0	

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

TOC	908.83	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	25.20	Before purging	9/12/2024	12:26	19.04	889.79		0.0	
		After purging				908.83			
		Top of Screen January 1990				893.63			
						-3.84	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				883.63			
		Bottom of Well	9/12/2024		25.20	883.63			
						0.00	feet sedimentation		
		Before Sampling				908.83			
		Recovery				908.83			
		Recovery				908.83			
		Recovery				908.83			
		Recovery				908.83			

Appendix B

Statistical Report

APPENDIX B.1 –1st Statistical Evaluation

GROUND WATER STATISTICS

FOR THE

SOUTH DALLAS COUNTY SANITARY LANDFILL

First Semi-Annual Monitoring Event in 2024

Prepared for:
South Dallas County Sanitary Landfill
2000 Main Street
Adel, Dallas County, IA 50003

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

April 2024

INTRODUCTION

This report summarizes the results of the statistical analysis used to evaluate the ground water quality data obtained during the first semi-annual monitoring event in 2024 at the South Dallas County Sanitary Landfill in Adel, Dallas County, Iowa. The statistical plan was designed to detect a release from the facility at the earliest indication so that it is protective of human health and the environment. The interwell methodology is described and then applied to the South Dallas County Landfill data. The statistical plan conforms with IAC 567, Chapter 113.10 and the USEPA Unified Guidance document ("*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities*", March 2009).

Ground Water Monitoring Program

The groundwater monitoring network for South Dallas County Sanitary Landfill includes upgradient wells MW-2, MW-17, and MW-19A and downgradient detection sample points MW-10, MW-12, MW-15R, MW-18, MW-20R, MW-21, MW-22, MW-24, MW-4, MW-5, and MW-9. Each of the groundwater monitoring wells is to be sampled at least semiannually and analyzed for the detection monitoring parameters listed in 113.10(5), which includes 15 inorganic constituents and 47 organic compounds, summarized in Table 1 below.

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

Organic Compounds:

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

Inorganic constituents:

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

The ground water data obtained during the first semi-annual monitoring event in 2024 are summarized in Attachment A.

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

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

Interwell Statistics: Upgradient versus Downgradient Comparisons

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

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

The previous background data used in this statistical analysis included the ground water data collected from ground water wells MW-2, MW-17, and MW-19A during the period from October 2014 through April 2018. Since then, wells MW-18, MW-24, and MW-9 have been approved as background wells. The background data used in this statistical analysis includes the ground water data collected from ground water wells MW-2, MW-17, MW-18, MW-19A, MW-24, and MW-9 during the period from October 2014 through the current data. A summary of the background data from monitoring wells MW-2, MW-17, MW-18, MW-19A, MW-24, and MW-9, used to determine the site prediction limits, is listed in Attachment B, Table 1 “Upgradient Data”. This statistical method compares the current downgradient determinations to site prediction limits and checks for exceedances.

Table 2 “Most Current Downgradient Monitoring Data”, summarizes the current data from downgradient wells MW-12, MW-15R, MW-20R, MW-21, MW-22, MW-4, and MW-5 compared to the site prediction limits. Prediction limit exceedances are flagged with asterisks. For the data obtained during the first semi-annual monitoring event in 2024, the site prediction limit exceedances detected are summarized in the table below.

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

Well	Trace Metal	Result, µg/L	Prediction Limit	Prediction Limit Type	Verified or Awaiting Verification
MW-5	Copper	26.8	10.0000	Nonparametric	Awaiting Verification

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. Barium, cobalt, and nickel are detected at a frequency greater than 50% in the upgradient wells so those metals were tested for normality. The remainder of the metals are rarely detected (less than 50%) in the upgradient wells so nonparametric limits were used in those cases. Table 4 summarizes the results of the Shapiro-Wilk test. Table 5 is a summary of the statistics and prediction limits determined for the metals. Time series graphs of each of the parameters at each well with the corresponding prediction limits are attached.

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

The past verified metals exceedances were evaluated against the ground water protection standards (GWPS) using confidence limits calculated in accordance with the Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, 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.

<u>Compliance wells</u>
The 95% LCL for arsenic at MW-15R (14.357 µg/L) exceeds the USEPA MCL of 10 µg/L.
The 95% LCL for arsenic at MW-20R (33.941 µg/L) exceeds the USEPA MCL of 10 µg/L.
The 95% LCL for arsenic at MW-22 (35.350 µg/L) exceeds the USEPA MCL of 10 µg/L.
The 95% LCL for cobalt at MW-22 (2.183 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L.
The 95% LCL for arsenic at MW-4 (43.075 µg/L) exceeds the USEPA MCL of 10 µg/L.

<u>Background wells</u>
The 95% LCL for arsenic at MW-18 (14.683 µg/L) exceeds the USEPA MCL of 10 µg/L.
The 95% LCL for cobalt at MW-18 (8.632 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L.
The 95% LCL for cobalt at MW-9 (4.504 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L.

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

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. As an alternative to nonparametric prediction limits, Poisson prediction limits can be used for small data sets where the detection frequency is less than 25%.

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 compared to three times the median value for intrawell analyses. If the value fails both criteria of the two-stage screening, 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.

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

The Appendix I trace metals data from compliance wells MW-12, MW-15R, MW-20R, MW-21, MW-22, MW-4, and MW-5 were evaluated using the combined Shewhart-CUSUM control chart method. The previous background included the data obtained from October 2014 through June 2018. Because there were eight rounds or fewer of background, there was insufficient data to determine nonparametric limits for those rarely detected parameters. Nonparametric prediction limits are the largest value detected during background at that well for that parameter. Since thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit, the background was updated to include data obtained from October 2014 through 2020.

A summary of the intrawell statistics is included in Attachment D, 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.

Summary of statistical limit exceedances during the first semi-annual monitoring period in 2024

Well	Parameter	Result	CUSUM Value	Control limit	Control Limit Type	Verified/Awaiting Verification
MW-12	Arsenic	12.0	27.4569	24.9913	Normal	Awaiting Verification
MW-5	Arsenic	166	229.4442	128.7478	Normal	Verified
	Barium	415	529.0585	400.5499	Normal	Awaiting Verification
	Copper	26.8	30.0871	11.0072	Normal	Verified

An increasing trend was detected in the background data for barium at MW-5.

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. Given an accepted resample verification plan of “pass one of one” resamples, the number of statistical comparisons, and the number of background data points, the optimal factor h = SCL = 6.5 for N < 12. Using this factor for intrawell analysis, the site-wide false positive rate is 17% and the test becomes sensitive to 4 standard deviation units over background.

Volatile Organic Compounds

Volatile Organic Compounds (VOCs) are generally man-made compounds not present in ambient ground water. If VOCs are detected above their statistical limit (i.e., the laboratory PQL or reporting limit), a verification resample will be conducted at the next scheduled sampling event. A statistical exceedance will be indicated if the VOC detection is confirmed by the subsequent monitoring. VOCs detected in the ground water at South Dallas County Landfill during the first semi-annual monitoring event in 2024 are summarized below.

VOCs detected at South Dallas County Landfill during the first semi-annual monitoring event in 2024

Well	VOC Detected	Result, µg/L	Reporting Limit, µg/L	Verified/ Awaiting Verification	Groundwater Standard, µg/L
MW-4	1,4-Dichlorobenzene	6.0	1	Verified	75[a]
	Benzene	1.4	1	Verified	5[a]
	Chloroethane	1.4	1	Verified	2800[b]

a - USEPA MCL
b – Iowa Statewide Standard

These VOCs are often associated with landfill gas migration. Historical VOC detections are summarized in Attachment E. The verified VOC detections 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, USEPA, March 2009 (Attachment F). The calculated LCLs are all below ground water quality standards for each of the verified detections.

CONCLUSIONS

This report summarizes the statistical analyses used to evaluate the ground water data obtained during the first semi-annual monitoring event in 2024 at South Dallas County Sanitary Landfill. Monitoring wells MW-12, MW-15R, MW-17, MW-18, MW-19A, MW-20R, MW-21, MW-22, MW-24, MW-4, MW-5, and MW-9 were sampled on September 11, 2024 and analyzed for the parameters required by permit. The ground water data was compared to background using prediction limits. There is a site prediction limit exceedance detected for copper at MW-5 awaiting verification. Using intrawell comparisons, there are verified control limit exceedances for arsenic at MW-5 and copper at MW-5. Additionally, there are control limit exceedances for arsenic at MW-12 and barium at MW-5 awaiting verification. The VOCs were compared to MCLs or PQLs, in lieu of statistical comparisons to historical concentrations. There are detections of 1,4-dichlorobenzene, benzene, and chloroethane at MW-4.

Attachment A

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

Table 1

Analytical Data Summary for 3/12/2024

Constituents	Units	MW-24
1,1,1,2-tetrachloroethane	ug/L	<1
1,1,1-trichloroethane	ug/L	<1
1,1,2,2-tetrachloroethane	ug/L	<1
1,1,2-trichloroethane	ug/L	<1
1,1-dichloroethane	ug/L	<1
1,1-dichloroethylene	ug/L	<1
1,2,3-trichloropropane	ug/L	<1
1,2-dibromo-3-chloropropane	ug/L	<5
1,2-dibromoethane	ug/L	<1
1,2-dichlorobenzene	ug/L	<1
1,2-dichloroethane	ug/L	<1
1,2-dichloropropane	ug/L	<1
1,4-dichlorobenzene	ug/L	<1
2-butanone (mek)	ug/L	<10
2-hexanone (mbk)	ug/L	<5
4-methyl-2-pentanone (mibk)	ug/L	<5
Acetone	ug/L	<10
Acrylonitrile	ug/L	<5
Antimony, total	ug/L	<2
Arsenic, total	ug/L	13.3
Barium, total	ug/L	459
Benzene	ug/L	<1
Beryllium, total	ug/L	<4
Bromochloromethane	ug/L	<1
Bromodichloromethane	ug/L	<1
Bromoform	ug/L	<1
Bromomethane	ug/L	<1
Cadmium, total	ug/L	<.8
Carbon disulfide	ug/L	<1
Carbon tetrachloride	ug/L	<1
Chlorobenzene	ug/L	<1
Chloroethane	ug/L	<1
Chloroform	ug/L	<1
Chloromethane	ug/L	<1
Chromium, total	ug/L	<8
Cis-1,2-dichloroethylene	ug/L	<1
Cis-1,3-dichloropropene	ug/L	<1
Cobalt, total	ug/L	<.4
Copper, total	ug/L	<4
Dibromochloromethane	ug/L	<1
Dibromomethane	ug/L	<1
Ethylbenzene	ug/L	<1
Lead, total	ug/L	<4
Methyl iodide	ug/L	<1
Methylene chloride	ug/L	<5
Nickel, total	ug/L	<4
Selenium, total	ug/L	<4
Silver, total	ug/L	<4
Styrene	ug/L	<1
Tetrachloroethylene	ug/L	<1
Thallium, total	ug/L	<2
Toluene	ug/L	<1
Trans-1,2-dichloroethylene	ug/L	<1
Trans-1,3-dichloropropene	ug/L	<1
Trans-1,4-dichloro-2-butene	ug/L	<5
Trichloroethylene	ug/L	<1
Trichlorofluoromethane	ug/L	<1
Vanadium, total	ug/L	<20
Vinyl acetate	ug/L	<5
Vinyl chloride	ug/L	<1
Xylenes, total	ug/L	<2
Zinc, total	ug/L	<20

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

Table 2

Analytical Data Summary for 3/19/2024 to 3/20/2024

Constituents	Units	MW-12	MW-15R	MW-17	MW-18	MW-19A	MW-20R	MW-21	MW-22	MW-25	MW-26	MW-4
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,2-dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5	<5	<5	<5			<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			6
2-butanone (mek)	ug/L	<10	<10	<10	<10	<10	<10	<10	<10			<10
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5			<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5			<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10			<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5			<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2			<2
Arsenic, total	ug/L	12.0	13.3	<4.0	16.8	4.0	75.0	<4.0	59.8	27.4	<4.0	57.2
Barium, total	ug/L	324.0	318.0	149.0	623.0	622.0	821.0	369.0	439.0	515.0	94.1	1010.0
Benzene	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			1.4
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4			<4
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8			<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Chloroethane	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			1.4
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8			<8
Cis-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Cobalt, total	ug/L	3.4	2.2	.7	12.2	6.9	.4	<.4	1.8			1.5
Copper, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0			<4.0
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4			<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5			<5
Nickel, total	ug/L	6.1	<4.0	4.9	21.6	6.6	<4.0	<4.0	<4.0			<4.0
Selenium, total	ug/L	<4.0	<4.0	7.5	<4.0	<4.0	<4.0	<4.0	<4.0			<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4			<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Thallium, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2			<2
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5			<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1			<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20			<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5			<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2			<2
Zinc, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20			<20

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

Table 2

Analytical Data Summary for 3/19/2024 to 3/20/2024

Constituents	MW-5	MW-9
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-dichloroethylene	<1	<1
1,2,3-trichloropropane	<1	<1
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
1,4-dichlorobenzene	<1	<1
2-butanone (mek)	<10	<10
2-hexanone (mbk)	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5
Acetone	<10	<10
Acrylonitrile	<5	<5
Antimony, total	<2	<2
Arsenic, total	166.0	7.0
Barium, total	415.0	295.0
Benzene	<1.0	<1.0
Beryllium, total	<4	<4
Bromochloromethane	<1	<1
Bromodichloromethane	<1	<1
Bromoform	<1	<1
Bromomethane	<1	<1
Cadmium, total	<.8	<.8
Carbon disulfide	<1	<1
Carbon tetrachloride	<1	<1
Chlorobenzene	<1	<1
Chloroethane	<1.0	<1.0
Chloroform	<1	<1
Chloromethane	<1	<1
Chromium, total	<8	<8
Cis-1,2-dichloroethylene	<1	<1
Cis-1,3-dichloropropene	<1	<1
Cobalt, total	2.6	4.5
Copper, total	26.8	<4.0
Dibromochloromethane	<1	<1
Dibromomethane	<1	<1
Ethylbenzene	<1	<1
Lead, total	<4	<4
Methyl iodide	<1	<1
Methylene chloride	<5	<5
Nickel, total	9.0	9.2
Selenium, total	<4.0	<4.0
Silver, total	<4	<4
Styrene	<1	<1
Tetrachloroethylene	<1	<1
Thallium, total	<2	<2
Toluene	<1	<1
Trans-1,2-dichloroethylene	<1	<1
Trans-1,3-dichloropropene	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5
Trichloroethylene	<1	<1
Trichlorofluoromethane	<1	<1
Vanadium, total	<20	<20
Vinyl acetate	<5	<5
Vinyl chloride	<1	<1
Xylenes, total	<2	<2
Zinc, total	<20	<20

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

Attachment B

Summary Tables and Graphs for the Interwell Comparisons

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Antimony, total	ug/L	MW-17	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-17	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-17	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-17	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-17	09/20/2016	ND	2.0000		
Antimony, total	ug/L	MW-17	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-17	10/09/2017	ND	2.0000		
Antimony, total	ug/L	MW-17	03/21/2018	ND	2.0000		
Antimony, total	ug/L	MW-17	09/07/2018	ND	2.0000		
Antimony, total	ug/L	MW-17	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-17	09/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-17	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-17	09/15/2020	ND	2.0000		
Antimony, total	ug/L	MW-17	03/08/2021	ND	2.0000		
Antimony, total	ug/L	MW-17	09/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-17	03/08/2022	ND	2.0000		
Antimony, total	ug/L	MW-17	08/30/2022	ND	2.0000		
Antimony, total	ug/L	MW-17	03/07/2023	ND	2.0000		
Antimony, total	ug/L	MW-17	09/11/2023	ND	2.0000		
Antimony, total	ug/L	MW-17	03/20/2024	ND	2.0000		
Arsenic, total	ug/L	MW-17	10/16/2014	ND	4.0000		
Arsenic, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Arsenic, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Arsenic, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Arsenic, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Arsenic, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-17	10/09/2017	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/21/2018		5.0000		
Arsenic, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Arsenic, total	ug/L	MW-17	04/02/2019		4.4000		
Arsenic, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-17	09/15/2020	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Arsenic, total	ug/L	MW-17	09/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/08/2022	ND	4.0000		
Arsenic, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Arsenic, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/20/2024	ND	4.0000		
Barium, total	ug/L	MW-17	10/16/2014		173.0000		
Barium, total	ug/L	MW-17	04/04/2015		185.0000		
Barium, total	ug/L	MW-17	10/01/2015		142.0000		
Barium, total	ug/L	MW-17	04/04/2016		143.0000		
Barium, total	ug/L	MW-17	09/20/2016		174.0000		
Barium, total	ug/L	MW-17	04/24/2017		172.0000		
Barium, total	ug/L	MW-17	10/09/2017		182.0000		
Barium, total	ug/L	MW-17	03/21/2018		233.0000		
Barium, total	ug/L	MW-17	09/07/2018		131.0000		
Barium, total	ug/L	MW-17	04/02/2019		179.0000		
Barium, total	ug/L	MW-17	09/18/2019		138.0000		
Barium, total	ug/L	MW-17	03/25/2020		123.0000		
Barium, total	ug/L	MW-17	09/15/2020		180.0000		
Barium, total	ug/L	MW-17	03/08/2021		160.0000		
Barium, total	ug/L	MW-17	09/28/2021		179.0000		
Barium, total	ug/L	MW-17	03/08/2022		192.0000		
Barium, total	ug/L	MW-17	08/30/2022		137.0000		
Barium, total	ug/L	MW-17	03/07/2023		162.0000		
Barium, total	ug/L	MW-17	09/11/2023		149.0000		
Barium, total	ug/L	MW-17	03/20/2024		149.0000		
Beryllium, total	ug/L	MW-17	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Beryllium, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-17	10/09/2017	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/21/2018	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Beryllium, total	ug/L	MW-17	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/15/2020	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/08/2021	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium, total	ug/L	MW-17	09/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/08/2022	ND	4.0000		
Beryllium, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/20/2024	ND	4.0000		
Cadmium, total	ug/L	MW-17	10/16/2014	ND	0.8000		
Cadmium, total	ug/L	MW-17	04/04/2015	ND	0.8000		
Cadmium, total	ug/L	MW-17	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-17	04/04/2016		1.0000		
Cadmium, total	ug/L	MW-17	09/20/2016	ND	0.8000		
Cadmium, total	ug/L	MW-17	04/24/2017		0.9000		
Cadmium, total	ug/L	MW-17	10/09/2017	ND	0.8000		
Cadmium, total	ug/L	MW-17	03/21/2018	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/07/2018	ND	0.8000		
Cadmium, total	ug/L	MW-17	04/02/2019	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-17	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/15/2020		0.8000		
Cadmium, total	ug/L	MW-17	03/08/2021	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/28/2021		1.1000		
Cadmium, total	ug/L	MW-17	03/08/2022	ND	0.8000		
Cadmium, total	ug/L	MW-17	08/30/2022	ND	0.8000		
Cadmium, total	ug/L	MW-17	03/07/2023	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/11/2023	ND	0.8000		
Cadmium, total	ug/L	MW-17	03/20/2024	ND	0.8000		
Chromium, total	ug/L	MW-17	10/16/2014	ND	8.0000		
Chromium, total	ug/L	MW-17	04/04/2015	ND	8.0000		
Chromium, total	ug/L	MW-17	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-17	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-17	09/20/2016	ND	8.0000		
Chromium, total	ug/L	MW-17	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-17	10/09/2017	ND	8.0000		
Chromium, total	ug/L	MW-17	03/21/2018	ND	8.0000		
Chromium, total	ug/L	MW-17	09/07/2018	ND	8.0000		
Chromium, total	ug/L	MW-17	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-17	09/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-17	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-17	09/15/2020	ND	8.0000		
Chromium, total	ug/L	MW-17	03/08/2021	ND	8.0000		
Chromium, total	ug/L	MW-17	09/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-17	03/08/2022	ND	8.0000		
Chromium, total	ug/L	MW-17	08/30/2022	ND	8.0000		
Chromium, total	ug/L	MW-17	03/07/2023	ND	8.0000		
Chromium, total	ug/L	MW-17	09/11/2023	ND	8.0000		
Chromium, total	ug/L	MW-17	03/20/2024	ND	8.0000		
Cobalt, total	ug/L	MW-17	10/16/2014		8.1000		
Cobalt, total	ug/L	MW-17	04/04/2015		9.7000		
Cobalt, total	ug/L	MW-17	10/01/2015		7.0000		
Cobalt, total	ug/L	MW-17	04/04/2016		4.6000		
Cobalt, total	ug/L	MW-17	09/20/2016		4.3000		
Cobalt, total	ug/L	MW-17	04/24/2017		5.2000		
Cobalt, total	ug/L	MW-17	10/09/2017		6.9000		
Cobalt, total	ug/L	MW-17	03/21/2018		23.0000		
Cobalt, total	ug/L	MW-17	09/07/2018		8.6000		
Cobalt, total	ug/L	MW-17	04/02/2019		46.5000		*
Cobalt, total	ug/L	MW-17	09/18/2019		54.8000		*
Cobalt, total	ug/L	MW-17	03/25/2020		7.2000		
Cobalt, total	ug/L	MW-17	09/15/2020		11.3000		
Cobalt, total	ug/L	MW-17	03/08/2021		7.4000		
Cobalt, total	ug/L	MW-17	09/28/2021		13.4000		
Cobalt, total	ug/L	MW-17	03/08/2022		5.5000		
Cobalt, total	ug/L	MW-17	08/30/2022		1.5000		
Cobalt, total	ug/L	MW-17	03/07/2023		13.0000		
Cobalt, total	ug/L	MW-17	09/11/2023		0.6000		*
Cobalt, total	ug/L	MW-17	03/20/2024		0.7000		*
Copper, total	ug/L	MW-17	10/16/2014		4.6000		
Copper, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Copper, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Copper, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Copper, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-17	10/09/2017		5.3000		
Copper, total	ug/L	MW-17	03/21/2018		4.3000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Copper, total	ug/L	MW-17	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Copper, total	ug/L	MW-17	03/25/2020		4.2000		
Copper, total	ug/L	MW-17	09/15/2020		4.3000		
Copper, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Copper, total	ug/L	MW-17	09/28/2021		7.4000		
Copper, total	ug/L	MW-17	03/08/2022		4.0000		
Copper, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Copper, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Copper, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Copper, total	ug/L	MW-17	03/20/2024	ND	4.0000		
Lead, total	ug/L	MW-17	10/16/2014	ND	4.0000		
Lead, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Lead, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Lead, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-17	10/09/2017	ND	4.0000		
Lead, total	ug/L	MW-17	03/21/2018	ND	4.0000		
Lead, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Lead, total	ug/L	MW-17	04/02/2019	ND	4.0000		
Lead, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Lead, total	ug/L	MW-17	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-17	09/15/2020	ND	4.0000		
Lead, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Lead, total	ug/L	MW-17	09/28/2021	ND	4.0000		
Lead, total	ug/L	MW-17	03/08/2022	ND	4.0000		
Lead, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Lead, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Lead, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Lead, total	ug/L	MW-17	03/20/2024	ND	4.0000		
Nickel, total	ug/L	MW-17	10/16/2014		9.9000		
Nickel, total	ug/L	MW-17	04/04/2015		7.8000		
Nickel, total	ug/L	MW-17	10/01/2015		13.7000		
Nickel, total	ug/L	MW-17	04/04/2016		4.7000		
Nickel, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Nickel, total	ug/L	MW-17	04/24/2017		6.3000		
Nickel, total	ug/L	MW-17	10/09/2017		8.0000		
Nickel, total	ug/L	MW-17	03/21/2018	ND	20.0000	4.0000	**
Nickel, total	ug/L	MW-17	09/07/2018		7.2000		
Nickel, total	ug/L	MW-17	04/02/2019		15.9000		
Nickel, total	ug/L	MW-17	09/18/2019		10.9000		
Nickel, total	ug/L	MW-17	03/25/2020		8.2000		
Nickel, total	ug/L	MW-17	09/15/2020		10.7000		
Nickel, total	ug/L	MW-17	03/08/2021		12.0000		
Nickel, total	ug/L	MW-17	09/28/2021		16.7000		
Nickel, total	ug/L	MW-17	03/08/2022		6.4000		
Nickel, total	ug/L	MW-17	08/30/2022		6.1000		
Nickel, total	ug/L	MW-17	03/07/2023		9.1000		
Nickel, total	ug/L	MW-17	09/11/2023		5.9000		
Nickel, total	ug/L	MW-17	03/20/2024		4.9000		
Selenium, total	ug/L	MW-17	10/16/2014	ND	4.0000		
Selenium, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Selenium, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-17	10/09/2017	ND	4.0000		
Selenium, total	ug/L	MW-17	03/21/2018	ND	4.0000		
Selenium, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Selenium, total	ug/L	MW-17	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-17	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-17	09/15/2020	ND	4.0000		
Selenium, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Selenium, total	ug/L	MW-17	09/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-17	03/08/2022	ND	4.0000		
Selenium, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Selenium, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Selenium, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Selenium, total	ug/L	MW-17	03/20/2024		7.5000		
Silver, total	ug/L	MW-17	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-17	04/04/2015	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Silver, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Silver, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-17	10/09/2017	ND	4.0000		
Silver, total	ug/L	MW-17	03/21/2018	ND	4.0000		
Silver, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Silver, total	ug/L	MW-17	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Silver, total	ug/L	MW-17	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-17	09/15/2020	ND	4.0000		
Silver, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Silver, total	ug/L	MW-17	09/28/2021	ND	4.0000		
Silver, total	ug/L	MW-17	03/08/2022	ND	4.0000		
Silver, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Silver, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Silver, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Silver, total	ug/L	MW-17	03/20/2024	ND	4.0000		
Thallium, total	ug/L	MW-17	10/16/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-17	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	09/20/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	10/09/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	03/21/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	09/07/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-17	09/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-17	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-17	09/15/2020	ND	2.0000		
Thallium, total	ug/L	MW-17	03/08/2021	ND	2.0000		
Thallium, total	ug/L	MW-17	09/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-17	03/08/2022	ND	2.0000		
Thallium, total	ug/L	MW-17	08/30/2022	ND	2.0000		
Thallium, total	ug/L	MW-17	03/07/2023		2.3000		
Thallium, total	ug/L	MW-17	09/11/2023	ND	2.0000		
Thallium, total	ug/L	MW-17	03/20/2024	ND	2.0000		
Vanadium, total	ug/L	MW-17	10/16/2014	ND	20.0000		
Vanadium, total	ug/L	MW-17	04/04/2015	ND	20.0000		
Vanadium, total	ug/L	MW-17	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-17	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/20/2016	ND	20.0000		
Vanadium, total	ug/L	MW-17	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-17	10/09/2017	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/21/2018	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/07/2018	ND	20.0000		
Vanadium, total	ug/L	MW-17	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/15/2020	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/08/2021	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/08/2022	ND	20.0000		
Vanadium, total	ug/L	MW-17	08/30/2022	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/07/2023	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/11/2023	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/20/2024	ND	20.0000		
Zinc, total	ug/L	MW-17	10/16/2014	ND	20.0000		
Zinc, total	ug/L	MW-17	04/04/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	10/01/2015		10.9000		
Zinc, total	ug/L	MW-17	04/04/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	09/20/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	10/09/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	03/21/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	09/07/2018		67.4000		*
Zinc, total	ug/L	MW-17	04/02/2019		33.3000		
Zinc, total	ug/L	MW-17	09/18/2019		61.5000		*
Zinc, total	ug/L	MW-17	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-17	09/15/2020	ND	20.0000		
Zinc, total	ug/L	MW-17	03/08/2021	ND	20.0000		
Zinc, total	ug/L	MW-17	09/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-17	03/08/2022	ND	20.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Zinc, total	ug/L	MW-17	08/30/2022	ND	20.0000		
Zinc, total	ug/L	MW-17	03/07/2023	ND	20.0000		
Zinc, total	ug/L	MW-17	09/11/2023	ND	20.0000		
Zinc, total	ug/L	MW-17	03/20/2024	ND	20.0000		
Antimony, total	ug/L	MW-18	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-18	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-18	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-18	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-18	09/20/2016	ND	2.0000		
Antimony, total	ug/L	MW-18	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-18	10/09/2017	ND	2.0000		
Antimony, total	ug/L	MW-18	03/21/2018	ND	2.0000		
Antimony, total	ug/L	MW-18	09/07/2018	ND	2.0000		
Antimony, total	ug/L	MW-18	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-18	09/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-18	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-18	09/15/2020	ND	2.0000		
Antimony, total	ug/L	MW-18	03/08/2021	ND	2.0000		
Antimony, total	ug/L	MW-18	09/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-18	03/08/2022	ND	2.0000		
Antimony, total	ug/L	MW-18	08/30/2022	ND	2.0000		
Antimony, total	ug/L	MW-18	03/07/2023	ND	2.0000		
Antimony, total	ug/L	MW-18	09/11/2023	ND	2.0000		
Antimony, total	ug/L	MW-18	03/20/2024	ND	2.0000		
Arsenic, total	ug/L	MW-18	10/16/2014		25.7000		
Arsenic, total	ug/L	MW-18	04/04/2015		34.2000		
Arsenic, total	ug/L	MW-18	10/01/2015		21.1000		
Arsenic, total	ug/L	MW-18	04/04/2016		26.2000		
Arsenic, total	ug/L	MW-18	09/20/2016		23.4000		
Arsenic, total	ug/L	MW-18	04/24/2017		22.3000		
Arsenic, total	ug/L	MW-18	10/09/2017		23.5000		
Arsenic, total	ug/L	MW-18	03/21/2018		21.1000		
Arsenic, total	ug/L	MW-18	09/07/2018		19.4000		
Arsenic, total	ug/L	MW-18	04/02/2019		21.5000		
Arsenic, total	ug/L	MW-18	09/18/2019		21.7000		
Arsenic, total	ug/L	MW-18	03/25/2020		19.4000		
Arsenic, total	ug/L	MW-18	09/15/2020		23.4000		
Arsenic, total	ug/L	MW-18	03/08/2021		23.3000		
Arsenic, total	ug/L	MW-18	09/28/2021		19.9000		
Arsenic, total	ug/L	MW-18	03/08/2022		21.3000		
Arsenic, total	ug/L	MW-18	08/30/2022		27.3000		
Arsenic, total	ug/L	MW-18	03/07/2023		18.3000		
Arsenic, total	ug/L	MW-18	09/11/2023		18.7000		
Arsenic, total	ug/L	MW-18	03/20/2024		16.8000		
Barium, total	ug/L	MW-18	10/16/2014		903.0000		
Barium, total	ug/L	MW-18	04/04/2015		1140.0000		
Barium, total	ug/L	MW-18	10/01/2015		822.0000		
Barium, total	ug/L	MW-18	04/04/2016		860.0000		
Barium, total	ug/L	MW-18	09/20/2016		877.0000		
Barium, total	ug/L	MW-18	04/24/2017		827.0000		
Barium, total	ug/L	MW-18	10/09/2017		868.0000		
Barium, total	ug/L	MW-18	03/21/2018		863.0000		
Barium, total	ug/L	MW-18	09/07/2018		831.0000		
Barium, total	ug/L	MW-18	04/02/2019		862.0000		
Barium, total	ug/L	MW-18	09/18/2019		823.0000		
Barium, total	ug/L	MW-18	03/25/2020		897.0000		
Barium, total	ug/L	MW-18	09/15/2020		898.0000		
Barium, total	ug/L	MW-18	03/08/2021		840.0000		
Barium, total	ug/L	MW-18	09/28/2021		741.0000		
Barium, total	ug/L	MW-18	03/08/2022		792.0000		
Barium, total	ug/L	MW-18	08/30/2022		760.0000		
Barium, total	ug/L	MW-18	03/07/2023		702.0000		
Barium, total	ug/L	MW-18	09/11/2023		709.0000		
Barium, total	ug/L	MW-18	03/20/2024		623.0000		
Beryllium, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/20/2016	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/09/2017	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/21/2018	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/07/2018	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/02/2019	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium, total	ug/L	MW-18	09/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/15/2020	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/08/2021	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/08/2022	ND	4.0000		
Beryllium, total	ug/L	MW-18	08/30/2022	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/07/2023	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/11/2023	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/20/2024	ND	4.0000		
Cadmium, total	ug/L	MW-18	10/16/2014		1.7000		
Cadmium, total	ug/L	MW-18	04/04/2015		3.9000		*
Cadmium, total	ug/L	MW-18	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-18	04/04/2016		1.0000		
Cadmium, total	ug/L	MW-18	09/20/2016		0.9000		
Cadmium, total	ug/L	MW-18	04/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-18	10/09/2017	ND	0.8000		
Cadmium, total	ug/L	MW-18	03/21/2018	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/07/2018	ND	0.8000		
Cadmium, total	ug/L	MW-18	04/02/2019	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-18	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/15/2020	ND	0.8000		
Cadmium, total	ug/L	MW-18	03/08/2021	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/28/2021		1.2000		
Cadmium, total	ug/L	MW-18	03/08/2022	ND	0.8000		
Cadmium, total	ug/L	MW-18	08/30/2022	ND	0.8000		
Cadmium, total	ug/L	MW-18	03/07/2023	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/11/2023	ND	0.8000		
Cadmium, total	ug/L	MW-18	03/20/2024	ND	0.8000		
Chromium, total	ug/L	MW-18	10/16/2014		11.6000		
Chromium, total	ug/L	MW-18	04/04/2015		26.4000		*
Chromium, total	ug/L	MW-18	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-18	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-18	09/20/2016		10.5000		
Chromium, total	ug/L	MW-18	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-18	10/09/2017	ND	8.0000		
Chromium, total	ug/L	MW-18	03/21/2018	ND	8.0000		
Chromium, total	ug/L	MW-18	09/07/2018	ND	8.0000		
Chromium, total	ug/L	MW-18	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-18	09/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-18	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-18	09/15/2020	ND	8.0000		
Chromium, total	ug/L	MW-18	03/08/2021	ND	8.0000		
Chromium, total	ug/L	MW-18	09/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-18	03/08/2022	ND	8.0000		
Chromium, total	ug/L	MW-18	08/30/2022	ND	8.0000		
Chromium, total	ug/L	MW-18	03/07/2023	ND	8.0000		
Chromium, total	ug/L	MW-18	09/11/2023	ND	8.0000		
Chromium, total	ug/L	MW-18	03/20/2024	ND	8.0000		
Cobalt, total	ug/L	MW-18	10/16/2014		23.5000		
Cobalt, total	ug/L	MW-18	04/04/2015		35.1000		*
Cobalt, total	ug/L	MW-18	10/01/2015		9.8000		
Cobalt, total	ug/L	MW-18	04/04/2016		12.0000		
Cobalt, total	ug/L	MW-18	09/20/2016		17.1000		
Cobalt, total	ug/L	MW-18	04/24/2017		8.5000		
Cobalt, total	ug/L	MW-18	10/09/2017		7.1000		
Cobalt, total	ug/L	MW-18	03/21/2018		5.5000		
Cobalt, total	ug/L	MW-18	09/07/2018		5.8000		
Cobalt, total	ug/L	MW-18	04/02/2019		4.1000		
Cobalt, total	ug/L	MW-18	09/18/2019		3.9000		
Cobalt, total	ug/L	MW-18	03/25/2020		3.6000		
Cobalt, total	ug/L	MW-18	09/15/2020		17.8000		
Cobalt, total	ug/L	MW-18	03/08/2021		9.2000		
Cobalt, total	ug/L	MW-18	09/28/2021		4.9000		
Cobalt, total	ug/L	MW-18	03/08/2022		4.0000		
Cobalt, total	ug/L	MW-18	08/30/2022		9.1000		
Cobalt, total	ug/L	MW-18	03/07/2023		9.2000		
Cobalt, total	ug/L	MW-18	09/11/2023		11.3000		
Cobalt, total	ug/L	MW-18	03/20/2024		12.2000		
Copper, total	ug/L	MW-18	10/16/2014		31.3000		*
Copper, total	ug/L	MW-18	04/04/2015		69.3000		*
Copper, total	ug/L	MW-18	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-18	04/04/2016	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper, total	ug/L	MW-18	09/20/2016		16.0000		*
Copper, total	ug/L	MW-18	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-18	10/09/2017	ND	4.0000		
Copper, total	ug/L	MW-18	03/21/2018	ND	4.0000		
Copper, total	ug/L	MW-18	09/07/2018	ND	4.0000		
Copper, total	ug/L	MW-18	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-18	09/18/2019	ND	4.0000		
Copper, total	ug/L	MW-18	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-18	09/15/2020	ND	4.0000		
Copper, total	ug/L	MW-18	03/08/2021	ND	4.0000		
Copper, total	ug/L	MW-18	09/28/2021	ND	4.0000		
Copper, total	ug/L	MW-18	03/08/2022	ND	4.0000		
Copper, total	ug/L	MW-18	08/30/2022	ND	4.0000		
Copper, total	ug/L	MW-18	03/07/2023	ND	4.0000		
Copper, total	ug/L	MW-18	09/11/2023	ND	4.0000		
Copper, total	ug/L	MW-18	03/20/2024	ND	4.0000		
Lead, total	ug/L	MW-18	10/16/2014		12.4000		*
Lead, total	ug/L	MW-18	04/04/2015		27.2000		*
Lead, total	ug/L	MW-18	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-18	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-18	09/20/2016		6.2000		
Lead, total	ug/L	MW-18	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-18	10/09/2017	ND	4.0000		
Lead, total	ug/L	MW-18	03/21/2018	ND	4.0000		
Lead, total	ug/L	MW-18	09/07/2018	ND	4.0000		
Lead, total	ug/L	MW-18	04/02/2019	ND	4.0000		
Lead, total	ug/L	MW-18	09/18/2019	ND	4.0000		
Lead, total	ug/L	MW-18	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-18	09/15/2020	ND	4.0000		
Lead, total	ug/L	MW-18	03/08/2021	ND	4.0000		
Lead, total	ug/L	MW-18	09/28/2021	ND	4.0000		
Lead, total	ug/L	MW-18	03/08/2022	ND	4.0000		
Lead, total	ug/L	MW-18	08/30/2022	ND	4.0000		
Lead, total	ug/L	MW-18	03/07/2023	ND	4.0000		
Lead, total	ug/L	MW-18	09/11/2023	ND	4.0000		
Lead, total	ug/L	MW-18	03/20/2024	ND	4.0000		
Nickel, total	ug/L	MW-18	10/16/2014		35.4000		*
Nickel, total	ug/L	MW-18	04/04/2015		67.7000		*
Nickel, total	ug/L	MW-18	10/01/2015		12.7000		
Nickel, total	ug/L	MW-18	04/04/2016		16.0000		
Nickel, total	ug/L	MW-18	09/20/2016		25.3000		
Nickel, total	ug/L	MW-18	04/24/2017		11.9000		
Nickel, total	ug/L	MW-18	10/09/2017		10.8000		
Nickel, total	ug/L	MW-18	03/21/2018	ND	20.0000	4.0000	**
Nickel, total	ug/L	MW-18	09/07/2018		9.2000		
Nickel, total	ug/L	MW-18	04/02/2019		7.2000		
Nickel, total	ug/L	MW-18	09/18/2019		10.7000		
Nickel, total	ug/L	MW-18	03/25/2020		6.6000		
Nickel, total	ug/L	MW-18	09/15/2020		29.7000		
Nickel, total	ug/L	MW-18	03/08/2021		12.4000		
Nickel, total	ug/L	MW-18	09/28/2021		8.5000		
Nickel, total	ug/L	MW-18	03/08/2022		7.2000		
Nickel, total	ug/L	MW-18	08/30/2022		16.9000		
Nickel, total	ug/L	MW-18	03/07/2023		19.8000		
Nickel, total	ug/L	MW-18	09/11/2023		19.5000		
Nickel, total	ug/L	MW-18	03/20/2024		21.6000		
Selenium, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Selenium, total	ug/L	MW-18	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-18	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-18	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-18	09/20/2016	ND	4.0000		
Selenium, total	ug/L	MW-18	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-18	10/09/2017	ND	4.0000		
Selenium, total	ug/L	MW-18	03/21/2018	ND	4.0000		
Selenium, total	ug/L	MW-18	09/07/2018	ND	4.0000		
Selenium, total	ug/L	MW-18	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-18	09/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-18	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-18	09/15/2020	ND	4.0000		
Selenium, total	ug/L	MW-18	03/08/2021	ND	4.0000		
Selenium, total	ug/L	MW-18	09/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-18	03/08/2022	ND	4.0000		
Selenium, total	ug/L	MW-18	08/30/2022	ND	4.0000		
Selenium, total	ug/L	MW-18	03/07/2023	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Selenium, total	ug/L	MW-18	09/11/2023	ND	4.0000		
Selenium, total	ug/L	MW-18	03/20/2024	ND	4.0000		
Silver, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-18	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-18	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-18	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-18	09/20/2016	ND	4.0000		
Silver, total	ug/L	MW-18	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-18	10/09/2017	ND	4.0000		
Silver, total	ug/L	MW-18	03/21/2018	ND	4.0000		
Silver, total	ug/L	MW-18	09/07/2018	ND	4.0000		
Silver, total	ug/L	MW-18	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-18	09/18/2019	ND	4.0000		
Silver, total	ug/L	MW-18	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-18	09/15/2020	ND	4.0000		
Silver, total	ug/L	MW-18	03/08/2021	ND	4.0000		
Silver, total	ug/L	MW-18	09/28/2021	ND	4.0000		
Silver, total	ug/L	MW-18	03/08/2022	ND	4.0000		
Silver, total	ug/L	MW-18	08/30/2022	ND	4.0000		
Silver, total	ug/L	MW-18	03/07/2023	ND	4.0000		
Silver, total	ug/L	MW-18	09/11/2023	ND	4.0000		
Silver, total	ug/L	MW-18	03/20/2024	ND	4.0000		
Thallium, total	ug/L	MW-18	10/16/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-18	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	09/20/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	10/09/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	03/21/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	09/07/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-18	09/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-18	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-18	09/15/2020	ND	2.0000		
Thallium, total	ug/L	MW-18	03/08/2021	ND	2.0000		
Thallium, total	ug/L	MW-18	09/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-18	03/08/2022	ND	2.0000		
Thallium, total	ug/L	MW-18	08/30/2022	ND	2.0000		
Thallium, total	ug/L	MW-18	03/07/2023	ND	2.0000		
Thallium, total	ug/L	MW-18	09/11/2023	ND	2.0000		
Thallium, total	ug/L	MW-18	03/20/2024	ND	2.0000		
Vanadium, total	ug/L	MW-18	10/16/2014	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/04/2015		31.6000		
Vanadium, total	ug/L	MW-18	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/20/2016	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-18	10/09/2017	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/21/2018	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/07/2018	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/15/2020	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/08/2021	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/08/2022	ND	20.0000		
Vanadium, total	ug/L	MW-18	08/30/2022	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/07/2023	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/11/2023	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/20/2024	ND	20.0000		
Zinc, total	ug/L	MW-18	10/16/2014		107.0000		
Zinc, total	ug/L	MW-18	04/04/2015		267.0000		
Zinc, total	ug/L	MW-18	10/01/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-18	04/04/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-18	09/20/2016		56.2000		
Zinc, total	ug/L	MW-18	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-18	10/09/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-18	03/21/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-18	09/07/2018		42.5000		
Zinc, total	ug/L	MW-18	04/02/2019		29.3000		
Zinc, total	ug/L	MW-18	09/18/2019		42.8000		
Zinc, total	ug/L	MW-18	03/25/2020	ND	20.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Zinc, total	ug/L	MW-18	09/15/2020	ND	20.0000		
Zinc, total	ug/L	MW-18	03/08/2021	ND	20.0000		
Zinc, total	ug/L	MW-18	09/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-18	03/08/2022	ND	20.0000		
Zinc, total	ug/L	MW-18	08/30/2022	ND	20.0000		
Zinc, total	ug/L	MW-18	03/07/2023	ND	20.0000		
Zinc, total	ug/L	MW-18	09/11/2023	ND	20.0000		
Zinc, total	ug/L	MW-18	03/20/2024	ND	20.0000		
Antimony, total	ug/L	MW-19A	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-19A	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-19A	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-19A	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/20/2016	ND	2.0000		
Antimony, total	ug/L	MW-19A	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-19A	10/09/2017	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/21/2018	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/07/2018	ND	2.0000		
Antimony, total	ug/L	MW-19A	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/15/2020	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/08/2021	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/08/2022	ND	2.0000		
Antimony, total	ug/L	MW-19A	08/30/2022	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/07/2023	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/11/2023	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/19/2024	ND	2.0000		
Arsenic, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Arsenic, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Arsenic, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Arsenic, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Arsenic, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Arsenic, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Arsenic, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/19/2024		4.0000		
Barium, total	ug/L	MW-19A	10/16/2014		48.9000		
Barium, total	ug/L	MW-19A	04/04/2015		55.5000		
Barium, total	ug/L	MW-19A	10/01/2015		30.0000		
Barium, total	ug/L	MW-19A	04/04/2016		30.4000		
Barium, total	ug/L	MW-19A	09/20/2016		29.5000		
Barium, total	ug/L	MW-19A	04/24/2017		42.1000		
Barium, total	ug/L	MW-19A	10/09/2017		35.1000		
Barium, total	ug/L	MW-19A	03/21/2018		46.9000		
Barium, total	ug/L	MW-19A	09/07/2018		38.7000		
Barium, total	ug/L	MW-19A	04/02/2019		37.9000		
Barium, total	ug/L	MW-19A	09/18/2019		42.5000		
Barium, total	ug/L	MW-19A	03/25/2020		34.2000		
Barium, total	ug/L	MW-19A	09/15/2020		35.8000		
Barium, total	ug/L	MW-19A	03/08/2021		35.2000		
Barium, total	ug/L	MW-19A	09/28/2021		36.1000		
Barium, total	ug/L	MW-19A	03/08/2022		40.1000		
Barium, total	ug/L	MW-19A	08/30/2022		38.3000		
Barium, total	ug/L	MW-19A	03/07/2023		32.5000		
Barium, total	ug/L	MW-19A	09/11/2023		32.1000		
Barium, total	ug/L	MW-19A	03/19/2024		622.0000		*
Beryllium, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Beryllium, total	ug/L	MW-19A	04/24/2017	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Beryllium, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Beryllium, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/19/2024	ND	4.0000		
Cadmium, total	ug/L	MW-19A	10/16/2014	ND	0.8000		
Cadmium, total	ug/L	MW-19A	04/04/2015	ND	0.8000		
Cadmium, total	ug/L	MW-19A	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-19A	04/04/2016		0.8000		
Cadmium, total	ug/L	MW-19A	09/20/2016	ND	0.8000		
Cadmium, total	ug/L	MW-19A	04/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-19A	10/09/2017	ND	0.8000		
Cadmium, total	ug/L	MW-19A	03/21/2018	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/07/2018	ND	0.8000		
Cadmium, total	ug/L	MW-19A	04/02/2019	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-19A	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/15/2020	ND	0.8000		
Cadmium, total	ug/L	MW-19A	03/08/2021	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-19A	03/08/2022	ND	0.8000		
Cadmium, total	ug/L	MW-19A	08/30/2022	ND	0.8000		
Cadmium, total	ug/L	MW-19A	03/07/2023	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/11/2023		9.0000		*
Cadmium, total	ug/L	MW-19A	03/19/2024	ND	0.8000		
Chromium, total	ug/L	MW-19A	10/16/2014	ND	8.0000		
Chromium, total	ug/L	MW-19A	04/04/2015	ND	8.0000		
Chromium, total	ug/L	MW-19A	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-19A	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/20/2016	ND	8.0000		
Chromium, total	ug/L	MW-19A	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-19A	10/09/2017	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/21/2018	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/07/2018	ND	8.0000		
Chromium, total	ug/L	MW-19A	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/15/2020	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/08/2021	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/08/2022	ND	8.0000		
Chromium, total	ug/L	MW-19A	08/30/2022	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/07/2023	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/11/2023	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/19/2024	ND	8.0000		
Cobalt, total	ug/L	MW-19A	10/16/2014	ND	0.8000		
Cobalt, total	ug/L	MW-19A	04/04/2015	ND	0.8000		
Cobalt, total	ug/L	MW-19A	10/01/2015	ND	0.8000		
Cobalt, total	ug/L	MW-19A	04/04/2016	ND	0.8000		
Cobalt, total	ug/L	MW-19A	09/20/2016	ND	0.8000		
Cobalt, total	ug/L	MW-19A	04/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-19A	10/09/2017	ND	0.8000		
Cobalt, total	ug/L	MW-19A	03/21/2018	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-19A	09/07/2018	ND	0.8000		
Cobalt, total	ug/L	MW-19A	04/02/2019	ND	0.8000		
Cobalt, total	ug/L	MW-19A	09/18/2019		0.8000		
Cobalt, total	ug/L	MW-19A	03/25/2020		0.8000		
Cobalt, total	ug/L	MW-19A	09/15/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-19A	03/08/2021		0.4000		
Cobalt, total	ug/L	MW-19A	09/28/2021		0.4000		
Cobalt, total	ug/L	MW-19A	03/08/2022		0.6000		
Cobalt, total	ug/L	MW-19A	08/30/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-19A	03/07/2023		0.4000		
Cobalt, total	ug/L	MW-19A	09/11/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-19A	03/19/2024		6.9000		*

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Copper, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Copper, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Copper, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Copper, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Copper, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Copper, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Copper, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Copper, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Copper, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Copper, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Copper, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Copper, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Copper, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Copper, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Copper, total	ug/L	MW-19A	03/19/2024	ND	4.0000		
Lead, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Lead, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Lead, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Lead, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Lead, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Lead, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Lead, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Lead, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Lead, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Lead, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Lead, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Lead, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Lead, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Lead, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Lead, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Lead, total	ug/L	MW-19A	03/19/2024	ND	4.0000		
Nickel, total	ug/L	MW-19A	10/16/2014		4.6000		
Nickel, total	ug/L	MW-19A	04/04/2015		6.9000		
Nickel, total	ug/L	MW-19A	10/01/2015		5.2000		
Nickel, total	ug/L	MW-19A	04/04/2016		4.3000		
Nickel, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Nickel, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-19A	10/09/2017		5.2000		
Nickel, total	ug/L	MW-19A	03/21/2018	ND	20.0000	4.0000	**
Nickel, total	ug/L	MW-19A	09/07/2018		6.4000		
Nickel, total	ug/L	MW-19A	04/02/2019		7.7000		
Nickel, total	ug/L	MW-19A	09/18/2019		11.8000		
Nickel, total	ug/L	MW-19A	03/25/2020		10.5000		
Nickel, total	ug/L	MW-19A	09/15/2020		11.5000		
Nickel, total	ug/L	MW-19A	12/02/2020		10.5000		
Nickel, total	ug/L	MW-19A	03/08/2021		9.5000		
Nickel, total	ug/L	MW-19A	09/28/2021		8.0000		
Nickel, total	ug/L	MW-19A	03/08/2022		8.0000		
Nickel, total	ug/L	MW-19A	08/30/2022		10.4000		
Nickel, total	ug/L	MW-19A	03/07/2023		11.4000		
Nickel, total	ug/L	MW-19A	09/11/2023		9.6000		
Nickel, total	ug/L	MW-19A	03/19/2024		6.6000		
Selenium, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Selenium, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Selenium, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Selenium, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/15/2020	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Selenium, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Selenium, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/19/2024	ND	4.0000		
Silver, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Silver, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Silver, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Silver, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Silver, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Silver, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Silver, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Silver, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Silver, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Silver, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Silver, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Silver, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Silver, total	ug/L	MW-19A	03/19/2024	ND	4.0000		
Thallium, total	ug/L	MW-19A	10/16/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-19A	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	09/20/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	10/09/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	03/21/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	09/07/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-19A	09/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-19A	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-19A	09/15/2020	ND	2.0000		
Thallium, total	ug/L	MW-19A	03/08/2021	ND	2.0000		
Thallium, total	ug/L	MW-19A	09/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-19A	03/08/2022	ND	2.0000		
Thallium, total	ug/L	MW-19A	08/30/2022	ND	2.0000		
Thallium, total	ug/L	MW-19A	03/07/2023	ND	2.0000		
Thallium, total	ug/L	MW-19A	09/11/2023	ND	2.0000		
Thallium, total	ug/L	MW-19A	03/19/2024	ND	2.0000		
Vanadium, total	ug/L	MW-19A	10/16/2014	ND	20.0000		
Vanadium, total	ug/L	MW-19A	04/04/2015	ND	20.0000		
Vanadium, total	ug/L	MW-19A	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-19A	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/20/2016	ND	20.0000		
Vanadium, total	ug/L	MW-19A	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-19A	10/09/2017	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/21/2018	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/07/2018	ND	20.0000		
Vanadium, total	ug/L	MW-19A	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/15/2020	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/08/2021	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/08/2022	ND	20.0000		
Vanadium, total	ug/L	MW-19A	08/30/2022	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/07/2023	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/11/2023	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/19/2024	ND	20.0000		
Zinc, total	ug/L	MW-19A	10/16/2014	ND	20.0000		
Zinc, total	ug/L	MW-19A	04/04/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-19A	10/01/2015		11.2000		
Zinc, total	ug/L	MW-19A	04/04/2016		15.2000		
Zinc, total	ug/L	MW-19A	09/20/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-19A	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-19A	10/09/2017	ND	8.0000	20.0000	**

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Zinc, total	ug/L	MW-19A	03/21/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-19A	09/07/2018		40.8000		
Zinc, total	ug/L	MW-19A	04/02/2019		35.8000		
Zinc, total	ug/L	MW-19A	09/18/2019		29.9000		
Zinc, total	ug/L	MW-19A	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-19A	09/15/2020	ND	20.0000		
Zinc, total	ug/L	MW-19A	03/08/2021	ND	20.0000		
Zinc, total	ug/L	MW-19A	09/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-19A	03/08/2022	ND	20.0000		
Zinc, total	ug/L	MW-19A	08/30/2022	ND	20.0000		
Zinc, total	ug/L	MW-19A	03/07/2023	ND	20.0000		
Zinc, total	ug/L	MW-19A	09/11/2023	ND	20.0000		
Zinc, total	ug/L	MW-19A	03/19/2024	ND	20.0000		
Antimony, total	ug/L	MW-2	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-2	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-2	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-2	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-2	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-2	03/25/2020	ND	2.0000		
Arsenic, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Arsenic, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Arsenic, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Arsenic, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-2	04/02/2019	ND	4.0000		
Arsenic, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Barium, total	ug/L	MW-2	04/04/2015		418.0000		
Barium, total	ug/L	MW-2	10/01/2015		491.0000		
Barium, total	ug/L	MW-2	04/04/2016		424.0000		
Barium, total	ug/L	MW-2	04/24/2017		125.0000		
Barium, total	ug/L	MW-2	04/02/2019		290.0000		
Barium, total	ug/L	MW-2	03/25/2020		137.0000		
Beryllium, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-2	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Cadmium, total	ug/L	MW-2	04/04/2015	ND	0.8000		
Cadmium, total	ug/L	MW-2	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-2	04/04/2016	ND	0.8000		
Cadmium, total	ug/L	MW-2	04/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-2	04/02/2019	ND	0.8000		
Cadmium, total	ug/L	MW-2	03/25/2020	ND	0.8000		
Chromium, total	ug/L	MW-2	04/04/2015	ND	8.0000		
Chromium, total	ug/L	MW-2	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-2	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-2	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-2	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-2	03/25/2020	ND	8.0000		
Cobalt, total	ug/L	MW-2	04/04/2015		7.4000		
Cobalt, total	ug/L	MW-2	10/01/2015		6.4000		
Cobalt, total	ug/L	MW-2	04/04/2016		8.2000		
Cobalt, total	ug/L	MW-2	04/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-2	04/02/2019	ND	0.8000		
Cobalt, total	ug/L	MW-2	03/25/2020	ND	0.8000		
Copper, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Copper, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Copper, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-2	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-2	03/25/2020		117.0000		*
Lead, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Lead, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-2	04/02/2019		13.6000		*
Lead, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-2	04/04/2015		21.1000		
Nickel, total	ug/L	MW-2	10/01/2015		7.8000		
Nickel, total	ug/L	MW-2	04/04/2016		16.6000		
Nickel, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-2	04/02/2019		8.8000		
Nickel, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-2	04/04/2015	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Selenium, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-2	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-2	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Thallium, total	ug/L	MW-2	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-2	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-2	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-2	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-2	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-2	03/25/2020	ND	2.0000		
Vanadium, total	ug/L	MW-2	04/04/2015	ND	20.0000		
Vanadium, total	ug/L	MW-2	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-2	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-2	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-2	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-2	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-2	04/04/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-2	10/01/2015		9.1000		
Zinc, total	ug/L	MW-2	04/04/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-2	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-2	04/02/2019	ND	20.0000		
Zinc, total	ug/L	MW-2	03/25/2020	ND	20.0000		
Antimony, total	ug/L	MW-24	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-24	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-24	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-24	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-24	09/20/2016	ND	2.0000		
Antimony, total	ug/L	MW-24	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-24	10/09/2017	ND	2.0000		
Antimony, total	ug/L	MW-24	03/21/2018	ND	2.0000		
Antimony, total	ug/L	MW-24	09/07/2018	ND	2.0000		
Antimony, total	ug/L	MW-24	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-24	09/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-24	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-24	09/15/2020	ND	2.0000		
Antimony, total	ug/L	MW-24	03/08/2021	ND	2.0000		
Antimony, total	ug/L	MW-24	09/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-24	03/08/2022	ND	2.0000		
Antimony, total	ug/L	MW-24	08/30/2022	ND	2.0000		
Antimony, total	ug/L	MW-24	03/07/2023	ND	2.0000		
Antimony, total	ug/L	MW-24	09/11/2023	ND	2.0000		
Antimony, total	ug/L	MW-24	03/12/2024	ND	2.0000		
Arsenic, total	ug/L	MW-24	10/16/2014		65.9000		
Arsenic, total	ug/L	MW-24	04/04/2015		25.0000		
Arsenic, total	ug/L	MW-24	10/01/2015		47.2000		
Arsenic, total	ug/L	MW-24	04/04/2016		88.5000		
Arsenic, total	ug/L	MW-24	09/20/2016		51.1000		
Arsenic, total	ug/L	MW-24	04/24/2017		139.0000		
Arsenic, total	ug/L	MW-24	10/09/2017		72.0000		
Arsenic, total	ug/L	MW-24	03/21/2018		155.0000		
Arsenic, total	ug/L	MW-24	09/07/2018		129.0000		
Arsenic, total	ug/L	MW-24	04/02/2019		210.0000		*
Arsenic, total	ug/L	MW-24	09/18/2019		117.0000		
Arsenic, total	ug/L	MW-24	03/25/2020		167.0000		
Arsenic, total	ug/L	MW-24	09/15/2020		61.6000		
Arsenic, total	ug/L	MW-24	03/08/2021		133.0000		
Arsenic, total	ug/L	MW-24	09/28/2021		142.0000		
Arsenic, total	ug/L	MW-24	03/08/2022		115.0000		
Arsenic, total	ug/L	MW-24	08/30/2022		101.0000		
Arsenic, total	ug/L	MW-24	03/07/2023		12.9000		
Arsenic, total	ug/L	MW-24	09/11/2023		57.9000		
Arsenic, total	ug/L	MW-24	03/12/2024		13.3000		
Barium, total	ug/L	MW-24	10/16/2014		1150.0000		
Barium, total	ug/L	MW-24	04/04/2015		671.0000		
Barium, total	ug/L	MW-24	10/01/2015		772.0000		
Barium, total	ug/L	MW-24	04/04/2016		975.0000		
Barium, total	ug/L	MW-24	09/20/2016		641.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Barium, total	ug/L	MW-24	04/24/2017		1260.0000		
Barium, total	ug/L	MW-24	10/09/2017		713.0000		
Barium, total	ug/L	MW-24	03/21/2018		1140.0000		
Barium, total	ug/L	MW-24	09/07/2018		968.0000		
Barium, total	ug/L	MW-24	04/02/2019		1500.0000		
Barium, total	ug/L	MW-24	09/18/2019		1100.0000		
Barium, total	ug/L	MW-24	03/25/2020		1080.0000		
Barium, total	ug/L	MW-24	09/15/2020		638.0000		
Barium, total	ug/L	MW-24	03/08/2021		901.0000		
Barium, total	ug/L	MW-24	09/28/2021		824.0000		
Barium, total	ug/L	MW-24	03/08/2022		801.0000		
Barium, total	ug/L	MW-24	08/30/2022		579.0000		
Barium, total	ug/L	MW-24	03/07/2023		385.0000		
Barium, total	ug/L	MW-24	09/11/2023		508.0000		
Barium, total	ug/L	MW-24	03/12/2024		459.0000		
Beryllium, total	ug/L	MW-24	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-24	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-24	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Beryllium, total	ug/L	MW-24	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/21/2018	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Beryllium, total	ug/L	MW-24	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Beryllium, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/12/2024	ND	4.0000		
Cadmium, total	ug/L	MW-24	10/16/2014		1.6000		
Cadmium, total	ug/L	MW-24	04/04/2015	ND	0.8000		
Cadmium, total	ug/L	MW-24	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-24	04/04/2016		0.8000		
Cadmium, total	ug/L	MW-24	09/20/2016	ND	0.8000		
Cadmium, total	ug/L	MW-24	04/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-24	10/09/2017	ND	0.8000		
Cadmium, total	ug/L	MW-24	03/21/2018	ND	0.8000		
Cadmium, total	ug/L	MW-24	09/07/2018	ND	0.8000		
Cadmium, total	ug/L	MW-24	04/02/2019		1.8000		
Cadmium, total	ug/L	MW-24	09/18/2019		1.0000		
Cadmium, total	ug/L	MW-24	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-24	09/15/2020	ND	0.8000		
Cadmium, total	ug/L	MW-24	03/08/2021		2.4000		
Cadmium, total	ug/L	MW-24	09/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-24	03/08/2022		0.8000		
Cadmium, total	ug/L	MW-24	08/30/2022	ND	0.8000		
Cadmium, total	ug/L	MW-24	03/07/2023	ND	0.8000		
Cadmium, total	ug/L	MW-24	09/11/2023	ND	0.8000		
Cadmium, total	ug/L	MW-24	03/12/2024	ND	0.8000		
Chromium, total	ug/L	MW-24	10/16/2014		37.5000		*
Chromium, total	ug/L	MW-24	04/04/2015	ND	8.0000		
Chromium, total	ug/L	MW-24	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-24	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-24	09/20/2016	ND	8.0000		
Chromium, total	ug/L	MW-24	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-24	10/09/2017	ND	8.0000		
Chromium, total	ug/L	MW-24	03/21/2018	ND	8.0000		
Chromium, total	ug/L	MW-24	09/07/2018	ND	8.0000		
Chromium, total	ug/L	MW-24	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-24	09/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-24	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-24	09/15/2020	ND	8.0000		
Chromium, total	ug/L	MW-24	03/08/2021	ND	8.0000		
Chromium, total	ug/L	MW-24	09/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-24	03/08/2022	ND	8.0000		
Chromium, total	ug/L	MW-24	08/30/2022	ND	8.0000		
Chromium, total	ug/L	MW-24	03/07/2023	ND	8.0000		
Chromium, total	ug/L	MW-24	09/11/2023	ND	8.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Chromium, total	ug/L	MW-24	03/12/2024	ND	8.0000		
Cobalt, total	ug/L	MW-24	10/16/2014		37.2000		*
Cobalt, total	ug/L	MW-24	04/04/2015		14.0000		
Cobalt, total	ug/L	MW-24	10/01/2015		2.0000		
Cobalt, total	ug/L	MW-24	04/04/2016		3.7000		
Cobalt, total	ug/L	MW-24	09/20/2016		5.6000		
Cobalt, total	ug/L	MW-24	04/24/2017		2.2000		
Cobalt, total	ug/L	MW-24	10/09/2017		1.2000		
Cobalt, total	ug/L	MW-24	03/21/2018	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-24	09/07/2018		0.9000		
Cobalt, total	ug/L	MW-24	04/02/2019		2.0000		
Cobalt, total	ug/L	MW-24	09/18/2019		1.6000		
Cobalt, total	ug/L	MW-24	03/25/2020		2.1000		
Cobalt, total	ug/L	MW-24	09/15/2020		0.8000		
Cobalt, total	ug/L	MW-24	03/08/2021		1.1000		
Cobalt, total	ug/L	MW-24	09/28/2021		1.0000		
Cobalt, total	ug/L	MW-24	03/08/2022		1.7000		
Cobalt, total	ug/L	MW-24	08/30/2022		0.6000		
Cobalt, total	ug/L	MW-24	03/07/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-24	09/11/2023		1.2000		
Cobalt, total	ug/L	MW-24	03/12/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW-24	10/16/2014		67.1000		*
Copper, total	ug/L	MW-24	04/04/2015		10.0000		
Copper, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-24	04/04/2016	ND	4.0000		
Copper, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Copper, total	ug/L	MW-24	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Copper, total	ug/L	MW-24	03/21/2018	ND	4.0000		
Copper, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Copper, total	ug/L	MW-24	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Copper, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Copper, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Copper, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Copper, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Copper, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Copper, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Copper, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Copper, total	ug/L	MW-24	03/12/2024	ND	4.0000		
Lead, total	ug/L	MW-24	10/16/2014		27.0000		*
Lead, total	ug/L	MW-24	04/04/2015	ND	4.0000		
Lead, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-24	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Lead, total	ug/L	MW-24	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Lead, total	ug/L	MW-24	03/21/2018	ND	4.0000		
Lead, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Lead, total	ug/L	MW-24	04/02/2019		6.8000		
Lead, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Lead, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Lead, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Lead, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Lead, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Lead, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Lead, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Lead, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Lead, total	ug/L	MW-24	03/12/2024	ND	4.0000		
Nickel, total	ug/L	MW-24	10/16/2014		81.2000		*
Nickel, total	ug/L	MW-24	04/04/2015		25.1000		*
Nickel, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Nickel, total	ug/L	MW-24	04/04/2016		4.0000		
Nickel, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Nickel, total	ug/L	MW-24	04/24/2017		4.3000		
Nickel, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Nickel, total	ug/L	MW-24	03/21/2018	ND	20.0000		*
Nickel, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Nickel, total	ug/L	MW-24	04/02/2019	ND	4.0000		
Nickel, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Nickel, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-24	09/15/2020	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Nickel, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Nickel, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Nickel, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Nickel, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Nickel, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Nickel, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Nickel, total	ug/L	MW-24	03/12/2024	ND	4.0000		
Selenium, total	ug/L	MW-24	10/16/2014		16.4000		*
Selenium, total	ug/L	MW-24	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-24	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Selenium, total	ug/L	MW-24	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Selenium, total	ug/L	MW-24	03/21/2018	ND	4.0000		
Selenium, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Selenium, total	ug/L	MW-24	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Selenium, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Selenium, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Selenium, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Selenium, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Selenium, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Selenium, total	ug/L	MW-24	03/12/2024	ND	4.0000		
Silver, total	ug/L	MW-24	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-24	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-24	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Silver, total	ug/L	MW-24	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Silver, total	ug/L	MW-24	03/21/2018	ND	4.0000		
Silver, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Silver, total	ug/L	MW-24	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Silver, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Silver, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Silver, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Silver, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Silver, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Silver, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Silver, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Silver, total	ug/L	MW-24	03/12/2024	ND	4.0000		
Thallium, total	ug/L	MW-24	10/16/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-24	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	09/20/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	10/09/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	03/21/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	09/07/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-24	09/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-24	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-24	09/15/2020	ND	2.0000		
Thallium, total	ug/L	MW-24	03/08/2021	ND	2.0000		
Thallium, total	ug/L	MW-24	09/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-24	03/08/2022	ND	2.0000		
Thallium, total	ug/L	MW-24	08/30/2022	ND	2.0000		
Thallium, total	ug/L	MW-24	03/07/2023	ND	2.0000		
Thallium, total	ug/L	MW-24	09/11/2023	ND	2.0000		
Thallium, total	ug/L	MW-24	03/12/2024	ND	2.0000		
Vanadium, total	ug/L	MW-24	10/16/2014		72.3000		*
Vanadium, total	ug/L	MW-24	04/04/2015	ND	20.0000		
Vanadium, total	ug/L	MW-24	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-24	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/20/2016	ND	20.0000		
Vanadium, total	ug/L	MW-24	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-24	10/09/2017	ND	20.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Vanadium, total	ug/L	MW-24	03/21/2018	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/07/2018	ND	20.0000		
Vanadium, total	ug/L	MW-24	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/15/2020	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/08/2021	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/08/2022	ND	20.0000		
Vanadium, total	ug/L	MW-24	08/30/2022	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/07/2023	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/11/2023	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/12/2024	ND	20.0000		
Zinc, total	ug/L	MW-24	10/16/2014		117.0000		
Zinc, total	ug/L	MW-24	04/04/2015		16.2000		
Zinc, total	ug/L	MW-24	10/01/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	04/04/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	09/20/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	10/09/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	03/21/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	09/07/2018		106.0000		
Zinc, total	ug/L	MW-24	04/02/2019		39.2000		
Zinc, total	ug/L	MW-24	09/18/2019		56.9000		
Zinc, total	ug/L	MW-24	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-24	09/15/2020	ND	20.0000		
Zinc, total	ug/L	MW-24	03/08/2021	ND	20.0000		
Zinc, total	ug/L	MW-24	09/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-24	03/08/2022	ND	20.0000		
Zinc, total	ug/L	MW-24	08/30/2022	ND	20.0000		
Zinc, total	ug/L	MW-24	03/07/2023	ND	20.0000		
Zinc, total	ug/L	MW-24	09/11/2023	ND	20.0000		
Zinc, total	ug/L	MW-24	03/12/2024	ND	20.0000		
Antimony, total	ug/L	MW-9	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-9	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-9	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-9	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-9	09/20/2016	ND	2.0000		
Antimony, total	ug/L	MW-9	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-9	10/09/2017	ND	2.0000		
Antimony, total	ug/L	MW-9	03/21/2018	ND	2.0000		
Antimony, total	ug/L	MW-9	09/07/2018	ND	2.0000		
Antimony, total	ug/L	MW-9	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-9	09/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-9	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-9	09/15/2020	ND	2.0000		
Antimony, total	ug/L	MW-9	03/08/2021	ND	2.0000		
Antimony, total	ug/L	MW-9	09/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-9	03/08/2022	ND	2.0000		
Antimony, total	ug/L	MW-9	08/30/2022	ND	2.0000		
Antimony, total	ug/L	MW-9	03/07/2023	ND	2.0000		
Antimony, total	ug/L	MW-9	09/11/2023	ND	2.0000		
Antimony, total	ug/L	MW-9	03/20/2024	ND	2.0000		
Arsenic, total	ug/L	MW-9	10/16/2014		6.1000		
Arsenic, total	ug/L	MW-9	04/04/2015		8.4000		
Arsenic, total	ug/L	MW-9	10/01/2015		8.9000		
Arsenic, total	ug/L	MW-9	04/04/2016		5.9000		
Arsenic, total	ug/L	MW-9	09/20/2016	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Arsenic, total	ug/L	MW-9	03/21/2018	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/07/2018		12.2000		
Arsenic, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/18/2019		19.4000		
Arsenic, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Arsenic, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Arsenic, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Arsenic, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/11/2023		7.2000		
Arsenic, total	ug/L	MW-9	03/20/2024		7.0000		
Barium, total	ug/L	MW-9	10/16/2014		271.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Barium, total	ug/L	MW-9	04/04/2015		291.0000		
Barium, total	ug/L	MW-9	10/01/2015		291.0000		
Barium, total	ug/L	MW-9	04/04/2016		259.0000		
Barium, total	ug/L	MW-9	09/20/2016		267.0000		
Barium, total	ug/L	MW-9	04/24/2017		264.0000		
Barium, total	ug/L	MW-9	10/09/2017		253.0000		
Barium, total	ug/L	MW-9	03/21/2018		266.0000		
Barium, total	ug/L	MW-9	09/07/2018		290.0000		
Barium, total	ug/L	MW-9	04/02/2019		270.0000		
Barium, total	ug/L	MW-9	09/18/2019		332.0000		
Barium, total	ug/L	MW-9	03/25/2020		272.0000		
Barium, total	ug/L	MW-9	09/15/2020		285.0000		
Barium, total	ug/L	MW-9	03/08/2021		292.0000		
Barium, total	ug/L	MW-9	09/28/2021		259.0000		
Barium, total	ug/L	MW-9	03/08/2022		291.0000		
Barium, total	ug/L	MW-9	08/30/2022		241.0000		
Barium, total	ug/L	MW-9	03/07/2023		269.0000		
Barium, total	ug/L	MW-9	09/11/2023		288.0000		
Barium, total	ug/L	MW-9	03/20/2024		295.0000		
Beryllium, total	ug/L	MW-9	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/20/2016	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/21/2018	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/07/2018	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Beryllium, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/11/2023	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/20/2024	ND	4.0000		
Cadmium, total	ug/L	MW-9	10/16/2014	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/04/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/04/2016		1.5000		
Cadmium, total	ug/L	MW-9	09/20/2016	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/09/2017	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/21/2018	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/07/2018	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/02/2019	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/15/2020	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/08/2021	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/08/2022	ND	0.8000		
Cadmium, total	ug/L	MW-9	08/30/2022	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/07/2023	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/11/2023	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/20/2024	ND	0.8000		
Chromium, total	ug/L	MW-9	10/16/2014	ND	8.0000		
Chromium, total	ug/L	MW-9	04/04/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-9	09/20/2016	ND	8.0000		
Chromium, total	ug/L	MW-9	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-9	10/09/2017	ND	8.0000		
Chromium, total	ug/L	MW-9	03/21/2018	ND	8.0000		
Chromium, total	ug/L	MW-9	09/07/2018	ND	8.0000		
Chromium, total	ug/L	MW-9	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-9	09/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-9	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	09/15/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	03/08/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	09/28/2021	ND	8.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Chromium, total	ug/L	MW-9	03/08/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	08/30/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	03/07/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	09/11/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	03/20/2024	ND	8.0000		
Cobalt, total	ug/L	MW-9	10/16/2014		5.8000		
Cobalt, total	ug/L	MW-9	04/04/2015		6.0000		
Cobalt, total	ug/L	MW-9	10/01/2015		4.6000		
Cobalt, total	ug/L	MW-9	04/04/2016		5.7000		
Cobalt, total	ug/L	MW-9	09/20/2016		6.4000		
Cobalt, total	ug/L	MW-9	04/24/2017		5.2000		
Cobalt, total	ug/L	MW-9	10/09/2017		4.9000		
Cobalt, total	ug/L	MW-9	03/21/2018		5.3000		
Cobalt, total	ug/L	MW-9	09/07/2018		5.4000		
Cobalt, total	ug/L	MW-9	04/02/2019		5.4000		
Cobalt, total	ug/L	MW-9	09/18/2019		5.7000		
Cobalt, total	ug/L	MW-9	03/25/2020		5.3000		
Cobalt, total	ug/L	MW-9	09/15/2020		5.8000		
Cobalt, total	ug/L	MW-9	03/08/2021		5.1000		
Cobalt, total	ug/L	MW-9	09/28/2021		4.8000		
Cobalt, total	ug/L	MW-9	03/08/2022		5.1000		
Cobalt, total	ug/L	MW-9	08/30/2022		5.0000		
Cobalt, total	ug/L	MW-9	03/07/2023		4.8000		
Cobalt, total	ug/L	MW-9	09/11/2023		5.3000		
Cobalt, total	ug/L	MW-9	03/20/2024		4.5000		
Copper, total	ug/L	MW-9	10/16/2014		4.3000		
Copper, total	ug/L	MW-9	04/04/2015		26.3000		*
Copper, total	ug/L	MW-9	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-9	04/04/2016		5.3000		
Copper, total	ug/L	MW-9	09/20/2016		8.4000		
Copper, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Copper, total	ug/L	MW-9	03/21/2018		18.0000		*
Copper, total	ug/L	MW-9	06/11/2018	ND	4.0000		
Copper, total	ug/L	MW-9	09/07/2018	ND	4.0000		
Copper, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-9	09/18/2019		7.1000		
Copper, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Copper, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Copper, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Copper, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Copper, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Copper, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Copper, total	ug/L	MW-9	09/11/2023	ND	4.0000		
Copper, total	ug/L	MW-9	03/20/2024	ND	4.0000		
Lead, total	ug/L	MW-9	10/16/2014	ND	4.0000		
Lead, total	ug/L	MW-9	04/04/2015	ND	4.0000		
Lead, total	ug/L	MW-9	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-9	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-9	09/20/2016	ND	4.0000		
Lead, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Lead, total	ug/L	MW-9	03/21/2018	ND	4.0000		
Lead, total	ug/L	MW-9	09/07/2018	ND	4.0000		
Lead, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Lead, total	ug/L	MW-9	09/18/2019	ND	4.0000		
Lead, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Lead, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Lead, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Lead, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Lead, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Lead, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Lead, total	ug/L	MW-9	09/11/2023	ND	4.0000		
Lead, total	ug/L	MW-9	03/20/2024	ND	4.0000		
Nickel, total	ug/L	MW-9	10/16/2014		12.4000		
Nickel, total	ug/L	MW-9	04/04/2015		11.8000		
Nickel, total	ug/L	MW-9	10/01/2015		8.6000		
Nickel, total	ug/L	MW-9	04/04/2016		11.2000		
Nickel, total	ug/L	MW-9	09/20/2016		8.2000		
Nickel, total	ug/L	MW-9	04/24/2017		10.9000		
Nickel, total	ug/L	MW-9	10/09/2017		11.0000		
Nickel, total	ug/L	MW-9	03/21/2018		10.9000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Nickel, total	ug/L	MW-9	09/07/2018		10.6000		
Nickel, total	ug/L	MW-9	04/02/2019		11.0000		
Nickel, total	ug/L	MW-9	09/18/2019		11.6000		
Nickel, total	ug/L	MW-9	03/25/2020		11.0000		
Nickel, total	ug/L	MW-9	09/15/2020		11.2000		
Nickel, total	ug/L	MW-9	03/08/2021		10.1000		
Nickel, total	ug/L	MW-9	09/28/2021		9.5000		
Nickel, total	ug/L	MW-9	03/08/2022		10.6000		
Nickel, total	ug/L	MW-9	08/30/2022		9.8000		
Nickel, total	ug/L	MW-9	03/07/2023		10.0000		
Nickel, total	ug/L	MW-9	09/11/2023		9.8000		
Nickel, total	ug/L	MW-9	03/20/2024		9.2000		
Selenium, total	ug/L	MW-9	10/16/2014	ND	4.0000		
Selenium, total	ug/L	MW-9	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-9	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-9	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-9	09/20/2016	ND	4.0000		
Selenium, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Selenium, total	ug/L	MW-9	03/21/2018	ND	4.0000		
Selenium, total	ug/L	MW-9	09/07/2018	ND	4.0000		
Selenium, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-9	09/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Selenium, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Selenium, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Selenium, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Selenium, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Selenium, total	ug/L	MW-9	09/11/2023	ND	4.0000		
Selenium, total	ug/L	MW-9	03/20/2024	ND	4.0000		
Silver, total	ug/L	MW-9	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-9	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-9	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-9	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-9	09/20/2016	ND	4.0000		
Silver, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Silver, total	ug/L	MW-9	03/21/2018	ND	4.0000		
Silver, total	ug/L	MW-9	09/07/2018	ND	4.0000		
Silver, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-9	09/18/2019	ND	4.0000		
Silver, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Silver, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Silver, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Silver, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Silver, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Silver, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Silver, total	ug/L	MW-9	09/11/2023	ND	4.0000		
Silver, total	ug/L	MW-9	03/20/2024	ND	4.0000		
Thallium, total	ug/L	MW-9	10/16/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	09/20/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/09/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	03/21/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	09/07/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	09/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	09/15/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	03/08/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	09/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	03/08/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	08/30/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	03/07/2023		2.0000		
Thallium, total	ug/L	MW-9	09/11/2023	ND	2.0000		
Thallium, total	ug/L	MW-9	03/20/2024	ND	2.0000		
Vanadium, total	ug/L	MW-9	10/16/2014	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/04/2015	ND	20.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Vanadium, total	ug/L	MW-9	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/20/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/09/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/21/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/07/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/15/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/08/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/08/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	08/30/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/07/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/11/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/20/2024	ND	20.0000		
Zinc, total	ug/L	MW-9	10/16/2014	ND	20.0000		
Zinc, total	ug/L	MW-9	04/04/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/01/2015		9.8000		
Zinc, total	ug/L	MW-9	04/04/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	09/20/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/09/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	03/21/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	09/07/2018		73.9000		*
Zinc, total	ug/L	MW-9	04/02/2019	ND	20.0000		
Zinc, total	ug/L	MW-9	09/18/2019		27.7000		
Zinc, total	ug/L	MW-9	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	09/15/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	03/08/2021	ND	20.0000		
Zinc, total	ug/L	MW-9	09/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-9	03/08/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	08/30/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	03/07/2023	ND	20.0000		
Zinc, total	ug/L	MW-9	09/11/2023	ND	20.0000		
Zinc, total	ug/L	MW-9	03/20/2024	ND	20.0000		

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

Table 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Antimony, total	ug/L	MW-12	03/20/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-12	03/20/2024		12.0000		167.0000
Barium, total	ug/L	MW-12	03/20/2024		324.0000		1290.3260
Beryllium, total	ug/L	MW-12	03/20/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-12	03/20/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-12	03/20/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-12	03/20/2024		3.4000		38.4404
Copper, total	ug/L	MW-12	03/20/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-12	03/20/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-12	03/20/2024		6.1000		22.5016
Selenium, total	ug/L	MW-12	03/20/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-12	03/20/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-12	03/20/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-12	03/20/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-12	03/20/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-15R	03/20/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-15R	03/20/2024		13.3000		167.0000
Barium, total	ug/L	MW-15R	03/20/2024		318.0000		1290.3260
Beryllium, total	ug/L	MW-15R	03/20/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-15R	03/20/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-15R	03/20/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-15R	03/20/2024		2.2000		38.4404
Copper, total	ug/L	MW-15R	03/20/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-15R	03/20/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-15R	03/20/2024	ND	4.0000		22.5016
Selenium, total	ug/L	MW-15R	03/20/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-15R	03/20/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-15R	03/20/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-15R	03/20/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-15R	03/20/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-20R	03/20/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-20R	03/20/2024		75.0000		167.0000
Barium, total	ug/L	MW-20R	03/20/2024		821.0000		1290.3260
Beryllium, total	ug/L	MW-20R	03/20/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-20R	03/20/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-20R	03/20/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-20R	03/20/2024		0.4000		38.4404
Copper, total	ug/L	MW-20R	03/20/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-20R	03/20/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-20R	03/20/2024	ND	4.0000		22.5016
Selenium, total	ug/L	MW-20R	03/20/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-20R	03/20/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-20R	03/20/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-20R	03/20/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-20R	03/20/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-21	03/20/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-21	03/20/2024	ND	4.0000		167.0000
Barium, total	ug/L	MW-21	03/20/2024		369.0000		1290.3260
Beryllium, total	ug/L	MW-21	03/20/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-21	03/20/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-21	03/20/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-21	03/20/2024	ND	0.4000		38.4404
Copper, total	ug/L	MW-21	03/20/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-21	03/20/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-21	03/20/2024	ND	4.0000		22.5016
Selenium, total	ug/L	MW-21	03/20/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-21	03/20/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-21	03/20/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-21	03/20/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-21	03/20/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-22	03/20/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-22	03/20/2024		59.8000		167.0000
Barium, total	ug/L	MW-22	03/20/2024		439.0000		1290.3260
Beryllium, total	ug/L	MW-22	03/20/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-22	03/20/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-22	03/20/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-22	03/20/2024		1.8000		38.4404
Copper, total	ug/L	MW-22	03/20/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-22	03/20/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-22	03/20/2024	ND	4.0000		22.5016
Selenium, total	ug/L	MW-22	03/20/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-22	03/20/2024	ND	4.0000		4.0000

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

Table 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Thallium, total	ug/L	MW-22	03/20/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-22	03/20/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-22	03/20/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-4	03/20/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-4	03/20/2024		57.2000		167.0000
Barium, total	ug/L	MW-4	03/20/2024		1010.0000		1290.3260
Beryllium, total	ug/L	MW-4	03/20/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-4	03/20/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-4	03/20/2024	ND	8.0000	**	11.6000
Cobalt, total	ug/L	MW-4	03/20/2024		1.5000		38.4404
Copper, total	ug/L	MW-4	03/20/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-4	03/20/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-4	03/20/2024	ND	4.0000	**	22.5016
Selenium, total	ug/L	MW-4	03/20/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-4	03/20/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-4	03/20/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-4	03/20/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-4	03/20/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-5	03/20/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-5	03/20/2024		166.0000		167.0000
Barium, total	ug/L	MW-5	03/20/2024		415.0000		1290.3260
Beryllium, total	ug/L	MW-5	03/20/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-5	03/20/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-5	03/20/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-5	03/20/2024		2.6000		38.4404
Copper, total	ug/L	MW-5	03/20/2024		26.8000	*	10.0000
Lead, total	ug/L	MW-5	03/20/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-5	03/20/2024		9.0000		22.5016
Selenium, total	ug/L	MW-5	03/20/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-5	03/20/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-5	03/20/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-5	03/20/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-5	03/20/2024	ND	20.0000		267.0000

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

Table 3

Detection Frequencies in Upgradient and Downgradient Wells

Constituent	Upgradient Detect	Upgradient N	Upgradient Proportion	Downgradient Detect	Downgradient N	Downgradient Proportion
Antimony, total	0	106	0.000	2	235	0.009
Arsenic, total	50	105	0.476	203	235	0.864
Barium, total	105	105	1.000	235	235	1.000
Beryllium, total	0	106	0.000	1	235	0.004
Cadmium, total	16	104	0.154	30	235	0.128
Chromium, total	2	104	0.019	12	235	0.051
Cobalt, total	80	99	0.808	186	235	0.791
Copper, total	12	100	0.120	83	236	0.352
Lead, total	2	102	0.020	37	235	0.157
Nickel, total	79	102	0.775	178	237	0.751
Selenium, total	1	105	0.010	6	235	0.026
Silver, total	0	106	0.000	0	235	0.000
Thallium, total	2	106	0.019	3	235	0.013
Vanadium, total	1	105	0.010	18	235	0.077
Zinc, total	21	103	0.204	99	235	0.421

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

Table 4

Shapiro-Wilk Multiple Group Test of Normality

Constituent	Detect	N	Detect Freq	G raw	G log	G cbrt	G sqrt	G sqr	G cub	Crit Value	Dist Form	Model Type
Antimony, total	0	106	0.000									nonpar
Arsenic, total	50	105	0.476	2.460	2.045					2.326	lognor	nonpar
Barium, total	105	105	1.000	1.812	0.657					2.326	normal	normal
Beryllium, total	0	106	0.000									nonpar
Cadmium, total	16	104	0.154	0.626	0.870					2.326	normal	nonpar
Chromium, total	2	104	0.019									nonpar
Cobalt, total	80	99	0.808	3.591	0.411					2.326	lognor	lognor
Copper, total	12	100	0.120	1.035	0.667					2.326	normal	nonpar
Lead, total	2	102	0.020									nonpar
Nickel, total	79	102	0.775	1.322	0.406					2.326	normal	normal
Selenium, total	1	105	0.010									nonpar
Silver, total	0	106	0.000									nonpar
Thallium, total	2	106	0.019									nonpar
Vanadium, total	1	105	0.010									nonpar
Zinc, total	21	103	0.204	1.235	0.382					2.326	normal	nonpar

* - Distribution override for that constituent.
Fit to distribution is confirmed if G <= critical value.
Model type may not match distributional form when detection frequency < 50%.

Table 5

Summary Statistics and Prediction Limits

Constituent	Units	Detect	N	Mean	SD	alpha	Factor	Pred Limit	Type		Conf
Antimony, total	ug/L	0	106					2.0000	nonpar	***	0.99
Arsenic, total	ug/L	50	105					167.0000	nonpar		0.99
Barium, total	ug/L	105	105	429.8933	362.4465	0.0100	2.3740	1290.3260	normal		
Beryllium, total	ug/L	0	106					4.0000	nonpar	***	0.99
Cadmium, total	ug/L	16	104					2.4000	nonpar		0.99
Chromium, total	ug/L	2	104					11.6000	nonpar		0.99
Cobalt, total	ug/L	80	99	1.1757	1.0406	0.0100	2.3769	38.4404	lognor		
Copper, total	ug/L	12	100					10.0000	nonpar		0.99
Lead, total	ug/L	2	102					6.8000	nonpar		0.99
Nickel, total	ug/L	79	102	8.1422	6.0451	0.0100	2.3754	22.5016	normal		
Selenium, total	ug/L	1	105					7.5000	nonpar		0.99
Silver, total	ug/L	0	106					4.0000	nonpar	***	0.99
Thallium, total	ug/L	2	106					2.3000	nonpar		0.99
Vanadium, total	ug/L	1	105					31.6000	nonpar		0.99
Zinc, total	ug/L	21	103					267.0000	nonpar		0.99

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

Table 6

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Cobalt, total	ug/L	MW-17	09/11/2023	0.6000		10/16/2014-03/20/2024	18	0.5798
Cobalt, total	ug/L	MW-17	03/20/2024	0.7000		10/16/2014-03/20/2024	18	0.5798
Zinc, total	ug/L	MW-17	09/07/2018	67.4000		10/16/2014-03/20/2024	20	0.5503
Zinc, total	ug/L	MW-17	09/18/2019	61.5000		10/16/2014-03/20/2024	20	0.5503
Cadmium, total	ug/L	MW-18	04/04/2015	3.9000		10/16/2014-03/20/2024	20	0.5381
Copper, total	ug/L	MW-18	10/16/2014	31.3000		10/16/2014-03/20/2024	19	0.5643
Copper, total	ug/L	MW-18	09/20/2016	16.0000		10/16/2014-03/20/2024	19	0.5643
Lead, total	ug/L	MW-18	10/16/2014	12.4000		10/16/2014-03/20/2024	19	0.5503
Barium, total	ug/L	MW-19A	03/19/2024	622.0000		10/16/2014-03/19/2024	20	0.5381
Cadmium, total	ug/L	MW-19A	09/11/2023	9.0000		10/16/2014-03/19/2024	20	0.5381
Cobalt, total	ug/L	MW-19A	03/19/2024	6.9000		10/16/2014-03/19/2024	20	0.5381
Lead, total	ug/L	MW-2	04/02/2019	13.6000		04/04/2015-03/25/2020	6	0.6987
Nickel, total	ug/L	MW-24	04/04/2015	25.1000		10/16/2014-03/12/2024	19	0.5643
Nickel, total	ug/L	MW-24	03/21/2018	20.0000	< 20.0000	10/16/2014-03/12/2024	19	0.5643
Copper, total	ug/L	MW-9	04/04/2015	26.3000		10/16/2014-03/20/2024	21	0.5381
Copper, total	ug/L	MW-9	03/21/2018	18.0000		10/16/2014-03/20/2024	21	0.5381
Zinc, total	ug/L	MW-9	09/07/2018	73.9000		10/16/2014-03/20/2024	20	0.5381

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Chromium, total	ug/L	MW-4	04/23/2008	ND	5.0000		11.6000
Chromium, total	ug/L	MW-4	06/23/2008	ND	5.0000		11.6000
Chromium, total	ug/L	MW-4	08/13/2008	ND	5.0000		11.6000
Chromium, total	ug/L	MW-4	10/02/2008	ND	1.0000		11.6000
Chromium, total	ug/L	MW-4	12/13/2008	ND	10.0000		11.6000
Chromium, total	ug/L	MW-4	03/04/2009	ND	10.0000		11.6000
Chromium, total	ug/L	MW-4	09/17/2009	ND	10.0000		11.6000
Chromium, total	ug/L	MW-4	11/06/2009	ND	10.0000		11.6000
Chromium, total	ug/L	MW-4	04/05/2010	ND	10.0000		11.6000
Chromium, total	ug/L	MW-4	10/08/2010	ND	10.0000		11.6000
Chromium, total	ug/L	MW-4	04/13/2011	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	09/22/2011	ND	20.0000		11.6000
Chromium, total	ug/L	MW-4	04/09/2012	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	09/05/2012	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	04/26/2013	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	04/10/2014	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	10/16/2014	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	04/04/2015	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	10/01/2015	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	04/04/2016	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	09/20/2016	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	04/24/2017	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	10/09/2017	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	03/21/2018	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	09/07/2018	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	04/02/2019	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	09/18/2019	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	03/25/2020	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	09/15/2020	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	03/08/2021	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	09/28/2021	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	03/08/2022	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	08/30/2022	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	03/07/2023	ND	8.0000		11.6000
Chromium, total	ug/L	MW-4	09/11/2023		33.9000	*	11.6000
Chromium, total	ug/L	MW-4	03/20/2024	ND	8.0000		11.6000
Nickel, total	ug/L	MW-4	04/23/2008		15.0000		22.5016
Nickel, total	ug/L	MW-4	06/23/2008		12.0000		22.5016
Nickel, total	ug/L	MW-4	08/13/2008		6.0000		22.5016
Nickel, total	ug/L	MW-4	10/02/2008		11.1000		22.5016
Nickel, total	ug/L	MW-4	12/13/2008		10.4000		22.5016
Nickel, total	ug/L	MW-4	03/04/2009		9.7000		22.5016
Nickel, total	ug/L	MW-4	09/17/2009		31.0000	*	22.5016
Nickel, total	ug/L	MW-4	11/06/2009		17.5000		22.5016
Nickel, total	ug/L	MW-4	04/05/2010		22.0000		22.5016
Nickel, total	ug/L	MW-4	10/08/2010		14.2000		22.5016
Nickel, total	ug/L	MW-4	04/13/2011		19.8000		22.5016
Nickel, total	ug/L	MW-4	09/22/2011		25.0000	*	22.5016
Nickel, total	ug/L	MW-4	04/09/2012		14.5000		22.5016
Nickel, total	ug/L	MW-4	09/05/2012		23.6000	*	22.5016
Nickel, total	ug/L	MW-4	04/26/2013		13.1000		22.5016
Nickel, total	ug/L	MW-4	04/10/2014		21.6000		22.5016
Nickel, total	ug/L	MW-4	10/16/2014		11.3000		22.5016
Nickel, total	ug/L	MW-4	04/04/2015		7.3000		22.5016
Nickel, total	ug/L	MW-4	10/01/2015	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	04/04/2016		7.5000		22.5016
Nickel, total	ug/L	MW-4	09/20/2016	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	04/24/2017	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	10/09/2017	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	03/21/2018	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	09/07/2018	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	04/02/2019	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	09/18/2019	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	03/25/2020	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	09/15/2020	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	03/08/2021	ND	4.0000		22.5016
Nickel, total	ug/L	MW-4	09/28/2021		26.4000	*	22.5016
Nickel, total	ug/L	MW-4	12/03/2021		5.2000		22.5016
Nickel, total	ug/L	MW-4	03/08/2022		4.5000		22.5016
Nickel, total	ug/L	MW-4	08/30/2022		4.6000		22.5016
Nickel, total	ug/L	MW-4	03/07/2023	ND	4.0000		22.5016

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

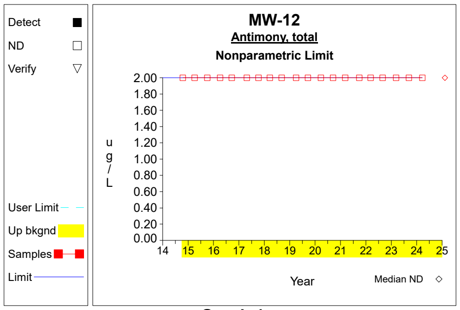
Table 8

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

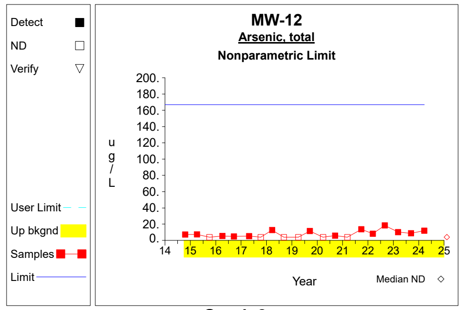
Constituent	Units	Well	Date		Result		Pred. Limit
Nickel, total	ug/L	MW-4	09/11/2023		52.8000	*	22.5016
Nickel, total	ug/L	MW-4	03/20/2024	ND	4.0000		22.5016
Copper, total	ug/L	MW-5	04/23/2008	ND	5.0000		10.0000
Copper, total	ug/L	MW-5	06/23/2008	ND	5.0000		10.0000
Copper, total	ug/L	MW-5	08/13/2008		6.0000		10.0000
Copper, total	ug/L	MW-5	10/02/2008	ND	8.0000		10.0000
Copper, total	ug/L	MW-5	12/13/2008	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	03/04/2009		4.7000		10.0000
Copper, total	ug/L	MW-5	09/17/2009		7.9000		10.0000
Copper, total	ug/L	MW-5	11/06/2009		11.4000	*	10.0000
Copper, total	ug/L	MW-5	04/05/2010		7.6000		10.0000
Copper, total	ug/L	MW-5	10/08/2010	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	04/13/2011		6.1000		10.0000
Copper, total	ug/L	MW-5	09/22/2011		5.4000		10.0000
Copper, total	ug/L	MW-5	04/09/2012	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/05/2012	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	04/26/2013		5.7000		10.0000
Copper, total	ug/L	MW-5	09/26/2013		10.0000		10.0000
Copper, total	ug/L	MW-5	04/10/2014	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	10/16/2014		4.0000		10.0000
Copper, total	ug/L	MW-5	04/04/2015	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	10/01/2015		4.2000		10.0000
Copper, total	ug/L	MW-5	04/04/2016	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/20/2016		7.7000		10.0000
Copper, total	ug/L	MW-5	04/24/2017	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	10/09/2017		4.7000		10.0000
Copper, total	ug/L	MW-5	03/21/2018	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/07/2018	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	04/02/2019	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/18/2019	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	03/25/2020	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/15/2020		4.4000		10.0000
Copper, total	ug/L	MW-5	03/08/2021	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/28/2021	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	03/08/2022		5.0000		10.0000
Copper, total	ug/L	MW-5	08/30/2022		45.5000	*	10.0000
Copper, total	ug/L	MW-5	03/07/2023		9.2000		10.0000
Copper, total	ug/L	MW-5	09/11/2023		9.6000		10.0000
Copper, total	ug/L	MW-5	03/20/2024		26.8000	*	10.0000

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

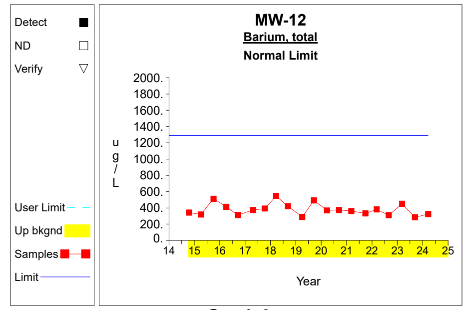
Up vs. Down Prediction Limits



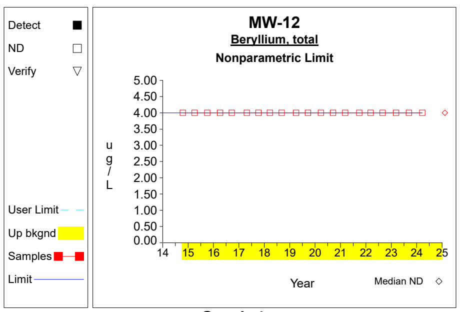
Graph 1



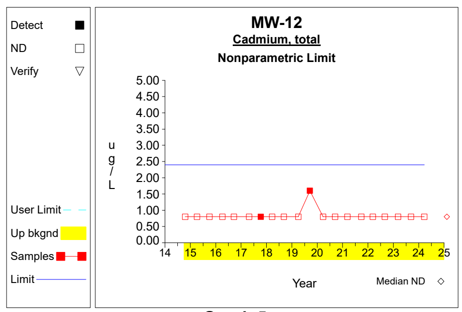
Graph 2



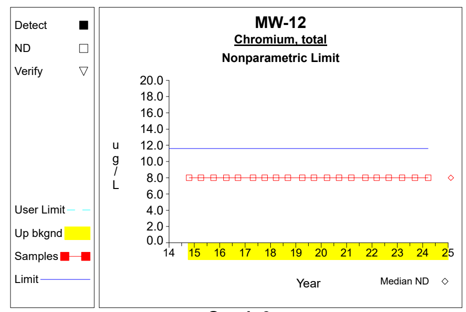
Graph 3



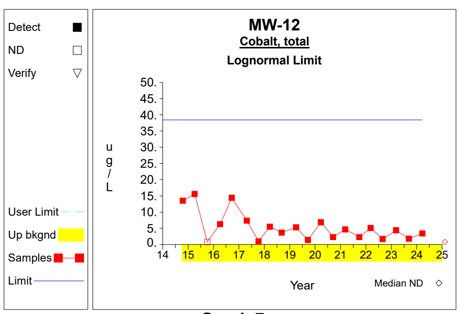
Graph 4



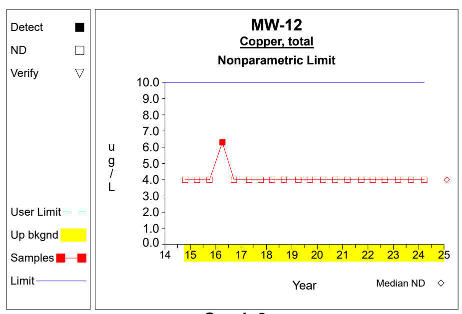
Graph 5



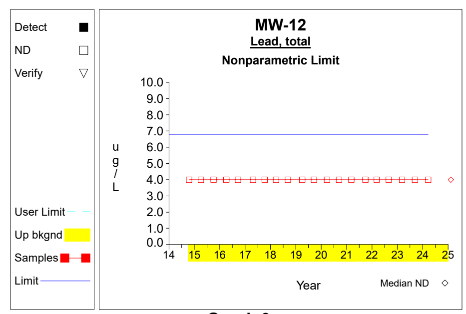
Graph 6



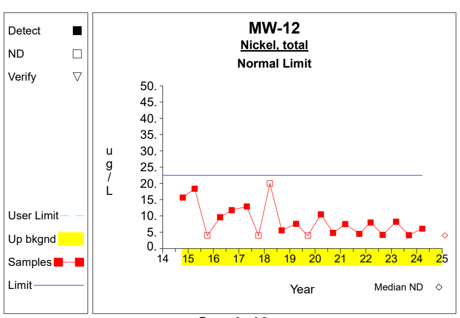
Graph 7



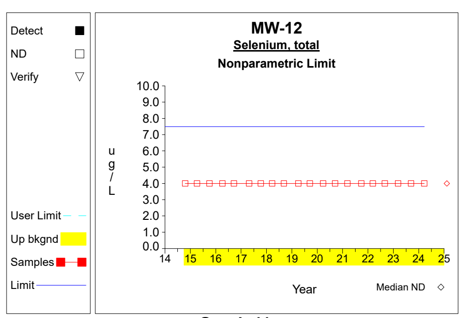
Graph 8



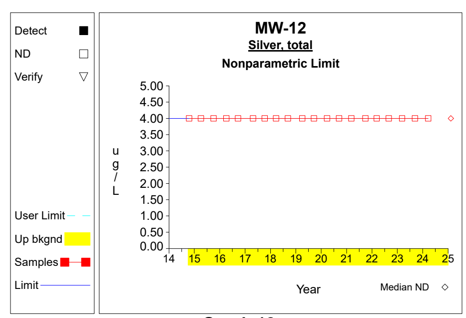
Graph 9



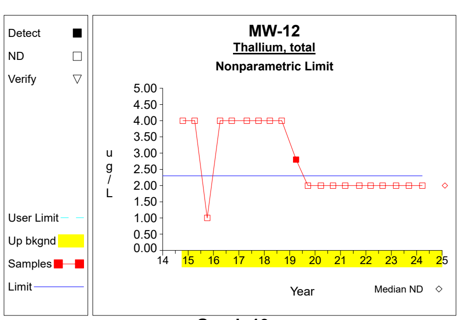
Graph 10



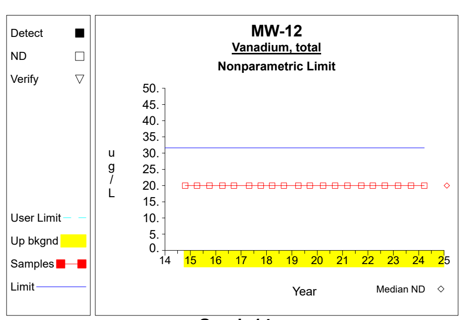
Graph 11



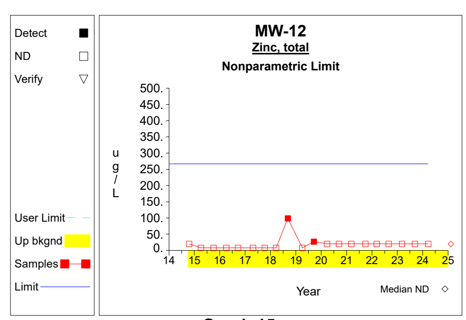
Graph 12



Graph 13



Graph 14



Graph 15

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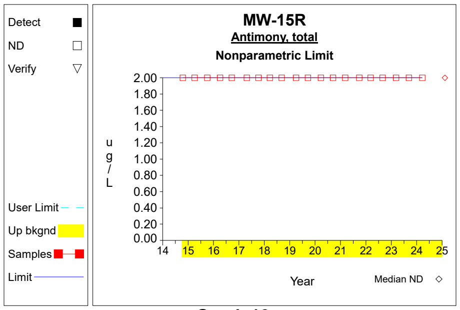
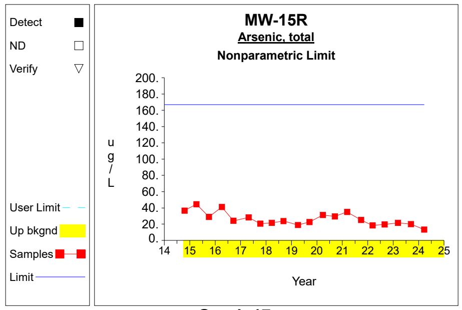
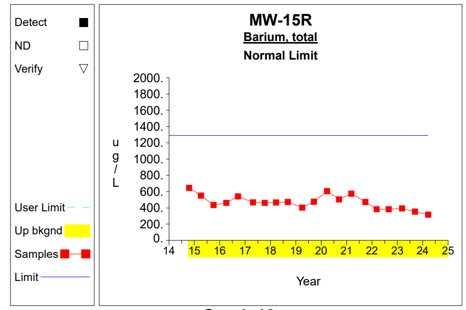
Up vs. Down Prediction Limits



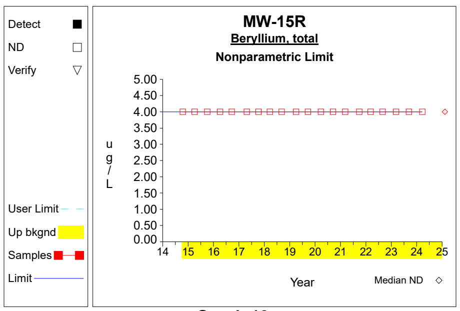
Graph 16



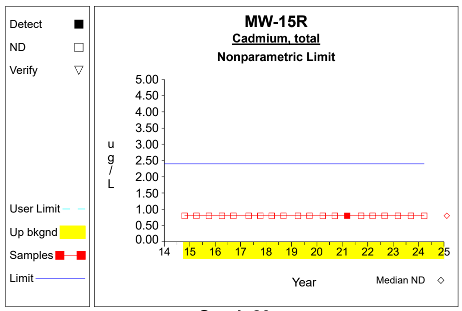
Graph 17



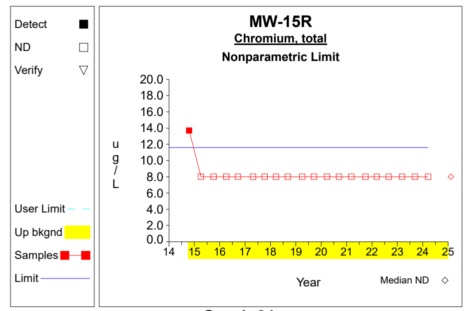
Graph 18



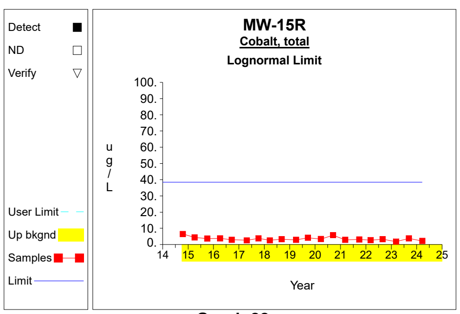
Graph 19



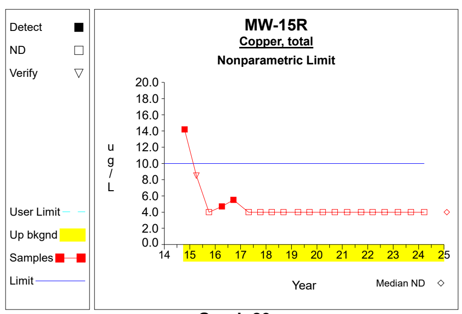
Graph 20



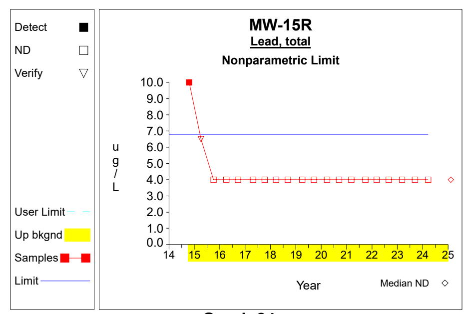
Graph 21



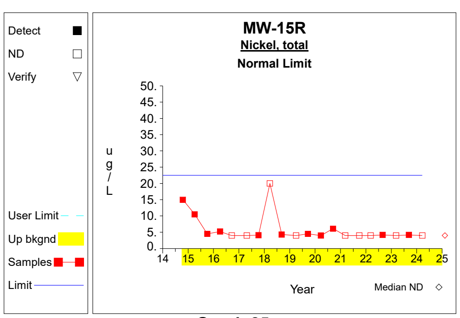
Graph 22



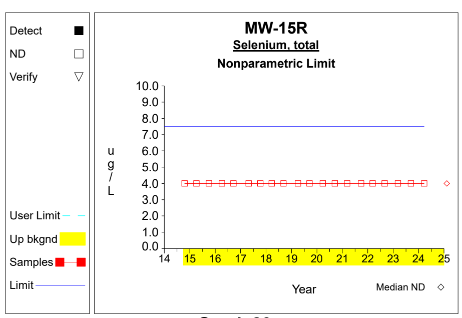
Graph 23



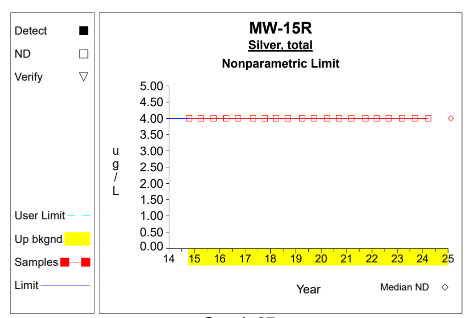
Graph 24



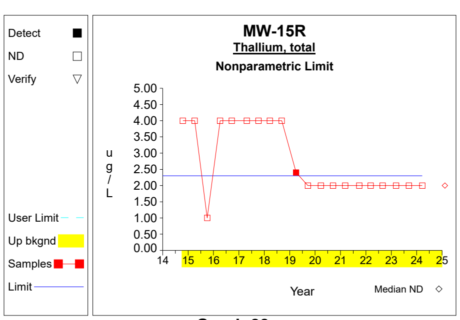
Graph 25



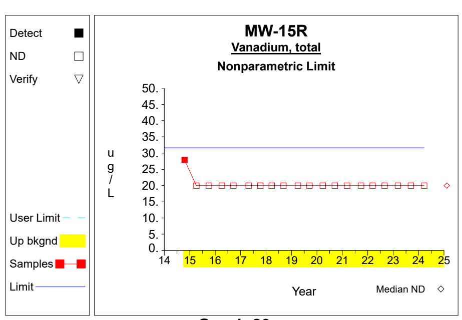
Graph 26



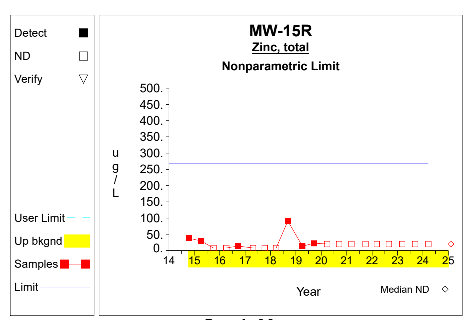
Graph 27



Graph 28



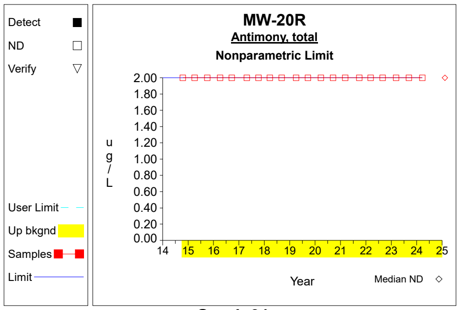
Graph 29



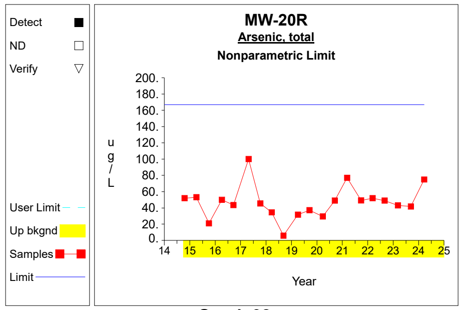
Graph 30

South Dallas [APPI] April 2024

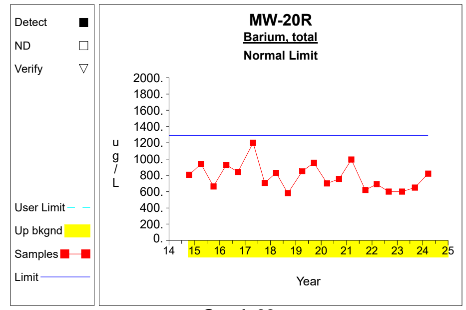
Up vs. Down Prediction Limits



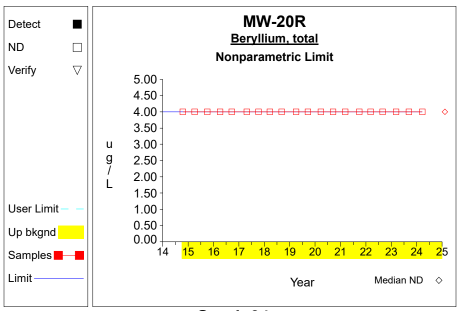
Graph 31



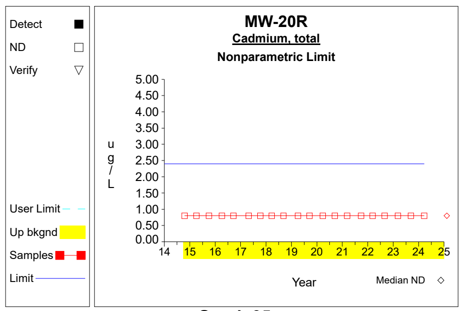
Graph 32



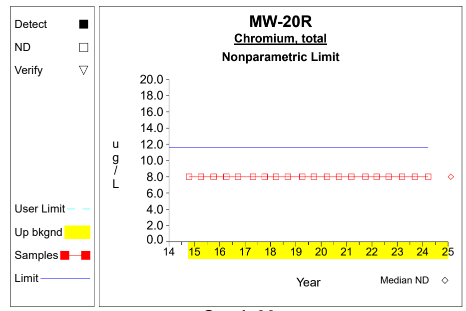
Graph 33



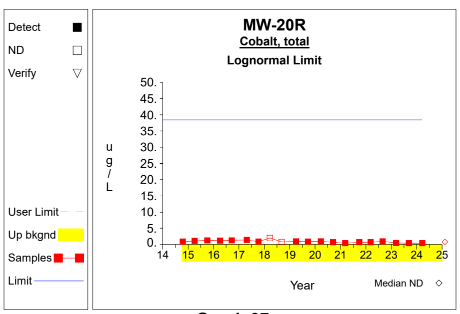
Graph 34



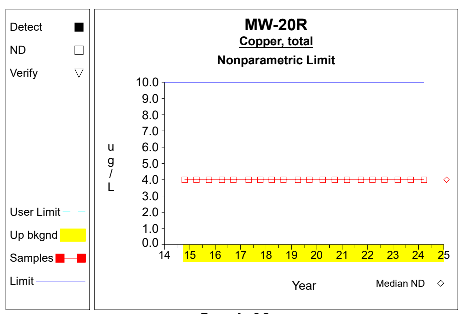
Graph 35



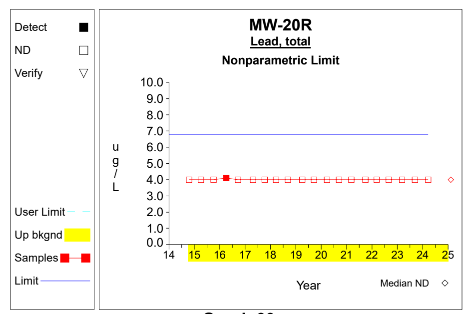
Graph 36



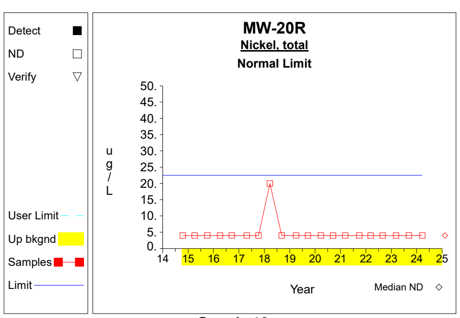
Graph 37



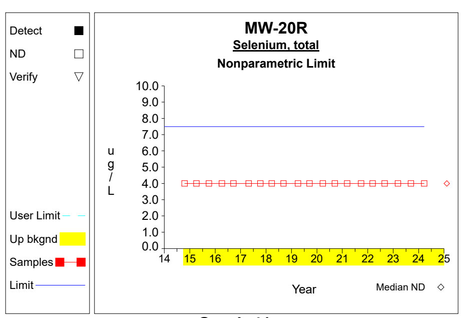
Graph 38



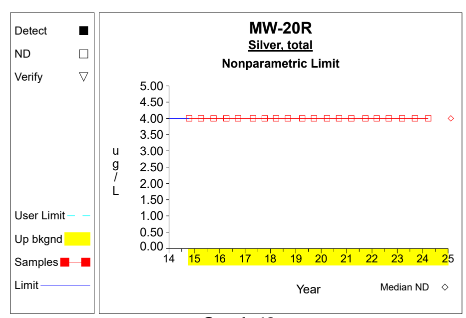
Graph 39



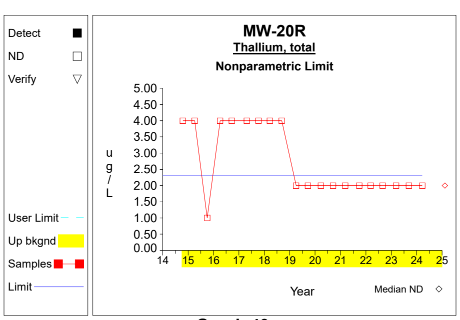
Graph 40



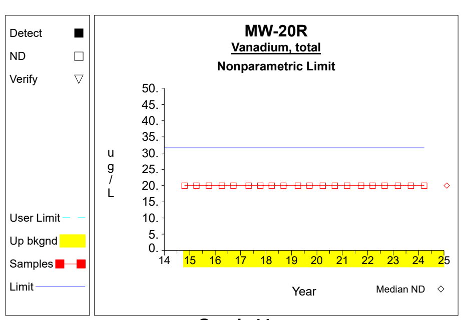
Graph 41



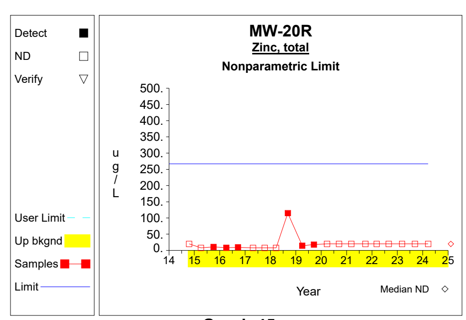
Graph 42



Graph 43



Graph 44



Graph 45

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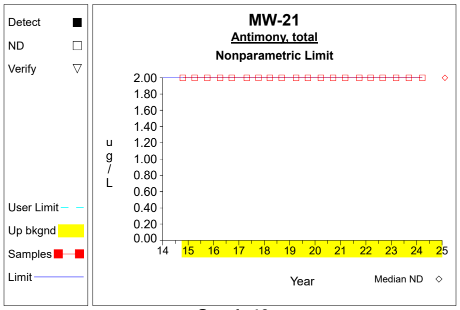
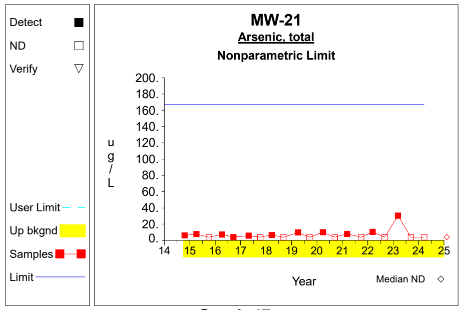
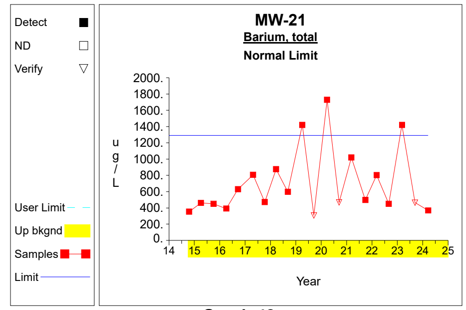
Up vs. Down Prediction Limits



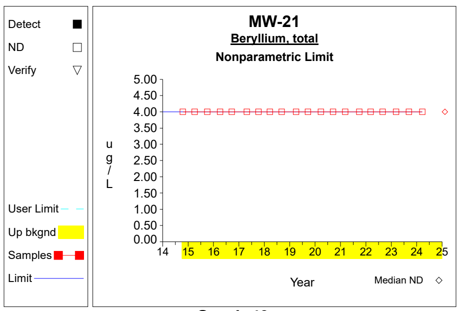
Graph 46



Graph 47



Graph 48



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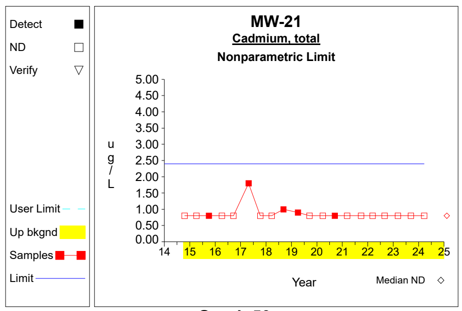

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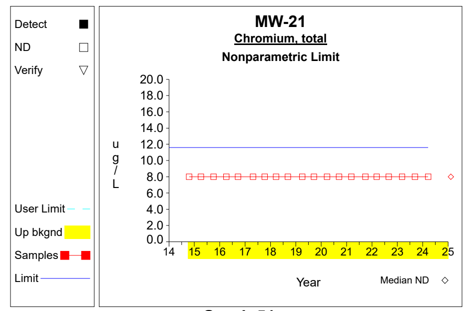

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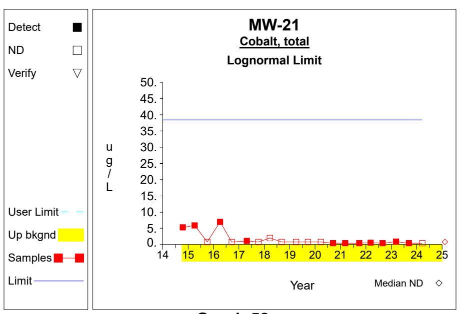

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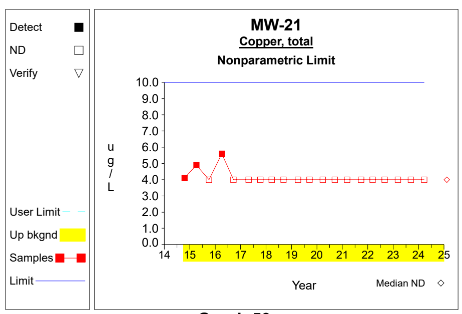

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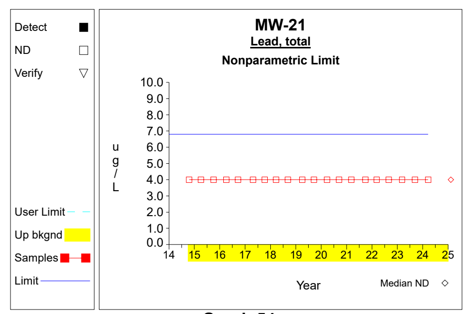

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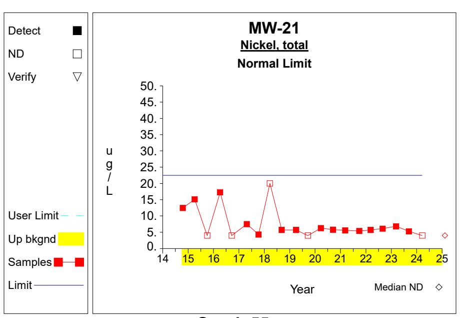

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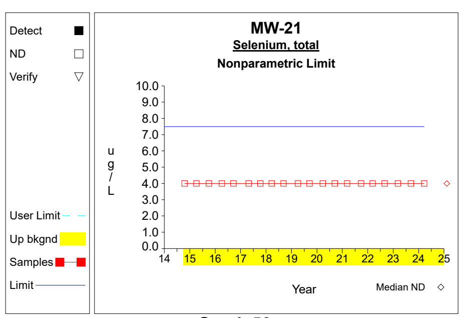

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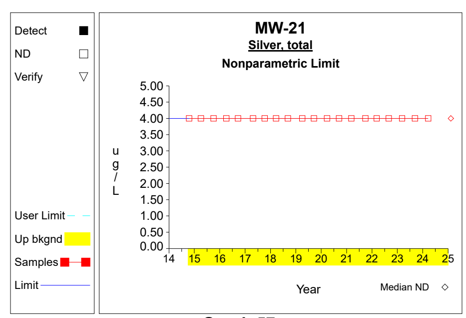

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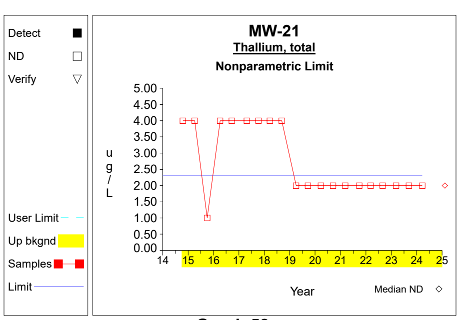

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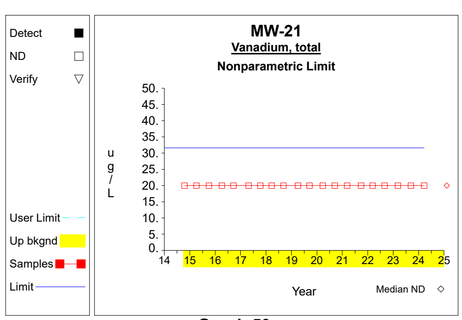

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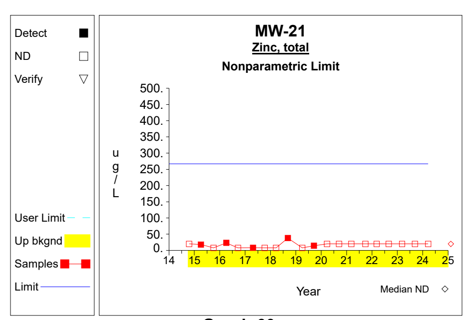

Graph 60

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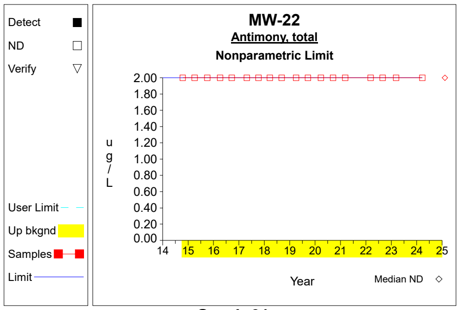
Up vs. Down Prediction Limits



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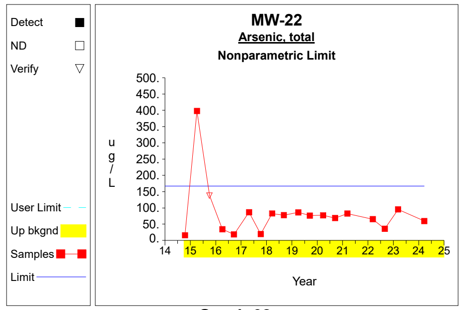

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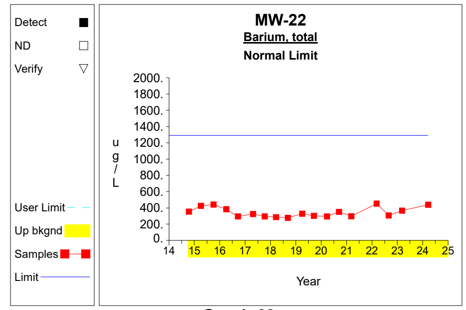
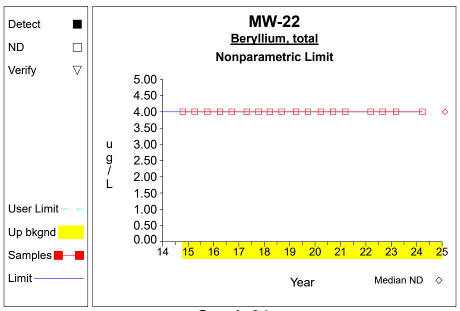


Graph 63



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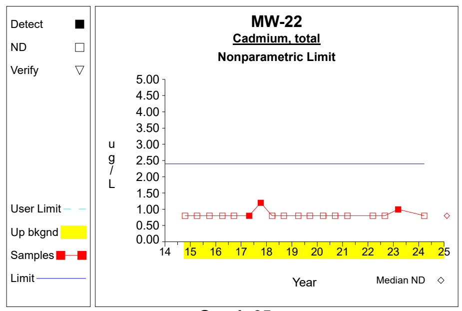
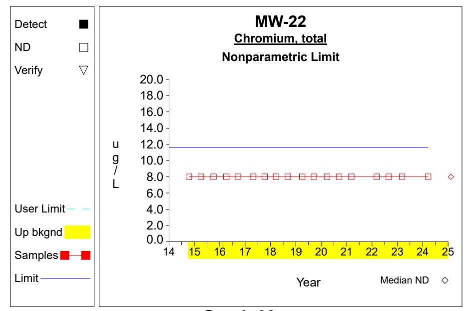


Graph 65



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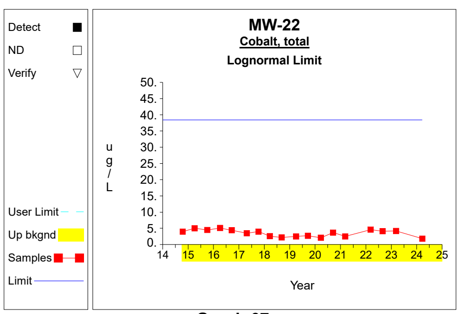

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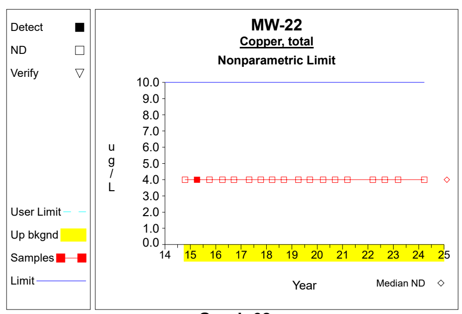

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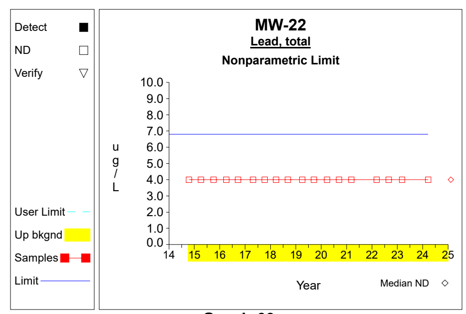

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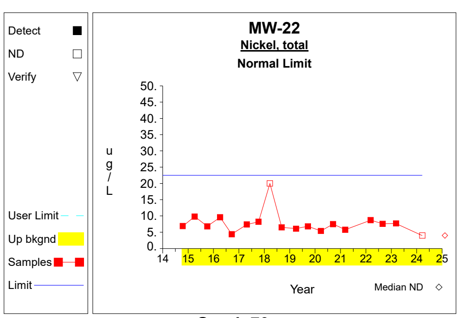

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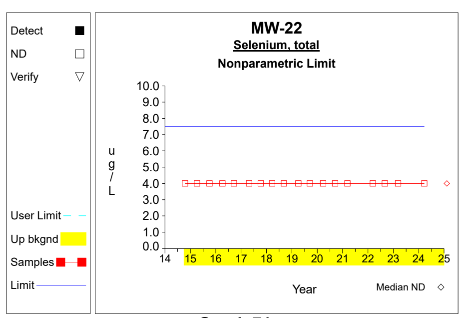

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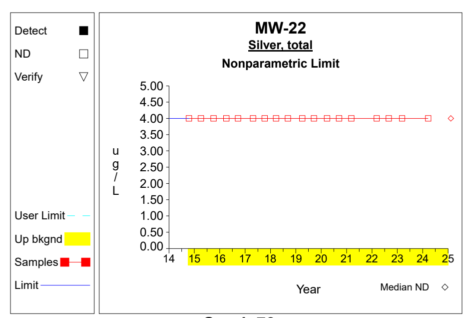

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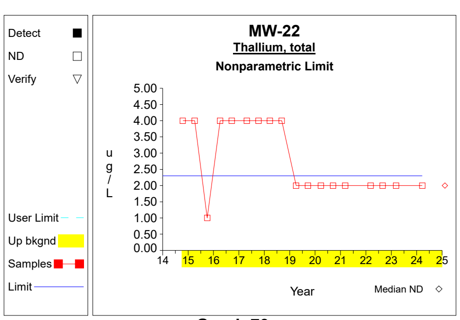

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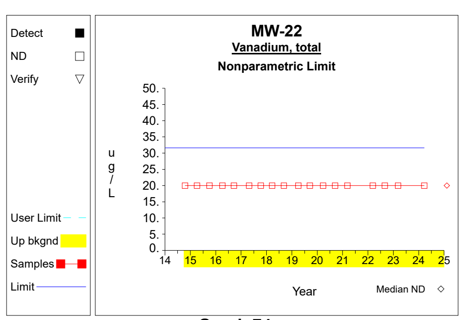
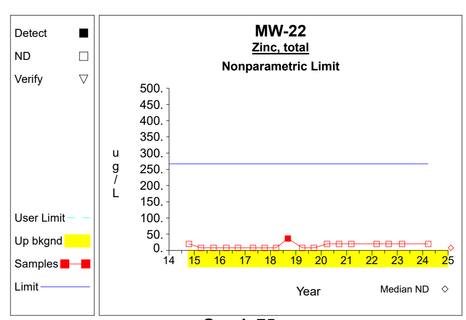


Graph 74



Graph 75

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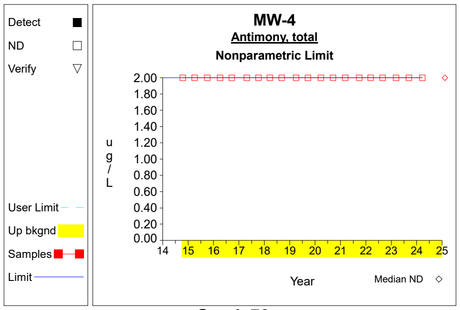
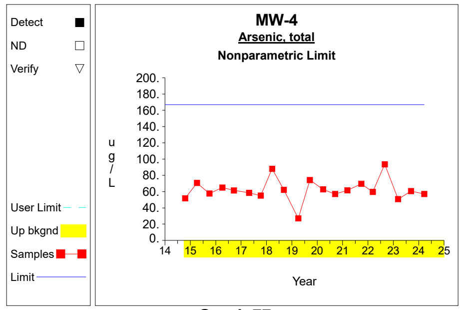
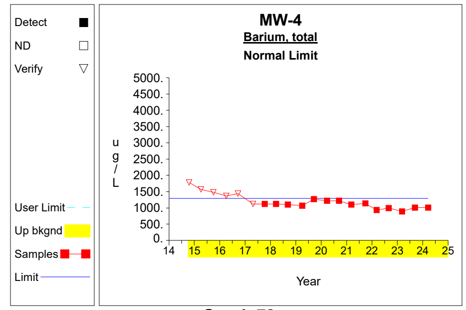
Up vs. Down Prediction Limits



Graph 76



Graph 77



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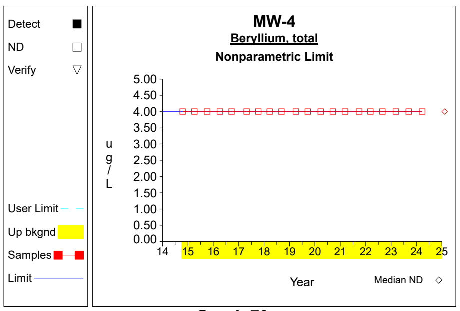
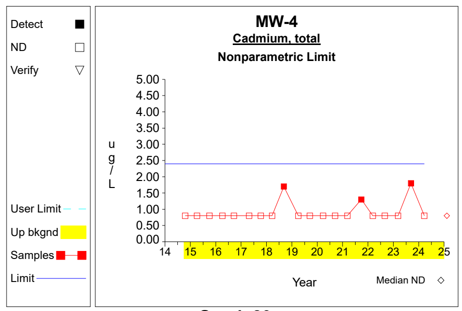


Graph 79



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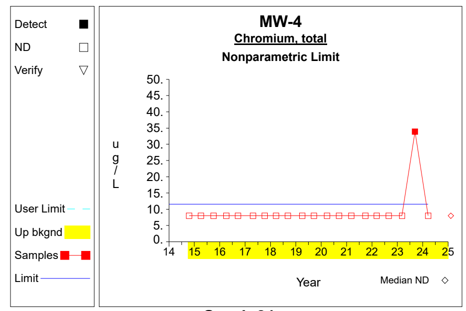

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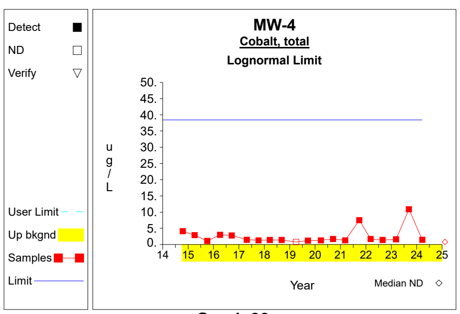
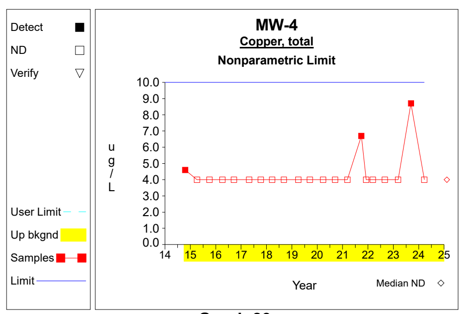


Graph 82



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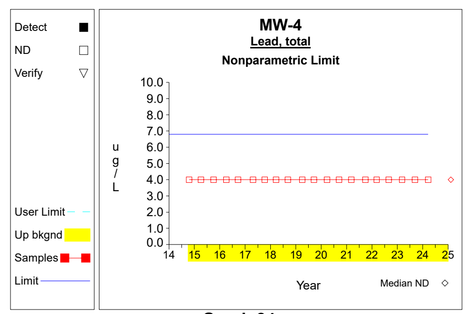

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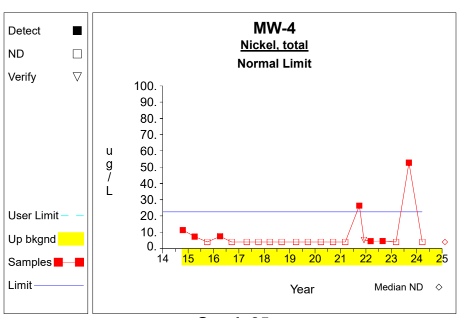

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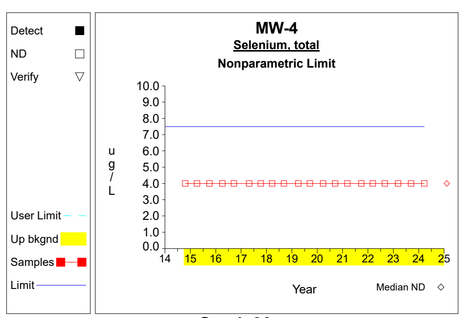

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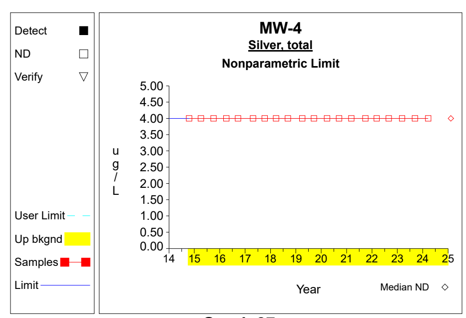

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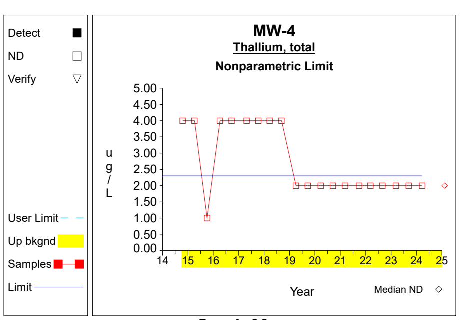

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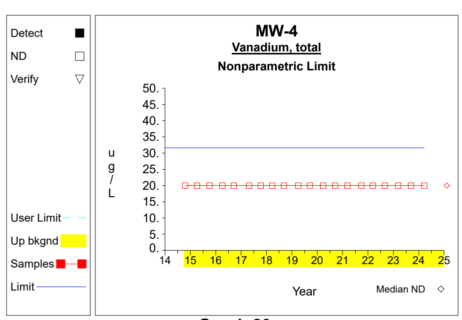

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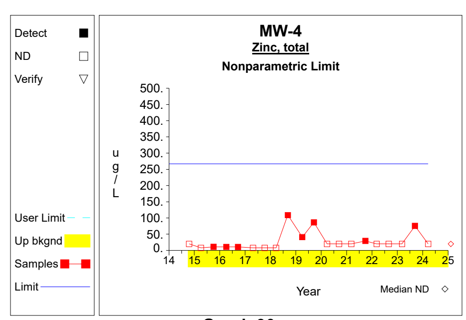

Graph 90

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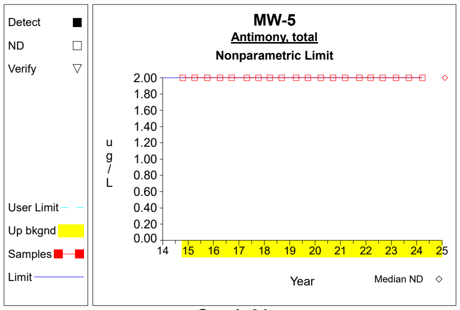
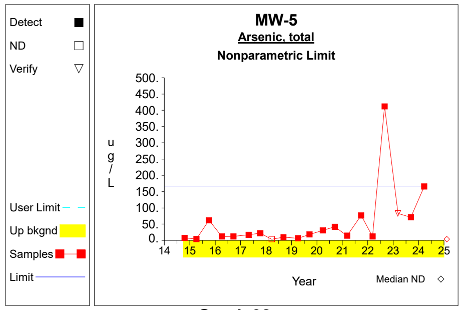
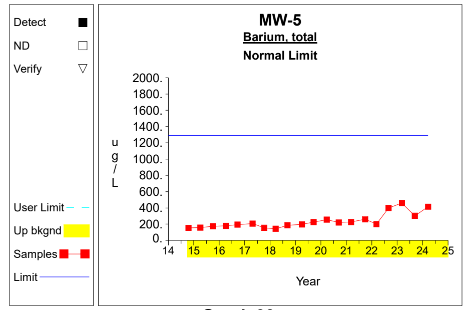
Up vs. Down Prediction Limits



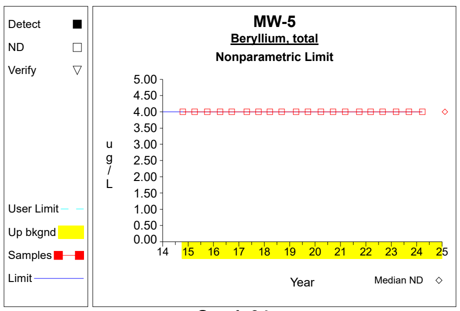
Graph 91



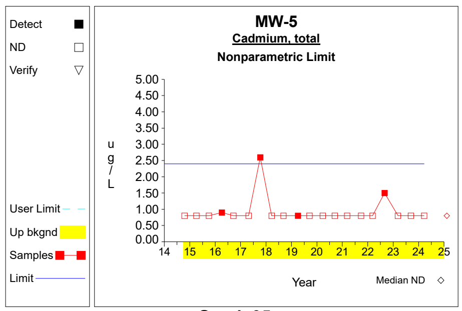
Graph 92



Graph 93



Graph 94



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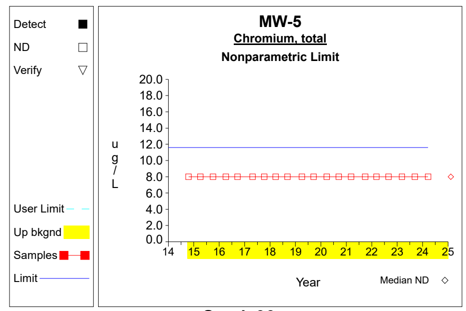
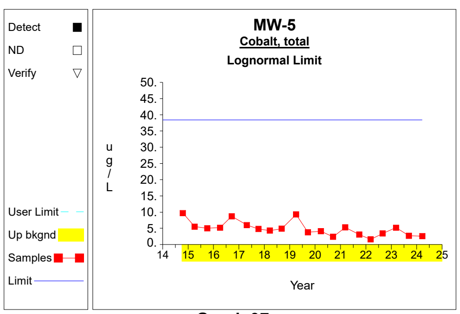


Graph 96



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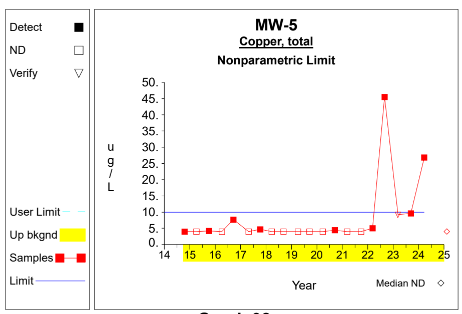

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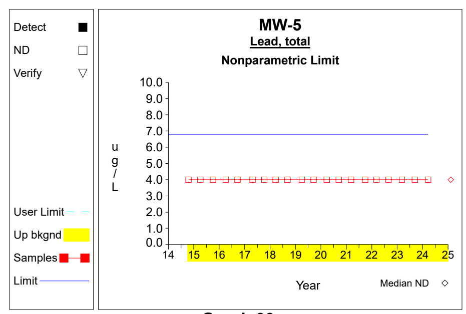
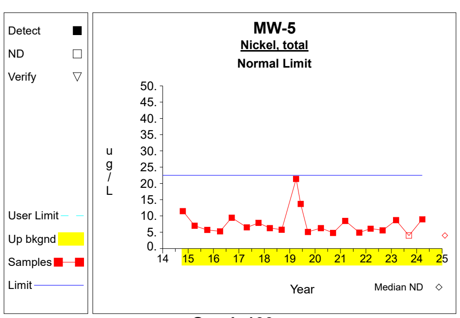
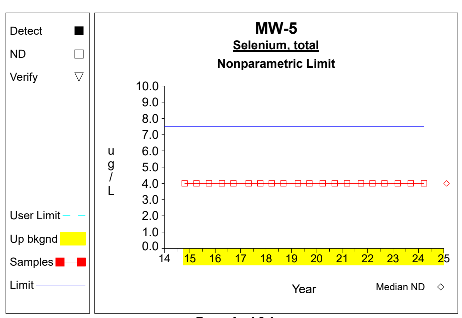


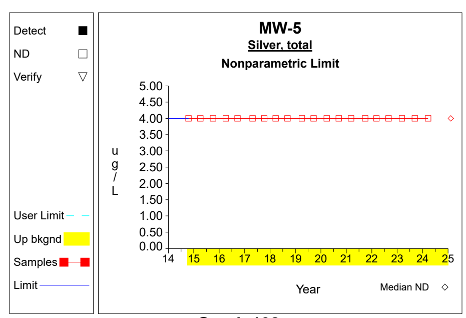
Graph 99



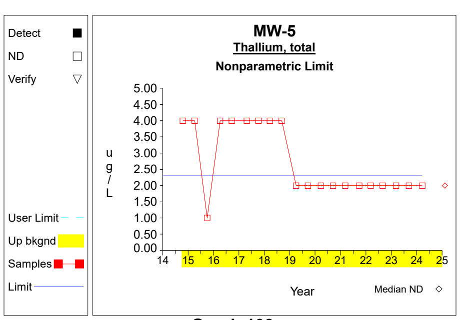
Graph 100



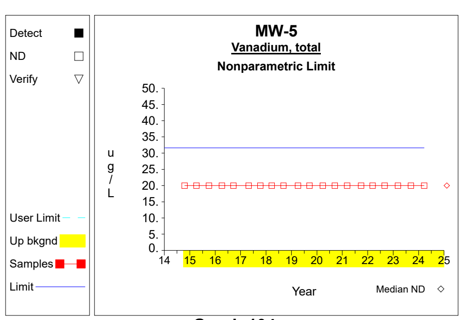
Graph 101



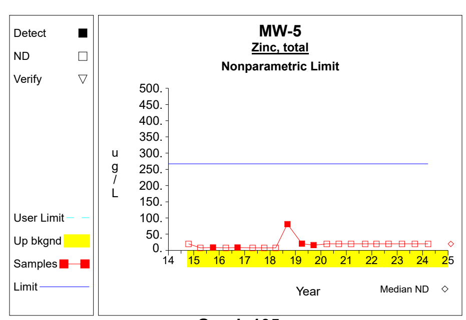
Graph 102



Graph 103

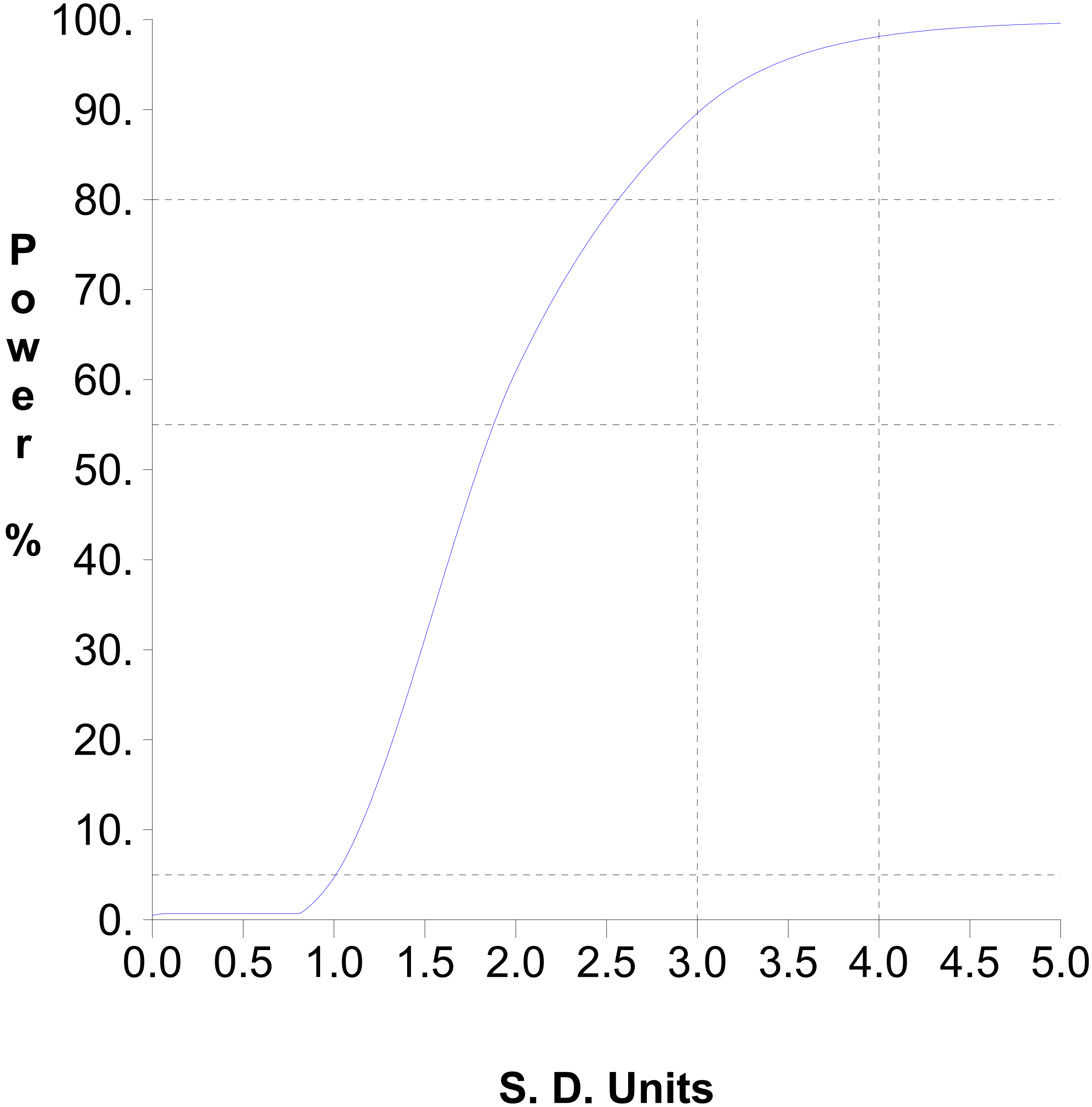


Graph 104



Graph 105

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



Attachment C

Assessment Statistics for Verified Trace Metal Exceedances

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-12	4	12.350	4.316	1.176	7.273	17.427	10.000		
Barium, total	ug/L	MW-12	4	342.500	73.478	1.176	256.069	428.931	2000.000		
Cadmium, total	ug/L	MW-12	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-12	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-12	4	2.825	1.307	1.176	1.287	4.363	2.100		
Copper, total	ug/L	MW-12	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-12	4	5.650	1.933	1.176	3.376	7.924	100.000		
Arsenic, total	ug/L	MW-15R	4	18.650	3.649	1.176	14.357	22.943	10.000	dec	**
Barium, total	ug/L	MW-15R	4	362.250	33.886	1.176	322.390	402.110	2000.000		
Cadmium, total	ug/L	MW-15R	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-15R	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-15R	4	2.775	0.932	1.176	1.678	3.872	2.100		
Copper, total	ug/L	MW-15R	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-15R	4	3.100	1.270	1.176	1.606	4.594	100.000		
Arsenic, total	ug/L	MW-17	4	2.000	0.000	1.176	2.000	2.000	10.000		
Barium, total	ug/L	MW-17	4	149.250	10.210	1.176	137.240	161.260	2000.000		
Cadmium, total	ug/L	MW-17	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-17	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-17	4	3.950	6.047	1.176	0.000	11.063	2.100		
Copper, total	ug/L	MW-17	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-17	4	6.500	1.811	1.176	4.370	8.630	100.000		
Arsenic, total	ug/L	MW-18	4	20.275	4.754	1.176	14.683	25.867	10.000	dec	**
Barium, total	ug/L	MW-18	4	698.500	56.583	1.176	631.942	765.058	2000.000	dec	
Cadmium, total	ug/L	MW-18	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-18	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-18	4	10.450	1.546	1.176	8.632	12.268	2.100		**
Copper, total	ug/L	MW-18	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-18	4	19.450	1.936	1.176	17.172	21.728	100.000		
Arsenic, total	ug/L	MW-19A	4	2.500	1.000	1.176	1.324	3.676	10.000		
Barium, total	ug/L	MW-19A	4	181.225	293.864	1.176	0.000	526.893	2000.000		
Cadmium, total	ug/L	MW-19A	4	2.550	4.300	1.176	0.000	7.608	5.000		
Chromium, total	ug/L	MW-19A	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-19A	4	2.025	3.250	1.176	0.000	5.848	2.100		
Copper, total	ug/L	MW-19A	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-19A	4	9.500	2.069	1.176	7.066	11.934	100.000		
Arsenic, total	ug/L	MW-20R	4	52.200	15.523	1.176	33.941	70.459	10.000		**
Barium, total	ug/L	MW-20R	4	667.250	105.282	1.176	543.408	791.092	2000.000		
Cadmium, total	ug/L	MW-20R	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-20R	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-20R	4	0.575	0.287	1.176	0.237	0.913	2.100		
Copper, total	ug/L	MW-20R	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-20R	4	2.000	0.000	1.176	2.000	2.000	100.000		
Arsenic, total	ug/L	MW-21	4	9.125	14.250	1.176	0.000	25.887	10.000		
Barium, total	ug/L	MW-21	4	676.000	497.789	1.176	90.456	1261.544	2000.000		
Cadmium, total	ug/L	MW-21	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-21	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-21	4	0.525	0.250	1.176	0.231	0.819	2.100		
Copper, total	ug/L	MW-21	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-21	4	5.050	2.124	1.176	2.552	7.548	100.000		
Arsenic, total	ug/L	MW-22	4	64.125	24.463	1.176	35.350	92.900	10.000		**
Barium, total	ug/L	MW-22	4	391.250	67.470	1.176	311.885	470.615	2000.000		
Cadmium, total	ug/L	MW-22	4	0.550	0.300	1.176	0.197	0.903	5.000		
Chromium, total	ug/L	MW-22	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-22	4	3.675	1.269	1.176	2.183	5.167	2.100		**
Copper, total	ug/L	MW-22	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-22	4	6.500	3.041	1.176	2.923	10.077	100.000		
Arsenic, total	ug/L	MW-24	4	46.275	42.155	1.176	0.000	95.862	10.000		
Barium, total	ug/L	MW-24	4	482.750	81.692	1.176	386.657	578.843	2000.000		
Cadmium, total	ug/L	MW-24	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-24	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-24	4	0.550	0.473	1.176	0.000	1.106	2.100	dec	
Copper, total	ug/L	MW-24	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-24	4	2.000	0.000	1.176	2.000	2.000	100.000		
Arsenic, total	ug/L	MW-25	4	8.350	12.700	1.176	0.000	23.289	10.000		
Barium, total	ug/L	MW-25	4	212.750	201.571	1.176	0.000	449.856	2000.000		
Cadmium, total	ug/L	MW-25	1								*
Chromium, total	ug/L	MW-25	1								*
Cobalt, total	ug/L	MW-25	1								*
Copper, total	ug/L	MW-25	1								*
Nickel, total	ug/L	MW-25	1								*
Arsenic, total	ug/L	MW-26	4	82.450	90.900	1.176	0.000	189.375	10.000		
Barium, total	ug/L	MW-26	4	826.275	725.974	1.176	0.000	1680.230	2000.000		

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

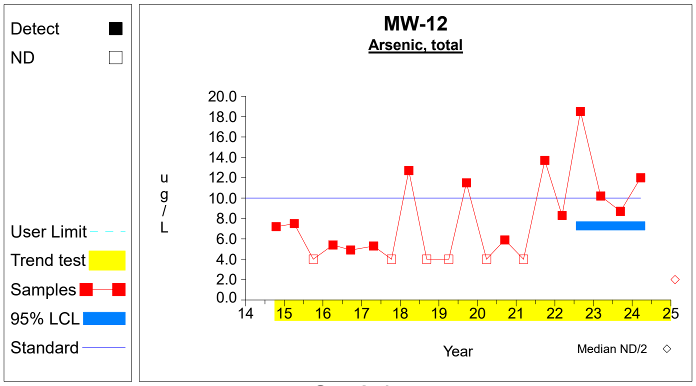
Table 1

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

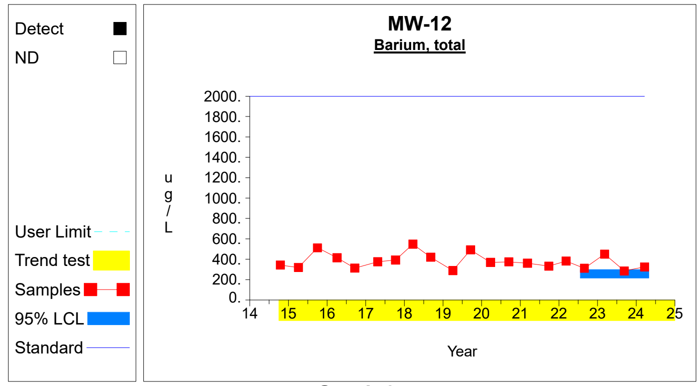
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Cadmium, total	ug/L	MW-26	1								*
Chromium, total	ug/L	MW-26	1								*
Cobalt, total	ug/L	MW-26	1								*
Copper, total	ug/L	MW-26	1								*
Nickel, total	ug/L	MW-26	1								*
Arsenic, total	ug/L	MW-4	4	65.575	19.128	1.176	43.075	88.075	10.000		**
Barium, total	ug/L	MW-4	4	976.250	57.933	1.176	908.104	1044.396	2000.000	dec	
Cadmium, total	ug/L	MW-4	4	0.750	0.700	1.176	0.000	1.573	5.000		
Chromium, total	ug/L	MW-4	4	11.475	14.950	1.176	0.000	29.061	100.000		
Cobalt, total	ug/L	MW-4	4	3.850	4.701	1.176	0.000	9.379	2.100		
Copper, total	ug/L	MW-4	4	3.675	3.350	1.176	0.000	7.616	1300.000		
Nickel, total	ug/L	MW-4	4	15.350	24.997	1.176	0.000	44.753	100.000		
Arsenic, total	ug/L	MW-5	4	183.025	158.379	1.176	0.000	369.324	10.000	inc	
Barium, total	ug/L	MW-5	4	394.250	66.575	1.176	315.938	472.562	2000.000	inc	
Cadmium, total	ug/L	MW-5	4	0.675	0.550	1.176	0.028	1.322	5.000		
Chromium, total	ug/L	MW-5	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-5	4	3.475	1.204	1.176	2.059	4.891	2.100	dec	
Copper, total	ug/L	MW-5	4	22.775	17.229	1.176	2.509	43.041	1300.000		
Nickel, total	ug/L	MW-5	4	6.325	3.267	1.176	2.482	10.168	100.000		
Arsenic, total	ug/L	MW-9	4	4.550	2.946	1.176	1.085	8.015	10.000		
Barium, total	ug/L	MW-9	4	273.250	24.144	1.176	244.850	301.650	2000.000		
Cadmium, total	ug/L	MW-9	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-9	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-9	4	4.900	0.337	1.176	4.504	5.296	2.100		**
Copper, total	ug/L	MW-9	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-9	4	9.700	0.346	1.176	9.293	10.107	100.000		

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

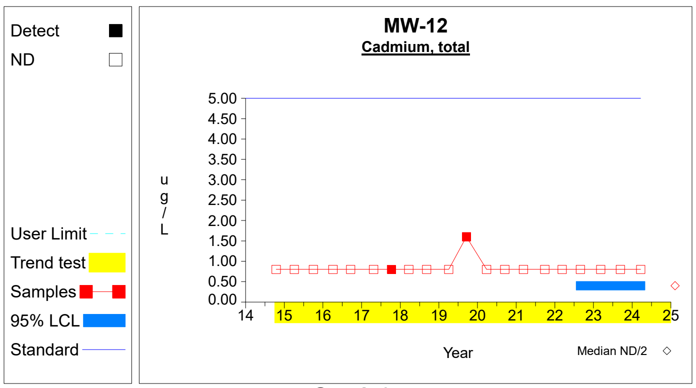
Confidence Limits (Assessment)



Graph 1



Graph 2



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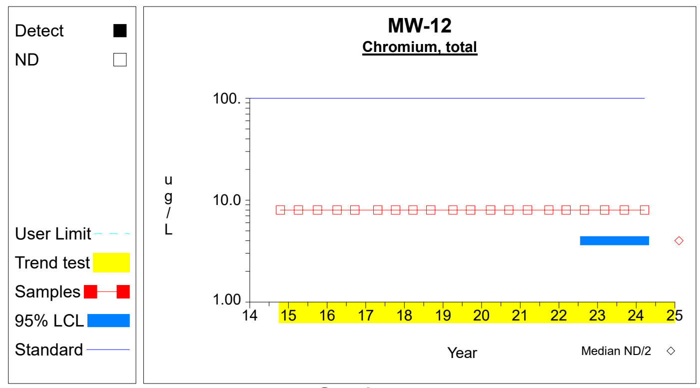

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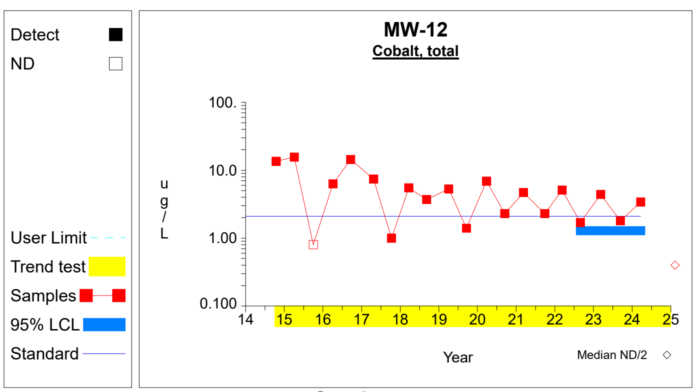
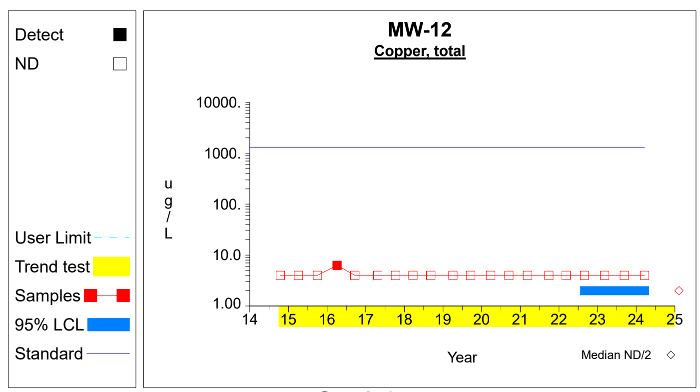
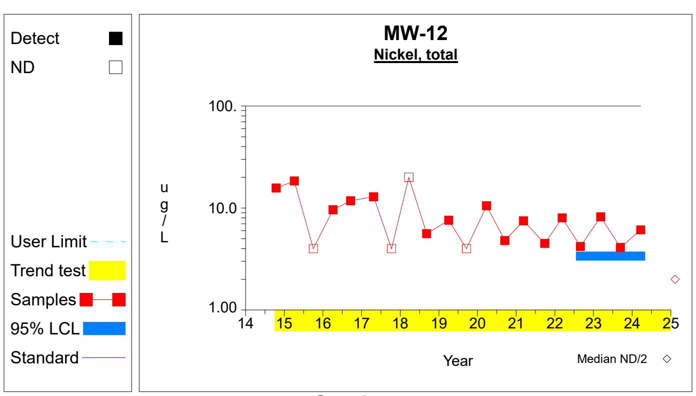


Graph 5

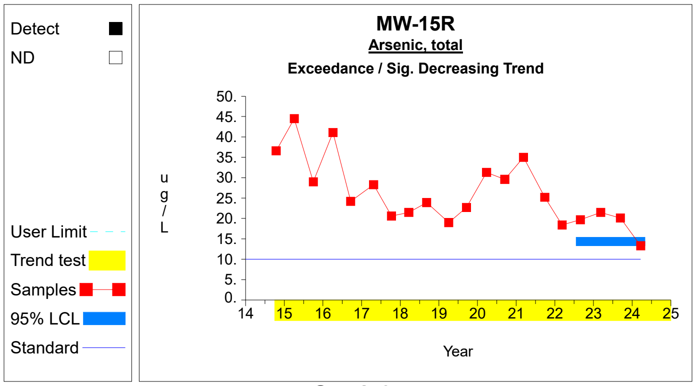


Graph 6



Graph 7

Confidence Limits (Assessment)



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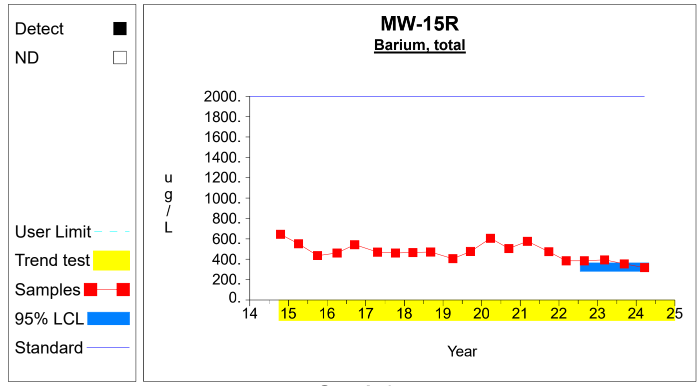

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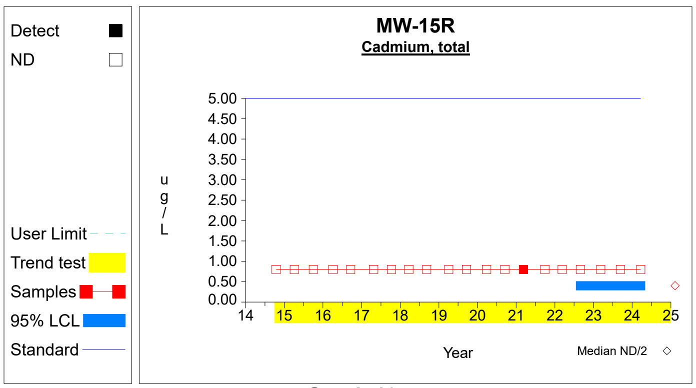

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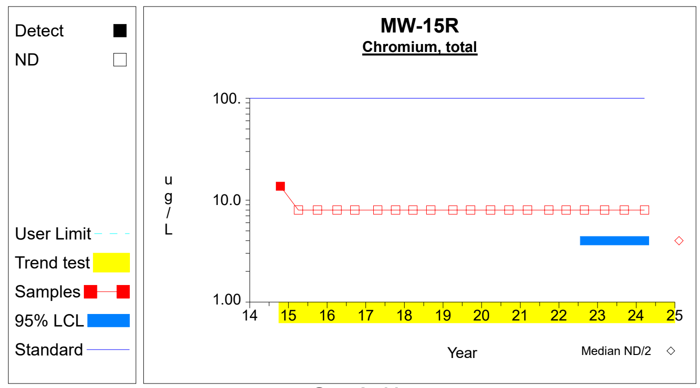

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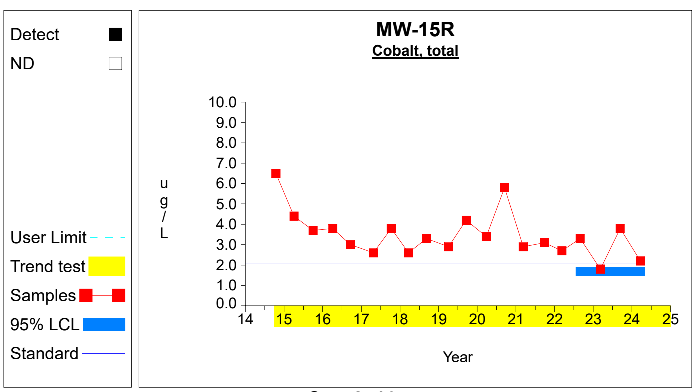

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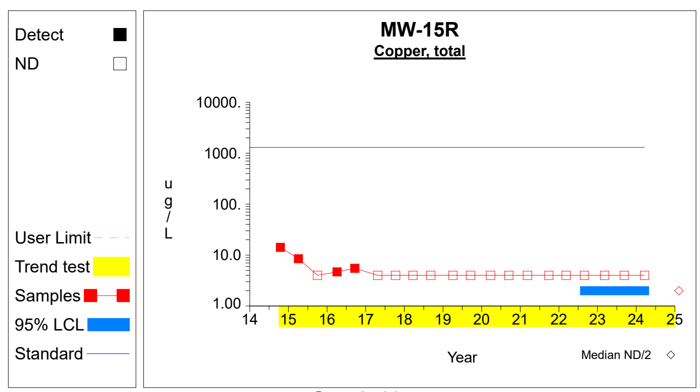
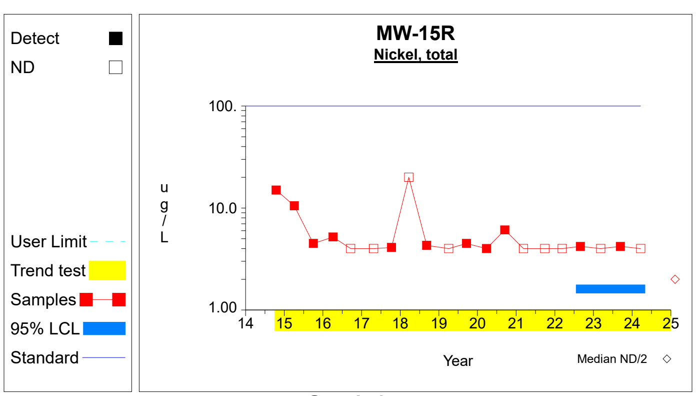
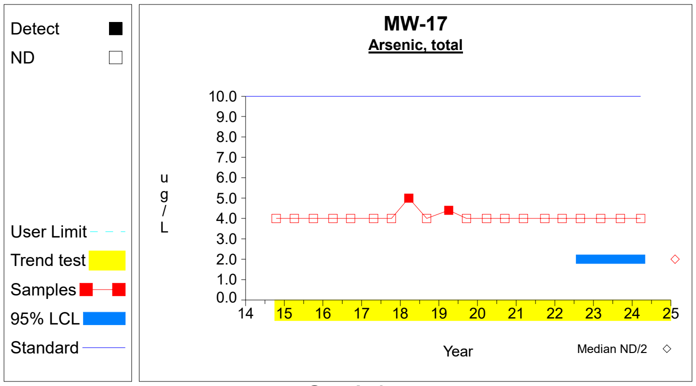


Graph 13

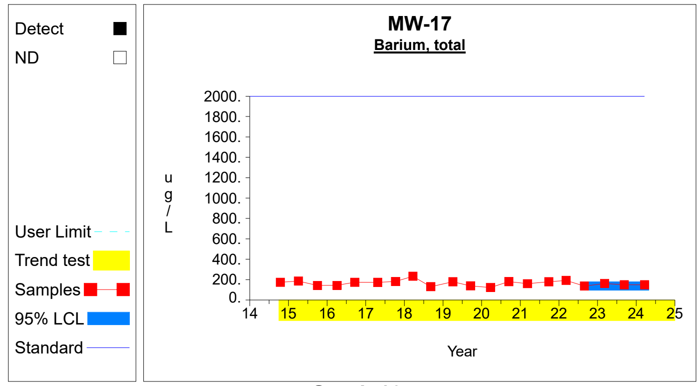


Graph 14

Confidence Limits (Assessment)



Graph 15



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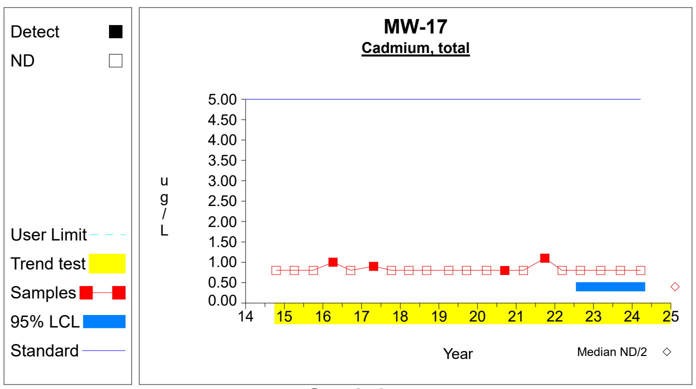

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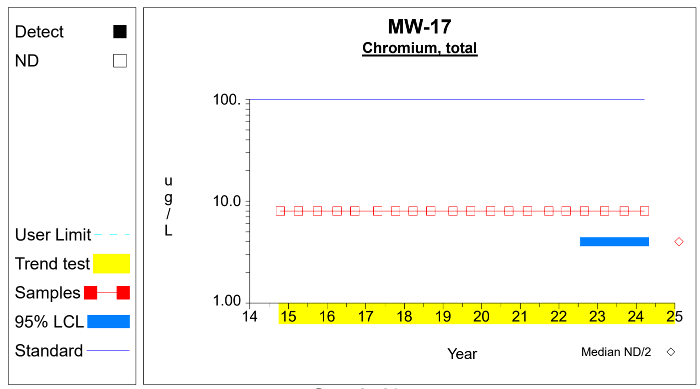

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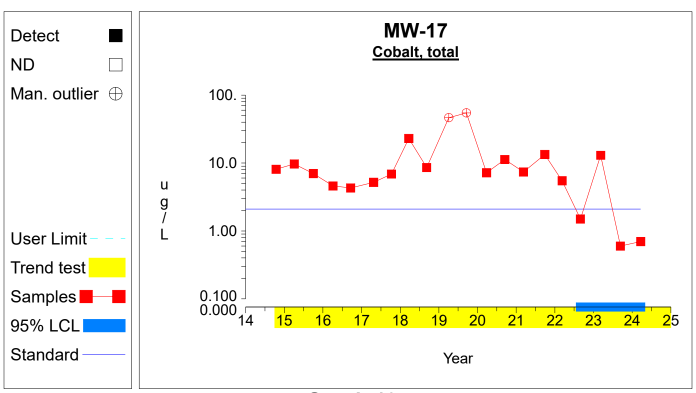
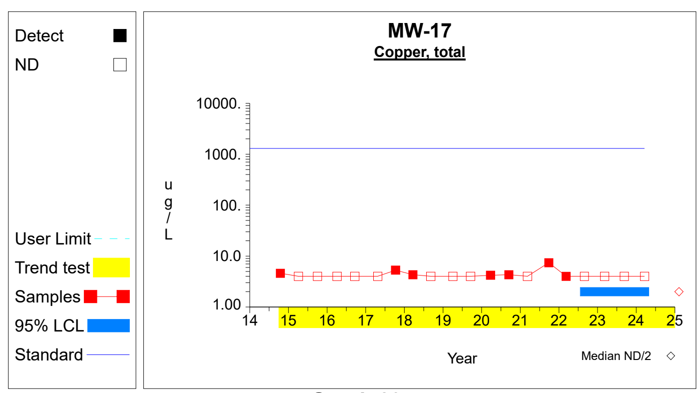
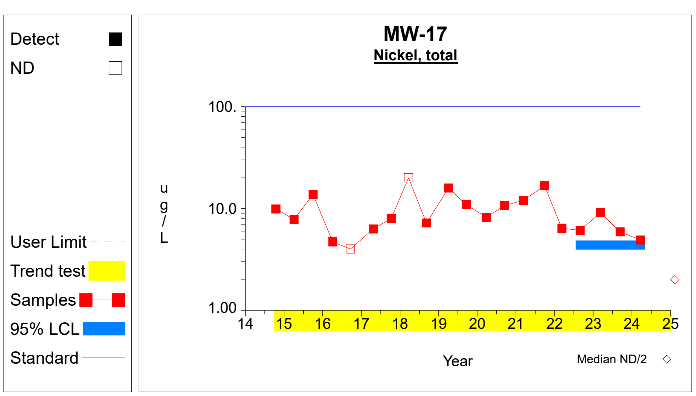


Graph 19



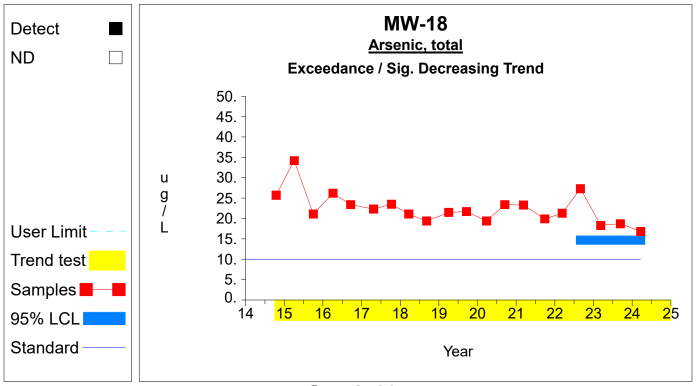
Graph 20



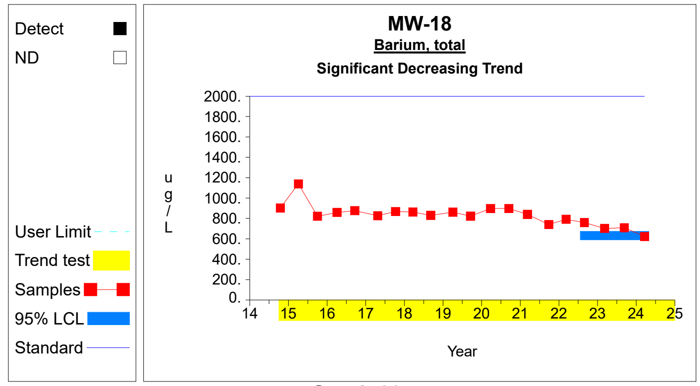
Graph 21

South Dallas [APPI] April 2024

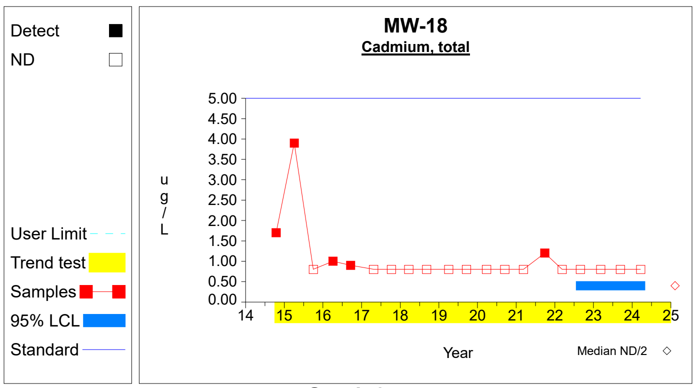
Confidence Limits (Assessment)



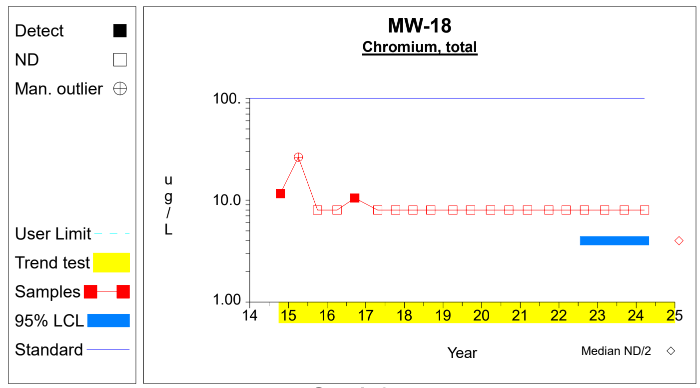
Graph 22



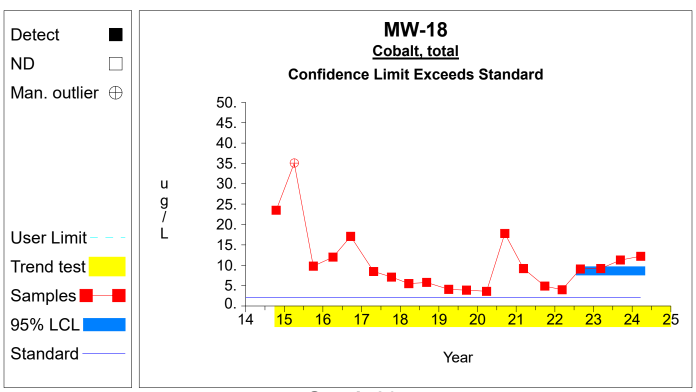
Graph 23



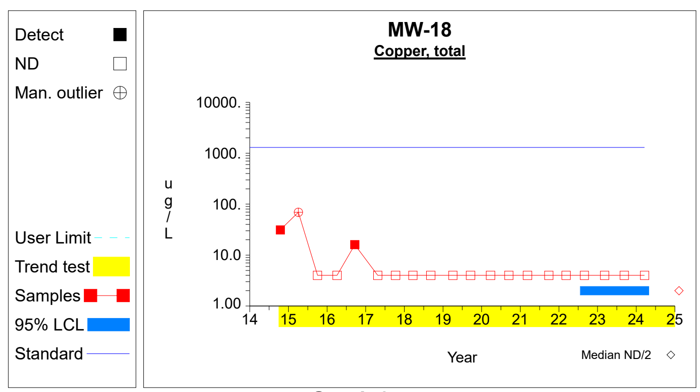
Graph 24



Graph 25



Graph 26



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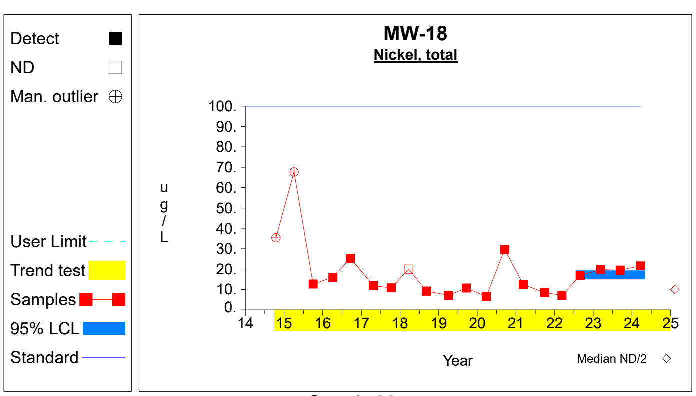
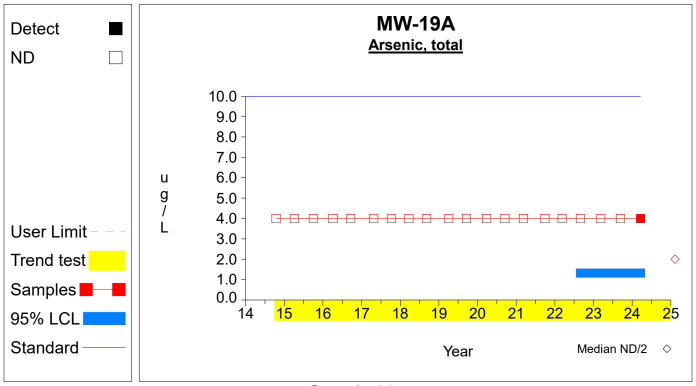


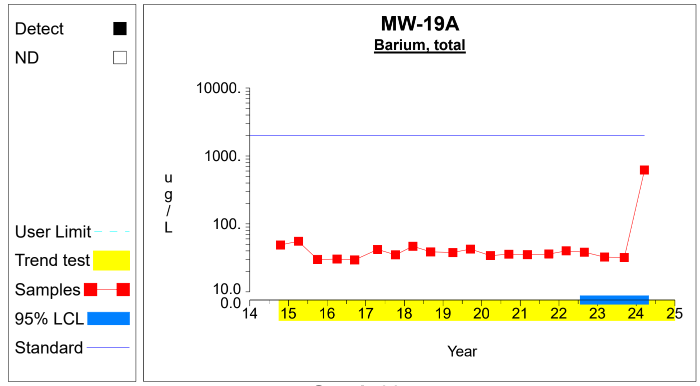
Graph 28

Prepared by: Otter Creek Environmental

Confidence Limits (Assessment)



Graph 29



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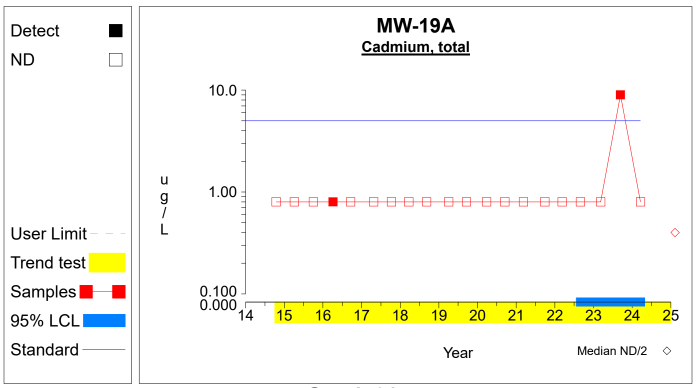

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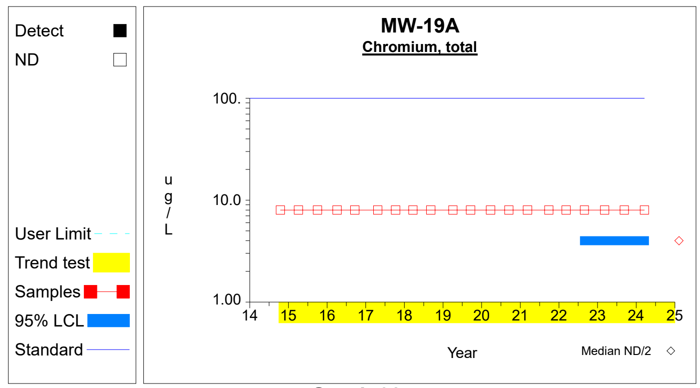

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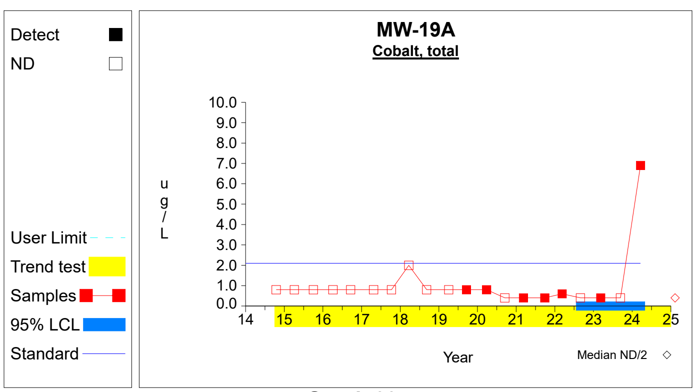

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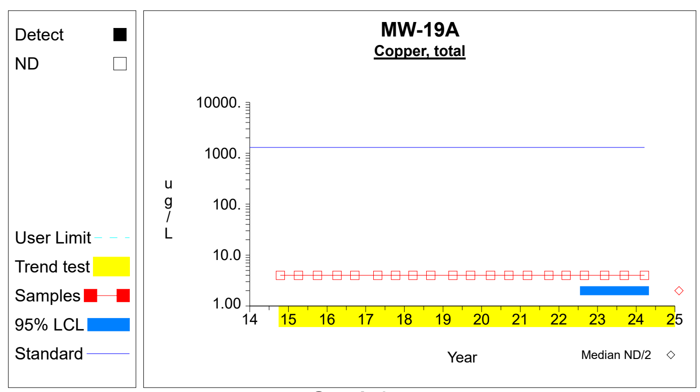
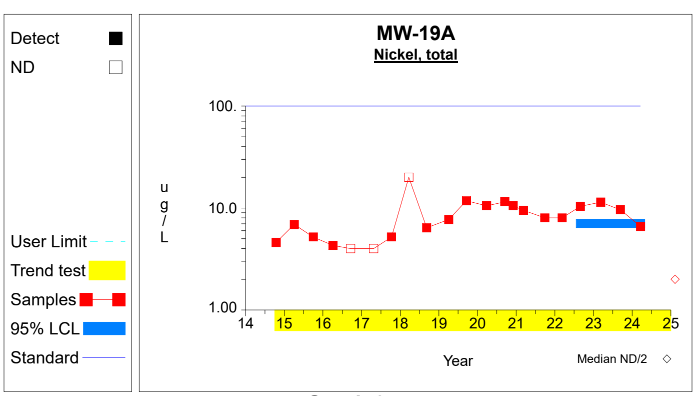
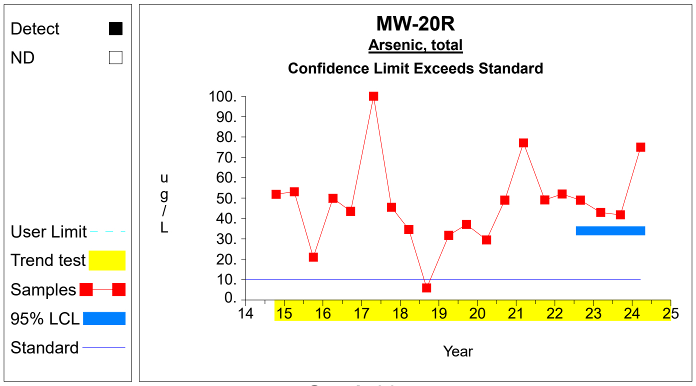


Graph 34

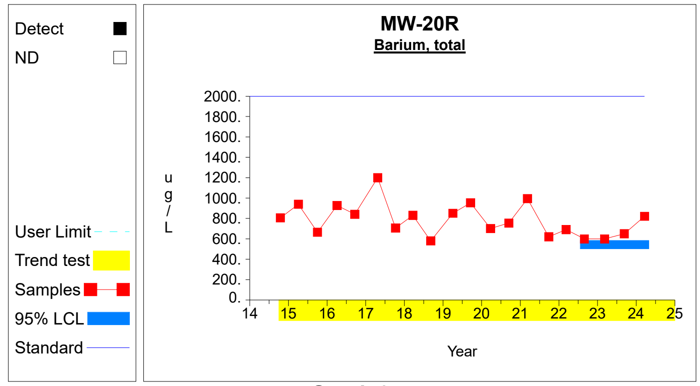


Graph 35

Confidence Limits (Assessment)



Graph 36



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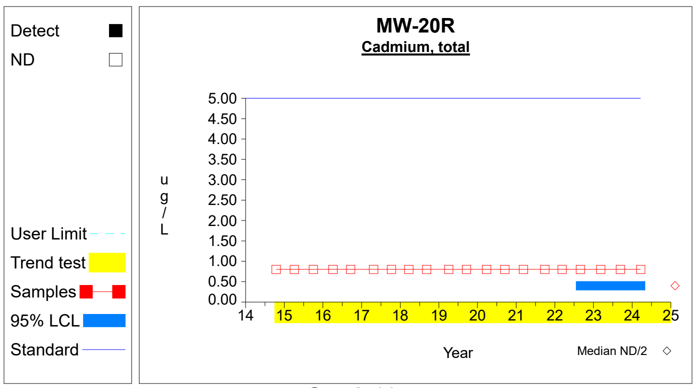

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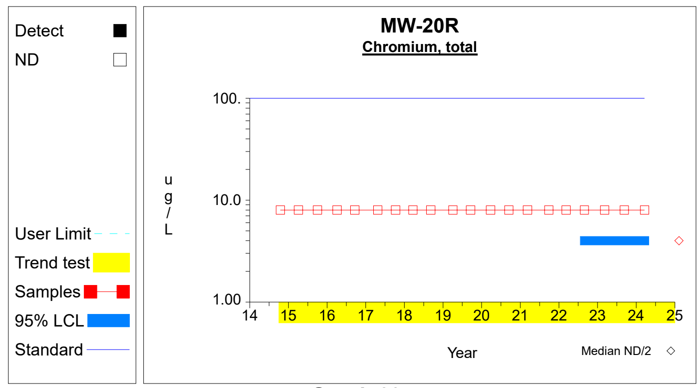

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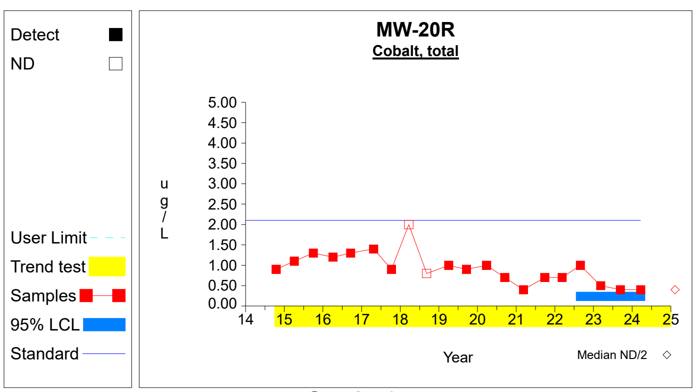

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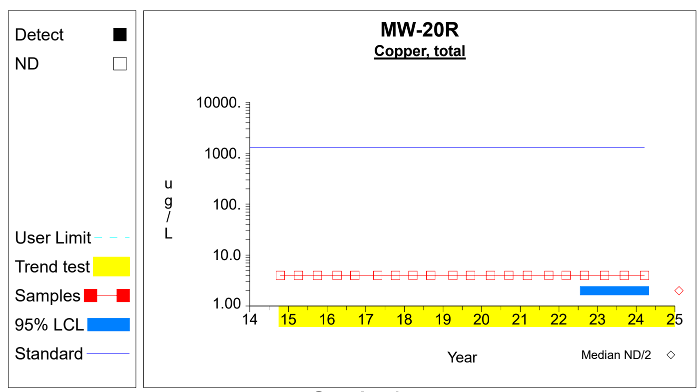
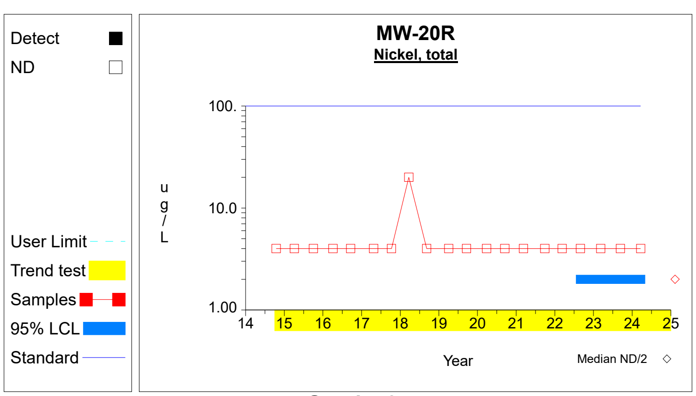
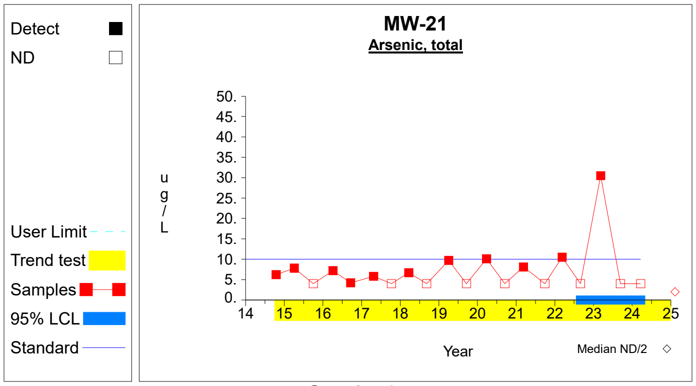


Graph 41

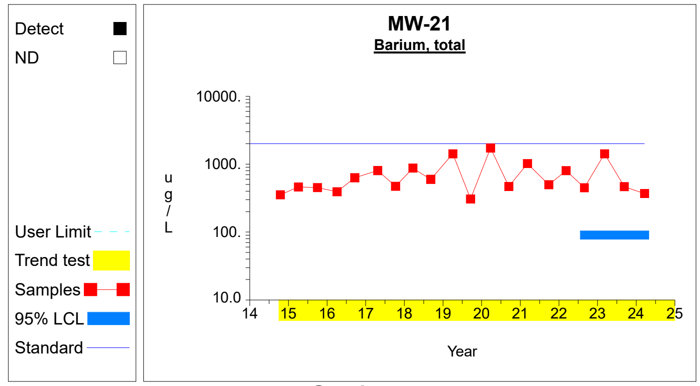


Graph 42

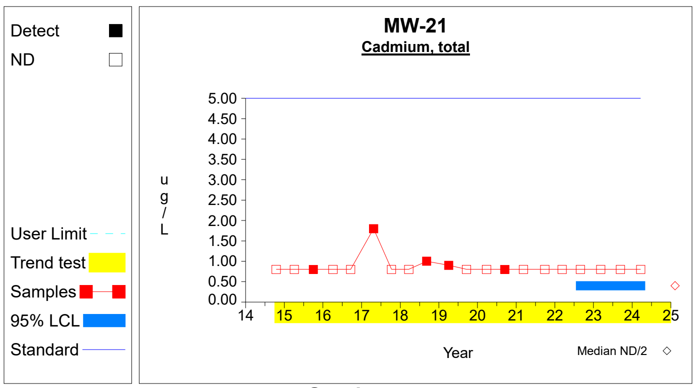
Confidence Limits (Assessment)



Graph 43



Graph 44



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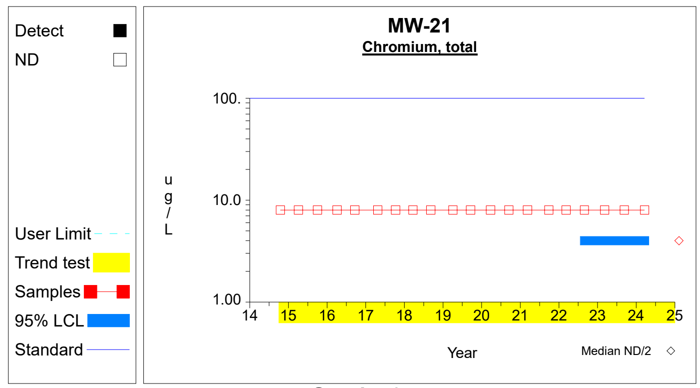

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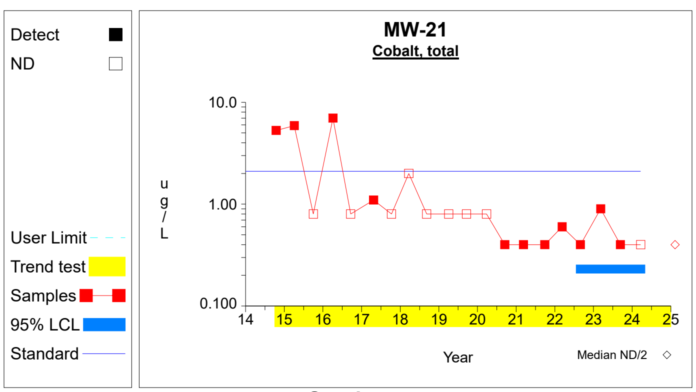

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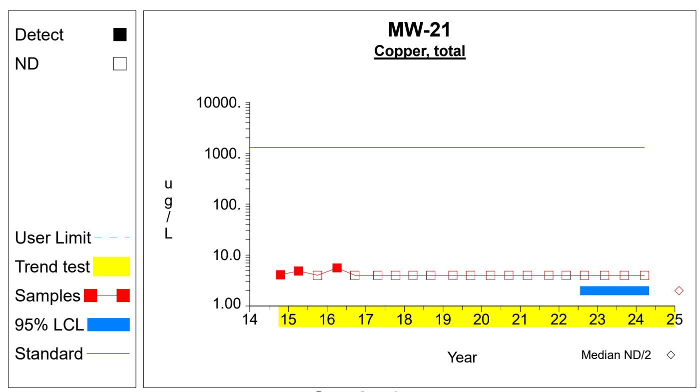

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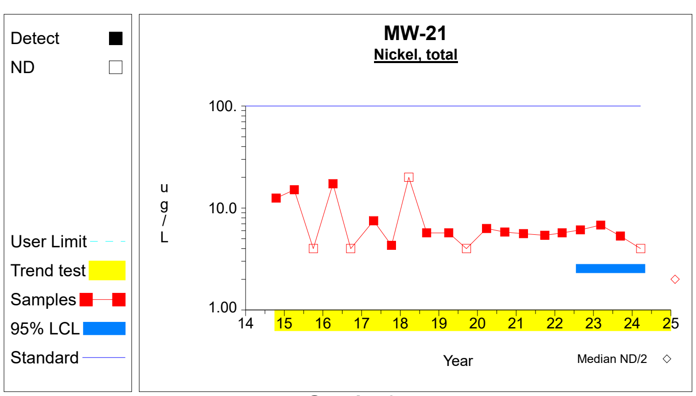
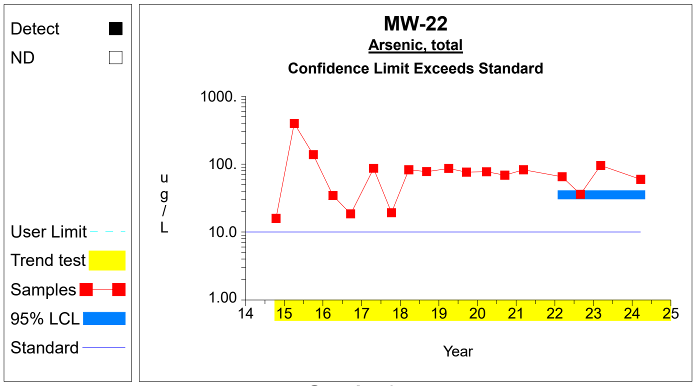


Graph 49

Confidence Limits (Assessment)



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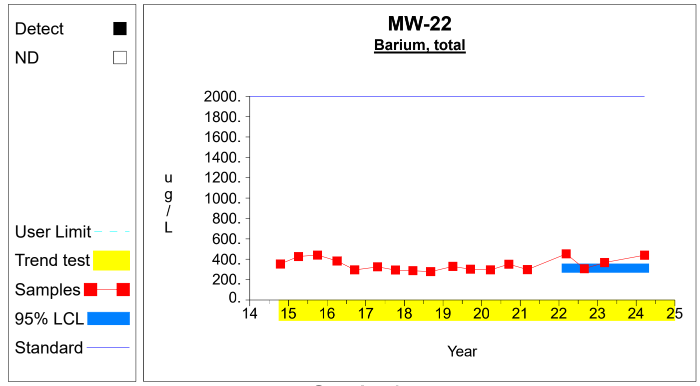
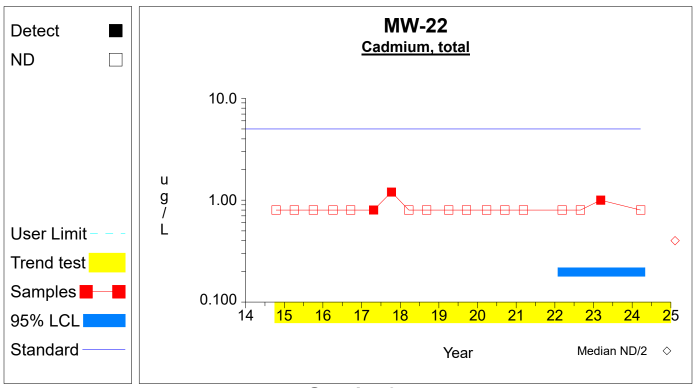
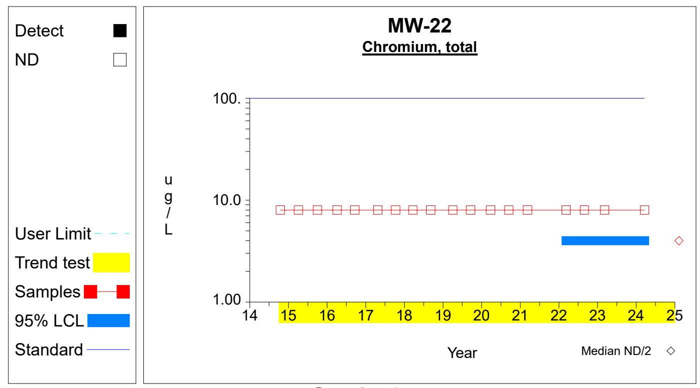


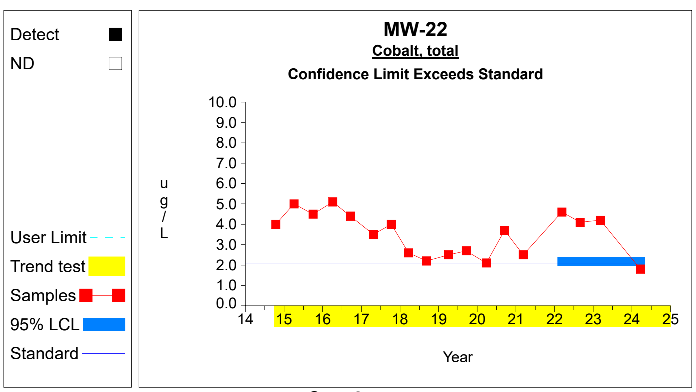
Graph 51



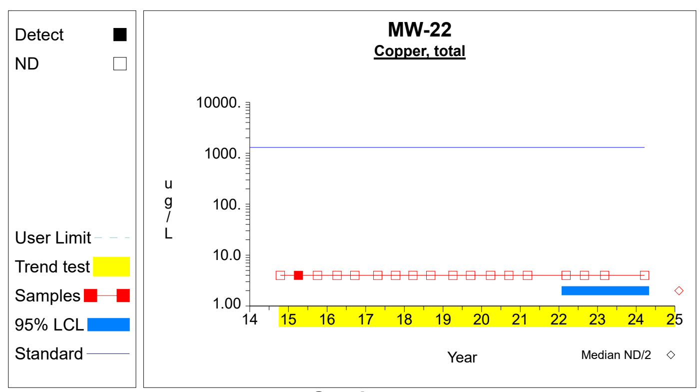
Graph 52



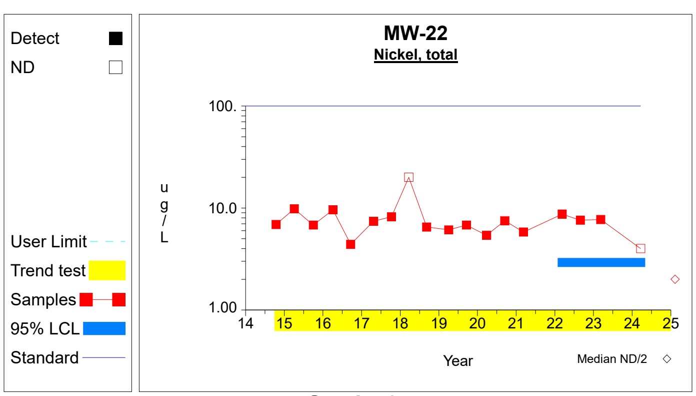
Graph 53



Graph 54

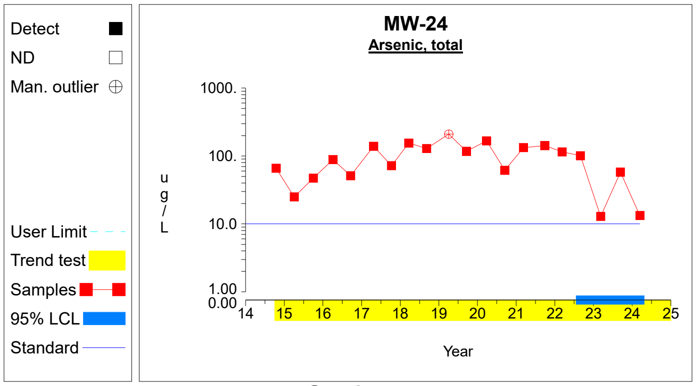


Graph 55

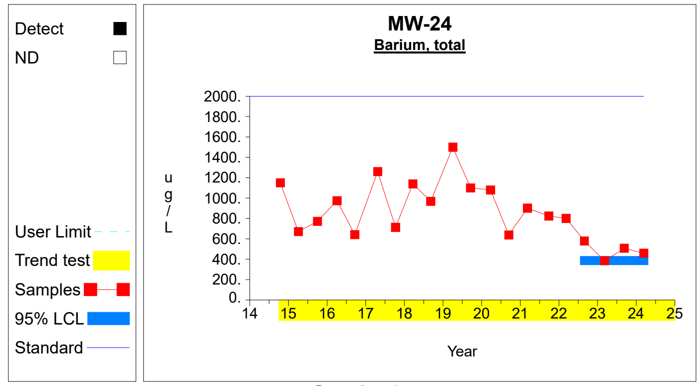


Graph 56

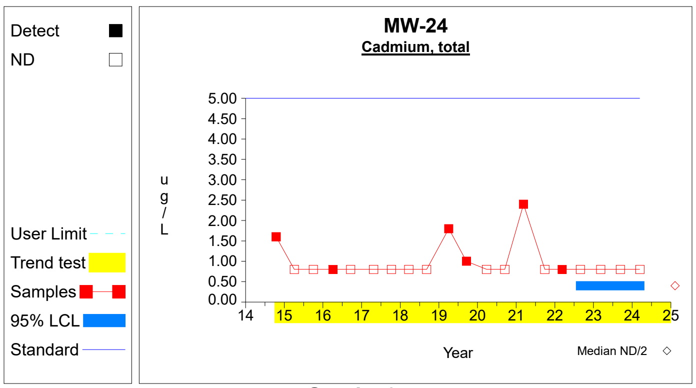
Confidence Limits (Assessment)



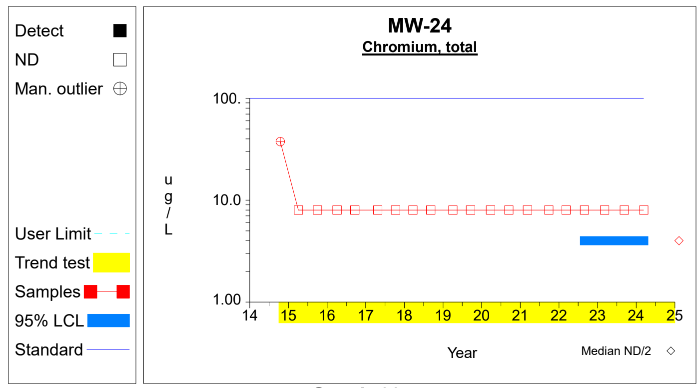
Graph 57



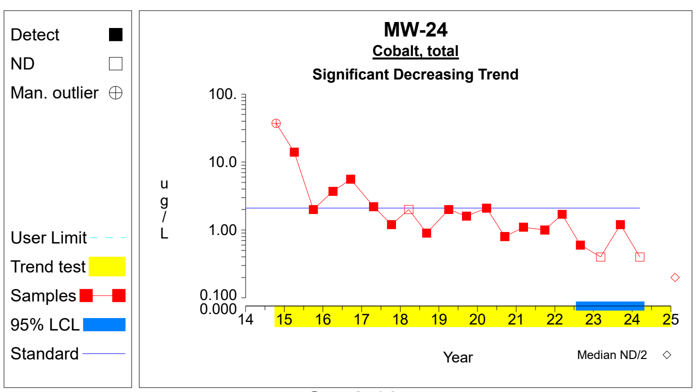
Graph 58



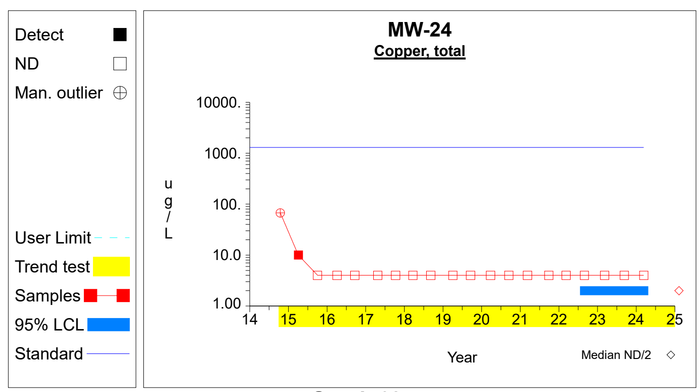
Graph 59



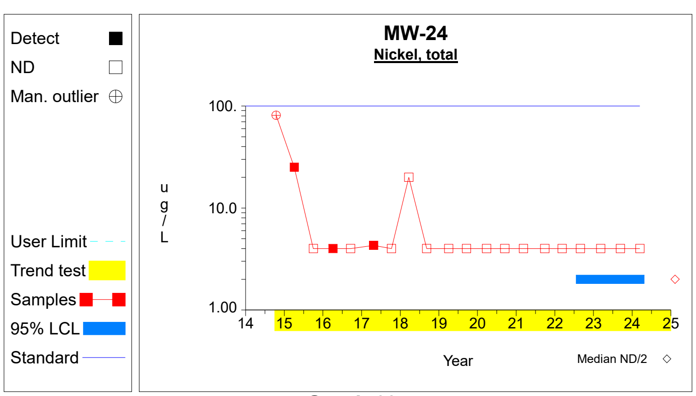
Graph 60



Graph 61

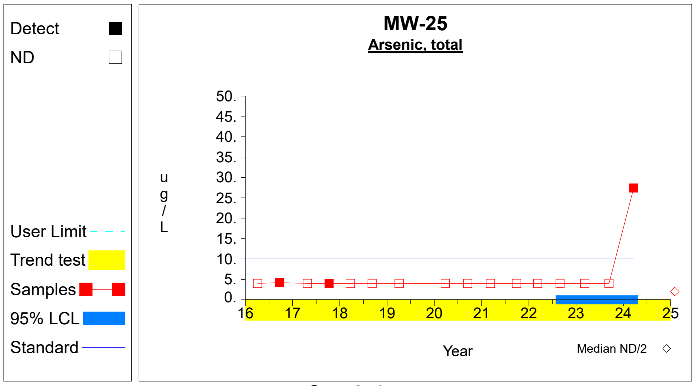


Graph 62

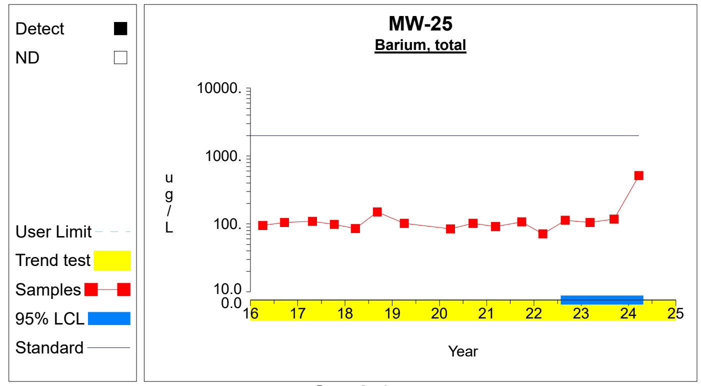


Graph 63

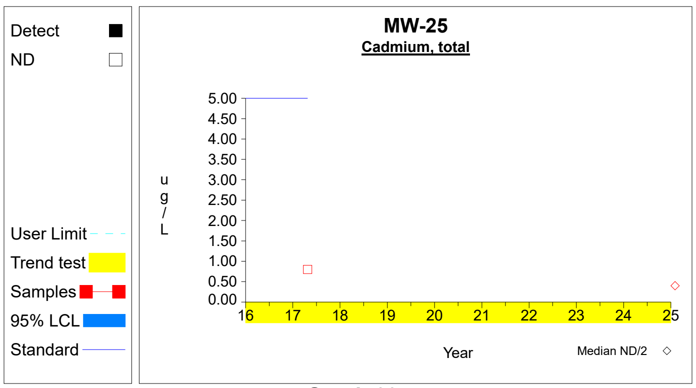
Confidence Limits (Assessment)



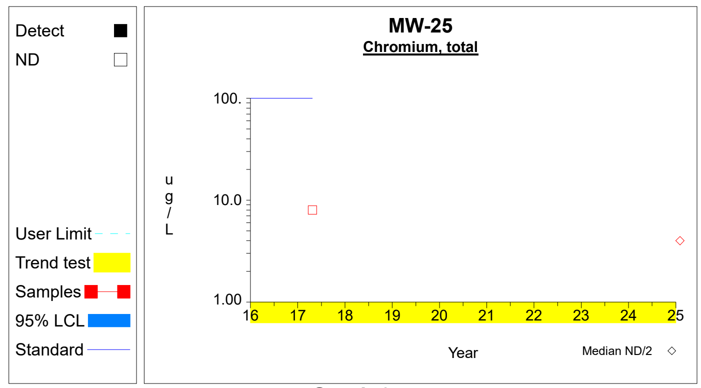
Graph 64



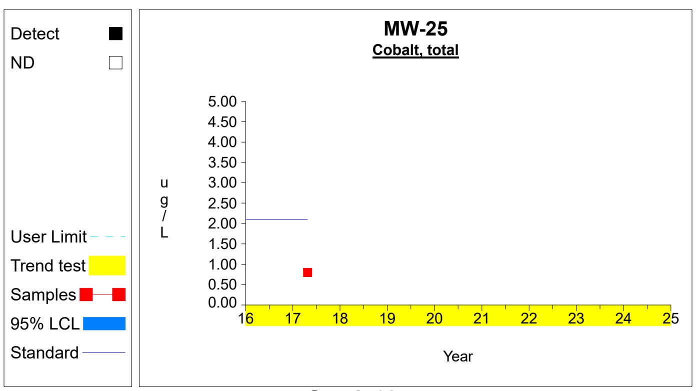
Graph 65



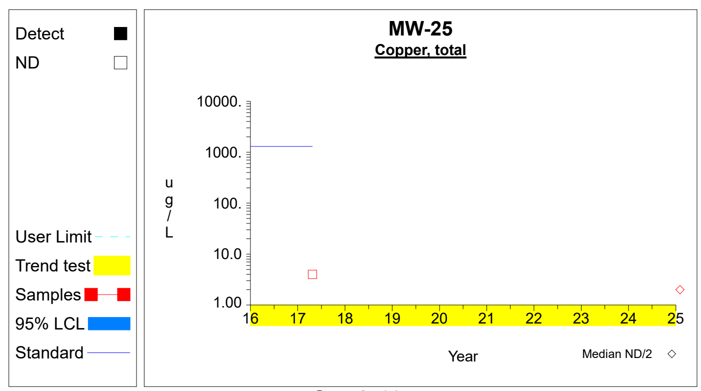
Graph 66



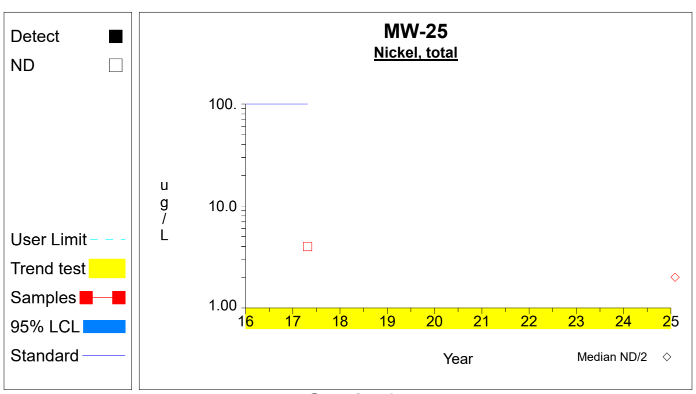
Graph 67



Graph 68

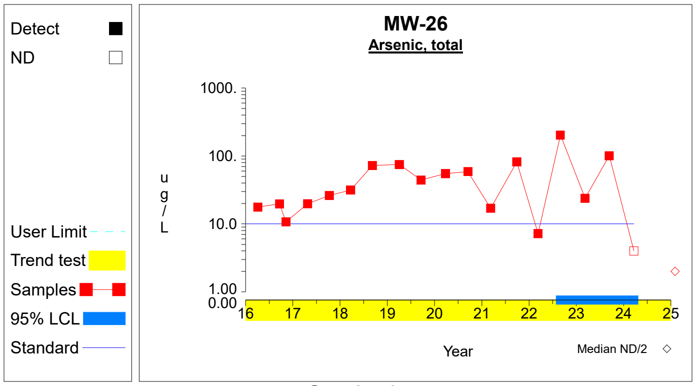


Graph 69

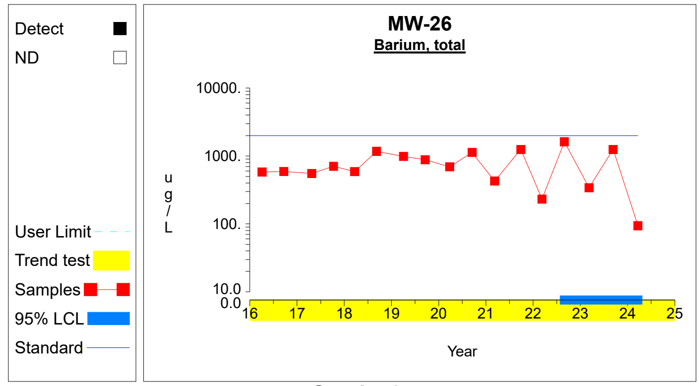


Graph 70

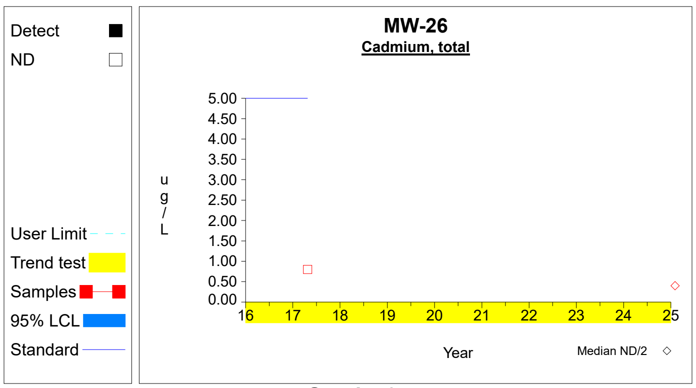
Confidence Limits (Assessment)



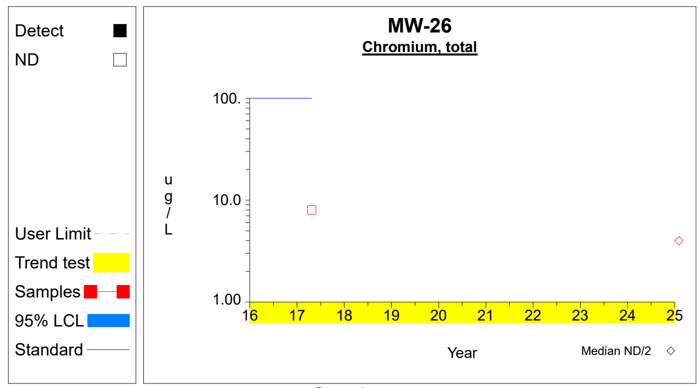
Graph 71



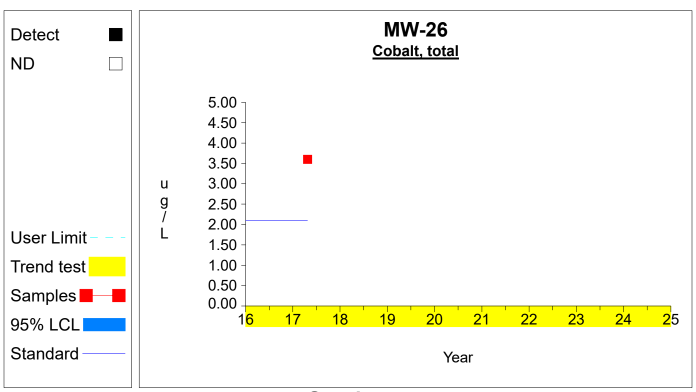
Graph 72



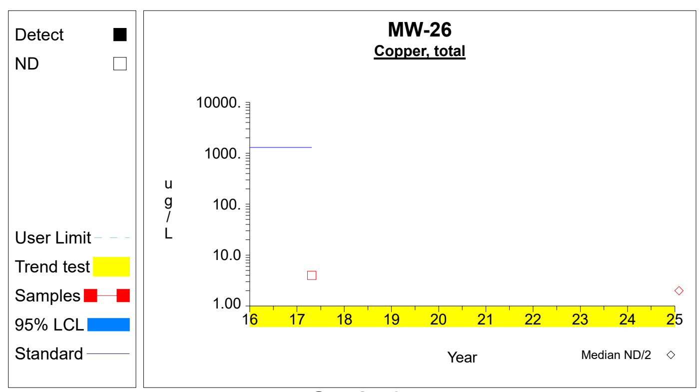
Graph 73



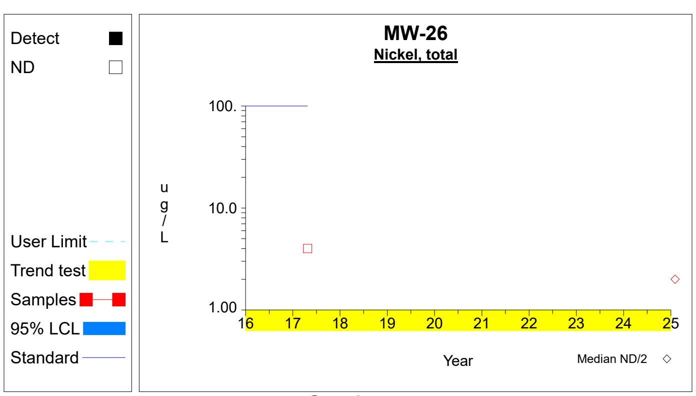
Graph 74



Graph 75

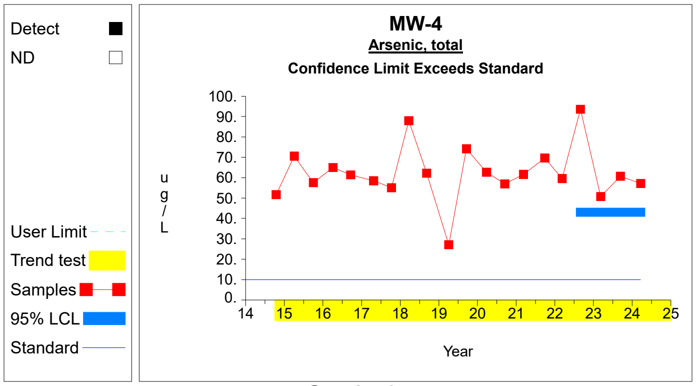


Graph 76

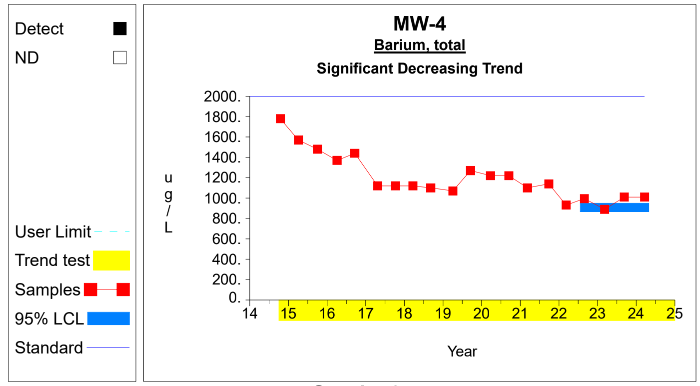


Graph 77

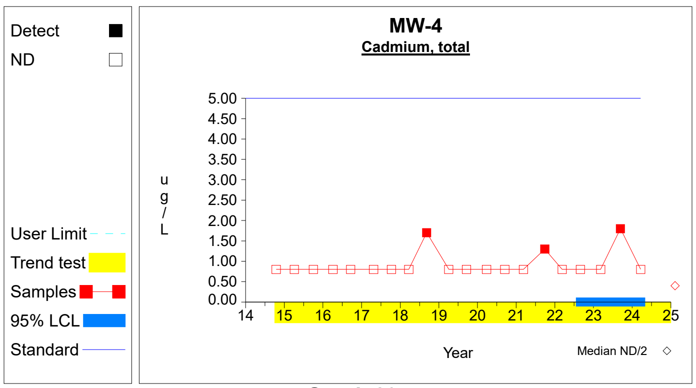
Confidence Limits (Assessment)



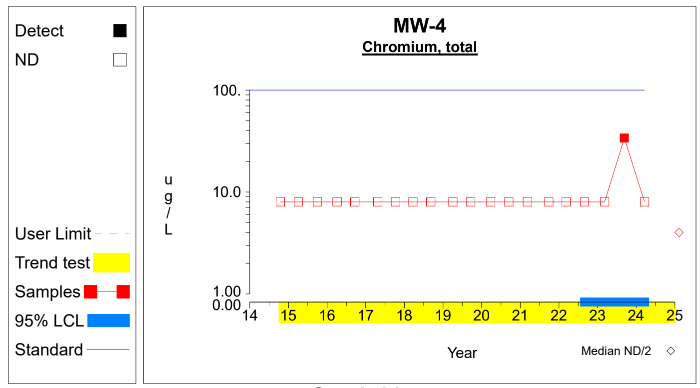
Graph 78



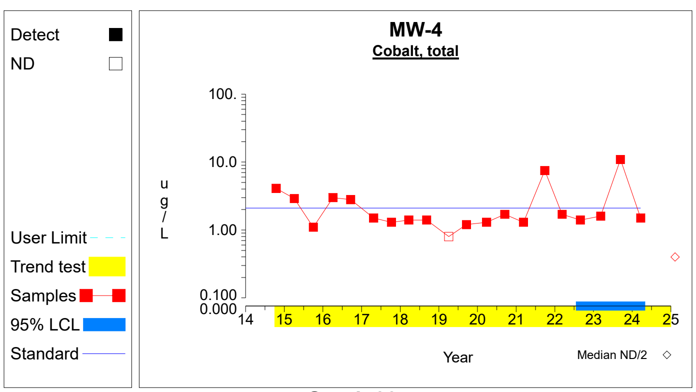
Graph 79



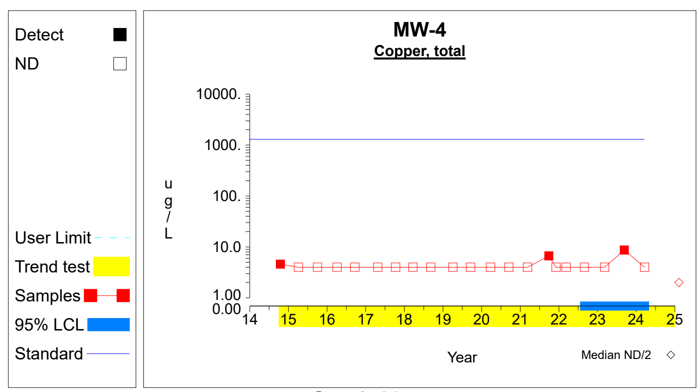
Graph 80



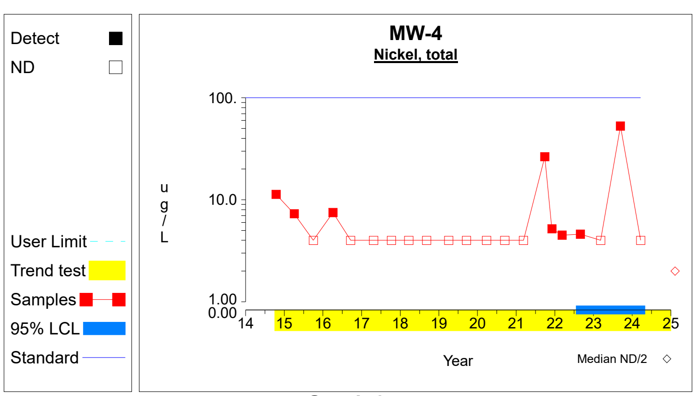
Graph 81



Graph 82

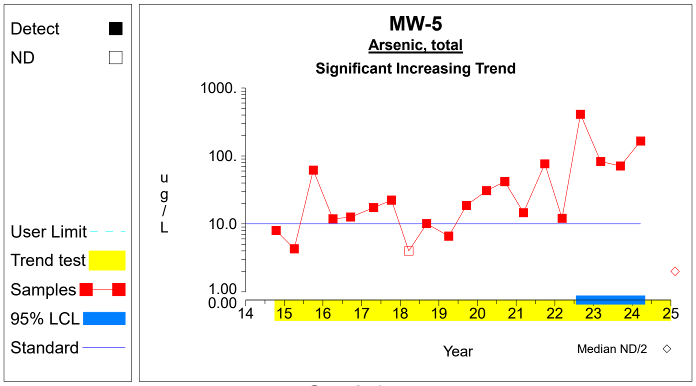


Graph 83

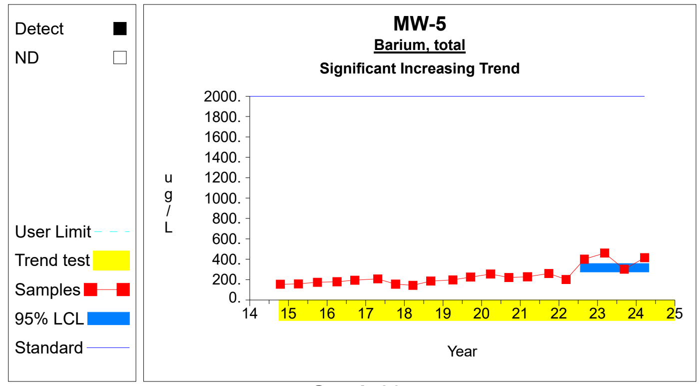


Graph 84

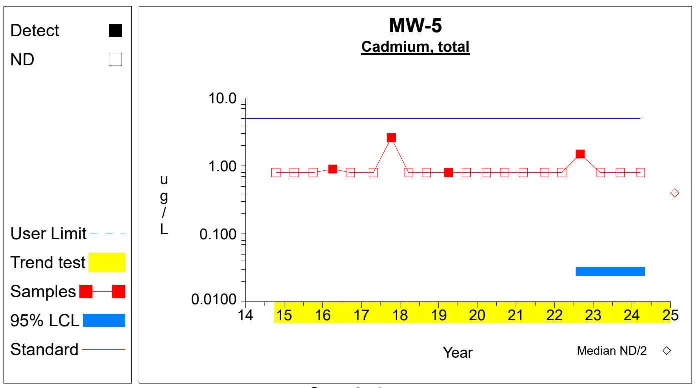
Confidence Limits (Assessment)



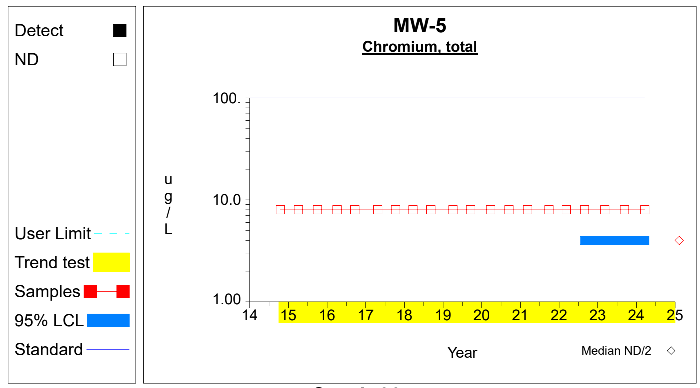
Graph 85



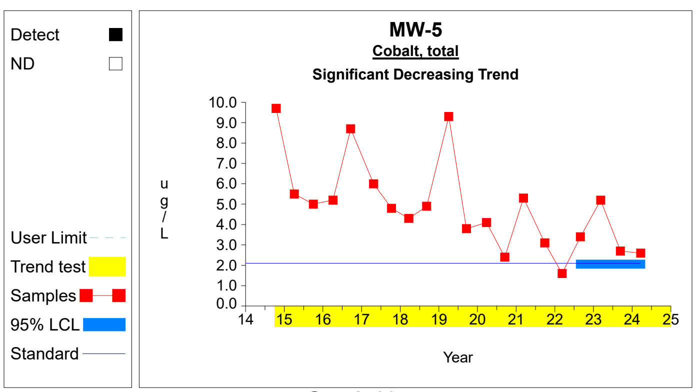
Graph 86



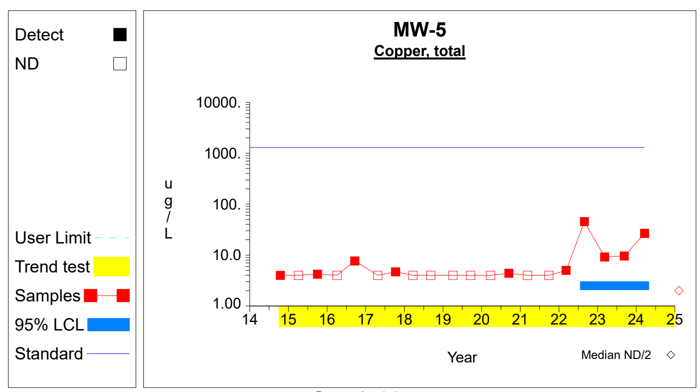
Graph 87



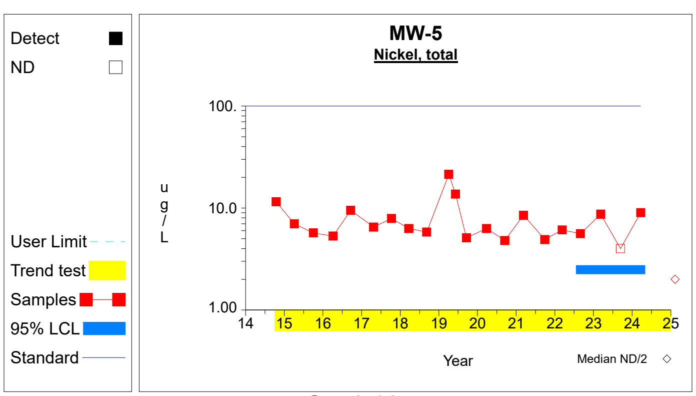
Graph 88



Graph 89

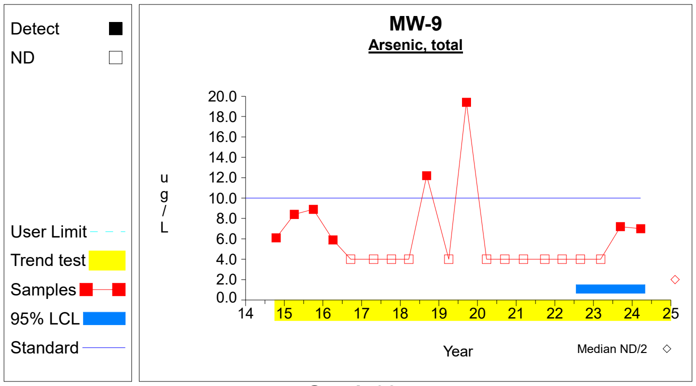


Graph 90

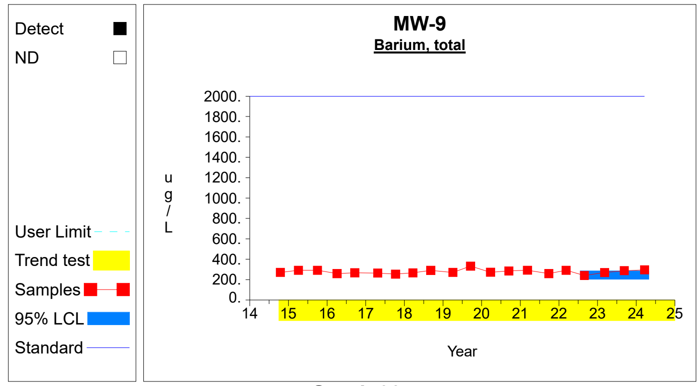


Graph 91

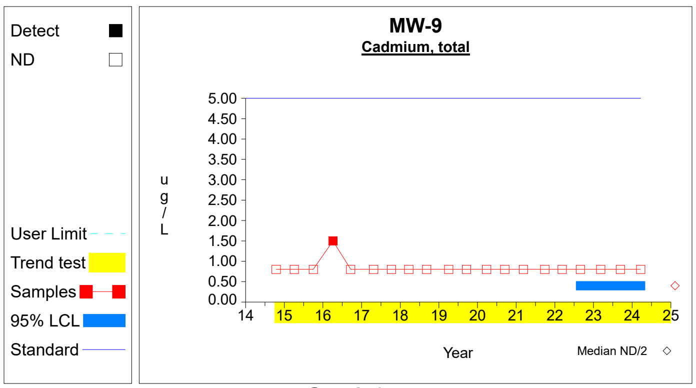
Confidence Limits (Assessment)



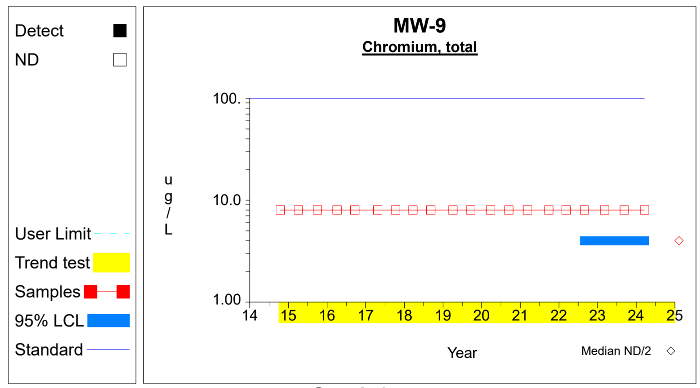
Graph 92



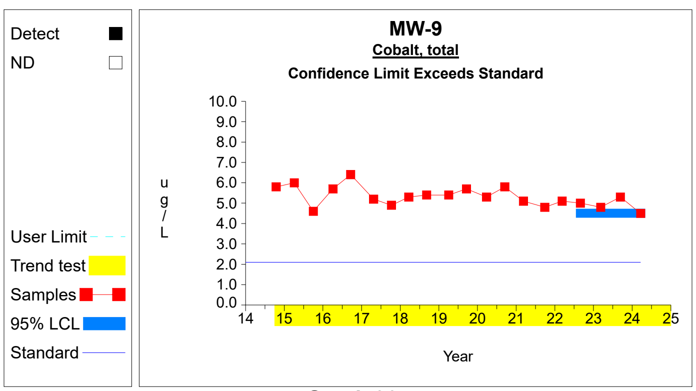
Graph 93



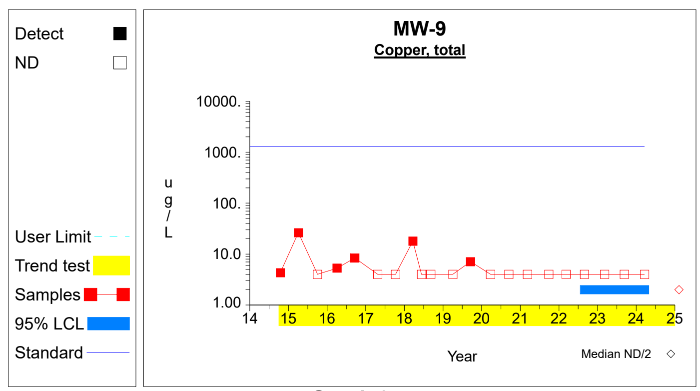
Graph 94



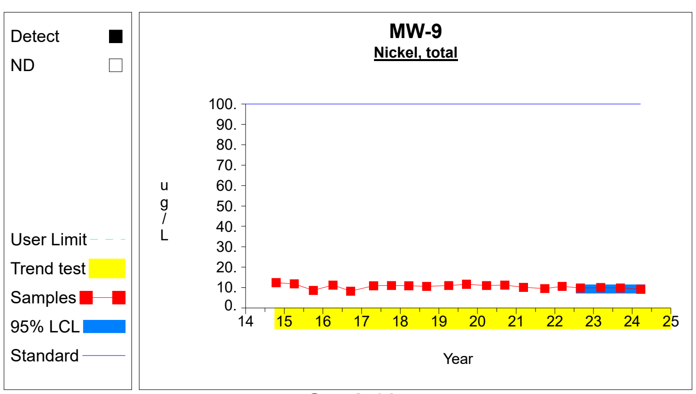
Graph 95



Graph 96



Graph 97



Graph 98

Attachment D

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-12	13	7	37			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-12	13	7	37	6.1846	2.8933	8.7000	12.0000	23.8115	27.4569	24.9913	normal		
Barium, total	ug/L	MW-12	13	7	37	396.8462	79.3304	285.0000	324.0000	396.8462	396.8462	912.4936	normal		
Beryllium, total	ug/L	MW-12	13	7	37			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-12	13	7	37			0.8000	0.8000			1.6000	nonpar	.99	**
Chromium, total	ug/L	MW-12	13	7	37			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-12	13	7	37	6.4692	5.0981	1.8000	3.4000	6.4692	6.4692	39.6069	normal		
Copper, total	ug/L	MW-12	13	7	37			4.0000	4.0000			6.3000	nonpar	.99	**
Lead, total	ug/L	MW-12	13	7	37			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-12	13	7	37	8.6846	4.9056	4.1000	6.1000	8.6846	8.6846	40.5709	normal		
Selenium, total	ug/L	MW-12	13	7	37			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-12	13	7	37			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-12	13	7	37			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-12	13	7	37			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-12	12	7	37								nonpar *		**
Antimony, total	ug/L	MW-15R	13	7	32			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-15R	13	7	32	28.6385	7.9813	20.1000	13.3000	28.6385	28.6385	80.5168	normal		
Barium, total	ug/L	MW-15R	13	7	32	499.6923	68.6384	354.0000	318.0000	499.6923	499.6923	945.8419	normal		
Beryllium, total	ug/L	MW-15R	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-15R	13	7	32			0.8000	0.8000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-15R	13	7	32			8.0000	8.0000			13.7000	nonpar	.99	**
Cobalt, total	ug/L	MW-15R	13	7	32	3.8462	1.1738	3.8000	2.2000	3.8462	3.8462	11.4755	normal		
Copper, total	ug/L	MW-15R	12	7	32	4.5583	1.3228	4.0000	4.0000	4.5583	4.5583	13.1568	normal		
Lead, total	ug/L	MW-15R	13	7	32			4.0000	4.0000			10.0000	nonpar	.99	**
Nickel, total	ug/L	MW-15R	11	7	32	5.0182	1.9312	4.2000	4.0000	5.0182	5.0182	17.5712	normal		
Selenium, total	ug/L	MW-15R	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-15R	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-15R	13	7	32			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-15R	13	7	32			20.0000	20.0000			27.9000	nonpar	.99	**
Zinc, total	ug/L	MW-15R	13	7	32	20.3769	23.4020	20.0000	20.0000	20.3769	20.3769	172.4897	normal		
Antimony, total	ug/L	MW-20R	13	7	32			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-20R	12	7	32	45.5667	19.8645	41.8000	75.0000	45.5667	60.1016	174.6860	normal		
Barium, total	ug/L	MW-20R	13	7	32	827.3846	158.7737	650.0000	821.0000	827.3846	827.3846	1859.4137	normal		
Beryllium, total	ug/L	MW-20R	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-20R	13	7	32			0.8000	0.8000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-20R	13	7	32			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-20R	13	7	32	1.0231	0.2204	0.4000	0.4000	1.0231	1.0231	2.4559	normal		
Copper, total	ug/L	MW-20R	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-20R	13	7	32			4.0000	4.0000			4.1000	nonpar	.99	**
Nickel, total	ug/L	MW-20R	12	7	32								nonpar *		**
Selenium, total	ug/L	MW-20R	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-20R	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-20R	13	7	32			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-20R	13	7	32			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-20R	12	7	32	9.7833	3.2566	20.0000	20.0000	9.7833	9.7833	30.9509	normal		
Antimony, total	ug/L	MW-21	13	7	32			2.0000	2.0000			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 verification resample (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-21	13	7	32	5.9769	2.2170	4.0000	4.0000	5.9769	5.9769	20.3877	normal		
Barium, total	ug/L	MW-21	13	7	32	689.6154	430.9446	465.0000	369.0000	689.6154	689.6154	3490.7553	normal		
Beryllium, total	ug/L	MW-21	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-21	13	7	32	0.9000	0.2769	0.8000	0.8000	0.9000	0.9000	2.6998	normal		
Chromium, total	ug/L	MW-21	13	7	32			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-21	13	7	32	2.0077	2.3450	0.4000	0.4000	2.0077	2.0077	17.2503	normal		
Copper, total	ug/L	MW-21	13	7	32			4.0000	4.0000			5.6000	nonpar	.99	**
Lead, total	ug/L	MW-21	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-21	13	7	32	7.4000	4.5527	5.3000	4.0000	7.4000	7.4000	36.9923	normal		
Selenium, total	ug/L	MW-21	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-21	13	7	32			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-21	13	7	32			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-21	13	7	32			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-21	13	7	32	12.8000	9.1223	20.0000	20.0000	12.8000	12.8000	72.0951	normal		
Antimony, total	ug/L	MW-22	13	5	29			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-22	13	5	29	90.7692	98.6890	95.5000	59.8000	90.7692	90.7692	732.2477	normal		
Barium, total	ug/L	MW-22	13	5	29	335.3846	53.2127	367.0000	439.0000	335.5022	399.2081	681.2671	normal		
Beryllium, total	ug/L	MW-22	13	5	29			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-22	13	5	29			1.0000	0.8000			1.2000	nonpar	.99	**
Chromium, total	ug/L	MW-22	13	5	29			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-22	13	5	29	3.5615	1.0492	4.2000	1.8000	3.5615	3.5615	10.3816	normal		
Copper, total	ug/L	MW-22	13	5	29			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-22	13	5	29			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-22	13	5	29	8.1077	3.8727	7.7000	4.0000	8.1077	8.1077	33.2799	normal		
Selenium, total	ug/L	MW-22	13	5	29			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-22	13	5	29			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-22	13	5	29			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-22	13	5	29			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-22	13	5	29			20.0000	20.0000			37.0000	nonpar	.99	**
Antimony, total	ug/L	MW-4	13	7	36			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-4	13	7	36	60.8538	13.9042	60.7000	57.2000	60.8538	60.8538	151.2314	normal		
Barium, total	ug/L	MW-4	13	7	36	1298.4615	216.7889	1010.0000	1010.0000	1298.4615	1298.4615	2707.5895	normal		
Beryllium, total	ug/L	MW-4	13	7	36			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-4	13	7	36			1.8000	0.8000			1.7000	nonpar	.99	**
Chromium, total	ug/L	MW-4	13	7	36			33.9000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-4	13	7	36	1.8846	0.9839	10.9000	1.5000	11.8719	2.4719	8.2800	normal		
Copper, total	ug/L	MW-4	13	8	37			8.7000	4.0000			4.6000	nonpar	.99	**
Lead, total	ug/L	MW-4	13	7	36			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-4	13	8	37			52.8000	4.0000			11.3000	nonpar	.99	**
Selenium, total	ug/L	MW-4	13	7	36			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-4	13	7	36			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-4	13	7	36			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-4	13	7	36			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-4	13	7	36	25.0077	33.8016	75.7000	20.0000	50.3488	25.0077	244.7180	normal		
Antimony, total	ug/L	MW-5	13	7	37			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-5	13	7	37	19.2769	16.8417	71.1000	166.0000	134.5442	229.4442	128.7478	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 verification resample (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-5	13	7	37	188.3846	32.6408	302.0000	415.0000	326.9237	529.0585	400.5499	normal		
Beryllium, total	ug/L	MW-5	13	7	37			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-5	12	7	37								nonpar *		**
Chromium, total	ug/L	MW-5	13	7	37			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-5	13	7	37	5.6692	2.2228	2.7000	2.6000	5.6692	5.6692	20.1171	normal		
Copper, total	ug/L	MW-5	13	7	37	4.3846	1.0189	9.6000	26.8000	12.8871	30.0871	11.0072	normal		
Lead, total	ug/L	MW-5	13	7	37			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-5	14	7	38	8.3429	4.5574	4.0000	9.0000	8.3429	8.3429	37.9663	normal		
Selenium, total	ug/L	MW-5	13	7	37			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-5	13	7	37			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-5	13	7	37			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-5	13	7	37			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-5	13	7	37	15.4385	20.1427	20.0000	20.0000	15.4385	15.4385	146.3659	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 verification resample (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
Zinc, total	ug/L	MW-12	09/07/2018	98.8000		10/16/2014-09/15/2020	13	0.6174
Copper, total	ug/L	MW-15R	10/16/2014	14.2000		10/16/2014-09/15/2020	13	0.6174
Nickel, total	ug/L	MW-15R	10/16/2014	15.0000		10/16/2014-09/15/2020	13	0.6425
Nickel, total	ug/L	MW-15R	03/21/2018	20.0000	< 20.0000	10/16/2014-09/15/2020	13	0.6425
Arsenic, total	ug/L	MW-20R	09/07/2018	5.9000		10/16/2014-09/15/2020	13	0.6174
Nickel, total	ug/L	MW-20R	03/21/2018	20.0000	< 20.0000	10/16/2014-09/15/2020	13	0.6174
Zinc, total	ug/L	MW-20R	09/07/2018	115.0000		10/16/2014-09/15/2020	13	0.6174
Cadmium, total	ug/L	MW-5	10/09/2017	2.6000		10/16/2014-09/15/2020	13	0.6174

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.

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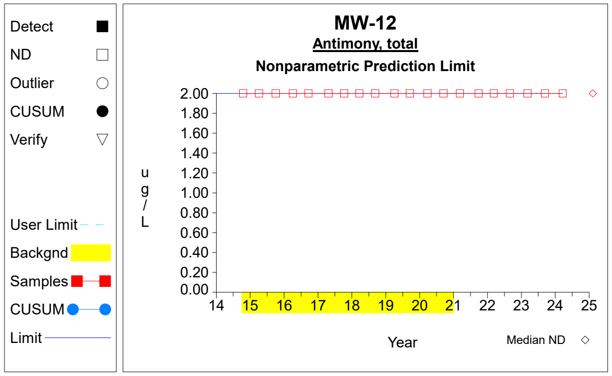
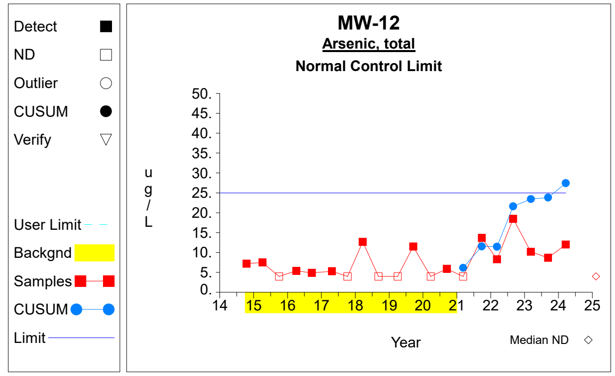
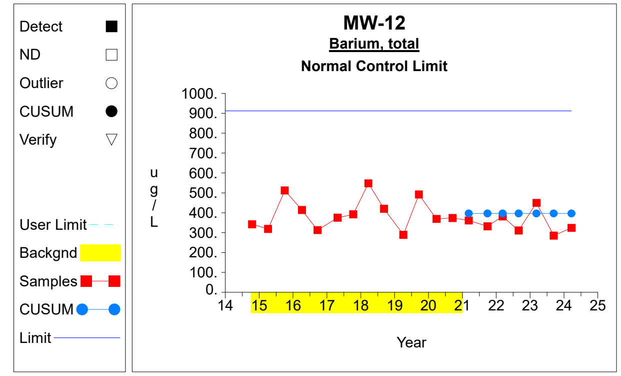


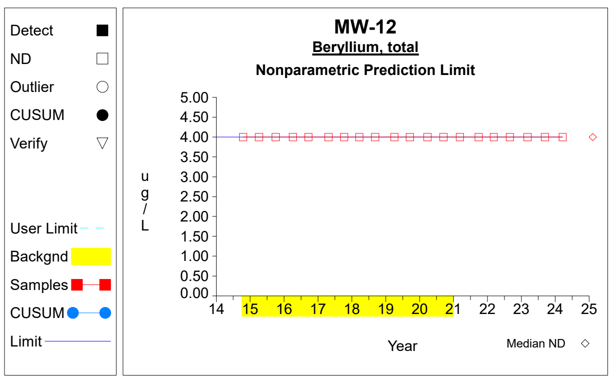
Graph 1



Graph 2



Graph 3



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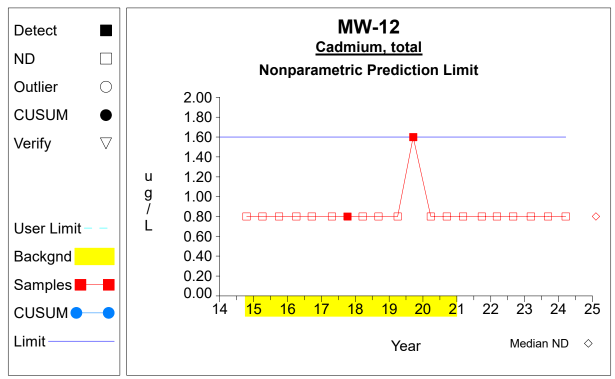

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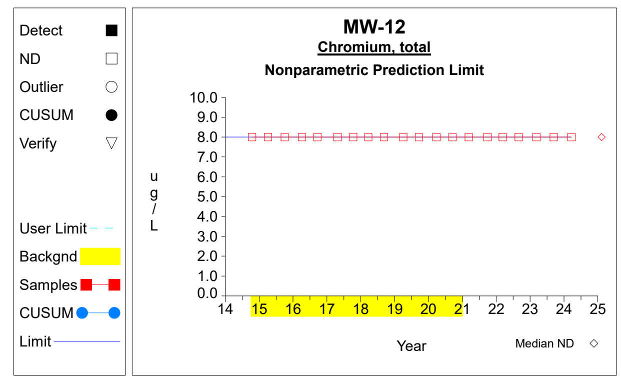

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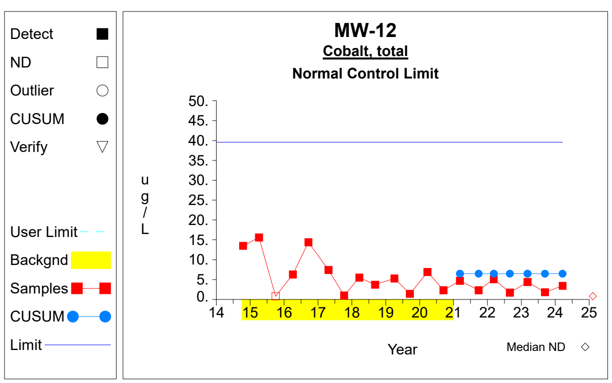

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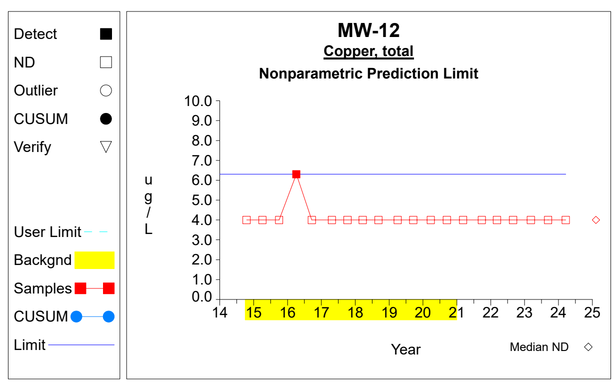

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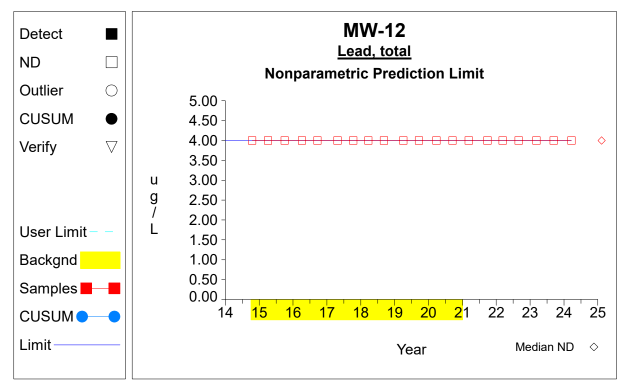

Graph 9

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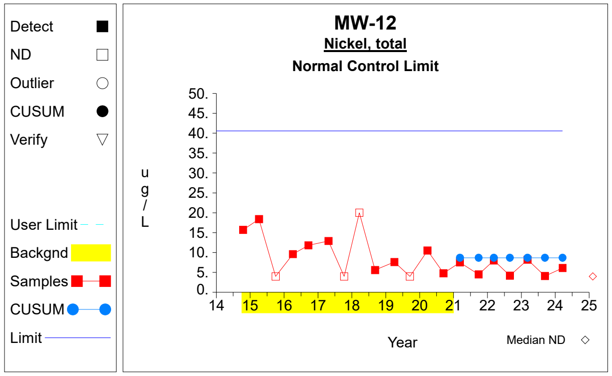
Intra-Well Control Charts / Prediction Limits



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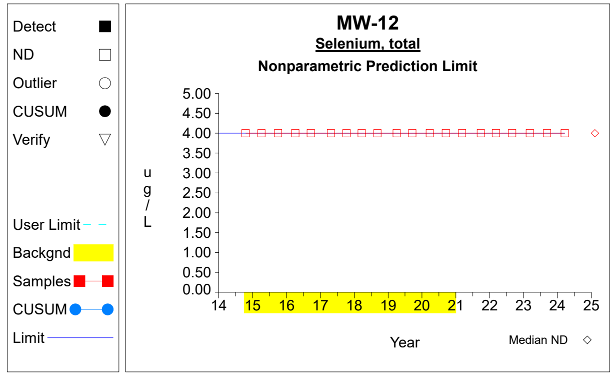

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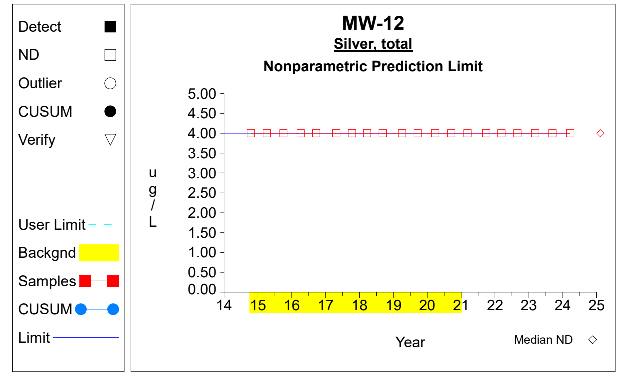

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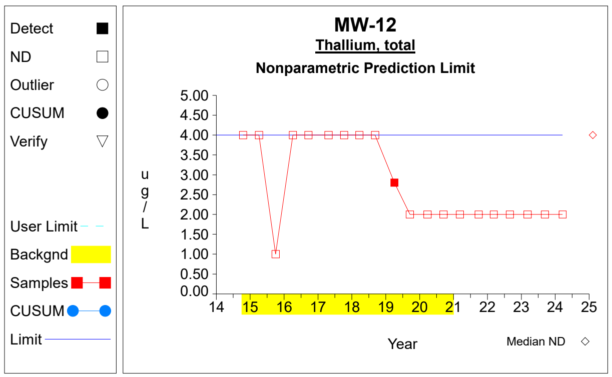

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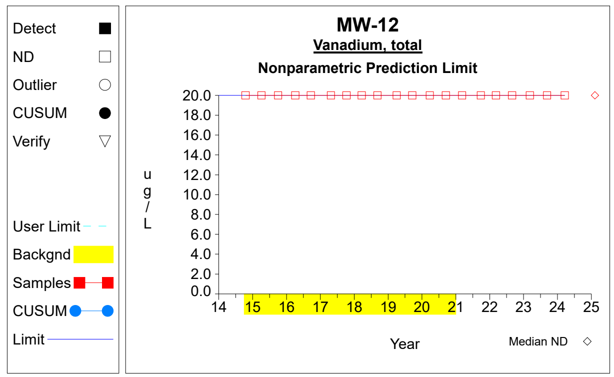

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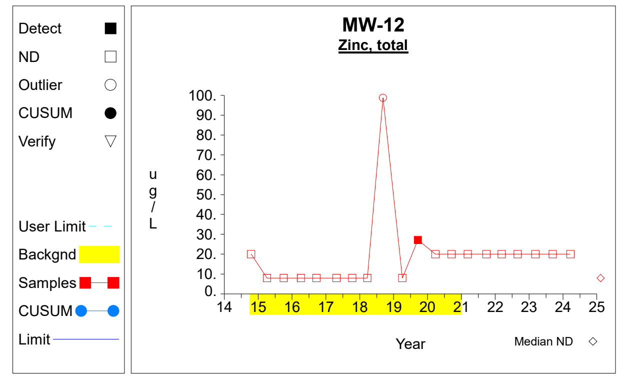

Graph 15

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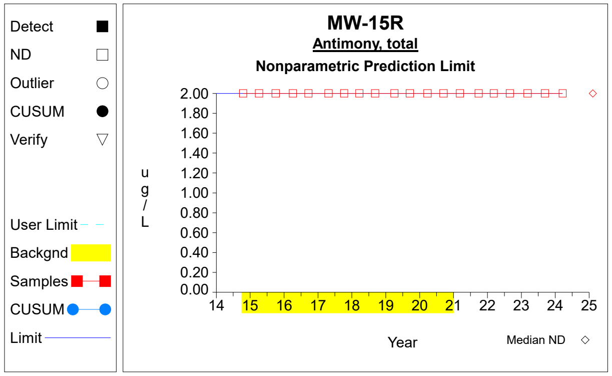

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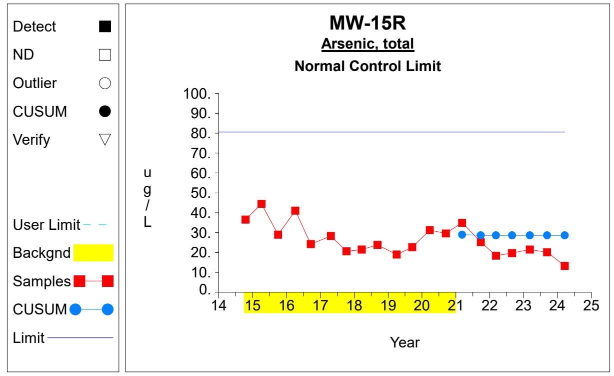

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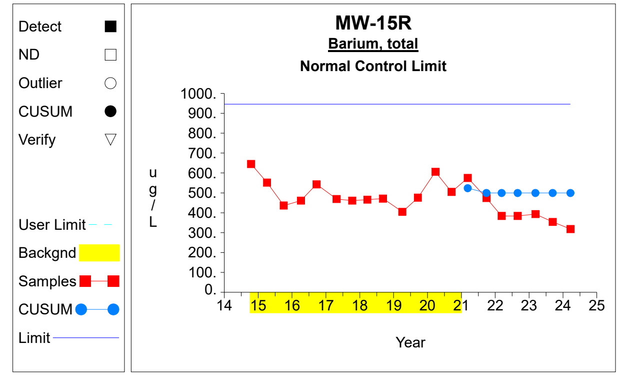

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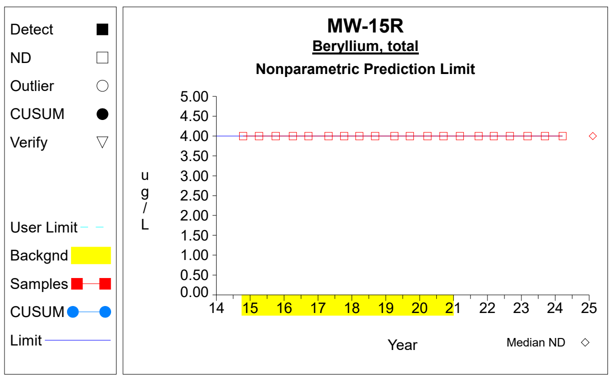

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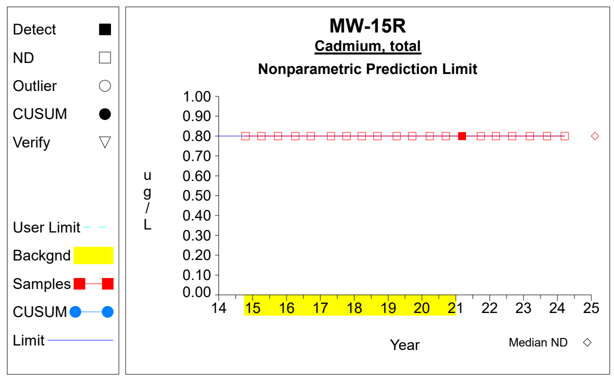

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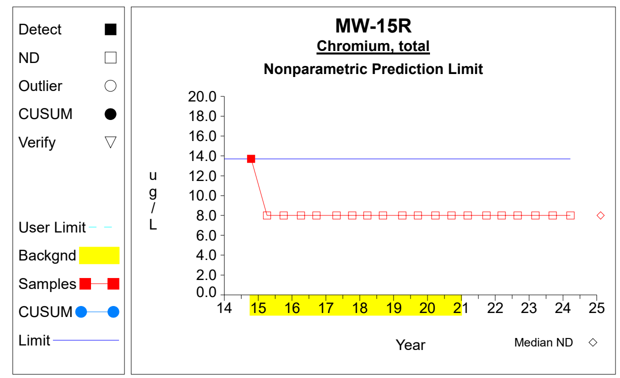

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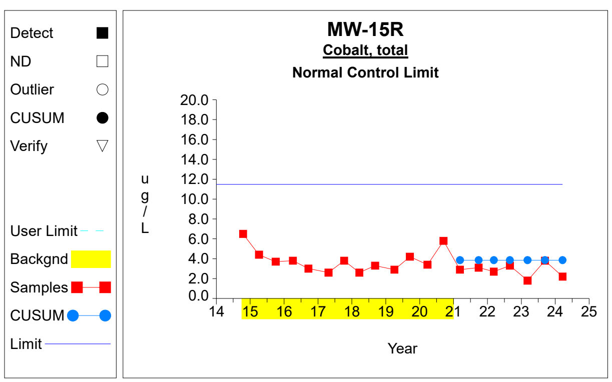

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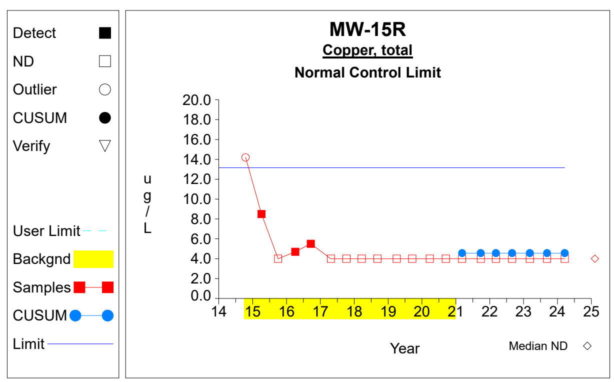

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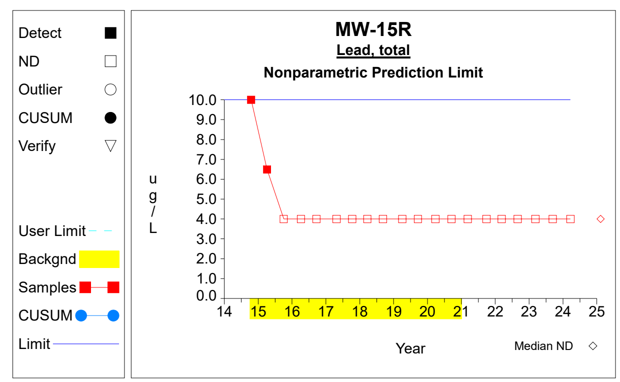

Graph 24

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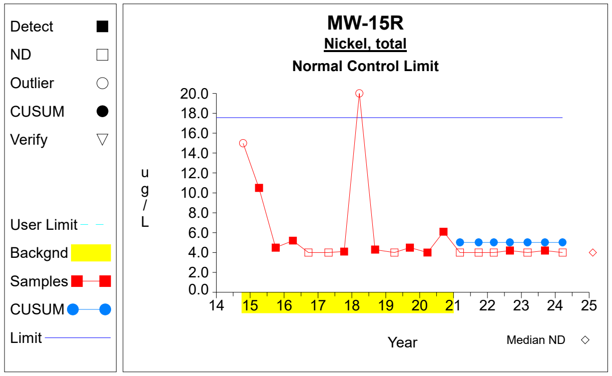

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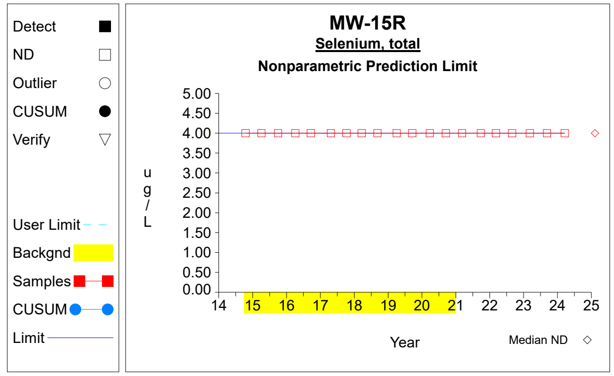

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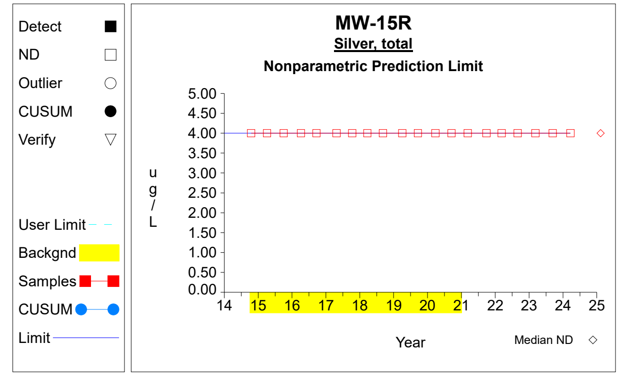

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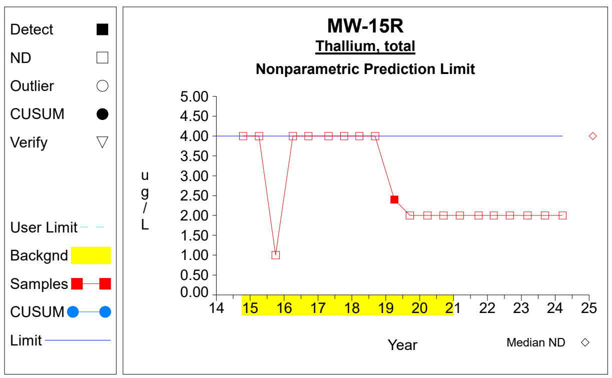

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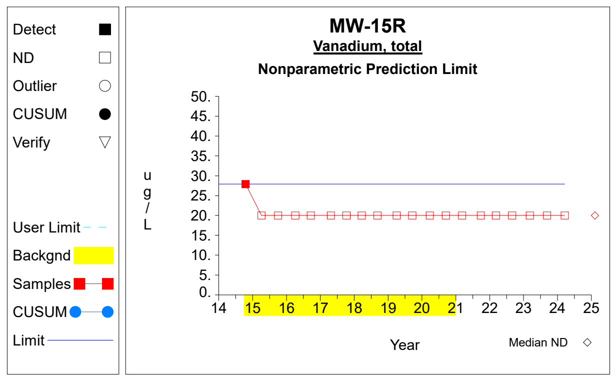

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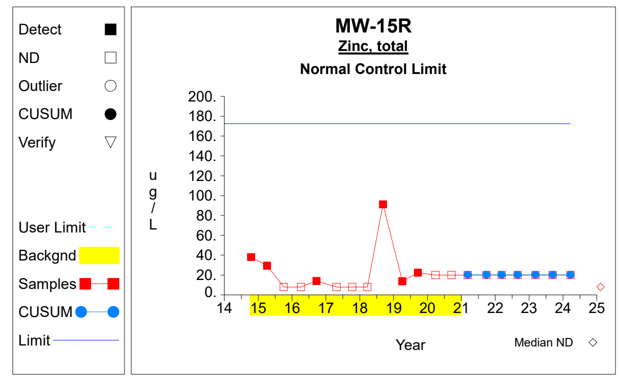

Graph 30

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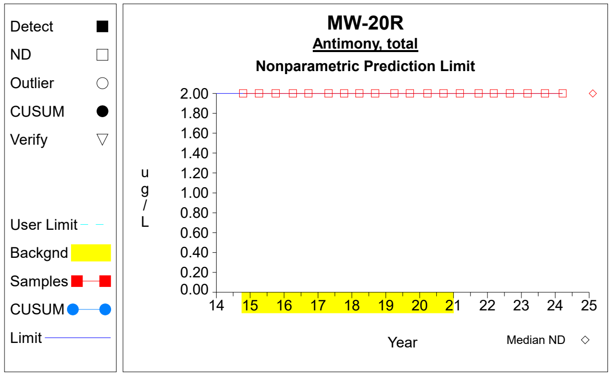
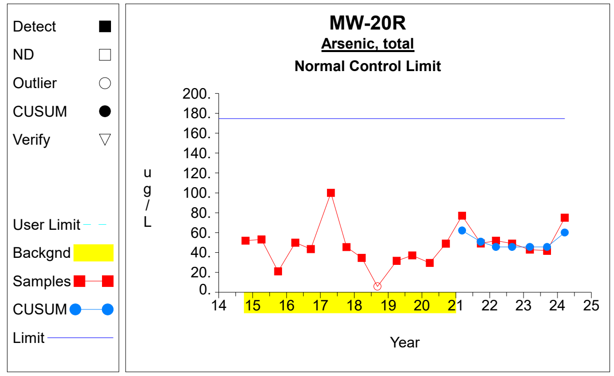


Graph 31



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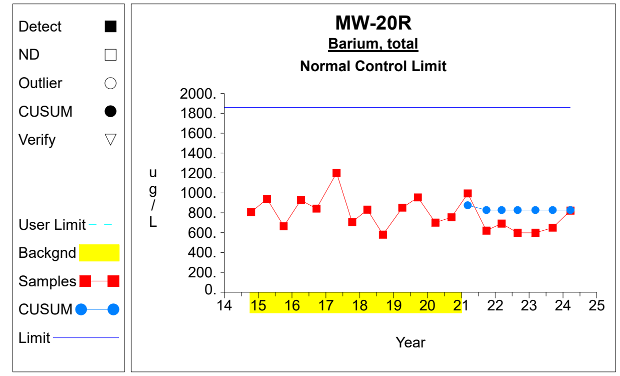

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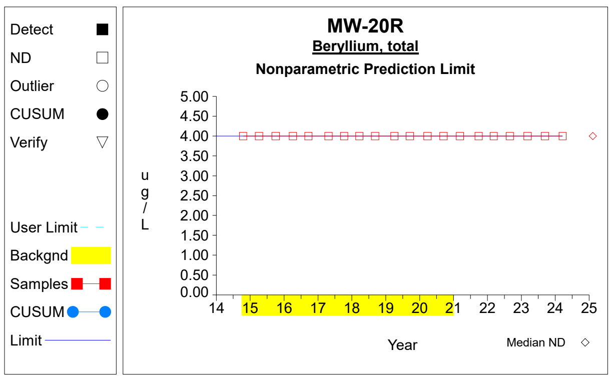

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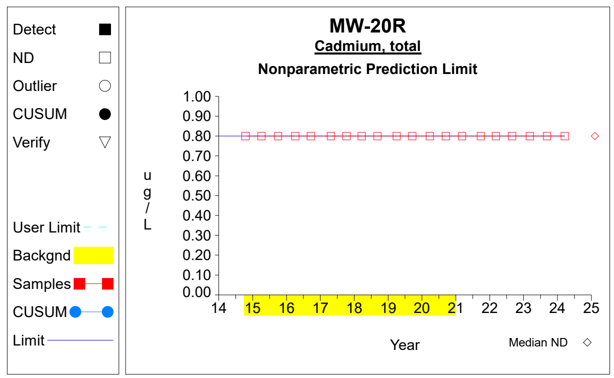

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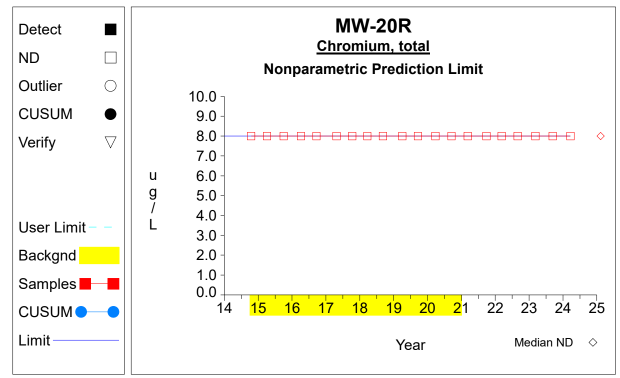

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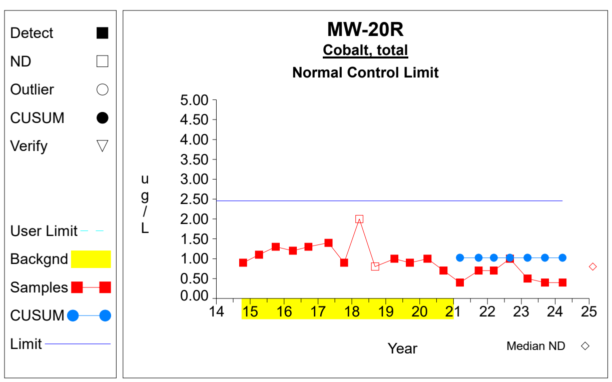

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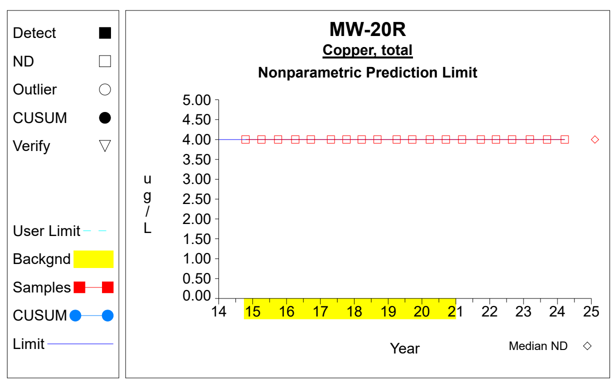

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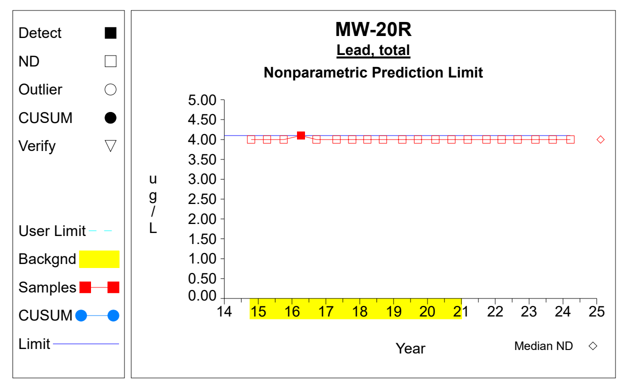

Graph 39

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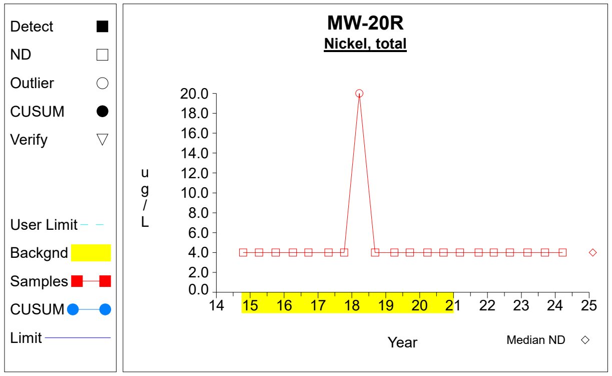
Intra-Well Control Charts / Prediction Limits



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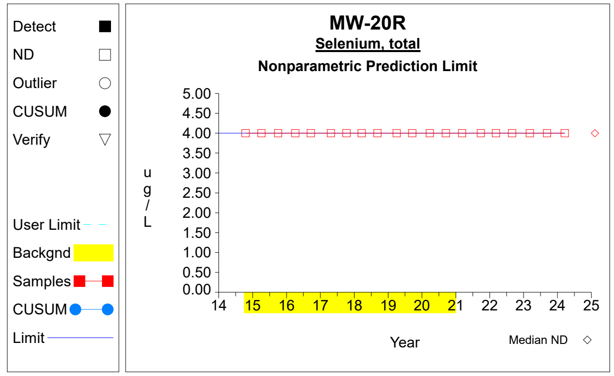
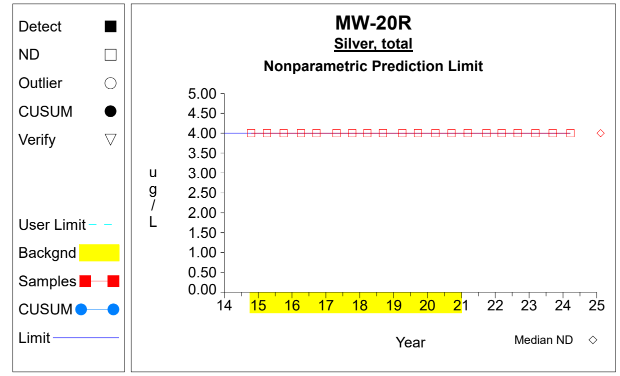


Graph 41



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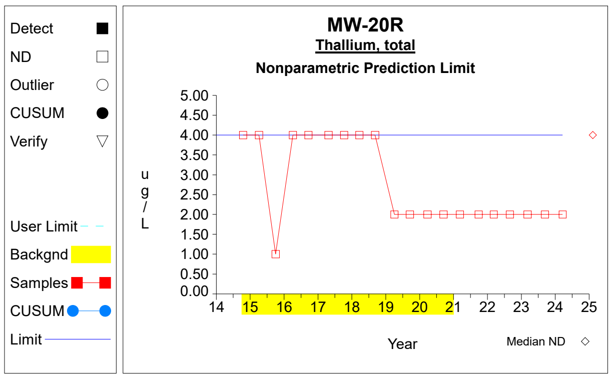

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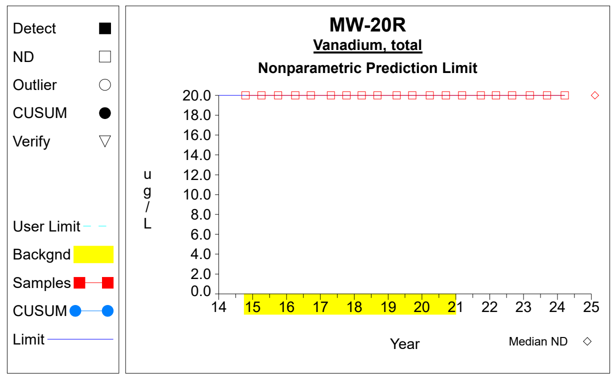

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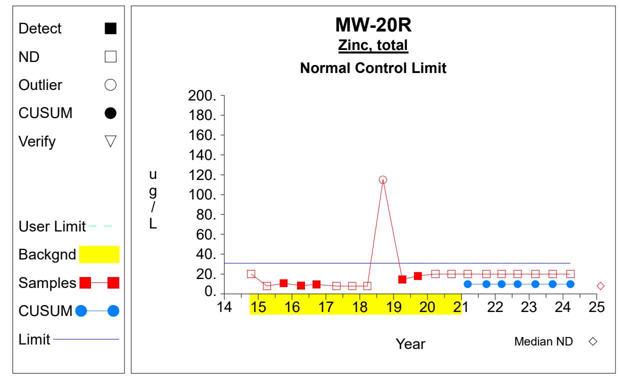

Graph 45

South Dallas [APPI]

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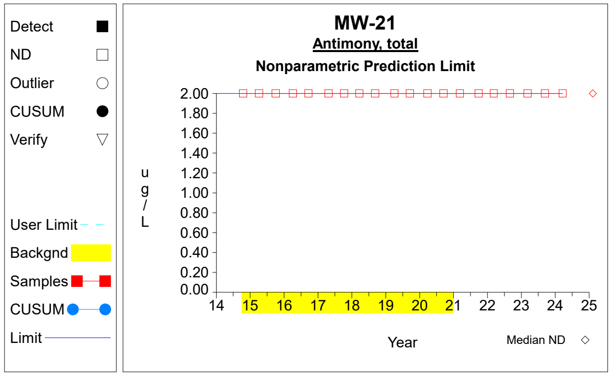
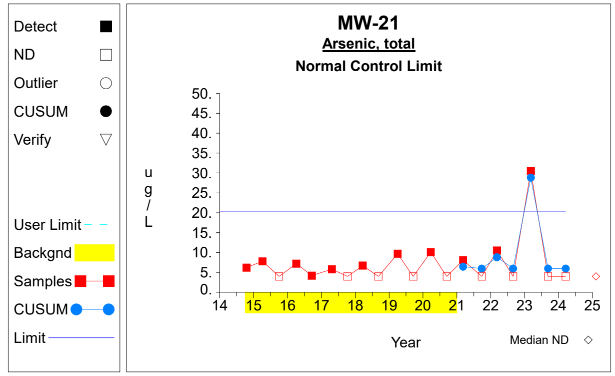
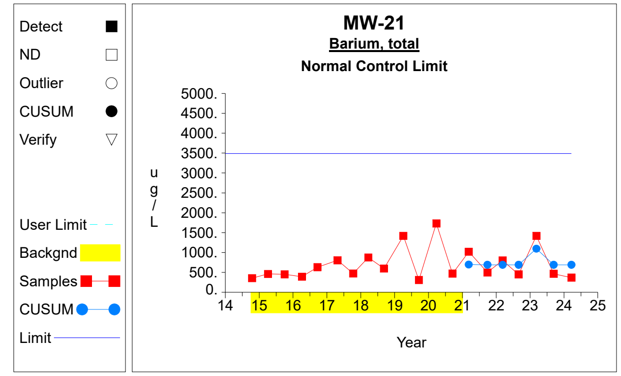
Intra-Well Control Charts / Prediction Limits



Graph 46



Graph 47



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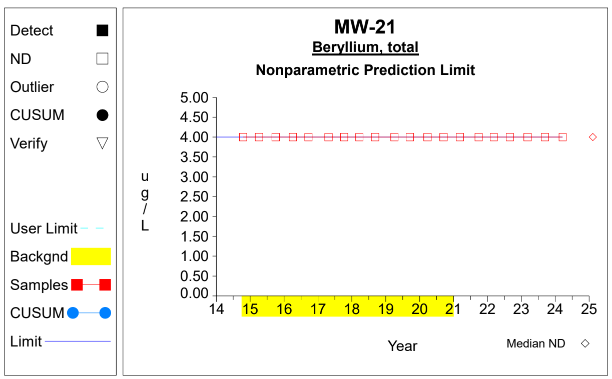

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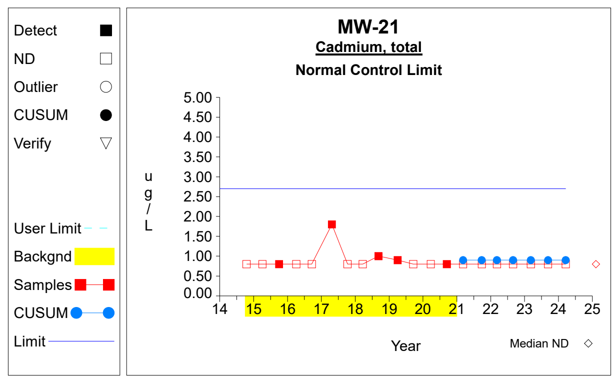

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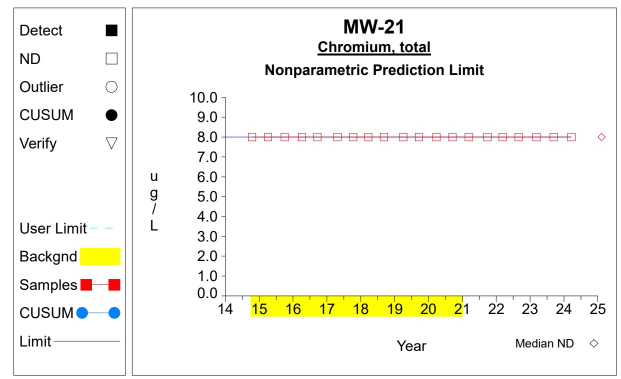

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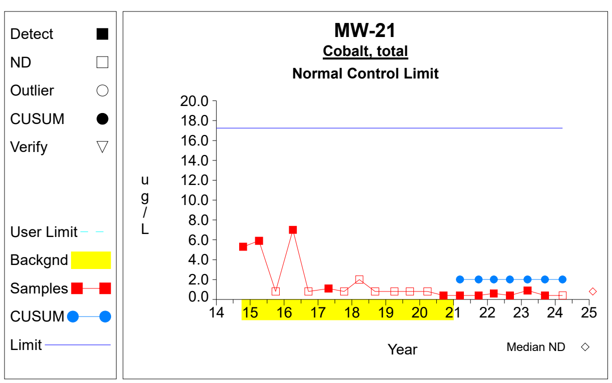

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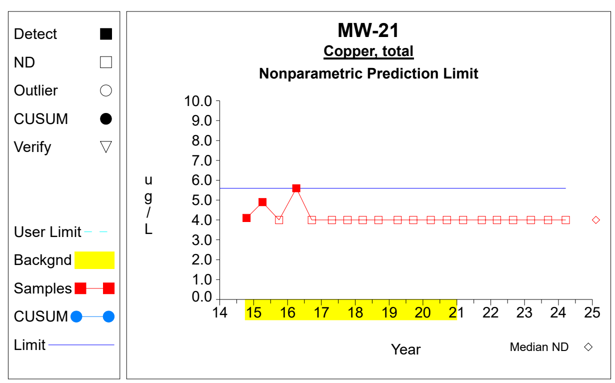

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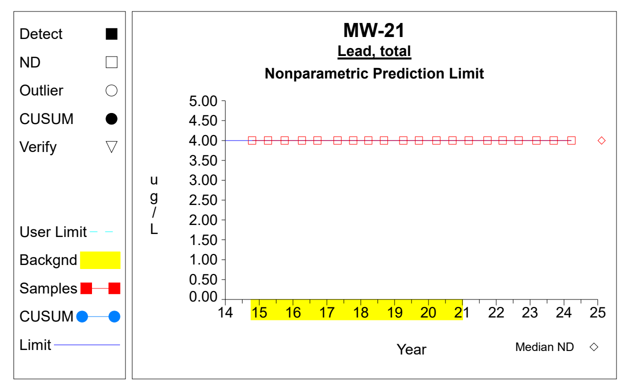

Graph 54

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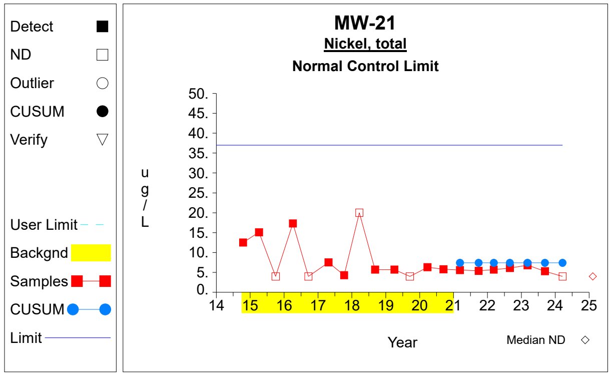
Intra-Well Control Charts / Prediction Limits



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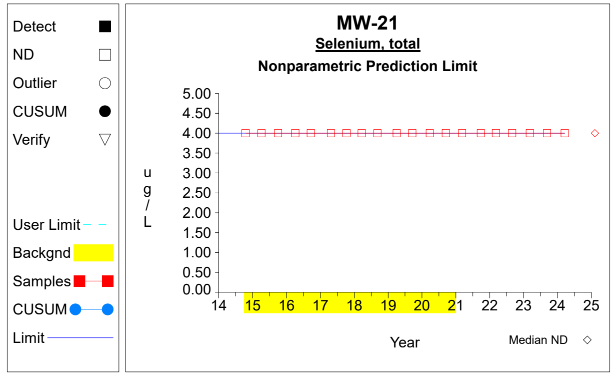
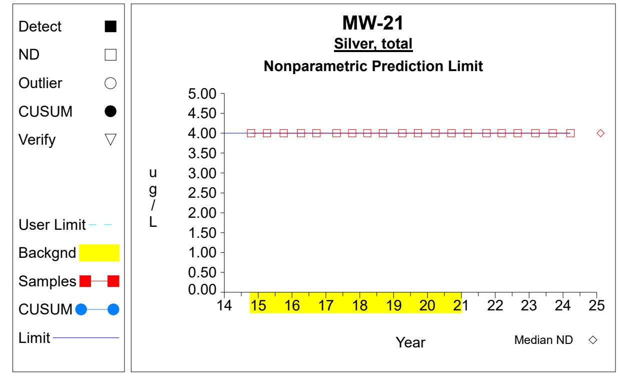


Graph 56



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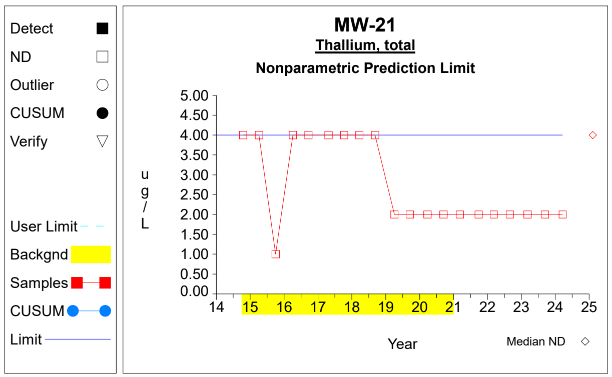

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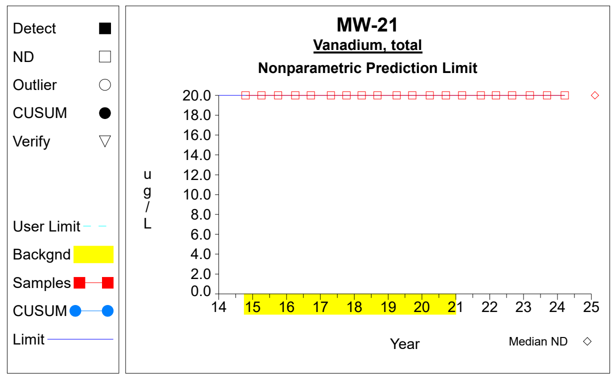

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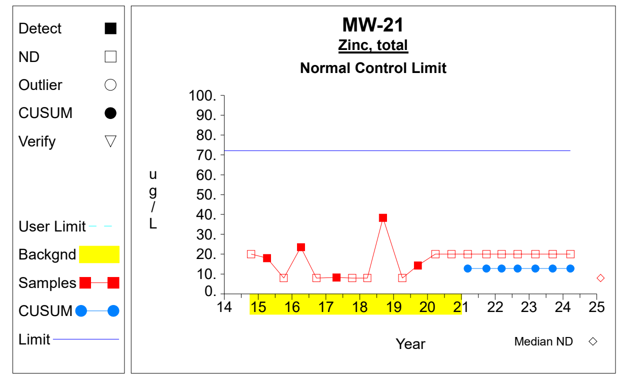

Graph 60

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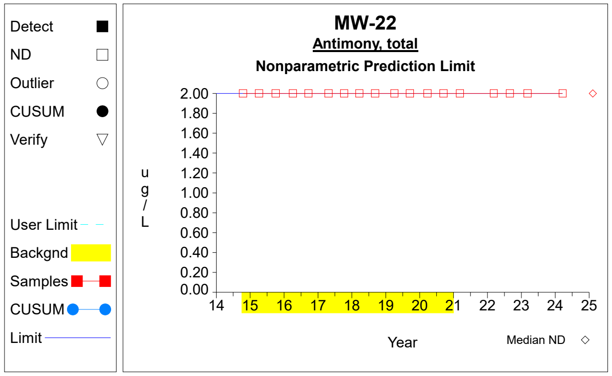
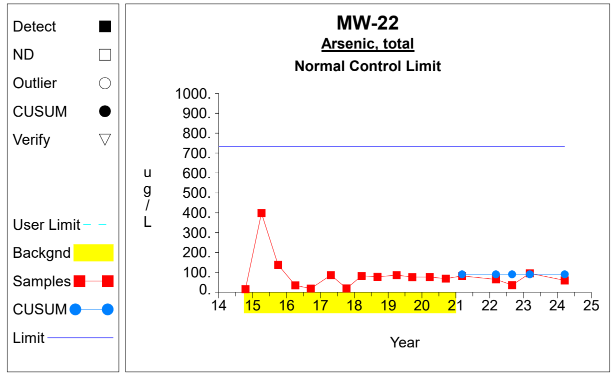
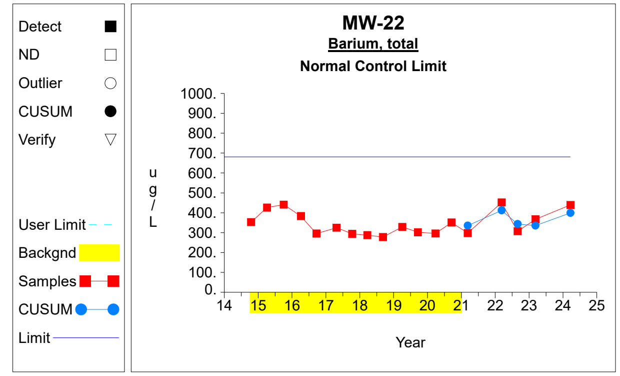
Intra-Well Control Charts / Prediction Limits



Graph 61



Graph 62



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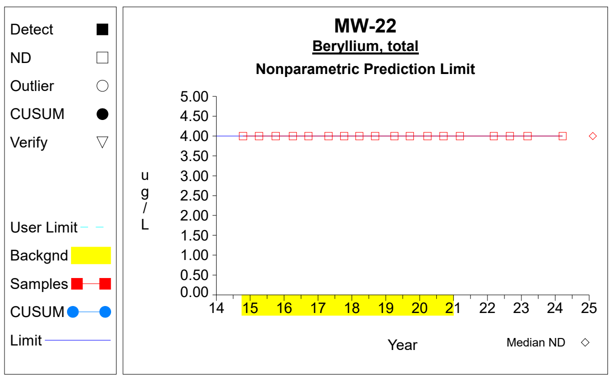

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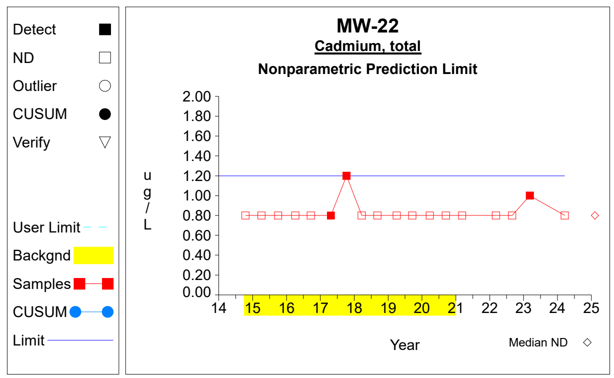

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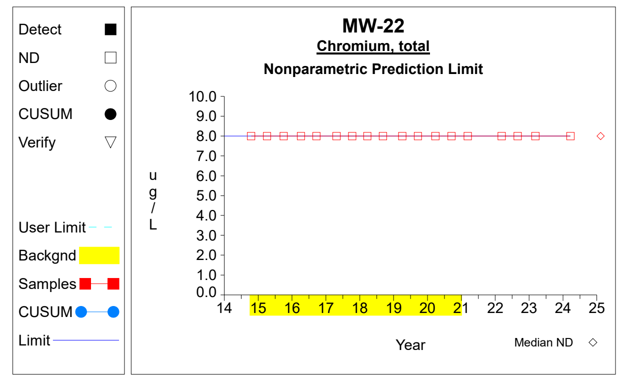

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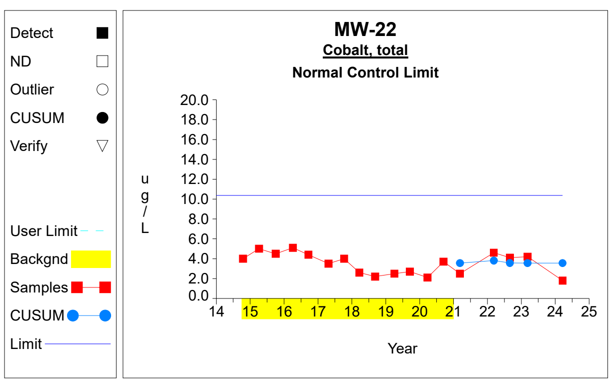

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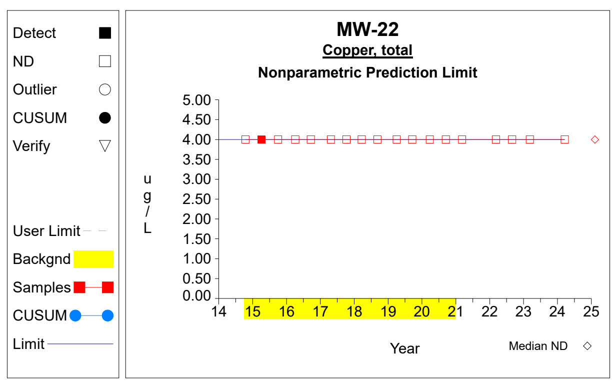

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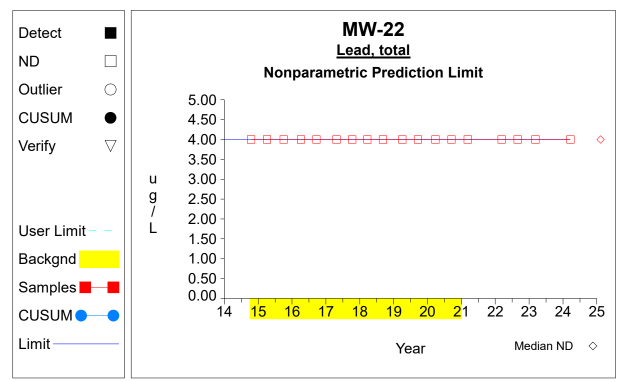
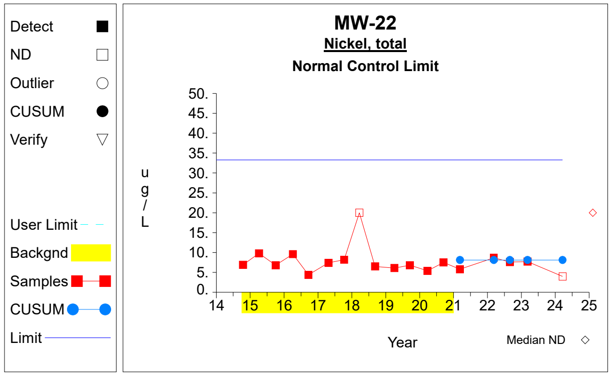


Graph 69

Intra-Well Control Charts / Prediction Limits



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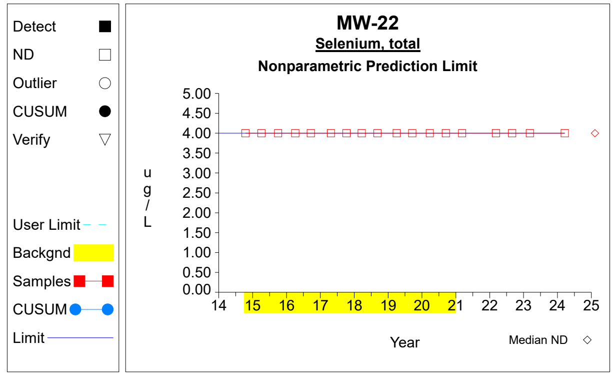

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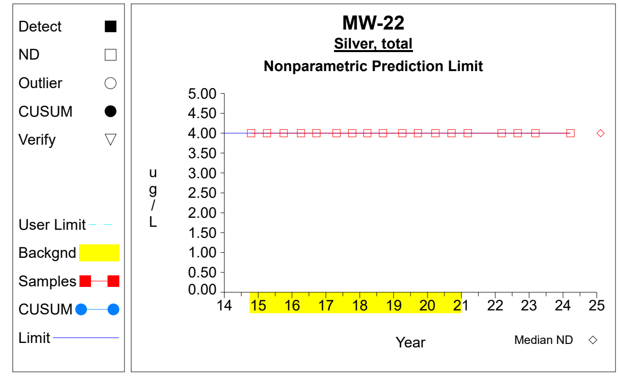

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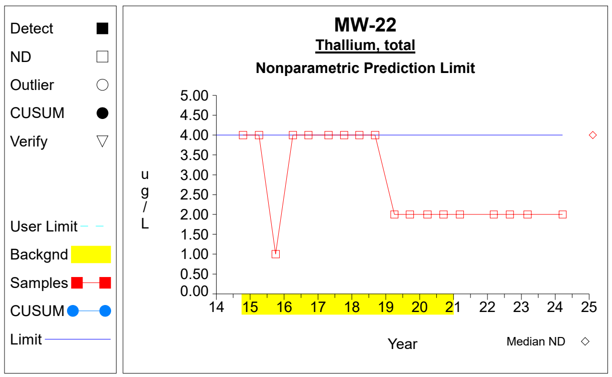

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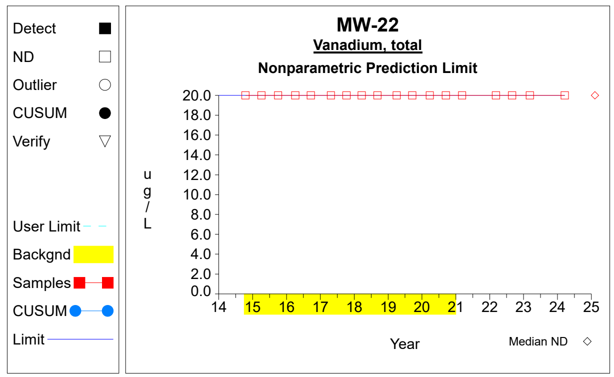

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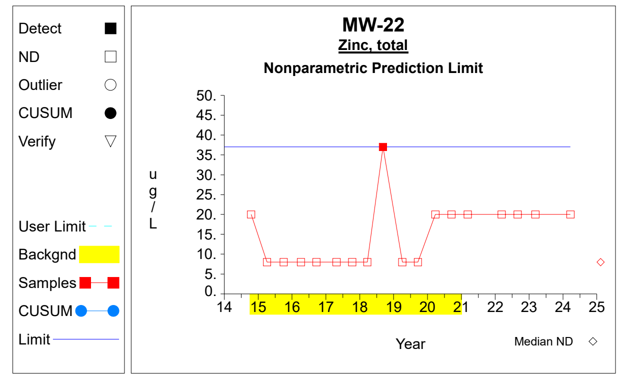
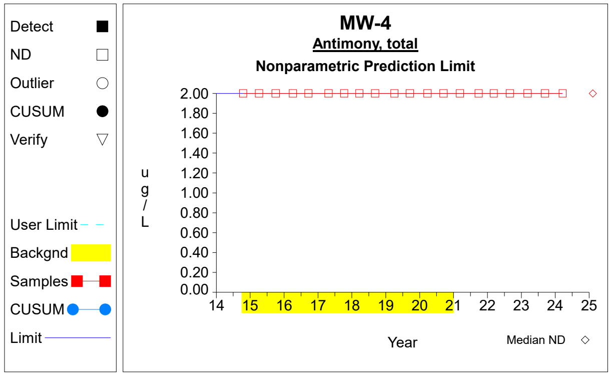


Graph 75

Intra-Well Control Charts / Prediction Limits



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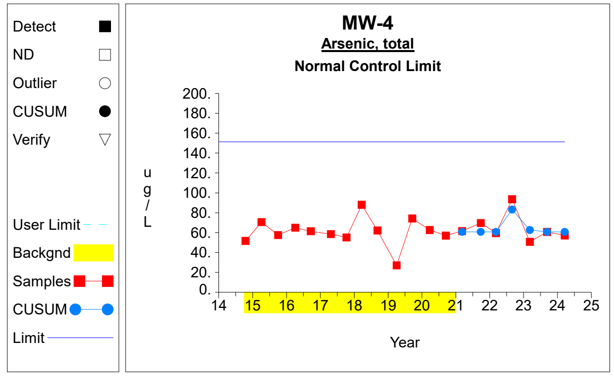

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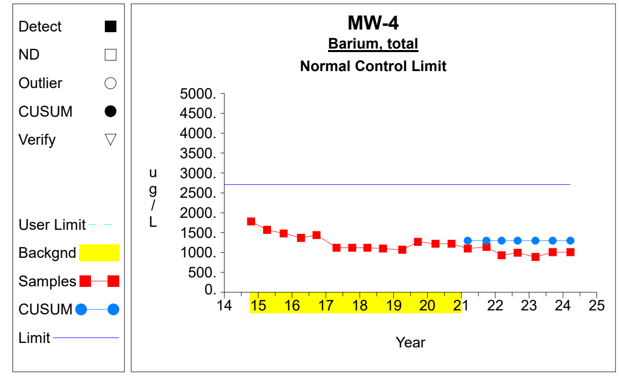

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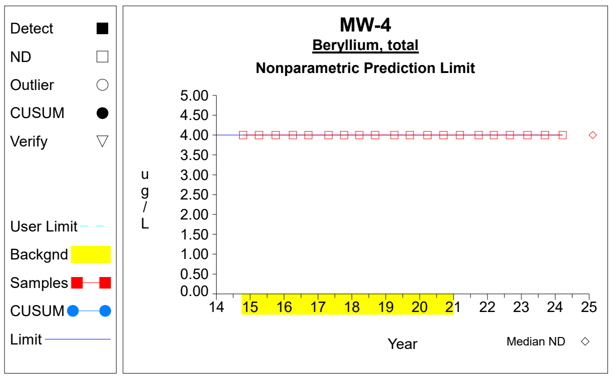

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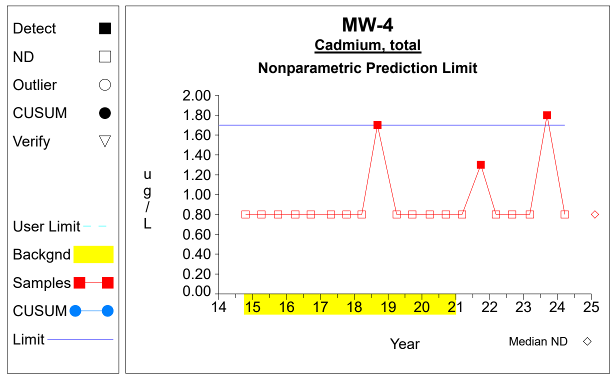

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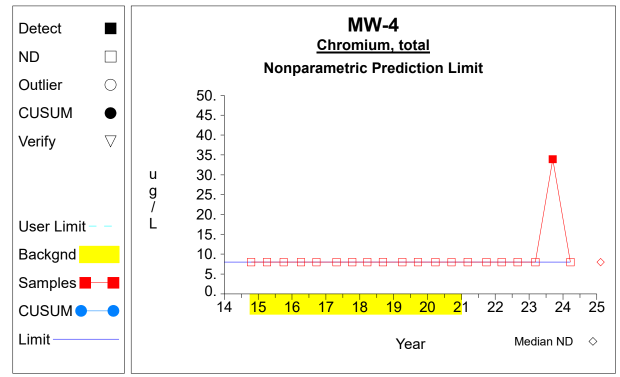

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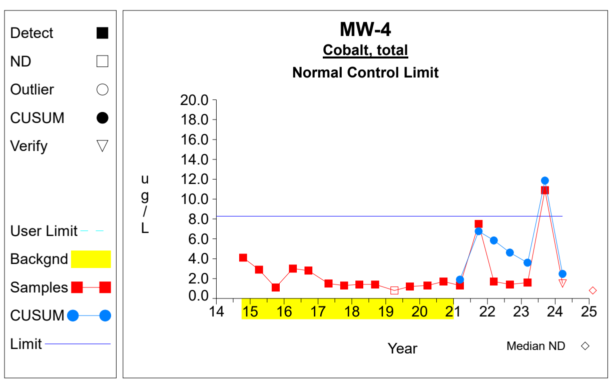

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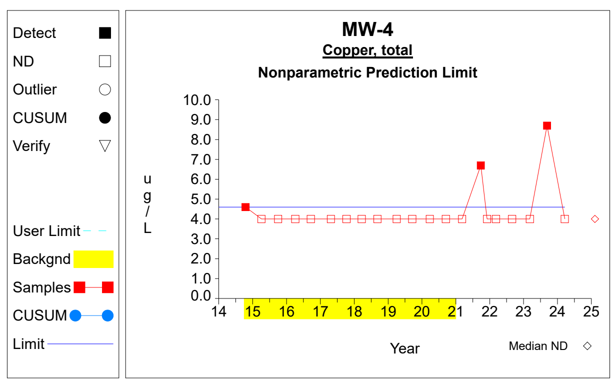

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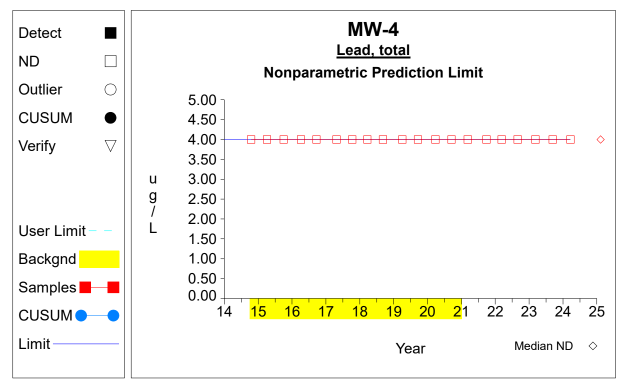

Graph 84

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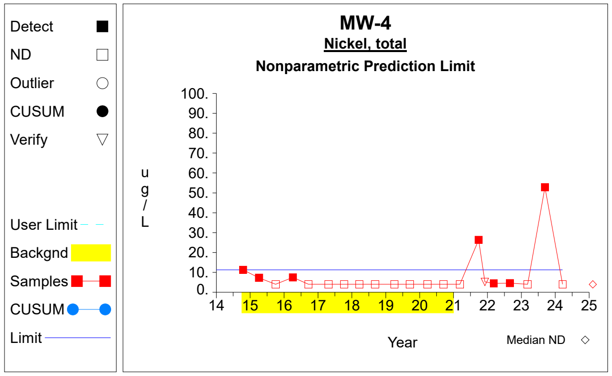
Intra-Well Control Charts / Prediction Limits



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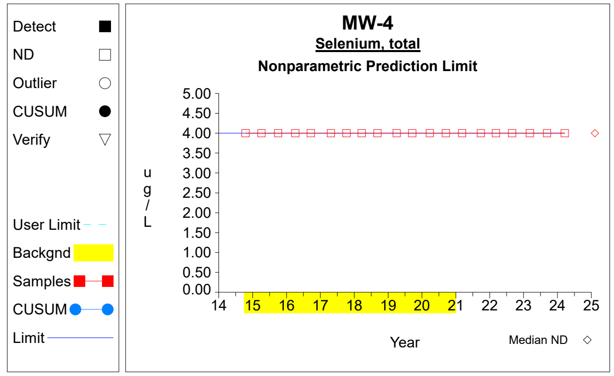

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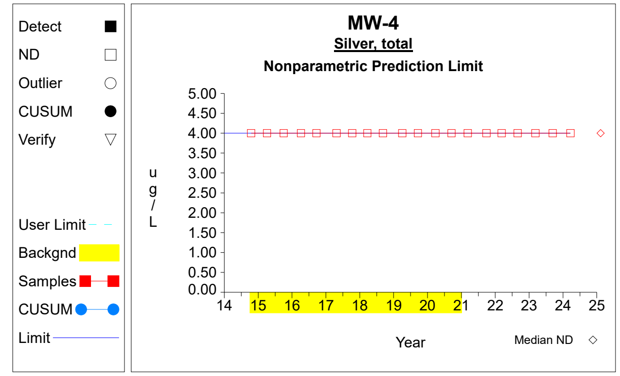
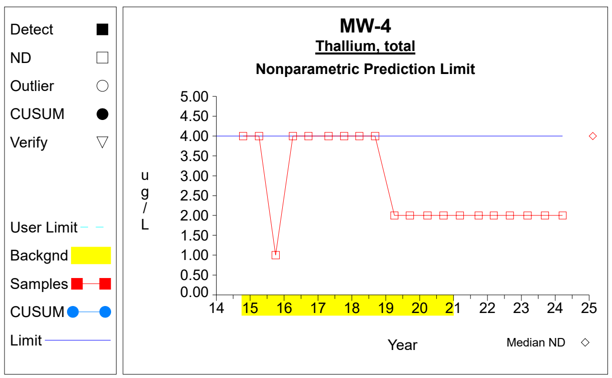


Graph 87



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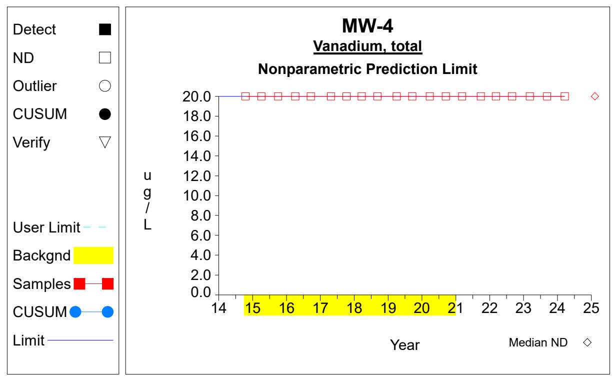

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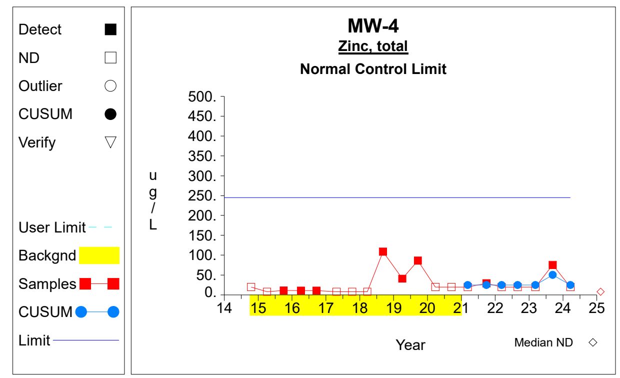

Graph 90

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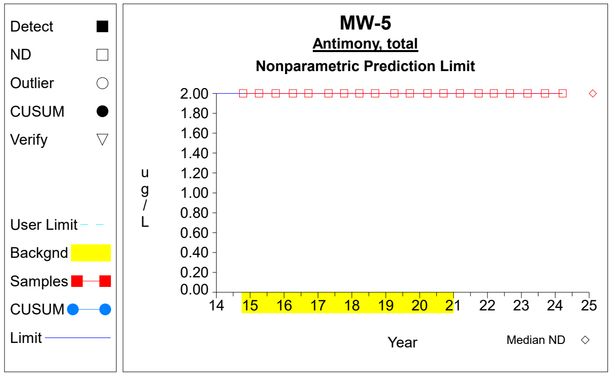
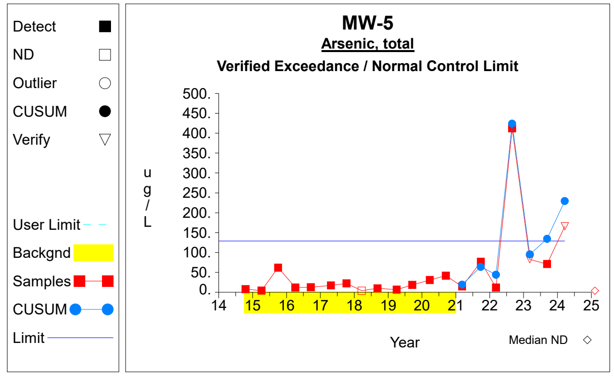
Intra-Well Control Charts / Prediction Limits



Graph 91



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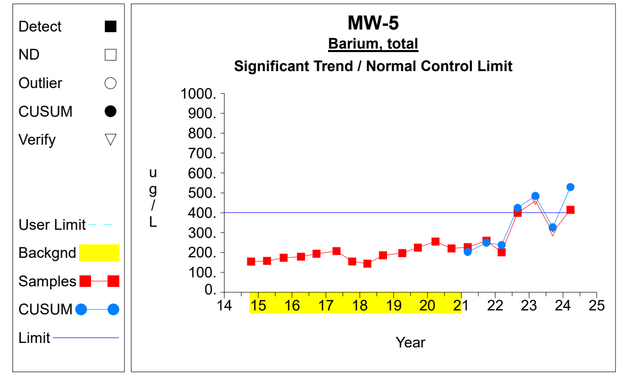

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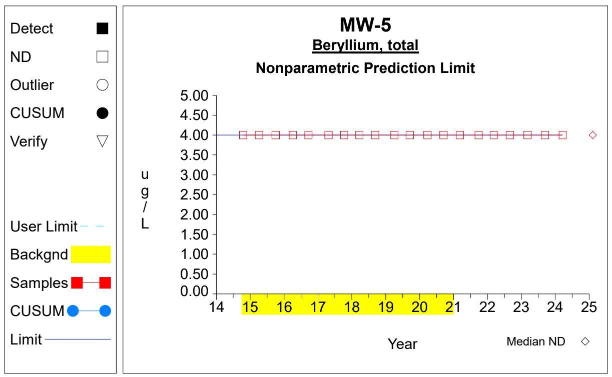
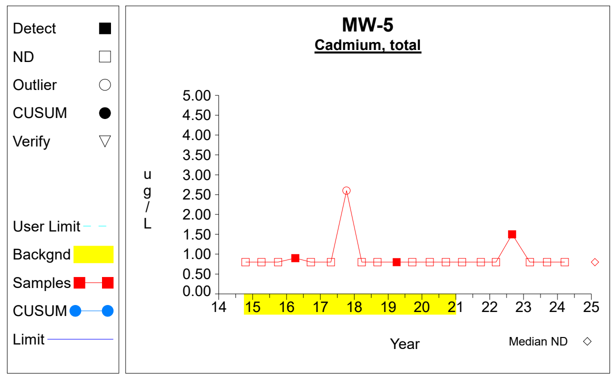
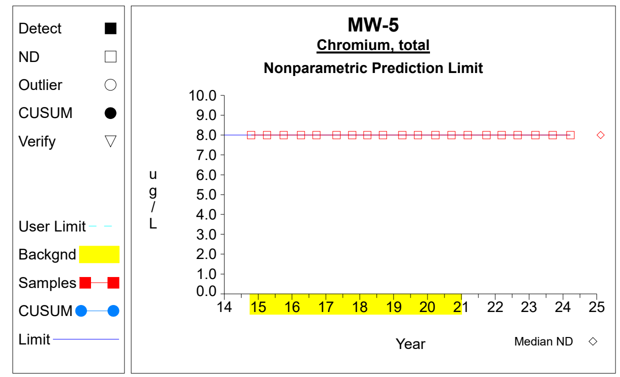


Graph 94



Graph 95



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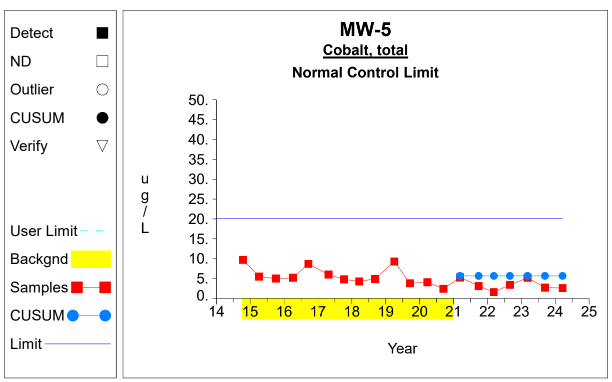
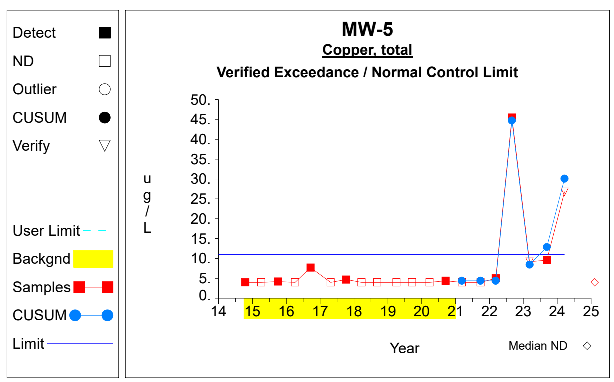


Graph 97



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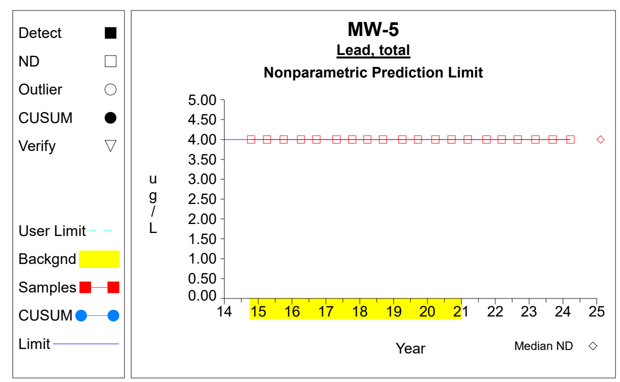

Graph 99

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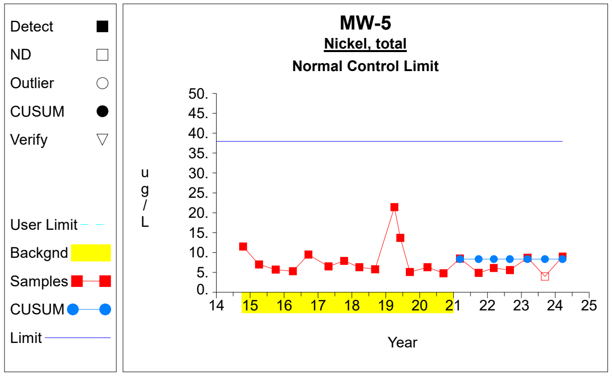
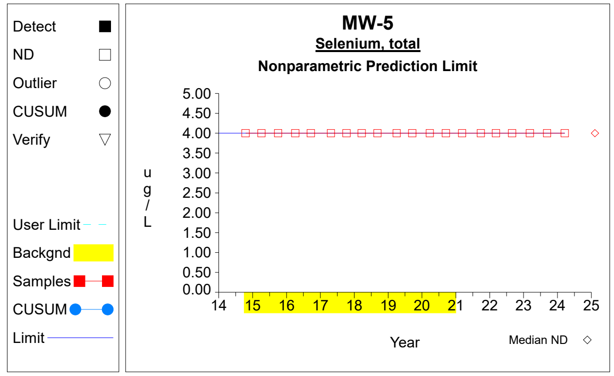
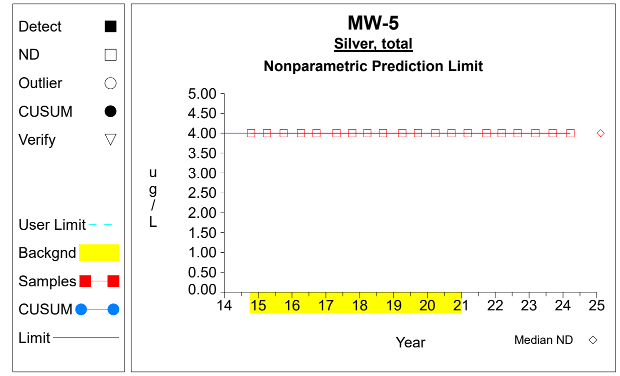
Intra-Well Control Charts / Prediction Limits



Graph 100



Graph 101



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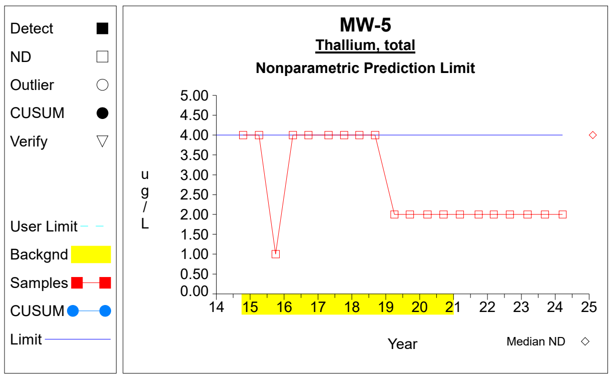
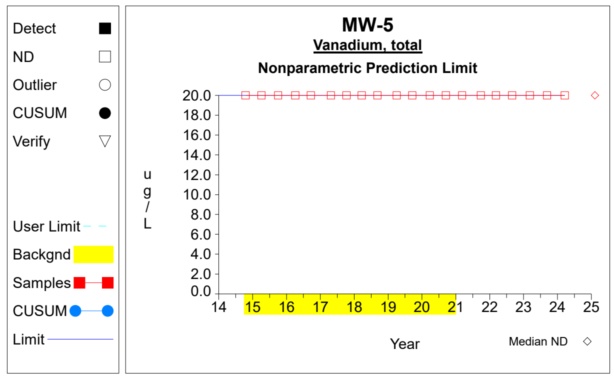
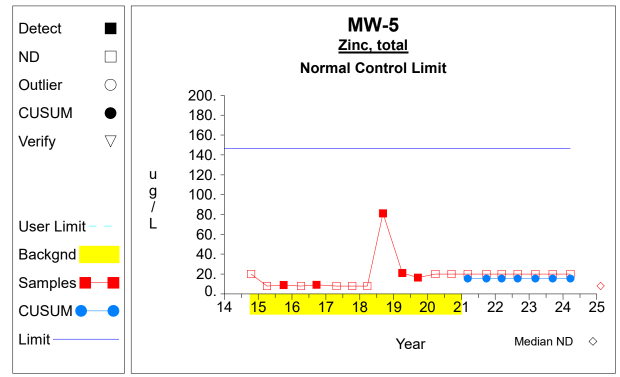


Graph 103

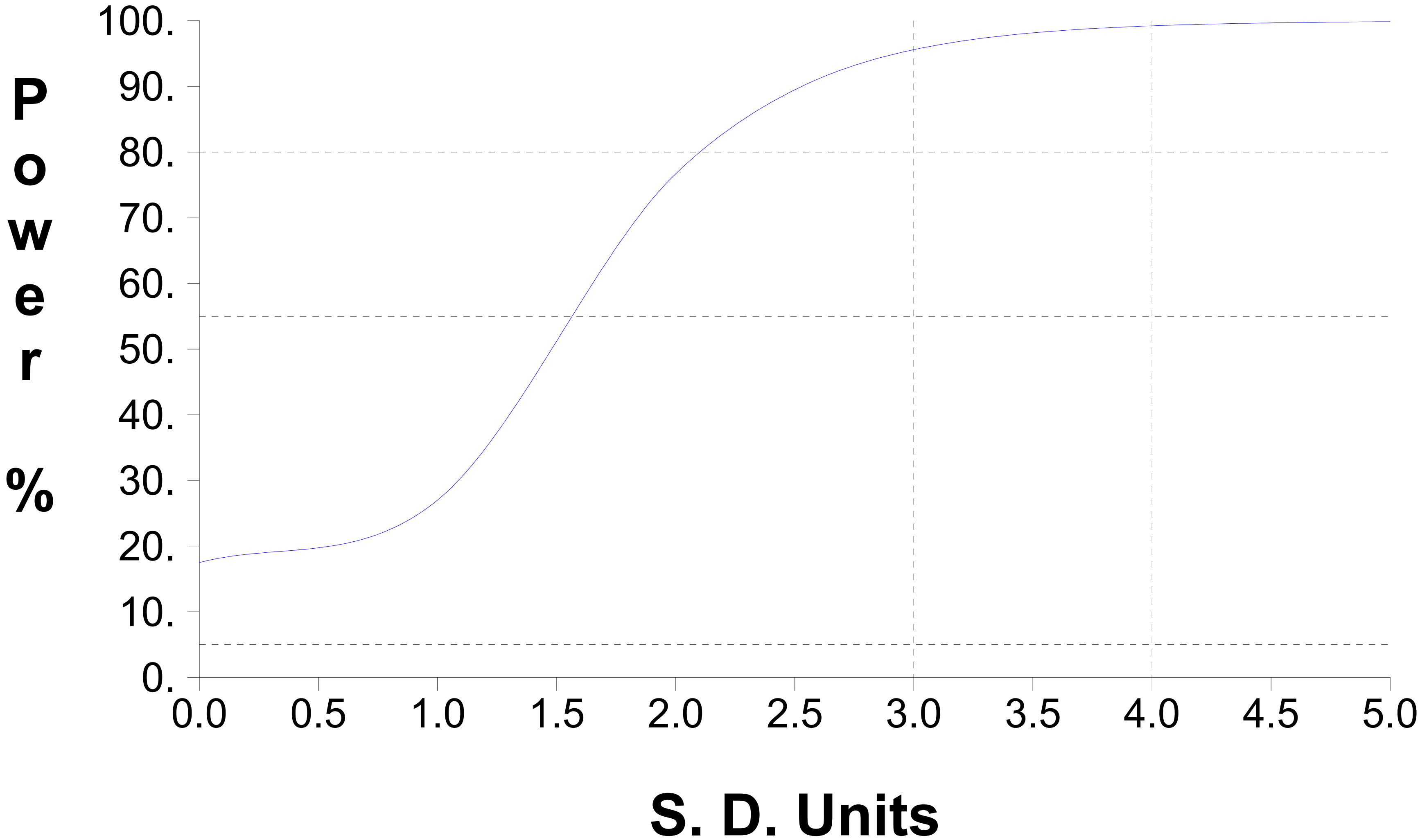


Graph 104



Graph 105

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



Attachment E

Summary Table of Historical VOC Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
2-butanone (mek)	GWD-1	4/09/2012		37.6	5.0	ug/L
Chloroethane	GWD-1	9/15/2020		1.6	1.0	ug/L
Trichlorofluoromethane	GWD-1	9/21/2011		4.1	1.0	ug/L
Vinyl chloride	GWD-1	3/07/2023		1.3	1.0	ug/L
Vinyl chloride	GWD-1	5/09/2023		1.5	1.0	ug/L
Vinyl chloride	GWD-1	6/07/2023		1.2	1.0	ug/L
Trichloroethylene	MW-10	7/07/1993		3.3	1.0	ug/L
Trichloroethylene	MW-10	10/12/1993		2.7	1.0	ug/L
Trichloroethylene	MW-10	1/24/1994		2.5	1.0	ug/L
Trichloroethylene	MW-10	4/26/1994		2.3	1.0	ug/L
Trichloroethylene	MW-10	7/26/1994		2.5	1.0	ug/L
1,1-dichloroethane	MW-12	6/23/2008		1.0	1.0	ug/L
1,1-dichloroethane	MW-12	12/13/2008		1.2	1.0	ug/L
1,1-dichloroethane	MW-12	9/17/2009		1.0	1.0	ug/L
Acetone	MW-12	10/09/2017		12.9	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	4/05/2010		9	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	9/20/2016		10	8	ug/L
Chloroethane	MW-12	4/23/2008		1.5	1.0	ug/L
Chloroethane	MW-12	6/23/2008		2.1	1.0	ug/L
Chloroethane	MW-12	12/13/2008		2.4	1.0	ug/L
Chloroethane	MW-12	3/04/2009		1.0	1.0	ug/L
Chloroethane	MW-12	11/06/2009		1.0	1.0	ug/L
Chloroethane	MW-12	4/05/2010		1.5	1.0	ug/L
Chloroethane	MW-12	9/15/2020		1.5	1.0	ug/L
Acetone	MW-15R	4/26/2013		49.1	10.0	ug/L
Acetone	MW-15R	10/09/2017		10.4	10.0	ug/L
Chloromethane	MW-15R	10/09/2017		2	1	ug/L
Dichlorodifluoromethane	MW-15R	4/04/2016		1	1	ug/L
Toluene	MW-15R	4/26/2013		7	1	ug/L
2-butanone (mek)	MW-16	9/18/2019		35	5	ug/L
Acetone	MW-16	4/23/2008		40.6	10.0	ug/L
Acetone	MW-16	6/23/2008		15.4	10.0	ug/L
Acetone	MW-16	8/13/2008		149.0	10.0	ug/L
Acetone	MW-16	10/02/2008		77.3	10.0	ug/L
Acetone	MW-16	12/13/2008		91.6	10.0	ug/L
Acetone	MW-16	3/04/2009		47.2	10.0	ug/L
Acetone	MW-16	9/17/2009		170.0	10.0	ug/L
Acetone	MW-16	11/06/2009		89.9	10.0	ug/L
Acetone	MW-16	4/05/2010		164.0	10.0	ug/L
Acetone	MW-16	10/08/2010		45.8	10.0	ug/L
Acetone	MW-16	4/13/2011		72.1	10.0	ug/L
Acetone	MW-16	9/22/2011		107.0	10.0	ug/L
Acetone	MW-16	4/09/2012		27.0	10.0	ug/L
Acetone	MW-16	9/26/2013		26.0	10.0	ug/L
Acetone	MW-16	4/10/2014		61.5	10.0	ug/L
Acetone	MW-16	10/16/2014		124.0	10.0	ug/L
Acetone	MW-16	4/04/2015		14.1	10.0	ug/L
Acetone	MW-16	10/01/2015		13.1	10.0	ug/L
Acetone	MW-16	9/20/2016		26.8	10.0	ug/L
Acetone	MW-16	4/24/2017		134.0	10.0	ug/L
Acetone	MW-16	10/09/2017		17.0	10.0	ug/L
Acetone	MW-16	3/21/2018		24.5	10.0	ug/L
Acetone	MW-16	9/07/2018		72.3	10.0	ug/L
Acetone	MW-16	4/02/2019		34.2	10.0	ug/L
Acetone	MW-16	9/18/2019		196.0	50.0	ug/L
Acetone	MW-16	3/25/2020		51.2	10.0	ug/L
Acetone	MW-16	9/15/2020		109.0	10.0	ug/L
Acetone	MW-16	3/08/2021		1140.0	50.0	ug/L
Benzene	MW-16	4/05/2010		1.1	1.0	ug/L
Benzene	MW-16	9/22/2011		1.2	1.0	ug/L
Chloroethane	MW-16	4/23/2008		2.0	1.0	ug/L
Chloroethane	MW-16	6/23/2008		1.7	1.0	ug/L
Chloroethane	MW-16	8/13/2008		2.0	1.0	ug/L
Chloroethane	MW-16	12/13/2008		1.8	1.0	ug/L
Chloroethane	MW-16	3/04/2009		1.3	1.0	ug/L
Chloroethane	MW-16	11/06/2009		2.2	1.0	ug/L
Chloroethane	MW-16	4/05/2010		2.1	1.0	ug/L
Chloroethane	MW-16	9/22/2011		2.3	1.0	ug/L
Chloroethane	MW-16	4/09/2012		1.1	1.0	ug/L
Chloroethane	MW-16	4/10/2014		1.0	1.0	ug/L
Chloroethane	MW-16	4/04/2016		1.0	1.0	ug/L
Chloromethane	MW-16	10/09/2017		2.3	1.0	ug/L
Dichlorodifluoromethane	MW-16	4/05/2010		1.2	1.0	ug/L
Dichlorodifluoromethane	MW-16	9/22/2011		1.0	1.0	ug/L
Dichlorodifluoromethane	MW-16	4/09/2012		1.2	1.0	ug/L
Dichlorodifluoromethane	MW-16	9/26/2013		1.2	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Dichlorodifluoromethane	MW-16	4/04/2016		1.0	1.0	ug/L
Vinyl chloride	MW-16	4/23/2008		2.9	1.0	ug/L
Vinyl chloride	MW-16	6/23/2008		2.5	1.0	ug/L
Vinyl chloride	MW-16	8/13/2008		2.5	1.0	ug/L
Vinyl chloride	MW-16	10/02/2008		2.5	1.0	ug/L
Vinyl chloride	MW-16	12/13/2008		2.8	1.0	ug/L
Vinyl chloride	MW-16	3/04/2009		1.8	1.0	ug/L
Vinyl chloride	MW-16	11/06/2009		2.0	1.0	ug/L
Vinyl chloride	MW-16	4/05/2010		2.9	1.0	ug/L
Vinyl chloride	MW-16	10/08/2010		3.0	1.0	ug/L
Vinyl chloride	MW-16	4/13/2011		2.3	1.0	ug/L
Vinyl chloride	MW-16	9/22/2011		1.4	1.0	ug/L
Vinyl chloride	MW-16	4/09/2012		1.0	1.0	ug/L
Vinyl chloride	MW-16	9/05/2012		1.4	1.0	ug/L
Vinyl chloride	MW-16	9/26/2013		1.1	1.0	ug/L
Acetone	MW-18	4/14/2011		26.2	10.0	ug/L
Acetone	MW-18	4/26/2013		17.2	10.0	ug/L
Acetone	MW-18	9/26/2013		10.3	10.0	ug/L
Acetone	MW-18	9/20/2016		11.7	10.0	ug/L
Acetone	MW-18	10/09/2017		16.8	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-20R	4/04/2016		25	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-20R	9/07/2018		7	6	ug/L
Chloroethane	MW-21	4/05/2010		2.1	1.0	ug/L
Chloroethane	MW-21	5/24/2010		1.3	1.0	ug/L
Chloroethane	MW-21	4/14/2011		2.5	1.0	ug/L
Chloroethane	MW-21	9/21/2011		2.0	1.0	ug/L
Chloroethane	MW-21	4/09/2012		2.2	1.0	ug/L
Chloroethane	MW-21	9/05/2012		1.4	1.0	ug/L
Chloroethane	MW-21	9/26/2013		1.4	1.0	ug/L
Chloroethane	MW-21	4/10/2014		1.2	1.0	ug/L
Chloroethane	MW-21	10/16/2014		1.4	1.0	ug/L
Chloroethane	MW-21	4/04/2015		1.1	1.0	ug/L
Chloroethane	MW-21	10/01/2015		1.7	1.0	ug/L
Chloroethane	MW-21	4/04/2016		2.4	1.0	ug/L
Chloroethane	MW-21	9/20/2016		1.4	1.0	ug/L
Chloroethane	MW-21	4/24/2017		2.6	1.0	ug/L
Chloroethane	MW-21	10/09/2017		1.0	1.0	ug/L
Chloroethane	MW-21	9/07/2018		1.6	1.0	ug/L
Chloroethane	MW-21	4/02/2019		1.8	1.0	ug/L
Chloroethane	MW-21	9/18/2019		1.7	1.0	ug/L
Chloroethane	MW-21	3/25/2020		1.2	1.0	ug/L
Chloroethane	MW-21	3/08/2021		1.3	1.0	ug/L
Chloroethane	MW-21	3/08/2022		1.0	1.0	ug/L
Chloroethane	MW-21	3/07/2023		1.4	1.0	ug/L
Chloromethane	MW-21	4/05/2010		2.7	1.0	ug/L
Chloromethane	MW-21	4/26/2013		1.4	1.0	ug/L
Dichlorodifluoromethane	MW-21	4/04/2016		1	1	ug/L
Acetone	MW-22	11/06/2009		14.9	10.0	ug/L
Acetone	MW-22	9/26/2013		10.1	10.0	ug/L
Acetone	MW-22	10/09/2017		14.6	10.0	ug/L
Benzene	MW-22	11/06/2009		1.8	1.0	ug/L
Benzene	MW-22	5/24/2010		1.4	1.0	ug/L
Benzene	MW-22	8/16/2010		2.0	1.0	ug/L
Benzene	MW-22	4/14/2011		1.7	1.0	ug/L
Benzene	MW-22	9/22/2011		1.6	1.0	ug/L
Benzene	MW-22	4/09/2012		2.2	1.0	ug/L
Benzene	MW-22	4/26/2013		1.3	1.0	ug/L
Benzene	MW-22	9/26/2013		1.2	1.0	ug/L
Benzene	MW-22	4/04/2015		1.6	1.0	ug/L
Benzene	MW-22	4/24/2017		1.7	1.0	ug/L
Benzene	MW-22	3/21/2018		2.3	1.0	ug/L
Benzene	MW-22	9/07/2018		1.5	1.0	ug/L
Benzene	MW-22	4/02/2019		2.2	1.0	ug/L
Benzene	MW-22	9/18/2019		2.3	1.0	ug/L
Benzene	MW-22	3/25/2020		2.4	1.0	ug/L
Benzene	MW-22	9/15/2020		1.5	1.0	ug/L
Benzene	MW-22	3/08/2021		1.4	1.0	ug/L
Benzene	MW-22	3/08/2022		1.0	1.0	ug/L
Benzene	MW-22	3/07/2023		2.0	1.0	ug/L
Bromomethane	MW-22	10/15/2014		2.4	1.0	ug/L
Chloroethane	MW-22	11/06/2009		5.4	1.0	ug/L
Chloroethane	MW-22	4/05/2010		5.4	1.0	ug/L
Chloroethane	MW-22	5/24/2010		4.6	1.0	ug/L
Chloroethane	MW-22	8/16/2010		4.2	1.0	ug/L
Chloroethane	MW-22	4/14/2011		3.8	1.0	ug/L
Chloroethane	MW-22	9/22/2011		2.7	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Chloroethane	MW-22	4/09/2012		3.3	1.0	ug/L
Chloroethane	MW-22	9/26/2013		1.4	1.0	ug/L
Chloroethane	MW-22	10/15/2014		1.0	1.0	ug/L
Chloroethane	MW-22	4/04/2015		1.1	1.0	ug/L
Chloroethane	MW-22	4/24/2017		1.5	1.0	ug/L
Chloroethane	MW-22	9/15/2020		1.7	1.0	ug/L
Chloroethane	MW-22	3/08/2021		1.2	1.0	ug/L
Chloromethane	MW-22	4/26/2013		1.1	1.0	ug/L
Hexachlorobenzene	MW-22	3/08/2021		.08	.05	ug/L
Methyl iodide	MW-22	10/15/2014		11.8	1.0	ug/L
Toluene	MW-22	4/24/2017		1.2	1.0	ug/L
Toluene	MW-22	3/21/2018		1.5	1.0	ug/L
Vinyl chloride	MW-22	11/06/2009		5.2	1.0	ug/L
Vinyl chloride	MW-22	4/05/2010		2.0	1.0	ug/L
Vinyl chloride	MW-22	5/24/2010		3.8	1.0	ug/L
Vinyl chloride	MW-22	10/08/2010		6.6	1.0	ug/L
Vinyl chloride	MW-22	4/14/2011		4.1	1.0	ug/L
Vinyl chloride	MW-22	9/22/2011		3.2	1.0	ug/L
Vinyl chloride	MW-22	4/09/2012		4.7	1.0	ug/L
Vinyl chloride	MW-22	9/26/2013		1.7	1.0	ug/L
Vinyl chloride	MW-22	4/04/2015		1.6	1.0	ug/L
Vinyl chloride	MW-22	10/01/2015		1.0	1.0	ug/L
Vinyl chloride	MW-22	4/24/2017		2.9	1.0	ug/L
Vinyl chloride	MW-22	9/07/2018		1.5	1.0	ug/L
Vinyl chloride	MW-22	4/02/2019		1.4	1.0	ug/L
Vinyl chloride	MW-22	9/18/2019		1.8	1.0	ug/L
Vinyl chloride	MW-22	3/25/2020		1.8	1.0	ug/L
Vinyl chloride	MW-22	9/15/2020		1.3	1.0	ug/L
Vinyl chloride	MW-22	3/08/2021		1.1	1.0	ug/L
Vinyl chloride	MW-22	3/07/2023		1.3	1.0	ug/L
1,1-dichloroethane	MW-23	9/21/2011		3.5	1.0	ug/L
1,1-dichloroethane	MW-23	9/05/2012		1.7	1.0	ug/L
Chloroethane	MW-23	9/21/2011		1.8	1.0	ug/L
Acetone	MW-24	4/26/2013		100.0	10.0	ug/L
Acetone	MW-24	10/16/2014		58.4	10.0	ug/L
Acetone	MW-24	3/25/2020		13.8	10.0	ug/L
Acetone	MW-24	3/08/2021		62.4	10.0	ug/L
Chloroethane	MW-26	4/24/2017		1.6	1.0	ug/L
1,1-dichloroethane	MW-4	4/23/2008		1.2	1.0	ug/L
1,1-dichloroethane	MW-4	12/13/2008		1.3	1.0	ug/L
1,1-dichloroethane	MW-4	9/17/2009		1.2	1.0	ug/L
1,1-dichloroethane	MW-4	4/05/2010		1.0	1.0	ug/L
1,1-dichloroethane	MW-4	4/04/2016		1.0	1.0	ug/L
1,1-dichloroethane	MW-4	4/24/2017		1.7	1.0	ug/L
1,1-dichloroethane	MW-4	10/09/2017		2.6	1.0	ug/L
1,1-dichloroethane	MW-4	3/21/2018		2.6	1.0	ug/L
1,1-dichloroethane	MW-4	9/15/2020		1.9	1.0	ug/L
1,1-dichloroethane	MW-4	9/28/2021		1.1	1.0	ug/L
1,2-dichloroethane	MW-4	7/07/1993		7.3	1.0	ug/L
1,2-dichloroethane	MW-4	10/12/1993		3.7	1.0	ug/L
1,2-dichloroethane	MW-4	1/24/1994		2.4	1.0	ug/L
1,2-dichloroethane	MW-4	10/13/1994		4.0	1.0	ug/L
1,2-dichloroethane	MW-4	4/25/1995		1.6	1.0	ug/L
1,2-dichloroethane	MW-4	10/18/1995		3.3	1.0	ug/L
1,2-dichloroethane	MW-4	7/31/1996		2.7	1.0	ug/L
1,2-dichloroethane	MW-4	10/09/1996		2.0	1.0	ug/L
1,2-dichloroethane	MW-4	4/23/2008		1.0	1.0	ug/L
1,2-dichloropropane	MW-4	10/16/2014		1.2	1.0	ug/L
1,2-dichloropropane	MW-4	9/18/2019		1.6	1.0	ug/L
1,2-dichloropropane	MW-4	9/28/2021		1.4	1.0	ug/L
1,2-dichloropropane	MW-4	3/07/2023		1.1	1.0	ug/L
1,2-dichloropropane	MW-4	9/11/2023		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	7/07/1993		1.6	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/12/1993		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/23/2008		8.7	1.0	ug/L
1,4-dichlorobenzene	MW-4	6/23/2008		6.9	1.0	ug/L
1,4-dichlorobenzene	MW-4	8/13/2008		4.9	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/02/2008		5.7	1.0	ug/L
1,4-dichlorobenzene	MW-4	12/13/2008		7.1	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/04/2009		5.5	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/17/2009		6.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	11/06/2009		5.3	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/05/2010		7.2	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/08/2010		3.9	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/13/2011		7.2	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/22/2011		5.5	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
1,4-dichlorobenzene	MW-4	4/09/2012		5.2	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/05/2012		9.8	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/26/2013		5.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/10/2014		7.5	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/16/2014		6.8	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/04/2015		5.1	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/01/2015		3.9	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/04/2016		5.3	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/20/2016		3.5	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/24/2017		5.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/09/2017		6.5	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/21/2018		6.3	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/07/2018		4.9	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/02/2019		10.4	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/18/2019		7.5	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/15/2020		6.2	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/08/2021		6.3	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/28/2021		6.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/08/2022		5.8	1.0	ug/L
1,4-dichlorobenzene	MW-4	8/30/2022		4.6	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/07/2023		5.7	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/11/2023		7.4	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/20/2024		6.0	1.0	ug/L
Acetone	MW-4	4/23/2008		12.5	10.0	ug/L
Acetone	MW-4	9/17/2009		36.7	10.0	ug/L
Acetone	MW-4	11/06/2009		19.7	10.0	ug/L
Acetone	MW-4	4/05/2010		146.0	10.0	ug/L
Acetone	MW-4	4/13/2011		29.0	10.0	ug/L
Acetone	MW-4	4/09/2012		25.9	10.0	ug/L
Acetone	MW-4	9/05/2012		209.0	10.0	ug/L
Acetone	MW-4	4/10/2014		11.0	10.0	ug/L
Acetone	MW-4	10/09/2017		11.2	10.0	ug/L
Acetone	MW-4	9/28/2021		43.4	10.0	ug/L
Benzene	MW-4	7/07/1993		5.2	1.0	ug/L
Benzene	MW-4	10/12/1993		3.9	1.0	ug/L
Benzene	MW-4	1/24/1994		2.5	1.0	ug/L
Benzene	MW-4	4/26/1994		2.1	1.0	ug/L
Benzene	MW-4	7/26/1994		2.4	1.0	ug/L
Benzene	MW-4	10/13/1994		9.1	1.0	ug/L
Benzene	MW-4	4/25/1995		3.0	1.0	ug/L
Benzene	MW-4	10/18/1995		8.5	1.0	ug/L
Benzene	MW-4	2/08/1996		9.6	1.0	ug/L
Benzene	MW-4	4/26/1996		5.9	1.0	ug/L
Benzene	MW-4	7/31/1996		7.5	1.0	ug/L
Benzene	MW-4	10/09/1996		7.5	1.0	ug/L
Benzene	MW-4	9/26/1997		3.2	1.0	ug/L
Benzene	MW-4	4/23/1998		2.6	1.0	ug/L
Benzene	MW-4	9/16/1998		3.7	1.0	ug/L
Benzene	MW-4	3/30/1999		3.1	1.0	ug/L
Benzene	MW-4	10/07/1999		3.1	1.0	ug/L
Benzene	MW-4	4/13/2000		1.9	1.0	ug/L
Benzene	MW-4	4/05/2001		7.4	1.0	ug/L
Benzene	MW-4	8/28/2001		2.3	1.0	ug/L
Benzene	MW-4	3/29/2002		2.7	1.0	ug/L
Benzene	MW-4	4/15/2003		1.0	1.0	ug/L
Benzene	MW-4	4/03/2004		1.1	1.0	ug/L
Benzene	MW-4	9/29/2004		1.7	1.0	ug/L
Benzene	MW-4	4/09/2005		1.3	1.0	ug/L
Benzene	MW-4	4/09/2006		1.2	1.0	ug/L
Benzene	MW-4	9/18/2006		3.3	1.0	ug/L
Benzene	MW-4	4/21/2007		4.4	1.0	ug/L
Benzene	MW-4	9/20/2007		5.8	1.0	ug/L
Benzene	MW-4	4/23/2008		4.8	1.0	ug/L
Benzene	MW-4	6/23/2008		4.3	1.0	ug/L
Benzene	MW-4	8/13/2008		3.9	1.0	ug/L
Benzene	MW-4	10/02/2008		4.8	1.0	ug/L
Benzene	MW-4	12/13/2008		4.1	1.0	ug/L
Benzene	MW-4	3/04/2009		3.0	1.0	ug/L
Benzene	MW-4	9/17/2009		4.0	1.0	ug/L
Benzene	MW-4	11/06/2009		3.2	1.0	ug/L
Benzene	MW-4	4/05/2010		4.4	1.0	ug/L
Benzene	MW-4	10/08/2010		2.7	1.0	ug/L
Benzene	MW-4	4/13/2011		3.3	1.0	ug/L
Benzene	MW-4	9/22/2011		2.6	1.0	ug/L
Benzene	MW-4	4/09/2012		1.7	1.0	ug/L
Benzene	MW-4	9/05/2012		2.2	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Benzene	MW-4	4/26/2013		1.3	1.0	ug/L
Benzene	MW-4	4/10/2014		1.5	1.0	ug/L
Benzene	MW-4	10/16/2014		2.4	1.0	ug/L
Benzene	MW-4	4/04/2015		1.6	1.0	ug/L
Benzene	MW-4	10/01/2015		1.3	1.0	ug/L
Benzene	MW-4	4/04/2016		1.4	1.0	ug/L
Benzene	MW-4	9/20/2016		1.2	1.0	ug/L
Benzene	MW-4	4/24/2017		1.2	1.0	ug/L
Benzene	MW-4	10/09/2017		1.3	1.0	ug/L
Benzene	MW-4	3/21/2018		1.5	1.0	ug/L
Benzene	MW-4	4/02/2019		1.0	1.0	ug/L
Benzene	MW-4	3/25/2020		1.2	1.0	ug/L
Benzene	MW-4	9/15/2020		1.3	1.0	ug/L
Benzene	MW-4	3/08/2021		1.6	1.0	ug/L
Benzene	MW-4	9/28/2021		1.4	1.0	ug/L
Benzene	MW-4	3/08/2022		1.7	1.0	ug/L
Benzene	MW-4	8/30/2022		1.2	1.0	ug/L
Benzene	MW-4	3/07/2023		1.5	1.0	ug/L
Benzene	MW-4	9/11/2023		1.7	1.0	ug/L
Benzene	MW-4	3/20/2024		1.4	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-4	4/05/2010		11	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-4	9/20/2016		10	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-4	9/28/2021		12	6	ug/L
Chloroethane	MW-4	4/23/2008		6.9	1.0	ug/L
Chloroethane	MW-4	6/23/2008		5.8	1.0	ug/L
Chloroethane	MW-4	8/13/2008		5.2	1.0	ug/L
Chloroethane	MW-4	10/02/2008		6.9	1.0	ug/L
Chloroethane	MW-4	12/13/2008		4.6	1.0	ug/L
Chloroethane	MW-4	3/04/2009		3.4	1.0	ug/L
Chloroethane	MW-4	9/17/2009		6.3	1.0	ug/L
Chloroethane	MW-4	11/06/2009		3.7	1.0	ug/L
Chloroethane	MW-4	4/05/2010		5.4	1.0	ug/L
Chloroethane	MW-4	4/13/2011		3.4	1.0	ug/L
Chloroethane	MW-4	9/22/2011		3.9	1.0	ug/L
Chloroethane	MW-4	4/09/2012		2.1	1.0	ug/L
Chloroethane	MW-4	9/05/2012		4.4	1.0	ug/L
Chloroethane	MW-4	4/26/2013		2.0	1.0	ug/L
Chloroethane	MW-4	4/10/2014		2.4	1.0	ug/L
Chloroethane	MW-4	10/16/2014		4.7	1.0	ug/L
Chloroethane	MW-4	4/04/2015		2.1	1.0	ug/L
Chloroethane	MW-4	10/01/2015		3.0	1.0	ug/L
Chloroethane	MW-4	4/04/2016		3.1	1.0	ug/L
Chloroethane	MW-4	9/20/2016		3.9	1.0	ug/L
Chloroethane	MW-4	4/24/2017		2.3	1.0	ug/L
Chloroethane	MW-4	10/09/2017		3.0	1.0	ug/L
Chloroethane	MW-4	3/21/2018		2.4	1.0	ug/L
Chloroethane	MW-4	9/07/2018		2.5	1.0	ug/L
Chloroethane	MW-4	4/02/2019		2.1	1.0	ug/L
Chloroethane	MW-4	9/18/2019		2.9	1.0	ug/L
Chloroethane	MW-4	3/25/2020		1.5	1.0	ug/L
Chloroethane	MW-4	9/15/2020		5.0	1.0	ug/L
Chloroethane	MW-4	3/08/2021		1.4	1.0	ug/L
Chloroethane	MW-4	9/28/2021		2.4	1.0	ug/L
Chloroethane	MW-4	3/08/2022		1.2	1.0	ug/L
Chloroethane	MW-4	8/30/2022		1.9	1.0	ug/L
Chloroethane	MW-4	3/07/2023		1.4	1.0	ug/L
Chloroethane	MW-4	9/11/2023		2.0	1.0	ug/L
Chloroethane	MW-4	3/20/2024		1.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	4/23/2008		32.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	6/23/2008		1.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	8/13/2008		1.5	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	12/13/2008		1.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/17/2009		6.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	11/06/2009		3.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	4/05/2010		6.0	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	10/08/2010		2.2	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	4/13/2011		1.8	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/22/2011		4.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	4/09/2012		3.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/05/2012		16.8	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	4/26/2013		1.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	10/16/2014		2.2	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	10/01/2015		2.1	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/20/2016		1.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	10/09/2017		2.0	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/18/2019		3.2	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Cis-1,2-dichloroethylene	MW-4	9/15/2020		1.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/28/2021		2.1	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	8/30/2022		4.5	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/11/2023		2.7	1.0	ug/L
Dichlorodifluoromethane	MW-4	9/22/2011		1.6	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/09/2012		1.2	1.0	ug/L
Dichlorodifluoromethane	MW-4	9/05/2012		1.4	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/26/2013		1.2	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/10/2014		1.7	1.0	ug/L
Dichlorodifluoromethane	MW-4	10/16/2014		3.7	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/04/2015		1.1	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/04/2016		1.4	1.0	ug/L
Dichlorodifluoromethane	MW-4	9/20/2016		1.1	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/24/2017		1.3	1.0	ug/L
Dichlorodifluoromethane	MW-4	10/09/2017		1.0	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/02/2019		2.6	1.0	ug/L
Dichlorodifluoromethane	MW-4	3/25/2020		1.1	1.0	ug/L
Ethylbenzene	MW-4	6/23/2008		1.0	1.0	ug/L
Ethylbenzene	MW-4	12/13/2008		1.1	1.0	ug/L
Methacrylonitrile	MW-4	9/22/2011		11.8	1.0	ug/L
Tetrachloroethylene	MW-4	4/23/2008		2	1	ug/L
Toluene	MW-4	6/23/2008		2.9	1.0	ug/L
Toluene	MW-4	8/13/2008		2.2	1.0	ug/L
Toluene	MW-4	10/02/2008		2.5	1.0	ug/L
Toluene	MW-4	12/13/2008		3.4	1.0	ug/L
Toluene	MW-4	3/04/2009		2.7	1.0	ug/L
Toluene	MW-4	9/17/2009		1.1	1.0	ug/L
Toluene	MW-4	4/05/2010		1.2	1.0	ug/L
Trichloroethylene	MW-4	7/07/1993		3.6	1.0	ug/L
Trichloroethylene	MW-4	10/12/1993		1.8	1.0	ug/L
Trichloroethylene	MW-4	1/24/1994		1.2	1.0	ug/L
Trichloroethylene	MW-4	4/23/2008		3.6	1.0	ug/L
Trichloroethylene	MW-4	9/05/2012		1.8	1.0	ug/L
Vinyl chloride	MW-4	4/23/2008		5.6	1.0	ug/L
Vinyl chloride	MW-4	6/23/2008		22.6	1.0	ug/L
Vinyl chloride	MW-4	8/13/2008		14.6	1.0	ug/L
Vinyl chloride	MW-4	10/02/2008		11.1	1.0	ug/L
Vinyl chloride	MW-4	12/13/2008		6.7	1.0	ug/L
Vinyl chloride	MW-4	3/04/2009		4.4	1.0	ug/L
Vinyl chloride	MW-4	9/17/2009		8.3	1.0	ug/L
Vinyl chloride	MW-4	11/06/2009		4.4	1.0	ug/L
Vinyl chloride	MW-4	4/05/2010		16.1	1.0	ug/L
Vinyl chloride	MW-4	10/08/2010		5.0	1.0	ug/L
Vinyl chloride	MW-4	4/13/2011		2.9	1.0	ug/L
Vinyl chloride	MW-4	9/22/2011		3.9	1.0	ug/L
Vinyl chloride	MW-4	4/09/2012		1.6	1.0	ug/L
Vinyl chloride	MW-4	9/05/2012		4.0	1.0	ug/L
Vinyl chloride	MW-4	4/26/2013		2.3	1.0	ug/L
Vinyl chloride	MW-4	4/10/2014		1.7	1.0	ug/L
Vinyl chloride	MW-4	10/16/2014		4.9	1.0	ug/L
Vinyl chloride	MW-4	4/04/2015		1.3	1.0	ug/L
Vinyl chloride	MW-4	10/01/2015		2.3	1.0	ug/L
Vinyl chloride	MW-4	9/20/2016		2.2	1.0	ug/L
Vinyl chloride	MW-4	10/09/2017		1.8	1.0	ug/L
Vinyl chloride	MW-4	3/21/2018		1.8	1.0	ug/L
Vinyl chloride	MW-4	9/07/2018		1.9	1.0	ug/L
Vinyl chloride	MW-4	4/02/2019		1.8	1.0	ug/L
Vinyl chloride	MW-4	9/18/2019		1.8	1.0	ug/L
Vinyl chloride	MW-4	3/25/2020		1.0	1.0	ug/L
Vinyl chloride	MW-4	9/15/2020		3.3	1.0	ug/L
Vinyl chloride	MW-4	9/28/2021		2.8	1.0	ug/L
Vinyl chloride	MW-4	8/30/2022		1.8	1.0	ug/L
Vinyl chloride	MW-4	9/11/2023		4.2	1.0	ug/L
Alpha-bhc	MW-5	3/25/2020		8.52	.05	ug/L
Bis(2-ethylhexyl) phthalate	MW-5	9/20/2016		10	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-5	3/25/2020		8	6	ug/L
Chloroethane	MW-5	4/23/2008		3.9	1.0	ug/L
Chloroethane	MW-5	6/23/2008		6.3	1.0	ug/L
Chloroethane	MW-5	8/13/2008		4.4	1.0	ug/L
Chloroethane	MW-5	10/02/2008		7.6	1.0	ug/L
Chloroethane	MW-5	12/13/2008		8.1	1.0	ug/L
Chloroethane	MW-5	3/04/2009		4.7	1.0	ug/L
Chloroethane	MW-5	9/17/2009		5.4	1.0	ug/L
Chloroethane	MW-5	11/06/2009		7.2	1.0	ug/L
Chloroethane	MW-5	4/05/2010		4.8	1.0	ug/L
Chloroethane	MW-5	4/13/2011		3.3	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Chloroethane	MW-5	9/22/2011		2.9	1.0	ug/L
Chloroethane	MW-5	9/05/2012		1.0	1.0	ug/L
Chloroethane	MW-5	4/26/2013		1.5	1.0	ug/L
Chloroethane	MW-5	9/26/2013		2.1	1.0	ug/L
Chloroethane	MW-5	4/10/2014		1.3	1.0	ug/L
Chloroethane	MW-5	10/16/2014		3.2	1.0	ug/L
Chloroethane	MW-5	10/01/2015		2.0	1.0	ug/L
Chloroethane	MW-5	4/04/2016		2.7	1.0	ug/L
Chloroethane	MW-5	4/24/2017		1.9	1.0	ug/L
Chloroethane	MW-5	4/02/2019		1.0	1.0	ug/L
Chloroethane	MW-5	6/05/2019		1.3	1.0	ug/L
Chloroethane	MW-5	9/18/2019		2.0	1.0	ug/L
Chloroethane	MW-5	3/25/2020		2.0	1.0	ug/L
Chloroethane	MW-5	9/15/2020		1.9	1.0	ug/L
Chloroethane	MW-5	3/08/2021		1.8	1.0	ug/L
Chloroethane	MW-5	8/30/2022		2.7	1.0	ug/L
Chloroethane	MW-5	3/07/2023		3.1	1.0	ug/L
Cis-1,2-dichloroethylene	MW-5	4/23/2008		1.0	1.0	ug/L
Cis-1,2-dichloroethylene	MW-5	6/23/2008		1.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-5	12/13/2008		1.0	1.0	ug/L
Di-n-octyl phthalate	MW-5	9/20/2016		64	8	ug/L
1,1-dichloroethylene	MW-9	1/24/1994		4.1	1.0	ug/L
Benzene	MW-9	1/24/1994		2.7	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-9	4/10/2014		9	8	ug/L
Trichloroethylene	MW-9	1/24/1994		4.4	1.0	ug/L

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

Attachment F

Assessment Statistics for Verified VOC Detections

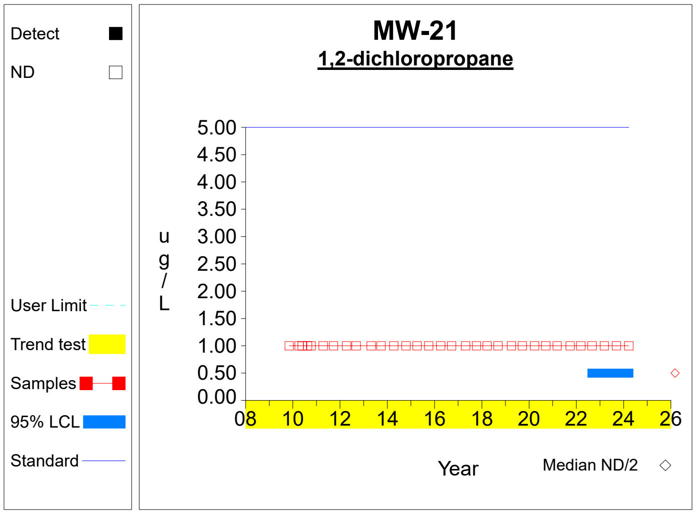
Table 1

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

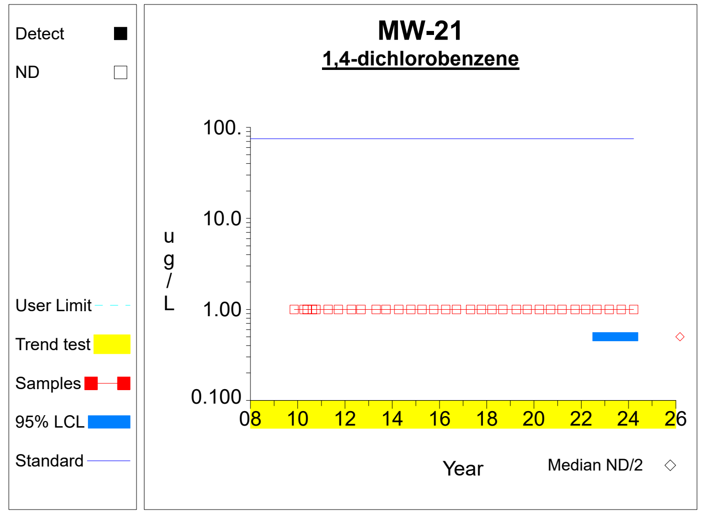
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
1,2-dichloropropane	ug/L	MW-21	4	0.500	0.000	1.176	0.500	0.500	5.000	
1,4-dichlorobenzene	ug/L	MW-21	4	0.500	0.000	1.176	0.500	0.500	75.000	
Benzene	ug/L	MW-21	4	0.500	0.000	1.176	0.500	0.500	5.000	
Chloroethane	ug/L	MW-21	4	0.725	0.450	1.176	0.196	1.254	2800.000	
Cis-1,2-dichloroethylene	ug/L	MW-21	4	0.500	0.000	1.176	0.500	0.500	70.000	
Vinyl chloride	ug/L	MW-21	4	0.500	0.000	1.176	0.500	0.500	2.000	
1,2-dichloropropane	ug/L	MW-4	4	0.775	0.320	1.176	0.398	1.152	5.000	
1,4-dichlorobenzene	ug/L	MW-4	4	5.925	1.153	1.176	4.569	7.281	75.000	
Benzene	ug/L	MW-4	4	1.450	0.208	1.176	1.205	1.695	5.000	dec
Chloroethane	ug/L	MW-4	4	1.675	0.320	1.176	1.298	2.052	2800.000	dec
Cis-1,2-dichloroethylene	ug/L	MW-4	4	2.050	1.935	1.176	0.000	4.326	70.000	
Vinyl chloride	ug/L	MW-4	4	1.750	1.745	1.176	0.000	3.802	2.000	dec
1,2-dichloropropane	ug/L	MW-5	4	0.500	0.000	1.176	0.500	0.500	5.000	
1,4-dichlorobenzene	ug/L	MW-5	4	0.500	0.000	1.176	0.500	0.500	75.000	
Benzene	ug/L	MW-5	4	0.500	0.000	1.176	0.500	0.500	5.000	
Chloroethane	ug/L	MW-5	4	1.700	1.395	1.176	0.059	3.341	2800.000	dec
Cis-1,2-dichloroethylene	ug/L	MW-5	4	0.500	0.000	1.176	0.500	0.500	70.000	
Vinyl chloride	ug/L	MW-5	4	0.500	0.000	1.176	0.500	0.500	2.000	

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

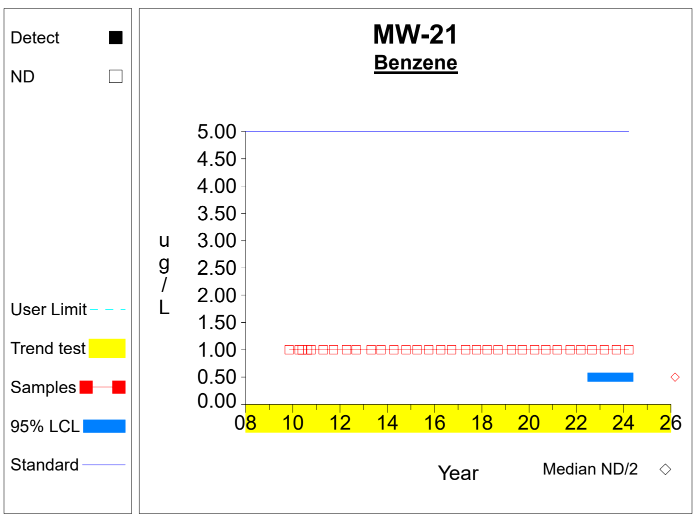
Confidence Limits (Assessment)



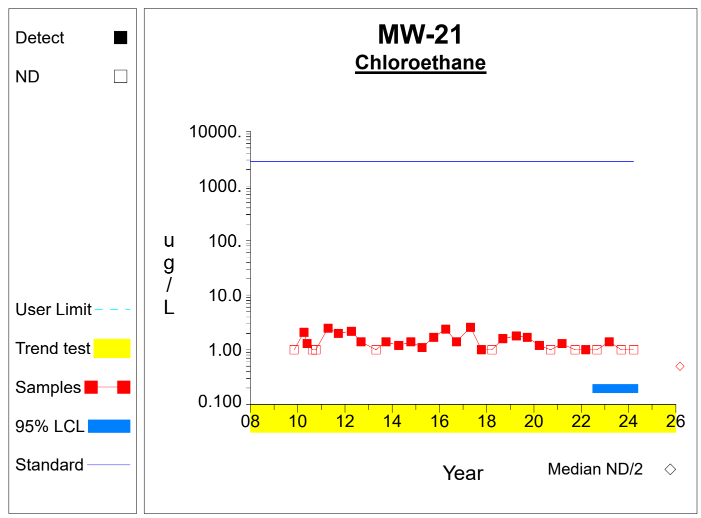
Graph 1



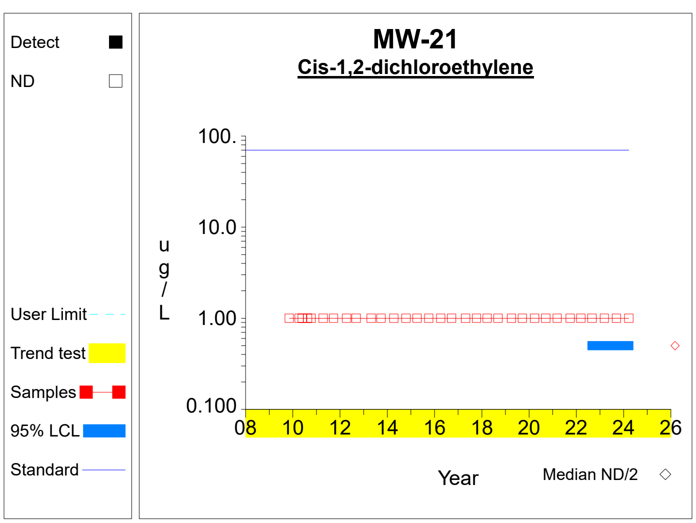
Graph 2



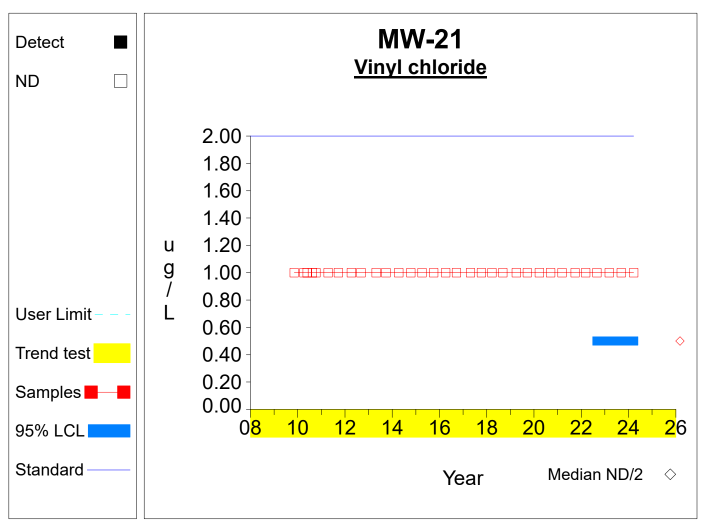
Graph 3



Graph 4

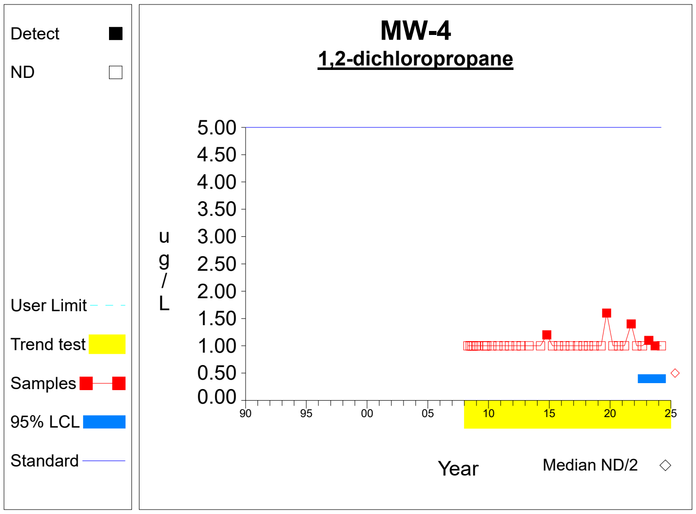


Graph 5

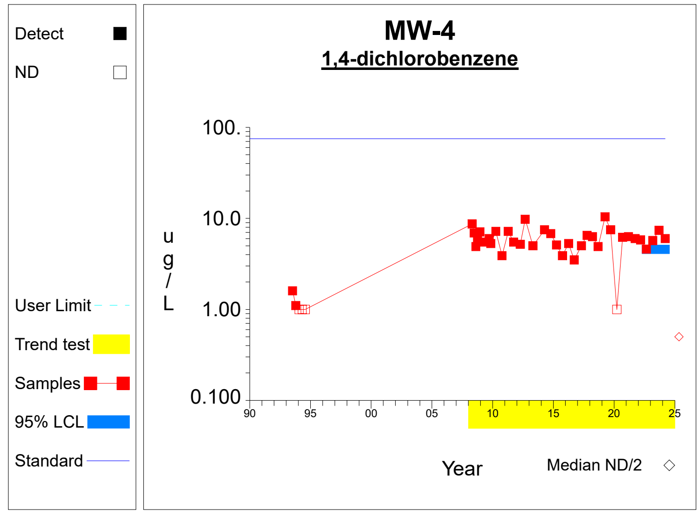


Graph 6

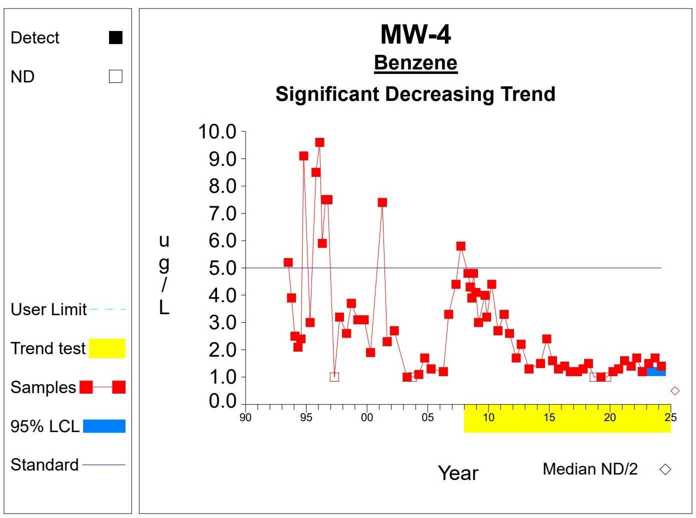
Confidence Limits (Assessment)



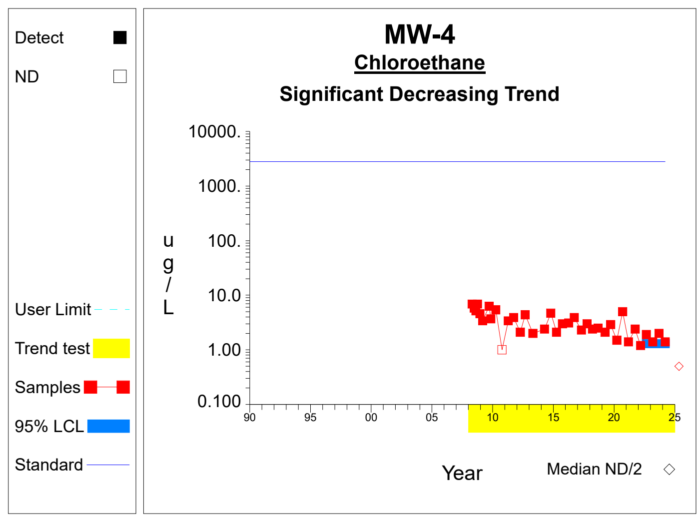
Graph 7



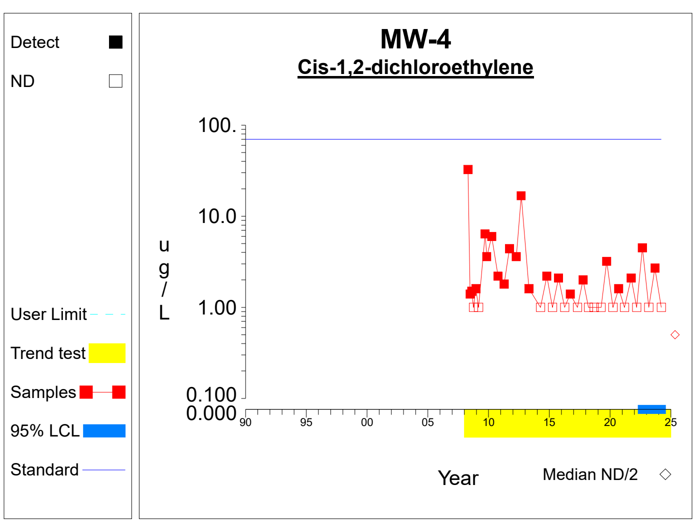
Graph 8



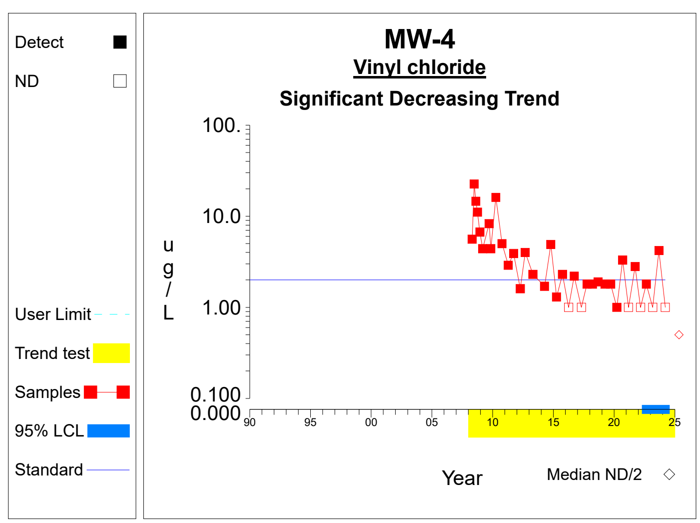
Graph 9



Graph 10

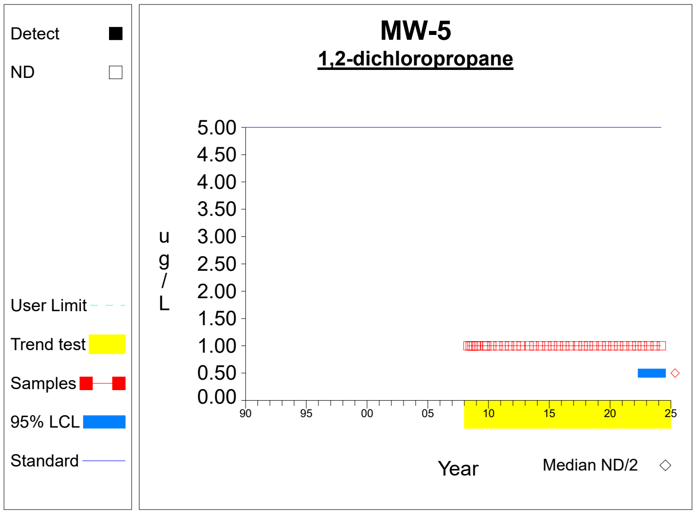


Graph 11

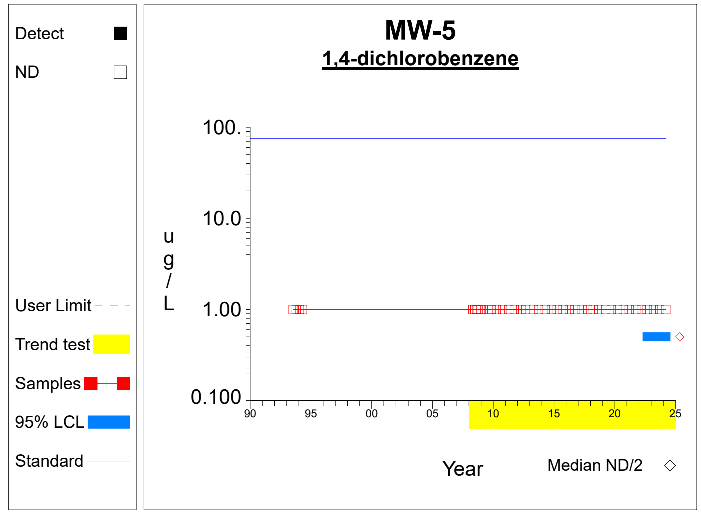


Graph 12

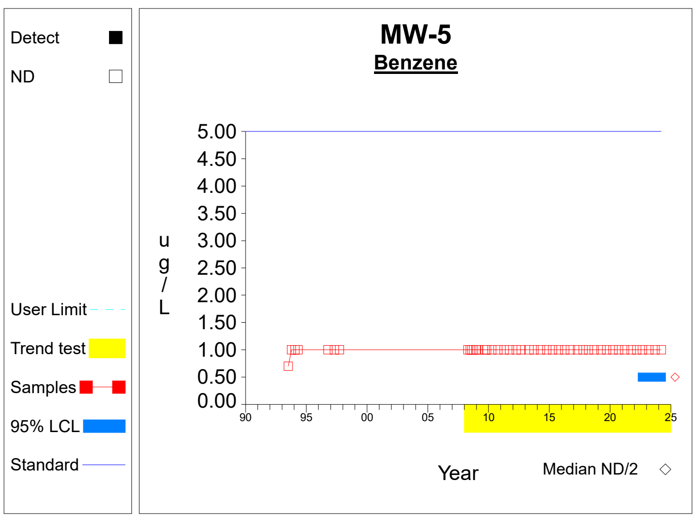
Confidence Limits (Assessment)



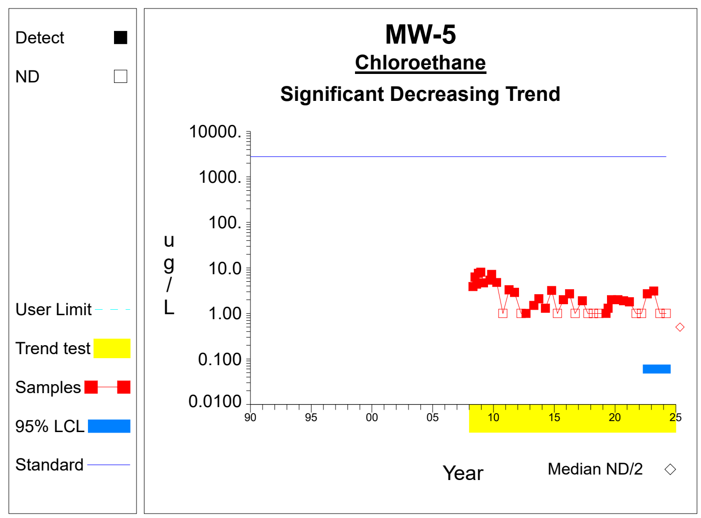
Graph 13



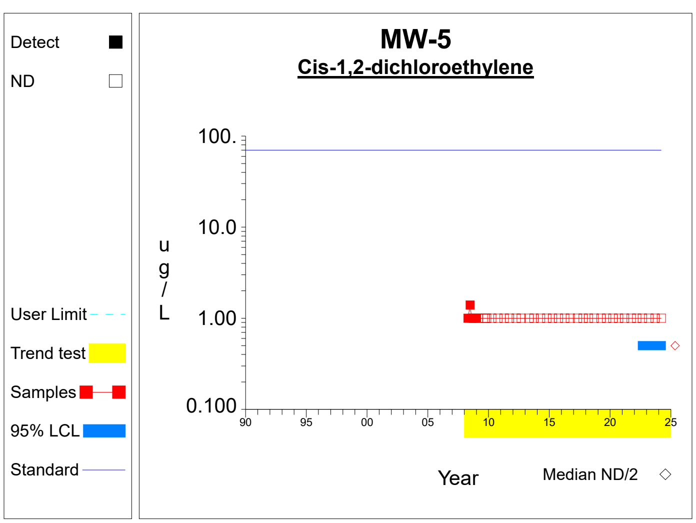
Graph 14



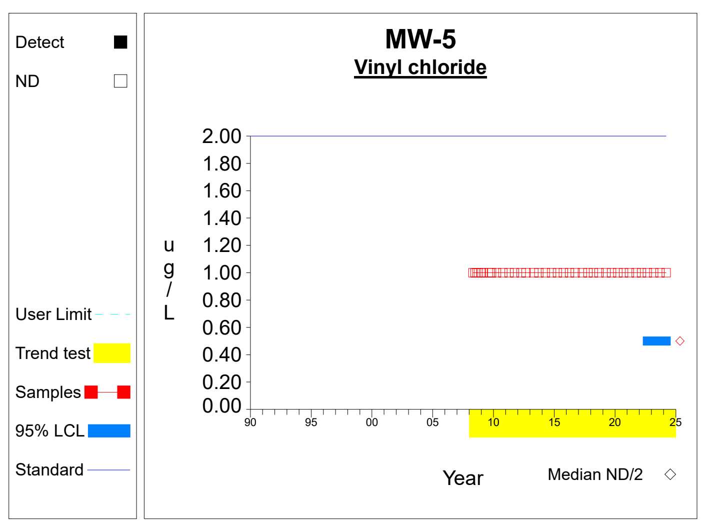
Graph 15



Graph 16



Graph 17



Graph 18

APPENDIX B.2 – 2^{nd} Statistical Evaluation

GROUND WATER STATISTICS

FOR THE

SOUTH DALLAS COUNTY SANITARY LANDFILL

Second Semi-Annual Monitoring Event in 2024

Prepared for:
South Dallas County Sanitary Landfill
2000 Main Street
Adel, Dallas County, IA 50003

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

October 2024

INTRODUCTION

This report summarizes the results of the statistical analysis used to evaluate the ground water quality data obtained during the second semi-annual monitoring event in 2024 at the South Dallas County Sanitary Landfill in Adel, Dallas County, Iowa. The statistical plan was designed to detect a release from the facility at the earliest indication so that it is protective of human health and the environment. The interwell methodology is described and then applied to the South Dallas County Landfill data. The statistical plan conforms with IAC 567, Chapter 113.10 and the USEPA Unified Guidance document ("*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities*", March 2009).

Ground Water Monitoring Program

The groundwater monitoring network for South Dallas County Sanitary Landfill includes upgradient wells MW-2, MW-17, and MW-19A and downgradient detection sample points MW-10, MW-12, MW-15R, MW-18, MW-20R, MW-21, MW-22, MW-24, MW-4, MW-5, and MW-9. Each of the groundwater monitoring wells is to be sampled at least semiannually and analyzed for the detection monitoring parameters listed in 113.10(5), which includes 15 inorganic constituents and 47 organic compounds, summarized in Table 1 below.

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

Organic Compounds:

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

Inorganic constituents:

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

The ground water data obtained during the second semi-annual monitoring event in 2024 are summarized in Attachment A.

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

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

Interwell Statistics: Upgradient versus Downgradient Comparisons

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

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

The previous background data used in this statistical analysis included the ground water data collected from ground water wells MW-2, MW-17, and MW-19A during the period from October 2014 through April 2018. Since then, wells MW-18, MW-24, and MW-9 have been approved as background wells. The background data used in this statistical analysis includes the ground water data collected from ground water wells MW-2, MW-17, MW-18, MW-19A, MW-24, and MW-9 during the period from October 2014 through the current data. A summary of the background data from monitoring wells MW-2, MW-17, MW-18, MW-19A, MW-24, and MW-9, used to determine the site prediction limits, is listed in Attachment B, Table 1 “Upgradient Data”. This statistical method compares the current downgradient determinations to site prediction limits and checks for exceedances.

Table 2 “Most Current Downgradient Monitoring Data”, summarizes the current data from downgradient wells MW-12, MW-15R, MW-20R, MW-21, MW-22, MW-4, and MW-5 compared to the site prediction limits. Prediction limit exceedances are flagged with asterisks. For the data obtained during the second semi-annual monitoring event in 2024, the site prediction limit exceedances detected are summarized in the table below.

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

Well	Trace Metal	Result, µg/L	Prediction Limit	Prediction Limit Type	Verified or Awaiting Verification
MW-5	Nickel	33.3	22.2432	Normal	Awaiting Verification

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. Barium, cobalt, and nickel are detected at a frequency greater than 50% in the upgradient wells so those metals were tested for normality. The remainder of the metals are rarely detected (less than 50%) in the upgradient wells so nonparametric limits were used in those cases. Table 4 summarizes the results of the Shapiro-Wilk test. Table 5 is a summary of the statistics and prediction limits determined for the metals. Time series graphs of each of the parameters at each well with the corresponding prediction limits are attached.

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

The past verified metals exceedances were evaluated against the ground water protection standards (GWPS) using confidence limits calculated in accordance with the Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, 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.

<u>Compliance wells</u>
The 95% LCL for arsenic at MW-15R (13.796 µg/L) exceeds the USEPA MCL of 10 µg/L.
The 95% LCL for arsenic at MW-20R (19.322 µg/L) exceeds the USEPA MCL of 10 µg/L.
The 95% LCL for arsenic at MW-22 (34.835 µg/L) exceeds the USEPA MCL of 10 µg/L.
The 95% LCL for cobalt at MW-22 (2.169 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L.
The 95% LCL for arsenic at MW-4 (51.788 µg/L) exceeds the USEPA MCL of 10 µg/L.

<u>Background wells</u>
The 95% LCL for arsenic at MW-18 (16.098 µg/L) exceeds the USEPA MCL of 10 µg/L.
The 95% LCL for cobalt at MW-18 (6.281 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L.
The 95% LCL for cobalt at MW-9 (4.331 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L.

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

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. As an alternative to nonparametric prediction limits, Poisson prediction limits can be used for small data sets where the detection frequency is less than 25%.

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. 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 compliance wells MW-12, MW-15R, MW-20R, MW-21, MW-22, MW-4, and MW-5 were evaluated using the combined Shewhart-CUSUM control chart method. The previous background included the data obtained from October 2014 through June 2018. Because there were eight rounds or fewer of background, there was insufficient data to determine nonparametric limits for those rarely detected parameters. Nonparametric prediction limits are the largest value detected during background at that well for that parameter. Since thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit, the background was updated to include data obtained from October 2014 through 2020.

A summary of the intrawell statistics is included in Attachment D, 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, there were no control limit exceedances detected.

An increasing trend was detected in the background data for barium at MW-5.

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. Given an accepted resample verification plan of “pass one of one” resamples, the number of statistical comparisons, and the number of background data points, the optimal factor $h = SCL = 6.5$ for $N < 12$. Using this factor for intrawell analysis, the site-wide false positive rate is 17% and the test becomes sensitive to 4 standard deviation units over background.

Volatile Organic Compounds

Volatile Organic Compounds (VOCs) are generally man-made compounds not present in ambient ground water. If VOCs are detected above their statistical limit (i.e., the laboratory PQL or reporting limit), a verification resample will be conducted at the next scheduled sampling event. A statistical exceedance will be indicated if the VOC detection is confirmed by the subsequent monitoring. VOCs detected in the ground water at South Dallas County Landfill during the second semi-annual monitoring event in 2024 are summarized below.

VOCs detected at South Dallas County Landfill during the second semi-annual monitoring event in 2024

Well	VOC Detected	Result, µg/L	Reporting Limit, µg/L	Verified/ Awaiting Verification	Groundwater Standard, µg/L
MW-4	1,4-Dichlorobenzene	5.9	1	Verified	75[a]
	Benzene	1.3	1	Verified	5[a]
	Chloroethane	1.3	1	Verified	2800[b]
	cis-1,2-Dichloroethene	2.4	1	Awaiting Verification	70[a]
MW-5	Bis(2-ethylhexyl)phthalate	9.0	6	Awaiting Verification	6[a]

a - USEPA MCL
b – Iowa Statewide Standard

These VOCs are often associated with landfill gas migration. Historical VOC detections are summarized in Attachment E. The verified VOC detections 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, USEPA, March 2009 (Attachment F). The calculated LCLs are all below ground water quality standards for each of the verified detections.

CONCLUSIONS

This report summarizes the statistical analyses used to evaluate the ground water data obtained during the second semi-annual monitoring event in 2024 at South Dallas County Sanitary Landfill. Monitoring wells MW-12, MW-15R, MW-17, MW-18, MW-19A, MW-20R, MW-21, MW-22, MW-24, MW-4, MW-5, and MW-9 were sampled on September 11-12, 2024 and analyzed for the parameters required by permit. The ground water data was compared to background using prediction limits. There is a site prediction limit exceedance detected for nickel at MW-5 awaiting verification. Using intrawell comparisons, there were no control limit exceedances. The VOCs were compared to MCLs or PQLs, in lieu of statistical comparisons to historical concentrations. There are verified detections of 1,4-dichlorobenzene, benzene, and chloroethane at MW-4.

Attachment A

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

Table 1

Analytical Data Summary for 9/11/2024 to 9/12/2024

Constituents	Units	MW-12	MW-15R	MW-17	MW-18	MW-19A	MW-20R	MW-21	MW-22	MW-24	MW-25	MW-26	MW-4	MW-5	MW-9
(3 4)-Methylphenol	ug/L													<8	
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,1-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,1-dichloropropene	ug/L													<1	
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L													<8	
1,2,4-trichlorobenzene	ug/L													<1	
1,2-dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5	<1	<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
1,2-dinitrobenzene	ug/L													<8	
1,3,5-trinitrobenzene	ug/L													<8	
1,3-dichlorobenzene	ug/L													<1	
1,3-dichloropropane	ug/L													<1	
1,3-dinitrobenzene	ug/L													<8	
1,4-dichlorobenzene	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			5.9	<1.0	<1.0
1,4-naphthoquinone	ug/L													<8	
1,4-phenylenediamine	ug/L													<8	
1-naphthylamine	ug/L													<8	
2,2-dichloropropane	ug/L													<1	
2,3,4,6-tetrachlorophenol	ug/L													<8	
2,4,5-t	ug/L													<.5	
2,4,5-tp (silvex)	ug/L													<.5	
2,4,5-trichlorophenol	ug/L													<8	
2,4,6-trichlorophenol	ug/L													<8	
2,4-d	ug/L													<2	
2,4-dichlorophenol	ug/L													<8	
2,4-dimethylphenol	ug/L													<8	
2,4-dinitrophenol	ug/L													<8	
2,4-dinitrotoluene	ug/L													<8	
2,6-dichlorophenol	ug/L													<8	
2,6-dinitrotoluene	ug/L													<8	
2-acetylaminofluorene	ug/L													<8	
2-butanone (mek)	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10			<10	<5	<10
2-chloronaphthalene	ug/L													<8	
2-chlorophenol	ug/L													<8	
2-hexanone (mbk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5	<5	<5
2-methylnaphthalene	ug/L													<8	
2-methylphenol	ug/L													<8	
2-naphthylamine	ug/L													<8	
2-nitroaniline	ug/L													<8	
2-nitrophenol	ug/L													<8	
3,3´-dichlorobenzidine	ug/L													<8	
3,3'-dimethylbenzidine	ug/L													<8	
3-methylcholanthrene	ug/L													<8	
3-nitroaniline	ug/L													<8	
4,4´-ddd	ug/L													<.05	
4,4´-dde	ug/L													<.05	

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

Table 1

Analytical Data Summary for 9/11/2024 to 9/12/2024

Constituents	Units	MW-12	MW-15R	MW-17	MW-18	MW-19A	MW-20R	MW-21	MW-22	MW-24	MW-25	MW-26	MW-4	MW-5	MW-9
4,4´-ddt	ug/L													<.05	
4,6-dinitro-2-methylphenol	ug/L													<8	
4-aminobiphenyl	ug/L													<8	
4-bromophenyl phenyl ether	ug/L													<8	
4-chloro-3-methylphenol	ug/L													<8	
4-chloroaniline	ug/L													<8	
4-chlorophenyl phenyl ether	ug/L													<8	
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5	<5	<5
4-nitroaniline	ug/L													<8	
4-nitrophenol	ug/L													<8	
5-nitro-o-toluidine	ug/L													<8	
7,12-dimethylbenz(a)anthracene	ug/L													<8	
Acenaphthene	ug/L													<8	
Acenaphthylene	ug/L													<8	
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10			<10	<10	<10
Acetonitrile	ug/L													<10	
Acetophenone	ug/L													<8	
Acrolein	ug/L													<10	
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5	<5	<5
Aldrin	ug/L													<.05	
Allyl chloride	ug/L													<1	
Alpha-bhc	ug/L													<.05	
Anthracene	ug/L													<8	
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2			<2	<2	<2
Arochlor 1016	ug/L													<.2	
Arochlor 1221	ug/L													<.2	
Arochlor 1232	ug/L													<.2	
Arochlor 1242	ug/L													<.2	
Arochlor 1248	ug/L													<.2	
Arochlor 1254	ug/L													<.2	
Arochlor 1260	ug/L													<.2	
Arsenic, total	ug/L	5.6	17.3	<4.0	16.2	<4.0	21.5	6.5	63.1	13.6	4.7	14.3	58.4	9.7	4.3
Azobenzene	ug/L													<8	
Barium, total	ug/L	310.0	332.0	153.0	621.0	38.2	657.0	517.0	418.0	509.0	131.0	420.0	1020.0	269.0	305.0
Benzene	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			1.3	<1.0	<1.0
Benzo(a)anthracene	ug/L													<8	
Benzo(a)pyrene	ug/L													<8	
Benzo(b)fluoranthene	ug/L													<8	
Benzo(g,h,i)perylene	ug/L													<8	
Benzo(k)fluoranthene	ug/L													<8	
Benzyl alcohol	ug/L													<8	
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4			<4	<4	<4
Beta-bhc	ug/L													<.05	
Bis (2-chloroethoxy) methane	ug/L													<8	
Bis(2-chloroethyl) ether	ug/L													<8	
Bis(2-chloroisopropyl) ether	ug/L													<8	
Bis(2-ethylhexyl) phthalate	ug/L													9	
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Butyl benzyl phthalate	ug/L													<8	
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	1.0	<.8	<.8	<.8	.9			<.8	.9	<.8
Carbon disulfide	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 9/11/2024 to 9/12/2024

Constituents	Units	MW-12	MW-15R	MW-17	MW-18	MW-19A	MW-20R	MW-21	MW-22	MW-24	MW-25	MW-26	MW-4	MW-5	MW-9
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Chlordane	ug/L													<.1	
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Chlorobenzilate	ug/L													<8	
Chloroethane	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			1.3	<1.0	<1.0
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Chloroprene	ug/L													<1	
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8			<8	<8	<8
Chrysene	ug/L													<8	
Cis-1,2-dichloroethylene	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			2.4	<1.0	<1.0
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Cobalt, total	ug/L	1.1	3.3	3.6	5.8	.4	.6	1.0	4.0	.6			1.5	10.6	4.5
Copper, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0			<4.0	7.3	<4.0
Cyanide, total	mg/L													<.01	
Delta-bhc	ug/L													<.05	
Diallate	ug/L													<8	
Dibenzo(a,h)anthracene	ug/L													<8	
Dibenzofuran	ug/L													<8	
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Dichlorodifluoromethane	ug/L													<1	
Dieldrin	ug/L													<.05	
Diethyl phthalate	ug/L													<8	
Dimethoate	ug/L													<.4	
Dimethylphthalate	ug/L													<8	
Di-n-butyl phthalate	ug/L													<8	
Di-n-octyl phthalate	ug/L													<8	
Dinoseb	ug/L													<.5	
Diphenylamine	ug/L													<8	
Disulfoton	ug/L													<.4	
Endosulfan i	ug/L													<.05	
Endosulfan ii	ug/L													<.05	
Endosulfan sulfate	ug/L													<.05	
Endrin	ug/L													<.05	
Endrin aldehyde	ug/L													<.05	
Ethyl methacrylate	ug/L													<10	
Ethyl methanesulfonate	ug/L													<8	
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Famphur	ug/L													<.4	
Fluoranthene	ug/L													<8	
Fluorene	ug/L													<8	
Gamma-bhc (lindane)	ug/L													<.05	
Heptachlor	ug/L													<.05	
Heptachlor epoxide	ug/L													<.05	
Hexachlorobenzene	ug/L													<.05	
Hexachlorobutadiene	ug/L													<8	
Hexachlorocyclopentadiene	ug/L													<8	
Hexachloroethane	ug/L													<8	
Hexachloropropene	ug/L													<8	
Indeno(1,2,3-cd)pyrene	ug/L													<8	
Isobutanol	ug/L													<1000	
Isodrin	ug/L													<8	
Isophorone	ug/L													<8	

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

Table 1

Analytical Data Summary for 9/11/2024 to 9/12/2024

Constituents	Units	MW-12	MW-15R	MW-17	MW-18	MW-19A	MW-20R	MW-21	MW-22	MW-24	MW-25	MW-26	MW-4	MW-5	MW-9
Isosafrole	ug/L													<8	
Kepone	ug/L													<8	
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4			<4	<4	<4
Mercury, total	ug/L													<.5	
Methacrylonitrile	ug/L													<1	
Methapyrilene	ug/L													<8	
Methoxychlor	ug/L													<.05	
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<2	<1
Methyl methacrylate	ug/L													<1	
Methyl methanesulfonate	ug/L													<8	
Methyl parathion	ug/L													<.4	
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5	<5	<5
Naphthalene	ug/L													<8	
Nickel, total	ug/L	<4.0	4.1	6.6	10.6	9.0	<4.0	8.5	7.4	<4.0			<4.0	33.3	9.5
Nitrobenzene	ug/L													<8	
N-nitrosodiethylamine	ug/L													<8	
N-nitrosodimethylamine	ug/L													<8	
N-nitrosodi-n-butylamine	ug/L													<8	
N-nitroso-di-n-propylamine	ug/L													<8	
N-nitrosodiphenylamine	ug/L													<8	
N-nitrosomethylethylamine	ug/L													<8	
N-nitrosopiperidine	ug/L													<8	
N-nitrosopyrrolidine	ug/L													<8	
O,o,o-triethyl phosphorothioate	ug/L													<.4	
O-toluidine	ug/L													<8	
Parathion	ug/L													<.4	
P-dimethylaminoazobenzene	ug/L													<8	
Pentachlorobenzene	ug/L													<8	
Pentachloronitrobenzene (pcnb)	ug/L													<8	
Pentachlorophenol	ug/L													<8	
Phenacetin	ug/L													<8	
Phenanthrene	ug/L													<8	
Phenol	ug/L													<8	
Phorate	ug/L													<.4	
Pronamide	ug/L													<8	
Propionitrile	ug/L													<10	
Pyrene	ug/L													<8	
Safrole	ug/L													<8	
Selenium, total	ug/L	<4.0	<4.0	6.8	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0			<4.0	<4.0	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4			<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Sulfide, total	mg/L													<.1	
Tetrachloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Thallium, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2			<2	<2	<2
Thionazin	ug/L													<.4	
Tin, total	ug/L													<20	
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Toxaphene	ug/L													<.2	
Trans-1,2-dichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5	<5	<5
Trichloroethylene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1			<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20			<20	<20	<20

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

Table 1

Analytical Data Summary for 9/11/2024 to 9/12/2024

Constituents	Units	MW-12	MW-15R	MW-17	MW-18	MW-19A	MW-20R	MW-21	MW-22	MW-24	MW-25	MW-26	MW-4	MW-5	MW-9
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5		<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2			<2	<2	<2
Zinc, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20			<20	<20	<20

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

Attachment B

Summary Tables and Graphs for the Interwell Comparisons

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Antimony, total	ug/L	MW-17	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-17	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-17	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-17	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-17	09/20/2016	ND	2.0000		
Antimony, total	ug/L	MW-17	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-17	10/09/2017	ND	2.0000		
Antimony, total	ug/L	MW-17	03/21/2018	ND	2.0000		
Antimony, total	ug/L	MW-17	09/07/2018	ND	2.0000		
Antimony, total	ug/L	MW-17	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-17	09/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-17	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-17	09/15/2020	ND	2.0000		
Antimony, total	ug/L	MW-17	03/08/2021	ND	2.0000		
Antimony, total	ug/L	MW-17	09/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-17	03/08/2022	ND	2.0000		
Antimony, total	ug/L	MW-17	08/30/2022	ND	2.0000		
Antimony, total	ug/L	MW-17	03/07/2023	ND	2.0000		
Antimony, total	ug/L	MW-17	09/11/2023	ND	2.0000		
Antimony, total	ug/L	MW-17	03/20/2024	ND	2.0000		
Antimony, total	ug/L	MW-17	09/12/2024	ND	2.0000		
Arsenic, total	ug/L	MW-17	10/16/2014	ND	4.0000		
Arsenic, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Arsenic, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Arsenic, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Arsenic, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Arsenic, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-17	10/09/2017	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/21/2018		5.0000		
Arsenic, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Arsenic, total	ug/L	MW-17	04/02/2019		4.4000		
Arsenic, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-17	09/15/2020	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Arsenic, total	ug/L	MW-17	09/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/08/2022	ND	4.0000		
Arsenic, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Arsenic, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Arsenic, total	ug/L	MW-17	03/20/2024	ND	4.0000		
Arsenic, total	ug/L	MW-17	09/12/2024	ND	4.0000		
Barium, total	ug/L	MW-17	10/16/2014		173.0000		
Barium, total	ug/L	MW-17	04/04/2015		185.0000		
Barium, total	ug/L	MW-17	10/01/2015		142.0000		
Barium, total	ug/L	MW-17	04/04/2016		143.0000		
Barium, total	ug/L	MW-17	09/20/2016		174.0000		
Barium, total	ug/L	MW-17	04/24/2017		172.0000		
Barium, total	ug/L	MW-17	10/09/2017		182.0000		
Barium, total	ug/L	MW-17	03/21/2018		233.0000		
Barium, total	ug/L	MW-17	09/07/2018		131.0000		
Barium, total	ug/L	MW-17	04/02/2019		179.0000		
Barium, total	ug/L	MW-17	09/18/2019		138.0000		
Barium, total	ug/L	MW-17	03/25/2020		123.0000		
Barium, total	ug/L	MW-17	09/15/2020		180.0000		
Barium, total	ug/L	MW-17	03/08/2021		160.0000		
Barium, total	ug/L	MW-17	09/28/2021		179.0000		
Barium, total	ug/L	MW-17	03/08/2022		192.0000		
Barium, total	ug/L	MW-17	08/30/2022		137.0000		
Barium, total	ug/L	MW-17	03/07/2023		162.0000		
Barium, total	ug/L	MW-17	09/11/2023		149.0000		
Barium, total	ug/L	MW-17	03/20/2024		149.0000		
Barium, total	ug/L	MW-17	09/12/2024		153.0000		
Beryllium, total	ug/L	MW-17	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Beryllium, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-17	10/09/2017	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/21/2018	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Beryllium, total	ug/L	MW-17	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/18/2019	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium, total	ug/L	MW-17	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/15/2020	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/08/2022	ND	4.0000		
Beryllium, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Beryllium, total	ug/L	MW-17	03/20/2024	ND	4.0000		
Beryllium, total	ug/L	MW-17	09/12/2024	ND	4.0000		
Cadmium, total	ug/L	MW-17	10/16/2014	ND	0.8000		
Cadmium, total	ug/L	MW-17	04/04/2015	ND	0.8000		
Cadmium, total	ug/L	MW-17	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-17	04/04/2016		1.0000		
Cadmium, total	ug/L	MW-17	09/20/2016	ND	0.8000		
Cadmium, total	ug/L	MW-17	04/24/2017		0.9000		
Cadmium, total	ug/L	MW-17	10/09/2017	ND	0.8000		
Cadmium, total	ug/L	MW-17	03/21/2018	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/07/2018	ND	0.8000		
Cadmium, total	ug/L	MW-17	04/02/2019	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-17	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/15/2020		0.8000		
Cadmium, total	ug/L	MW-17	03/08/2021	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/28/2021		1.1000		
Cadmium, total	ug/L	MW-17	03/08/2022	ND	0.8000		
Cadmium, total	ug/L	MW-17	08/30/2022	ND	0.8000		
Cadmium, total	ug/L	MW-17	03/07/2023	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/11/2023	ND	0.8000		
Cadmium, total	ug/L	MW-17	03/20/2024	ND	0.8000		
Cadmium, total	ug/L	MW-17	09/12/2024	ND	0.8000		
Chromium, total	ug/L	MW-17	10/16/2014	ND	8.0000		
Chromium, total	ug/L	MW-17	04/04/2015	ND	8.0000		
Chromium, total	ug/L	MW-17	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-17	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-17	09/20/2016	ND	8.0000		
Chromium, total	ug/L	MW-17	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-17	10/09/2017	ND	8.0000		
Chromium, total	ug/L	MW-17	03/21/2018	ND	8.0000		
Chromium, total	ug/L	MW-17	09/07/2018	ND	8.0000		
Chromium, total	ug/L	MW-17	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-17	09/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-17	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-17	09/15/2020	ND	8.0000		
Chromium, total	ug/L	MW-17	03/08/2021	ND	8.0000		
Chromium, total	ug/L	MW-17	09/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-17	03/08/2022	ND	8.0000		
Chromium, total	ug/L	MW-17	08/30/2022	ND	8.0000		
Chromium, total	ug/L	MW-17	03/07/2023	ND	8.0000		
Chromium, total	ug/L	MW-17	09/11/2023	ND	8.0000		
Chromium, total	ug/L	MW-17	03/20/2024	ND	8.0000		
Chromium, total	ug/L	MW-17	09/12/2024	ND	8.0000		
Cobalt, total	ug/L	MW-17	10/16/2014		8.1000		
Cobalt, total	ug/L	MW-17	04/04/2015		9.7000		
Cobalt, total	ug/L	MW-17	10/01/2015		7.0000		
Cobalt, total	ug/L	MW-17	04/04/2016		4.6000		
Cobalt, total	ug/L	MW-17	09/20/2016		4.3000		
Cobalt, total	ug/L	MW-17	04/24/2017		5.2000		
Cobalt, total	ug/L	MW-17	10/09/2017		6.9000		
Cobalt, total	ug/L	MW-17	03/21/2018		23.0000		
Cobalt, total	ug/L	MW-17	09/07/2018		8.6000		
Cobalt, total	ug/L	MW-17	04/02/2019		46.5000		*
Cobalt, total	ug/L	MW-17	09/18/2019		54.8000		*
Cobalt, total	ug/L	MW-17	03/25/2020		7.2000		
Cobalt, total	ug/L	MW-17	09/15/2020		11.3000		
Cobalt, total	ug/L	MW-17	03/08/2021		7.4000		
Cobalt, total	ug/L	MW-17	09/28/2021		13.4000		
Cobalt, total	ug/L	MW-17	03/08/2022		5.5000		
Cobalt, total	ug/L	MW-17	08/30/2022		1.5000		
Cobalt, total	ug/L	MW-17	03/07/2023		13.0000		
Cobalt, total	ug/L	MW-17	09/11/2023		0.6000		
Cobalt, total	ug/L	MW-17	03/20/2024		0.7000		
Cobalt, total	ug/L	MW-17	09/12/2024		3.6000		
Copper, total	ug/L	MW-17	10/16/2014		4.6000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Copper, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Copper, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Copper, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-17	10/09/2017		5.3000		
Copper, total	ug/L	MW-17	03/21/2018		4.3000		
Copper, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Copper, total	ug/L	MW-17	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Copper, total	ug/L	MW-17	03/25/2020		4.2000		
Copper, total	ug/L	MW-17	09/15/2020		4.3000		
Copper, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Copper, total	ug/L	MW-17	09/28/2021		7.4000		
Copper, total	ug/L	MW-17	03/08/2022		4.0000		
Copper, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Copper, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Copper, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Copper, total	ug/L	MW-17	03/20/2024	ND	4.0000		
Copper, total	ug/L	MW-17	09/12/2024	ND	4.0000		
Lead, total	ug/L	MW-17	10/16/2014	ND	4.0000		
Lead, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Lead, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Lead, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-17	10/09/2017	ND	4.0000		
Lead, total	ug/L	MW-17	03/21/2018	ND	4.0000		
Lead, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Lead, total	ug/L	MW-17	04/02/2019	ND	4.0000		
Lead, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Lead, total	ug/L	MW-17	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-17	09/15/2020	ND	4.0000		
Lead, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Lead, total	ug/L	MW-17	09/28/2021	ND	4.0000		
Lead, total	ug/L	MW-17	03/08/2022	ND	4.0000		
Lead, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Lead, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Lead, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Lead, total	ug/L	MW-17	03/20/2024	ND	4.0000		
Lead, total	ug/L	MW-17	09/12/2024	ND	4.0000		
Nickel, total	ug/L	MW-17	10/16/2014		9.9000		
Nickel, total	ug/L	MW-17	04/04/2015		7.8000		
Nickel, total	ug/L	MW-17	10/01/2015		13.7000		
Nickel, total	ug/L	MW-17	04/04/2016		4.7000		
Nickel, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Nickel, total	ug/L	MW-17	04/24/2017		6.3000		
Nickel, total	ug/L	MW-17	10/09/2017		8.0000		
Nickel, total	ug/L	MW-17	03/21/2018	ND	20.0000	4.0000	**
Nickel, total	ug/L	MW-17	09/07/2018		7.2000		
Nickel, total	ug/L	MW-17	04/02/2019		15.9000		
Nickel, total	ug/L	MW-17	09/18/2019		10.9000		
Nickel, total	ug/L	MW-17	03/25/2020		8.2000		
Nickel, total	ug/L	MW-17	09/15/2020		10.7000		
Nickel, total	ug/L	MW-17	03/08/2021		12.0000		
Nickel, total	ug/L	MW-17	09/28/2021		16.7000		
Nickel, total	ug/L	MW-17	03/08/2022		6.4000		
Nickel, total	ug/L	MW-17	08/30/2022		6.1000		
Nickel, total	ug/L	MW-17	03/07/2023		9.1000		
Nickel, total	ug/L	MW-17	09/11/2023		5.9000		
Nickel, total	ug/L	MW-17	03/20/2024		4.9000		
Nickel, total	ug/L	MW-17	09/12/2024		6.6000		
Selenium, total	ug/L	MW-17	10/16/2014	ND	4.0000		
Selenium, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Selenium, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-17	10/09/2017	ND	4.0000		
Selenium, total	ug/L	MW-17	03/21/2018	ND	4.0000		
Selenium, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Selenium, total	ug/L	MW-17	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-17	03/25/2020	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Selenium, total	ug/L	MW-17	09/15/2020	ND	4.0000		
Selenium, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Selenium, total	ug/L	MW-17	09/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-17	03/08/2022	ND	4.0000		
Selenium, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Selenium, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Selenium, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Selenium, total	ug/L	MW-17	03/20/2024		7.5000		
Selenium, total	ug/L	MW-17	09/12/2024		6.8000		
Silver, total	ug/L	MW-17	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-17	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-17	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-17	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-17	09/20/2016	ND	4.0000		
Silver, total	ug/L	MW-17	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-17	10/09/2017	ND	4.0000		
Silver, total	ug/L	MW-17	03/21/2018	ND	4.0000		
Silver, total	ug/L	MW-17	09/07/2018	ND	4.0000		
Silver, total	ug/L	MW-17	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-17	09/18/2019	ND	4.0000		
Silver, total	ug/L	MW-17	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-17	09/15/2020	ND	4.0000		
Silver, total	ug/L	MW-17	03/08/2021	ND	4.0000		
Silver, total	ug/L	MW-17	09/28/2021	ND	4.0000		
Silver, total	ug/L	MW-17	03/08/2022	ND	4.0000		
Silver, total	ug/L	MW-17	08/30/2022	ND	4.0000		
Silver, total	ug/L	MW-17	03/07/2023	ND	4.0000		
Silver, total	ug/L	MW-17	09/11/2023	ND	4.0000		
Silver, total	ug/L	MW-17	03/20/2024	ND	4.0000		
Silver, total	ug/L	MW-17	09/12/2024	ND	4.0000		
Thallium, total	ug/L	MW-17	10/16/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-17	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	09/20/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	10/09/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	03/21/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	09/07/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-17	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-17	09/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-17	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-17	09/15/2020	ND	2.0000		
Thallium, total	ug/L	MW-17	03/08/2021	ND	2.0000		
Thallium, total	ug/L	MW-17	09/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-17	03/08/2022	ND	2.0000		
Thallium, total	ug/L	MW-17	08/30/2022	ND	2.0000		
Thallium, total	ug/L	MW-17	03/07/2023		2.3000		
Thallium, total	ug/L	MW-17	09/11/2023	ND	2.0000		
Thallium, total	ug/L	MW-17	03/20/2024	ND	2.0000		
Thallium, total	ug/L	MW-17	09/12/2024	ND	2.0000		
Vanadium, total	ug/L	MW-17	10/16/2014	ND	20.0000		
Vanadium, total	ug/L	MW-17	04/04/2015	ND	20.0000		
Vanadium, total	ug/L	MW-17	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-17	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/20/2016	ND	20.0000		
Vanadium, total	ug/L	MW-17	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-17	10/09/2017	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/21/2018	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/07/2018	ND	20.0000		
Vanadium, total	ug/L	MW-17	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/15/2020	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/08/2021	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/08/2022	ND	20.0000		
Vanadium, total	ug/L	MW-17	08/30/2022	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/07/2023	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/11/2023	ND	20.0000		
Vanadium, total	ug/L	MW-17	03/20/2024	ND	20.0000		
Vanadium, total	ug/L	MW-17	09/12/2024	ND	20.0000		
Zinc, total	ug/L	MW-17	10/16/2014	ND	20.0000		
Zinc, total	ug/L	MW-17	04/04/2015	ND	8.0000	20.0000	**

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Zinc, total	ug/L	MW-17	10/01/2015		10.9000		
Zinc, total	ug/L	MW-17	04/04/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	09/20/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	10/09/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	03/21/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-17	09/07/2018		67.4000		*
Zinc, total	ug/L	MW-17	04/02/2019		33.3000		
Zinc, total	ug/L	MW-17	09/18/2019		61.5000		*
Zinc, total	ug/L	MW-17	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-17	09/15/2020	ND	20.0000		
Zinc, total	ug/L	MW-17	03/08/2021	ND	20.0000		
Zinc, total	ug/L	MW-17	09/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-17	03/08/2022	ND	20.0000		
Zinc, total	ug/L	MW-17	08/30/2022	ND	20.0000		
Zinc, total	ug/L	MW-17	03/07/2023	ND	20.0000		
Zinc, total	ug/L	MW-17	09/11/2023	ND	20.0000		
Zinc, total	ug/L	MW-17	03/20/2024	ND	20.0000		
Zinc, total	ug/L	MW-17	09/12/2024	ND	20.0000		
Antimony, total	ug/L	MW-18	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-18	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-18	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-18	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-18	09/20/2016	ND	2.0000		
Antimony, total	ug/L	MW-18	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-18	10/09/2017	ND	2.0000		
Antimony, total	ug/L	MW-18	03/21/2018	ND	2.0000		
Antimony, total	ug/L	MW-18	09/07/2018	ND	2.0000		
Antimony, total	ug/L	MW-18	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-18	09/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-18	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-18	09/15/2020	ND	2.0000		
Antimony, total	ug/L	MW-18	03/08/2021	ND	2.0000		
Antimony, total	ug/L	MW-18	09/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-18	03/08/2022	ND	2.0000		
Antimony, total	ug/L	MW-18	08/30/2022	ND	2.0000		
Antimony, total	ug/L	MW-18	03/07/2023	ND	2.0000		
Antimony, total	ug/L	MW-18	09/11/2023	ND	2.0000		
Antimony, total	ug/L	MW-18	03/20/2024	ND	2.0000		
Antimony, total	ug/L	MW-18	09/12/2024	ND	2.0000		
Arsenic, total	ug/L	MW-18	10/16/2014		25.7000		
Arsenic, total	ug/L	MW-18	04/04/2015		34.2000		
Arsenic, total	ug/L	MW-18	10/01/2015		21.1000		
Arsenic, total	ug/L	MW-18	04/04/2016		26.2000		
Arsenic, total	ug/L	MW-18	09/20/2016		23.4000		
Arsenic, total	ug/L	MW-18	04/24/2017		22.3000		
Arsenic, total	ug/L	MW-18	10/09/2017		23.5000		
Arsenic, total	ug/L	MW-18	03/21/2018		21.1000		
Arsenic, total	ug/L	MW-18	09/07/2018		19.4000		
Arsenic, total	ug/L	MW-18	04/02/2019		21.5000		
Arsenic, total	ug/L	MW-18	09/18/2019		21.7000		
Arsenic, total	ug/L	MW-18	03/25/2020		19.4000		
Arsenic, total	ug/L	MW-18	09/15/2020		23.4000		
Arsenic, total	ug/L	MW-18	03/08/2021		23.3000		
Arsenic, total	ug/L	MW-18	09/28/2021		19.9000		
Arsenic, total	ug/L	MW-18	03/08/2022		21.3000		
Arsenic, total	ug/L	MW-18	08/30/2022		27.3000		
Arsenic, total	ug/L	MW-18	03/07/2023		18.3000		
Arsenic, total	ug/L	MW-18	09/11/2023		18.7000		
Arsenic, total	ug/L	MW-18	03/20/2024		16.8000		
Arsenic, total	ug/L	MW-18	09/12/2024		16.2000		
Barium, total	ug/L	MW-18	10/16/2014		903.0000		
Barium, total	ug/L	MW-18	04/04/2015		1140.0000		
Barium, total	ug/L	MW-18	10/01/2015		822.0000		
Barium, total	ug/L	MW-18	04/04/2016		860.0000		
Barium, total	ug/L	MW-18	09/20/2016		877.0000		
Barium, total	ug/L	MW-18	04/24/2017		827.0000		
Barium, total	ug/L	MW-18	10/09/2017		868.0000		
Barium, total	ug/L	MW-18	03/21/2018		863.0000		
Barium, total	ug/L	MW-18	09/07/2018		831.0000		
Barium, total	ug/L	MW-18	04/02/2019		862.0000		
Barium, total	ug/L	MW-18	09/18/2019		823.0000		
Barium, total	ug/L	MW-18	03/25/2020		897.0000		
Barium, total	ug/L	MW-18	09/15/2020		898.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Barium, total	ug/L	MW-18	03/08/2021		840.0000		
Barium, total	ug/L	MW-18	09/28/2021		741.0000		
Barium, total	ug/L	MW-18	03/08/2022		792.0000		
Barium, total	ug/L	MW-18	08/30/2022		760.0000		
Barium, total	ug/L	MW-18	03/07/2023		702.0000		
Barium, total	ug/L	MW-18	09/11/2023		709.0000		
Barium, total	ug/L	MW-18	03/20/2024		623.0000		
Barium, total	ug/L	MW-18	09/12/2024		621.0000		
Beryllium, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/20/2016	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/09/2017	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/21/2018	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/07/2018	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/15/2020	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/08/2021	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/08/2022	ND	4.0000		
Beryllium, total	ug/L	MW-18	08/30/2022	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/07/2023	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/11/2023	ND	4.0000		
Beryllium, total	ug/L	MW-18	03/20/2024	ND	4.0000		
Beryllium, total	ug/L	MW-18	09/12/2024	ND	4.0000		
Cadmium, total	ug/L	MW-18	10/16/2014		1.7000		
Cadmium, total	ug/L	MW-18	04/04/2015		3.9000		*
Cadmium, total	ug/L	MW-18	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-18	04/04/2016		1.0000		
Cadmium, total	ug/L	MW-18	09/20/2016		0.9000		
Cadmium, total	ug/L	MW-18	04/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-18	10/09/2017	ND	0.8000		
Cadmium, total	ug/L	MW-18	03/21/2018	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/07/2018	ND	0.8000		
Cadmium, total	ug/L	MW-18	04/02/2019	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-18	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/15/2020	ND	0.8000		
Cadmium, total	ug/L	MW-18	03/08/2021	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/28/2021		1.2000		
Cadmium, total	ug/L	MW-18	03/08/2022	ND	0.8000		
Cadmium, total	ug/L	MW-18	08/30/2022	ND	0.8000		
Cadmium, total	ug/L	MW-18	03/07/2023	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/11/2023	ND	0.8000		
Cadmium, total	ug/L	MW-18	03/20/2024	ND	0.8000		
Cadmium, total	ug/L	MW-18	09/12/2024	ND	0.8000		
Chromium, total	ug/L	MW-18	10/16/2014		11.6000		
Chromium, total	ug/L	MW-18	04/04/2015		26.4000		*
Chromium, total	ug/L	MW-18	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-18	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-18	09/20/2016		10.5000		
Chromium, total	ug/L	MW-18	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-18	10/09/2017	ND	8.0000		
Chromium, total	ug/L	MW-18	03/21/2018	ND	8.0000		
Chromium, total	ug/L	MW-18	09/07/2018	ND	8.0000		
Chromium, total	ug/L	MW-18	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-18	09/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-18	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-18	09/15/2020	ND	8.0000		
Chromium, total	ug/L	MW-18	03/08/2021	ND	8.0000		
Chromium, total	ug/L	MW-18	09/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-18	03/08/2022	ND	8.0000		
Chromium, total	ug/L	MW-18	08/30/2022	ND	8.0000		
Chromium, total	ug/L	MW-18	03/07/2023	ND	8.0000		
Chromium, total	ug/L	MW-18	09/11/2023	ND	8.0000		
Chromium, total	ug/L	MW-18	03/20/2024	ND	8.0000		
Chromium, total	ug/L	MW-18	09/12/2024	ND	8.0000		
Cobalt, total	ug/L	MW-18	10/16/2014		23.5000		
Cobalt, total	ug/L	MW-18	04/04/2015		35.1000		*
Cobalt, total	ug/L	MW-18	10/01/2015		9.8000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Cobalt, total	ug/L	MW-18	04/04/2016		12.0000		
Cobalt, total	ug/L	MW-18	09/20/2016		17.1000		
Cobalt, total	ug/L	MW-18	04/24/2017		8.5000		
Cobalt, total	ug/L	MW-18	10/09/2017		7.1000		
Cobalt, total	ug/L	MW-18	03/21/2018		5.5000		
Cobalt, total	ug/L	MW-18	09/07/2018		5.8000		
Cobalt, total	ug/L	MW-18	04/02/2019		4.1000		
Cobalt, total	ug/L	MW-18	09/18/2019		3.9000		
Cobalt, total	ug/L	MW-18	03/25/2020		3.6000		
Cobalt, total	ug/L	MW-18	09/15/2020		17.8000		
Cobalt, total	ug/L	MW-18	03/08/2021		9.2000		
Cobalt, total	ug/L	MW-18	09/28/2021		4.9000		
Cobalt, total	ug/L	MW-18	03/08/2022		4.0000		
Cobalt, total	ug/L	MW-18	08/30/2022		9.1000		
Cobalt, total	ug/L	MW-18	03/07/2023		9.2000		
Cobalt, total	ug/L	MW-18	09/11/2023		11.3000		
Cobalt, total	ug/L	MW-18	03/20/2024		12.2000		
Cobalt, total	ug/L	MW-18	09/12/2024		5.8000		
Copper, total	ug/L	MW-18	10/16/2014		31.3000		*
Copper, total	ug/L	MW-18	04/04/2015		69.3000		*
Copper, total	ug/L	MW-18	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-18	04/04/2016	ND	4.0000		
Copper, total	ug/L	MW-18	09/20/2016		16.0000		*
Copper, total	ug/L	MW-18	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-18	10/09/2017	ND	4.0000		
Copper, total	ug/L	MW-18	03/21/2018	ND	4.0000		
Copper, total	ug/L	MW-18	09/07/2018	ND	4.0000		
Copper, total	ug/L	MW-18	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-18	09/18/2019	ND	4.0000		
Copper, total	ug/L	MW-18	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-18	09/15/2020	ND	4.0000		
Copper, total	ug/L	MW-18	03/08/2021	ND	4.0000		
Copper, total	ug/L	MW-18	09/28/2021	ND	4.0000		
Copper, total	ug/L	MW-18	03/08/2022	ND	4.0000		
Copper, total	ug/L	MW-18	08/30/2022	ND	4.0000		
Copper, total	ug/L	MW-18	03/07/2023	ND	4.0000		
Copper, total	ug/L	MW-18	09/11/2023	ND	4.0000		
Copper, total	ug/L	MW-18	03/20/2024	ND	4.0000		
Copper, total	ug/L	MW-18	09/12/2024	ND	4.0000		
Lead, total	ug/L	MW-18	10/16/2014		12.4000		*
Lead, total	ug/L	MW-18	04/04/2015		27.2000		*
Lead, total	ug/L	MW-18	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-18	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-18	09/20/2016		6.2000		
Lead, total	ug/L	MW-18	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-18	10/09/2017	ND	4.0000		
Lead, total	ug/L	MW-18	03/21/2018	ND	4.0000		
Lead, total	ug/L	MW-18	09/07/2018	ND	4.0000		
Lead, total	ug/L	MW-18	04/02/2019	ND	4.0000		
Lead, total	ug/L	MW-18	09/18/2019	ND	4.0000		
Lead, total	ug/L	MW-18	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-18	09/15/2020	ND	4.0000		
Lead, total	ug/L	MW-18	03/08/2021	ND	4.0000		
Lead, total	ug/L	MW-18	09/28/2021	ND	4.0000		
Lead, total	ug/L	MW-18	03/08/2022	ND	4.0000		
Lead, total	ug/L	MW-18	08/30/2022	ND	4.0000		
Lead, total	ug/L	MW-18	03/07/2023	ND	4.0000		
Lead, total	ug/L	MW-18	09/11/2023	ND	4.0000		
Lead, total	ug/L	MW-18	03/20/2024	ND	4.0000		
Lead, total	ug/L	MW-18	09/12/2024	ND	4.0000		
Nickel, total	ug/L	MW-18	10/16/2014		35.4000		*
Nickel, total	ug/L	MW-18	04/04/2015		67.7000		*
Nickel, total	ug/L	MW-18	10/01/2015		12.7000		
Nickel, total	ug/L	MW-18	04/04/2016		16.0000		
Nickel, total	ug/L	MW-18	09/20/2016		25.3000		
Nickel, total	ug/L	MW-18	04/24/2017		11.9000		
Nickel, total	ug/L	MW-18	10/09/2017		10.8000		
Nickel, total	ug/L	MW-18	03/21/2018	ND	20.0000	4.0000	**
Nickel, total	ug/L	MW-18	09/07/2018		9.2000		
Nickel, total	ug/L	MW-18	04/02/2019		7.2000		
Nickel, total	ug/L	MW-18	09/18/2019		10.7000		
Nickel, total	ug/L	MW-18	03/25/2020		6.6000		
Nickel, total	ug/L	MW-18	09/15/2020		29.7000		
Nickel, total	ug/L	MW-18	03/08/2021		12.4000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Nickel, total	ug/L	MW-18	09/28/2021		8.5000		
Nickel, total	ug/L	MW-18	03/08/2022		7.2000		
Nickel, total	ug/L	MW-18	08/30/2022		16.9000		
Nickel, total	ug/L	MW-18	03/07/2023		19.8000		
Nickel, total	ug/L	MW-18	09/11/2023		19.5000		
Nickel, total	ug/L	MW-18	03/20/2024		21.6000		
Nickel, total	ug/L	MW-18	09/12/2024		10.6000		
Selenium, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Selenium, total	ug/L	MW-18	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-18	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-18	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-18	09/20/2016	ND	4.0000		
Selenium, total	ug/L	MW-18	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-18	10/09/2017	ND	4.0000		
Selenium, total	ug/L	MW-18	03/21/2018	ND	4.0000		
Selenium, total	ug/L	MW-18	09/07/2018	ND	4.0000		
Selenium, total	ug/L	MW-18	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-18	09/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-18	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-18	09/15/2020	ND	4.0000		
Selenium, total	ug/L	MW-18	03/08/2021	ND	4.0000		
Selenium, total	ug/L	MW-18	09/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-18	03/08/2022	ND	4.0000		
Selenium, total	ug/L	MW-18	08/30/2022	ND	4.0000		
Selenium, total	ug/L	MW-18	03/07/2023	ND	4.0000		
Selenium, total	ug/L	MW-18	09/11/2023	ND	4.0000		
Selenium, total	ug/L	MW-18	03/20/2024	ND	4.0000		
Selenium, total	ug/L	MW-18	09/12/2024	ND	4.0000		
Silver, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-18	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-18	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-18	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-18	09/20/2016	ND	4.0000		
Silver, total	ug/L	MW-18	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-18	10/09/2017	ND	4.0000		
Silver, total	ug/L	MW-18	03/21/2018	ND	4.0000		
Silver, total	ug/L	MW-18	09/07/2018	ND	4.0000		
Silver, total	ug/L	MW-18	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-18	09/18/2019	ND	4.0000		
Silver, total	ug/L	MW-18	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-18	09/15/2020	ND	4.0000		
Silver, total	ug/L	MW-18	03/08/2021	ND	4.0000		
Silver, total	ug/L	MW-18	09/28/2021	ND	4.0000		
Silver, total	ug/L	MW-18	03/08/2022	ND	4.0000		
Silver, total	ug/L	MW-18	08/30/2022	ND	4.0000		
Silver, total	ug/L	MW-18	03/07/2023	ND	4.0000		
Silver, total	ug/L	MW-18	09/11/2023	ND	4.0000		
Silver, total	ug/L	MW-18	03/20/2024	ND	4.0000		
Silver, total	ug/L	MW-18	09/12/2024	ND	4.0000		
Thallium, total	ug/L	MW-18	10/16/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-18	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	09/20/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	10/09/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	03/21/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	09/07/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-18	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-18	09/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-18	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-18	09/15/2020	ND	2.0000		
Thallium, total	ug/L	MW-18	03/08/2021	ND	2.0000		
Thallium, total	ug/L	MW-18	09/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-18	03/08/2022	ND	2.0000		
Thallium, total	ug/L	MW-18	08/30/2022	ND	2.0000		
Thallium, total	ug/L	MW-18	03/07/2023	ND	2.0000		
Thallium, total	ug/L	MW-18	09/11/2023	ND	2.0000		
Thallium, total	ug/L	MW-18	03/20/2024	ND	2.0000		
Thallium, total	ug/L	MW-18	09/12/2024	ND	2.0000		
Vanadium, total	ug/L	MW-18	10/16/2014	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/04/2015		31.6000		
Vanadium, total	ug/L	MW-18	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/04/2016	ND	20.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Vanadium, total	ug/L	MW-18	09/20/2016	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-18	10/09/2017	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/21/2018	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/07/2018	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/15/2020	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/08/2021	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/08/2022	ND	20.0000		
Vanadium, total	ug/L	MW-18	08/30/2022	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/07/2023	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/11/2023	ND	20.0000		
Vanadium, total	ug/L	MW-18	03/20/2024	ND	20.0000		
Vanadium, total	ug/L	MW-18	09/12/2024	ND	20.0000		
Zinc, total	ug/L	MW-18	10/16/2014		107.0000		
Zinc, total	ug/L	MW-18	04/04/2015		267.0000		
Zinc, total	ug/L	MW-18	10/01/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-18	04/04/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-18	09/20/2016		56.2000		
Zinc, total	ug/L	MW-18	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-18	10/09/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-18	03/21/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-18	09/07/2018		42.5000		
Zinc, total	ug/L	MW-18	04/02/2019		29.3000		
Zinc, total	ug/L	MW-18	09/18/2019		42.8000		
Zinc, total	ug/L	MW-18	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-18	09/15/2020	ND	20.0000		
Zinc, total	ug/L	MW-18	03/08/2021	ND	20.0000		
Zinc, total	ug/L	MW-18	09/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-18	03/08/2022	ND	20.0000		
Zinc, total	ug/L	MW-18	08/30/2022	ND	20.0000		
Zinc, total	ug/L	MW-18	03/07/2023	ND	20.0000		
Zinc, total	ug/L	MW-18	09/11/2023	ND	20.0000		
Zinc, total	ug/L	MW-18	03/20/2024	ND	20.0000		
Zinc, total	ug/L	MW-18	09/12/2024	ND	20.0000		
Antimony, total	ug/L	MW-19A	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-19A	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-19A	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-19A	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/20/2016	ND	2.0000		
Antimony, total	ug/L	MW-19A	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-19A	10/09/2017	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/21/2018	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/07/2018	ND	2.0000		
Antimony, total	ug/L	MW-19A	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/15/2020	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/08/2021	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/08/2022	ND	2.0000		
Antimony, total	ug/L	MW-19A	08/30/2022	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/07/2023	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/11/2023	ND	2.0000		
Antimony, total	ug/L	MW-19A	03/20/2024	ND	2.0000		
Antimony, total	ug/L	MW-19A	09/12/2024	ND	2.0000		
Arsenic, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Arsenic, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Arsenic, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Arsenic, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Arsenic, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Arsenic, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/28/2021	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Arsenic, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Arsenic, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Arsenic, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Arsenic, total	ug/L	MW-19A	03/20/2024		4.0000		
Arsenic, total	ug/L	MW-19A	09/12/2024	ND	4.0000		
Barium, total	ug/L	MW-19A	10/16/2014		48.9000		
Barium, total	ug/L	MW-19A	04/04/2015		55.5000		
Barium, total	ug/L	MW-19A	10/01/2015		30.0000		
Barium, total	ug/L	MW-19A	04/04/2016		30.4000		
Barium, total	ug/L	MW-19A	09/20/2016		29.5000		
Barium, total	ug/L	MW-19A	04/24/2017		42.1000		
Barium, total	ug/L	MW-19A	10/09/2017		35.1000		
Barium, total	ug/L	MW-19A	03/21/2018		46.9000		
Barium, total	ug/L	MW-19A	09/07/2018		38.7000		
Barium, total	ug/L	MW-19A	04/02/2019		37.9000		
Barium, total	ug/L	MW-19A	09/18/2019		42.5000		
Barium, total	ug/L	MW-19A	03/25/2020		34.2000		
Barium, total	ug/L	MW-19A	09/15/2020		35.8000		
Barium, total	ug/L	MW-19A	03/08/2021		35.2000		
Barium, total	ug/L	MW-19A	09/28/2021		36.1000		
Barium, total	ug/L	MW-19A	03/08/2022		40.1000		
Barium, total	ug/L	MW-19A	08/30/2022		38.3000		
Barium, total	ug/L	MW-19A	03/07/2023		32.5000		
Barium, total	ug/L	MW-19A	09/11/2023		32.1000		
Barium, total	ug/L	MW-19A	03/20/2024		622.0000		*
Barium, total	ug/L	MW-19A	09/12/2024		38.2000		
Beryllium, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Beryllium, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Beryllium, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Beryllium, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Beryllium, total	ug/L	MW-19A	03/20/2024	ND	4.0000		
Beryllium, total	ug/L	MW-19A	09/12/2024	ND	4.0000		
Cadmium, total	ug/L	MW-19A	10/16/2014	ND	0.8000		
Cadmium, total	ug/L	MW-19A	04/04/2015	ND	0.8000		
Cadmium, total	ug/L	MW-19A	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-19A	04/04/2016		0.8000		
Cadmium, total	ug/L	MW-19A	09/20/2016	ND	0.8000		
Cadmium, total	ug/L	MW-19A	04/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-19A	10/09/2017	ND	0.8000		
Cadmium, total	ug/L	MW-19A	03/21/2018	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/07/2018	ND	0.8000		
Cadmium, total	ug/L	MW-19A	04/02/2019	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-19A	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/15/2020	ND	0.8000		
Cadmium, total	ug/L	MW-19A	03/08/2021	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-19A	03/08/2022	ND	0.8000		
Cadmium, total	ug/L	MW-19A	08/30/2022	ND	0.8000		
Cadmium, total	ug/L	MW-19A	03/07/2023	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/11/2023		9.0000		*
Cadmium, total	ug/L	MW-19A	03/20/2024	ND	0.8000		
Cadmium, total	ug/L	MW-19A	09/12/2024		1.0000		
Chromium, total	ug/L	MW-19A	10/16/2014	ND	8.0000		
Chromium, total	ug/L	MW-19A	04/04/2015	ND	8.0000		
Chromium, total	ug/L	MW-19A	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-19A	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/20/2016	ND	8.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Chromium, total	ug/L	MW-19A	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-19A	10/09/2017	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/21/2018	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/07/2018	ND	8.0000		
Chromium, total	ug/L	MW-19A	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/15/2020	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/08/2021	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/08/2022	ND	8.0000		
Chromium, total	ug/L	MW-19A	08/30/2022	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/07/2023	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/11/2023	ND	8.0000		
Chromium, total	ug/L	MW-19A	03/20/2024	ND	8.0000		
Chromium, total	ug/L	MW-19A	09/12/2024	ND	8.0000		
Cobalt, total	ug/L	MW-19A	10/16/2014	ND	0.8000		
Cobalt, total	ug/L	MW-19A	04/04/2015	ND	0.8000		
Cobalt, total	ug/L	MW-19A	10/01/2015	ND	0.8000		
Cobalt, total	ug/L	MW-19A	04/04/2016	ND	0.8000		
Cobalt, total	ug/L	MW-19A	09/20/2016	ND	0.8000		
Cobalt, total	ug/L	MW-19A	04/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-19A	10/09/2017	ND	0.8000		
Cobalt, total	ug/L	MW-19A	03/21/2018	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-19A	09/07/2018	ND	0.8000		
Cobalt, total	ug/L	MW-19A	04/02/2019	ND	0.8000		
Cobalt, total	ug/L	MW-19A	09/18/2019		0.8000		
Cobalt, total	ug/L	MW-19A	03/25/2020		0.8000		
Cobalt, total	ug/L	MW-19A	09/15/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-19A	03/08/2021		0.4000		
Cobalt, total	ug/L	MW-19A	09/28/2021		0.4000		
Cobalt, total	ug/L	MW-19A	03/08/2022		0.6000		
Cobalt, total	ug/L	MW-19A	08/30/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-19A	03/07/2023		0.4000		
Cobalt, total	ug/L	MW-19A	09/11/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-19A	03/20/2024		6.9000		*
Cobalt, total	ug/L	MW-19A	09/12/2024		0.4000		
Copper, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Copper, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Copper, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Copper, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Copper, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Copper, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Copper, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Copper, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Copper, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Copper, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Copper, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Copper, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Copper, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Copper, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Copper, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Copper, total	ug/L	MW-19A	03/20/2024	ND	4.0000		
Copper, total	ug/L	MW-19A	09/12/2024	ND	4.0000		
Lead, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Lead, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Lead, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Lead, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Lead, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Lead, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Lead, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Lead, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Lead, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Lead, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Lead, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Lead, total	ug/L	MW-19A	03/08/2022	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Lead, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Lead, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Lead, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Lead, total	ug/L	MW-19A	03/20/2024	ND	4.0000		
Lead, total	ug/L	MW-19A	09/12/2024	ND	4.0000		
Nickel, total	ug/L	MW-19A	10/16/2014		4.6000		
Nickel, total	ug/L	MW-19A	04/04/2015		6.9000		
Nickel, total	ug/L	MW-19A	10/01/2015		5.2000		
Nickel, total	ug/L	MW-19A	04/04/2016		4.3000		
Nickel, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Nickel, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-19A	10/09/2017		5.2000		
Nickel, total	ug/L	MW-19A	03/21/2018	ND	20.0000	4.0000	**
Nickel, total	ug/L	MW-19A	09/07/2018		6.4000		
Nickel, total	ug/L	MW-19A	04/02/2019		7.7000		
Nickel, total	ug/L	MW-19A	09/18/2019		11.8000		
Nickel, total	ug/L	MW-19A	03/25/2020		10.5000		
Nickel, total	ug/L	MW-19A	09/15/2020		11.5000		
Nickel, total	ug/L	MW-19A	12/02/2020		10.5000		
Nickel, total	ug/L	MW-19A	03/08/2021		9.5000		
Nickel, total	ug/L	MW-19A	09/28/2021		8.0000		
Nickel, total	ug/L	MW-19A	03/08/2022		8.0000		
Nickel, total	ug/L	MW-19A	08/30/2022		10.4000		
Nickel, total	ug/L	MW-19A	03/07/2023		11.4000		
Nickel, total	ug/L	MW-19A	09/11/2023		9.6000		
Nickel, total	ug/L	MW-19A	03/20/2024		6.6000		
Nickel, total	ug/L	MW-19A	09/12/2024		9.0000		
Selenium, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Selenium, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Selenium, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Selenium, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Selenium, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Selenium, total	ug/L	MW-19A	03/20/2024	ND	4.0000		
Selenium, total	ug/L	MW-19A	09/12/2024	ND	4.0000		
Silver, total	ug/L	MW-19A	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-19A	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-19A	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-19A	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-19A	09/20/2016	ND	4.0000		
Silver, total	ug/L	MW-19A	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-19A	10/09/2017	ND	4.0000		
Silver, total	ug/L	MW-19A	03/21/2018	ND	4.0000		
Silver, total	ug/L	MW-19A	09/07/2018	ND	4.0000		
Silver, total	ug/L	MW-19A	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-19A	09/18/2019	ND	4.0000		
Silver, total	ug/L	MW-19A	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-19A	09/15/2020	ND	4.0000		
Silver, total	ug/L	MW-19A	03/08/2021	ND	4.0000		
Silver, total	ug/L	MW-19A	09/28/2021	ND	4.0000		
Silver, total	ug/L	MW-19A	03/08/2022	ND	4.0000		
Silver, total	ug/L	MW-19A	08/30/2022	ND	4.0000		
Silver, total	ug/L	MW-19A	03/07/2023	ND	4.0000		
Silver, total	ug/L	MW-19A	09/11/2023	ND	4.0000		
Silver, total	ug/L	MW-19A	03/20/2024	ND	4.0000		
Silver, total	ug/L	MW-19A	09/12/2024	ND	4.0000		
Thallium, total	ug/L	MW-19A	10/16/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-19A	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	09/20/2016	ND	4.0000	2.0000	**

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Thallium, total	ug/L	MW-19A	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	10/09/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	03/21/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	09/07/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-19A	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-19A	09/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-19A	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-19A	09/15/2020	ND	2.0000		
Thallium, total	ug/L	MW-19A	03/08/2021	ND	2.0000		
Thallium, total	ug/L	MW-19A	09/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-19A	03/08/2022	ND	2.0000		
Thallium, total	ug/L	MW-19A	08/30/2022	ND	2.0000		
Thallium, total	ug/L	MW-19A	03/07/2023	ND	2.0000		
Thallium, total	ug/L	MW-19A	09/11/2023	ND	2.0000		
Thallium, total	ug/L	MW-19A	03/20/2024	ND	2.0000		
Thallium, total	ug/L	MW-19A	09/12/2024	ND	2.0000		
Vanadium, total	ug/L	MW-19A	10/16/2014	ND	20.0000		
Vanadium, total	ug/L	MW-19A	04/04/2015	ND	20.0000		
Vanadium, total	ug/L	MW-19A	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-19A	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/20/2016	ND	20.0000		
Vanadium, total	ug/L	MW-19A	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-19A	10/09/2017	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/21/2018	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/07/2018	ND	20.0000		
Vanadium, total	ug/L	MW-19A	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/15/2020	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/08/2021	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/08/2022	ND	20.0000		
Vanadium, total	ug/L	MW-19A	08/30/2022	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/07/2023	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/11/2023	ND	20.0000		
Vanadium, total	ug/L	MW-19A	03/20/2024	ND	20.0000		
Vanadium, total	ug/L	MW-19A	09/12/2024	ND	20.0000		
Zinc, total	ug/L	MW-19A	10/16/2014	ND	20.0000		
Zinc, total	ug/L	MW-19A	04/04/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-19A	10/01/2015		11.2000		
Zinc, total	ug/L	MW-19A	04/04/2016		15.2000		
Zinc, total	ug/L	MW-19A	09/20/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-19A	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-19A	10/09/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-19A	03/21/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-19A	09/07/2018		40.8000		
Zinc, total	ug/L	MW-19A	04/02/2019		35.8000		
Zinc, total	ug/L	MW-19A	09/18/2019		29.9000		
Zinc, total	ug/L	MW-19A	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-19A	09/15/2020	ND	20.0000		
Zinc, total	ug/L	MW-19A	03/08/2021	ND	20.0000		
Zinc, total	ug/L	MW-19A	09/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-19A	03/08/2022	ND	20.0000		
Zinc, total	ug/L	MW-19A	08/30/2022	ND	20.0000		
Zinc, total	ug/L	MW-19A	03/07/2023	ND	20.0000		
Zinc, total	ug/L	MW-19A	09/11/2023	ND	20.0000		
Zinc, total	ug/L	MW-19A	03/20/2024	ND	20.0000		
Zinc, total	ug/L	MW-19A	09/12/2024	ND	20.0000		
Antimony, total	ug/L	MW-2	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-2	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-2	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-2	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-2	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-2	03/25/2020	ND	2.0000		
Arsenic, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Arsenic, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Arsenic, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Arsenic, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-2	04/02/2019	ND	4.0000		
Arsenic, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Barium, total	ug/L	MW-2	04/04/2015		418.0000		
Barium, total	ug/L	MW-2	10/01/2015		491.0000		
Barium, total	ug/L	MW-2	04/04/2016		424.0000		
Barium, total	ug/L	MW-2	04/24/2017		125.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Barium, total	ug/L	MW-2	04/02/2019		290.0000		
Barium, total	ug/L	MW-2	03/25/2020		137.0000		
Beryllium, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-2	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Cadmium, total	ug/L	MW-2	04/04/2015	ND	0.8000		
Cadmium, total	ug/L	MW-2	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-2	04/04/2016	ND	0.8000		
Cadmium, total	ug/L	MW-2	04/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-2	04/02/2019	ND	0.8000		
Cadmium, total	ug/L	MW-2	03/25/2020	ND	0.8000		
Chromium, total	ug/L	MW-2	04/04/2015	ND	8.0000		
Chromium, total	ug/L	MW-2	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-2	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-2	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-2	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-2	03/25/2020	ND	8.0000		
Cobalt, total	ug/L	MW-2	04/04/2015		7.4000		
Cobalt, total	ug/L	MW-2	10/01/2015		6.4000		
Cobalt, total	ug/L	MW-2	04/04/2016		8.2000		
Cobalt, total	ug/L	MW-2	04/24/2017	ND	0.8000		
Cobalt, total	ug/L	MW-2	04/02/2019	ND	0.8000		
Cobalt, total	ug/L	MW-2	03/25/2020	ND	0.8000		
Copper, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Copper, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Copper, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-2	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-2	03/25/2020		117.0000		*
Lead, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Lead, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-2	04/02/2019		13.6000		*
Lead, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-2	04/04/2015		21.1000		
Nickel, total	ug/L	MW-2	10/01/2015		7.8000		
Nickel, total	ug/L	MW-2	04/04/2016		16.6000		
Nickel, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Nickel, total	ug/L	MW-2	04/02/2019		8.8000		
Nickel, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-2	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-2	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-2	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-2	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-2	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-2	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-2	03/25/2020	ND	4.0000		
Thallium, total	ug/L	MW-2	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-2	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-2	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-2	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-2	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-2	03/25/2020	ND	2.0000		
Vanadium, total	ug/L	MW-2	04/04/2015	ND	20.0000		
Vanadium, total	ug/L	MW-2	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-2	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-2	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-2	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-2	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-2	04/04/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-2	10/01/2015		9.1000		
Zinc, total	ug/L	MW-2	04/04/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-2	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-2	04/02/2019	ND	20.0000		
Zinc, total	ug/L	MW-2	03/25/2020	ND	20.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Antimony, total	ug/L	MW-24	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-24	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-24	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-24	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-24	09/20/2016	ND	2.0000		
Antimony, total	ug/L	MW-24	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-24	10/09/2017	ND	2.0000		
Antimony, total	ug/L	MW-24	03/21/2018	ND	2.0000		
Antimony, total	ug/L	MW-24	09/07/2018	ND	2.0000		
Antimony, total	ug/L	MW-24	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-24	09/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-24	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-24	09/15/2020	ND	2.0000		
Antimony, total	ug/L	MW-24	03/08/2021	ND	2.0000		
Antimony, total	ug/L	MW-24	09/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-24	03/08/2022	ND	2.0000		
Antimony, total	ug/L	MW-24	08/30/2022	ND	2.0000		
Antimony, total	ug/L	MW-24	03/07/2023	ND	2.0000		
Antimony, total	ug/L	MW-24	09/11/2023	ND	2.0000		
Antimony, total	ug/L	MW-24	03/20/2024	ND	2.0000		
Antimony, total	ug/L	MW-24	09/12/2024	ND	2.0000		
Arsenic, total	ug/L	MW-24	10/16/2014		65.9000		
Arsenic, total	ug/L	MW-24	04/04/2015		25.0000		
Arsenic, total	ug/L	MW-24	10/01/2015		47.2000		
Arsenic, total	ug/L	MW-24	04/04/2016		88.5000		
Arsenic, total	ug/L	MW-24	09/20/2016		51.1000		
Arsenic, total	ug/L	MW-24	04/24/2017		139.0000		
Arsenic, total	ug/L	MW-24	10/09/2017		72.0000		
Arsenic, total	ug/L	MW-24	03/21/2018		155.0000		
Arsenic, total	ug/L	MW-24	09/07/2018		129.0000		
Arsenic, total	ug/L	MW-24	04/02/2019		210.0000		*
Arsenic, total	ug/L	MW-24	09/18/2019		117.0000		
Arsenic, total	ug/L	MW-24	03/25/2020		167.0000		
Arsenic, total	ug/L	MW-24	09/15/2020		61.6000		
Arsenic, total	ug/L	MW-24	03/08/2021		133.0000		
Arsenic, total	ug/L	MW-24	09/28/2021		142.0000		
Arsenic, total	ug/L	MW-24	03/08/2022		115.0000		
Arsenic, total	ug/L	MW-24	08/30/2022		101.0000		
Arsenic, total	ug/L	MW-24	03/07/2023		12.9000		
Arsenic, total	ug/L	MW-24	09/11/2023		57.9000		
Arsenic, total	ug/L	MW-24	03/20/2024		13.3000		
Arsenic, total	ug/L	MW-24	09/12/2024		13.6000		
Barium, total	ug/L	MW-24	10/16/2014		1150.0000		
Barium, total	ug/L	MW-24	04/04/2015		671.0000		
Barium, total	ug/L	MW-24	10/01/2015		772.0000		
Barium, total	ug/L	MW-24	04/04/2016		975.0000		
Barium, total	ug/L	MW-24	09/20/2016		641.0000		
Barium, total	ug/L	MW-24	04/24/2017		1260.0000		
Barium, total	ug/L	MW-24	10/09/2017		713.0000		
Barium, total	ug/L	MW-24	03/21/2018		1140.0000		
Barium, total	ug/L	MW-24	09/07/2018		968.0000		
Barium, total	ug/L	MW-24	04/02/2019		1500.0000		
Barium, total	ug/L	MW-24	09/18/2019		1100.0000		
Barium, total	ug/L	MW-24	03/25/2020		1080.0000		
Barium, total	ug/L	MW-24	09/15/2020		638.0000		
Barium, total	ug/L	MW-24	03/08/2021		901.0000		
Barium, total	ug/L	MW-24	09/28/2021		824.0000		
Barium, total	ug/L	MW-24	03/08/2022		801.0000		
Barium, total	ug/L	MW-24	08/30/2022		579.0000		
Barium, total	ug/L	MW-24	03/07/2023		385.0000		
Barium, total	ug/L	MW-24	09/11/2023		508.0000		
Barium, total	ug/L	MW-24	03/20/2024		459.0000		
Barium, total	ug/L	MW-24	09/12/2024		509.0000		
Beryllium, total	ug/L	MW-24	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-24	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-24	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Beryllium, total	ug/L	MW-24	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/21/2018	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Beryllium, total	ug/L	MW-24	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/18/2019	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Beryllium, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Beryllium, total	ug/L	MW-24	03/20/2024	ND	4.0000		
Beryllium, total	ug/L	MW-24	09/12/2024	ND	4.0000		
Cadmium, total	ug/L	MW-24	10/16/2014		1.6000		
Cadmium, total	ug/L	MW-24	04/04/2015	ND	0.8000		
Cadmium, total	ug/L	MW-24	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-24	04/04/2016		0.8000		
Cadmium, total	ug/L	MW-24	09/20/2016	ND	0.8000		
Cadmium, total	ug/L	MW-24	04/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-24	10/09/2017	ND	0.8000		
Cadmium, total	ug/L	MW-24	03/21/2018	ND	0.8000		
Cadmium, total	ug/L	MW-24	09/07/2018	ND	0.8000		
Cadmium, total	ug/L	MW-24	04/02/2019		1.8000		
Cadmium, total	ug/L	MW-24	09/18/2019		1.0000		
Cadmium, total	ug/L	MW-24	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-24	09/15/2020	ND	0.8000		
Cadmium, total	ug/L	MW-24	03/08/2021		2.4000		
Cadmium, total	ug/L	MW-24	09/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-24	03/08/2022		0.8000		
Cadmium, total	ug/L	MW-24	08/30/2022	ND	0.8000		
Cadmium, total	ug/L	MW-24	03/07/2023	ND	0.8000		
Cadmium, total	ug/L	MW-24	09/11/2023	ND	0.8000		
Cadmium, total	ug/L	MW-24	03/20/2024	ND	0.8000		
Cadmium, total	ug/L	MW-24	09/12/2024		0.9000		
Chromium, total	ug/L	MW-24	10/16/2014		37.5000		*
Chromium, total	ug/L	MW-24	04/04/2015	ND	8.0000		
Chromium, total	ug/L	MW-24	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-24	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-24	09/20/2016	ND	8.0000		
Chromium, total	ug/L	MW-24	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-24	10/09/2017	ND	8.0000		
Chromium, total	ug/L	MW-24	03/21/2018	ND	8.0000		
Chromium, total	ug/L	MW-24	09/07/2018	ND	8.0000		
Chromium, total	ug/L	MW-24	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-24	09/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-24	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-24	09/15/2020	ND	8.0000		
Chromium, total	ug/L	MW-24	03/08/2021	ND	8.0000		
Chromium, total	ug/L	MW-24	09/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-24	03/08/2022	ND	8.0000		
Chromium, total	ug/L	MW-24	08/30/2022	ND	8.0000		
Chromium, total	ug/L	MW-24	03/07/2023	ND	8.0000		
Chromium, total	ug/L	MW-24	09/11/2023	ND	8.0000		
Chromium, total	ug/L	MW-24	03/20/2024	ND	8.0000		
Chromium, total	ug/L	MW-24	09/12/2024	ND	8.0000		
Cobalt, total	ug/L	MW-24	10/16/2014		37.2000		*
Cobalt, total	ug/L	MW-24	04/04/2015		14.0000		
Cobalt, total	ug/L	MW-24	10/01/2015		2.0000		
Cobalt, total	ug/L	MW-24	04/04/2016		3.7000		
Cobalt, total	ug/L	MW-24	09/20/2016		5.6000		
Cobalt, total	ug/L	MW-24	04/24/2017		2.2000		
Cobalt, total	ug/L	MW-24	10/09/2017		1.2000		
Cobalt, total	ug/L	MW-24	03/21/2018	ND	2.0000	0.8000	**
Cobalt, total	ug/L	MW-24	09/07/2018		0.9000		
Cobalt, total	ug/L	MW-24	04/02/2019		2.0000		
Cobalt, total	ug/L	MW-24	09/18/2019		1.6000		
Cobalt, total	ug/L	MW-24	03/25/2020		2.1000		
Cobalt, total	ug/L	MW-24	09/15/2020		0.8000		
Cobalt, total	ug/L	MW-24	03/08/2021		1.1000		
Cobalt, total	ug/L	MW-24	09/28/2021		1.0000		
Cobalt, total	ug/L	MW-24	03/08/2022		1.7000		
Cobalt, total	ug/L	MW-24	08/30/2022		0.6000		
Cobalt, total	ug/L	MW-24	03/07/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-24	09/11/2023		1.2000		
Cobalt, total	ug/L	MW-24	03/20/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-24	09/12/2024		0.6000		
Copper, total	ug/L	MW-24	10/16/2014		67.1000		*

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper, total	ug/L	MW-24	04/04/2015		10.0000		
Copper, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-24	04/04/2016	ND	4.0000		
Copper, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Copper, total	ug/L	MW-24	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Copper, total	ug/L	MW-24	03/21/2018	ND	4.0000		
Copper, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Copper, total	ug/L	MW-24	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Copper, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Copper, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Copper, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Copper, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Copper, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Copper, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Copper, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Copper, total	ug/L	MW-24	03/20/2024	ND	4.0000		
Copper, total	ug/L	MW-24	09/12/2024	ND	4.0000		
Lead, total	ug/L	MW-24	10/16/2014		27.0000		*
Lead, total	ug/L	MW-24	04/04/2015	ND	4.0000		
Lead, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-24	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Lead, total	ug/L	MW-24	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Lead, total	ug/L	MW-24	03/21/2018	ND	4.0000		
Lead, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Lead, total	ug/L	MW-24	04/02/2019		6.8000		
Lead, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Lead, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Lead, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Lead, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Lead, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Lead, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Lead, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Lead, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Lead, total	ug/L	MW-24	03/20/2024	ND	4.0000		
Lead, total	ug/L	MW-24	09/12/2024	ND	4.0000		
Nickel, total	ug/L	MW-24	10/16/2014		81.2000		*
Nickel, total	ug/L	MW-24	04/04/2015		25.1000		*
Nickel, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Nickel, total	ug/L	MW-24	04/04/2016		4.0000		
Nickel, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Nickel, total	ug/L	MW-24	04/24/2017		4.3000		
Nickel, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Nickel, total	ug/L	MW-24	03/21/2018	ND	20.0000		*
Nickel, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Nickel, total	ug/L	MW-24	04/02/2019	ND	4.0000		
Nickel, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Nickel, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Nickel, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Nickel, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Nickel, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Nickel, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Nickel, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Nickel, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Nickel, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Nickel, total	ug/L	MW-24	03/20/2024	ND	4.0000		
Nickel, total	ug/L	MW-24	09/12/2024	ND	4.0000		
Selenium, total	ug/L	MW-24	10/16/2014		16.4000		*
Selenium, total	ug/L	MW-24	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-24	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Selenium, total	ug/L	MW-24	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Selenium, total	ug/L	MW-24	03/21/2018	ND	4.0000		
Selenium, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Selenium, total	ug/L	MW-24	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-24	03/25/2020	ND	4.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Selenium, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Selenium, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Selenium, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Selenium, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Selenium, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Selenium, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Selenium, total	ug/L	MW-24	03/20/2024	ND	4.0000		
Selenium, total	ug/L	MW-24	09/12/2024	ND	4.0000		
Silver, total	ug/L	MW-24	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-24	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-24	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-24	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-24	09/20/2016	ND	4.0000		
Silver, total	ug/L	MW-24	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-24	10/09/2017	ND	4.0000		
Silver, total	ug/L	MW-24	03/21/2018	ND	4.0000		
Silver, total	ug/L	MW-24	09/07/2018	ND	4.0000		
Silver, total	ug/L	MW-24	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-24	09/18/2019	ND	4.0000		
Silver, total	ug/L	MW-24	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-24	09/15/2020	ND	4.0000		
Silver, total	ug/L	MW-24	03/08/2021	ND	4.0000		
Silver, total	ug/L	MW-24	09/28/2021	ND	4.0000		
Silver, total	ug/L	MW-24	03/08/2022	ND	4.0000		
Silver, total	ug/L	MW-24	08/30/2022	ND	4.0000		
Silver, total	ug/L	MW-24	03/07/2023	ND	4.0000		
Silver, total	ug/L	MW-24	09/11/2023	ND	4.0000		
Silver, total	ug/L	MW-24	03/20/2024	ND	4.0000		
Silver, total	ug/L	MW-24	09/12/2024	ND	4.0000		
Thallium, total	ug/L	MW-24	10/16/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-24	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	09/20/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	10/09/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	03/21/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	09/07/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-24	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-24	09/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-24	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-24	09/15/2020	ND	2.0000		
Thallium, total	ug/L	MW-24	03/08/2021	ND	2.0000		
Thallium, total	ug/L	MW-24	09/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-24	03/08/2022	ND	2.0000		
Thallium, total	ug/L	MW-24	08/30/2022	ND	2.0000		
Thallium, total	ug/L	MW-24	03/07/2023	ND	2.0000		
Thallium, total	ug/L	MW-24	09/11/2023	ND	2.0000		
Thallium, total	ug/L	MW-24	03/20/2024	ND	2.0000		
Thallium, total	ug/L	MW-24	09/12/2024	ND	2.0000		
Vanadium, total	ug/L	MW-24	10/16/2014		72.3000		*
Vanadium, total	ug/L	MW-24	04/04/2015	ND	20.0000		
Vanadium, total	ug/L	MW-24	10/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-24	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/20/2016	ND	20.0000		
Vanadium, total	ug/L	MW-24	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-24	10/09/2017	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/21/2018	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/07/2018	ND	20.0000		
Vanadium, total	ug/L	MW-24	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/15/2020	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/08/2021	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/08/2022	ND	20.0000		
Vanadium, total	ug/L	MW-24	08/30/2022	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/07/2023	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/11/2023	ND	20.0000		
Vanadium, total	ug/L	MW-24	03/20/2024	ND	20.0000		
Vanadium, total	ug/L	MW-24	09/12/2024	ND	20.0000		
Zinc, total	ug/L	MW-24	10/16/2014		117.0000		
Zinc, total	ug/L	MW-24	04/04/2015		16.2000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Zinc, total	ug/L	MW-24	10/01/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	04/04/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	09/20/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	10/09/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	03/21/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-24	09/07/2018		106.0000		
Zinc, total	ug/L	MW-24	04/02/2019		39.2000		
Zinc, total	ug/L	MW-24	09/18/2019		56.9000		
Zinc, total	ug/L	MW-24	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-24	09/15/2020	ND	20.0000		
Zinc, total	ug/L	MW-24	03/08/2021	ND	20.0000		
Zinc, total	ug/L	MW-24	09/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-24	03/08/2022	ND	20.0000		
Zinc, total	ug/L	MW-24	08/30/2022	ND	20.0000		
Zinc, total	ug/L	MW-24	03/07/2023	ND	20.0000		
Zinc, total	ug/L	MW-24	09/11/2023	ND	20.0000		
Zinc, total	ug/L	MW-24	03/20/2024	ND	20.0000		
Zinc, total	ug/L	MW-24	09/12/2024	ND	20.0000		
Antimony, total	ug/L	MW-9	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-9	04/04/2015	ND	2.0000		
Antimony, total	ug/L	MW-9	10/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-9	04/04/2016	ND	2.0000		
Antimony, total	ug/L	MW-9	09/20/2016	ND	2.0000		
Antimony, total	ug/L	MW-9	04/24/2017	ND	2.0000		
Antimony, total	ug/L	MW-9	10/09/2017	ND	2.0000		
Antimony, total	ug/L	MW-9	03/21/2018	ND	2.0000		
Antimony, total	ug/L	MW-9	09/07/2018	ND	2.0000		
Antimony, total	ug/L	MW-9	04/02/2019	ND	2.0000		
Antimony, total	ug/L	MW-9	09/18/2019	ND	2.0000		
Antimony, total	ug/L	MW-9	03/25/2020	ND	2.0000		
Antimony, total	ug/L	MW-9	09/15/2020	ND	2.0000		
Antimony, total	ug/L	MW-9	03/08/2021	ND	2.0000		
Antimony, total	ug/L	MW-9	09/28/2021	ND	2.0000		
Antimony, total	ug/L	MW-9	03/08/2022	ND	2.0000		
Antimony, total	ug/L	MW-9	08/30/2022	ND	2.0000		
Antimony, total	ug/L	MW-9	03/07/2023	ND	2.0000		
Antimony, total	ug/L	MW-9	09/11/2023	ND	2.0000		
Antimony, total	ug/L	MW-9	03/20/2024	ND	2.0000		
Antimony, total	ug/L	MW-9	09/12/2024	ND	2.0000		
Arsenic, total	ug/L	MW-9	10/16/2014		6.1000		
Arsenic, total	ug/L	MW-9	04/04/2015		8.4000		
Arsenic, total	ug/L	MW-9	10/01/2015		8.9000		
Arsenic, total	ug/L	MW-9	04/04/2016		5.9000		
Arsenic, total	ug/L	MW-9	09/20/2016	ND	4.0000		
Arsenic, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Arsenic, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Arsenic, total	ug/L	MW-9	03/21/2018	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/07/2018		12.2000		
Arsenic, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/18/2019		19.4000		
Arsenic, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Arsenic, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Arsenic, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Arsenic, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Arsenic, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Arsenic, total	ug/L	MW-9	09/11/2023		7.2000		
Arsenic, total	ug/L	MW-9	03/20/2024		7.0000		
Arsenic, total	ug/L	MW-9	09/12/2024		4.3000		
Barium, total	ug/L	MW-9	10/16/2014		271.0000		
Barium, total	ug/L	MW-9	04/04/2015		291.0000		
Barium, total	ug/L	MW-9	10/01/2015		291.0000		
Barium, total	ug/L	MW-9	04/04/2016		259.0000		
Barium, total	ug/L	MW-9	09/20/2016		267.0000		
Barium, total	ug/L	MW-9	04/24/2017		264.0000		
Barium, total	ug/L	MW-9	10/09/2017		253.0000		
Barium, total	ug/L	MW-9	03/21/2018		266.0000		
Barium, total	ug/L	MW-9	09/07/2018		290.0000		
Barium, total	ug/L	MW-9	04/02/2019		270.0000		
Barium, total	ug/L	MW-9	09/18/2019		332.0000		
Barium, total	ug/L	MW-9	03/25/2020		272.0000		
Barium, total	ug/L	MW-9	09/15/2020		285.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Barium, total	ug/L	MW-9	03/08/2021		292.0000		
Barium, total	ug/L	MW-9	09/28/2021		259.0000		
Barium, total	ug/L	MW-9	03/08/2022		291.0000		
Barium, total	ug/L	MW-9	08/30/2022		241.0000		
Barium, total	ug/L	MW-9	03/07/2023		269.0000		
Barium, total	ug/L	MW-9	09/11/2023		288.0000		
Barium, total	ug/L	MW-9	03/20/2024		295.0000		
Barium, total	ug/L	MW-9	09/12/2024		305.0000		
Beryllium, total	ug/L	MW-9	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/04/2015	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/04/2016	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/20/2016	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Beryllium, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/21/2018	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/07/2018	ND	4.0000		
Beryllium, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/18/2019	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Beryllium, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/11/2023	ND	4.0000		
Beryllium, total	ug/L	MW-9	03/20/2024	ND	4.0000		
Beryllium, total	ug/L	MW-9	09/12/2024	ND	4.0000		
Cadmium, total	ug/L	MW-9	10/16/2014	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/04/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/04/2016		1.5000		
Cadmium, total	ug/L	MW-9	09/20/2016	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/24/2017	ND	0.8000		
Cadmium, total	ug/L	MW-9	10/09/2017	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/21/2018	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/07/2018	ND	0.8000		
Cadmium, total	ug/L	MW-9	04/02/2019	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/18/2019	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/25/2020	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/15/2020	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/08/2021	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/28/2021	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/08/2022	ND	0.8000		
Cadmium, total	ug/L	MW-9	08/30/2022	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/07/2023	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/11/2023	ND	0.8000		
Cadmium, total	ug/L	MW-9	03/20/2024	ND	0.8000		
Cadmium, total	ug/L	MW-9	09/12/2024	ND	0.8000		
Chromium, total	ug/L	MW-9	10/16/2014	ND	8.0000		
Chromium, total	ug/L	MW-9	04/04/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	10/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-9	04/04/2016	ND	8.0000		
Chromium, total	ug/L	MW-9	09/20/2016	ND	8.0000		
Chromium, total	ug/L	MW-9	04/24/2017	ND	8.0000		
Chromium, total	ug/L	MW-9	10/09/2017	ND	8.0000		
Chromium, total	ug/L	MW-9	03/21/2018	ND	8.0000		
Chromium, total	ug/L	MW-9	09/07/2018	ND	8.0000		
Chromium, total	ug/L	MW-9	04/02/2019	ND	8.0000		
Chromium, total	ug/L	MW-9	09/18/2019	ND	8.0000		
Chromium, total	ug/L	MW-9	03/25/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	09/15/2020	ND	8.0000		
Chromium, total	ug/L	MW-9	03/08/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	09/28/2021	ND	8.0000		
Chromium, total	ug/L	MW-9	03/08/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	08/30/2022	ND	8.0000		
Chromium, total	ug/L	MW-9	03/07/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	09/11/2023	ND	8.0000		
Chromium, total	ug/L	MW-9	03/20/2024	ND	8.0000		
Chromium, total	ug/L	MW-9	09/12/2024	ND	8.0000		
Cobalt, total	ug/L	MW-9	10/16/2014		5.8000		
Cobalt, total	ug/L	MW-9	04/04/2015		6.0000		
Cobalt, total	ug/L	MW-9	10/01/2015		4.6000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Cobalt, total	ug/L	MW-9	04/04/2016		5.7000		
Cobalt, total	ug/L	MW-9	09/20/2016		6.4000		
Cobalt, total	ug/L	MW-9	04/24/2017		5.2000		
Cobalt, total	ug/L	MW-9	10/09/2017		4.9000		
Cobalt, total	ug/L	MW-9	03/21/2018		5.3000		
Cobalt, total	ug/L	MW-9	09/07/2018		5.4000		
Cobalt, total	ug/L	MW-9	04/02/2019		5.4000		
Cobalt, total	ug/L	MW-9	09/18/2019		5.7000		
Cobalt, total	ug/L	MW-9	03/25/2020		5.3000		
Cobalt, total	ug/L	MW-9	09/15/2020		5.8000		
Cobalt, total	ug/L	MW-9	03/08/2021		5.1000		
Cobalt, total	ug/L	MW-9	09/28/2021		4.8000		
Cobalt, total	ug/L	MW-9	03/08/2022		5.1000		
Cobalt, total	ug/L	MW-9	08/30/2022		5.0000		
Cobalt, total	ug/L	MW-9	03/07/2023		4.8000		
Cobalt, total	ug/L	MW-9	09/11/2023		5.3000		
Cobalt, total	ug/L	MW-9	03/20/2024		4.5000		
Cobalt, total	ug/L	MW-9	09/12/2024		4.5000		
Copper, total	ug/L	MW-9	10/16/2014		4.3000		
Copper, total	ug/L	MW-9	04/04/2015		26.3000		*
Copper, total	ug/L	MW-9	10/01/2015	ND	4.0000		
Copper, total	ug/L	MW-9	04/04/2016		5.3000		
Copper, total	ug/L	MW-9	09/20/2016		8.4000		
Copper, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Copper, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Copper, total	ug/L	MW-9	03/21/2018		18.0000		*
Copper, total	ug/L	MW-9	06/11/2018	ND	4.0000		
Copper, total	ug/L	MW-9	09/07/2018	ND	4.0000		
Copper, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Copper, total	ug/L	MW-9	09/18/2019		7.1000		
Copper, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Copper, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Copper, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Copper, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Copper, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Copper, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Copper, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Copper, total	ug/L	MW-9	09/11/2023	ND	4.0000		
Copper, total	ug/L	MW-9	03/20/2024	ND	4.0000		
Copper, total	ug/L	MW-9	09/12/2024	ND	4.0000		
Lead, total	ug/L	MW-9	10/16/2014	ND	4.0000		
Lead, total	ug/L	MW-9	04/04/2015	ND	4.0000		
Lead, total	ug/L	MW-9	10/01/2015	ND	4.0000		
Lead, total	ug/L	MW-9	04/04/2016	ND	4.0000		
Lead, total	ug/L	MW-9	09/20/2016	ND	4.0000		
Lead, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Lead, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Lead, total	ug/L	MW-9	03/21/2018	ND	4.0000		
Lead, total	ug/L	MW-9	09/07/2018	ND	4.0000		
Lead, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Lead, total	ug/L	MW-9	09/18/2019	ND	4.0000		
Lead, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Lead, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Lead, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Lead, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Lead, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Lead, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Lead, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Lead, total	ug/L	MW-9	09/11/2023	ND	4.0000		
Lead, total	ug/L	MW-9	03/20/2024	ND	4.0000		
Lead, total	ug/L	MW-9	09/12/2024	ND	4.0000		
Nickel, total	ug/L	MW-9	10/16/2014		12.4000		
Nickel, total	ug/L	MW-9	04/04/2015		11.8000		
Nickel, total	ug/L	MW-9	10/01/2015		8.6000		
Nickel, total	ug/L	MW-9	04/04/2016		11.2000		
Nickel, total	ug/L	MW-9	09/20/2016		8.2000		
Nickel, total	ug/L	MW-9	04/24/2017		10.9000		
Nickel, total	ug/L	MW-9	10/09/2017		11.0000		
Nickel, total	ug/L	MW-9	03/21/2018		10.9000		
Nickel, total	ug/L	MW-9	09/07/2018		10.6000		
Nickel, total	ug/L	MW-9	04/02/2019		11.0000		
Nickel, total	ug/L	MW-9	09/18/2019		11.6000		
Nickel, total	ug/L	MW-9	03/25/2020		11.0000		
Nickel, total	ug/L	MW-9	09/15/2020		11.2000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Nickel, total	ug/L	MW-9	03/08/2021		10.1000		
Nickel, total	ug/L	MW-9	09/28/2021		9.5000		
Nickel, total	ug/L	MW-9	03/08/2022		10.6000		
Nickel, total	ug/L	MW-9	08/30/2022		9.8000		
Nickel, total	ug/L	MW-9	03/07/2023		10.0000		
Nickel, total	ug/L	MW-9	09/11/2023		9.8000		
Nickel, total	ug/L	MW-9	03/20/2024		9.2000		
Nickel, total	ug/L	MW-9	09/12/2024		9.5000		
Selenium, total	ug/L	MW-9	10/16/2014	ND	4.0000		
Selenium, total	ug/L	MW-9	04/04/2015	ND	4.0000		
Selenium, total	ug/L	MW-9	10/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-9	04/04/2016	ND	4.0000		
Selenium, total	ug/L	MW-9	09/20/2016	ND	4.0000		
Selenium, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Selenium, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Selenium, total	ug/L	MW-9	03/21/2018	ND	4.0000		
Selenium, total	ug/L	MW-9	09/07/2018	ND	4.0000		
Selenium, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Selenium, total	ug/L	MW-9	09/18/2019	ND	4.0000		
Selenium, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Selenium, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Selenium, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Selenium, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Selenium, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Selenium, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Selenium, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Selenium, total	ug/L	MW-9	09/11/2023	ND	4.0000		
Selenium, total	ug/L	MW-9	03/20/2024	ND	4.0000		
Selenium, total	ug/L	MW-9	09/12/2024	ND	4.0000		
Silver, total	ug/L	MW-9	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-9	04/04/2015	ND	4.0000		
Silver, total	ug/L	MW-9	10/01/2015	ND	4.0000		
Silver, total	ug/L	MW-9	04/04/2016	ND	4.0000		
Silver, total	ug/L	MW-9	09/20/2016	ND	4.0000		
Silver, total	ug/L	MW-9	04/24/2017	ND	4.0000		
Silver, total	ug/L	MW-9	10/09/2017	ND	4.0000		
Silver, total	ug/L	MW-9	03/21/2018	ND	4.0000		
Silver, total	ug/L	MW-9	09/07/2018	ND	4.0000		
Silver, total	ug/L	MW-9	04/02/2019	ND	4.0000		
Silver, total	ug/L	MW-9	09/18/2019	ND	4.0000		
Silver, total	ug/L	MW-9	03/25/2020	ND	4.0000		
Silver, total	ug/L	MW-9	09/15/2020	ND	4.0000		
Silver, total	ug/L	MW-9	03/08/2021	ND	4.0000		
Silver, total	ug/L	MW-9	09/28/2021	ND	4.0000		
Silver, total	ug/L	MW-9	03/08/2022	ND	4.0000		
Silver, total	ug/L	MW-9	08/30/2022	ND	4.0000		
Silver, total	ug/L	MW-9	03/07/2023	ND	4.0000		
Silver, total	ug/L	MW-9	09/11/2023	ND	4.0000		
Silver, total	ug/L	MW-9	03/20/2024	ND	4.0000		
Silver, total	ug/L	MW-9	09/12/2024	ND	4.0000		
Thallium, total	ug/L	MW-9	10/16/2014	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/04/2015	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/01/2015	ND	1.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/04/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	09/20/2016	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/24/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	10/09/2017	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	03/21/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	09/07/2018	ND	4.0000	2.0000	**
Thallium, total	ug/L	MW-9	04/02/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	09/18/2019	ND	2.0000		
Thallium, total	ug/L	MW-9	03/25/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	09/15/2020	ND	2.0000		
Thallium, total	ug/L	MW-9	03/08/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	09/28/2021	ND	2.0000		
Thallium, total	ug/L	MW-9	03/08/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	08/30/2022	ND	2.0000		
Thallium, total	ug/L	MW-9	03/07/2023		2.0000		
Thallium, total	ug/L	MW-9	09/11/2023	ND	2.0000		
Thallium, total	ug/L	MW-9	03/20/2024	ND	2.0000		
Thallium, total	ug/L	MW-9	09/12/2024	ND	2.0000		
Vanadium, total	ug/L	MW-9	10/16/2014	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/04/2015	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/01/2015	ND	20.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Vanadium, total	ug/L	MW-9	04/04/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/20/2016	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/24/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	10/09/2017	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/21/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/07/2018	ND	20.0000		
Vanadium, total	ug/L	MW-9	04/02/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/18/2019	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/25/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/15/2020	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/08/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/28/2021	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/08/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	08/30/2022	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/07/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/11/2023	ND	20.0000		
Vanadium, total	ug/L	MW-9	03/20/2024	ND	20.0000		
Vanadium, total	ug/L	MW-9	09/12/2024	ND	20.0000		
Zinc, total	ug/L	MW-9	10/16/2014	ND	20.0000		
Zinc, total	ug/L	MW-9	04/04/2015	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/01/2015		9.8000		
Zinc, total	ug/L	MW-9	04/04/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	09/20/2016	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	04/24/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	10/09/2017	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	03/21/2018	ND	8.0000	20.0000	**
Zinc, total	ug/L	MW-9	09/07/2018		73.9000		*
Zinc, total	ug/L	MW-9	04/02/2019	ND	20.0000		
Zinc, total	ug/L	MW-9	09/18/2019		27.7000		
Zinc, total	ug/L	MW-9	03/25/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	09/15/2020	ND	20.0000		
Zinc, total	ug/L	MW-9	03/08/2021	ND	20.0000		
Zinc, total	ug/L	MW-9	09/28/2021	ND	20.0000		
Zinc, total	ug/L	MW-9	03/08/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	08/30/2022	ND	20.0000		
Zinc, total	ug/L	MW-9	03/07/2023	ND	20.0000		
Zinc, total	ug/L	MW-9	09/11/2023	ND	20.0000		
Zinc, total	ug/L	MW-9	03/20/2024	ND	20.0000		
Zinc, total	ug/L	MW-9	09/12/2024	ND	20.0000		

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

Table 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Antimony, total	ug/L	MW-12	09/12/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-12	09/12/2024		5.6000		167.0000
Barium, total	ug/L	MW-12	09/12/2024		310.0000		1273.5634
Beryllium, total	ug/L	MW-12	09/12/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-12	09/12/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-12	09/12/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-12	09/12/2024		1.1000		38.1853
Copper, total	ug/L	MW-12	09/12/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-12	09/12/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-12	09/12/2024	ND	4.0000		22.2432
Selenium, total	ug/L	MW-12	09/12/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-12	09/12/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-12	09/12/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-12	09/12/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-12	09/12/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-15R	09/12/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-15R	09/12/2024		17.3000		167.0000
Barium, total	ug/L	MW-15R	09/12/2024		332.0000		1273.5634
Beryllium, total	ug/L	MW-15R	09/12/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-15R	09/12/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-15R	09/12/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-15R	09/12/2024		3.3000		38.1853
Copper, total	ug/L	MW-15R	09/12/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-15R	09/12/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-15R	09/12/2024		4.1000		22.2432
Selenium, total	ug/L	MW-15R	09/12/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-15R	09/12/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-15R	09/12/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-15R	09/12/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-15R	09/12/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-20R	09/12/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-20R	09/12/2024		21.5000		167.0000
Barium, total	ug/L	MW-20R	09/12/2024		657.0000		1273.5634
Beryllium, total	ug/L	MW-20R	09/12/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-20R	09/12/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-20R	09/12/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-20R	09/12/2024		0.6000		38.1853
Copper, total	ug/L	MW-20R	09/12/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-20R	09/12/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-20R	09/12/2024	ND	4.0000		22.2432
Selenium, total	ug/L	MW-20R	09/12/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-20R	09/12/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-20R	09/12/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-20R	09/12/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-20R	09/12/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-21	09/11/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-21	09/11/2024		6.5000		167.0000
Barium, total	ug/L	MW-21	09/11/2024		517.0000		1273.5634
Beryllium, total	ug/L	MW-21	09/11/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-21	09/11/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-21	09/11/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-21	09/11/2024		1.0000		38.1853
Copper, total	ug/L	MW-21	09/11/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-21	09/11/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-21	09/11/2024		8.5000		22.2432
Selenium, total	ug/L	MW-21	09/11/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-21	09/11/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-21	09/11/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-21	09/11/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-21	09/11/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-22	09/12/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-22	09/12/2024		63.1000		167.0000
Barium, total	ug/L	MW-22	09/12/2024		418.0000		1273.5634
Beryllium, total	ug/L	MW-22	09/12/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-22	09/12/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-22	09/12/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-22	09/12/2024		4.0000		38.1853
Copper, total	ug/L	MW-22	09/12/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-22	09/12/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-22	09/12/2024		7.4000		22.2432
Selenium, total	ug/L	MW-22	09/12/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-22	09/12/2024	ND	4.0000		4.0000

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

Table 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Thallium, total	ug/L	MW-22	09/12/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-22	09/12/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-22	09/12/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-4	09/12/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-4	09/12/2024		58.4000		167.0000
Barium, total	ug/L	MW-4	09/12/2024		1020.0000		1273.5634
Beryllium, total	ug/L	MW-4	09/12/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-4	09/12/2024	ND	0.8000		2.4000
Chromium, total	ug/L	MW-4	09/12/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-4	09/12/2024		1.5000		38.1853
Copper, total	ug/L	MW-4	09/12/2024	ND	4.0000		10.0000
Lead, total	ug/L	MW-4	09/12/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-4	09/12/2024	ND	4.0000		22.2432
Selenium, total	ug/L	MW-4	09/12/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-4	09/12/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-4	09/12/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-4	09/12/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-4	09/12/2024	ND	20.0000		267.0000
Antimony, total	ug/L	MW-5	09/12/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW-5	09/12/2024		9.7000		167.0000
Barium, total	ug/L	MW-5	09/12/2024		269.0000		1273.5634
Beryllium, total	ug/L	MW-5	09/12/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW-5	09/12/2024		0.9000		2.4000
Chromium, total	ug/L	MW-5	09/12/2024	ND	8.0000		11.6000
Cobalt, total	ug/L	MW-5	09/12/2024		10.6000		38.1853
Copper, total	ug/L	MW-5	09/12/2024		7.3000	**	10.0000
Lead, total	ug/L	MW-5	09/12/2024	ND	4.0000		6.8000
Nickel, total	ug/L	MW-5	09/12/2024		33.3000	*	22.2432
Selenium, total	ug/L	MW-5	09/12/2024	ND	4.0000		7.5000
Silver, total	ug/L	MW-5	09/12/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW-5	09/12/2024	ND	2.0000		2.3000
Vanadium, total	ug/L	MW-5	09/12/2024	ND	20.0000		31.6000
Zinc, total	ug/L	MW-5	09/12/2024	ND	20.0000		267.0000

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

Table 3

Detection Frequencies in Upgradient and Downgradient Wells

Constituent	Upgradient Detect	Upgradient N	Upgradient Proportion	Downgradient Detect	Downgradient N	Downgradient Proportion
Antimony, total	0	111	0.000	2	242	0.008
Arsenic, total	53	110	0.482	211	243	0.868
Barium, total	110	110	1.000	242	242	1.000
Beryllium, total	0	111	0.000	1	242	0.004
Cadmium, total	18	109	0.165	31	242	0.128
Chromium, total	2	109	0.018	12	242	0.050
Cobalt, total	87	106	0.821	193	242	0.798
Copper, total	12	105	0.114	84	243	0.346
Lead, total	2	107	0.019	37	242	0.153
Nickel, total	83	107	0.776	182	244	0.746
Selenium, total	2	110	0.018	6	242	0.025
Silver, total	0	111	0.000	0	242	0.000
Thallium, total	2	111	0.018	3	242	0.012
Vanadium, total	1	110	0.009	18	242	0.074
Zinc, total	21	108	0.194	99	242	0.409

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

Table 4

Shapiro-Wilk Multiple Group Test of Normality

Constituent	Detect	N	Detect Freq	G raw	G log	G cbrt	G sqrt	G sqr	G cub	Crit Value	Dist Form	Model Type
Antimony, total	0	111	0.000									nonpar
Arsenic, total	53	110	0.482	2.377	1.130					2.326	lognor	nonpar
Barium, total	110	110	1.000	1.794	0.401					2.326	normal	normal
Beryllium, total	0	111	0.000									nonpar
Cadmium, total	18	109	0.165	0.247	0.619					2.326	normal	nonpar
Chromium, total	2	109	0.018									nonpar
Cobalt, total	87	106	0.821	4.028	1.579					2.326	lognor	lognor
Copper, total	12	105	0.114	1.035	0.667					2.326	normal	nonpar
Lead, total	2	107	0.019									nonpar
Nickel, total	83	107	0.776	1.370	0.400					2.326	normal	normal
Selenium, total	2	110	0.018									nonpar
Silver, total	0	111	0.000									nonpar
Thallium, total	2	111	0.018									nonpar
Vanadium, total	1	110	0.009									nonpar
Zinc, total	21	108	0.194	1.235	0.382					2.326	normal	nonpar

* - Distribution override for that constituent.
Fit to distribution is confirmed if G <= critical value.
Model type may not match distributional form when detection frequency < 50%.

Table 5

Summary Statistics and Prediction Limits

Constituent	Units	Detect	N	Mean	SD	alpha	Factor	Pred Limit	Type		Conf
Antimony, total	ug/L	0	111					2.0000	nonpar	***	0.99
Arsenic, total	ug/L	53	110					167.0000	nonpar		0.99
Barium, total	ug/L	110	110	425.1364	357.7221	0.0100	2.3717	1273.5634	normal		
Beryllium, total	ug/L	0	111					4.0000	nonpar	***	0.99
Cadmium, total	ug/L	18	109					2.4000	nonpar		0.99
Chromium, total	ug/L	2	109					11.6000	nonpar		0.99
Cobalt, total	ug/L	87	106	1.1193	1.0631	0.0100	2.3735	38.1853	lognor		
Copper, total	ug/L	12	105					10.0000	nonpar		0.99
Lead, total	ug/L	2	107					6.8000	nonpar		0.99
Nickel, total	ug/L	83	107	8.0953	5.9619	0.0100	2.3730	22.2432	normal		
Selenium, total	ug/L	2	110					7.5000	nonpar		0.99
Silver, total	ug/L	0	111					4.0000	nonpar	***	0.99
Thallium, total	ug/L	2	111					2.3000	nonpar		0.99
Vanadium, total	ug/L	1	110					31.6000	nonpar		0.99
Zinc, total	ug/L	21	108					267.0000	nonpar		0.99

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

Table 6

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Zinc, total	ug/L	MW-17	09/07/2018	67.4000		10/16/2014-09/12/2024	21	0.5381
Zinc, total	ug/L	MW-17	09/18/2019	61.5000		10/16/2014-09/12/2024	21	0.5381
Cadmium, total	ug/L	MW-18	04/04/2015	3.9000		10/16/2014-09/12/2024	21	0.5263
Copper, total	ug/L	MW-18	10/16/2014	31.3000		10/16/2014-09/12/2024	20	0.5503
Copper, total	ug/L	MW-18	09/20/2016	16.0000		10/16/2014-09/12/2024	20	0.5503
Lead, total	ug/L	MW-18	10/16/2014	12.4000		10/16/2014-09/12/2024	20	0.5381
Barium, total	ug/L	MW-19A	03/20/2024	622.0000		10/16/2014-09/12/2024	21	0.5263
Cadmium, total	ug/L	MW-19A	09/11/2023	9.0000		10/16/2014-09/12/2024	21	0.5263
Cobalt, total	ug/L	MW-19A	03/20/2024	6.9000		10/16/2014-09/12/2024	21	0.5263
Lead, total	ug/L	MW-2	04/02/2019	13.6000		04/04/2015-03/25/2020	6	0.6987
Nickel, total	ug/L	MW-24	04/04/2015	25.1000		10/16/2014-09/12/2024	20	0.5503
Nickel, total	ug/L	MW-24	03/21/2018	20.0000	< 20.0000	10/16/2014-09/12/2024	20	0.5503
Copper, total	ug/L	MW-9	04/04/2015	26.3000		10/16/2014-09/12/2024	22	0.5263
Copper, total	ug/L	MW-9	03/21/2018	18.0000		10/16/2014-09/12/2024	22	0.5263
Zinc, total	ug/L	MW-9	09/07/2018	73.9000		10/16/2014-09/12/2024	21	0.5263

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Copper, total	ug/L	MW-5	04/23/2008	ND	5.0000		10.0000
Copper, total	ug/L	MW-5	06/23/2008	ND	5.0000		10.0000
Copper, total	ug/L	MW-5	08/13/2008		6.0000		10.0000
Copper, total	ug/L	MW-5	10/02/2008	ND	8.0000		10.0000
Copper, total	ug/L	MW-5	12/13/2008	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	03/04/2009		4.7000		10.0000
Copper, total	ug/L	MW-5	09/17/2009		7.9000		10.0000
Copper, total	ug/L	MW-5	11/06/2009		11.4000	*	10.0000
Copper, total	ug/L	MW-5	04/05/2010		7.6000		10.0000
Copper, total	ug/L	MW-5	10/08/2010	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	04/13/2011		6.1000		10.0000
Copper, total	ug/L	MW-5	09/22/2011		5.4000		10.0000
Copper, total	ug/L	MW-5	04/09/2012	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/05/2012	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	04/26/2013		5.7000		10.0000
Copper, total	ug/L	MW-5	09/26/2013		10.0000		10.0000
Copper, total	ug/L	MW-5	04/10/2014	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	10/16/2014		4.0000		10.0000
Copper, total	ug/L	MW-5	04/04/2015	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	10/01/2015		4.2000		10.0000
Copper, total	ug/L	MW-5	04/04/2016	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/20/2016		7.7000		10.0000
Copper, total	ug/L	MW-5	04/24/2017	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	10/09/2017		4.7000		10.0000
Copper, total	ug/L	MW-5	03/21/2018	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/07/2018	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	04/02/2019	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/18/2019	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	03/25/2020	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/15/2020		4.4000		10.0000
Copper, total	ug/L	MW-5	03/08/2021	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	09/28/2021	ND	4.0000		10.0000
Copper, total	ug/L	MW-5	03/08/2022		5.0000		10.0000
Copper, total	ug/L	MW-5	08/30/2022		45.5000	*	10.0000
Copper, total	ug/L	MW-5	03/07/2023		9.2000		10.0000
Copper, total	ug/L	MW-5	09/11/2023		9.6000		10.0000
Copper, total	ug/L	MW-5	03/20/2024		26.8000	*	10.0000
Copper, total	ug/L	MW-5	09/12/2024		7.3000		10.0000
Nickel, total	ug/L	MW-5	04/23/2008	ND	5.0000		22.2432
Nickel, total	ug/L	MW-5	06/23/2008		13.0000		22.2432
Nickel, total	ug/L	MW-5	08/13/2008		8.0000		22.2432
Nickel, total	ug/L	MW-5	10/02/2008		13.9000		22.2432
Nickel, total	ug/L	MW-5	12/13/2008		9.2000		22.2432
Nickel, total	ug/L	MW-5	03/04/2009		6.8000		22.2432
Nickel, total	ug/L	MW-5	09/17/2009		8.7000		22.2432
Nickel, total	ug/L	MW-5	11/06/2009		10.8000		22.2432
Nickel, total	ug/L	MW-5	04/05/2010		10.4000		22.2432
Nickel, total	ug/L	MW-5	10/08/2010		9.9000		22.2432
Nickel, total	ug/L	MW-5	04/13/2011		17.6000		22.2432
Nickel, total	ug/L	MW-5	09/22/2011		16.8000		22.2432
Nickel, total	ug/L	MW-5	04/09/2012		13.4000		22.2432
Nickel, total	ug/L	MW-5	09/05/2012		12.9000		22.2432
Nickel, total	ug/L	MW-5	04/26/2013		11.6000		22.2432
Nickel, total	ug/L	MW-5	09/26/2013		7.8000		22.2432
Nickel, total	ug/L	MW-5	04/10/2014	ND	4.0000		22.2432
Nickel, total	ug/L	MW-5	10/16/2014		11.5000		22.2432
Nickel, total	ug/L	MW-5	04/04/2015		7.0000		22.2432
Nickel, total	ug/L	MW-5	10/01/2015		5.7000		22.2432
Nickel, total	ug/L	MW-5	04/04/2016		5.3000		22.2432
Nickel, total	ug/L	MW-5	09/20/2016		9.5000		22.2432
Nickel, total	ug/L	MW-5	04/24/2017		6.5000		22.2432
Nickel, total	ug/L	MW-5	10/09/2017		7.9000		22.2432
Nickel, total	ug/L	MW-5	03/21/2018		6.3000		22.2432
Nickel, total	ug/L	MW-5	09/07/2018		5.8000		22.2432
Nickel, total	ug/L	MW-5	04/02/2019		21.4000		22.2432
Nickel, total	ug/L	MW-5	06/05/2019		13.7000		22.2432
Nickel, total	ug/L	MW-5	09/18/2019		5.1000		22.2432
Nickel, total	ug/L	MW-5	03/25/2020		6.3000		22.2432
Nickel, total	ug/L	MW-5	09/15/2020		4.8000		22.2432
Nickel, total	ug/L	MW-5	03/08/2021		8.5000		22.2432
Nickel, total	ug/L	MW-5	09/28/2021		4.9000		22.2432

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

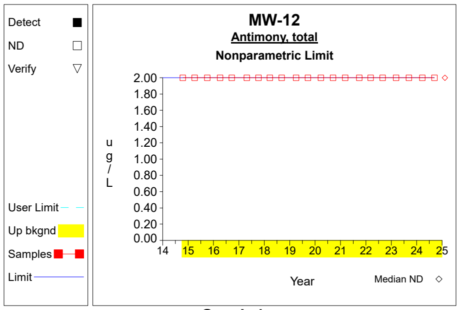
Table 8

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

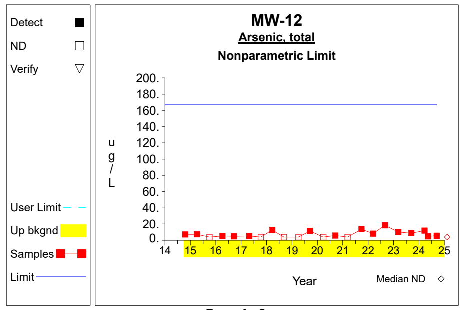
Constituent	Units	Well	Date		Result		Pred. Limit
Nickel, total	ug/L	MW-5	03/08/2022		6.1000		22.2432
Nickel, total	ug/L	MW-5	08/30/2022		5.6000		22.2432
Nickel, total	ug/L	MW-5	03/07/2023		8.7000		22.2432
Nickel, total	ug/L	MW-5	09/11/2023	ND	4.0000		22.2432
Nickel, total	ug/L	MW-5	03/20/2024		9.0000		22.2432
Nickel, total	ug/L	MW-5	09/12/2024		33.3000	*	22.2432

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

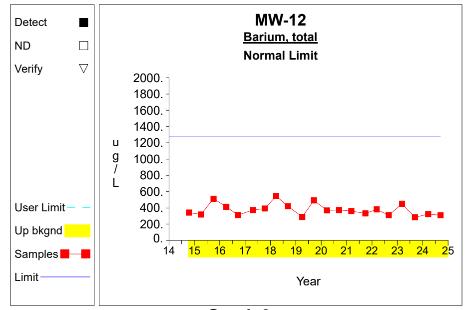
Up vs. Down Prediction Limits



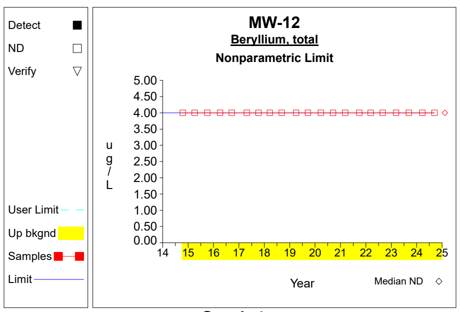
Graph 1



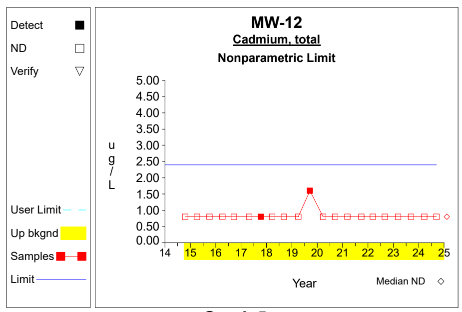
Graph 2



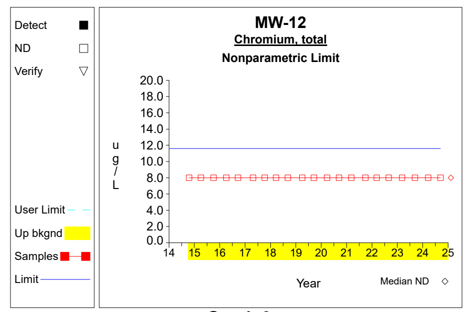
Graph 3



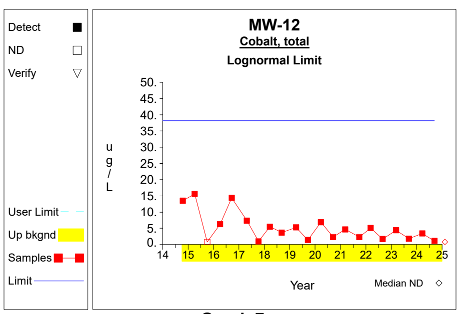
Graph 4



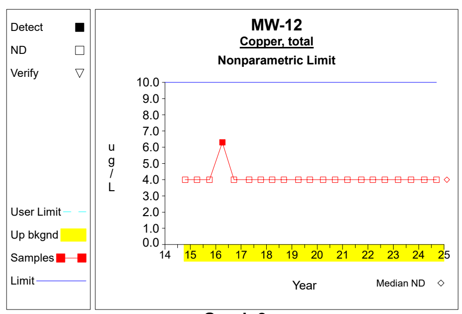
Graph 5



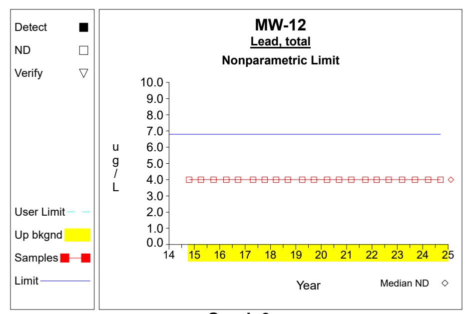
Graph 6



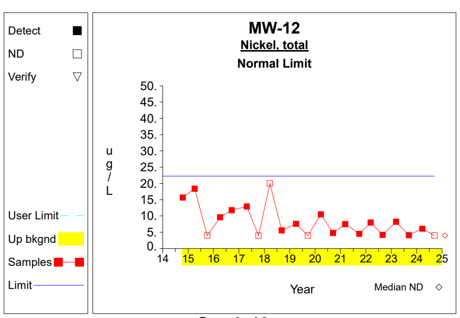
Graph 7



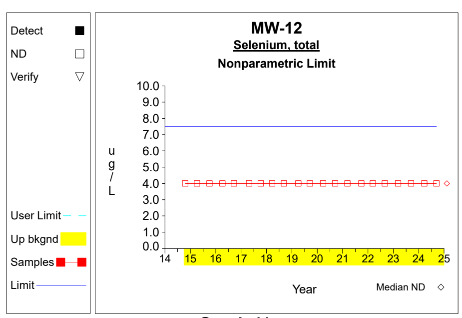
Graph 8



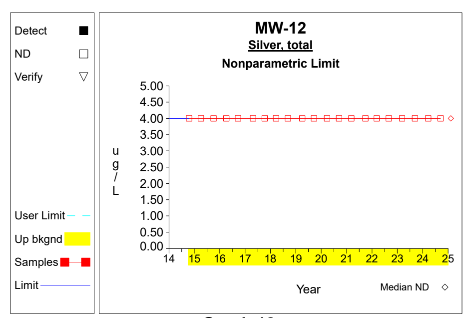
Graph 9



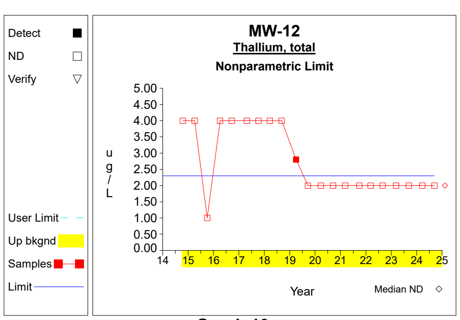
Graph 10



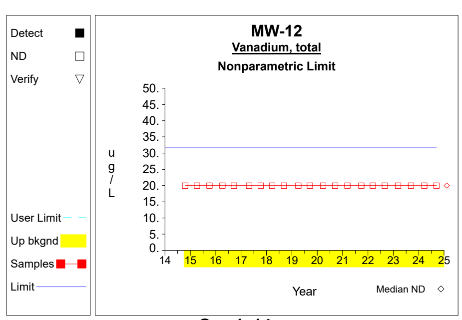
Graph 11



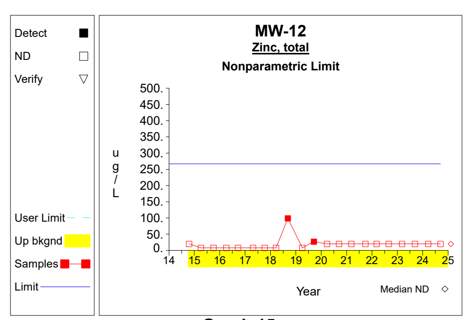
Graph 12



Graph 13



Graph 14



Graph 15

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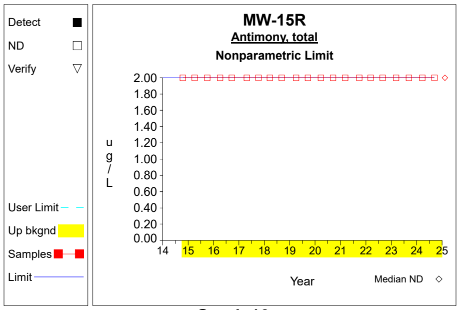
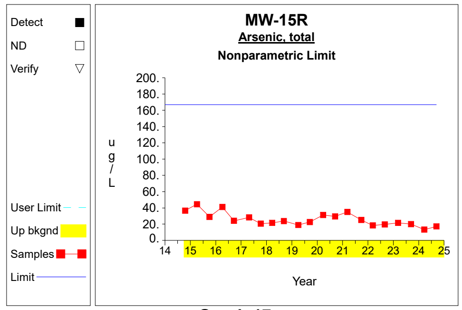
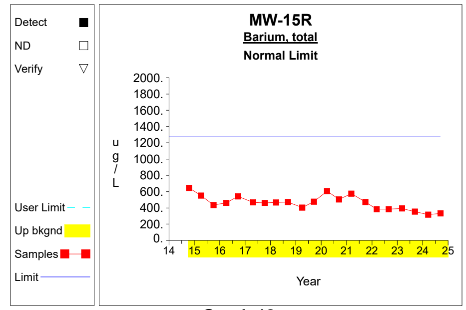
Up vs. Down Prediction Limits



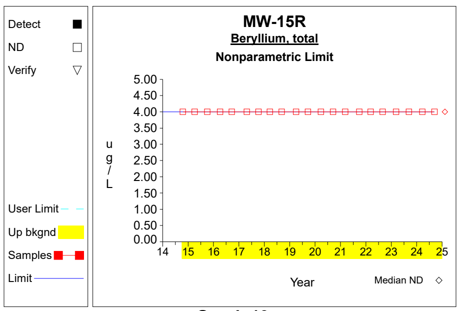
Graph 16



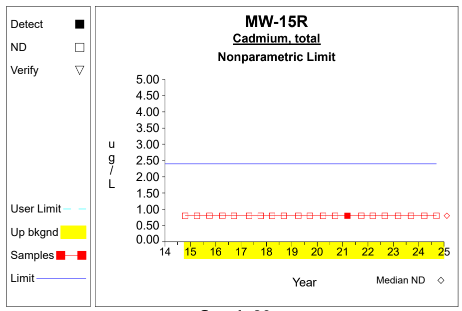
Graph 17



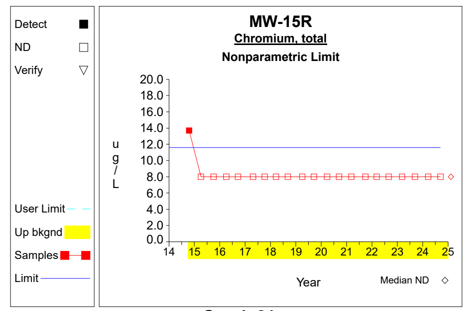
Graph 18



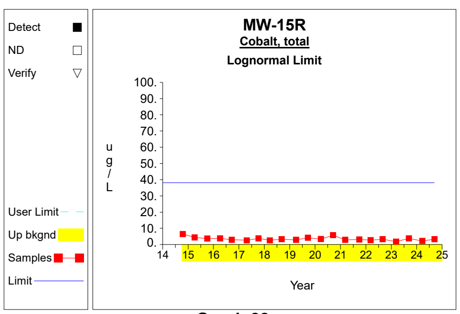
Graph 19



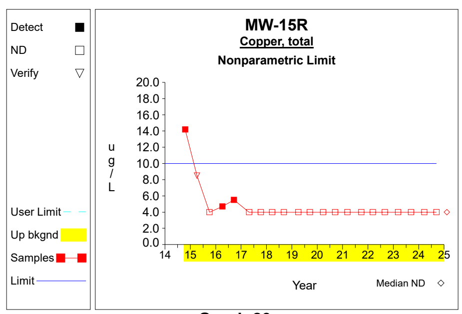
Graph 20



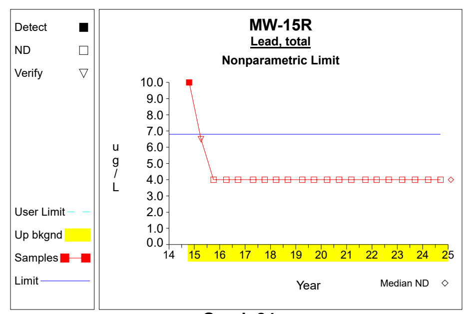
Graph 21



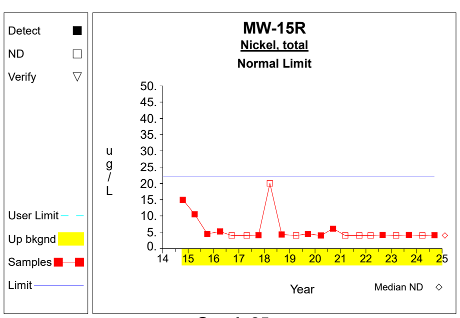
Graph 22



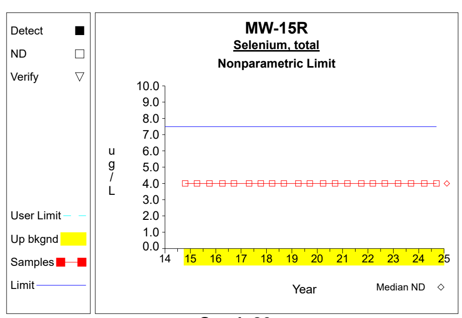
Graph 23



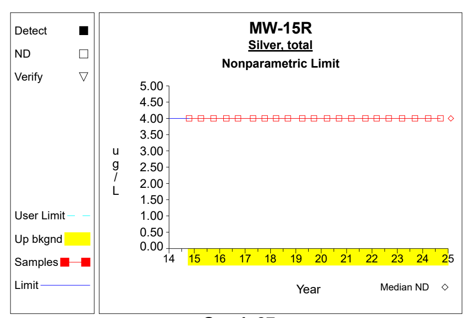
Graph 24



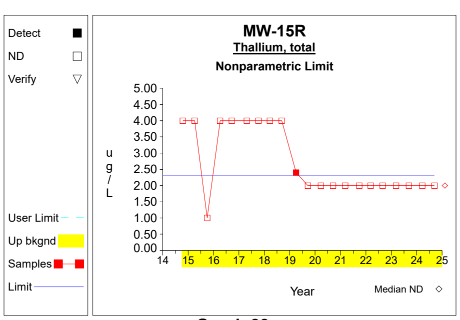
Graph 25



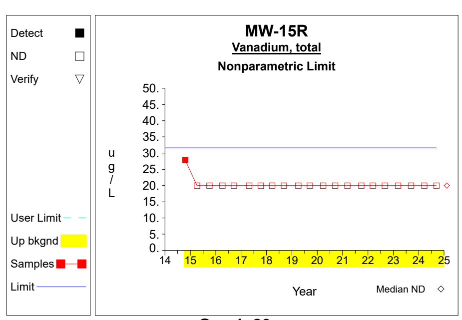
Graph 26



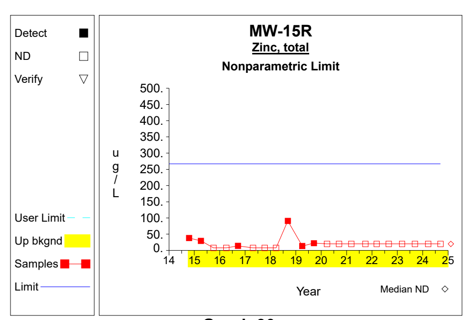
Graph 27



Graph 28



Graph 29



Graph 30

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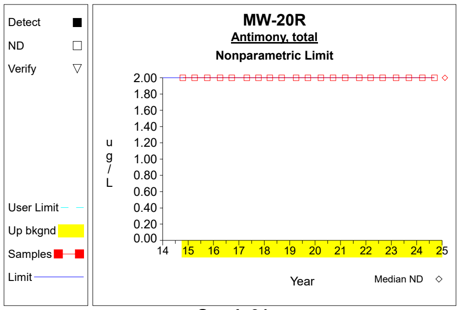
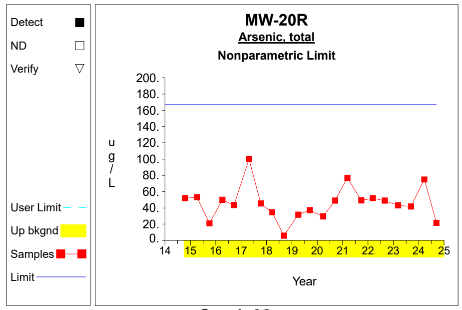
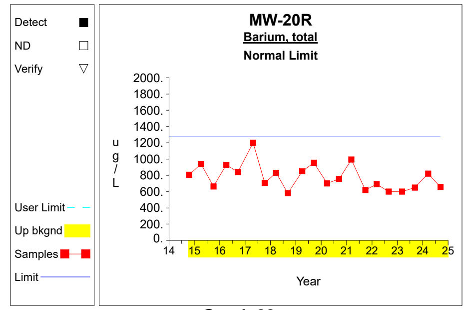
Up vs. Down Prediction Limits



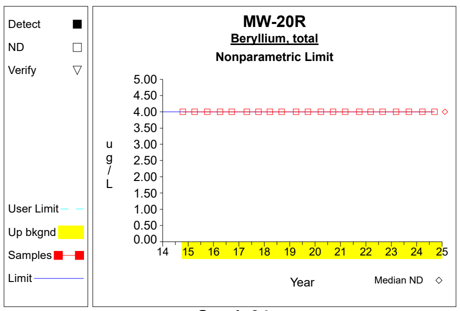
Graph 31



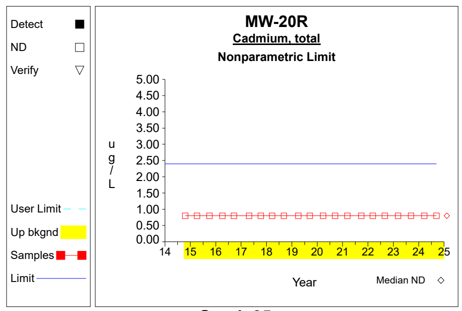
Graph 32



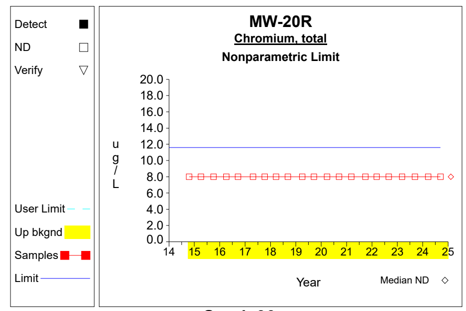
Graph 33



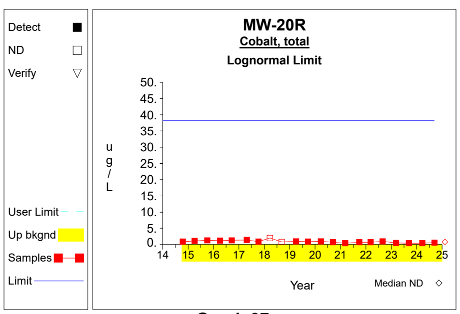
Graph 34



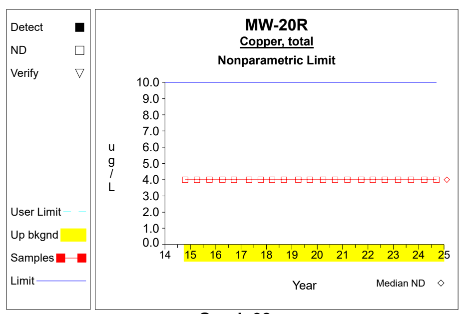
Graph 35



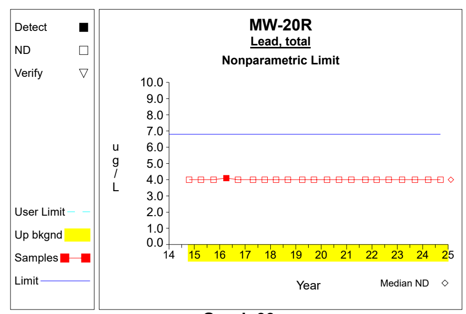
Graph 36



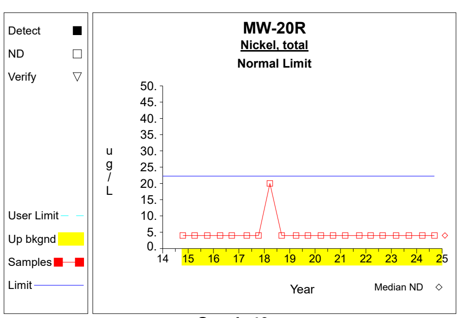
Graph 37



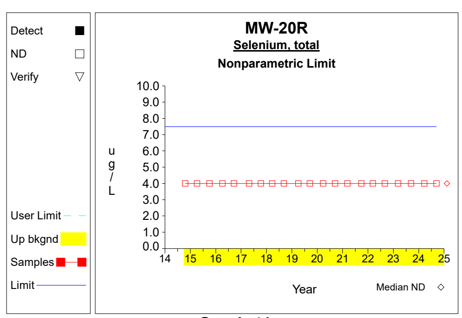
Graph 38



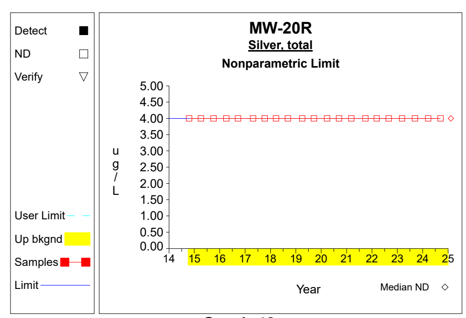
Graph 39



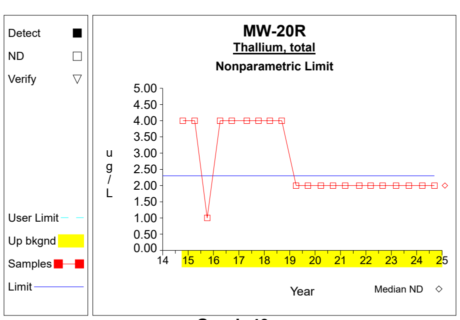
Graph 40



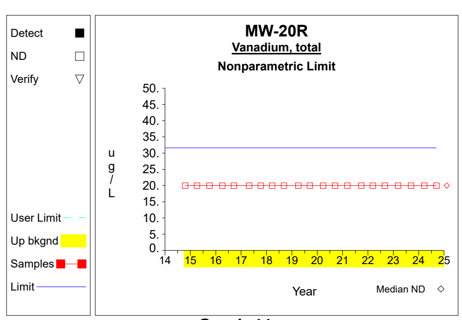
Graph 41



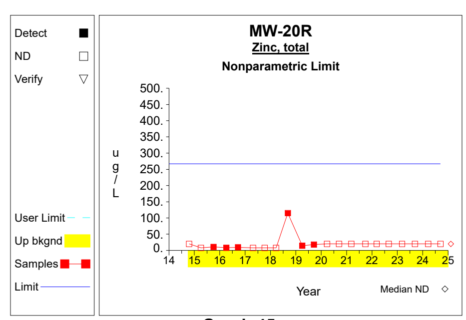
Graph 42



Graph 43



Graph 44



Graph 45

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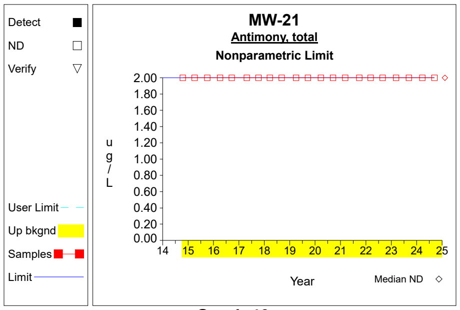
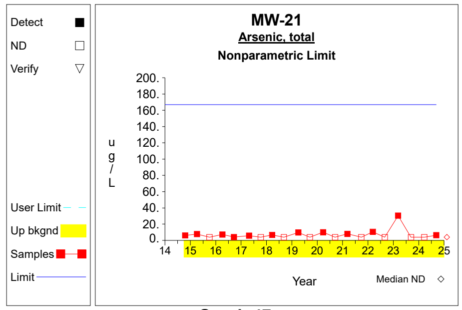
Up vs. Down Prediction Limits



Graph 46



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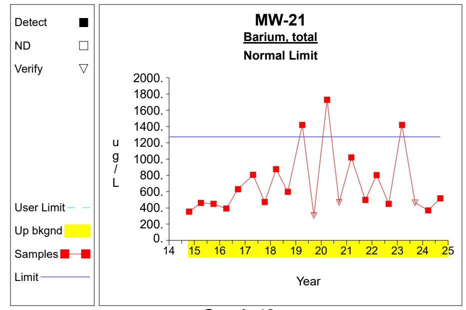

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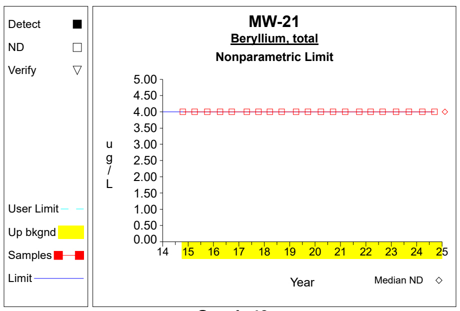

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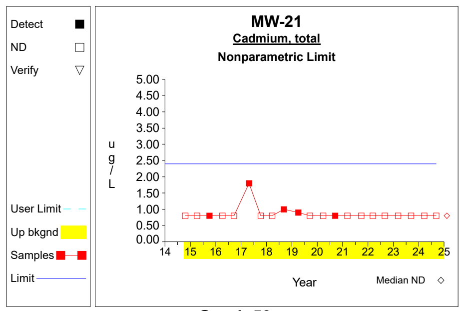

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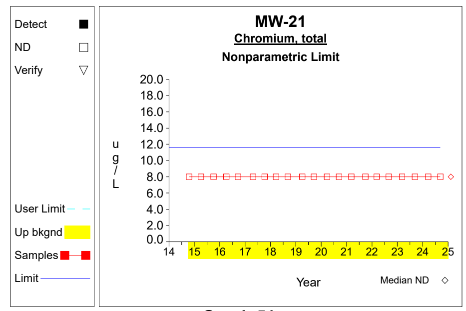

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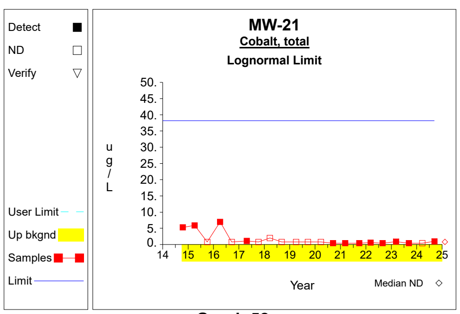

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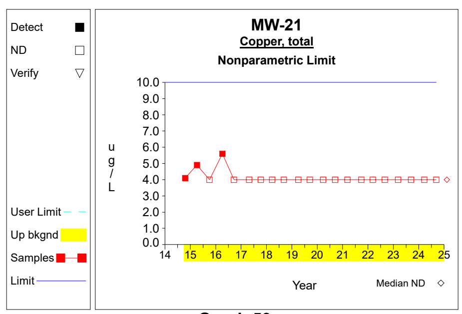

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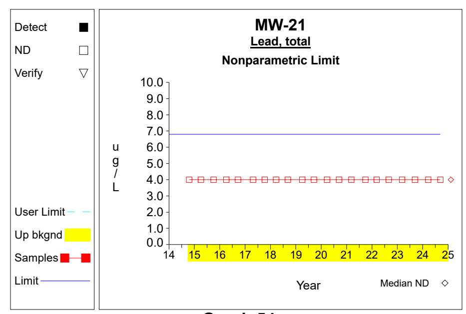

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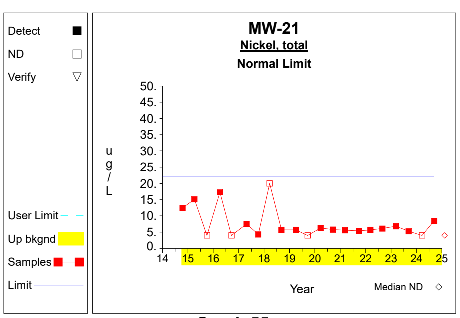

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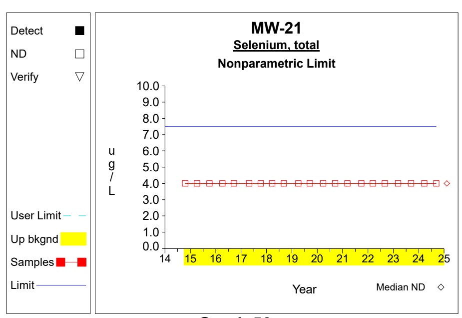

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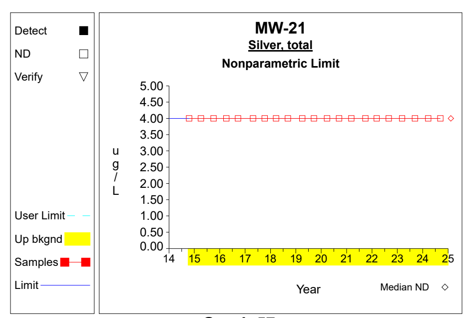

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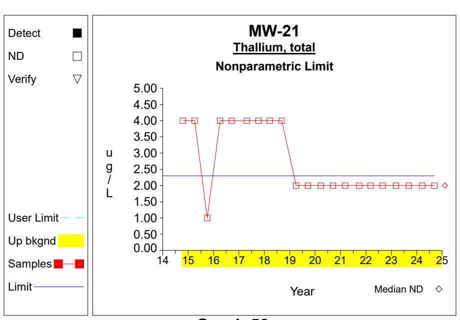

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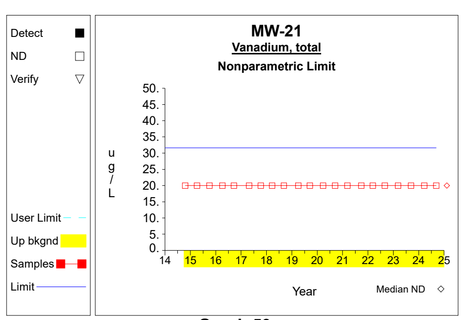

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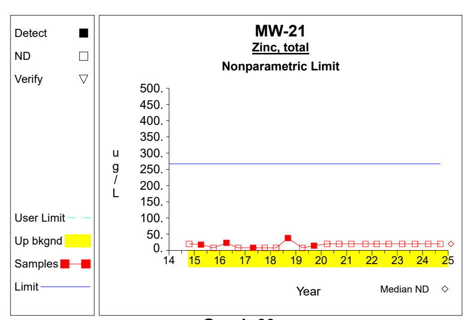

Graph 60

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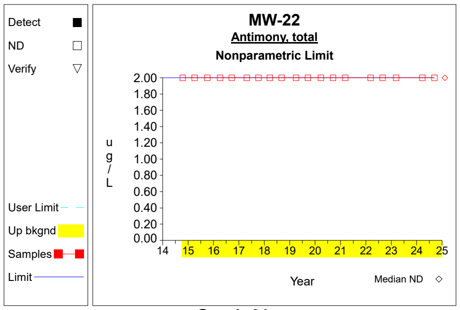
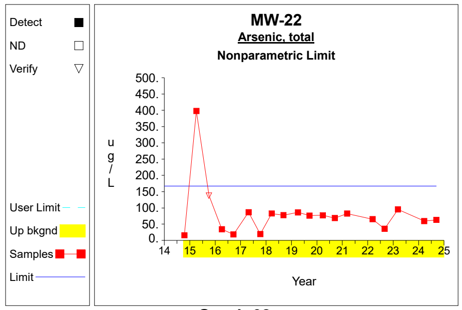
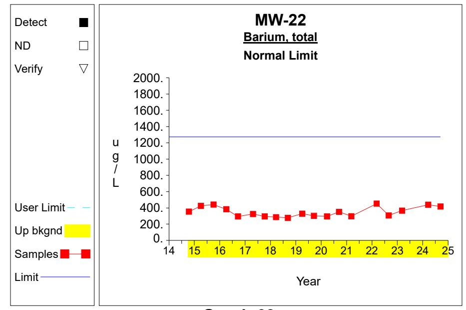
Up vs. Down Prediction Limits



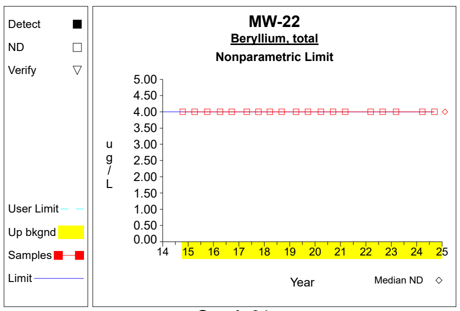
Graph 61



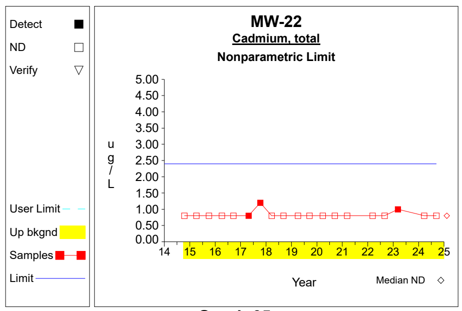
Graph 62



Graph 63



Graph 64



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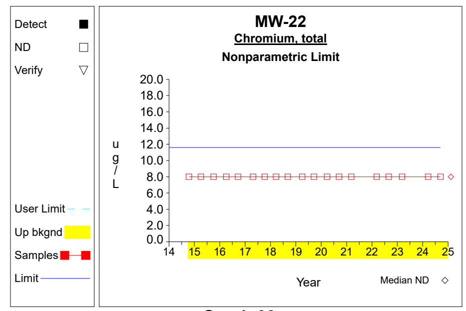

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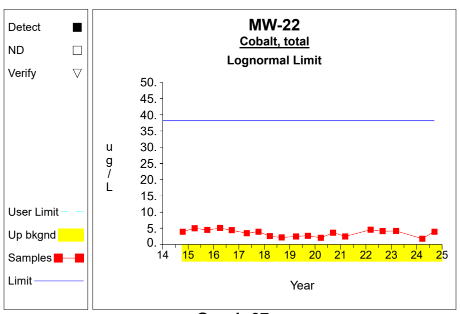

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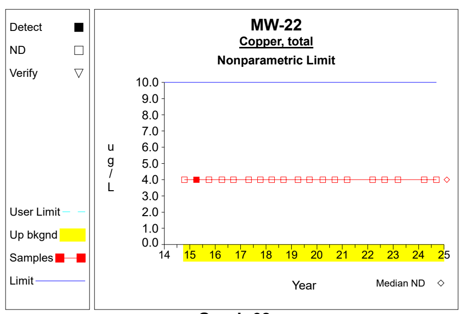

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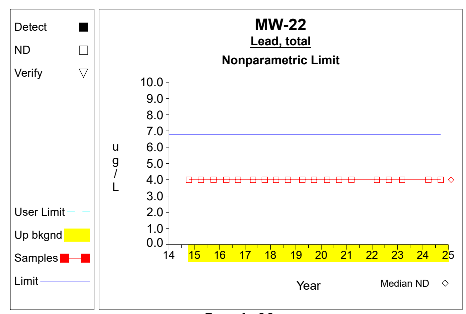

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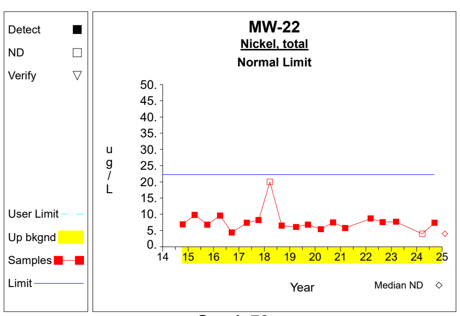

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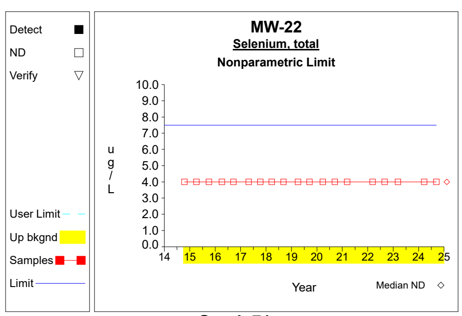

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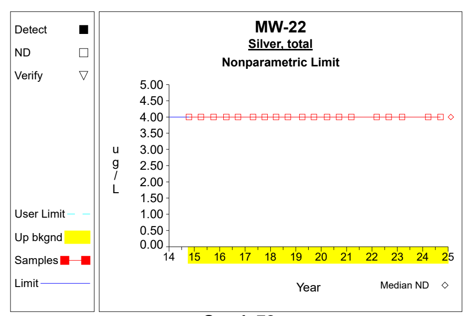

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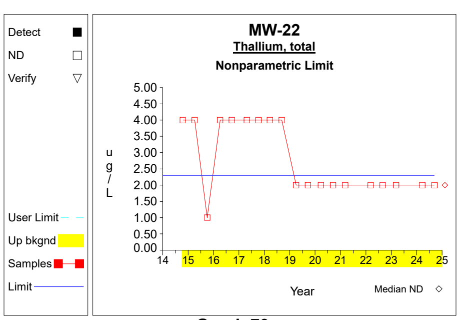

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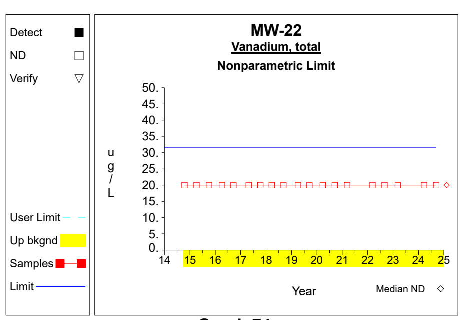

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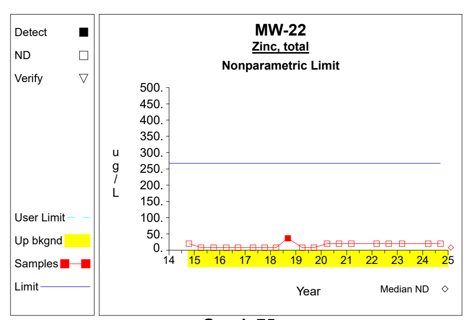

Graph 75

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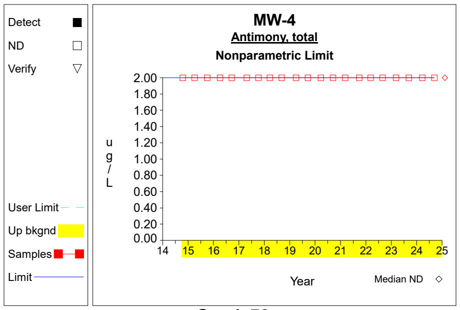
Up vs. Down Prediction Limits



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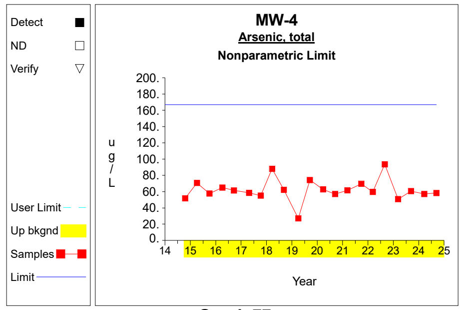

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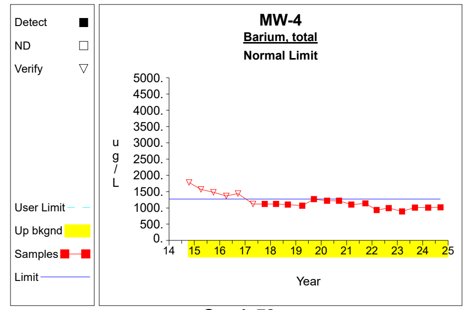

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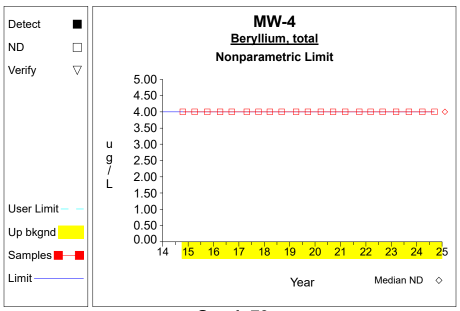

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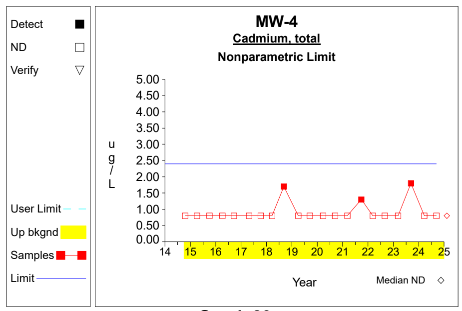

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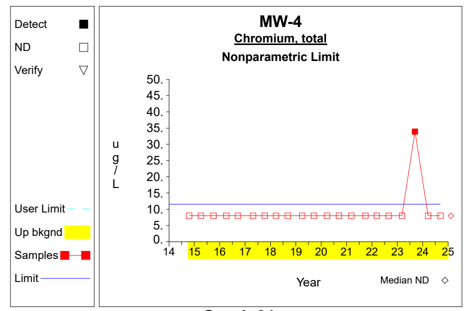

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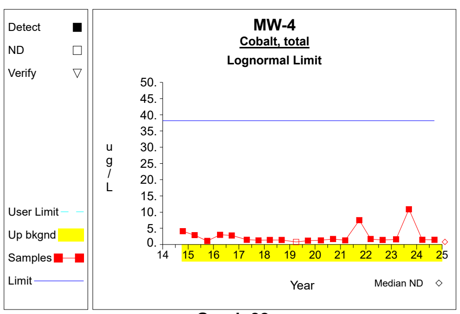

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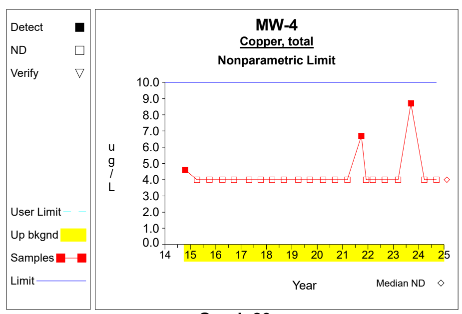

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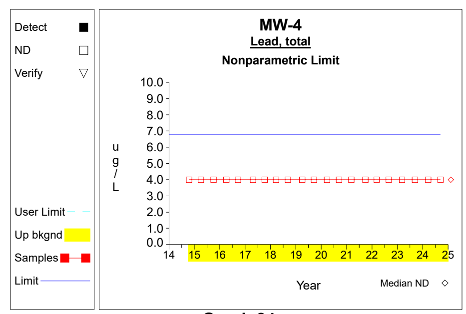

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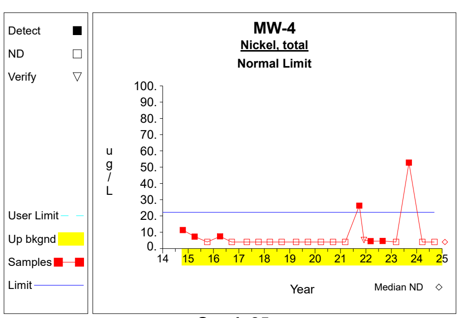

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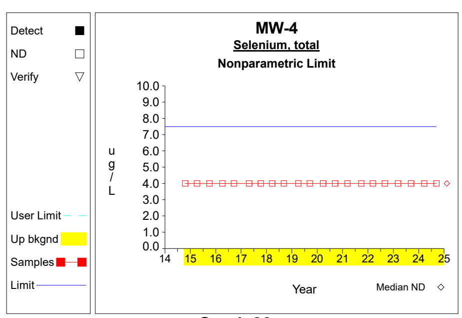
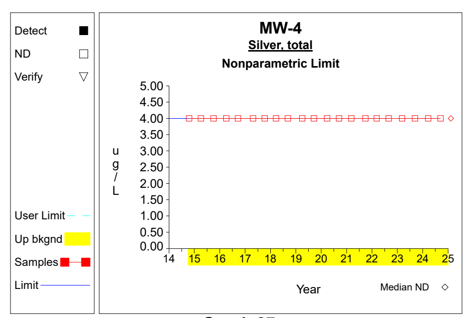


Graph 86



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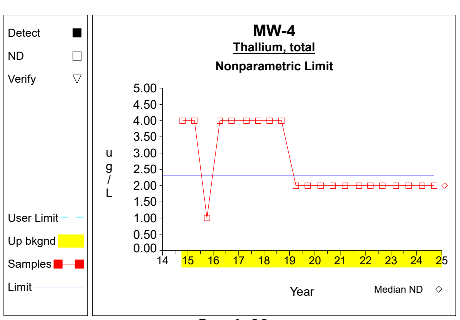

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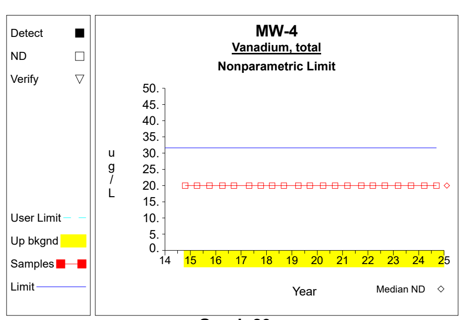

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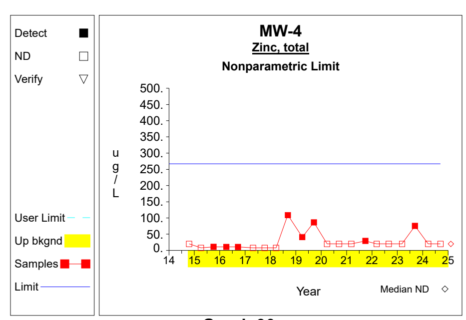

Graph 90

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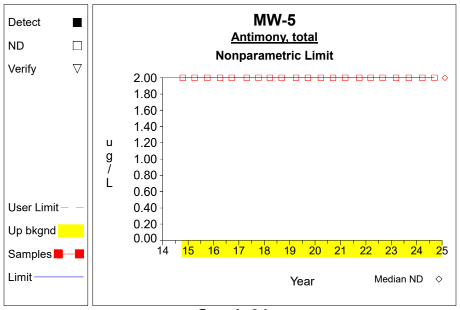
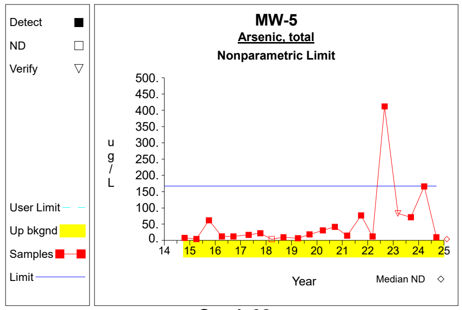
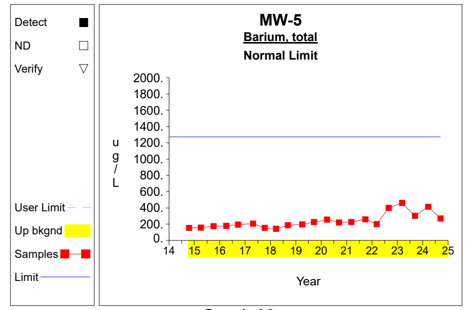
Up vs. Down Prediction Limits



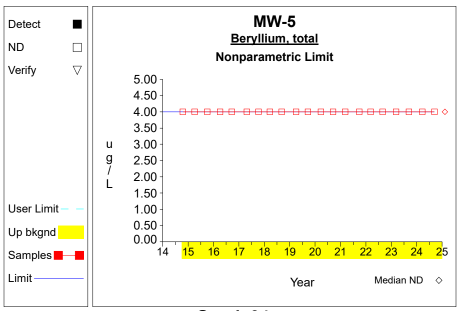
Graph 91



Graph 92



Graph 93



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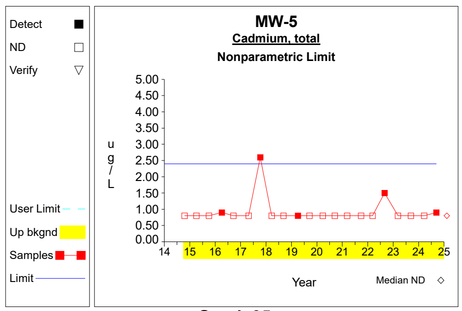
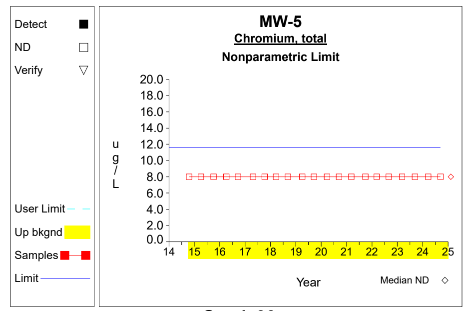


Graph 95



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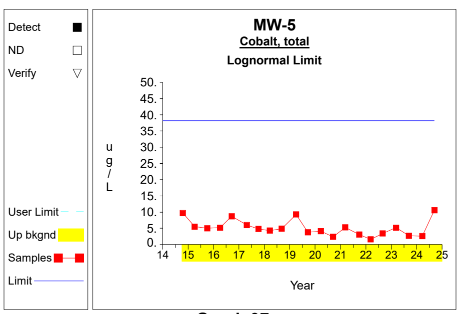
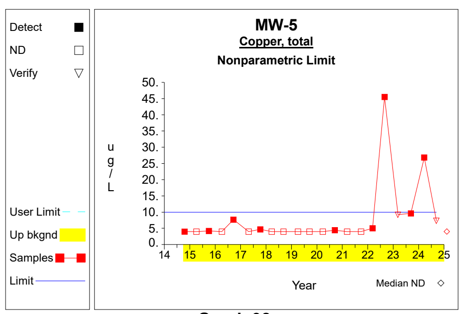


Graph 97



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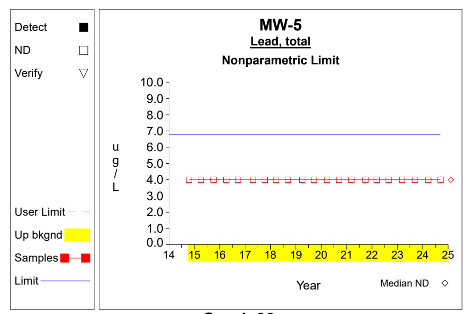

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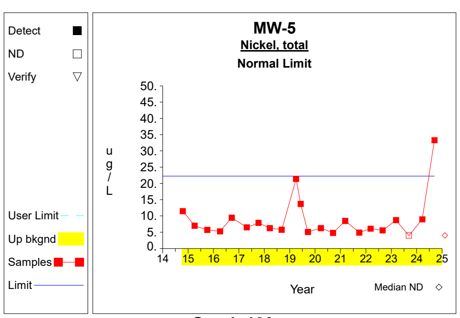
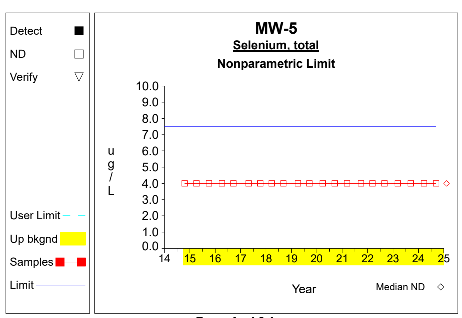
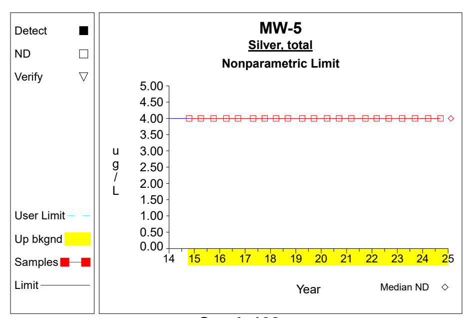


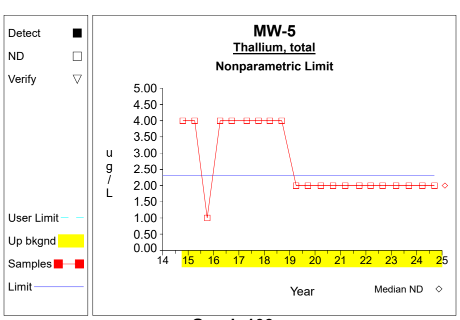
Graph 100



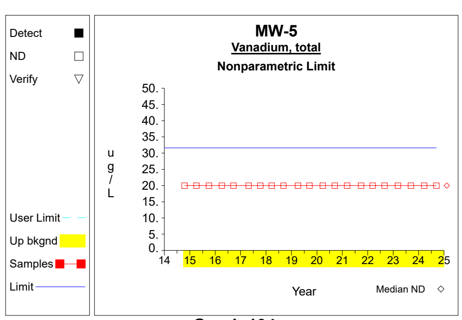
Graph 101



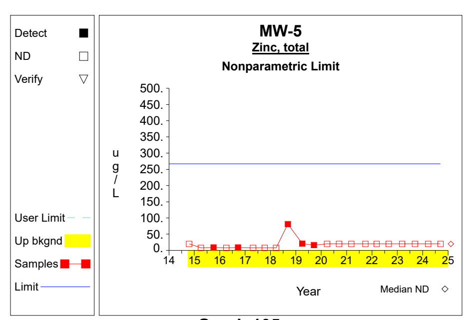
Graph 102



Graph 103

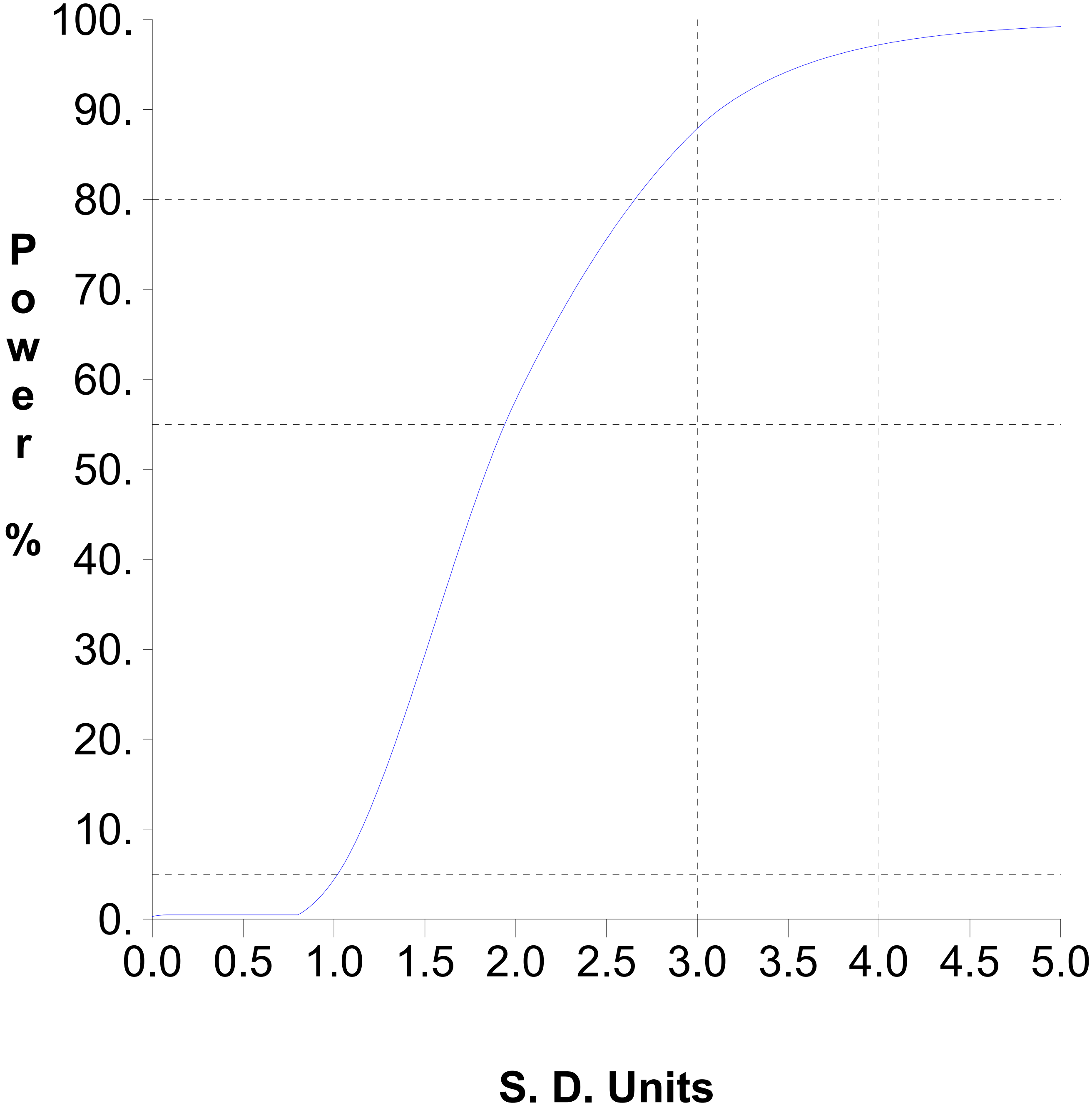


Graph 104



Graph 105

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



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

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

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

Step	Equation	Description
1	PL = max(X) = **167.0**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{46765.0} / \mathbf{110}$ $= \mathbf{425.136}$	Compute upgradient mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{3.38}\times\mathbf{10^7} - \mathbf{2.19}\times\mathbf{10^9}/\mathbf{110}) / (\mathbf{110}-1))^{1/2}$ $= \mathbf{357.722}$	Compute upgradient sd.
3	alpha $= \min[(1-.95^{1/\mathbf{K}})^{1/2}, .01]$ $= \min[(1-.95^{1/\mathbf{105}})^{1/2}, .01]$ $= \mathbf{0.01}$	Adjusted per comparison false positive rate. Pass initial or 1 resample.
4	$PL = \bar{\mathbf{X}} + \mathbf{tS}(1+1/\mathbf{N})^{1/2}$ $= \mathbf{425.136} + (\mathbf{2.361}*\mathbf{357.722})(1+1/\mathbf{110})^{1/2}$ $= \mathbf{1273.563}$	One-sided normal prediction limit (t is Student's t on N-1 degrees of freedom and 1-alpha confidence level).

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

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

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

Step	Equation	Description
1	PL = max(X) = **2.4**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

Step	Equation	Description
1	PL = max(X) = **11.6**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

Step	Equation	Description
1	$Y = \log_e(X)$	Transform to natural logarithmic scale.
2	$\bar{Y}_1 = \mathbf{sum[Y_1]} / \mathbf{N_1}$ $= \mathbf{118.646} / \mathbf{87}$ $= \mathbf{1.364}$	Compute mean of N_1 detected log transformed measurements.
3	$S_{Y_1} = ((\mathbf{sum[Y_1^2]}-\mathbf{sum[Y_1]}^2/\mathbf{N_1}) / (\mathbf{N_1}-1))^{½}$ $= ((\mathbf{251.271}-\mathbf{14076.767}/\mathbf{87}) / (\mathbf{87}-1))^{½}$ $= \mathbf{1.02}$	Compute sd of N_1 detected log transformed measurements.
4	$\bar{Y} = (1 - \mathbf{N_0}/\mathbf{N})\, \mathbf{\bar{Y}_1}$ $= (1 - \mathbf{19}/\mathbf{106})\, \mathbf{1.364}$ $= \mathbf{1.119}$	Use Aitchison's method to adjust mean for presence of nondetects (log scale).
5	$S_Y = [(1 - \mathbf{N_0}/\mathbf{N}) * \mathbf{S_{Y_1}}^2 +$ $(\mathbf{N_0}/\mathbf{N}) (1 - (\mathbf{N_0}-1)/(\mathbf{N}-1))\, \mathbf{\bar{Y}_1}^2]^{½}$ $= [(1 - \mathbf{19}/\mathbf{106}) * \mathbf{1.02}^2 +$ $(\mathbf{19}/\mathbf{106}) (1 - (\mathbf{19}-1)/(\mathbf{106}-1))\, \mathbf{1.364}^2]^{½}$ $= \mathbf{1.063}$	Use Aitchison's method to adjust sd for presence of nondetects (log scale).
6	$alpha = \min[(1-.95^{1/\mathbf{K}})^{½}, .01]$ $= \min[(1-.95^{1/\mathbf{105}})^{½}, .01]$ $= \mathbf{0.01}$	Adjusted per comparison false positive rate. Pass initial or 1 resample.
7	$PL = \exp[\mathbf{\bar{Y}} + \mathbf{tS_Y}(1+1/\mathbf{N})^{½}]$ $= \exp[\mathbf{1.119}$ $+ (\mathbf{2.362}*\mathbf{1.063})(1+1/\mathbf{106})^{½}]$ $= \mathbf{38.185}$	One-sided lognormal prediction limit (t is Student's t on N-1 degrees of freedom and 1-alpha confidence level).

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

Step	Equation	Description
1	$PL = \max(X)$ $= \mathbf{10.0}$	Compute nonparametric prediction limit as largest background measurement.
2	$Conf = \mathbf{0.99}$	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

Step	Equation	Description
1	PL = max(X) = **6.8**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

Step	Equation	Description
1	$\bar{X}_1 = \mathbf{sum[X_1]} / \mathbf{N_1}$ $= \mathbf{866.2} / \mathbf{83}$ $= \mathbf{10.436}$	Compute mean of N_1 detected measurements.
2	$S_1 = ((\mathbf{sum[X_1^2]} - \mathbf{sum[X_1]}^2/\mathbf{N_1}) / (\mathbf{N_1}-1))^{1/2}$ $= ((\mathbf{10775.1}-\mathbf{750302.44}/\mathbf{83}) / (\mathbf{83}-1))^{1/2}$ $= \mathbf{4.6}$	Compute sd of N_1 detected measurements.
3	$\bar{X} = (1 - \mathbf{N_0}/\mathbf{N})\, \mathbf{\bar{X}_1}$ $= (1 - \mathbf{24}/\mathbf{107})\, \mathbf{10.436}$ $= \mathbf{8.095}$	Use Aitchison's method to adjust mean for presence of nondetects.
4	$S = [(1 - \mathbf{N_0}/\mathbf{N}) * \mathbf{S_1}^2 + (\mathbf{N_0}/\mathbf{N}) (1 - (\mathbf{N_0}-1)/(\mathbf{N}-1))\, \mathbf{\bar{X}_1}^2]^{1/2}$ $= [(1 - \mathbf{24}/\mathbf{107}) * \mathbf{4.6}^2 + (\mathbf{24}/\mathbf{107}) (1 - (\mathbf{24}-1)/(\mathbf{107}-1))\, \mathbf{10.436}^2]^{1/2}$ $= \mathbf{5.962}$	Use Aitchison's method to adjust sd for presence of nondetects.
5	$\text{alpha} = \min[(1-.95^{1/\mathbf{K}})^{1/2}, .01]$ $= \min[(1-.95^{1/\mathbf{105}})^{1/2}, .01]$ $= \mathbf{0.01}$	Adjusted per comparison false positive rate. Pass initial or 1 resample.
6	$PL = \mathbf{\bar{X}} + \mathbf{tS}(1+1/\mathbf{N})^{1/2}$ $= \mathbf{8.095} + (\mathbf{2.362}*\mathbf{5.962})(1+1/\mathbf{107})^{1/2}$ $= \mathbf{22.243}$	One-sided normal prediction limit (t is Student's t on N-1 degrees of freedom and 1-alpha confidence level).

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

Step	Equation	Description
1	PL = max(X) = **7.5**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

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

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

Step	Equation	Description
1	PL = max(X) = **2.3**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

Step	Equation	Description
1	PL = max(X) = **31.6**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

Step	Equation	Description
1	PL = max(X) = **267.0**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Attachment C

Assessment Statistics for Verified Trace Metal Exceedances

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-12	4	7.825	3.221	1.176	4.036	11.614	10.000		
Barium, total	ug/L	MW-12	4	342.250	73.622	1.176	255.649	428.851	2000.000		
Cadmium, total	ug/L	MW-12	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-12	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-12	4	2.675	1.500	1.176	0.911	4.439	2.100		
Copper, total	ug/L	MW-12	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-12	4	5.100	2.660	1.176	1.972	8.228	100.000		
Arsenic, total	ug/L	MW-15R	4	18.050	3.616	1.176	13.796	22.304	10.000	dec	**
Barium, total	ug/L	MW-15R	4	349.250	32.715	1.176	310.768	387.732	2000.000	dec	
Cadmium, total	ug/L	MW-15R	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-15R	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-15R	4	2.775	0.932	1.176	1.678	3.872	2.100		
Copper, total	ug/L	MW-15R	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-15R	4	3.075	1.242	1.176	1.614	4.536	100.000		
Arsenic, total	ug/L	MW-17	4	2.000	0.000	1.176	2.000	2.000	10.000		
Barium, total	ug/L	MW-17	4	153.250	6.131	1.176	146.039	160.461	2000.000		
Cadmium, total	ug/L	MW-17	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-17	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-17	4	4.475	5.851	1.176	0.000	11.358	2.100		
Copper, total	ug/L	MW-17	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-17	4	6.625	1.791	1.176	4.518	8.732	100.000		
Arsenic, total	ug/L	MW-18	4	17.500	1.192	1.176	16.098	18.902	10.000	dec	**
Barium, total	ug/L	MW-18	4	663.750	48.300	1.176	606.935	720.565	2000.000	dec	
Cadmium, total	ug/L	MW-18	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-18	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-18	4	9.625	2.843	1.176	6.281	12.969	2.100		**
Copper, total	ug/L	MW-18	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-18	4	17.875	4.938	1.176	12.067	23.683	100.000		
Arsenic, total	ug/L	MW-19A	4	2.500	1.000	1.176	1.324	3.676	10.000		
Barium, total	ug/L	MW-19A	4	181.200	293.880	1.176	0.000	526.888	2000.000		
Cadmium, total	ug/L	MW-19A	4	2.700	4.210	1.176	0.000	7.652	5.000		
Chromium, total	ug/L	MW-19A	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-19A	4	2.025	3.250	1.176	0.000	5.848	2.100		
Copper, total	ug/L	MW-19A	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-19A	4	9.150	1.982	1.176	6.818	11.482	100.000		
Arsenic, total	ug/L	MW-20R	4	45.325	22.106	1.176	19.322	71.328	10.000		**
Barium, total	ug/L	MW-20R	4	681.750	96.365	1.176	568.397	795.103	2000.000		
Cadmium, total	ug/L	MW-20R	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-20R	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-20R	4	0.475	0.096	1.176	0.362	0.588	2.100		
Copper, total	ug/L	MW-20R	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-20R	4	2.000	0.000	1.176	2.000	2.000	100.000		
Arsenic, total	ug/L	MW-21	4	10.250	13.666	1.176	0.000	26.325	10.000		
Barium, total	ug/L	MW-21	4	692.750	488.694	1.176	117.905	1267.595	2000.000		
Cadmium, total	ug/L	MW-21	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-21	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-21	4	0.675	0.320	1.176	0.298	1.052	2.100		
Copper, total	ug/L	MW-21	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-21	4	5.650	2.762	1.176	2.401	8.899	100.000		
Arsenic, total	ug/L	MW-22	4	63.600	24.454	1.176	34.835	92.365	10.000		**
Barium, total	ug/L	MW-22	4	382.750	58.858	1.176	313.516	451.984	2000.000		
Cadmium, total	ug/L	MW-22	4	0.550	0.300	1.176	0.197	0.903	5.000		
Chromium, total	ug/L	MW-22	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-22	4	3.525	1.153	1.176	2.169	4.881	2.100		**
Copper, total	ug/L	MW-22	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-22	4	6.175	2.786	1.176	2.898	9.452	100.000		
Arsenic, total	ug/L	MW-24	4	24.425	22.319	1.176	0.000	50.678	10.000		
Barium, total	ug/L	MW-24	4	465.250	58.369	1.176	396.591	533.909	2000.000	dec	
Cadmium, total	ug/L	MW-24	4	0.525	0.250	1.176	0.231	0.819	5.000		
Chromium, total	ug/L	MW-24	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-24	4	0.550	0.473	1.176	0.000	1.106	2.100	dec	
Copper, total	ug/L	MW-24	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-24	4	2.000	0.000	1.176	2.000	2.000	100.000		
Arsenic, total	ug/L	MW-25	4	9.025	12.316	1.176	0.000	23.512	10.000		
Barium, total	ug/L	MW-25	4	217.250	198.784	1.176	0.000	451.077	2000.000		
Cadmium, total	ug/L	MW-25	1								*
Chromium, total	ug/L	MW-25	1								*
Cobalt, total	ug/L	MW-25	1								*
Copper, total	ug/L	MW-25	1								*
Nickel, total	ug/L	MW-25	1								*
Arsenic, total	ug/L	MW-26	4	35.275	44.716	1.176	0.000	87.874	10.000		
Barium, total	ug/L	MW-26	4	526.275	502.054	1.176	0.000	1116.835	2000.000		

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

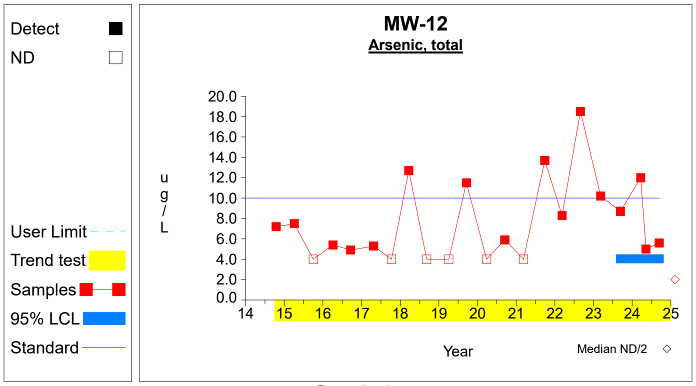
Table 1

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

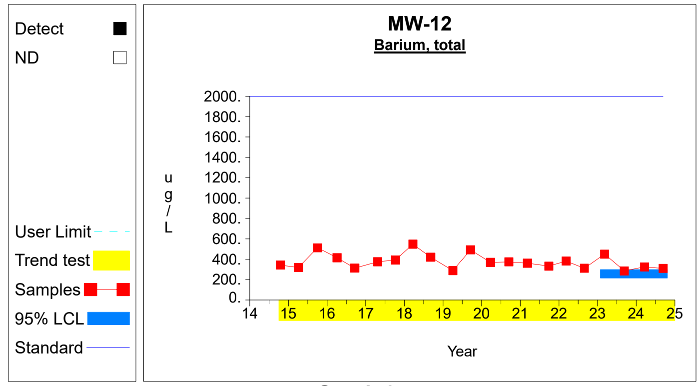
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Cadmium, total	ug/L	MW-26	1								*
Chromium, total	ug/L	MW-26	1								*
Cobalt, total	ug/L	MW-26	1								*
Copper, total	ug/L	MW-26	1								*
Nickel, total	ug/L	MW-26	1								*
Arsenic, total	ug/L	MW-4	4	56.775	4.240	1.176	51.788	61.762	10.000		**
Barium, total	ug/L	MW-4	4	982.500	61.847	1.176	909.751	1055.249	2000.000	dec	
Cadmium, total	ug/L	MW-4	4	0.750	0.700	1.176	0.000	1.573	5.000		
Chromium, total	ug/L	MW-4	4	11.475	14.950	1.176	0.000	29.061	100.000		
Cobalt, total	ug/L	MW-4	4	3.875	4.684	1.176	0.000	9.384	2.100		
Copper, total	ug/L	MW-4	4	3.675	3.350	1.176	0.000	7.616	1300.000		
Nickel, total	ug/L	MW-4	4	14.700	25.400	1.176	0.000	44.578	100.000		
Arsenic, total	ug/L	MW-5	4	82.450	64.297	1.176	6.818	158.082	10.000		
Barium, total	ug/L	MW-5	4	361.500	90.666	1.176	254.851	468.149	2000.000	inc	
Cadmium, total	ug/L	MW-5	4	0.525	0.250	1.176	0.231	0.819	5.000		
Chromium, total	ug/L	MW-5	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-5	4	5.275	3.748	1.176	0.866	9.684	2.100		
Copper, total	ug/L	MW-5	4	13.225	9.105	1.176	2.514	23.936	1300.000		
Nickel, total	ug/L	MW-5	4	13.250	13.752	1.176	0.000	29.426	100.000		
Arsenic, total	ug/L	MW-9	4	5.125	2.468	1.176	2.222	8.028	10.000		
Barium, total	ug/L	MW-9	4	289.250	15.196	1.176	271.375	307.125	2000.000		
Cadmium, total	ug/L	MW-9	4	0.400	0.000	1.176	0.400	0.400	5.000		
Chromium, total	ug/L	MW-9	4	4.000	0.000	1.176	4.000	4.000	100.000		
Cobalt, total	ug/L	MW-9	4	4.775	0.377	1.176	4.331	5.219	2.100		**
Copper, total	ug/L	MW-9	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-9	4	9.625	0.350	1.176	9.213	10.037	100.000		

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

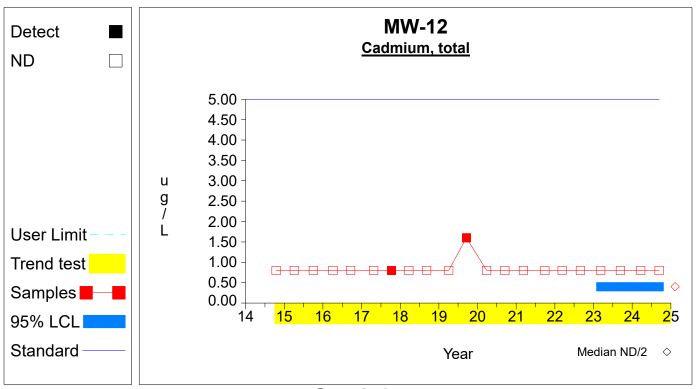
Confidence Limits (Assessment)



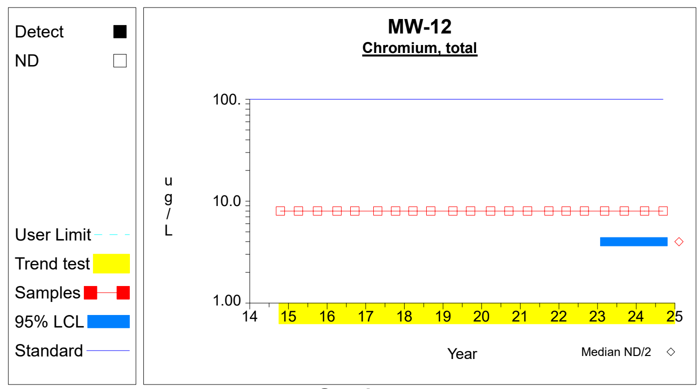
Graph 1



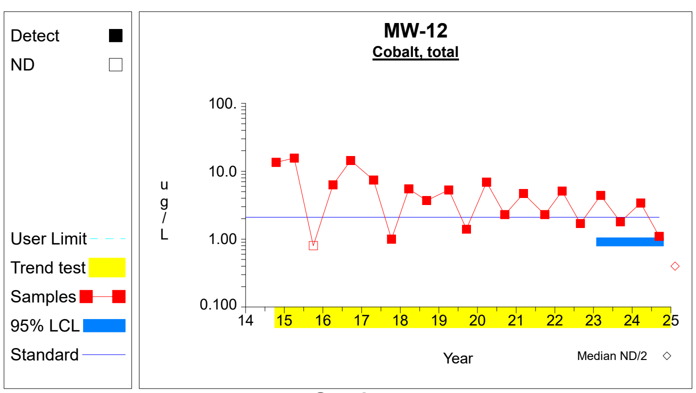
Graph 2



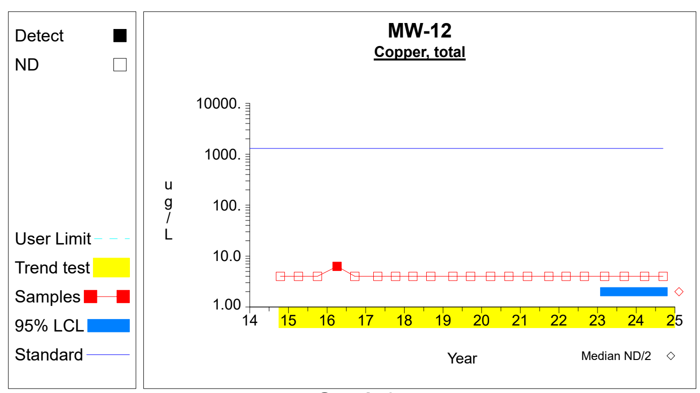
Graph 3



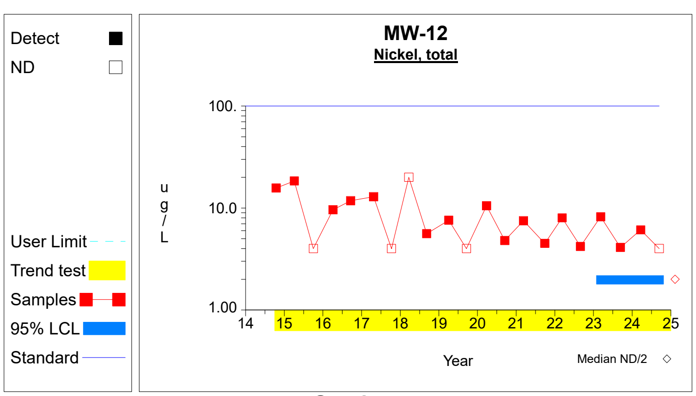
Graph 4



Graph 5

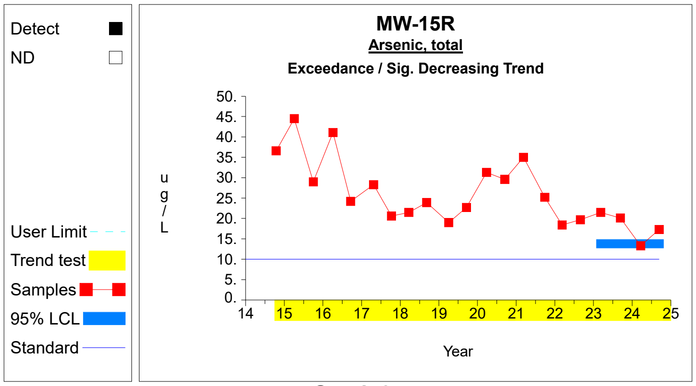


Graph 6

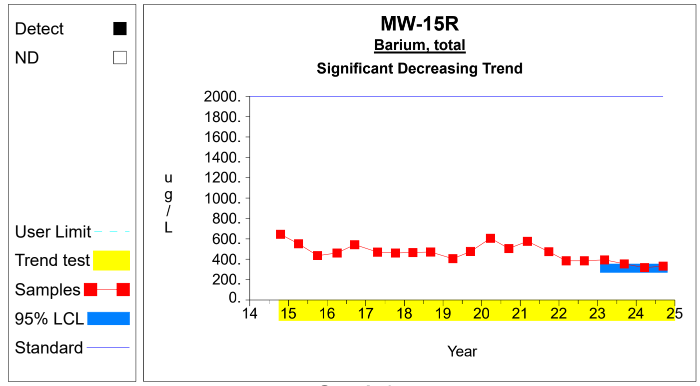


Graph 7

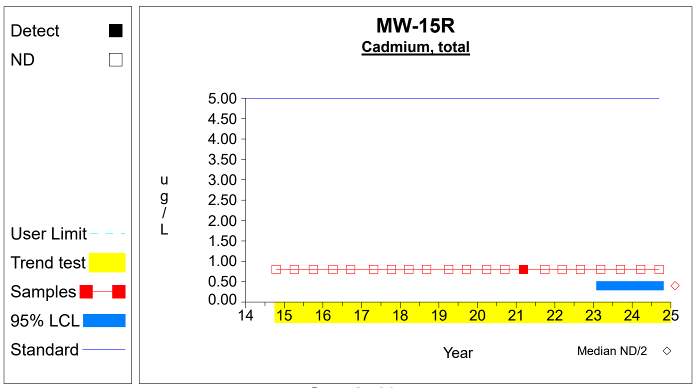
Confidence Limits (Assessment)



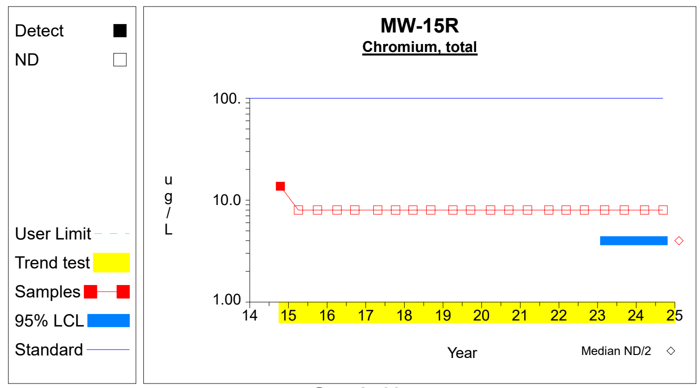
Graph 8



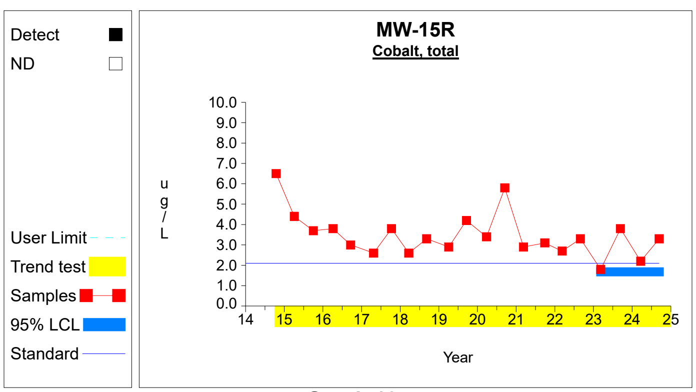
Graph 9



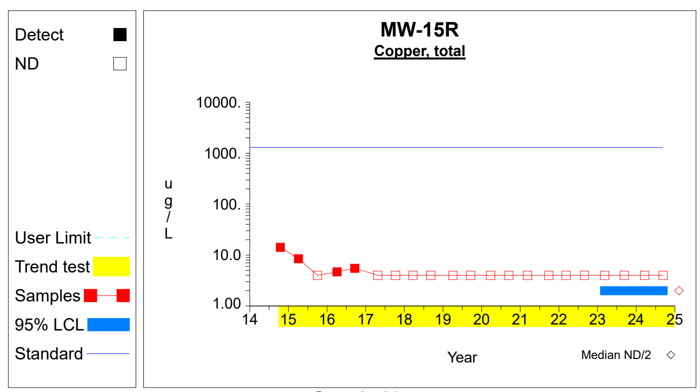
Graph 10



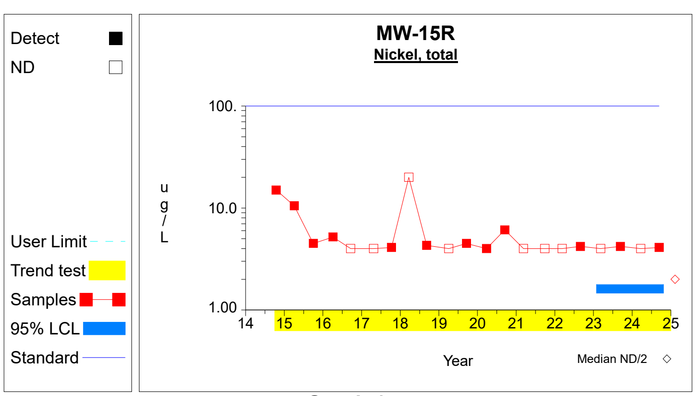
Graph 11



Graph 12

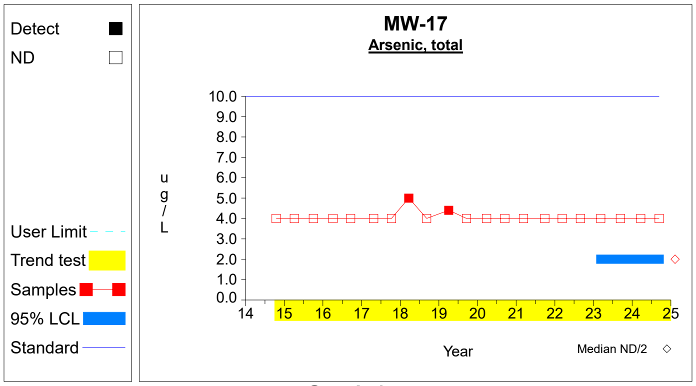


Graph 13

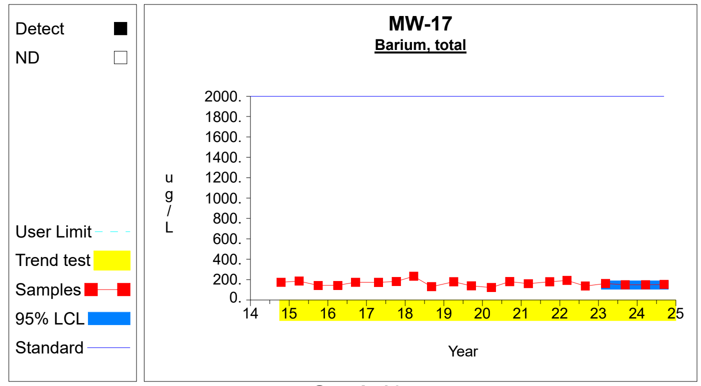


Graph 14

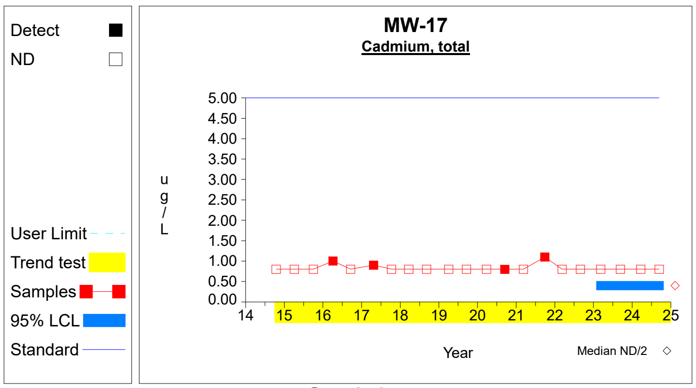
Confidence Limits (Assessment)



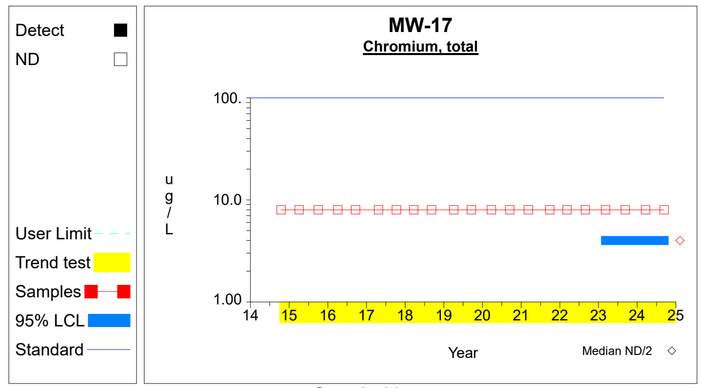
Graph 15



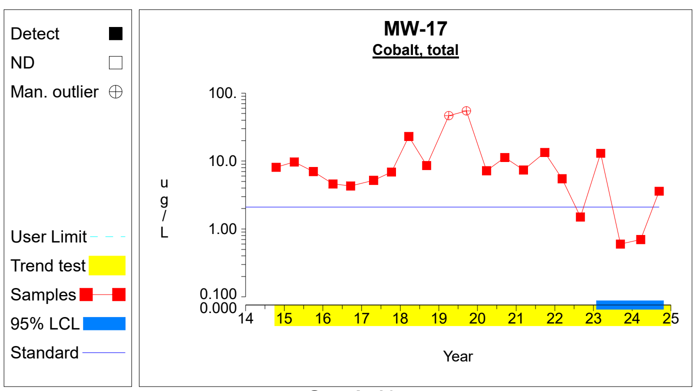
Graph 16



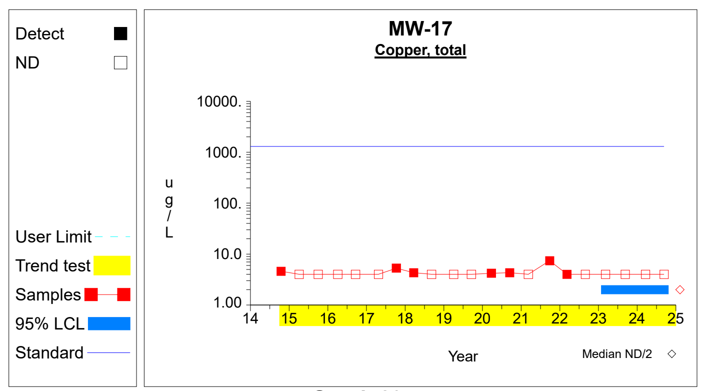
Graph 17



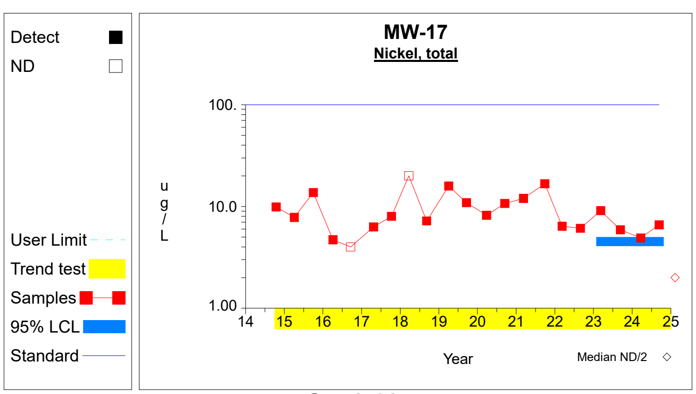
Graph 18



Graph 19

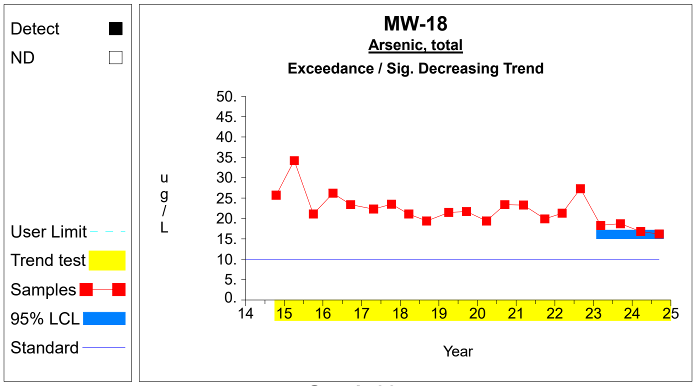


Graph 20

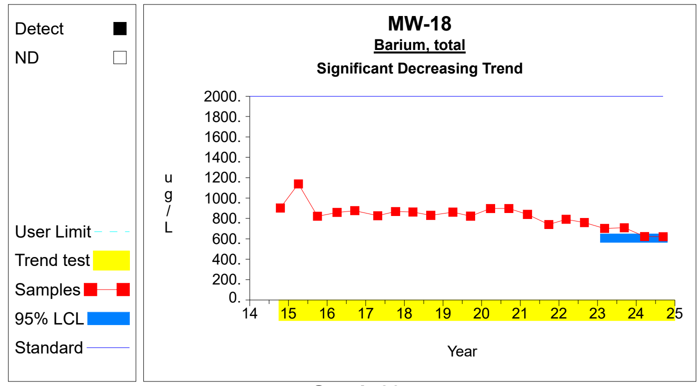


Graph 21

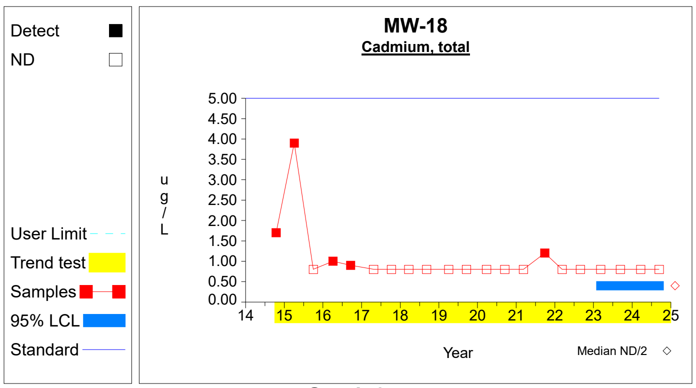
Confidence Limits (Assessment)



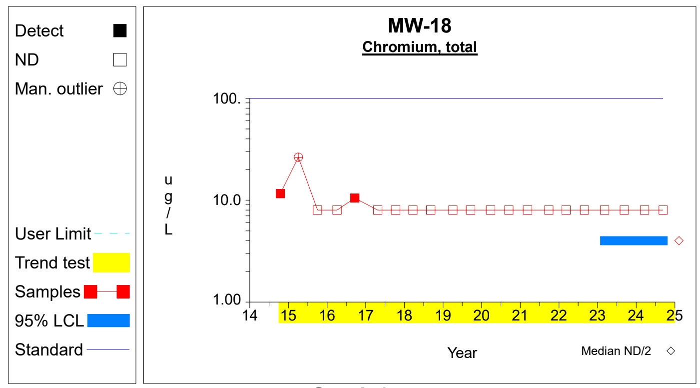
Graph 22



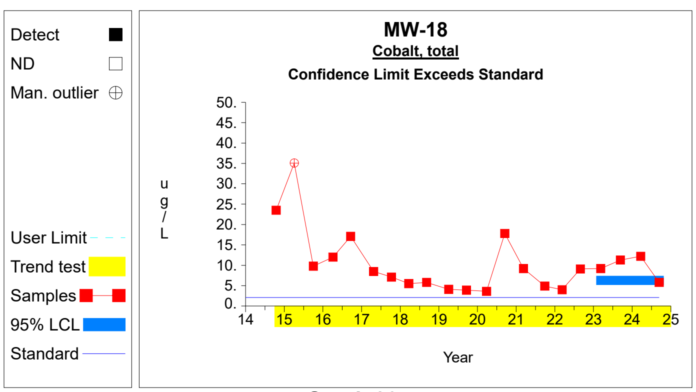
Graph 23



Graph 24



Graph 25



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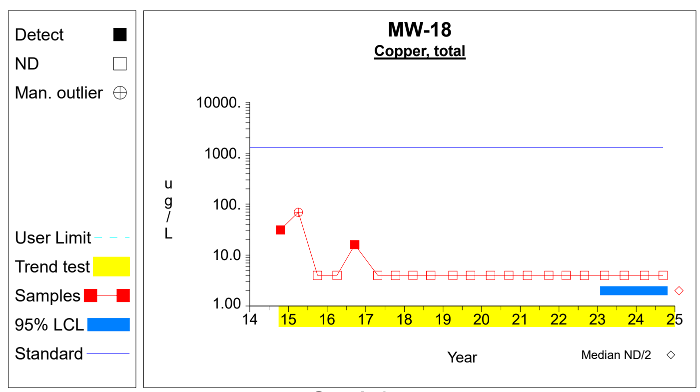
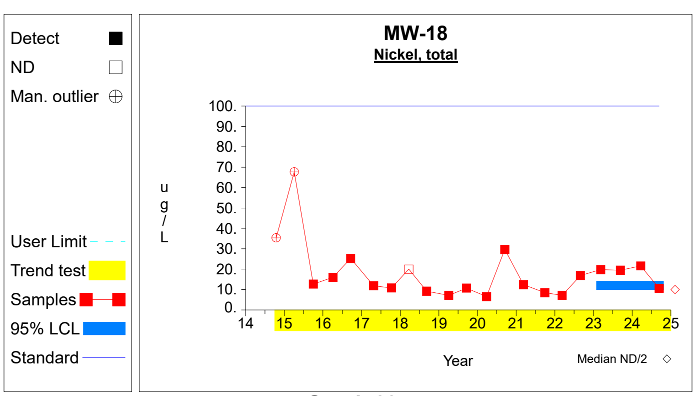
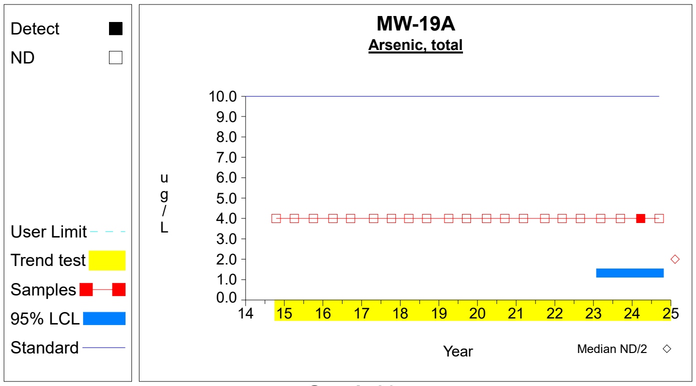


Graph 27

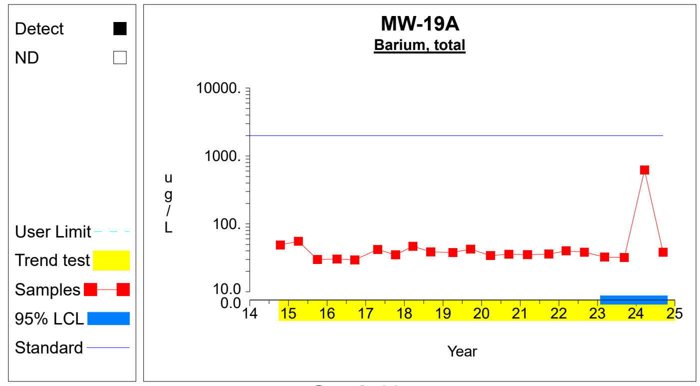


Graph 28

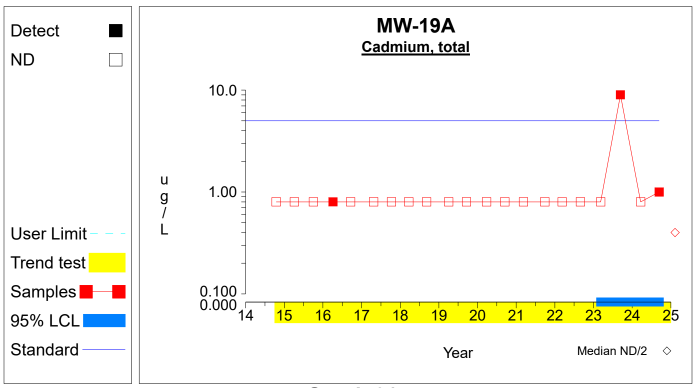
Confidence Limits (Assessment)



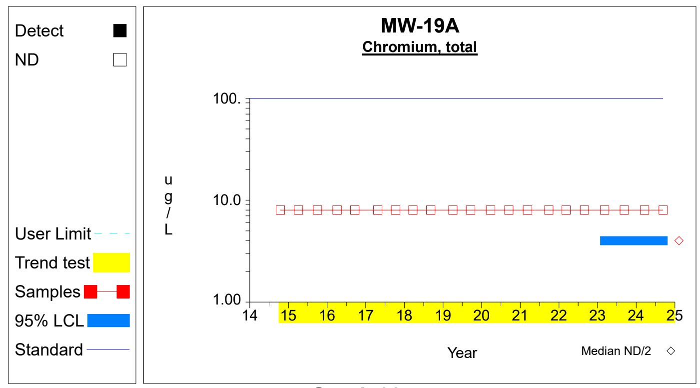
Graph 29



Graph 30



Graph 31



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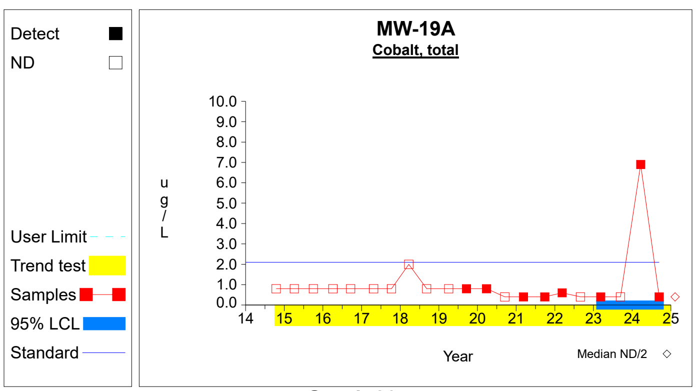
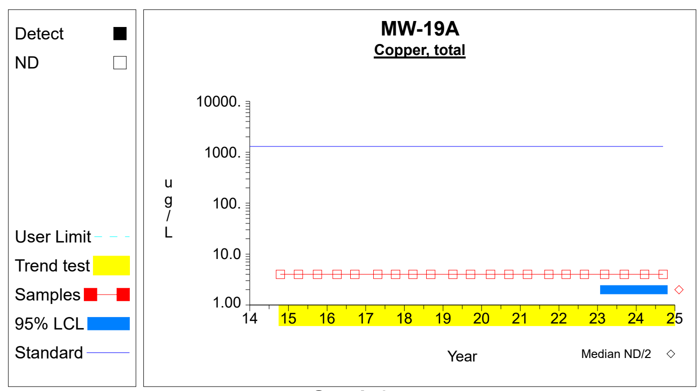
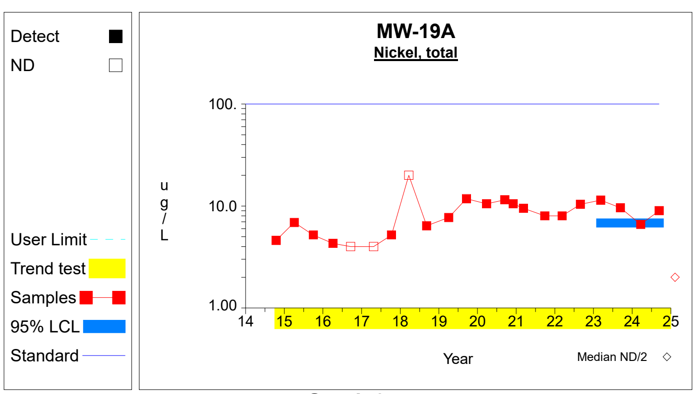


Graph 33

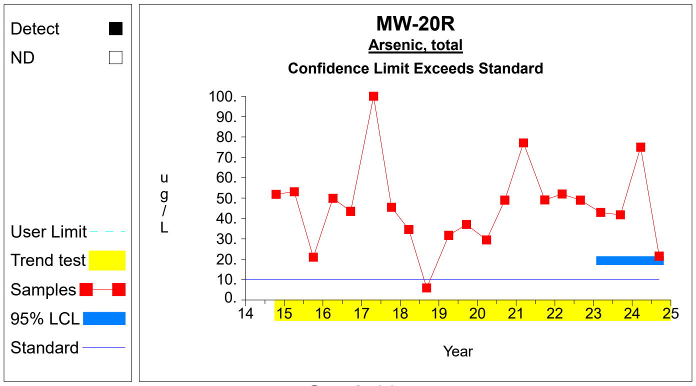


Graph 34

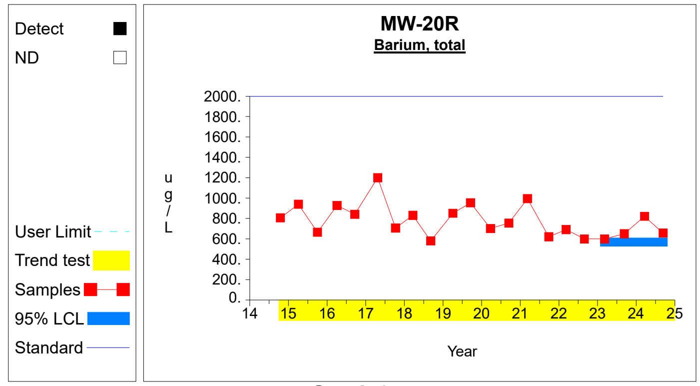


Graph 35

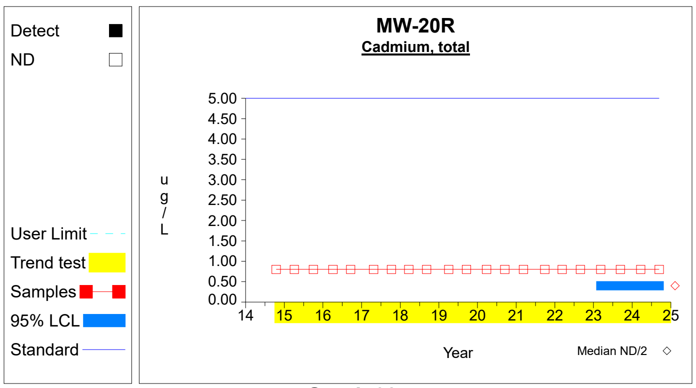
Confidence Limits (Assessment)



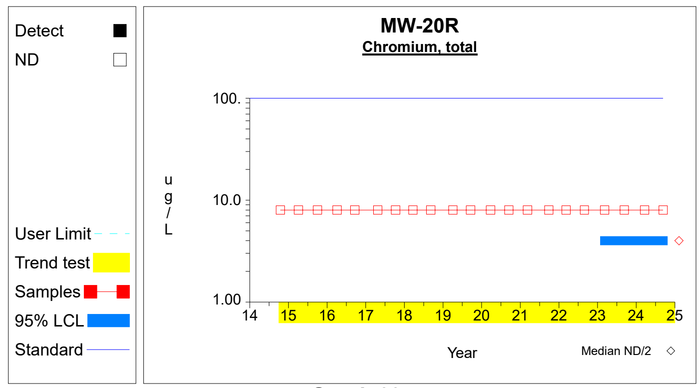
Graph 36



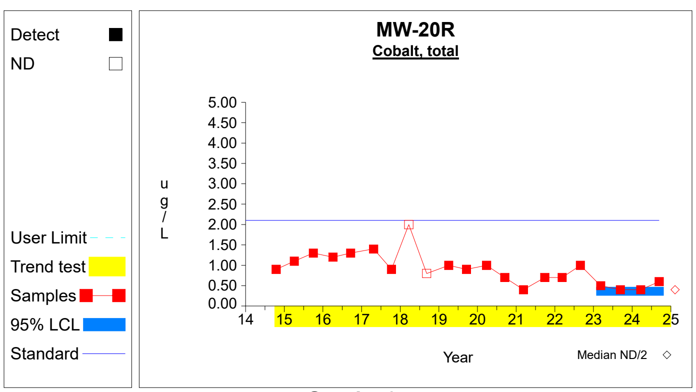
Graph 37



Graph 38



Graph 39



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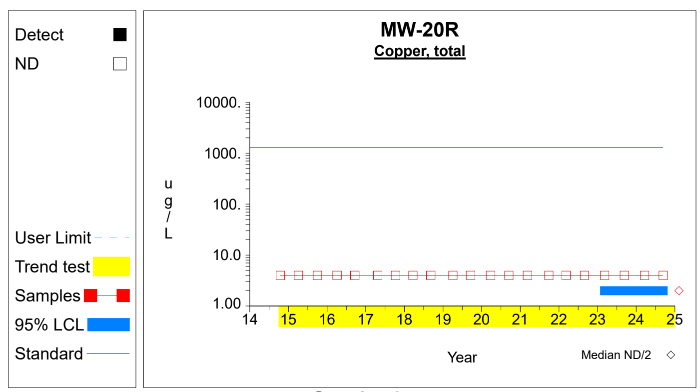

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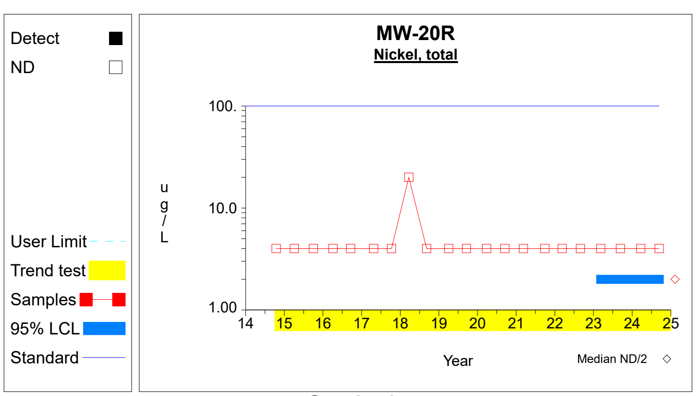
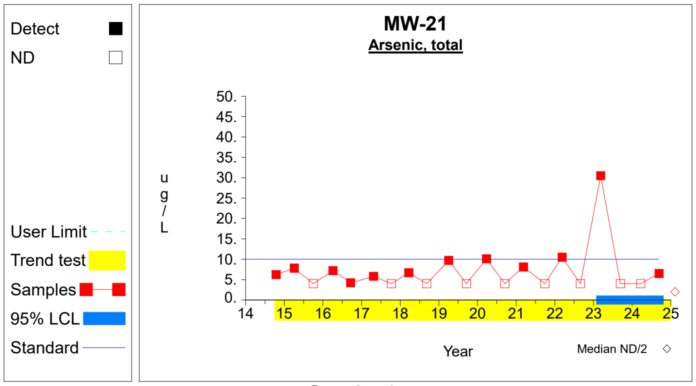
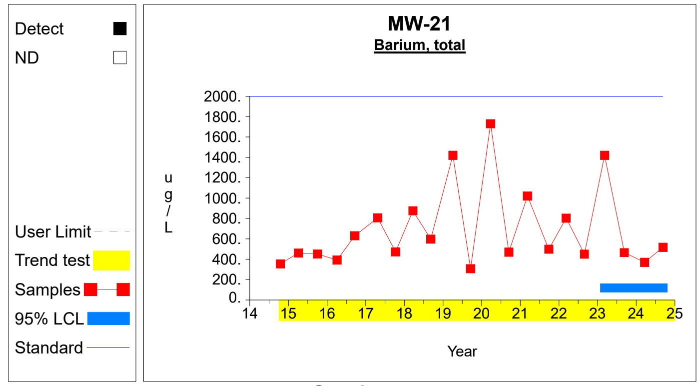


Graph 42

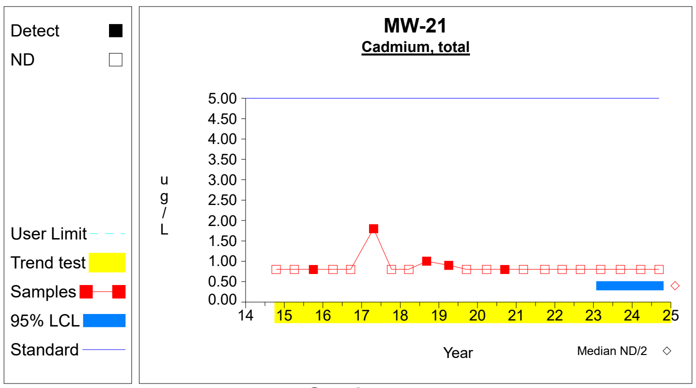
Confidence Limits (Assessment)



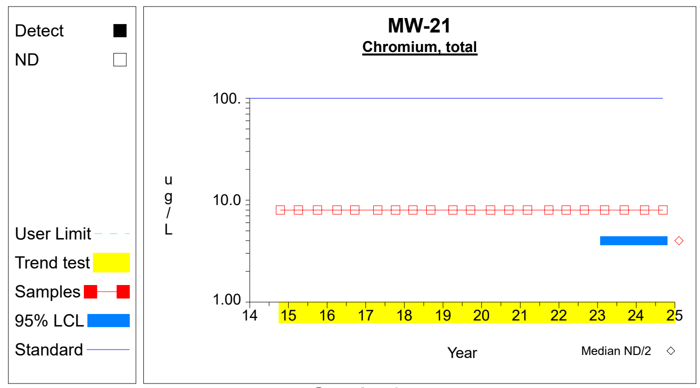
Graph 43



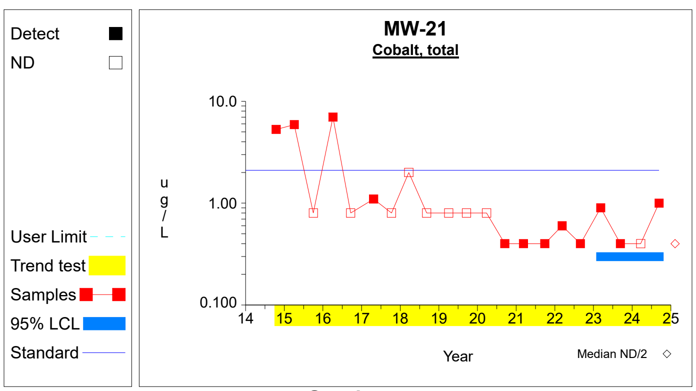
Graph 44



Graph 45



Graph 46



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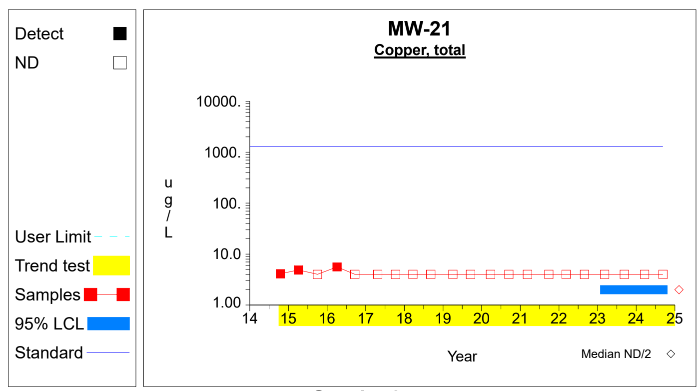
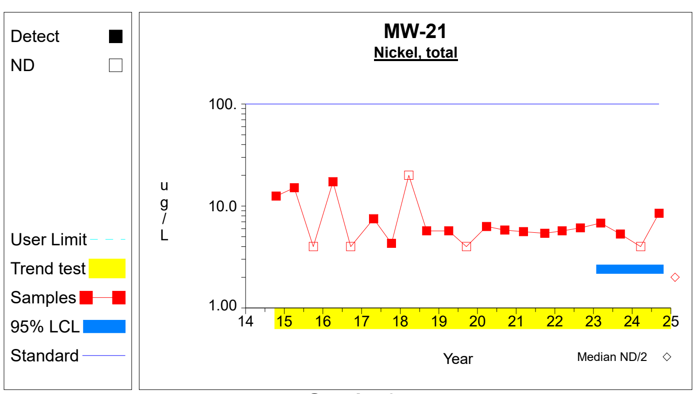
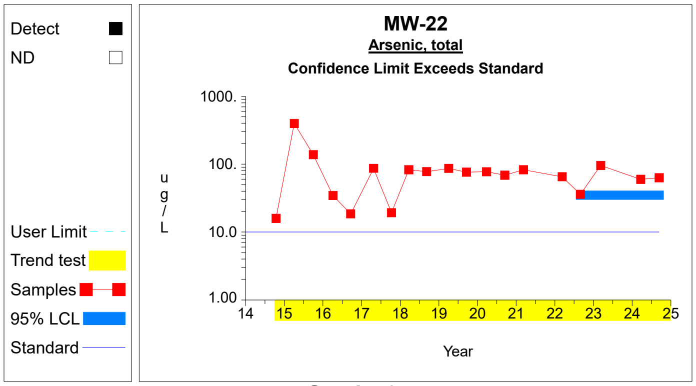


Graph 48

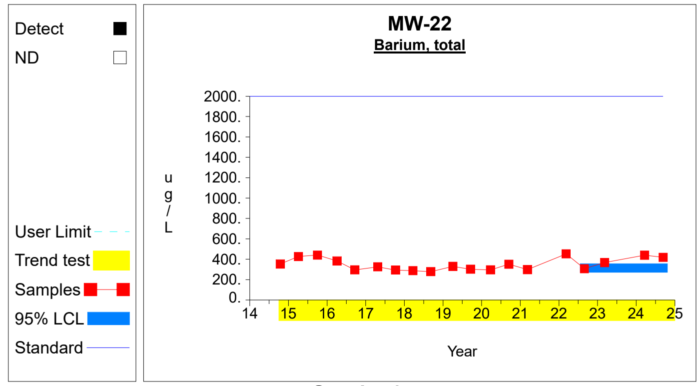


Graph 49

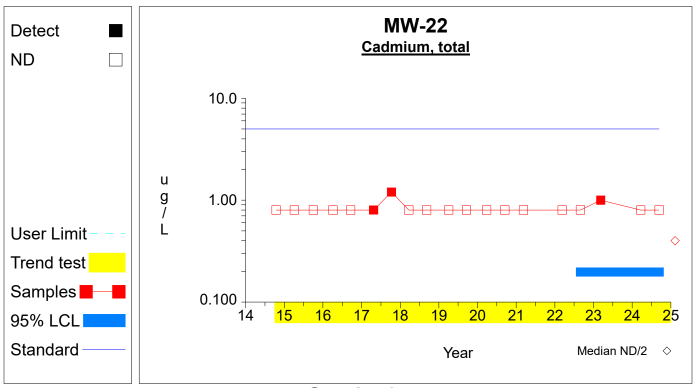
Confidence Limits (Assessment)



Graph 50



Graph 51



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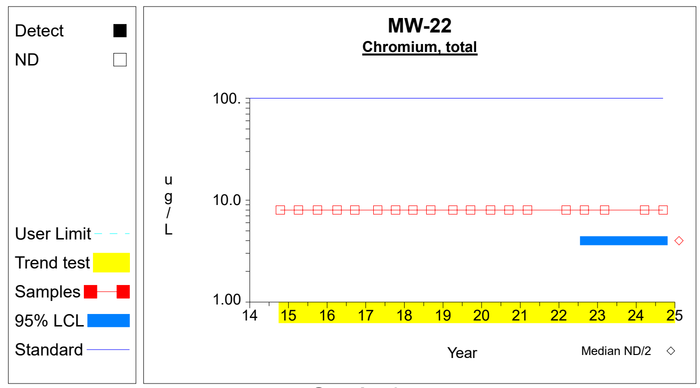

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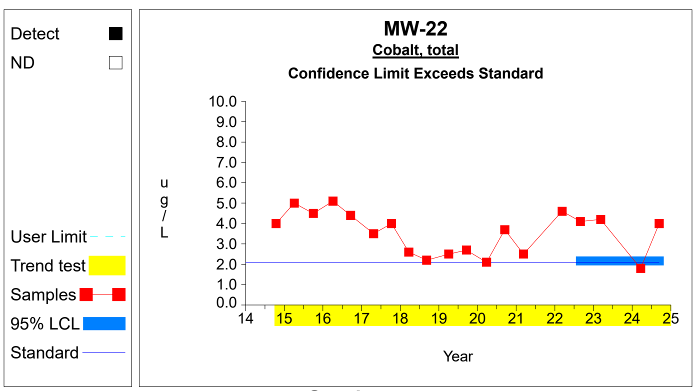

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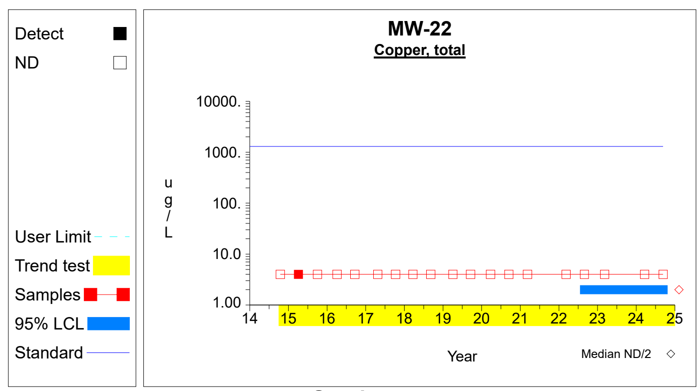
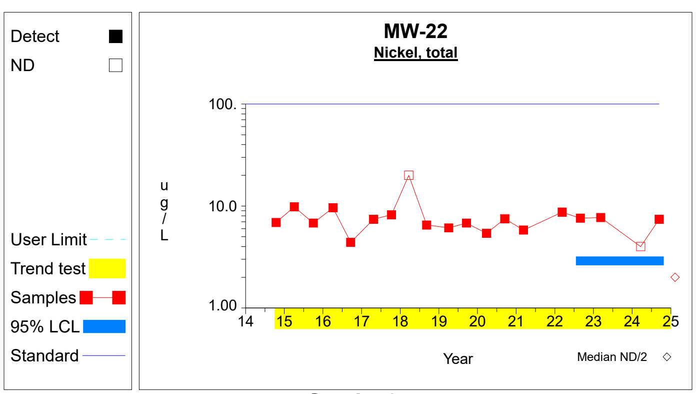
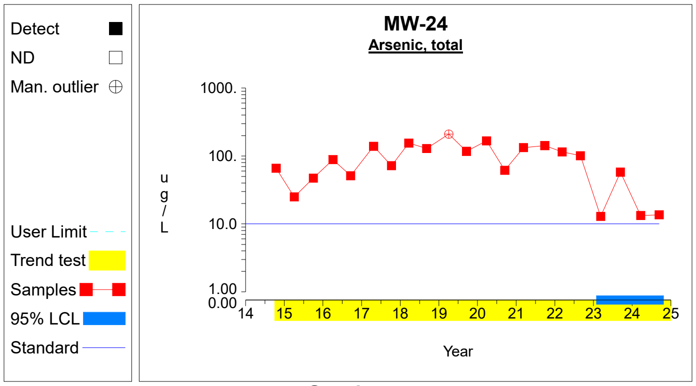


Graph 55



Graph 56

Confidence Limits (Assessment)



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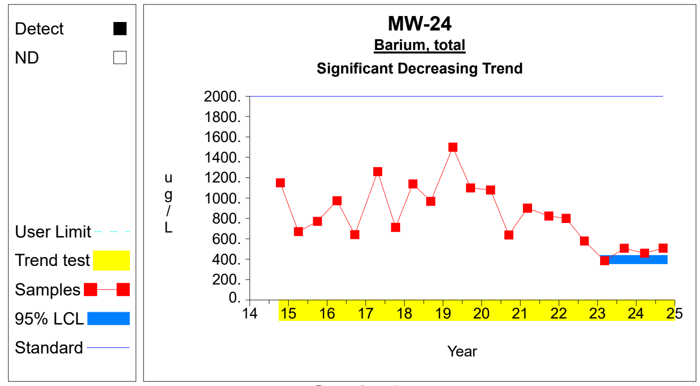
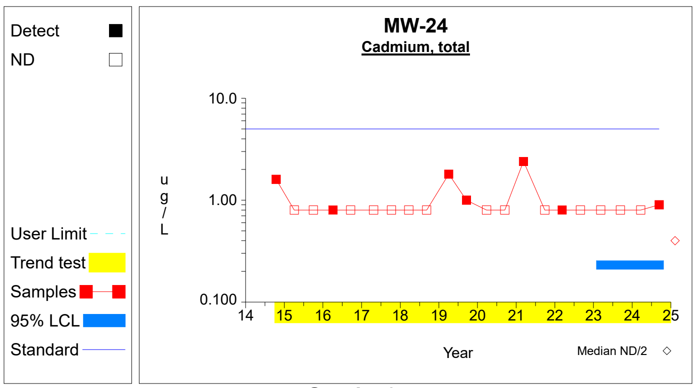
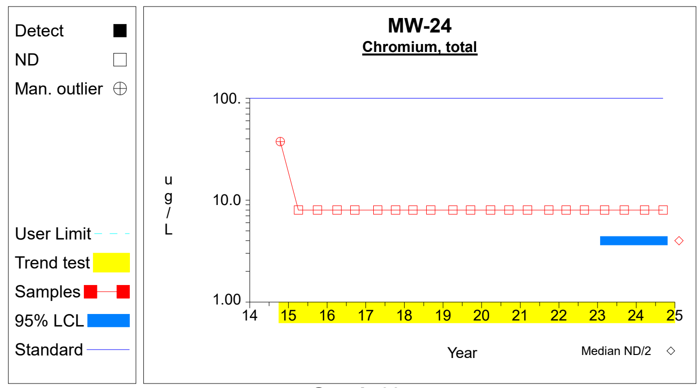


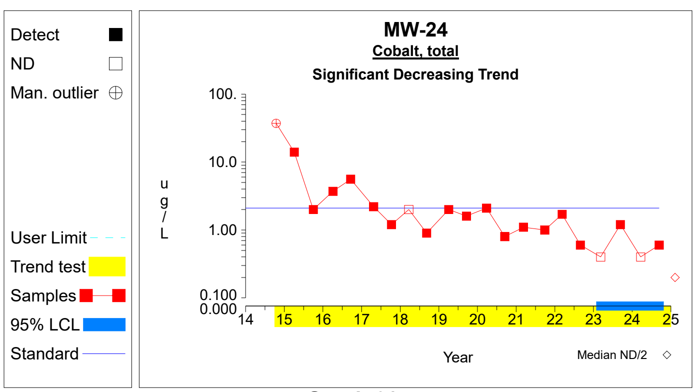
Graph 58



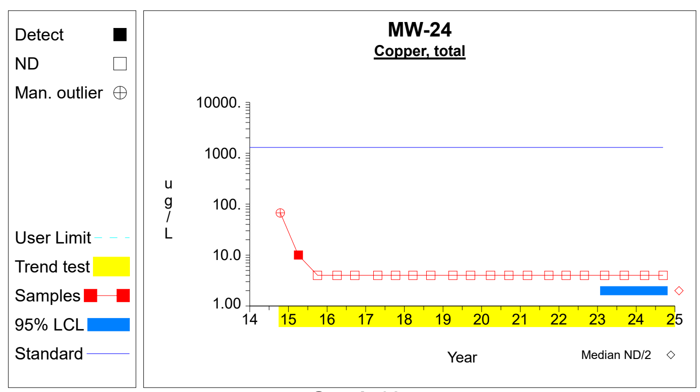
Graph 59



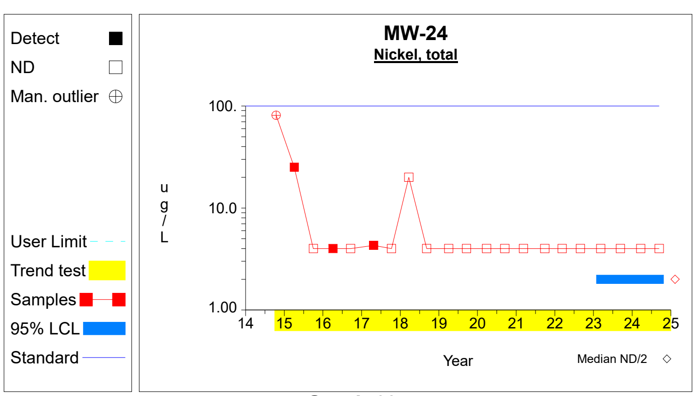
Graph 60



Graph 61

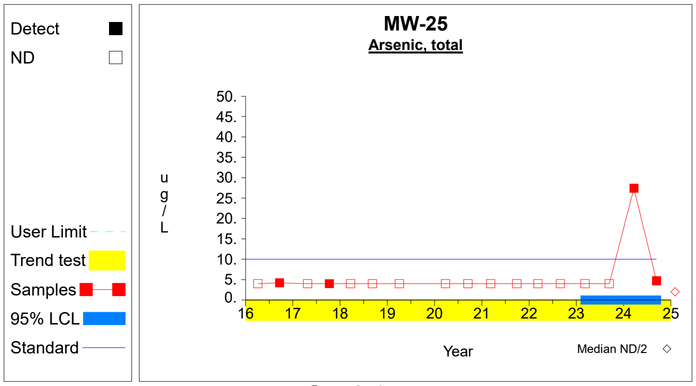


Graph 62

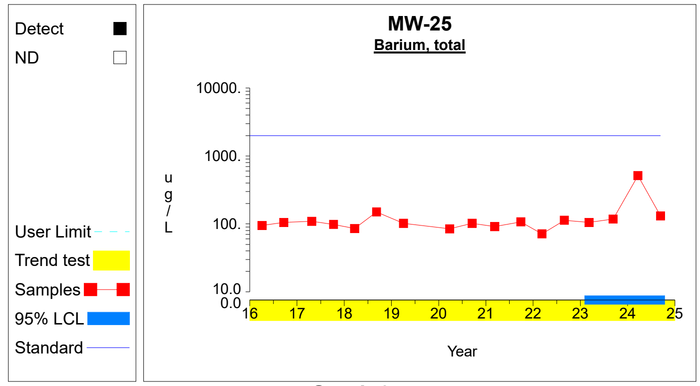


Graph 63

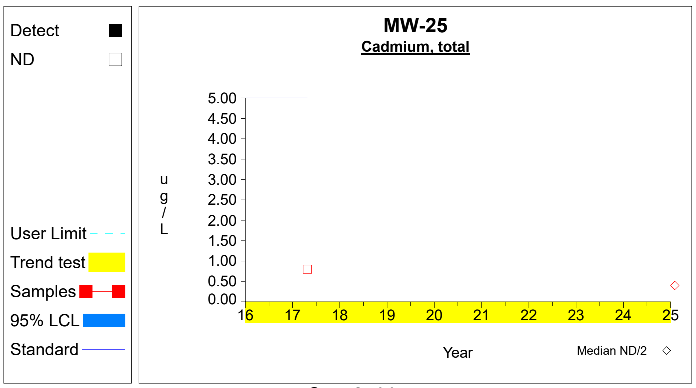
Confidence Limits (Assessment)



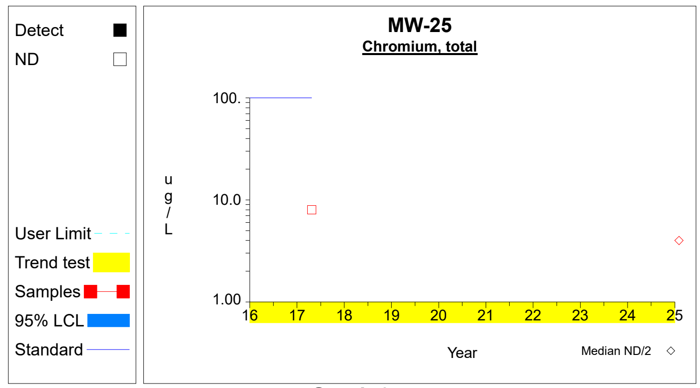
Graph 64



Graph 65



Graph 66



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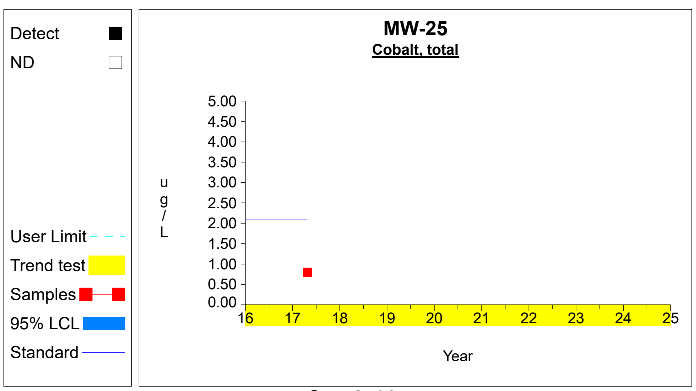
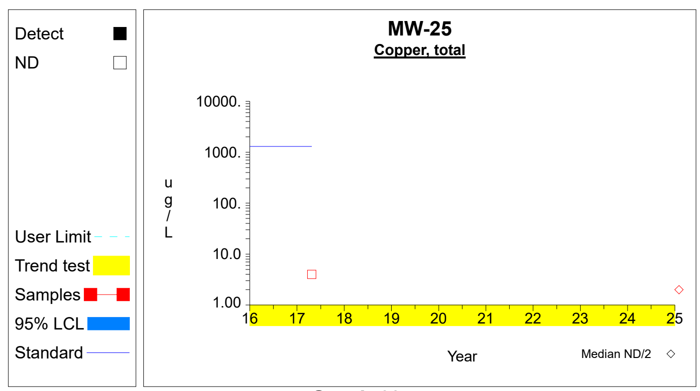
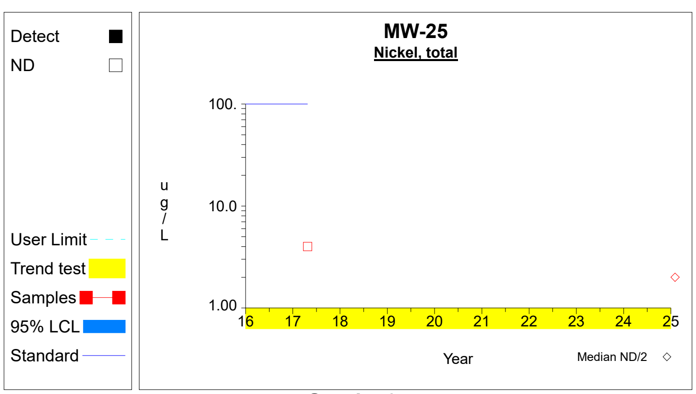


Graph 68

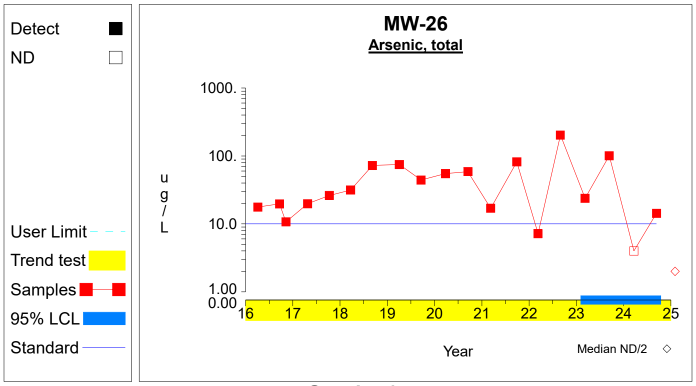


Graph 69

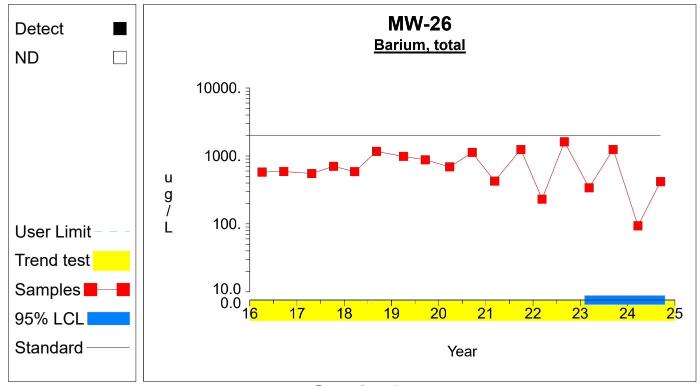


Graph 70

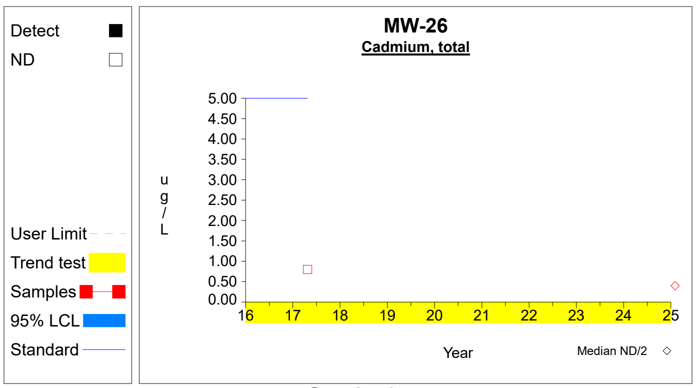
Confidence Limits (Assessment)



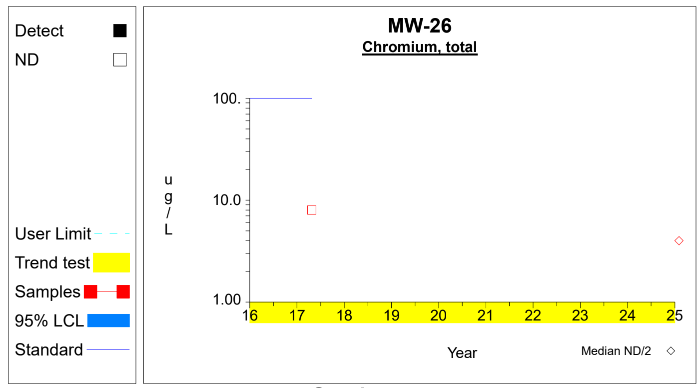
Graph 71



Graph 72



Graph 73



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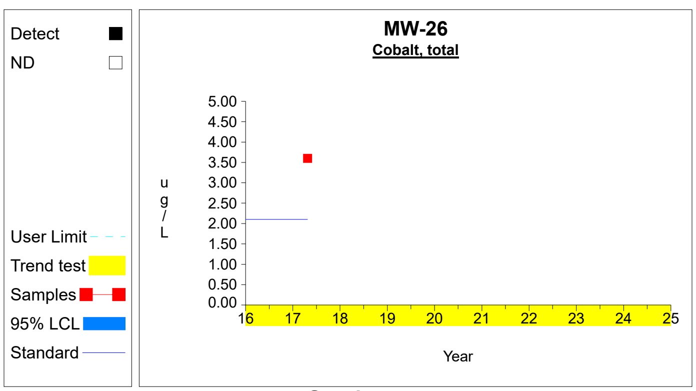

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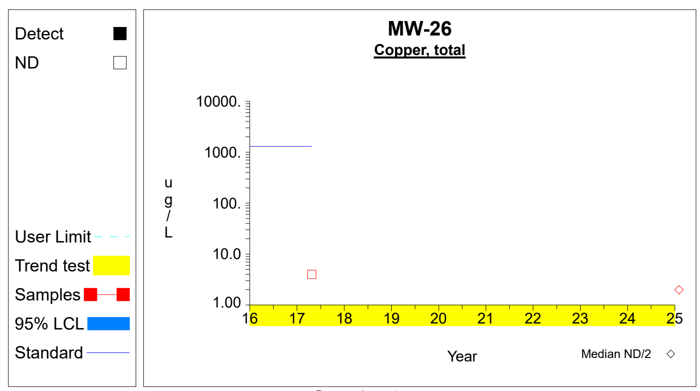
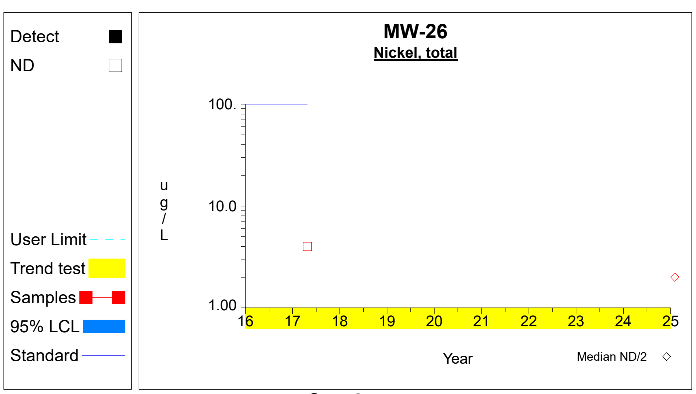
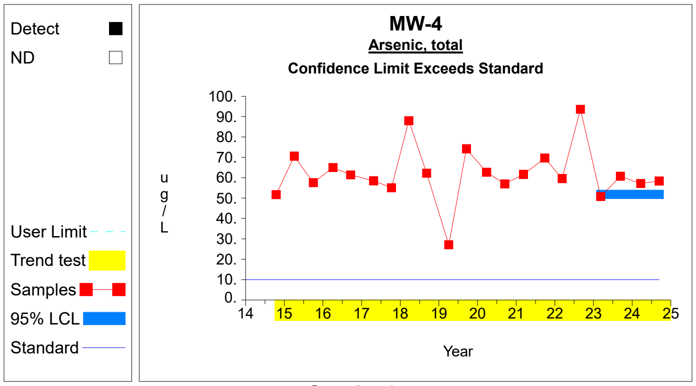


Graph 76

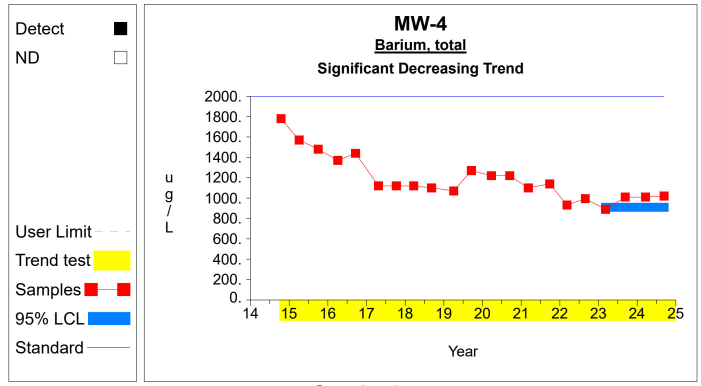


Graph 77

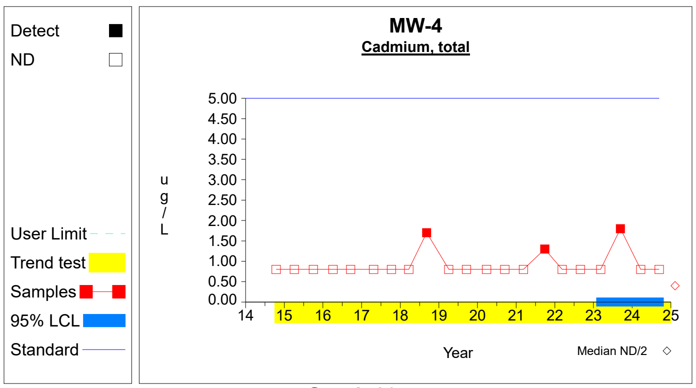
Confidence Limits (Assessment)



Graph 78



Graph 79



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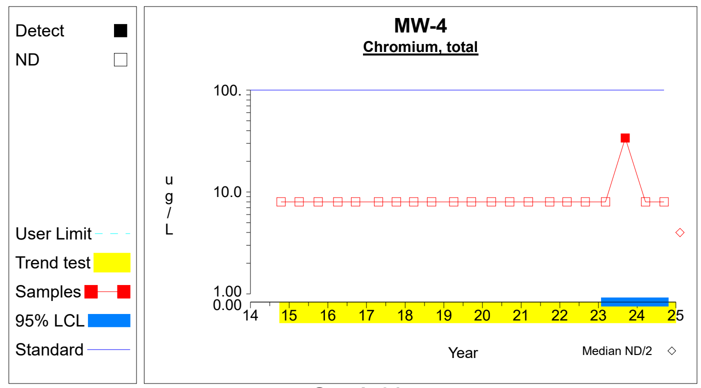
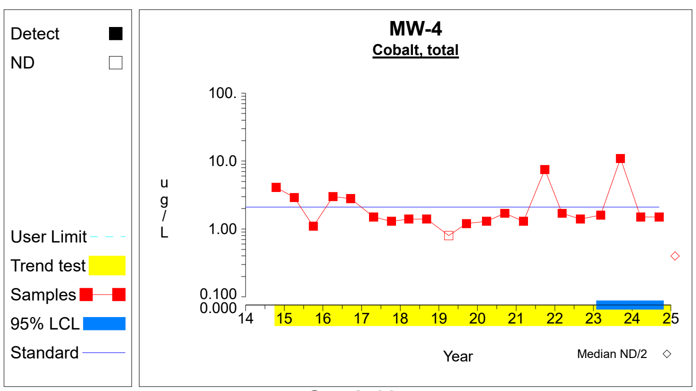
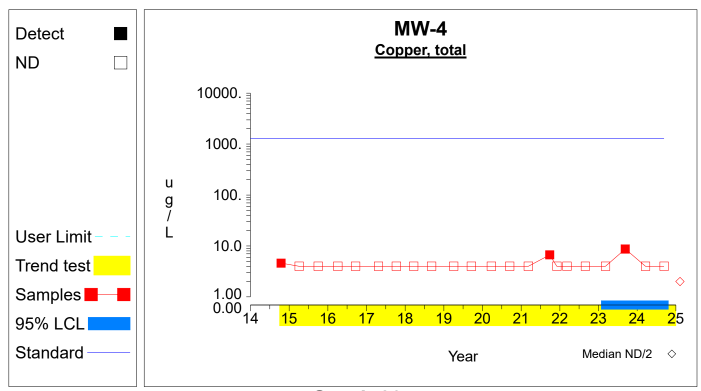


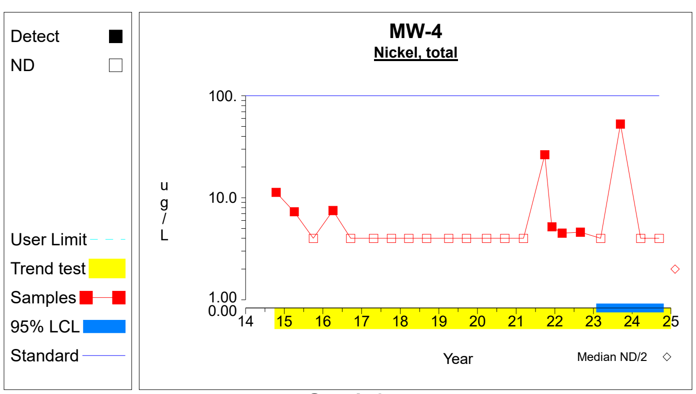
Graph 81



Graph 82

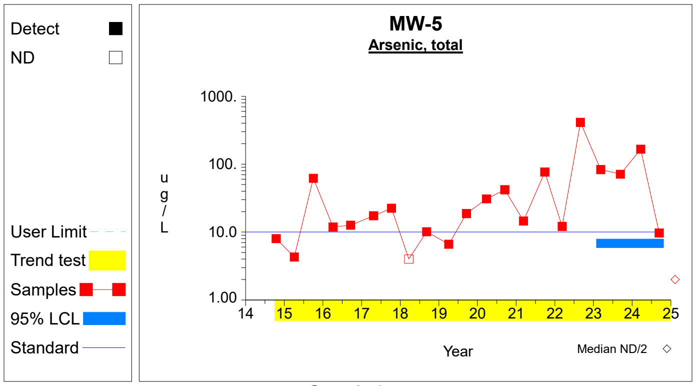


Graph 83

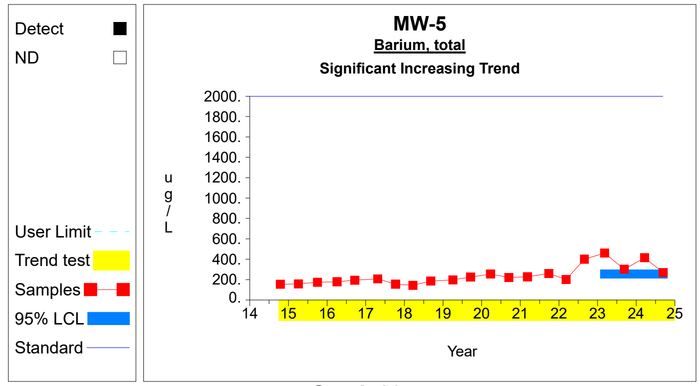


Graph 84

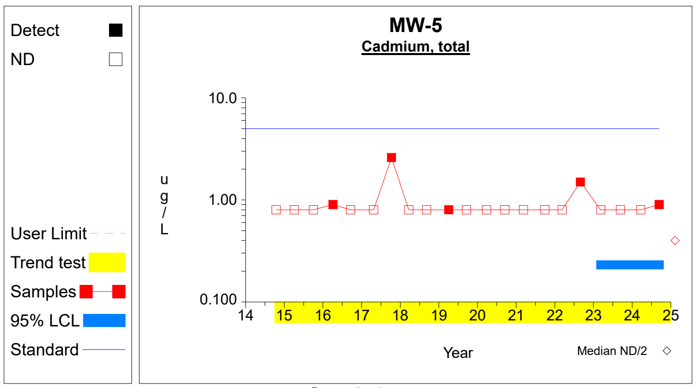
Confidence Limits (Assessment)



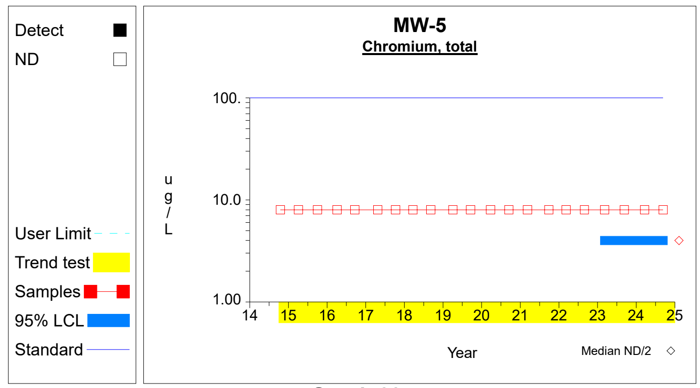
Graph 85



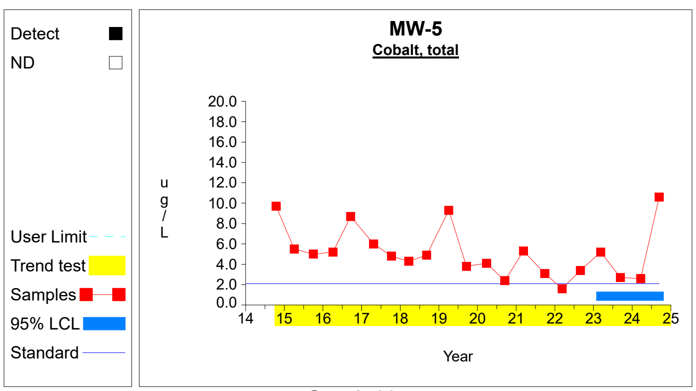
Graph 86



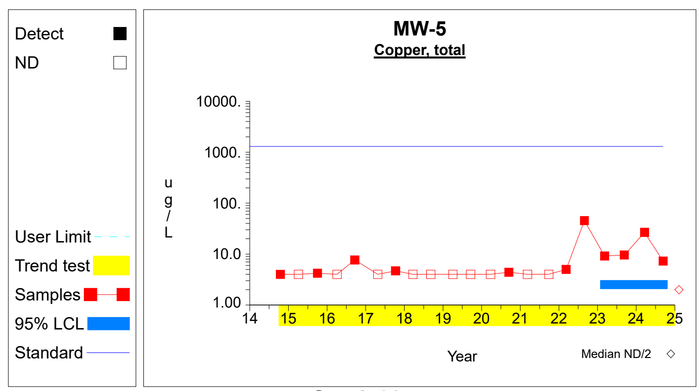
Graph 87



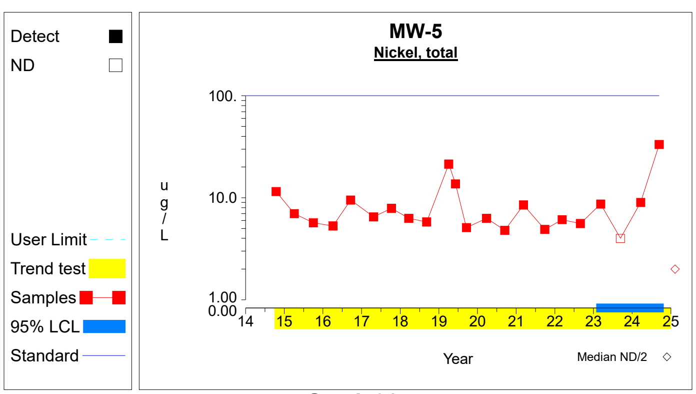
Graph 88



Graph 89

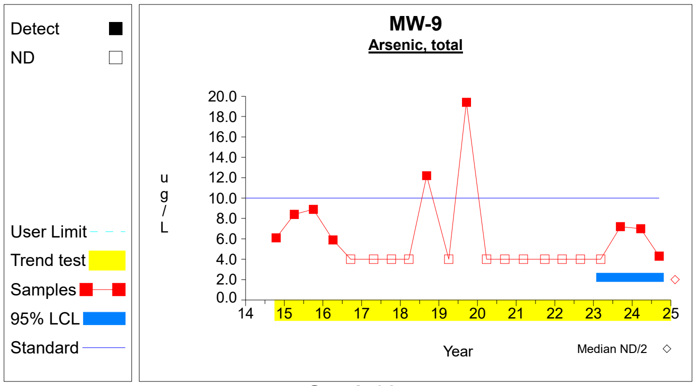


Graph 90

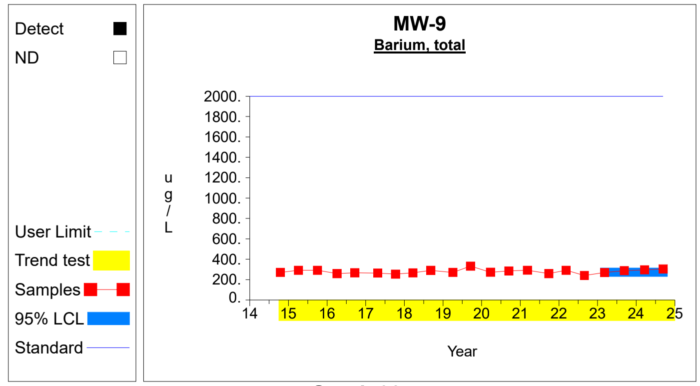


Graph 91

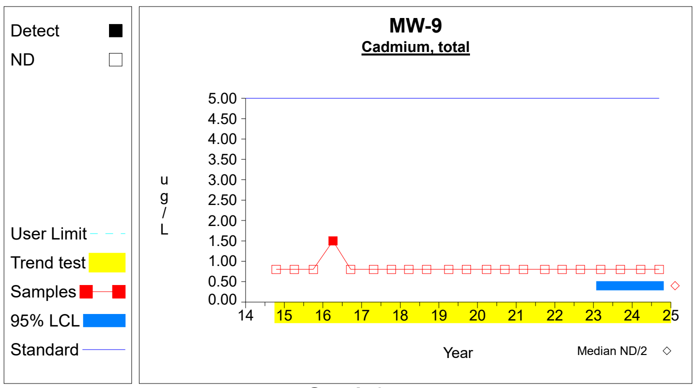
Confidence Limits (Assessment)



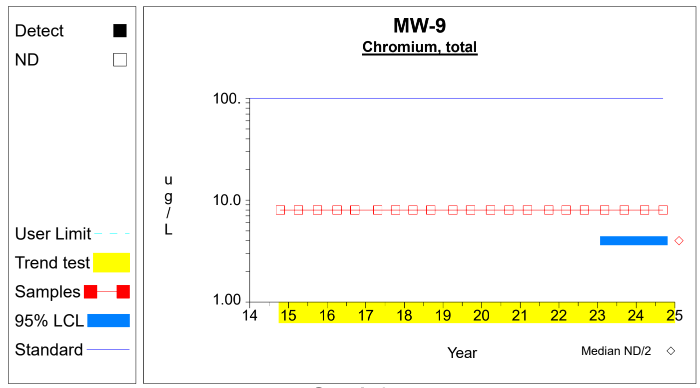
Graph 92



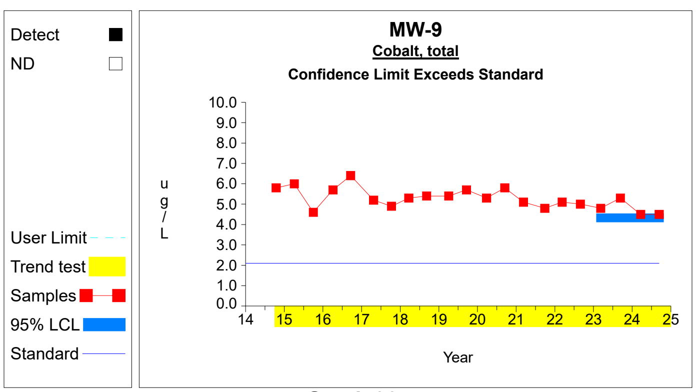
Graph 93



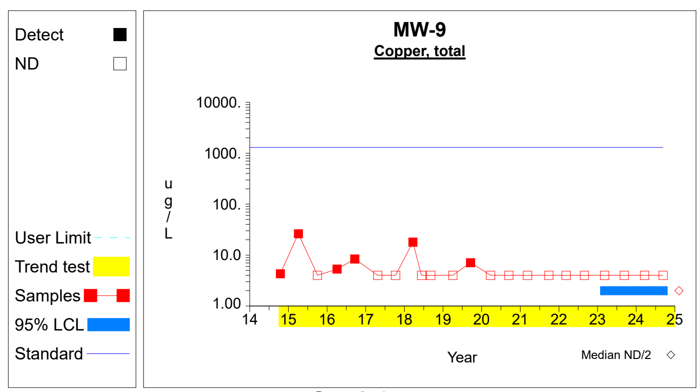
Graph 94



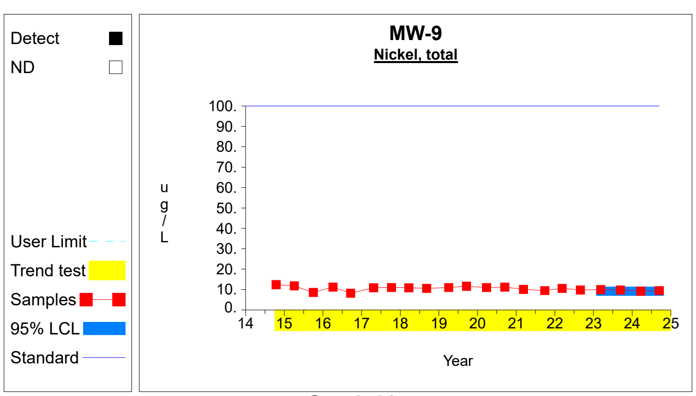
Graph 95



Graph 96



Graph 97



Graph 98

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-12

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **31.3** / **4** = **7.825**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½} = ((**276.05** - **979.69/4**) / (**4**-1))^{½} = **3.221**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **7.825** - **2.353** * **3.221/4**^{½} = **4.036**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **7.825** + **2.353** * **3.221/4**^{½} = **11.614**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
6	S = **0.341**	Sen's estimator of trend.
7	var(S) = **1229.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**231** ± **2.576** * **1229.333**^{½}) / 2 = [**70.34**, **160.66**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.689**, **1.397**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-12

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{1369.0} / \mathbf{4}$ $= \mathbf{342.25}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{484801.0} - \mathbf{1.87}x\mathbf{10^6}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{73.622}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{342.25} - \mathbf{2.353} * \mathbf{73.622}/\mathbf{4}^{1/2}$ $= \mathbf{255.649}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{342.25} + \mathbf{2.353} * \mathbf{73.622}/\mathbf{4}^{1/2}$ $= \mathbf{428.851}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{21} * (\mathbf{21}-1) / 2$ $= \mathbf{210}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{-8.377}$	Sen's estimator of trend.
7	$var(S) = \mathbf{1096.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{1096.667}^{1/2}) / 2$ $= [\ \mathbf{62.347}, \mathbf{147.653}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{-24.186}, \mathbf{6.917}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-12

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1.6** / **4** = **0.4**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**0.64** - **2.56/4**) / (**4**-1))$^{1/2}$ = **4.21×10^{-9}**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS**/**N**$^{1/2}$ = **0.4** - **2.353** * **4.21×10^{-9}/$4^{1/2}$** = **0.4**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS**/**N**$^{1/2}$ = **0.4** + **2.353** * **4.21×10^{-9}/$4^{1/2}$** = **0.4**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **279.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **279.667**$^{1/2}$) / 2 = [**83.46**, **126.54**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-12

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{16.0} / \mathbf{4}$ $= \mathbf{4.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{64.0} - \mathbf{256.0}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{4.0} - \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{1/2}$ $= \mathbf{4.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{4.0} + \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{1/2}$ $= \mathbf{4.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{21} * (\mathbf{21}-1) / 2$ $= \mathbf{210}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{0.0}^{1/2}) / 2$ $= [\ \mathbf{105.0}, \mathbf{105.0}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-12

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **10.7** / **4** = **2.675**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**35.37** - **114.49**/**4**) / (**4**-1))$^{1/2}$ = **1.5**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**$^{1/2}$ = **2.675** - **2.353** * **1.5**/**4**$^{1/2}$ = **0.911**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**$^{1/2}$ = **2.675** + **2.353** * **1.5**/**4**$^{1/2}$ = **4.439**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.695**	Sen's estimator of trend.
7	var(S) = **1095.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **1095.667**$^{1/2}$) / 2 = [**62.366**, **147.634**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.528**, **0.09**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-12

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½} = ((**16.0** - **64.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **2.0** - **2.353** * **0.0**/**4**^{½} = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **2.0** + **2.353** * **0.0**/**4**^{½} = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **146.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **146.667**^{½}) / 2 = [**89.402**, **120.598**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-12

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **20.4** / **4** = **5.1**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X²]** - **sum[X]²/N**) / (**N**-1))^{½} = ((**125.26** - **416.16/4**) / (**4**-1))^{½} = **2.66**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS/N**^{½} = **5.1** - **2.353** * **2.66/4**^{½} = **1.972**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS/N**^{½} = **5.1** + **2.353** * **2.66/4**^{½} = **8.228**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.721**	Sen's estimator of trend.
7	var(S) = **1080.0**	Variance estimate for slope.
8	M(S) = (**N'** ± $Z_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **1080.0**^{½}) / 2 = [**62.672**, **147.328**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.596**, **0.36**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-15R

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **72.2** / **4** = **18.05**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1342.44** - **5212.84/4**) / (**4**-1))^{½} = **3.616**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**^{½} = **18.05** - **2.353** * **3.616/4**^{½} = **13.796**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**^{½} = **18.05** + **2.353** * **3.616/4**^{½} = **22.304**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-1.644**	Sen's estimator of trend.
7	var(S) = **1095.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **1095.667**^{½}) / 2 = [**62.366**, **147.634**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-3.196**, **-0.425**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-15R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1397.0** / **4** = **349.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**491113.0** - **1.95**x**10^6**/**4**) / (**4**-1))$^{1/2}$ = **32.715**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$ = **349.25** - **2.353** * **32.715**/**4**$^{1/2}$ = **310.768**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$ = **349.25** + **2.353** * **32.715**/**4**$^{1/2}$ = **387.732**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-18.668**	Sen's estimator of trend.
7	var(S) = **1094.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **1094.667**$^{1/2}$) / 2 = [**62.386**, **147.614**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-32.645**, **-1.784**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-15R

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{1.6} / \mathbf{4}$ $= \mathbf{0.4}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{0.64} - \mathbf{2.56}/\mathbf{4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{4.21}\times\mathbf{10^{-9}}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{0.4} - \mathbf{2.353} * \mathbf{4.21}\times\mathbf{10^{-9}}/\mathbf{4}^{½}$ $= \mathbf{0.4}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{0.4} + \mathbf{2.353} * \mathbf{4.21}\times\mathbf{10^{-9}}/\mathbf{4}^{½}$ $= \mathbf{0.4}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{21} * (\mathbf{21}-1) / 2$ $= \mathbf{210}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{146.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{146.667}^{½}) / 2$ $= [\ \mathbf{89.402},\ \mathbf{120.598}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0},\ \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-15R

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **16.0** / **4** = **4.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**64.0** - **256.0/4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = $\overline{X}$ - **tS/N**$^{1/2}$ = **4.0** - **2.353** * **0.0/4**$^{1/2}$ = **4.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{X}$ + **tS/N**$^{1/2}$ = **4.0** + **2.353** * **0.0/4**$^{1/2}$ = **4.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **146.667**	Variance estimate for slope.
8	M(S) = (**N'** ± $Z_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **146.667**$^{1/2}$) / 2 = [**89.402**, **120.598**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-15R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **11.1** / **4** = **2.775**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½} = ((**33.41** - **123.21**/**4**) / (**4**-1))^{½} = **0.932**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS**/**N**^{½} = **2.775** - **2.353** * **0.932**/**4**^{½} = **1.678**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS**/**N**^{½} = **2.775** + **2.353** * **0.932**/**4**^{½} = **3.872**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.136**	Sen's estimator of trend.
7	var(S) = **1087.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **1087.333**^{½}) / 2 = [**62.529**, **147.471**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.331**, **0.066**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-15R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**16.0** - **64.0**/**4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **2.0** - **2.353** * **0.0**/**4**$^{1/2}$ = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **2.0** + **2.353** * **0.0**/**4**$^{1/2}$ = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **507.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **507.333**$^{1/2}$) / 2 = [**75.989**, **134.011**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-15R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **12.3** / **4** = **3.075**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{42.45} - \mathbf{151.29}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ = **1.242**	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{3.075} - \mathbf{2.353} * \mathbf{1.242}/\mathbf{4}^{1/2}$ = **1.614**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{3.075} + \mathbf{2.353} * \mathbf{1.242}/\mathbf{4}^{1/2}$ = **4.536**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.078**	Sen's estimator of trend.
7	var(S) = **1001.667**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{1001.667}^{1/2}) / 2$ = [**64.236**, **145.764**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.794**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-17

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{8.0} / \mathbf{4}$ $= \mathbf{2.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{16.0} - \mathbf{64.0}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{2.0} - \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{1/2}$ $= \mathbf{2.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{2.0} + \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{1/2}$ $= \mathbf{2.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{21} * (\mathbf{21}-1) / 2$ $= \mathbf{210}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{279.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{279.667}^{1/2}) / 2$ $= [\ \mathbf{83.46}, \mathbf{126.54}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-17

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **613.0** / **4** = **153.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**94055.0** - **375769.0/4**) / (**4**-1))$^{1/2}$ = **6.131**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**$^{1/2}$ = **153.25** - **2.353** * **6.131**/**4**$^{1/2}$ = **146.039**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**$^{1/2}$ = **153.25** + **2.353** * **6.131**/**4**$^{1/2}$ = **160.461**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-1.252**	Sen's estimator of trend.
7	var(S) = **1094.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **1094.667**$^{1/2}$) / 2 = [**62.386**, **147.614**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-6.402**, **3.279**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-17

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.6** / **4** = **0.4**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**0.64** - **2.56**/**4**) / (**4**-1))$^{1/2}$ = **4.21**x**10^{-9}**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS**/**N**$^{1/2}$ = **0.4** - **2.353** * **4.21**x**10^{-9}**/**4**$^{1/2}$ = **0.4**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **0.4** + **2.353** * **4.21**x**10^{-9}**/**4**$^{1/2}$ = **0.4**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **507.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **507.333**$^{1/2}$) / 2 = [**75.989**, **134.011**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-17

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **16.0** / **4** = **4.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**64.0 - 256.0/4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**^{½} = **4.0 - 2.353** * **0.0/4**^{½} = **4.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**^{½} = **4.0 + 2.353** * **0.0/4**^{½} = **4.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **0.0**^{½}) / 2 = [**105.0**, **105.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-17

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **17.9** / **4** = **4.475**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**182.81** - **320.41/4**) / (**4**-1))^{½} = **5.851**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**^{½} = **4.475 - 2.353** * **5.851/4**^{½} = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**^{½} = **4.475** + **2.353** * **5.851/4**^{½} = **11.358**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
6	S = **-0.471**	Sen's estimator of trend.
7	var(S) = **817.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**171** ± **2.576** * **817.0**^{½}) / 2 = [**48.685**, **122.315**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.148**, **0.686**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-17

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**16.0** - **64.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **2.0** - **2.353** * **0.0**/**4**^{½} = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **2.0** + **2.353** * **0.0**/**4**^{½} = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **762.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **762.0**^{½}) / 2 = [**69.446**, **140.554**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-17

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{26.5} / \textbf{4}$ $= \textbf{6.625}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{185.19} - \textbf{702.25}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{1.791}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{6.625} - \textbf{2.353} * \textbf{1.791}/\textbf{4}^{1/2}$ $= \textbf{4.518}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{6.625} + \textbf{2.353} * \textbf{1.791}/\textbf{4}^{1/2}$ $= \textbf{8.732}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{21} * (\textbf{21}-1) / 2$ $= \textbf{210}$	Number of sample pairs during trend detection period.
6	$S = \textbf{-0.098}$	Sen's estimator of trend.
7	$var(S) = \textbf{1095.667}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{210} \pm \textbf{2.576} * \textbf{1095.667}^{1/2}) / 2$ $= [\ \textbf{62.366}, \textbf{147.634}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{-0.863}, \textbf{0.736}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-18

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **70.0** / **4** = **17.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**1229.26** - **4900.0**/**4**) / (**4**-1))$^{1/2}$ = **1.192**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **17.5** - **2.353** * **1.192**/**4**$^{1/2}$ = **16.098**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **17.5** + **2.353** * **1.192**/**4**$^{1/2}$ = **18.902**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.793**	Sen's estimator of trend.
7	var(S) = **1093.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **1093.667**$^{1/2}$) / 2 = [**62.405**, **147.595**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.351**, **-0.203**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-18

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2655.0** / **4** = **663.75**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**1.77**x**10^6** - **7.05**x**10^6/4**) / (**4**-1))^{½} = **48.3**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**^{½} = **663.75 - 2.353 * 48.3/4**^{½} = **606.935**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**^{½} = **663.75** + **2.353** * **48.3/4**^{½} = **720.565**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-23.919**	Sen's estimator of trend.
7	var(S) = **1096.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **1096.667**^{½}) / 2 = [**62.347**, **147.653**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-44.407**, **-10.151**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-18

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.6** / **4** = **0.4**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**0.64** - **2.56/4**) / (**4**-1))$^{1/2}$ = **4.21**x**10^{-9}**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N$^{1/2}$** = **0.4** - **2.353** * **4.21**x**10^{-9}/4$^{1/2}$** = **0.4**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N$^{1/2}$** = **0.4** + **2.353** * **4.21**x**10^{-9}/4$^{1/2}$** = **0.4**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **603.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)$^{1/2}$**) / 2 = (**210** ± **2.576** * **603.333$^{1/2}$**) / 2 = [**73.363**, **136.637**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.069**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-18

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **16.0** / **4** = **4.0**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{64.0} - \mathbf{256.0}/\mathbf{4}) / (\mathbf{4}-1))^{½}$ = **0.0**	Compute sd of the last 4 measurements.
3	$LCL = \mathbf{\overline{X}} - \mathbf{tS/N^{½}}$ $= \mathbf{4.0} - \mathbf{2.353} * \mathbf{0.0/4^{½}}$ = **4.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \mathbf{\overline{X}} + \mathbf{tS/N^{½}}$ $= \mathbf{4.0} + \mathbf{2.353} * \mathbf{0.0/4^{½}}$ = **4.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **253.0**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{190} \pm \mathbf{2.576} * \mathbf{253.0}^{½}) / 2$ = [**74.513**, **115.487**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-18

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **38.5** / **4** = **9.625**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**394.81** - **1482.25**/**4**) / (**4**-1))^{½} = **2.843**	Compute sd of the last 4 measurements.
3	LCL = $\overline{\mathbf{X}}$ - **tS**/**N**^{½} = **9.625** - **2.353** * **2.843**/**4**^{½} = **6.281**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{\mathbf{X}}$ + **tS**/**N**^{½} = **9.625** + **2.353** * **2.843**/**4**^{½} = **12.969**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
6	S = **-0.45**	Sen's estimator of trend.
7	var(S) = **948.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**190** ± **2.576** * **948.0**^{½}) / 2 = [**55.343**, **134.657**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.729**, **0.687**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-18

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**16.0** - **64.0/4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**^{½} = **2.0** - **2.353** * **0.0/4**^{½} = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**^{½} = **2.0** + **2.353** * **0.0/4**^{½} = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **253.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**^{½}) / 2 = (**190** ± **2.576** * **253.0**^{½}) / 2 = [**74.513**, **115.487**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-18

Step	Equation	Description
1	$\overline{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{71.5} / \textbf{4}$ $= \textbf{17.875}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{1351.21} - \textbf{5112.25/4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{4.938}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\textbf{X}} - \textbf{tS/N}^{1/2}$ $= \textbf{17.875} - \textbf{2.353} * \textbf{4.938/4}^{1/2}$ $= \textbf{12.067}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\textbf{X}} + \textbf{tS/N}^{1/2}$ $= \textbf{17.875} + \textbf{2.353} * \textbf{4.938/4}^{1/2}$ $= \textbf{23.683}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{19} * (\textbf{19}-1) / 2$ $= \textbf{171}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{816.0}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{171} \pm \textbf{2.576} * \textbf{816.0}^{1/2}) / 2$ $= [\ \textbf{48.707}, \textbf{122.293}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{-1.545}, \textbf{1.793}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-19A

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **10.0** / **4** = **2.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**28.0** - **100.0**/**4**) / (**4**-1))^{½} = **1.0**	Compute sd of the last 4 measurements.
3	LCL = $\overline{X}$ - **tS**/**N**^{½} = **2.5** - **2.353** * **1.0**/**4**^{½} = **1.324**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{X}$ + **tS**/**N**^{½} = **2.5** + **2.353** * **1.0**/**4**^{½} = **3.676**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **146.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **146.667**^{½}) / 2 = [**89.402**, **120.598**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-19A

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **724.8** / **4** = **181.2**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**390429.9** - **525335.04**/**4**) / (**4**-1))^{½} = **293.88**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **181.2** - **2.353** * **293.88**/**4**^{½} = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **181.2** + **2.353** * **293.88**/**4**^{½} = **526.888**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.092**	Sen's estimator of trend.
7	var(S) = **1096.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **1096.667**^{½}) / 2 = [**62.347**, **147.653**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.838**, **1.302**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-19A

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **10.8** / **4** = **2.7**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**82.32** - **116.64**/**4**) / (**4**-1))^{½} = **4.21**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**^{½} = **2.7** - **2.353** * **4.21**/**4**^{½} = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**^{½} = **2.7** + **2.353** * **4.21**/**4**^{½} = **7.652**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **399.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **399.667**^{½}) / 2 = [**79.251**, **130.749**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-19A

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{16.0} / \mathbf{4}$ $= \mathbf{4.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{64.0} - \mathbf{256.0}/\mathbf{4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{4.0} - \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{½}$ $= \mathbf{4.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{4.0} + \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{½}$ $= \mathbf{4.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{21} * (\mathbf{21}-1) / 2$ $= \mathbf{210}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{0.0}^{½}) / 2$ $= [\ \mathbf{105.0}, \mathbf{105.0}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-19A

Step	Equation	Description
1	$\bar{X}$ = **sum[X] / N** = **8.1** / **4** = **2.025**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**48.09** - **65.61/4**) / (**4**-1))^{½} = **3.25**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**^{½} = **2.025** - **2.353** * **3.25/4**^{½} = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**^{½} = **2.025** + **2.353** * **3.25/4**^{½} = **5.848**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **506.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **506.333**^{½}) / 2 = [**76.018**, **133.982**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-19A

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{8.0} / \mathbf{4}$ $= \mathbf{2.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{16.0} - \mathbf{64.0/4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N}^{½}$ $= \mathbf{2.0} - \mathbf{2.353} * \mathbf{0.0/4}^{½}$ $= \mathbf{2.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N}^{½}$ $= \mathbf{2.0} + \mathbf{2.353} * \mathbf{0.0/4}^{½}$ $= \mathbf{2.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{21} * (\mathbf{21}-1) / 2$ $= \mathbf{210}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{0.0}^{½}) / 2$ $= [\ \mathbf{105.0}, \mathbf{105.0}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-19A

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **36.6** / **4** = **9.15**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{346.68} - \mathbf{1339.56/4}) / (\mathbf{4}-1))^{1/2}$ = **1.982**	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{9.15 - 2.353 * 1.982/4}^{1/2}$ = **6.818**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{9.15 + 2.353 * 1.982/4}^{1/2}$ = **11.482**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
6	S = **0.614**	Sen's estimator of trend.
7	var(S) = **1251.0**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} \pm \mathbf{2.576} * \mathbf{1251.0}^{1/2}) / 2$ = [**69.944**, **161.056**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.002**, **1.148**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-20R

Step	Equation	Description
1	$\bar{X}$ = **sum[X] / N** = **181.3** / **4** = **45.325**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{9683.49} - \mathbf{32869.69}/\mathbf{4}) / (\mathbf{4}-1))^{½}$ = **22.106**	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{45.325} - \mathbf{2.353} * \mathbf{22.106}/\mathbf{4}^{½}$ = **19.322**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{45.325} + \mathbf{2.353} * \mathbf{22.106}/\mathbf{4}^{½}$ = **71.328**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.181**	Sen's estimator of trend.
7	var(S) = **1095.667**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{1095.667}^{½}) / 2$ = [**62.366**, **147.634**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-3.896**, **4.057**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-20R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2727.0** / **4** = **681.75**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{1.89}\times\mathbf{10^6} - \mathbf{7.44}\times\mathbf{10^6/4}) / (\mathbf{4}-1))^{1/2}$ = **96.365**	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{681.75 - 2.353 * 96.365/4}^{1/2}$ = **568.397**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{681.75 + 2.353 * 96.365/4}^{1/2}$ = **795.103**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-22.421**	Sen's estimator of trend.
7	var(S) = **1095.667**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{1095.667}^{1/2}) / 2$ = [**62.366**, **147.634**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-50.691**, **8.906**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-20R

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{1.6} / \mathbf{4}$ $= \mathbf{0.4}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{0.64} - \mathbf{2.56}/\mathbf{4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{4.21 \times 10^{-9}}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{0.4} - \mathbf{2.353} * \mathbf{4.21 \times 10^{-9}}/\mathbf{4}^{½}$ $= \mathbf{0.4}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{0.4} + \mathbf{2.353} * \mathbf{4.21 \times 10^{-9}}/\mathbf{4}^{½}$ $= \mathbf{0.4}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{21} * (\mathbf{21}-1) / 2$ $= \mathbf{210}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{0.0}^{½}) / 2$ $= [\ \mathbf{105.0}, \mathbf{105.0}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-20R

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{16.0} / \textbf{4}$ $= \textbf{4.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}\text{-}1))^{1/2}$ $= ((\textbf{64.0} - \textbf{256.0}/\textbf{4}) / (\textbf{4}\text{-}1))^{1/2}$ $= \textbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{4.0} - \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{4.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{4.0} + \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{4.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}\text{-}1) / 2$ $= \textbf{21} * (\textbf{21}\text{-}1) / 2$ $= \textbf{210}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{210} \pm \textbf{2.576} * \textbf{0.0}^{1/2}) / 2$ $= [\ \textbf{105.0}, \textbf{105.0}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{0.0}, \textbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-20R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.9** / **4** = **0.475**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X²]** - **sum[X]²**/**N**) / (**N**-1))$^{1/2}$ = ((**0.93** - **3.61**/**4**) / (**4**-1))$^{1/2}$ = **0.096**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$ = **0.475** - **2.353** * **0.096**/**4**$^{1/2}$ = **0.362**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$ = **0.475** + **2.353** * **0.096**/**4**$^{1/2}$ = **0.588**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.078**	Sen's estimator of trend.
7	var(S) = **1068.0**	Variance estimate for slope.
8	M(S) = (**N'** ± $Z_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **1068.0**$^{1/2}$) / 2 = [**62.908**, **147.092**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.124**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-20R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**16.0** - **64.0/4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N^{½}** = **2.0** - **2.353** * **0.0/4^{½}** = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N^{½}** = **2.0** + **2.353** * **0.0/4^{½}** = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)^{½}**) / 2 = (**210** ± **2.576** * **0.0^{½}**) / 2 = [**105.0**, **105.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-20R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**16.0** - **64.0**/**4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$ = **2.0** - **2.353** * **0.0/4**$^{1/2}$ = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**$^{1/2}$ = **2.0** + **2.353** * **0.0/4**$^{1/2}$ = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **0.0**$^{1/2}$) / 2 = [**105.0**, **105.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-21

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **41.0** / **4** = **10.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**980.5** - **1681.0**/**4**) / (**4**-1))^{½} = **13.666**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **10.25** - **2.353** * **13.666**/**4**^{½} = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **10.25** + **2.353** * **13.666**/**4**^{½} = **26.325**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1004.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **1004.667**^{½}) / 2 = [**64.175**, **145.825**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.708**, **0.728**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-21

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{2771.0} / \mathbf{4}$ $= \mathbf{692.75}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{2.64}x\mathbf{10^6} - \mathbf{7.68}x\mathbf{10^6}/\mathbf{4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{488.694}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{692.75} - \mathbf{2.353} * \mathbf{488.694}/\mathbf{4}^{½}$ $= \mathbf{117.905}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{692.75} + \mathbf{2.353} * \mathbf{488.694}/\mathbf{4}^{½}$ $= \mathbf{1267.595}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{21} * (\mathbf{21}-1) / 2$ $= \mathbf{210}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{8.451}$	Sen's estimator of trend.
7	$var(S) = \mathbf{1095.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{1095.667}^{½}) / 2$ $= [\ \mathbf{62.366}, \mathbf{147.634}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{-36.882}, \mathbf{104.469}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-21

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1.6** / **4** = **0.4**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{0.64} - \mathbf{2.56}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{4.21 \times 10^{-9}}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{0.4} - \mathbf{2.353} * \mathbf{4.21 \times 10^{-9}}/\mathbf{4}^{1/2}$ = **0.4**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{0.4} + \mathbf{2.353} * \mathbf{4.21 \times 10^{-9}}/\mathbf{4}^{1/2}$ = **0.4**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **602.333**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{602.333}^{1/2}) / 2$ = [**73.389**, **136.611**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-21

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **16.0** / **4** = **4.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**64.0** - **256.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **4.0** - **2.353** * **0.0**/**4**^{½} = **4.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **4.0** + **2.353** * **0.0**/**4**^{½} = **4.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **0.0**^{½}) / 2 = [**105.0**, **105.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-21

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.7** / **4** = **0.675**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**2.13** - **7.29/4**) / (**4**-1))$^{1/2}$ = **0.32**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N$^{1/2}$** = **0.675** - **2.353** * **0.32/4**$^{1/2}$ = **0.298**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N$^{1/2}$** = **0.675** + **2.353** * **0.32/4**$^{1/2}$ = **1.052**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **763.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **763.0**$^{1/2}$) / 2 = [**69.422**, **140.578**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.102**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-21

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{16.0} - \mathbf{64.0}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{2.0} - \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{1/2}$ = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{2.0} + \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{1/2}$ = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **399.667**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{399.667}^{1/2}) / 2$ = [**79.251**, **130.749**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-21

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **22.6** / **4** = **5.65**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**150.58** - **510.76**/**4**) / (**4**-1))$^{1/2}$ = **2.762**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$ = **5.65** - **2.353** * **2.762**/**4**$^{1/2}$ = **2.401**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$ = **5.65** + **2.353** * **2.762**/**4**$^{1/2}$ = **8.899**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1076.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **1076.333**$^{1/2}$) / 2 = [**62.744**, **147.256**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-1.049**, **0.604**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-22

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **254.4** / **4** = **63.6**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**17973.9** - **64719.36**/**4**) / (**4**-1))^{½} = **24.454**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **63.6** - **2.353** * **24.454**/**4**^{½} = **34.835**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **63.6** + **2.353** * **24.454**/**4**^{½} = **92.365**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
6	S = **-2.371**	Sen's estimator of trend.
7	var(S) = **817.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**171** ± **2.576** * **817.0**^{½}) / 2 = [**48.685**, **122.315**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-9.655**, **6.49**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-22

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1531.0** / **4** = **382.75**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½} = ((**596383.0** - **2.34**x**10^6**/**4**) / (**4**-1))^{½} = **58.858**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS**/**N**^{½} = **382.75** - **2.353** * **58.858**/**4**^{½} = **313.516**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **382.75** + **2.353** * **58.858**/**4**^{½} = **451.984**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
6	S = **1.71**	Sen's estimator of trend.
7	var(S) = **817.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**171** ± **2.576** * **817.0**^{½}) / 2 = [**48.685**, **122.315**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-16.056**, **16.594**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-22

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.2** / **4** = **0.55**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**1.48 - 4.84/4**) / (**4**-1))$^{1/2}$ = **0.3**	Compute sd of the last 4 measurements.
3	LCL = $\overline{X}$ **- tS/N**$^{1/2}$ = **0.55 - 2.353** * **0.3/4**$^{1/2}$ = **0.197**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{X}$ **+ tS/N**$^{1/2}$ = **0.55** + **2.353** * **0.3/4**$^{1/2}$ = **0.903**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **323.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**171** ± **2.576** * **323.667**$^{1/2}$) / 2 = [**62.328**, **108.672**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-22

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{16.0} / \mathbf{4}$ $= \mathbf{4.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{64.0} - \mathbf{256.0}/\mathbf{4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{4.0} - \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{½}$ $= \mathbf{4.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{½}$ $= \mathbf{4.0} + \mathbf{2.353} * \mathbf{0.0}/\mathbf{4}^{½}$ $= \mathbf{4.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{19} * (\mathbf{19}-1) / 2$ $= \mathbf{171}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{171} \pm \mathbf{2.576} * \mathbf{0.0}^{½}) / 2$ $= [\ \mathbf{85.5}, \mathbf{85.5}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-22

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **14.1** / **4** = **3.525**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**53.69** - **198.81/4**) / (**4**-1))^{½} = **1.153**	Compute sd of the last 4 measurements.
3	LCL = $\overline{X}$ - **tS/N**^{½} = **3.525** - **2.353** * **1.153/4**^{½} = **2.169**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{X}$ + **tS/N**^{½} = **3.525** + **2.353** * **1.153/4**^{½} = **4.881**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
6	S = **-0.13**	Sen's estimator of trend.
7	var(S) = **812.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**171** ± **2.576** * **812.333**^{½}) / 2 = [**48.79**, **122.21**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.423**, **0.102**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-22

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**16.0 - 64.0/4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**^{½} = **2.0** - **2.353** * **0.0/4**^{½} = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**^{½} = **2.0** + **2.353** * **0.0/4**^{½} = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **120.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**^{½}) / 2 = (**171** ± **2.576** * **120.0**^{½}) / 2 = [**71.391**, **99.609**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-22

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **24.7** / **4** = **6.175**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**175.81** - **610.09**/**4**) / (**4**-1))^{½} = **2.786**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **6.175** - **2.353** * **2.786**/**4**^{½} = **2.898**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **6.175** + **2.353** * **2.786**/**4**^{½} = **9.452**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
6	S = **-0.103**	Sen's estimator of trend.
7	var(S) = **814.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**171** ± **2.576** * **814.0**^{½}) / 2 = [**48.752**, **122.248**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.69**, **0.3**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-24

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **97.7** / **4** = **24.425**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**3880.67** - **9545.29**/**4**) / (**4**-1))$^{1/2}$ = **22.319**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **24.425** - **2.353** * **22.319**/**4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **24.425** + **2.353** * **22.319**/**4**$^{1/2}$ = **50.678**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
6	S = **-1.539**	Sen's estimator of trend.
7	var(S) = **950.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**190** ± **2.576** * **950.0**$^{1/2}$) / 2 = [**55.301**, **134.699**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-16.849**, **10.933**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-24

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1861.0** / **4** = **465.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**876051.0** - **3.46**x**10^6/4**) / (**4**-1))$^{1/2}$ = **58.369**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**$^{1/2}$ = **465.25** - **2.353** * **58.369**/**4**$^{1/2}$ = **396.591**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**$^{1/2}$ = **465.25** + **2.353** * **58.369**/**4**$^{1/2}$ = **533.909**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-49.358**	Sen's estimator of trend.
7	var(S) = **1096.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **1096.667**$^{1/2}$) / 2 = [**62.347**, **147.653**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-118.999**, **-4.005**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-24

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.1** / **4** = **0.525**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**1.29** - **4.41**/**4**) / (**4**-1))$^{1/2}$ = **0.25**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**$^{1/2}$ = **0.525** - **2.353** * **0.25**/**4**$^{1/2}$ = **0.231**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**$^{1/2}$ = **0.525** + **2.353** * **0.25**/**4**$^{1/2}$ = **0.819**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **762.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **762.0**$^{1/2}$) / 2 = [**69.446**, **140.554**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-24

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **16.0** / **4** = **4.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**64.0** - **256.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = $\overline{X}$ - **tS**/**N**^{½} = **4.0** - **2.353** * **0.0**/**4**^{½} = **4.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{X}$ + **tS**/**N**^{½} = **4.0** + **2.353** * **0.0**/**4**^{½} = **4.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**190** ± **2.576** * **0.0**^{½}) / 2 = [**95.0**, **95.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-24

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{2.2} / \mathbf{4}$ $= \mathbf{0.55}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{1.88} - \mathbf{4.84/4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{0.473}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS/N}^{½}$ $= \mathbf{0.55} - \mathbf{2.353} * \mathbf{0.473/4}^{½}$ $= \mathbf{0.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS/N}^{½}$ $= \mathbf{0.55} + \mathbf{2.353} * \mathbf{0.473/4}^{½}$ $= \mathbf{1.106}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{20} * (\mathbf{20}-1) / 2$ $= \mathbf{190}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{-0.296}$	Sen's estimator of trend.
7	$var(S) = \mathbf{943.333}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{190} \pm \mathbf{2.576} * \mathbf{943.333}^{½}) / 2$ $= [\ \mathbf{55.441}, \mathbf{134.559}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{-0.638}, \mathbf{-0.08}\ ]$	Two-sided confidence interval for slope.
10	$UCL(S) < 0$	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-24

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{8.0} / \textbf{4}$ $= \textbf{2.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{16.0} - \textbf{64.0}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{2.0} - \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{2.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{2.0} + \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{2.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{20} * (\textbf{20}-1) / 2$ $= \textbf{190}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{133.0}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{190} \pm \textbf{2.576} * \textbf{133.0}^{1/2}) / 2$ $= [\ \textbf{80.146}, \textbf{109.854}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{0.0}, \textbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-24

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{8.0} / \textbf{4}$ $= \textbf{2.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{16.0} - \textbf{64.0}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{2.0} - \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{2.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{2.0} + \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{2.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{20} * (\textbf{20}-1) / 2$ $= \textbf{190}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{360.667}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{190} \pm \textbf{2.576} * \textbf{360.667}^{1/2}) / 2$ $= [\ \textbf{70.539}, \textbf{119.461}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{0.0}, \textbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-25

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **36.1** / **4** = **9.025**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**780.85 - 1303.21/4**) / (**4**-1))^{½} = **12.316**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**^{½} = **9.025 - 2.353** * **12.316/4**^{½} = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**^{½} = **9.025** + **2.353** * **12.316/4**^{½} = **23.512**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **17** * (**17**-1) / 2 = **136**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **320.667**	Variance estimate for slope.
8	M(S) = (**N' ± Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**136** ± **2.576** * **320.667**^{½}) / 2 = [**44.936**, **91.064**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-25

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute the mean of the last 4 measurements.
	= **869.0** / **4**	
	= **217.25**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$	Compute sd of the last 4 measurements.
	= ((**307335.0** - **755161.0**/**4**) / (**4**-1))$^{1/2}$	
	= **198.784**	
3	LCL = $\overline{X}$ - **tS**/**N**$^{1/2}$	Compute lower confidence limit for the mean of the last 4 measurements.
	= **217.25** - **2.353** * **198.784**/**4**$^{1/2}$	
	= **0.0**	
4	UCL = $\overline{X}$ + **tS**/**N**$^{1/2}$	Compute upper confidence limit for the mean of the last 4 measurements.
	= **217.25** + **2.353** * **198.784**/**4**$^{1/2}$	
	= **451.077**	
5	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **17** * (**17**-1) / 2	
	= **136**	
6	S = **2.902**	Sen's estimator of trend.
7	var(S) = **587.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
	= (**136** ± **2.576** * **587.333**$^{1/2}$) / 2	
	= [**36.785**, **99.215**]	
9	CL(S) = [**-3.072**, **10.448**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-25

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-25

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-25

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-25

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-25

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-26

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **141.1** / **4** = **35.275**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**10975.93** - **19909.21/4**) / (**4**-1))$^{1/2}$ = **44.716**	Compute sd of the last 4 measurements.
3	LCL = $\overline{\mathbf{X}}$ - **tS/N**$^{1/2}$ = **35.275 - 2.353** * **44.716/4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{\mathbf{X}}$ + **tS/N**$^{1/2}$ = **35.275** + **2.353** * **44.716/4**$^{1/2}$ = **87.874**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
6	S = **4.056**	Sen's estimator of trend.
7	var(S) = **817.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**171** ± **2.576** * **817.0**$^{1/2}$) / 2 = [**48.685**, **122.315**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-4.936**, **13.144**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-26

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2105.1** / **4** = **526.275**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**1.86**x**10^6** - **4.43**x**10^6**/**4**) / (**4**-1))^{½} = **502.054**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **526.275** - **2.353** * **502.054**/**4**^{½} = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **526.275** + **2.353** * **502.054**/**4**^{½} = **1116.835**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **18** * (**18**-1) / 2 = **153**	Number of sample pairs during trend detection period.
6	S = **-2.67**	Sen's estimator of trend.
7	var(S) = **696.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**153** ± **2.576** * **696.0**^{½}) / 2 = [**42.52**, **110.48**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-108.686**, **127.081**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-26

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-26

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-26

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-26

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-26

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-4

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **227.1** / **4** = **56.775**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**12947.53** - **51574.41**/**4**) / (**4**-1))^{½} = **4.24**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **56.775** - **2.353** * **4.24**/**4**^{½} = **51.788**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **56.775** + **2.353** * **4.24**/**4**^{½} = **61.762**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.114**	Sen's estimator of trend.
7	var(S) = **1096.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **1096.667**^{½}) / 2 = [**62.347**, **147.653**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-2.034**, **2.021**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-4

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{3930.0} / \mathbf{4}$ $= \mathbf{982.5}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{3.87}\times\mathbf{10^6} - \mathbf{1.54}\times\mathbf{10^7}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{61.847}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{982.5 - 2.353 * 61.847/4}^{1/2}$ $= \mathbf{909.751}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{982.5 + 2.353 * 61.847/4}^{1/2}$ $= \mathbf{1055.249}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{21} * (\mathbf{21}-1) / 2$ $= \mathbf{210}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{-53.903}$	Sen's estimator of trend.
7	$var(S) = \mathbf{1090.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{1090.0}^{1/2}) / 2$ $= [\ \mathbf{62.476}, \mathbf{147.524}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{-87.699}, \mathbf{-23.043}\ ]$	Two-sided confidence interval for slope.
10	$UCL(S) < 0$	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-4

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **3.0** / **4** = **0.75**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{3.72} - \mathbf{9.0/4}) / (\mathbf{4}-1))^{½}$ = **0.7**	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS/N}^{½}$ $= \mathbf{0.75} - \mathbf{2.353} * \mathbf{0.7/4}^{½}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS/N}^{½}$ $= \mathbf{0.75} + \mathbf{2.353} * \mathbf{0.7/4}^{½}$ = **1.573**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **399.667**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{399.667}^{½}) / 2$ = [**79.251**, **130.749**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-4

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **45.9** / **4** = **11.475**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**1197.21** - **2106.81**/**4**) / (**4**-1))^{½} = **14.95**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **11.475** - **2.353** * **14.95**/**4**^{½} = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **11.475** + **2.353** * **14.95**/**4**^{½} = **29.061**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **146.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **146.667**^{½}) / 2 = [**89.402**, **120.598**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-4

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **15.5** / **4** = **3.875**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**125.87** - **240.25**/**4**) / (**4**-1))$^{1/2}$ = **4.684**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$ = **3.875** - **2.353** * **4.684**/**4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$ = **3.875** + **2.353** * **4.684**/**4**$^{1/2}$ = **9.384**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1084.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **1084.667**$^{1/2}$) / 2 = [**62.581**, **147.419**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.227**, **0.099**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-4

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{14.7} / \mathbf{4}$ $= \mathbf{3.675}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{87.69} - \mathbf{216.09}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{3.35}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{3.675} - \mathbf{2.353} * \mathbf{3.35}/\mathbf{4}^{1/2}$ $= \mathbf{0.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{3.675} + \mathbf{2.353} * \mathbf{3.35}/\mathbf{4}^{1/2}$ $= \mathbf{7.616}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{440.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} \pm \mathbf{2.576} * \mathbf{440.667}^{1/2}) / 2$ $= [\ \mathbf{88.462}, \mathbf{142.538}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-4

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **58.8** / **4** = **14.7**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**2799.84** - **3457.44**/**4**) / (**4**-1))^{½} = **25.4**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **14.7** - **2.353** * **25.4**/**4**^{½} = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **14.7** + **2.353** * **25.4**/**4**^{½} = **44.578**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **924.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**231** ± **2.576** * **924.0**^{½}) / 2 = [**76.348**, **154.652**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-5

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **329.8** / **4** = **82.45**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{39594.3} - \mathbf{108768.04/4}) / (\mathbf{4}-1))^{1/2}$ = **64.297**	Compute sd of the last 4 measurements.
3	$LCL = \mathbf{\bar{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{82.45} - \mathbf{2.353} * \mathbf{64.297/4}^{1/2}$ = **6.818**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \mathbf{\bar{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{82.45} + \mathbf{2.353} * \mathbf{64.297/4}^{1/2}$ = **158.082**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **5.276**	Sen's estimator of trend.
7	var(S) = **1096.667**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{1096.667}^{1/2}) / 2$ = [**62.347**, **147.653**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.202**, **14.089**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-5

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1446.0** / **4** = **361.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**547390.0** - **2.09**x**10^6/4**) / (**4**-1))$^{1/2}$ = **90.666**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$ = **361.5** - **2.353** * **90.666/4**$^{1/2}$ = **254.851**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**$^{1/2}$ = **361.5** + **2.353** * **90.666/4**$^{1/2}$ = **468.149**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **17.049**	Sen's estimator of trend.
7	var(S) = **1096.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **1096.667**$^{1/2}$) / 2 = [**62.347**, **147.653**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**9.641**, **30.657**]	Two-sided confidence interval for slope.
10	LCL(S) > 0	**Significant increasing trend.**

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-5

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2.1** / **4** = **0.525**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{1.29} - \mathbf{4.41/4}) / (\mathbf{4}-1))^{1/2}$ = **0.25**	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{0.525} - \mathbf{2.353} * \mathbf{0.25/4}^{1/2}$ = **0.231**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{0.525} + \mathbf{2.353} * \mathbf{0.25/4}^{1/2}$ = **0.819**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **602.333**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{210} \pm \mathbf{2.576} * \mathbf{602.333}^{1/2}) / 2$ = [**73.389**, **136.611**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-5

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{16.0} / \textbf{4}$ $= \textbf{4.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{64.0} - \textbf{256.0}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{4.0} - \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{4.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{4.0} + \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{4.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{21} * (\textbf{21}-1) / 2$ $= \textbf{210}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{210} \pm \textbf{2.576} * \textbf{0.0}^{1/2}) / 2$ $= [\ \textbf{105.0}, \textbf{105.0}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{0.0}, \textbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-5

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **21.1** / **4** = **5.275**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**153.45** - **445.21**/**4**) / (**4**-1))^{½} = **3.748**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **5.275** - **2.353** * **3.748**/**4**^{½} = **0.866**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **5.275** + **2.353** * **3.748**/**4**^{½} = **9.684**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.333**	Sen's estimator of trend.
7	var(S) = **1095.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **1095.667**^{½}) / 2 = [**62.366**, **147.634**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.759**, **0.024**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-5

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **52.9** / **4** = **13.225**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**948.33** - **2798.41**/**4**) / (**4**-1))^{½} = **9.105**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **13.225** - **2.353** * **9.105**/**4**^{½} = **2.514**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **13.225** + **2.353** * **9.105**/**4**^{½} = **23.936**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.361**	Sen's estimator of trend.
7	var(S) = **971.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **971.667**^{½}) / 2 = [**64.851**, **145.149**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **1.46**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-5

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **53.0** / **4** = **13.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**1269.58** - **2809.0**/**4**) / (**4**-1))$^{1/2}$ = **13.752**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **13.25** - **2.353** * **13.752**/**4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **13.25** + **2.353** * **13.752**/**4**$^{1/2}$ = **29.426**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
6	S = **-0.082**	Sen's estimator of trend.
7	var(S) = **1256.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**231** ± **2.576** * **1256.667**$^{1/2}$) / 2 = [**69.841**, **161.159**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.756**, **0.526**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic, total (ug/L) at MW-9

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **20.5** / **4** = **5.125**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**123.33** - **420.25/4**) / (**4**-1))$^{1/2}$ = **2.468**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$ = **5.125** - **2.353** * **2.468/4**$^{1/2}$ = **2.222**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**$^{1/2}$ = **5.125** + **2.353** * **2.468/4**$^{1/2}$ = **8.028**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **884.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **884.0**$^{1/2}$) / 2 = [**66.705**, **143.295**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.646**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW-9

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1157.0** / **4** = **289.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**335355.0** - **1.34**x**10^6**/**4**) / (**4**-1))^{½} = **15.196**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **289.25** - **2.353** * **15.196**/**4**^{½} = **271.375**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **289.25** + **2.353** * **15.196**/**4**^{½} = **307.125**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **1.538**	Sen's estimator of trend.
7	var(S) = **1092.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **1092.0**^{½}) / 2 = [**62.437**, **147.563**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-2.287**, **5.547**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW-9

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1.6** / **4** = **0.4**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**0.64** - **2.56**/**4**) / (**4**-1))^{½} = **4.21**x**10^{-9}**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **0.4** - **2.353** * **4.21**x**10^{-9}**/**4**^{½} = **0.4**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **0.4** + **2.353** * **4.21**x**10^{-9}**/**4**^{½} = **0.4**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **146.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **146.667**^{½}) / 2 = [**89.402**, **120.598**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chromium, total (ug/L) at MW-9

Step	Equation	Description
1	$\overline{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{16.0} / \textbf{4}$ $= \textbf{4.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{64.0} - \textbf{256.0}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{4.0} - \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{4.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{4.0} + \textbf{2.353} * \textbf{0.0}/\textbf{4}^{1/2}$ $= \textbf{4.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{21} * (\textbf{21}-1) / 2$ $= \textbf{210}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{210} \pm \textbf{2.576} * \textbf{0.0}^{1/2}) / 2$ $= [\ \textbf{105.0}, \textbf{105.0}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{0.0}, \textbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW-9

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **19.1** / **4** = **4.775**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**91.63 - 364.81/4**) / (**4**-1))$^{1/2}$ = **0.377**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$ = **4.775 - 2.353** * **0.377/4**$^{1/2}$ = **4.331**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**$^{1/2}$ = **4.775** + **2.353** * **0.377/4**$^{1/2}$ = **5.219**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.102**	Sen's estimator of trend.
7	var(S) = **1087.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**210** ± **2.576** * **1087.0**$^{1/2}$) / 2 = [**62.535**, **147.465**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.177**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Copper, total (ug/L) at MW-9

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.0** / **4** = **2.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**16.0** - **64.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **2.0** - **2.353** * **0.0**/**4**^{½} = **2.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **2.0** + **2.353** * **0.0**/**4**^{½} = **2.0**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **764.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**231** ± **2.576** * **764.333**^{½}) / 2 = [**79.891**, **151.109**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.424**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW-9

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **38.5** / **4** = **9.625**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**370.93** - **1482.25/4**) / (**4**-1))^{½} = **0.35**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**^{½} = **9.625** - **2.353** * **0.35/4**^{½} = **9.213**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**^{½} = **9.625** + **2.353** * **0.35/4**^{½} = **10.037**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
6	S = **-0.205**	Sen's estimator of trend.
7	var(S) = **1088.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**210** ± **2.576** * **1088.0**^{½}) / 2 = [**62.516**, **147.484**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.337**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Attachment D

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-12	13	8	38			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-12	13	9	39	6.1846	2.8933	5.0000	5.6000	20.4569	17.7023	24.9913	normal		
Barium, total	ug/L	MW-12	13	8	38	396.8462	79.3304	324.0000	310.0000	396.8462	396.8462	912.4936	normal		
Beryllium, total	ug/L	MW-12	13	8	38			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-12	13	8	38			0.8000	0.8000			1.6000	nonpar	.99	**
Chromium, total	ug/L	MW-12	13	8	38			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-12	13	8	38	6.4692	5.0981	3.4000	1.1000	6.4692	6.4692	39.6069	normal		
Copper, total	ug/L	MW-12	13	8	38			4.0000	4.0000			6.3000	nonpar	.99	**
Lead, total	ug/L	MW-12	13	8	38			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-12	13	8	38	8.6846	4.9056	6.1000	4.0000	8.6846	8.6846	40.5709	normal		
Selenium, total	ug/L	MW-12	13	8	38			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-12	13	8	38			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-12	13	8	38			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-12	13	8	38			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-12	12	8	38								nonpar *		**
Antimony, total	ug/L	MW-15R	13	8	33			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-15R	13	8	33	28.6385	7.9813	13.3000	17.3000	28.6385	28.6385	80.5168	normal		
Barium, total	ug/L	MW-15R	13	8	33	499.6923	68.6384	318.0000	332.0000	499.6923	499.6923	945.8419	normal		
Beryllium, total	ug/L	MW-15R	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-15R	13	8	33			0.8000	0.8000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-15R	13	8	33			8.0000	8.0000			13.7000	nonpar	.99	**
Cobalt, total	ug/L	MW-15R	13	8	33	3.8462	1.1738	2.2000	3.3000	3.8462	3.8462	11.4755	normal		
Copper, total	ug/L	MW-15R	12	8	33	4.5583	1.3228	4.0000	4.0000	4.5583	4.5583	13.1568	normal		
Lead, total	ug/L	MW-15R	13	8	33			4.0000	4.0000			10.0000	nonpar	.99	**
Nickel, total	ug/L	MW-15R	11	8	33	5.0182	1.9312	4.0000	4.1000	5.0182	5.0182	17.5712	normal		
Selenium, total	ug/L	MW-15R	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-15R	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-15R	13	8	33			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-15R	13	8	33			20.0000	20.0000			27.9000	nonpar	.99	**
Zinc, total	ug/L	MW-15R	13	8	33	20.3769	23.4020	20.0000	20.0000	20.3769	20.3769	172.4897	normal		
Antimony, total	ug/L	MW-20R	13	8	33			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-20R	12	8	33	45.5667	19.8645	75.0000	21.5000	60.1016	45.5667	174.6860	normal		
Barium, total	ug/L	MW-20R	13	8	33	827.3846	158.7737	821.0000	657.0000	827.3846	827.3846	1859.4137	normal		
Beryllium, total	ug/L	MW-20R	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-20R	13	8	33			0.8000	0.8000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW-20R	13	8	33			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-20R	13	8	33	1.0231	0.2204	0.4000	0.6000	1.0231	1.0231	2.4559	normal		
Copper, total	ug/L	MW-20R	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-20R	13	8	33			4.0000	4.0000			4.1000	nonpar	.99	**
Nickel, total	ug/L	MW-20R	12	8	33								nonpar *		**
Selenium, total	ug/L	MW-20R	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-20R	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-20R	13	8	33			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-20R	13	8	33			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-20R	12	8	33	9.7833	3.2566	20.0000	20.0000	9.7833	9.7833	30.9509	normal		
Antimony, total	ug/L	MW-21	13	8	33			2.0000	2.0000			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 verification resample (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-21	13	8	33	5.9769	2.2170	4.0000	6.5000	5.9769	5.9769	20.3877	normal		
Barium, total	ug/L	MW-21	13	8	33	689.6154	430.9446	369.0000	517.0000	689.6154	689.6154	3490.7553	normal		
Beryllium, total	ug/L	MW-21	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-21	13	8	33	0.9000	0.2769	0.8000	0.8000	0.9000	0.9000	2.6998	normal		
Chromium, total	ug/L	MW-21	13	8	33			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-21	13	8	33	2.0077	2.3450	0.4000	1.0000	2.0077	2.0077	17.2503	normal		
Copper, total	ug/L	MW-21	13	8	33			4.0000	4.0000			5.6000	nonpar	.99	**
Lead, total	ug/L	MW-21	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-21	13	8	33	7.4000	4.5527	4.0000	8.5000	7.4000	7.4000	36.9923	normal		
Selenium, total	ug/L	MW-21	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-21	13	8	33			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-21	13	8	33			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-21	13	8	33			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-21	13	8	33	12.8000	9.1223	20.0000	20.0000	12.8000	12.8000	72.0951	normal		
Antimony, total	ug/L	MW-22	13	6	30			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-22	13	6	30	90.7692	98.6890	59.8000	63.1000	90.7692	90.7692	732.2477	normal		
Barium, total	ug/L	MW-22	13	6	30	335.3846	53.2127	439.0000	418.0000	399.2081	441.9140	681.2671	normal		
Beryllium, total	ug/L	MW-22	13	6	30			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-22	13	6	30			0.8000	0.8000			1.2000	nonpar	.99	**
Chromium, total	ug/L	MW-22	13	6	30			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-22	13	6	30	3.5615	1.0492	1.8000	4.0000	3.5615	3.5615	10.3816	normal		
Copper, total	ug/L	MW-22	13	6	30			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW-22	13	6	30			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-22	13	6	30	8.1077	3.8727	4.0000	7.4000	8.1077	8.1077	33.2799	normal		
Selenium, total	ug/L	MW-22	13	6	30			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-22	13	6	30			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-22	13	6	30			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-22	13	6	30			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-22	13	6	30			20.0000	20.0000			37.0000	nonpar	.99	**
Antimony, total	ug/L	MW-4	13	8	37			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-4	13	8	37	60.8538	13.9042	57.2000	58.4000	60.8538	60.8538	151.2314	normal		
Barium, total	ug/L	MW-4	13	8	37	1298.4615	216.7889	1010.0000	1020.0000	1298.4615	1298.4615	2707.5895	normal		
Beryllium, total	ug/L	MW-4	13	8	37			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-4	13	8	37			0.8000	0.8000			1.7000	nonpar	.99	**
Chromium, total	ug/L	MW-4	13	8	37			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-4	13	8	37	1.8846	0.9839	1.5000	1.5000	2.4719	1.8846	8.2800	normal		
Copper, total	ug/L	MW-4	13	9	38			4.0000	4.0000			4.6000	nonpar	.99	**
Lead, total	ug/L	MW-4	13	8	37			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-4	13	9	38			4.0000	4.0000			11.3000	nonpar	.99	**
Selenium, total	ug/L	MW-4	13	8	37			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-4	13	8	37			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-4	13	8	37			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-4	13	8	37			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-4	13	8	37	25.0077	33.8016	20.0000	20.0000	25.0077	25.0077	244.7180	normal		
Antimony, total	ug/L	MW-5	13	8	38			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW-5	13	8	38	19.2769	16.8417	166.0000	9.7000	229.4442	73.1442	128.7478	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 verification resample (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-5	13	8	38	188.3846	32.6408	415.0000	269.0000	529.0585	383.0585	400.5499	normal		
Beryllium, total	ug/L	MW-5	13	8	38			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW-5	12	8	38								nonpar *		**
Chromium, total	ug/L	MW-5	13	8	38			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW-5	13	8	38	5.6692	2.2228	2.6000	10.6000	5.6692	8.9329	20.1171	normal		
Copper, total	ug/L	MW-5	13	8	38	4.3846	1.0189	26.8000	7.3000	30.0871	10.5871	11.0072	normal		
Lead, total	ug/L	MW-5	13	8	38			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW-5	14	8	39	8.3429	4.5574	9.0000	33.3000	8.3429	29.8819	37.9663	normal		
Selenium, total	ug/L	MW-5	13	8	38			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW-5	13	8	38			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW-5	13	8	38			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW-5	13	8	38			20.0000	20.0000			20.0000	nonpar	.99	**
Zinc, total	ug/L	MW-5	13	8	38	15.4385	20.1427	20.0000	20.0000	15.4385	15.4385	146.3659	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 verification resample (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
Zinc, total	ug/L	MW-12	09/07/2018	98.8000		10/16/2014-09/15/2020	13	0.6174
Copper, total	ug/L	MW-15R	10/16/2014	14.2000		10/16/2014-09/15/2020	13	0.6174
Nickel, total	ug/L	MW-15R	10/16/2014	15.0000		10/16/2014-09/15/2020	13	0.6425
Nickel, total	ug/L	MW-15R	03/21/2018	20.0000	< 20.0000	10/16/2014-09/15/2020	13	0.6425
Arsenic, total	ug/L	MW-20R	09/07/2018	5.9000		10/16/2014-09/15/2020	13	0.6174
Nickel, total	ug/L	MW-20R	03/21/2018	20.0000	< 20.0000	10/16/2014-09/15/2020	13	0.6174
Zinc, total	ug/L	MW-20R	09/07/2018	115.0000		10/16/2014-09/15/2020	13	0.6174
Cadmium, total	ug/L	MW-5	10/09/2017	2.6000		10/16/2014-09/15/2020	13	0.6174

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.

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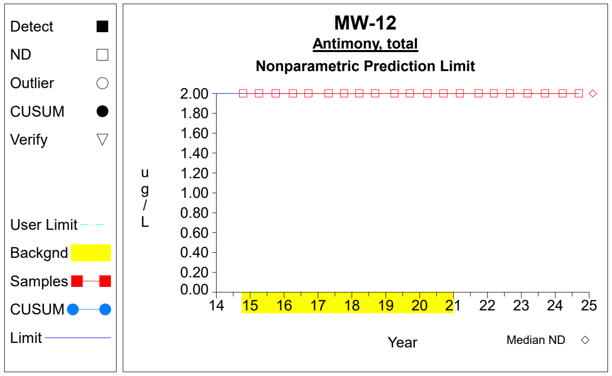
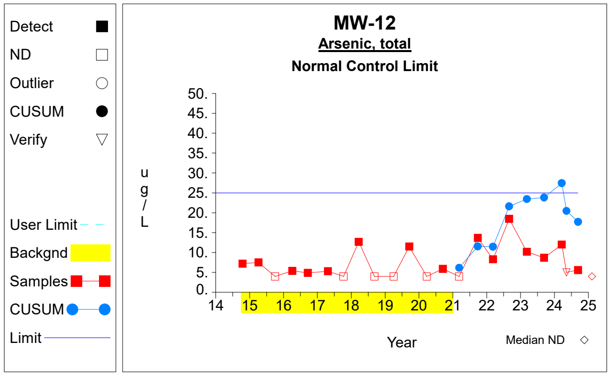
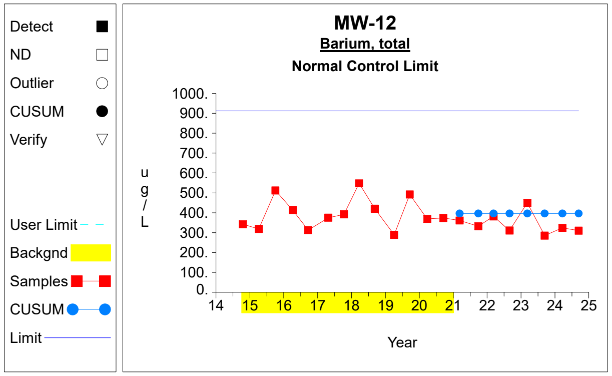
Intra-Well Control Charts / Prediction Limits



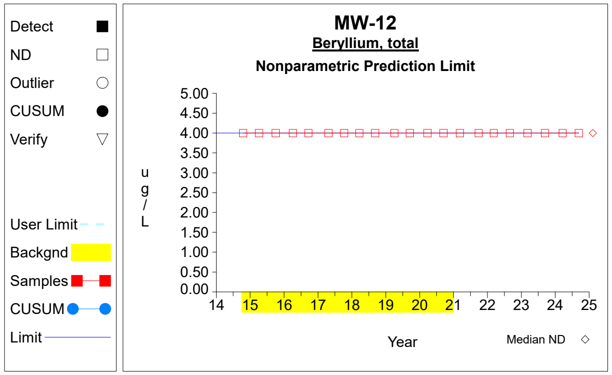
Graph 1



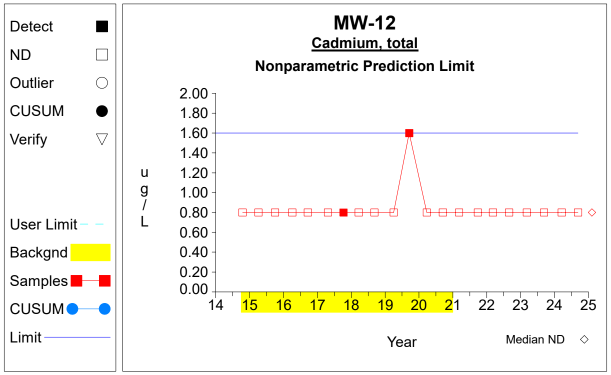
Graph 2



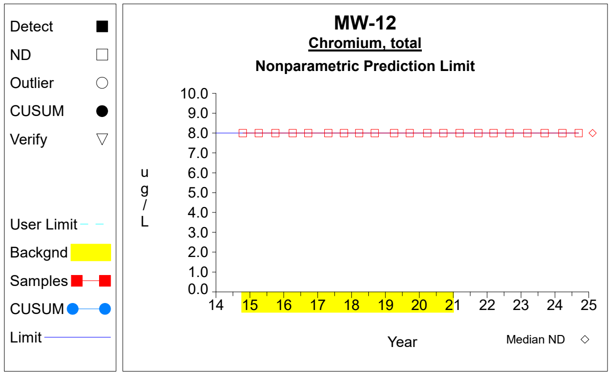
Graph 3



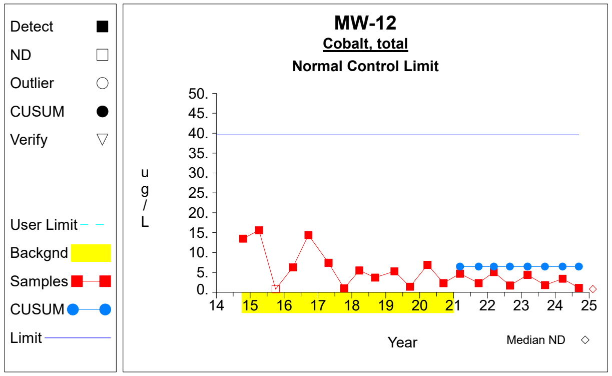
Graph 4



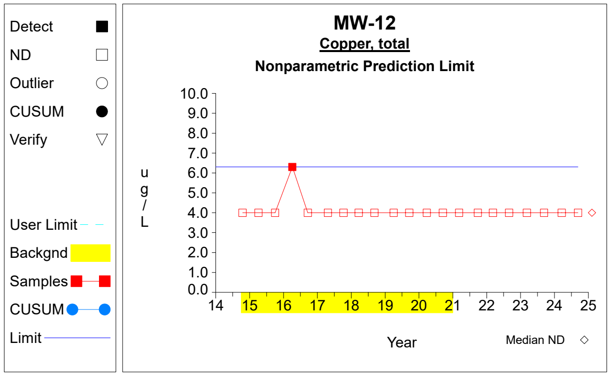
Graph 5



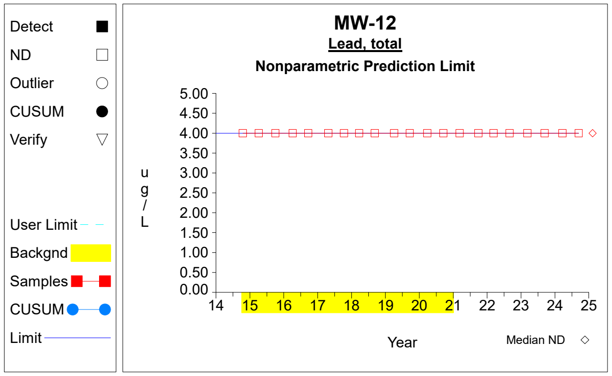
Graph 6



Graph 7



Graph 8



Graph 9

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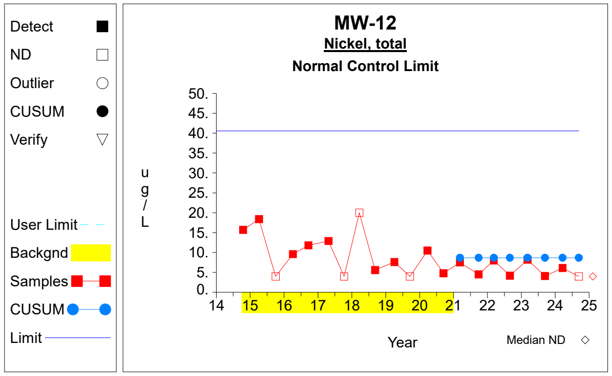
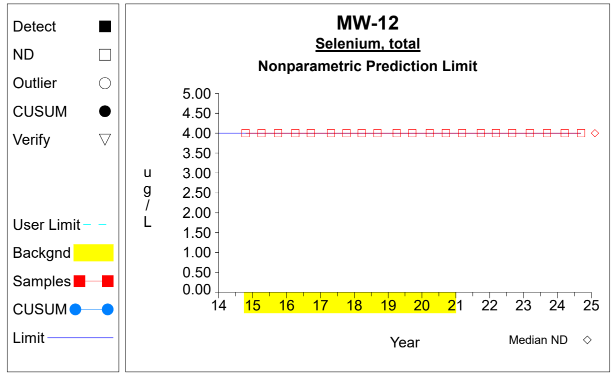
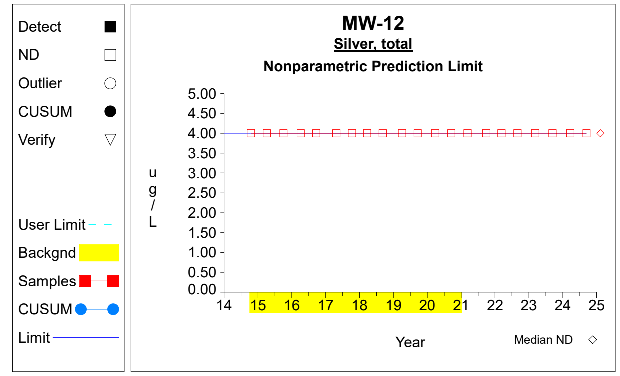
Intra-Well Control Charts / Prediction Limits



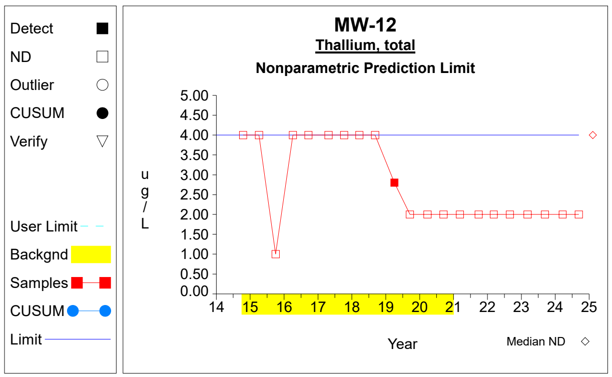
Graph 10



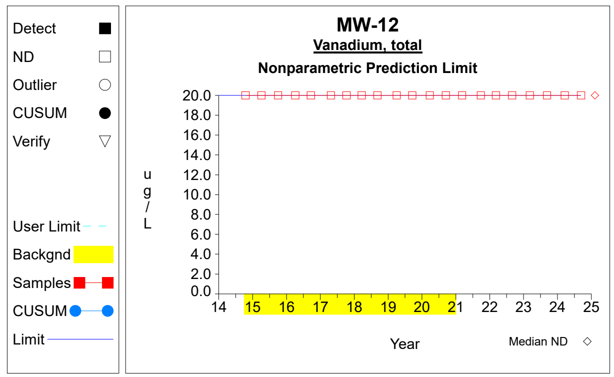
Graph 11



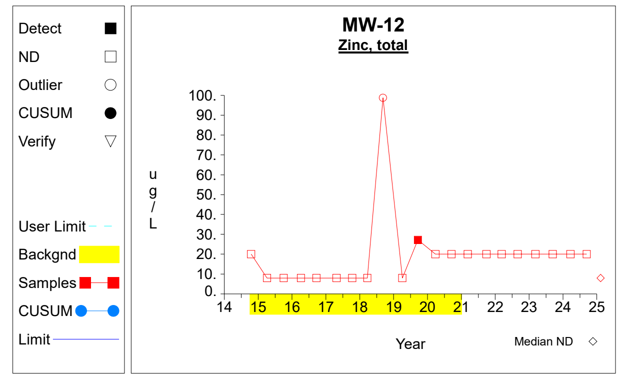
Graph 12



Graph 13

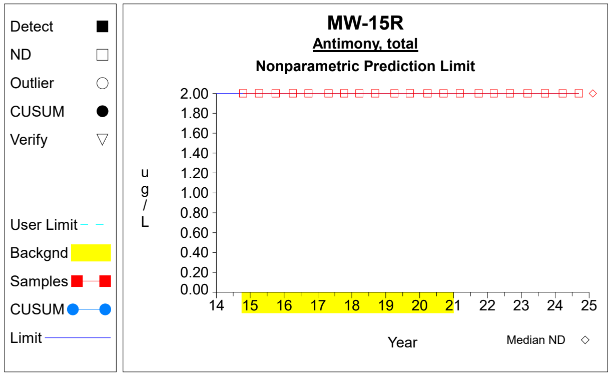


Graph 14

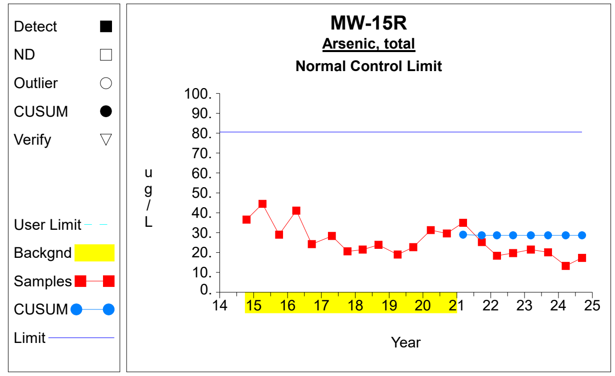


Graph 15

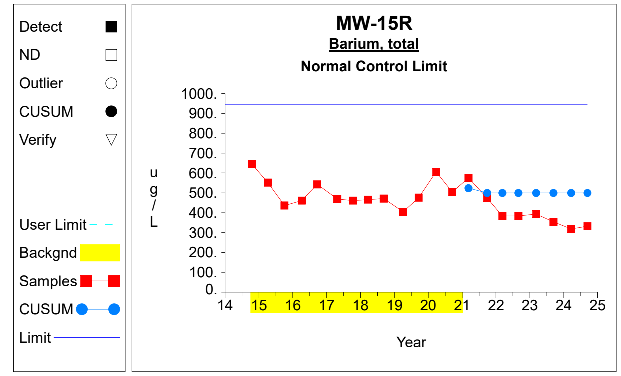
Intra-Well Control Charts / Prediction Limits



Graph 16



Graph 17



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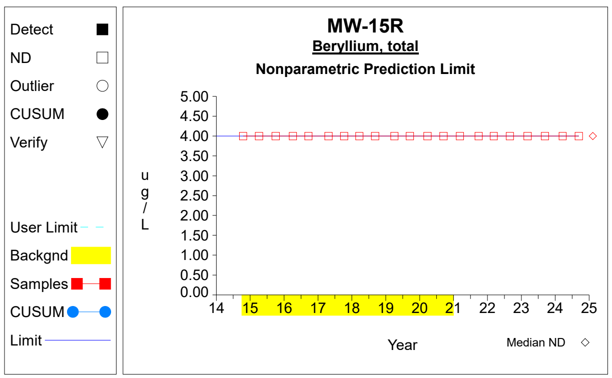

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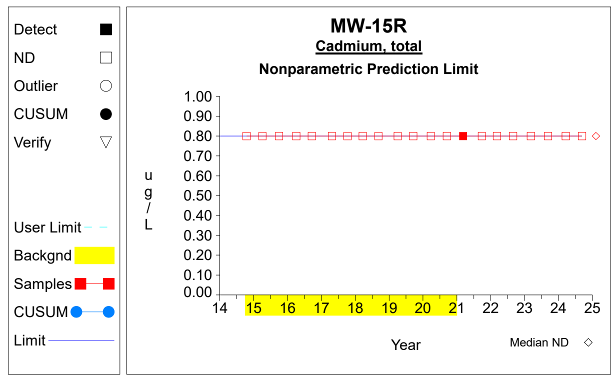

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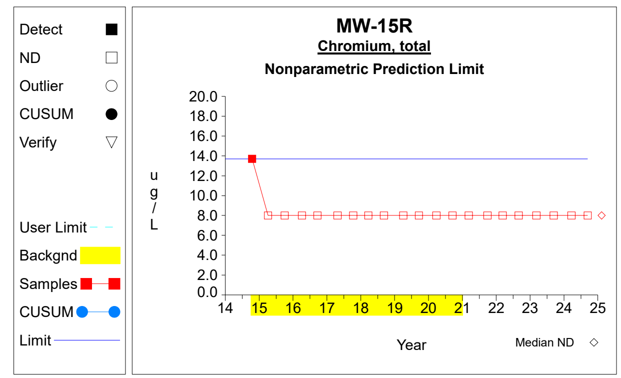

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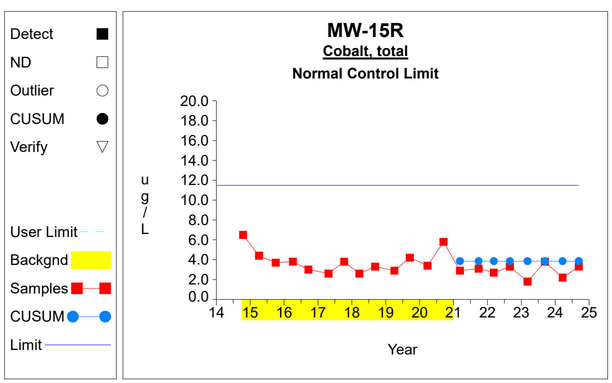

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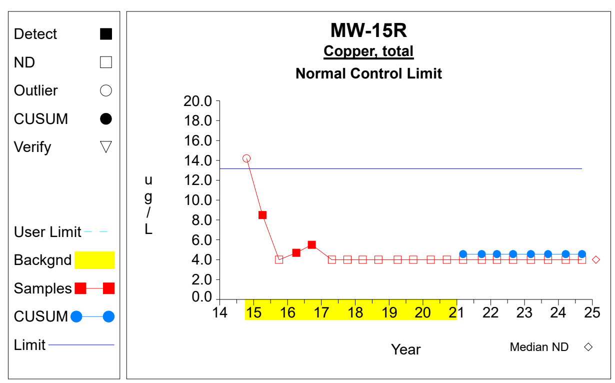

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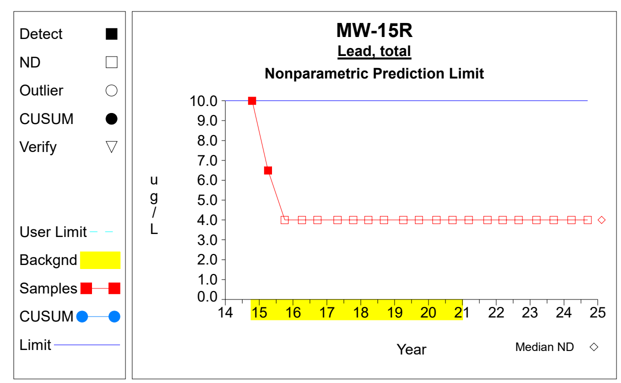
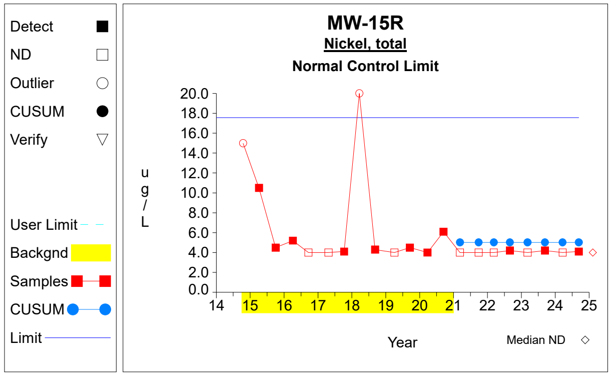


Graph 24

Intra-Well Control Charts / Prediction Limits



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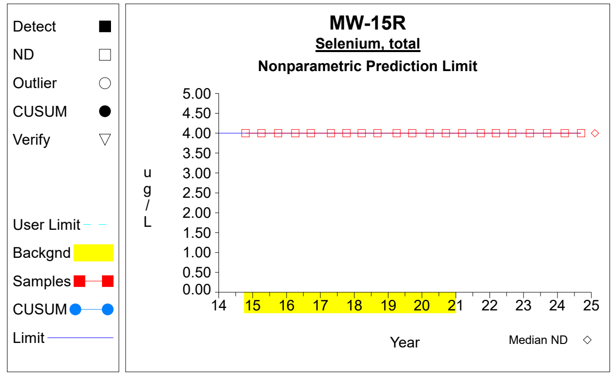

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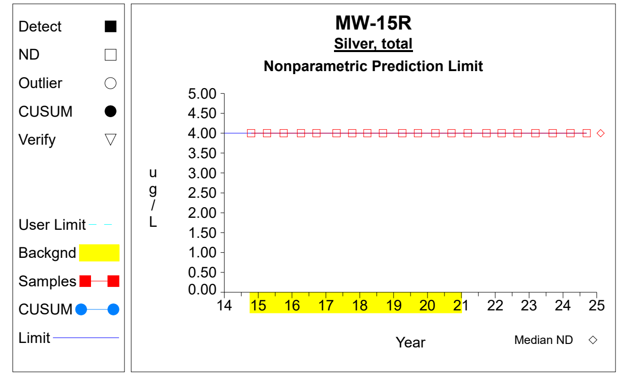

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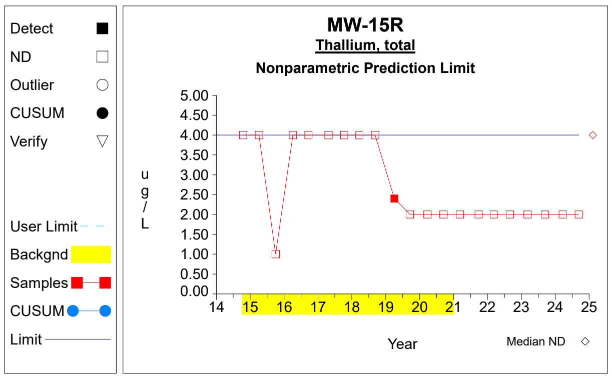

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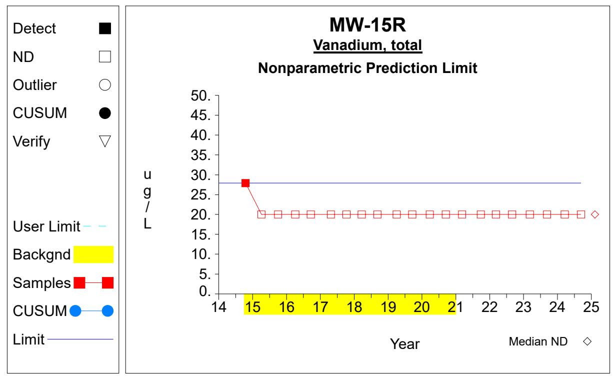
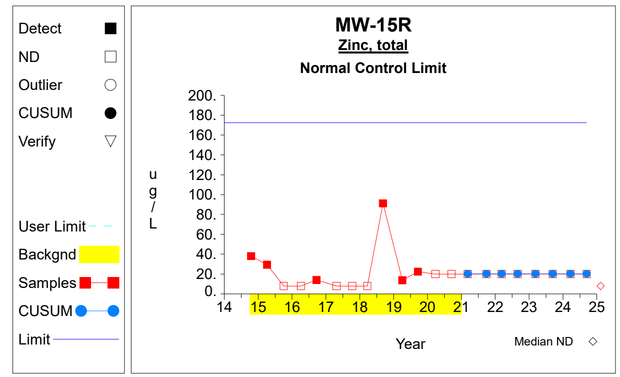
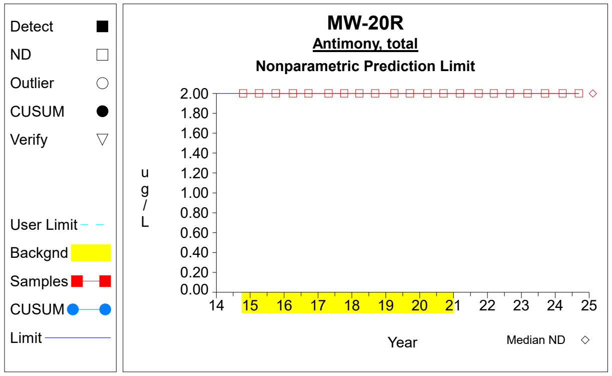


Graph 29



Graph 30

Intra-Well Control Charts / Prediction Limits



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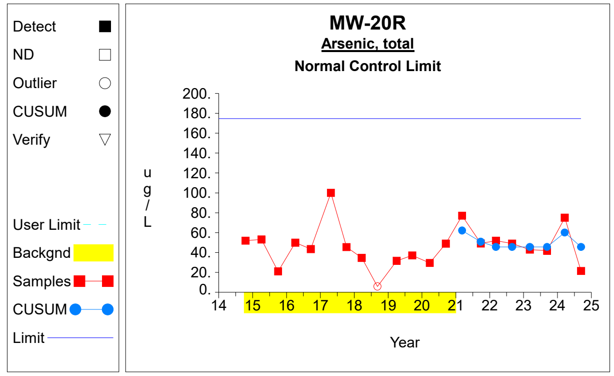

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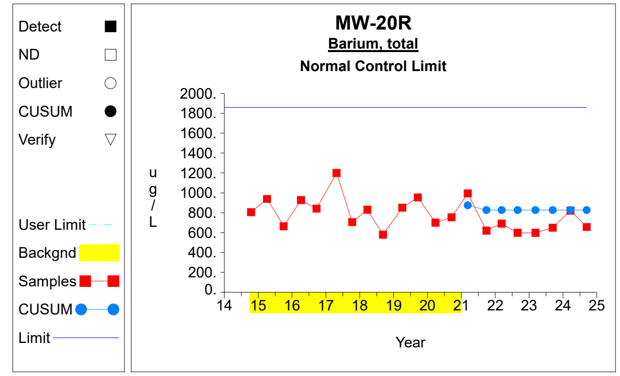

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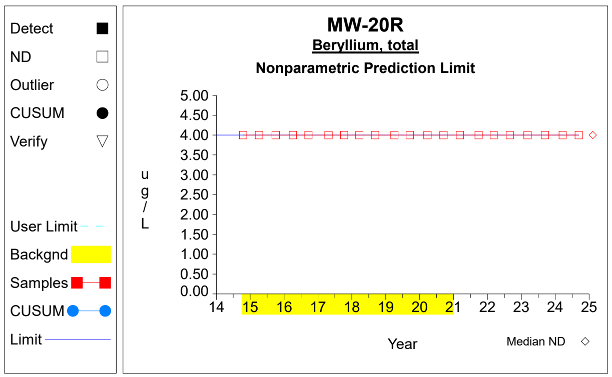

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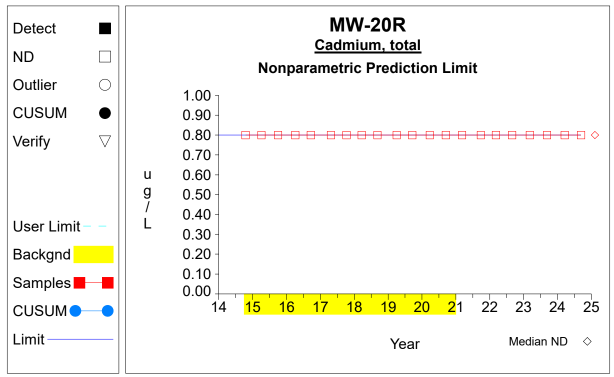

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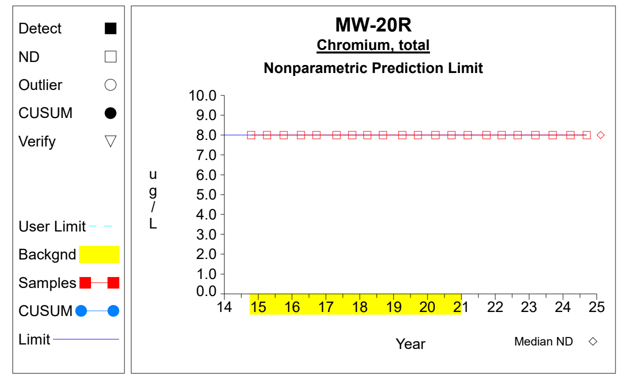

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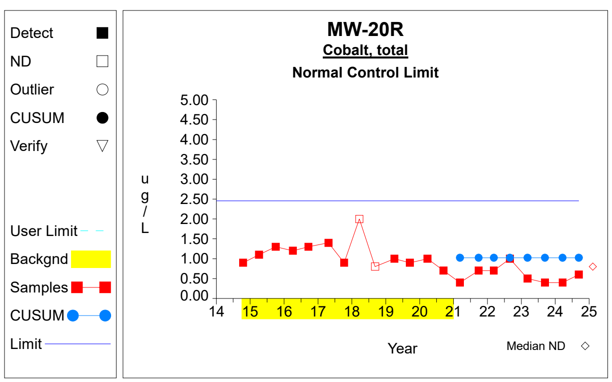

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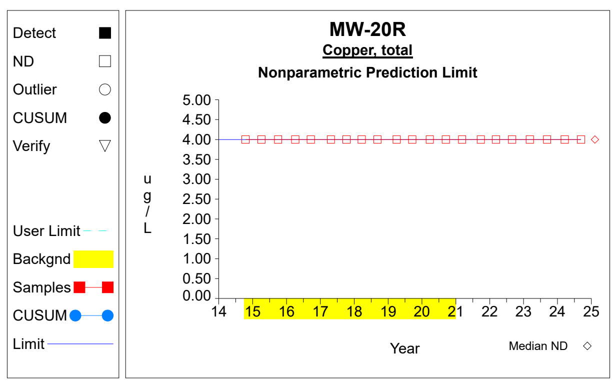

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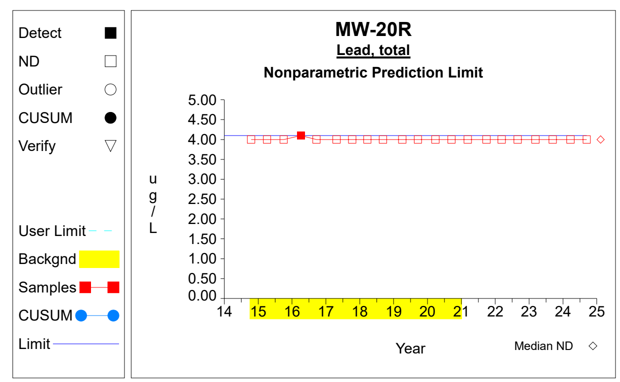
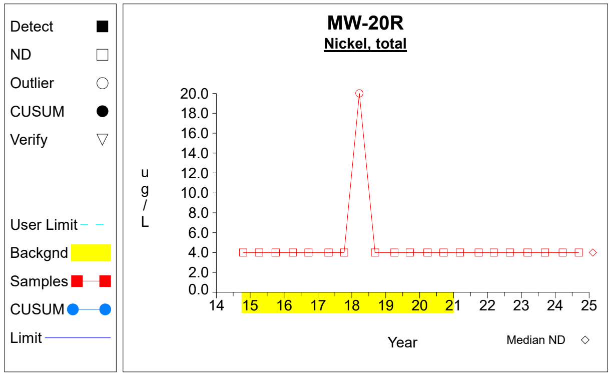
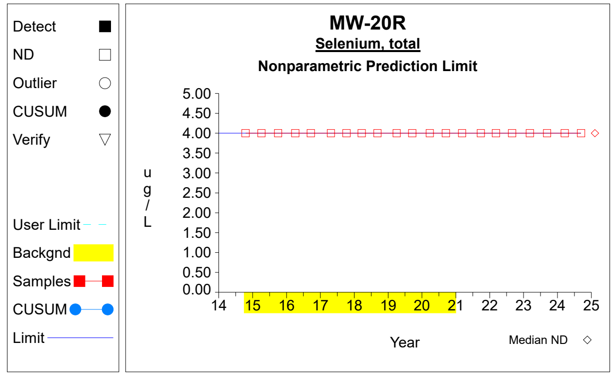


Graph 39

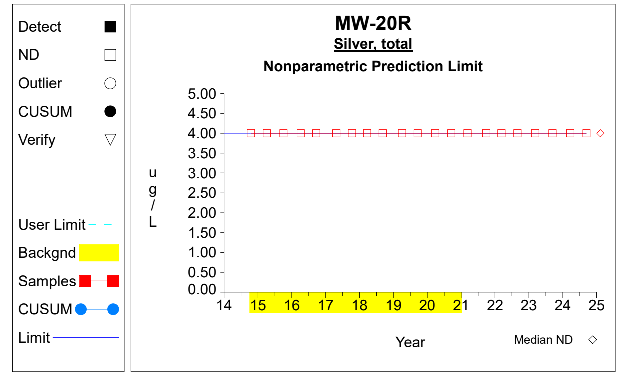
Intra-Well Control Charts / Prediction Limits



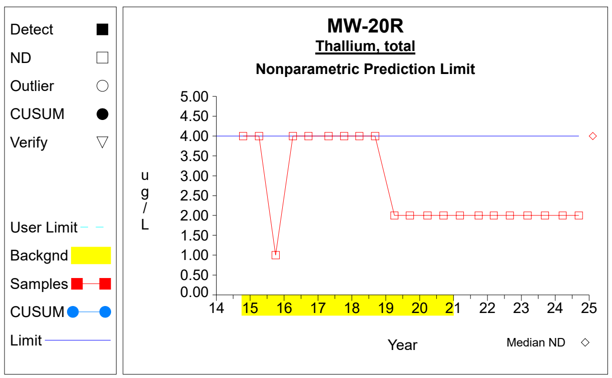
Graph 40



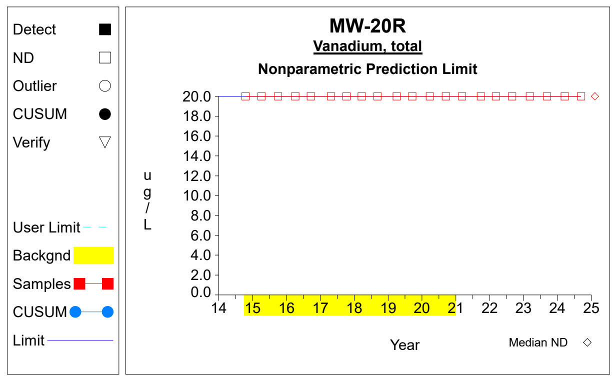
Graph 41



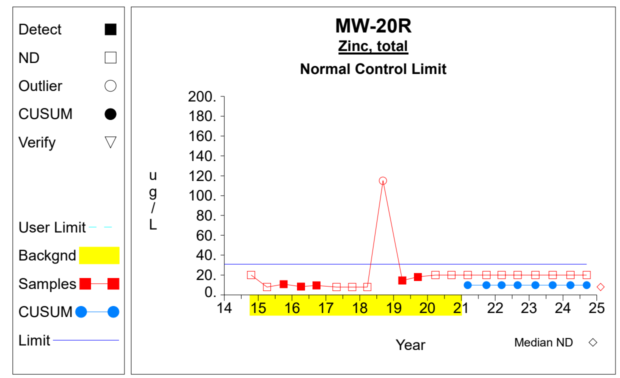
Graph 42



Graph 43



Graph 44



Graph 45

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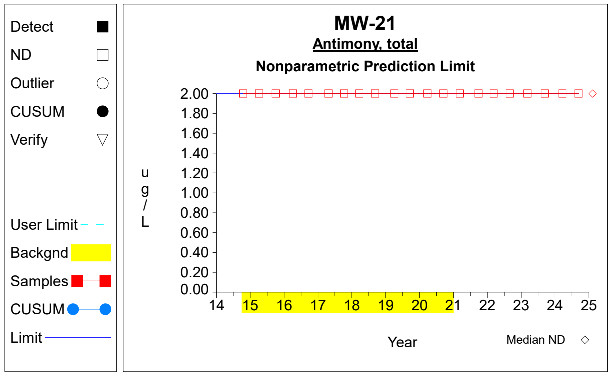
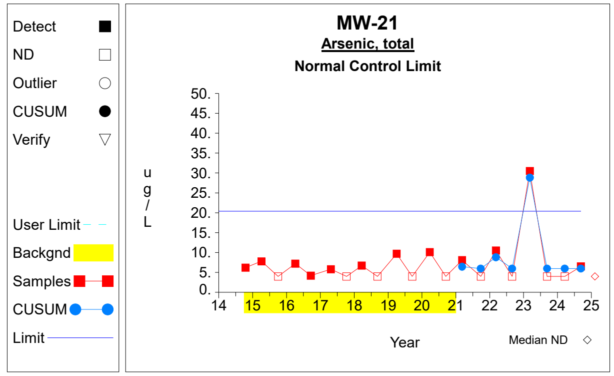
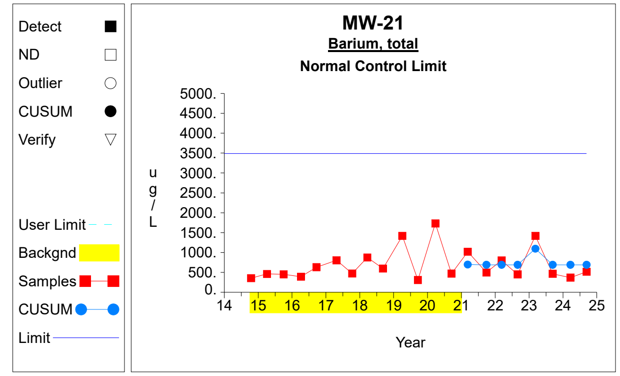
Intra-Well Control Charts / Prediction Limits



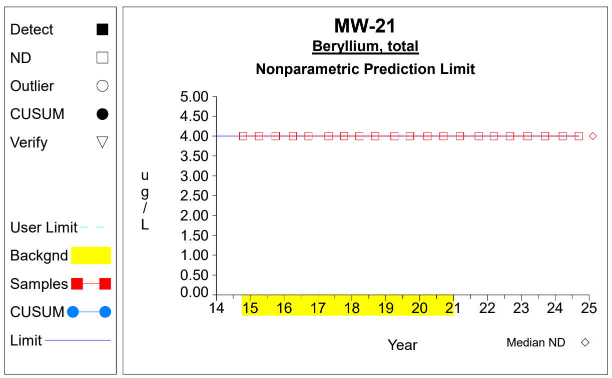
Graph 46



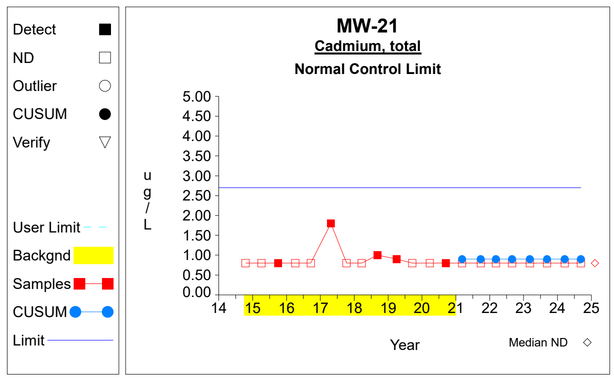
Graph 47



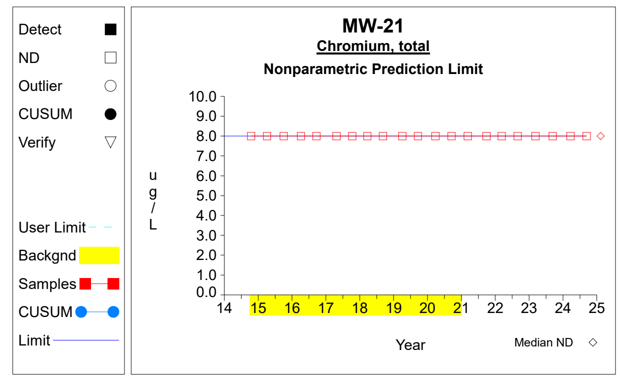
Graph 48



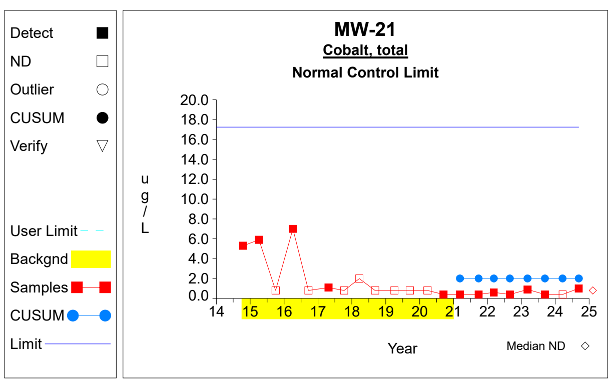
Graph 49



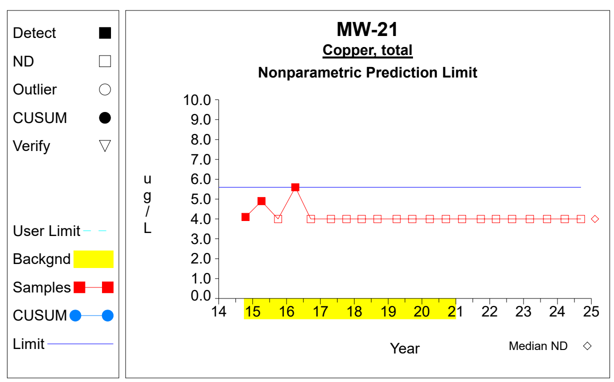
Graph 50



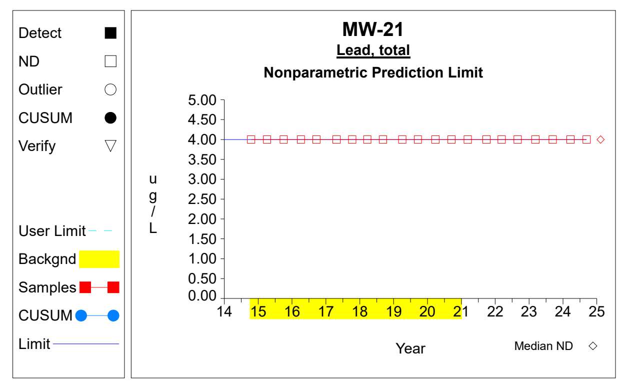
Graph 51



Graph 52



Graph 53



Graph 54

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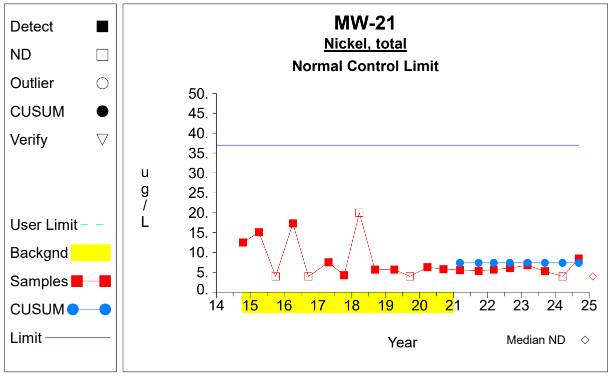
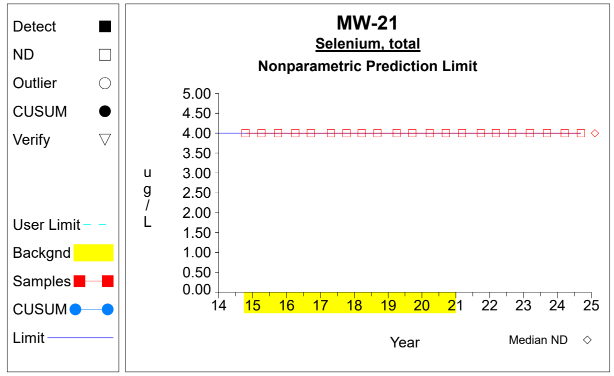
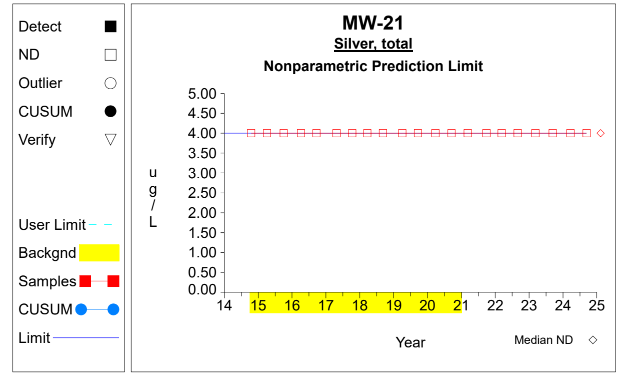
Intra-Well Control Charts / Prediction Limits



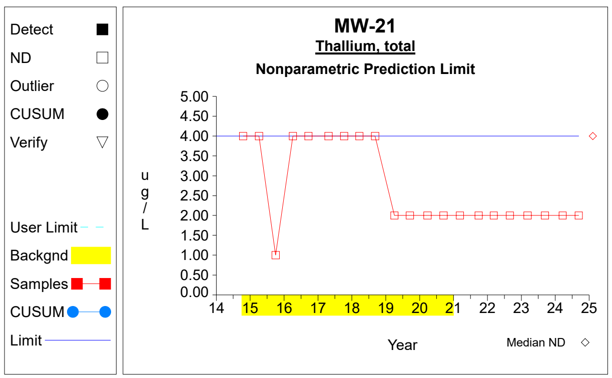
Graph 55



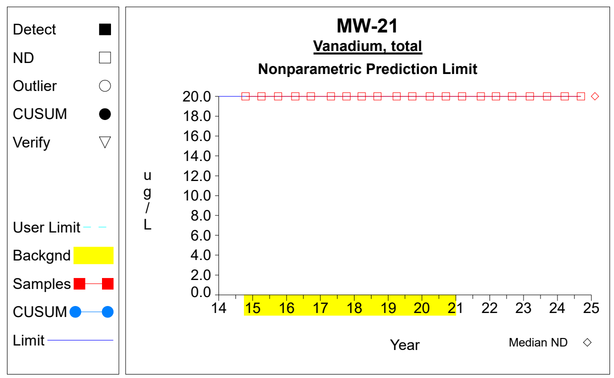
Graph 56



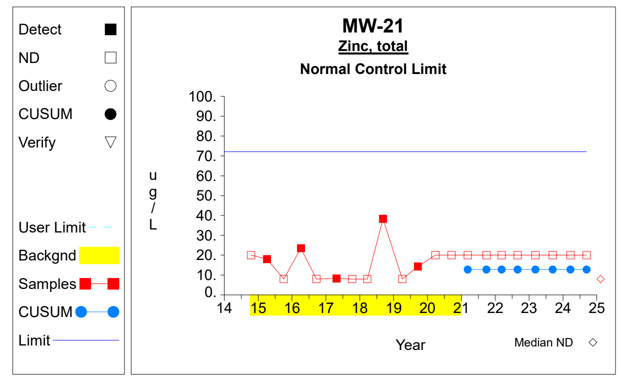
Graph 57



Graph 58

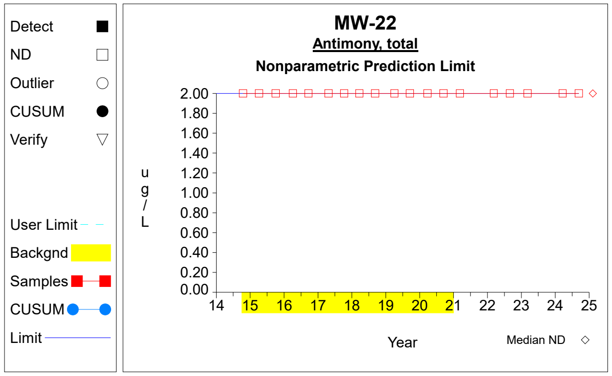


Graph 59

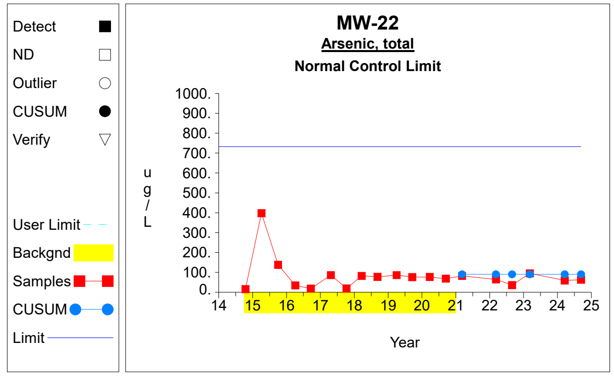


Graph 60

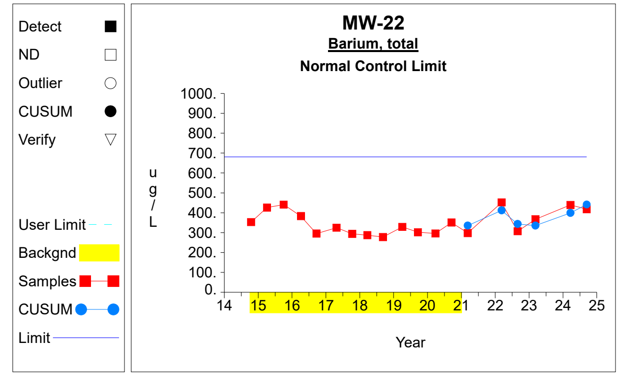
Intra-Well Control Charts / Prediction Limits



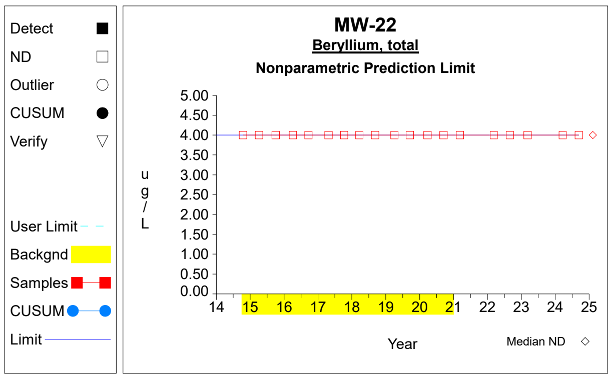
Graph 61



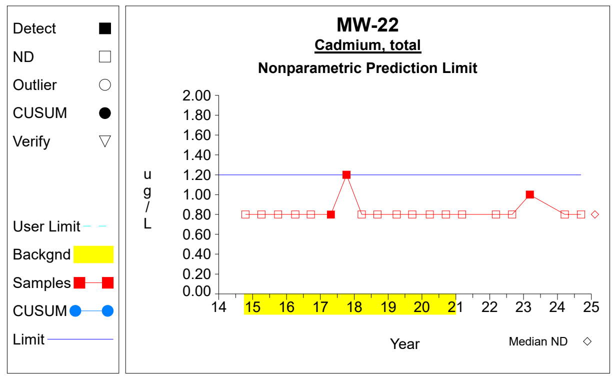
Graph 62



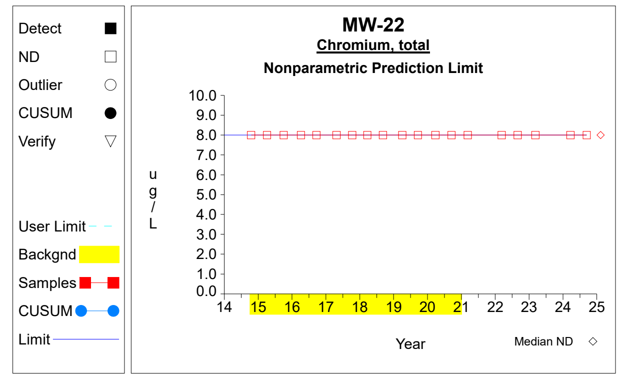
Graph 63



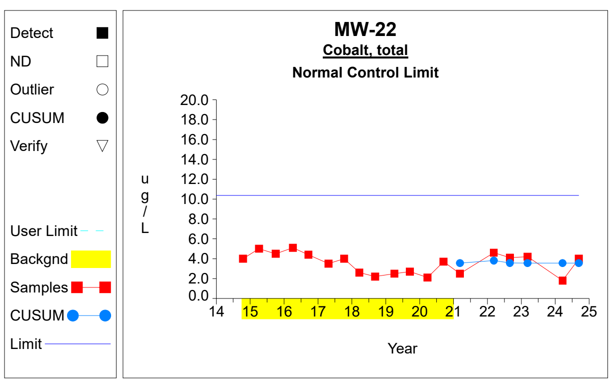
Graph 64



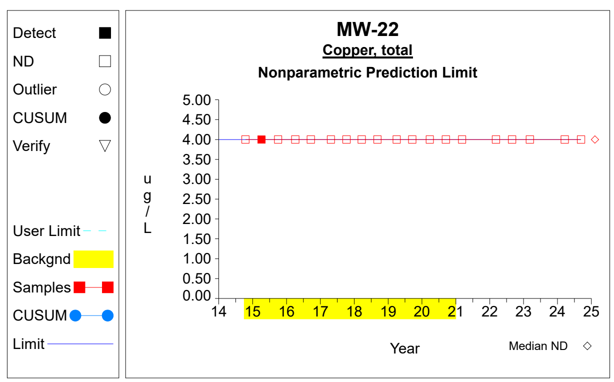
Graph 65



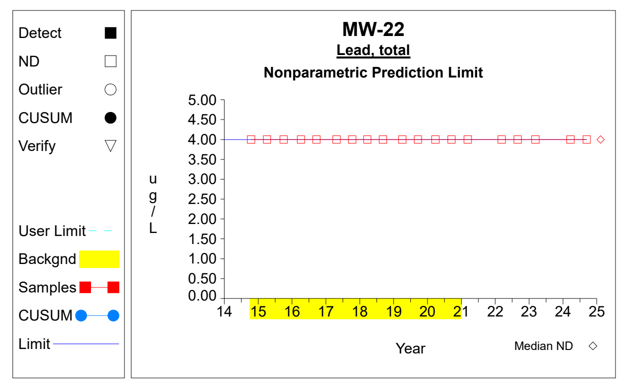
Graph 66



Graph 67



Graph 68



Graph 69

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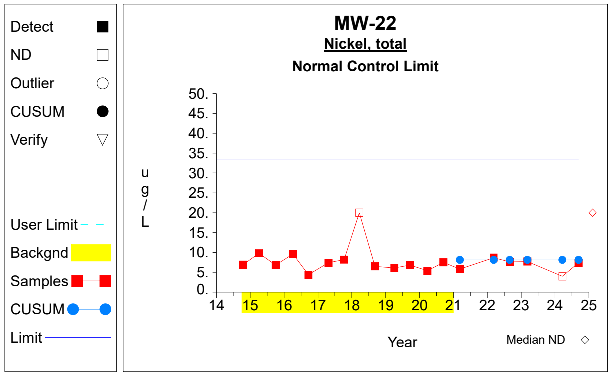
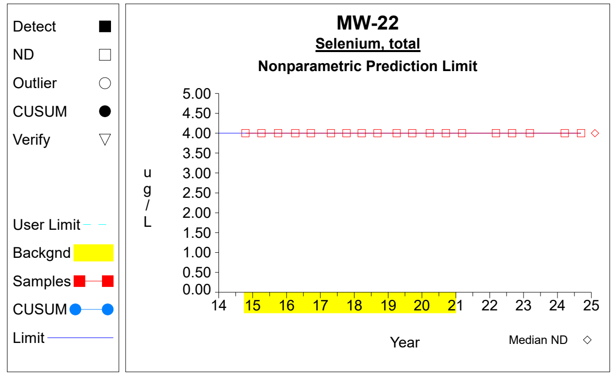
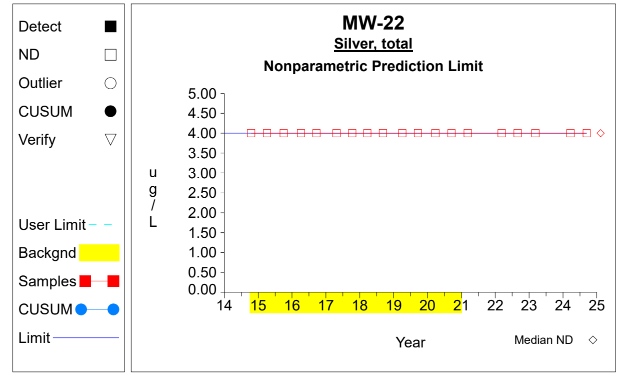
Intra-Well Control Charts / Prediction Limits



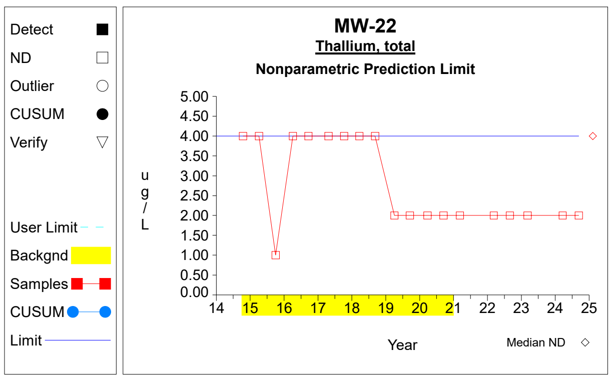
Graph 70



Graph 71



Graph 72



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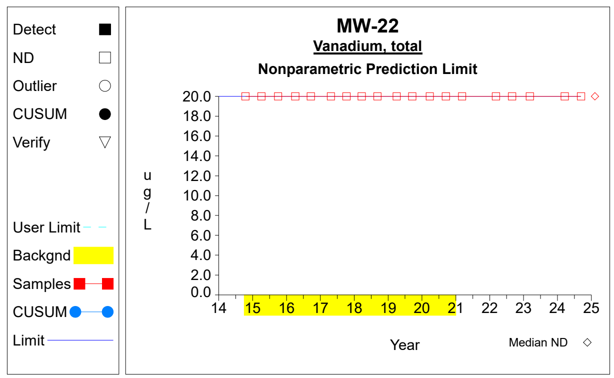
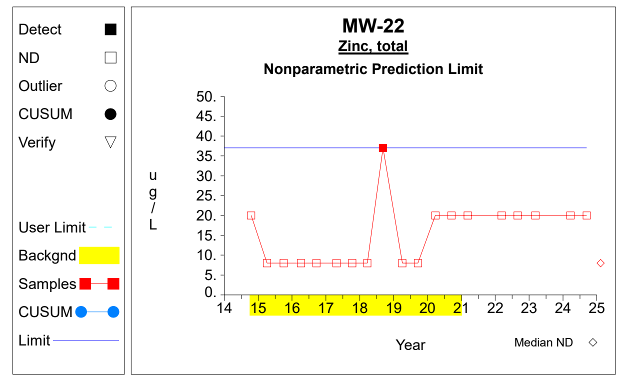


Graph 74



Graph 75

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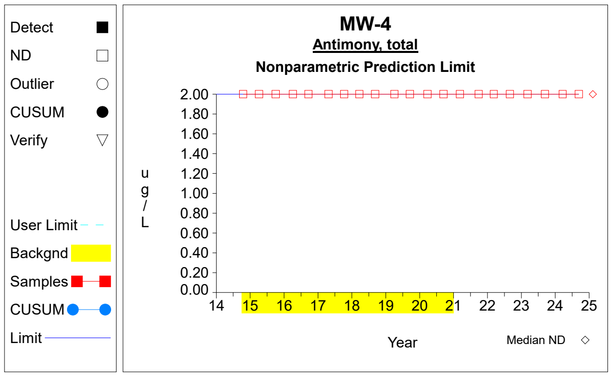
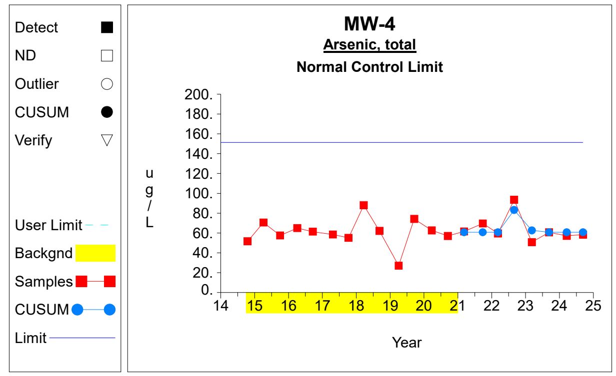
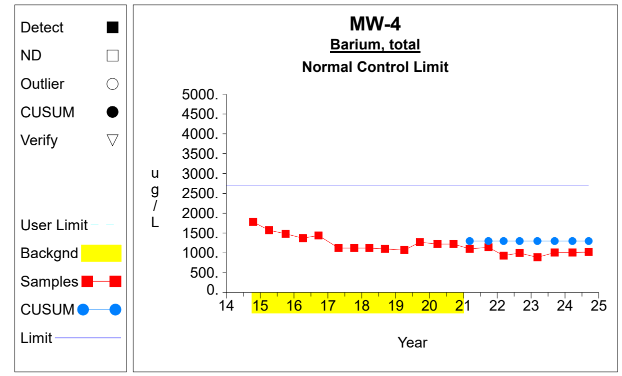
Intra-Well Control Charts / Prediction Limits



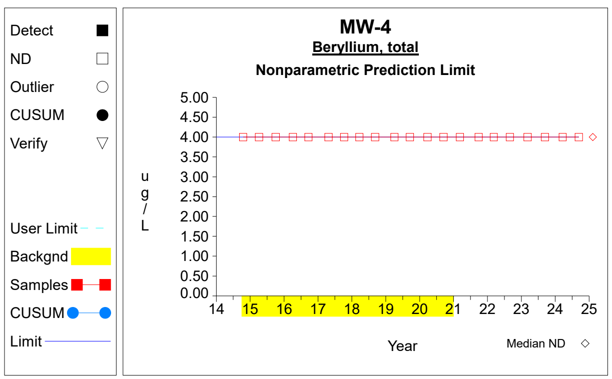
Graph 76



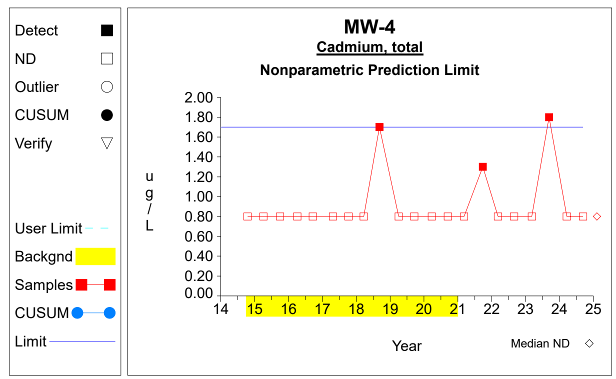
Graph 77



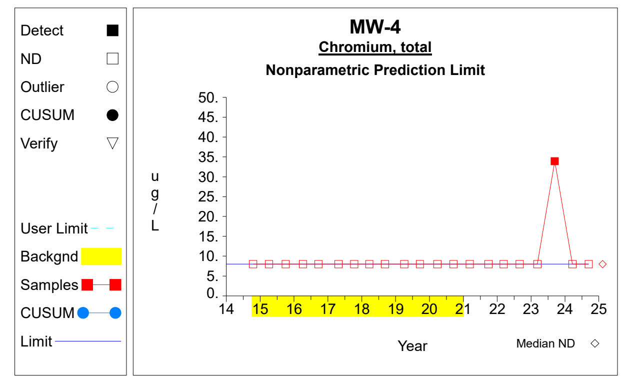
Graph 78



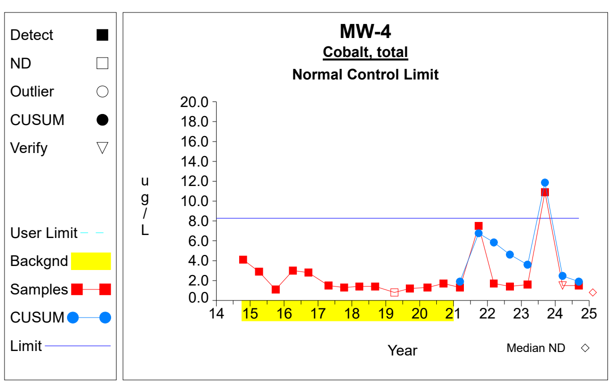
Graph 79



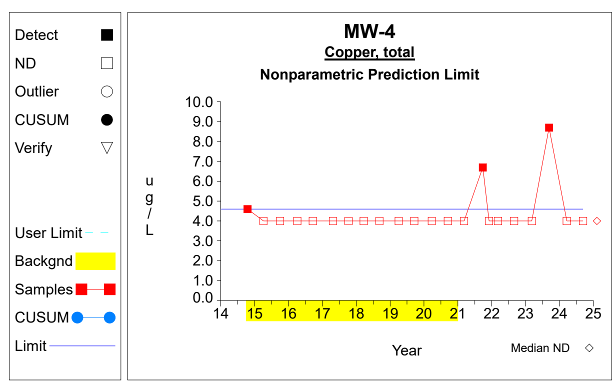
Graph 80



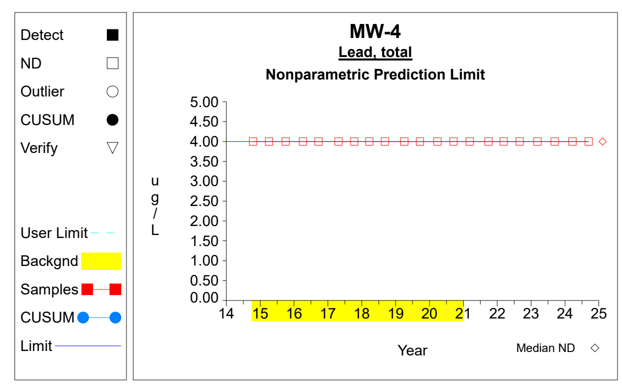
Graph 81



Graph 82



Graph 83



Graph 84

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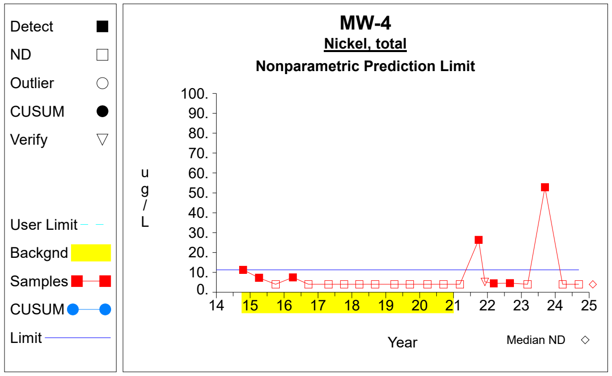
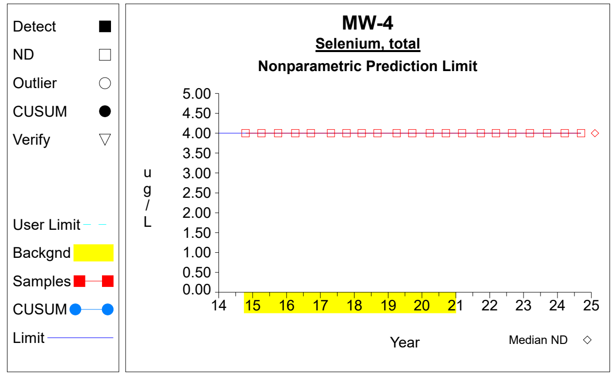
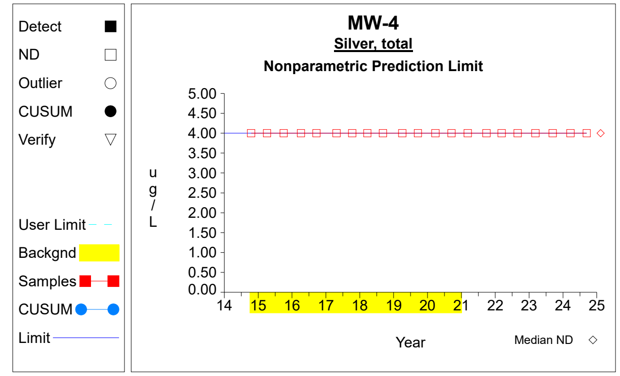
Intra-Well Control Charts / Prediction Limits



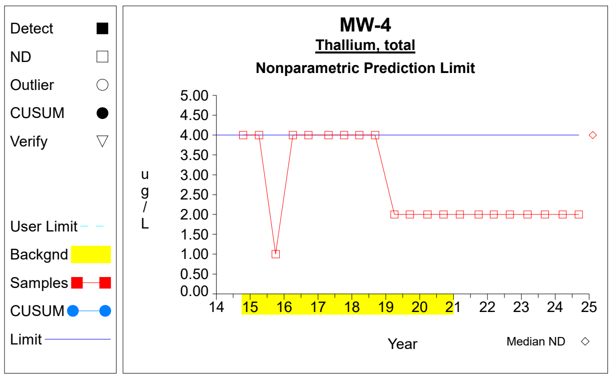
Graph 85



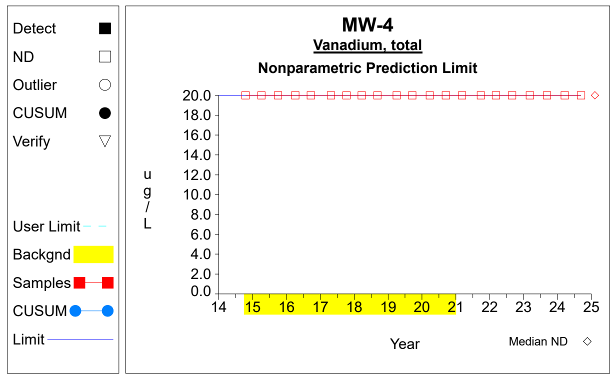
Graph 86



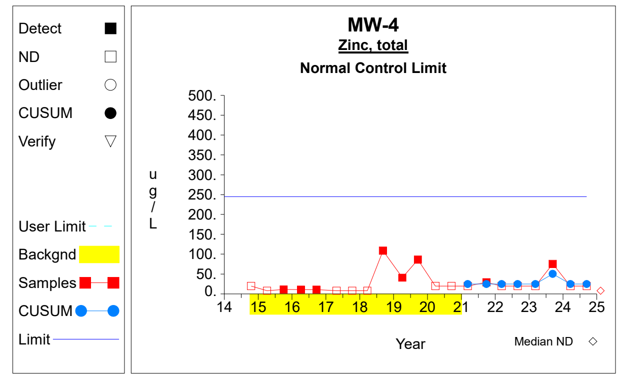
Graph 87



Graph 88



Graph 89



Graph 90

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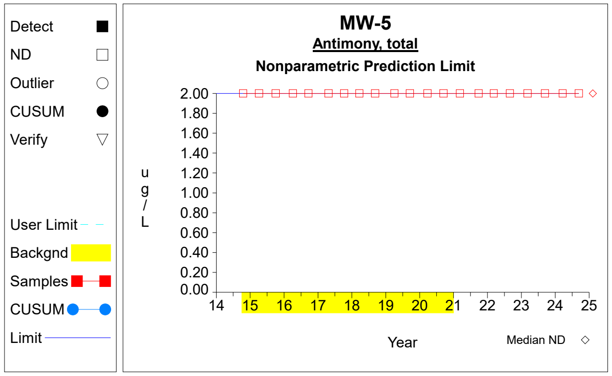
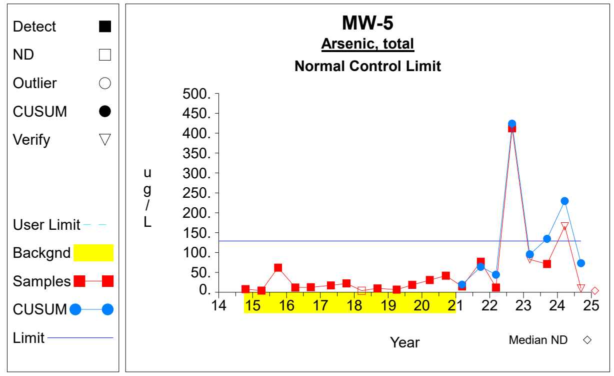
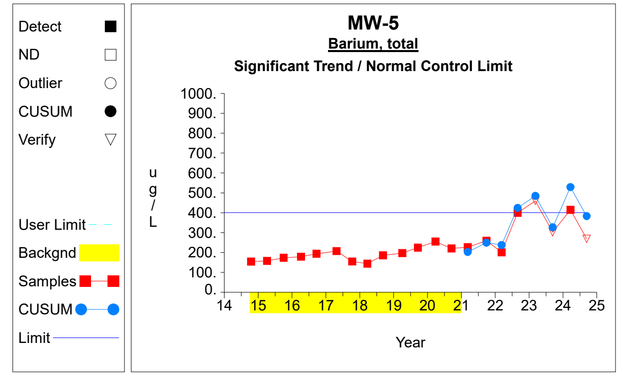
Intra-Well Control Charts / Prediction Limits



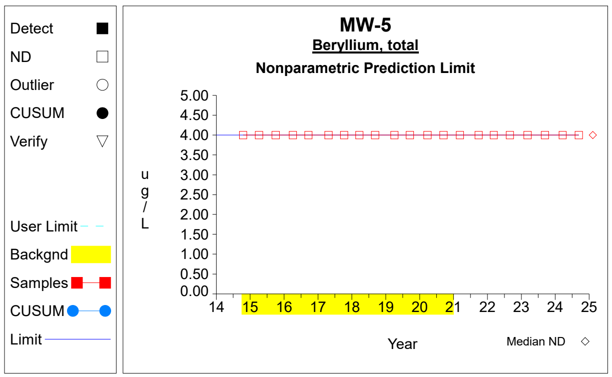
Graph 91



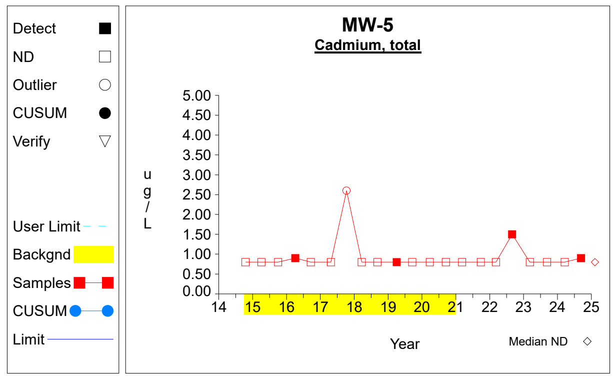
Graph 92



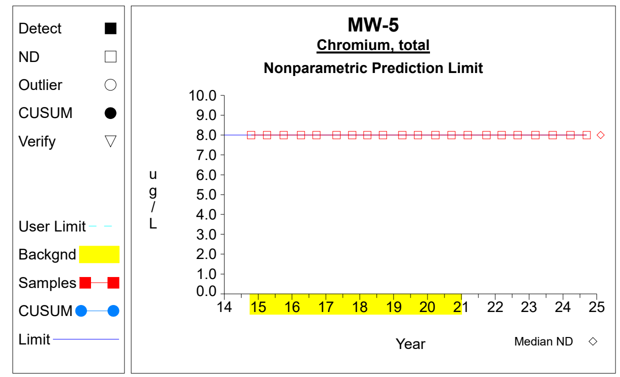
Graph 93



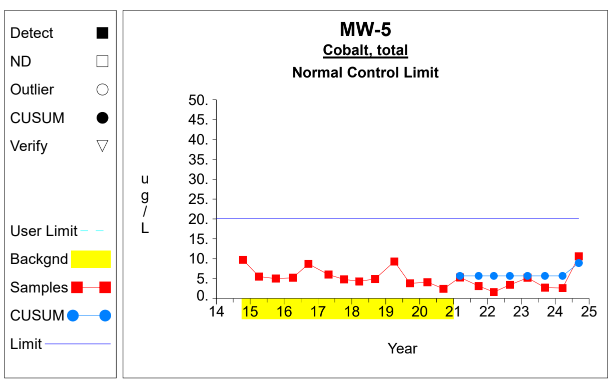
Graph 94



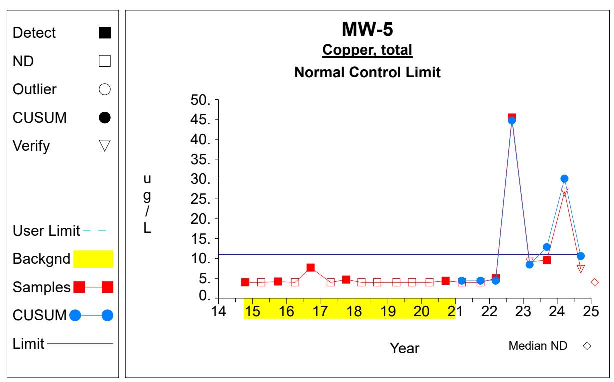
Graph 95



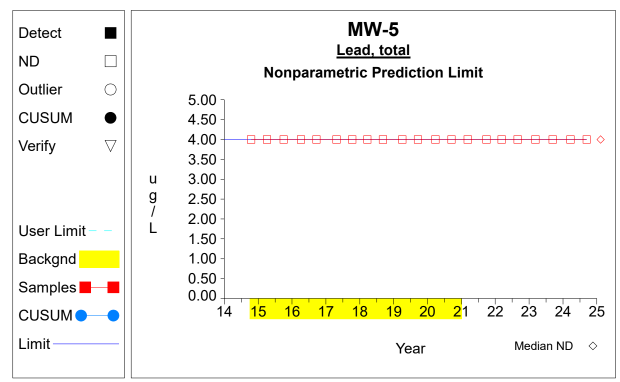
Graph 96



Graph 97



Graph 98



Graph 99

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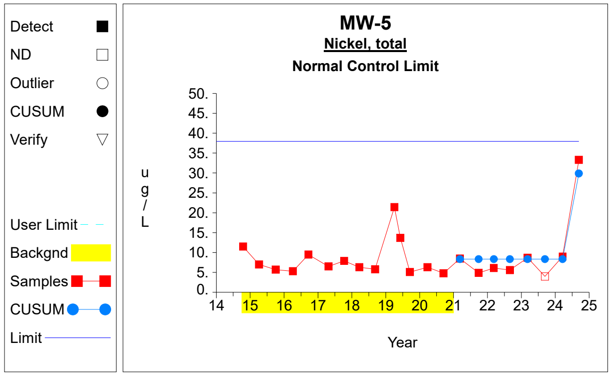
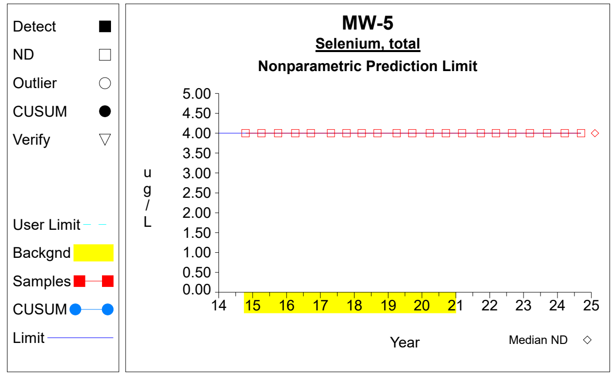
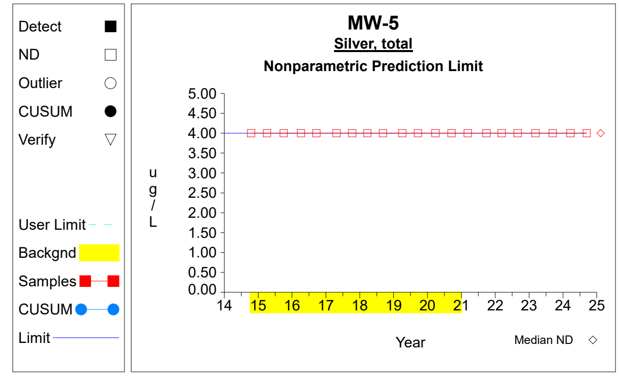
Intra-Well Control Charts / Prediction Limits



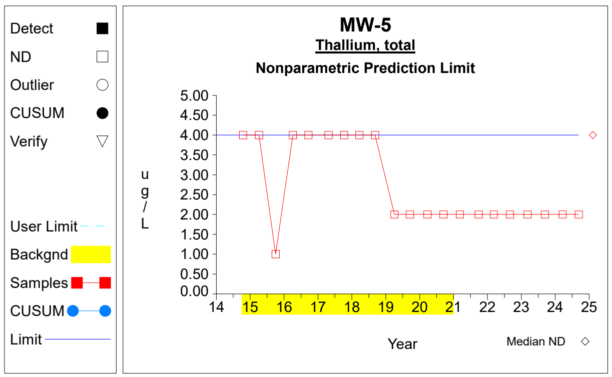
Graph 100



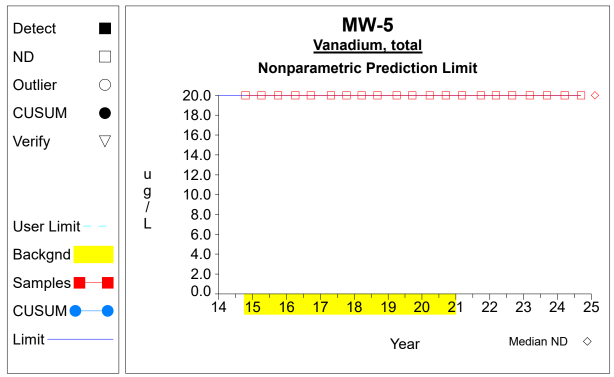
Graph 101



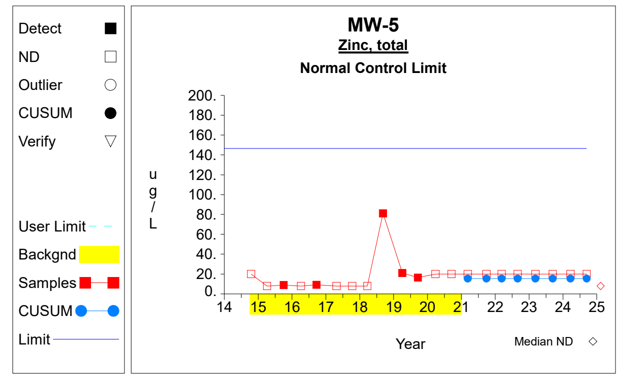
Graph 102



Graph 103

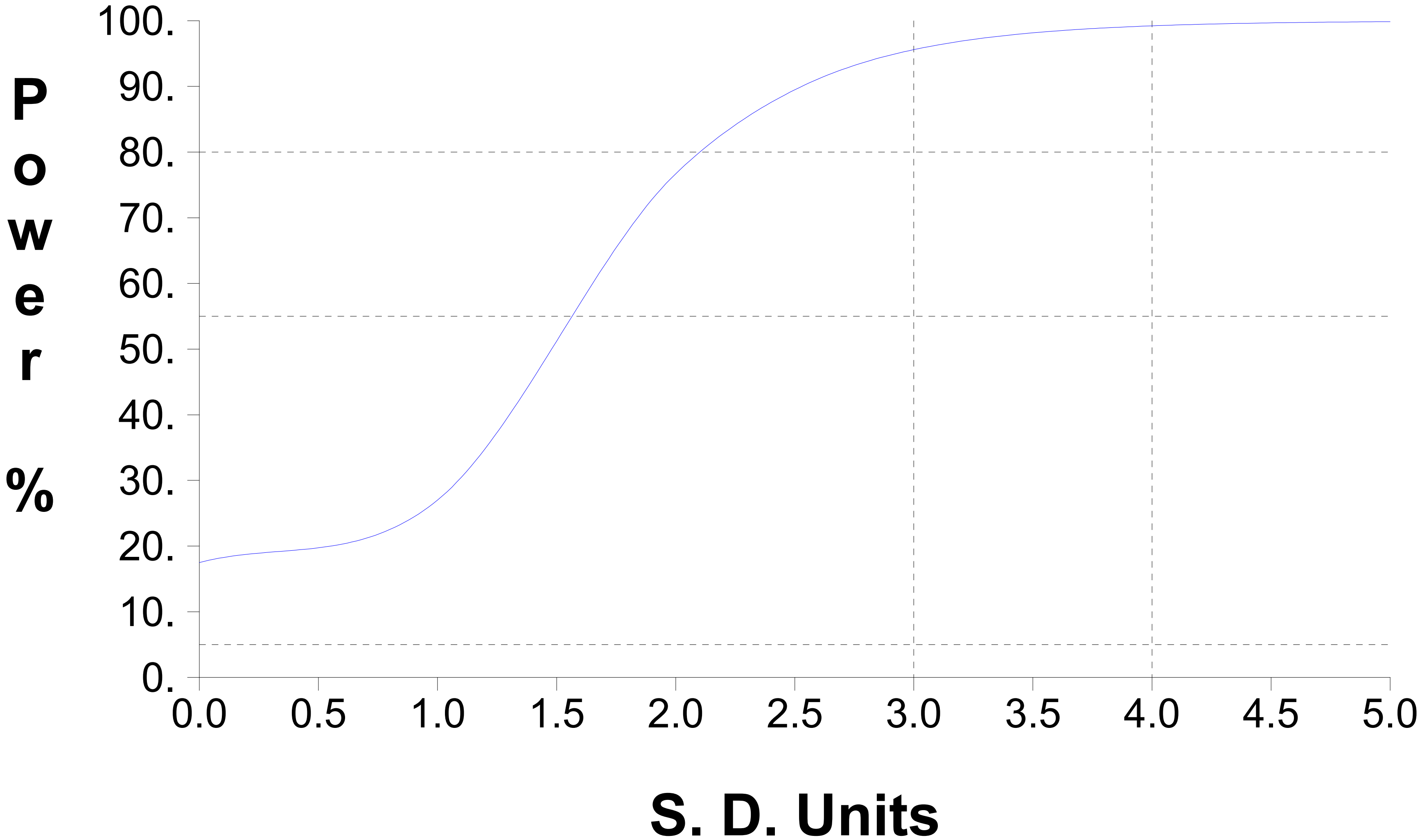


Graph 104



Graph 105

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



Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW-12
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW-12
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **80.4** / **13** = **6.185**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**597.7** - **6464.16**/**13**) / (**13**-1))^{½} = **2.893**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **6.185** + **6.5** * **2.893** = **24.991**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **-0.047**	Sen's estimator of trend.
6	var(S) = **252.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**78** - **2.326** * **252.0**^{½}) / 2 = **20.538**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.899**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW-12
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **5159.0** / **13**	
	= **396.846**	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\mathbf{2.12 \times 10^6} - \mathbf{2.66 \times 10^7}/\mathbf{13}) / (\mathbf{13}-1))^{1/2}$	
	= **79.33**	
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **396.846** + **6.5** * **79.33**	
	= **912.494**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **13** * (**13**-1) / 2	
	= **78**	
5	S = **5.186**	Sen's estimator of trend.
6	var(S) = **268.667**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{78} - \mathbf{2.326} * \mathbf{268.667}^{1/2}) / 2$	
	= **19.937**	
8	LCL(S) = **-33.217**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW-12
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW-12
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **1.6**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW-12
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **8.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW-12
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **84.1** / **13** = **6.469**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**855.95** - **7072.81**/**13**) / (**13**-1))$^{1/2}$ = **5.098**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **6.469** + **6.5** * **5.098** = **39.607**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **-1.46**	Sen's estimator of trend.
6	var(S) = **268.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**78** - **2.326** * **268.667**$^{1/2}$) / 2 = **19.937**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-3.414**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW-12
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **6.3**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW-12
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW-12
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **112.9** / **13**	
	= **8.685**	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$	Compute background sd.
	$= ((\mathbf{1269.27} - \mathbf{12746.41}/\mathbf{13}) / (\mathbf{13}-1))^{½}$	
	= **4.906**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **8.685** + **6.5** * **4.906**	
	= **40.571**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **13** * (**13**-1) / 2	
	= **78**	
5	S = **-1.571**	Sen's estimator of trend.
6	var(S) = **260.0**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{78} - \mathbf{2.326} * \mathbf{260.0}^{½}) / 2$	
	= **20.247**	
8	LCL(S) = **-3.212**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW-12
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW-12
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW-12
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **4.0**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW-12
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW-12

Insufficient data to perform analysis

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW-15R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW-15R
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **372.3** / **13**	
	= **28.638**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**11426.51** - **138607.29**/**13**) / (**13**-1))^{½}	
	= **7.981**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **28.638** + **6.5** * **7.981**	
	= **80.517**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **13** * (**13**-1) / 2	
	= **78**	
5	S = **-2.444**	Sen's estimator of trend.
6	var(S) = **268.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**78** - **2.326** * **268.667**^{½}) / 2	
	= **19.937**	
8	LCL(S) = **-5.328**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW-15R
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **6496.0** / **13** = **499.692**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**3.30**x**10^6** - **4.22**x**10^7**/**13**) / (**13**-1))^{½} = **68.638**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **499.692** + **6.5** * **68.638** = **945.842**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **0.729**	Sen's estimator of trend.
6	var(S) = **267.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**78** - **2.326** * **267.667**^{½}) / 2 = **19.973**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-37.921**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW-15R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW-15R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.8**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW-15R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **13.7**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW-15R
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **50.0** / **13**	
	= **3.846**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**208.84** - **2500.0**/**13**) / (**13**-1))^{½}	
	= **1.174**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **3.846** + **6.5** * **1.174**	
	= **11.476**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **13** * (**13**-1) / 2	
	= **78**	
5	S = **-0.11**	Sen's estimator of trend.
6	var(S) = **266.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**78** - **2.326** * **266.667**^{½}) / 2	
	= **20.008**	
8	LCL(S) = **-0.676**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW-15R
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **54.7** / **12**	
	= **4.558**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**268.59** - **2992.09**/**12**) / (**12**-1))^{½}	
	= **1.323**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **4.558** + **6.5** * **1.323**	
	= **13.157**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **12** * (**12**-1) / 2	
	= **66**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **120.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**66** - **2.326** * **120.667**^{½}) / 2	
	= **20.225**	
8	LCL(S) = **-0.416**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW-15R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **10.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW-15R
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{55.2} / \mathbf{11}$ $= \mathbf{5.018}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{314.3} - \mathbf{3047.04}/\mathbf{11}) / (\mathbf{11}-1))^{1/2}$ $= \mathbf{1.931}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{5.018} + \mathbf{6.5} * \mathbf{1.931}$ $= \mathbf{17.571}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{11} * (\mathbf{11}-1) / 2$ $= \mathbf{55}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-0.041}$	Sen's estimator of trend.
6	$var(S) = \mathbf{155.333}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{55} - \mathbf{2.326} * \mathbf{155.333}^{1/2}) / 2$ $= \mathbf{13.005}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the $M_1{}^{th}$ largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-0.807}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW-15R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW-15R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW-15R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **4.0**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW-15R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **27.9**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW-15R
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **264.9** / **13**	
	= **20.377**	
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**11969.67** - **70172.01**/**13**) / (**13**-1))^{½}	
	= **23.402**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **20.377** + **6.5** * **23.402**	
	= **172.49**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **13** * (**13**-1) / 2	
	= **78**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **224.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z$_{.99}$** * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**78** - **2.326** * **224.333**^{½}) / 2	
	= **21.581**	
8	LCL(S) = **-5.808**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW-20R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW-20R
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{546.8} / \textbf{12}$ $= \textbf{45.567}$	Compute background mean.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$ $= ((\textbf{29256.44} - \textbf{298990.24}/\textbf{12}) / (\textbf{12}-1))^{½}$ $= \textbf{19.865}$	Compute background sd.
3	$SCL = \overline{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{45.567} + \textbf{6.5} * \textbf{19.865}$ $= \textbf{174.686}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{12} * (\textbf{12}-1) / 2$ $= \textbf{66}$	Number of sample pairs during trend detection period.
5	$S = \textbf{-2.957}$	Sen's estimator of trend.
6	$var(S) = \textbf{212.667}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$ $= (\textbf{66} - \textbf{2.326} * \textbf{212.667}^{½}) / 2$ $= \textbf{16.04}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-6.24}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW-20R
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **10756.0** / **13**	
	= **827.385**	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\mathbf{9.20 \times 10^6} - \mathbf{1.16 \times 10^8}/\mathbf{13}) / (\mathbf{13}-1))^{1/2}$	
	= **158.774**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **827.385** + **6.5** * **158.774**	
	= **1859.414**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **13** * (**13**-1) / 2	
	= **78**	
5	S = **-15.139**	Sen's estimator of trend.
6	var(S) = **268.667**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1 th largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{78} - \mathbf{2.326} * \mathbf{268.667}^{1/2}) / 2$	
	= **19.937**	
8	LCL(S) = **-102.531**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW-20R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW-20R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.8**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW-20R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW-20R
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **13.3** / **13**	
	= **1.023**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$	Compute background sd.
	= ((**14.19** - **176.89**/**13**) / (**13**-1))$^{1/2}$	
	= **0.22**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **1.023** + **6.5** * **0.22**	
	= **2.456**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **13** * (**13**-1) / 2	
	= **78**	
5	S = **-0.059**	Sen's estimator of trend.
6	var(S) = **262.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**78** - **2.326** * **262.0**$^{1/2}$) / 2	
	= **20.175**	
8	LCL(S) = **-0.169**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW-20R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW-20R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **4.1**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW-20R

Insufficient data to perform analysis

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW-20R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW-20R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW-20R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW-20R
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW-20R
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **117.4** / **12** = **9.783**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**1265.22** - **13782.76**/**12**) / (**12**-1))^{½} = **3.257**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **9.783** + **6.5** * **3.257** = **30.951**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **12** * (**12**-1) / 2 = **66**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **168.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**66** - **2.326** * **168.333**^{½}) / 2 = **17.911**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.275**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW-21
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW-21
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{77.7} / \mathbf{13}$ $= \mathbf{5.977}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{523.39} - \mathbf{6037.29}/\mathbf{13}) / (\mathbf{13}-1))^{1/2}$ $= \mathbf{2.217}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{5.977} + \mathbf{6.5} * \mathbf{2.217}$ $= \mathbf{20.388}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{13} * (\mathbf{13}-1) / 2$ $= \mathbf{78}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \mathbf{252.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{78} - \mathbf{2.326} * \mathbf{252.0}^{1/2}) / 2$ $= \mathbf{20.538}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-0.886}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW-21
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **8965.0** / **13** = **689.615**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**8.41x10^6** - **8.04x10^7**/**13**) / (**13**-1))^{½} = **430.945**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **689.615** + **6.5** * **430.945** = **3490.755**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **93.046**	Sen's estimator of trend.
6	var(S) = **268.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**78** - **2.326** * **268.667**^{½}) / 2 = **19.937**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-34.66**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW-21
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW-21
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **11.7** / **13** = **0.9**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**11.45 - 136.89/13**) / (**13**-1))$^{1/2}$ = **0.277**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **0.9** + **6.5** * **0.277** = **2.7**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **143.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**78 - 2.326** * **143.667**$^{1/2}$) / 2 = **25.06**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW-21
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW-21
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{26.1} / \mathbf{13}$ $= \mathbf{2.008}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{118.39} - \mathbf{681.21}/\mathbf{13}) / (\mathbf{13}-1))^{1/2}$ $= \mathbf{2.345}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{2.008} + \mathbf{6.5} * \mathbf{2.345}$ $= \mathbf{17.25}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{13} * (\mathbf{13}-1) / 2$ $= \mathbf{78}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-0.145}$	Sen's estimator of trend.
6	$var(S) = \mathbf{203.333}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{78} - \mathbf{2.326} * \mathbf{203.333}^{1/2}) / 2$ $= \mathbf{22.416}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-1.151}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW-21
Nonparametric Prediction Limit

Step	Equation	Description
1	$PL = max(X)$ $= \mathbf{5.6}$	Compute nonparametric prediction limit as largest background measurement.
2	$Conf = \mathbf{0.99}$	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW-21
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW-21
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **96.2** / **13** = **7.4**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{960.6} - \mathbf{9254.44/13}) / (\mathbf{13}-1))^{1/2}$ = **4.553**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **7.4** + **6.5** * **4.553** = **36.992**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **-0.456**	Sen's estimator of trend.
6	var(S) = **259.0**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{78} - \mathbf{2.326} * \mathbf{259.0}^{1/2}) / 2$ = **20.283**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1 th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-2.698**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW-21
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW-21
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW-21
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW-21
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW-21
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **166.4** / **13** = **12.8**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**3128.52** - **27688.96**/**13**) / (**13**-1))^{½} = **9.122**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **12.8** + **6.5** * **9.122** = **72.095**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **203.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**78** - **2.326** * **203.333**^{½}) / 2 = **22.416**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-1.417**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW-22
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW-22
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1180.0** / **13** = **90.769**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**223981.92 - 1.39**x**10^6/13**) / (**13**-1))$^{1/2}$ = **98.689**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **90.769** + **6.5** * **98.689** = **732.248**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **-1.997**	Sen's estimator of trend.
6	var(S) = **268.667**	Variance estimate for slope.
7	M_1(S) = (**N' - Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**78** - **2.326** * **268.667**$^{1/2}$) / 2 = **19.937**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-20.662**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW-22
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **4360.0** / **13** = **335.385**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**1.50x10^6** - **1.90x10^7**/**13**) / (**13**-1))^{½} = **53.213**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **335.385** + **6.5** * **53.213** = **681.267**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **-14.718**	Sen's estimator of trend.
6	var(S) = **268.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**78** - **2.326** * **268.667**^{½}) / 2 = **19.937**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-41.967**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW-22
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW-22
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.2**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW-22
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW-22
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **46.3** / **13** = **3.562**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**178.11** - **2143.69**/**13**) / (**13**-1))^{½} = **1.049**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **3.562** + **6.5** * **1.049** = **10.382**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **-0.432**	Sen's estimator of trend.
6	var(S) = **267.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**78** - **2.326** * **267.667**^{½}) / 2 = **19.973**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.773**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW-22
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **4.0**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW-22
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW-22
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{105.4} / \mathbf{13}$ $= \mathbf{8.108}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{1034.52} - \mathbf{11109.16}/\mathbf{13}) / (\mathbf{13}-1))^{½}$ $= \mathbf{3.873}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{8.108} + \mathbf{6.5} * \mathbf{3.873}$ $= \mathbf{33.28}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{13} * (\mathbf{13}-1) / 2$ $= \mathbf{78}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-0.219}$	Sen's estimator of trend.
6	$var(S) = \mathbf{267.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{78} - \mathbf{2.326} * \mathbf{267.667}^{½}) / 2$ $= \mathbf{19.973}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-0.965}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW-22
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW-22
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW-22
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW-22
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW-22
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **37.0**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW-4
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW-4
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{791.1} / \mathbf{13}$ $= \mathbf{60.854}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{50461.41} - \mathbf{625839.21}/\mathbf{13}) / (\mathbf{13}-1))^{1/2}$ $= \mathbf{13.904}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{60.854} + \mathbf{6.5} * \mathbf{13.904}$ $= \mathbf{151.231}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{13} * (\mathbf{13}-1) / 2$ $= \mathbf{78}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.347}$	Sen's estimator of trend.
6	$var(S) = \mathbf{268.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{78} - \mathbf{2.326} * \mathbf{268.667}^{1/2}) / 2$ $= \mathbf{19.937}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-6.301}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW-4
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$	Compute background mean.
	$= \mathbf{16880.0} / \mathbf{13}$	
	$= \mathbf{1298.462}$	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$	Compute background sd.
	$= ((\mathbf{2.25{\times}10^7} - \mathbf{2.85{\times}10^8}/\mathbf{13}) / (\mathbf{13}-1))^{½}$	
	$= \mathbf{216.789}$	
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$	Compute combined Shewhart-CUSUM normal control limit.
	$= \mathbf{1298.462} + \mathbf{6.5} * \mathbf{216.789}$	
	$= \mathbf{2707.59}$	
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$	Number of sample pairs during trend detection period.
	$= \mathbf{13} * (\mathbf{13}-1) / 2$	
	$= \mathbf{78}$	
5	$S = \mathbf{-65.76}$	Sen's estimator of trend.
6	$var(S) = \mathbf{264.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1 th largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{78} - \mathbf{2.326} * \mathbf{264.0}^{½}) / 2$	
	$= \mathbf{20.103}$	
8	$LCL(S) = \mathbf{-172.331}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW-4
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.7**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW-4
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **24.5** / **13**	
	= **1.885**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$	Compute background sd.
	= ((**57.79** - **600.25**/**13**) / (**13**-1))$^{1/2}$	
	= **0.984**	
3	SCL = **$\bar{X}$** + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **1.885** + **6.5** * **0.984**	
	= **8.28**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **13** * (**13**-1) / 2	
	= **78**	
5	S = **-0.33**	Sen's estimator of trend.
6	var(S) = **266.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**78** - **2.326** * **266.667**$^{1/2}$) / 2	
	= **20.008**	
8	LCL(S) = **-0.681**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **4.6**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW-4
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **11.3**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW-4
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW-4
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW-4
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW-4
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW-4
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **325.1** / **13** = **25.008**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**21840.57** - **105690.01**/**13**) / (**13**-1))^{½} = **33.802**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **25.008** + **6.5** * **33.802** = **244.718**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **224.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**^{½}) / 2 = (**78** - **2.326** * **224.333**^{½}) / 2 = **21.581**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.663**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW-5
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW-5
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$	Compute background mean.
	$= \textbf{250.6} / \textbf{13}$	
	$= \textbf{19.277}$	
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\textbf{8234.5} - \textbf{62800.36}/\textbf{13}) / (\textbf{13}-1))^{1/2}$	
	$= \textbf{16.842}$	
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$	Compute combined Shewhart-CUSUM normal control limit.
	$= \textbf{19.277} + \textbf{6.5} * \textbf{16.842}$	
	$= \textbf{128.748}$	
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$	Number of sample pairs during trend detection period.
	$= \textbf{13} * (\textbf{13}-1) / 2$	
	$= \textbf{78}$	
5	$S = \textbf{2.944}$	Sen's estimator of trend.
6	$var(S) = \textbf{268.667}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\textbf{78} - \textbf{2.326} * \textbf{268.667}^{1/2}) / 2$	
	$= \textbf{19.937}$	
8	$LCL(S) = \textbf{-4.032}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW-5
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **2449.0** / **13**	
	= **188.385**	
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$	Compute background sd.
	= ((**474139.0** - **6.00**×**10^6**/**13**) / (**13**-1))$^{1/2}$	
	= **32.641**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **188.385** + **6.5** * **32.641**	
	= **400.55**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **13** * (**13**-1) / 2	
	= **78**	
5	S = **13.867**	Sen's estimator of trend.
6	var(S) = **268.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**78** - **2.326** * **268.667**$^{1/2}$) / 2	
	= **19.937**	
8	LCL(S) = **2.779**	One-sided lower confidence limit for slope.
9	LCL(S) > 0	**Significant increasing trend.**

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW-5
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW-5

Insufficient data to perform analysis

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW-5
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW-5
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **73.7** / **13** = **5.669**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**477.11** - **5431.69**/**13**) / (**13**-1))^{½} = **2.223**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **5.669** + **6.5** * **2.223** = **20.117**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **-0.516**	Sen's estimator of trend.
6	var(S) = **268.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**^{½}) / 2 = (**78** - **2.326** * **268.667**^{½}) / 2 = **19.937**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-1.316**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW-5
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **57.0** / **13**	
	= **4.385**	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\mathbf{262.38} - \mathbf{3249.0/13}) / (\mathbf{13}-1))^{1/2}$	
	= **1.019**	
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **4.385** + **6.5** * **1.019**	
	= **11.007**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **13** * (**13**-1) / 2	
	= **78**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **176.667**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{78} - \mathbf{2.326} * \mathbf{176.667}^{1/2}) / 2$	
	= **23.542**	
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW-5
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW-5
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **116.8** / **14** = **8.343**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**1244.46** - **13642.24**/**14**) / (**14**-1))$^{1/2}$ = **4.557**	Compute background sd.
3	SCL = **$\overline{X}$** + **F** * **S** = **8.343** + **6.5** * **4.557** = **37.966**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **14** * (**14**-1) / 2 = **91**	Number of sample pairs during trend detection period.
5	S = **-0.302**	Sen's estimator of trend.
6	var(S) = **332.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**91** - **2.326** * **332.667**$^{1/2}$) / 2 = **24.288**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-1.401**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW-5
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW-5
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW-5
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW-5
Nonparametric Prediction Limit

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

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW-5
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **200.7** / **13** = **15.438**	Compute background mean.
2	$S = ((\textbf{sum}[X^2] - \textbf{sum}[X]^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{7967.23} - \textbf{40280.49}/\textbf{13}) / (\textbf{13}-1))^{1/2}$ = **20.143**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **15.438** + **6.5** * **20.143** = **146.366**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **203.333**	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{78} - \textbf{2.326} * \textbf{203.333}^{1/2}) / 2$ = **22.416**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Attachment E

Summary Table of Historical VOC Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
2-butanone (mek)	GWD-1	4/09/2012		37.6	5.0	ug/L
Chloroethane	GWD-1	9/15/2020		1.6	1.0	ug/L
Trichlorofluoromethane	GWD-1	9/21/2011		4.1	1.0	ug/L
Vinyl chloride	GWD-1	3/07/2023		1.3	1.0	ug/L
Vinyl chloride	GWD-1	5/09/2023		1.5	1.0	ug/L
Vinyl chloride	GWD-1	6/07/2023		1.2	1.0	ug/L
Trichloroethylene	MW-10	7/07/1993		3.3	1.0	ug/L
Trichloroethylene	MW-10	10/12/1993		2.7	1.0	ug/L
Trichloroethylene	MW-10	1/24/1994		2.5	1.0	ug/L
Trichloroethylene	MW-10	4/26/1994		2.3	1.0	ug/L
Trichloroethylene	MW-10	7/26/1994		2.5	1.0	ug/L
1,1-dichloroethane	MW-12	6/23/2008		1.0	1.0	ug/L
1,1-dichloroethane	MW-12	12/13/2008		1.2	1.0	ug/L
1,1-dichloroethane	MW-12	9/17/2009		1.0	1.0	ug/L
Acetone	MW-12	10/09/2017		12.9	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	4/05/2010		9	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-12	9/20/2016		10	8	ug/L
Chloroethane	MW-12	4/23/2008		1.5	1.0	ug/L
Chloroethane	MW-12	6/23/2008		2.1	1.0	ug/L
Chloroethane	MW-12	12/13/2008		2.4	1.0	ug/L
Chloroethane	MW-12	3/04/2009		1.0	1.0	ug/L
Chloroethane	MW-12	11/06/2009		1.0	1.0	ug/L
Chloroethane	MW-12	4/05/2010		1.5	1.0	ug/L
Chloroethane	MW-12	9/15/2020		1.5	1.0	ug/L
Acetone	MW-15R	4/26/2013		49.1	10.0	ug/L
Acetone	MW-15R	10/09/2017		10.4	10.0	ug/L
Chloromethane	MW-15R	10/09/2017		2	1	ug/L
Dichlorodifluoromethane	MW-15R	4/04/2016		1	1	ug/L
Toluene	MW-15R	4/26/2013		7	1	ug/L
2-butanone (mek)	MW-16	9/18/2019		35	5	ug/L
Acetone	MW-16	4/23/2008		40.6	10.0	ug/L
Acetone	MW-16	6/23/2008		15.4	10.0	ug/L
Acetone	MW-16	8/13/2008		149.0	10.0	ug/L
Acetone	MW-16	10/02/2008		77.3	10.0	ug/L
Acetone	MW-16	12/13/2008		91.6	10.0	ug/L
Acetone	MW-16	3/04/2009		47.2	10.0	ug/L
Acetone	MW-16	9/17/2009		170.0	10.0	ug/L
Acetone	MW-16	11/06/2009		89.9	10.0	ug/L
Acetone	MW-16	4/05/2010		164.0	10.0	ug/L
Acetone	MW-16	10/08/2010		45.8	10.0	ug/L
Acetone	MW-16	4/13/2011		72.1	10.0	ug/L
Acetone	MW-16	9/22/2011		107.0	10.0	ug/L
Acetone	MW-16	4/09/2012		27.0	10.0	ug/L
Acetone	MW-16	9/26/2013		26.0	10.0	ug/L
Acetone	MW-16	4/10/2014		61.5	10.0	ug/L
Acetone	MW-16	10/16/2014		124.0	10.0	ug/L
Acetone	MW-16	4/04/2015		14.1	10.0	ug/L
Acetone	MW-16	10/01/2015		13.1	10.0	ug/L
Acetone	MW-16	9/20/2016		26.8	10.0	ug/L
Acetone	MW-16	4/24/2017		134.0	10.0	ug/L
Acetone	MW-16	10/09/2017		17.0	10.0	ug/L
Acetone	MW-16	3/21/2018		24.5	10.0	ug/L
Acetone	MW-16	9/07/2018		72.3	10.0	ug/L
Acetone	MW-16	4/02/2019		34.2	10.0	ug/L
Acetone	MW-16	9/18/2019		196.0	50.0	ug/L
Acetone	MW-16	3/25/2020		51.2	10.0	ug/L
Acetone	MW-16	9/15/2020		109.0	10.0	ug/L
Acetone	MW-16	3/08/2021		1140.0	50.0	ug/L
Benzene	MW-16	4/05/2010		1.1	1.0	ug/L
Benzene	MW-16	9/22/2011		1.2	1.0	ug/L
Chloroethane	MW-16	4/23/2008		2.0	1.0	ug/L
Chloroethane	MW-16	6/23/2008		1.7	1.0	ug/L
Chloroethane	MW-16	8/13/2008		2.0	1.0	ug/L
Chloroethane	MW-16	12/13/2008		1.8	1.0	ug/L
Chloroethane	MW-16	3/04/2009		1.3	1.0	ug/L
Chloroethane	MW-16	11/06/2009		2.2	1.0	ug/L
Chloroethane	MW-16	4/05/2010		2.1	1.0	ug/L
Chloroethane	MW-16	9/22/2011		2.3	1.0	ug/L
Chloroethane	MW-16	4/09/2012		1.1	1.0	ug/L
Chloroethane	MW-16	4/10/2014		1.0	1.0	ug/L
Chloroethane	MW-16	4/04/2016		1.0	1.0	ug/L
Chloromethane	MW-16	10/09/2017		2.3	1.0	ug/L
Dichlorodifluoromethane	MW-16	4/05/2010		1.2	1.0	ug/L
Dichlorodifluoromethane	MW-16	9/22/2011		1.0	1.0	ug/L
Dichlorodifluoromethane	MW-16	4/09/2012		1.2	1.0	ug/L
Dichlorodifluoromethane	MW-16	9/26/2013		1.2	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Dichlorodifluoromethane	MW-16	4/04/2016		1.0	1.0	ug/L
Vinyl chloride	MW-16	4/23/2008		2.9	1.0	ug/L
Vinyl chloride	MW-16	6/23/2008		2.5	1.0	ug/L
Vinyl chloride	MW-16	8/13/2008		2.5	1.0	ug/L
Vinyl chloride	MW-16	10/02/2008		2.5	1.0	ug/L
Vinyl chloride	MW-16	12/13/2008		2.8	1.0	ug/L
Vinyl chloride	MW-16	3/04/2009		1.8	1.0	ug/L
Vinyl chloride	MW-16	11/06/2009		2.0	1.0	ug/L
Vinyl chloride	MW-16	4/05/2010		2.9	1.0	ug/L
Vinyl chloride	MW-16	10/08/2010		3.0	1.0	ug/L
Vinyl chloride	MW-16	4/13/2011		2.3	1.0	ug/L
Vinyl chloride	MW-16	9/22/2011		1.4	1.0	ug/L
Vinyl chloride	MW-16	4/09/2012		1.0	1.0	ug/L
Vinyl chloride	MW-16	9/05/2012		1.4	1.0	ug/L
Vinyl chloride	MW-16	9/26/2013		1.1	1.0	ug/L
Acetone	MW-18	4/14/2011		26.2	10.0	ug/L
Acetone	MW-18	4/26/2013		17.2	10.0	ug/L
Acetone	MW-18	9/26/2013		10.3	10.0	ug/L
Acetone	MW-18	9/20/2016		11.7	10.0	ug/L
Acetone	MW-18	10/09/2017		16.8	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-20R	4/04/2016		25	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-20R	9/07/2018		7	6	ug/L
Chloroethane	MW-21	4/05/2010		2.1	1.0	ug/L
Chloroethane	MW-21	5/24/2010		1.3	1.0	ug/L
Chloroethane	MW-21	4/14/2011		2.5	1.0	ug/L
Chloroethane	MW-21	9/21/2011		2.0	1.0	ug/L
Chloroethane	MW-21	4/09/2012		2.2	1.0	ug/L
Chloroethane	MW-21	9/05/2012		1.4	1.0	ug/L
Chloroethane	MW-21	9/26/2013		1.4	1.0	ug/L
Chloroethane	MW-21	4/10/2014		1.2	1.0	ug/L
Chloroethane	MW-21	10/16/2014		1.4	1.0	ug/L
Chloroethane	MW-21	4/04/2015		1.1	1.0	ug/L
Chloroethane	MW-21	10/01/2015		1.7	1.0	ug/L
Chloroethane	MW-21	4/04/2016		2.4	1.0	ug/L
Chloroethane	MW-21	9/20/2016		1.4	1.0	ug/L
Chloroethane	MW-21	4/24/2017		2.6	1.0	ug/L
Chloroethane	MW-21	10/09/2017		1.0	1.0	ug/L
Chloroethane	MW-21	9/07/2018		1.6	1.0	ug/L
Chloroethane	MW-21	4/02/2019		1.8	1.0	ug/L
Chloroethane	MW-21	9/18/2019		1.7	1.0	ug/L
Chloroethane	MW-21	3/25/2020		1.2	1.0	ug/L
Chloroethane	MW-21	3/08/2021		1.3	1.0	ug/L
Chloroethane	MW-21	3/08/2022		1.0	1.0	ug/L
Chloroethane	MW-21	3/07/2023		1.4	1.0	ug/L
Chloromethane	MW-21	4/05/2010		2.7	1.0	ug/L
Chloromethane	MW-21	4/26/2013		1.4	1.0	ug/L
Dichlorodifluoromethane	MW-21	4/04/2016		1	1	ug/L
Acetone	MW-22	11/06/2009		14.9	10.0	ug/L
Acetone	MW-22	9/26/2013		10.1	10.0	ug/L
Acetone	MW-22	10/09/2017		14.6	10.0	ug/L
Benzene	MW-22	11/06/2009		1.8	1.0	ug/L
Benzene	MW-22	5/24/2010		1.4	1.0	ug/L
Benzene	MW-22	8/16/2010		2.0	1.0	ug/L
Benzene	MW-22	4/14/2011		1.7	1.0	ug/L
Benzene	MW-22	9/22/2011		1.6	1.0	ug/L
Benzene	MW-22	4/09/2012		2.2	1.0	ug/L
Benzene	MW-22	4/26/2013		1.3	1.0	ug/L
Benzene	MW-22	9/26/2013		1.2	1.0	ug/L
Benzene	MW-22	4/04/2015		1.6	1.0	ug/L
Benzene	MW-22	4/24/2017		1.7	1.0	ug/L
Benzene	MW-22	3/21/2018		2.3	1.0	ug/L
Benzene	MW-22	9/07/2018		1.5	1.0	ug/L
Benzene	MW-22	4/02/2019		2.2	1.0	ug/L
Benzene	MW-22	9/18/2019		2.3	1.0	ug/L
Benzene	MW-22	3/25/2020		2.4	1.0	ug/L
Benzene	MW-22	9/15/2020		1.5	1.0	ug/L
Benzene	MW-22	3/08/2021		1.4	1.0	ug/L
Benzene	MW-22	3/08/2022		1.0	1.0	ug/L
Benzene	MW-22	3/07/2023		2.0	1.0	ug/L
Bromomethane	MW-22	10/15/2014		2.4	1.0	ug/L
Chloroethane	MW-22	11/06/2009		5.4	1.0	ug/L
Chloroethane	MW-22	4/05/2010		5.4	1.0	ug/L
Chloroethane	MW-22	5/24/2010		4.6	1.0	ug/L
Chloroethane	MW-22	8/16/2010		4.2	1.0	ug/L
Chloroethane	MW-22	4/14/2011		3.8	1.0	ug/L
Chloroethane	MW-22	9/22/2011		2.7	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Chloroethane	MW-22	4/09/2012		3.3	1.0	ug/L
Chloroethane	MW-22	9/26/2013		1.4	1.0	ug/L
Chloroethane	MW-22	10/15/2014		1.0	1.0	ug/L
Chloroethane	MW-22	4/04/2015		1.1	1.0	ug/L
Chloroethane	MW-22	4/24/2017		1.5	1.0	ug/L
Chloroethane	MW-22	9/15/2020		1.7	1.0	ug/L
Chloroethane	MW-22	3/08/2021		1.2	1.0	ug/L
Chloromethane	MW-22	4/26/2013		1.1	1.0	ug/L
Hexachlorobenzene	MW-22	3/08/2021		.08	.05	ug/L
Methyl iodide	MW-22	10/15/2014		11.8	1.0	ug/L
Toluene	MW-22	4/24/2017		1.2	1.0	ug/L
Toluene	MW-22	3/21/2018		1.5	1.0	ug/L
Vinyl chloride	MW-22	11/06/2009		5.2	1.0	ug/L
Vinyl chloride	MW-22	4/05/2010		2.0	1.0	ug/L
Vinyl chloride	MW-22	5/24/2010		3.8	1.0	ug/L
Vinyl chloride	MW-22	10/08/2010		6.6	1.0	ug/L
Vinyl chloride	MW-22	4/14/2011		4.1	1.0	ug/L
Vinyl chloride	MW-22	9/22/2011		3.2	1.0	ug/L
Vinyl chloride	MW-22	4/09/2012		4.7	1.0	ug/L
Vinyl chloride	MW-22	9/26/2013		1.7	1.0	ug/L
Vinyl chloride	MW-22	4/04/2015		1.6	1.0	ug/L
Vinyl chloride	MW-22	10/01/2015		1.0	1.0	ug/L
Vinyl chloride	MW-22	4/24/2017		2.9	1.0	ug/L
Vinyl chloride	MW-22	9/07/2018		1.5	1.0	ug/L
Vinyl chloride	MW-22	4/02/2019		1.4	1.0	ug/L
Vinyl chloride	MW-22	9/18/2019		1.8	1.0	ug/L
Vinyl chloride	MW-22	3/25/2020		1.8	1.0	ug/L
Vinyl chloride	MW-22	9/15/2020		1.3	1.0	ug/L
Vinyl chloride	MW-22	3/08/2021		1.1	1.0	ug/L
Vinyl chloride	MW-22	3/07/2023		1.3	1.0	ug/L
1,1-dichloroethane	MW-23	9/21/2011		3.5	1.0	ug/L
1,1-dichloroethane	MW-23	9/05/2012		1.7	1.0	ug/L
Chloroethane	MW-23	9/21/2011		1.8	1.0	ug/L
Acetone	MW-24	4/26/2013		100.0	10.0	ug/L
Acetone	MW-24	10/16/2014		58.4	10.0	ug/L
Acetone	MW-24	3/25/2020		13.8	10.0	ug/L
Acetone	MW-24	3/08/2021		62.4	10.0	ug/L
Chloroethane	MW-26	4/24/2017		1.6	1.0	ug/L
1,1-dichloroethane	MW-4	4/23/2008		1.2	1.0	ug/L
1,1-dichloroethane	MW-4	12/13/2008		1.3	1.0	ug/L
1,1-dichloroethane	MW-4	9/17/2009		1.2	1.0	ug/L
1,1-dichloroethane	MW-4	4/05/2010		1.0	1.0	ug/L
1,1-dichloroethane	MW-4	4/04/2016		1.0	1.0	ug/L
1,1-dichloroethane	MW-4	4/24/2017		1.7	1.0	ug/L
1,1-dichloroethane	MW-4	10/09/2017		2.6	1.0	ug/L
1,1-dichloroethane	MW-4	3/21/2018		2.6	1.0	ug/L
1,1-dichloroethane	MW-4	9/15/2020		1.9	1.0	ug/L
1,1-dichloroethane	MW-4	9/28/2021		1.1	1.0	ug/L
1,2-dichloroethane	MW-4	7/07/1993		7.3	1.0	ug/L
1,2-dichloroethane	MW-4	10/12/1993		3.7	1.0	ug/L
1,2-dichloroethane	MW-4	1/24/1994		2.4	1.0	ug/L
1,2-dichloroethane	MW-4	10/13/1994		4.0	1.0	ug/L
1,2-dichloroethane	MW-4	4/25/1995		1.6	1.0	ug/L
1,2-dichloroethane	MW-4	10/18/1995		3.3	1.0	ug/L
1,2-dichloroethane	MW-4	7/31/1996		2.7	1.0	ug/L
1,2-dichloroethane	MW-4	10/09/1996		2.0	1.0	ug/L
1,2-dichloroethane	MW-4	4/23/2008		1.0	1.0	ug/L
1,2-dichloropropane	MW-4	10/16/2014		1.2	1.0	ug/L
1,2-dichloropropane	MW-4	9/18/2019		1.6	1.0	ug/L
1,2-dichloropropane	MW-4	9/28/2021		1.4	1.0	ug/L
1,2-dichloropropane	MW-4	3/07/2023		1.1	1.0	ug/L
1,2-dichloropropane	MW-4	9/11/2023		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	7/07/1993		1.6	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/12/1993		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/23/2008		8.7	1.0	ug/L
1,4-dichlorobenzene	MW-4	6/23/2008		6.9	1.0	ug/L
1,4-dichlorobenzene	MW-4	8/13/2008		4.9	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/02/2008		5.7	1.0	ug/L
1,4-dichlorobenzene	MW-4	12/13/2008		7.1	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/04/2009		5.5	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/17/2009		6.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	11/06/2009		5.3	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/05/2010		7.2	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/08/2010		3.9	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/13/2011		7.2	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/22/2011		5.5	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
1,4-dichlorobenzene	MW-4	4/09/2012		5.2	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/05/2012		9.8	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/26/2013		5.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/10/2014		7.5	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/16/2014		6.8	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/04/2015		5.1	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/01/2015		3.9	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/04/2016		5.3	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/20/2016		3.5	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/24/2017		5.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	10/09/2017		6.5	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/21/2018		6.3	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/07/2018		4.9	1.0	ug/L
1,4-dichlorobenzene	MW-4	4/02/2019		10.4	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/18/2019		7.5	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/15/2020		6.2	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/08/2021		6.3	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/28/2021		6.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/08/2022		5.8	1.0	ug/L
1,4-dichlorobenzene	MW-4	8/30/2022		4.6	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/07/2023		5.7	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/11/2023		7.4	1.0	ug/L
1,4-dichlorobenzene	MW-4	3/20/2024		6.0	1.0	ug/L
1,4-dichlorobenzene	MW-4	9/12/2024		5.9	1.0	ug/L
Acetone	MW-4	4/23/2008		12.5	10.0	ug/L
Acetone	MW-4	9/17/2009		36.7	10.0	ug/L
Acetone	MW-4	11/06/2009		19.7	10.0	ug/L
Acetone	MW-4	4/05/2010		146.0	10.0	ug/L
Acetone	MW-4	4/13/2011		29.0	10.0	ug/L
Acetone	MW-4	4/09/2012		25.9	10.0	ug/L
Acetone	MW-4	9/05/2012		209.0	10.0	ug/L
Acetone	MW-4	4/10/2014		11.0	10.0	ug/L
Acetone	MW-4	10/09/2017		11.2	10.0	ug/L
Acetone	MW-4	9/28/2021		43.4	10.0	ug/L
Benzene	MW-4	7/07/1993		5.2	1.0	ug/L
Benzene	MW-4	10/12/1993		3.9	1.0	ug/L
Benzene	MW-4	1/24/1994		2.5	1.0	ug/L
Benzene	MW-4	4/26/1994		2.1	1.0	ug/L
Benzene	MW-4	7/26/1994		2.4	1.0	ug/L
Benzene	MW-4	10/13/1994		9.1	1.0	ug/L
Benzene	MW-4	4/25/1995		3.0	1.0	ug/L
Benzene	MW-4	10/18/1995		8.5	1.0	ug/L
Benzene	MW-4	2/08/1996		9.6	1.0	ug/L
Benzene	MW-4	4/26/1996		5.9	1.0	ug/L
Benzene	MW-4	7/31/1996		7.5	1.0	ug/L
Benzene	MW-4	10/09/1996		7.5	1.0	ug/L
Benzene	MW-4	9/26/1997		3.2	1.0	ug/L
Benzene	MW-4	4/23/1998		2.6	1.0	ug/L
Benzene	MW-4	9/16/1998		3.7	1.0	ug/L
Benzene	MW-4	3/30/1999		3.1	1.0	ug/L
Benzene	MW-4	10/07/1999		3.1	1.0	ug/L
Benzene	MW-4	4/13/2000		1.9	1.0	ug/L
Benzene	MW-4	4/05/2001		7.4	1.0	ug/L
Benzene	MW-4	8/28/2001		2.3	1.0	ug/L
Benzene	MW-4	3/29/2002		2.7	1.0	ug/L
Benzene	MW-4	4/15/2003		1.0	1.0	ug/L
Benzene	MW-4	4/03/2004		1.1	1.0	ug/L
Benzene	MW-4	9/29/2004		1.7	1.0	ug/L
Benzene	MW-4	4/09/2005		1.3	1.0	ug/L
Benzene	MW-4	4/09/2006		1.2	1.0	ug/L
Benzene	MW-4	9/18/2006		3.3	1.0	ug/L
Benzene	MW-4	4/21/2007		4.4	1.0	ug/L
Benzene	MW-4	9/20/2007		5.8	1.0	ug/L
Benzene	MW-4	4/23/2008		4.8	1.0	ug/L
Benzene	MW-4	6/23/2008		4.3	1.0	ug/L
Benzene	MW-4	8/13/2008		3.9	1.0	ug/L
Benzene	MW-4	10/02/2008		4.8	1.0	ug/L
Benzene	MW-4	12/13/2008		4.1	1.0	ug/L
Benzene	MW-4	3/04/2009		3.0	1.0	ug/L
Benzene	MW-4	9/17/2009		4.0	1.0	ug/L
Benzene	MW-4	11/06/2009		3.2	1.0	ug/L
Benzene	MW-4	4/05/2010		4.4	1.0	ug/L
Benzene	MW-4	10/08/2010		2.7	1.0	ug/L
Benzene	MW-4	4/13/2011		3.3	1.0	ug/L
Benzene	MW-4	9/22/2011		2.6	1.0	ug/L
Benzene	MW-4	4/09/2012		1.7	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Benzene	MW-4	9/05/2012		2.2	1.0	ug/L
Benzene	MW-4	4/26/2013		1.3	1.0	ug/L
Benzene	MW-4	4/10/2014		1.5	1.0	ug/L
Benzene	MW-4	10/16/2014		2.4	1.0	ug/L
Benzene	MW-4	4/04/2015		1.6	1.0	ug/L
Benzene	MW-4	10/01/2015		1.3	1.0	ug/L
Benzene	MW-4	4/04/2016		1.4	1.0	ug/L
Benzene	MW-4	9/20/2016		1.2	1.0	ug/L
Benzene	MW-4	4/24/2017		1.2	1.0	ug/L
Benzene	MW-4	10/09/2017		1.3	1.0	ug/L
Benzene	MW-4	3/21/2018		1.5	1.0	ug/L
Benzene	MW-4	4/02/2019		1.0	1.0	ug/L
Benzene	MW-4	3/25/2020		1.2	1.0	ug/L
Benzene	MW-4	9/15/2020		1.3	1.0	ug/L
Benzene	MW-4	3/08/2021		1.6	1.0	ug/L
Benzene	MW-4	9/28/2021		1.4	1.0	ug/L
Benzene	MW-4	3/08/2022		1.7	1.0	ug/L
Benzene	MW-4	8/30/2022		1.2	1.0	ug/L
Benzene	MW-4	3/07/2023		1.5	1.0	ug/L
Benzene	MW-4	9/11/2023		1.7	1.0	ug/L
Benzene	MW-4	3/20/2024		1.4	1.0	ug/L
Benzene	MW-4	9/12/2024		1.3	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-4	4/05/2010		11	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-4	9/20/2016		10	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-4	9/28/2021		12	6	ug/L
Chloroethane	MW-4	4/23/2008		6.9	1.0	ug/L
Chloroethane	MW-4	6/23/2008		5.8	1.0	ug/L
Chloroethane	MW-4	8/13/2008		5.2	1.0	ug/L
Chloroethane	MW-4	10/02/2008		6.9	1.0	ug/L
Chloroethane	MW-4	12/13/2008		4.6	1.0	ug/L
Chloroethane	MW-4	3/04/2009		3.4	1.0	ug/L
Chloroethane	MW-4	9/17/2009		6.3	1.0	ug/L
Chloroethane	MW-4	11/06/2009		3.7	1.0	ug/L
Chloroethane	MW-4	4/05/2010		5.4	1.0	ug/L
Chloroethane	MW-4	4/13/2011		3.4	1.0	ug/L
Chloroethane	MW-4	9/22/2011		3.9	1.0	ug/L
Chloroethane	MW-4	4/09/2012		2.1	1.0	ug/L
Chloroethane	MW-4	9/05/2012		4.4	1.0	ug/L
Chloroethane	MW-4	4/26/2013		2.0	1.0	ug/L
Chloroethane	MW-4	4/10/2014		2.4	1.0	ug/L
Chloroethane	MW-4	10/16/2014		4.7	1.0	ug/L
Chloroethane	MW-4	4/04/2015		2.1	1.0	ug/L
Chloroethane	MW-4	10/01/2015		3.0	1.0	ug/L
Chloroethane	MW-4	4/04/2016		3.1	1.0	ug/L
Chloroethane	MW-4	9/20/2016		3.9	1.0	ug/L
Chloroethane	MW-4	4/24/2017		2.3	1.0	ug/L
Chloroethane	MW-4	10/09/2017		3.0	1.0	ug/L
Chloroethane	MW-4	3/21/2018		2.4	1.0	ug/L
Chloroethane	MW-4	9/07/2018		2.5	1.0	ug/L
Chloroethane	MW-4	4/02/2019		2.1	1.0	ug/L
Chloroethane	MW-4	9/18/2019		2.9	1.0	ug/L
Chloroethane	MW-4	3/25/2020		1.5	1.0	ug/L
Chloroethane	MW-4	9/15/2020		5.0	1.0	ug/L
Chloroethane	MW-4	3/08/2021		1.4	1.0	ug/L
Chloroethane	MW-4	9/28/2021		2.4	1.0	ug/L
Chloroethane	MW-4	3/08/2022		1.2	1.0	ug/L
Chloroethane	MW-4	8/30/2022		1.9	1.0	ug/L
Chloroethane	MW-4	3/07/2023		1.4	1.0	ug/L
Chloroethane	MW-4	9/11/2023		2.0	1.0	ug/L
Chloroethane	MW-4	3/20/2024		1.4	1.0	ug/L
Chloroethane	MW-4	9/12/2024		1.3	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	4/23/2008		32.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	6/23/2008		1.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	8/13/2008		1.5	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	12/13/2008		1.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/17/2009		6.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	11/06/2009		3.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	4/05/2010		6.0	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	10/08/2010		2.2	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	4/13/2011		1.8	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/22/2011		4.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	4/09/2012		3.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/05/2012		16.8	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	4/26/2013		1.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	10/16/2014		2.2	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	10/01/2015		2.1	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Cis-1,2-dichloroethylene	MW-4	9/20/2016		1.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	10/09/2017		2.0	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/18/2019		3.2	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/15/2020		1.6	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/28/2021		2.1	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	8/30/2022		4.5	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/11/2023		2.7	1.0	ug/L
Cis-1,2-dichloroethylene	MW-4	9/12/2024		2.4	1.0	ug/L
Dichlorodifluoromethane	MW-4	9/22/2011		1.6	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/09/2012		1.2	1.0	ug/L
Dichlorodifluoromethane	MW-4	9/05/2012		1.4	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/26/2013		1.2	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/10/2014		1.7	1.0	ug/L
Dichlorodifluoromethane	MW-4	10/16/2014		3.7	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/04/2015		1.1	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/04/2016		1.4	1.0	ug/L
Dichlorodifluoromethane	MW-4	9/20/2016		1.1	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/24/2017		1.3	1.0	ug/L
Dichlorodifluoromethane	MW-4	10/09/2017		1.0	1.0	ug/L
Dichlorodifluoromethane	MW-4	4/02/2019		2.6	1.0	ug/L
Dichlorodifluoromethane	MW-4	3/25/2020		1.1	1.0	ug/L
Ethylbenzene	MW-4	6/23/2008		1.0	1.0	ug/L
Ethylbenzene	MW-4	12/13/2008		1.1	1.0	ug/L
Methacrylonitrile	MW-4	9/22/2011		11.8	1.0	ug/L
Tetrachloroethylene	MW-4	4/23/2008		2	1	ug/L
Toluene	MW-4	6/23/2008		2.9	1.0	ug/L
Toluene	MW-4	8/13/2008		2.2	1.0	ug/L
Toluene	MW-4	10/02/2008		2.5	1.0	ug/L
Toluene	MW-4	12/13/2008		3.4	1.0	ug/L
Toluene	MW-4	3/04/2009		2.7	1.0	ug/L
Toluene	MW-4	9/17/2009		1.1	1.0	ug/L
Toluene	MW-4	4/05/2010		1.2	1.0	ug/L
Trichloroethylene	MW-4	7/07/1993		3.6	1.0	ug/L
Trichloroethylene	MW-4	10/12/1993		1.8	1.0	ug/L
Trichloroethylene	MW-4	1/24/1994		1.2	1.0	ug/L
Trichloroethylene	MW-4	4/23/2008		3.6	1.0	ug/L
Trichloroethylene	MW-4	9/05/2012		1.8	1.0	ug/L
Vinyl chloride	MW-4	4/23/2008		5.6	1.0	ug/L
Vinyl chloride	MW-4	6/23/2008		22.6	1.0	ug/L
Vinyl chloride	MW-4	8/13/2008		14.6	1.0	ug/L
Vinyl chloride	MW-4	10/02/2008		11.1	1.0	ug/L
Vinyl chloride	MW-4	12/13/2008		6.7	1.0	ug/L
Vinyl chloride	MW-4	3/04/2009		4.4	1.0	ug/L
Vinyl chloride	MW-4	9/17/2009		8.3	1.0	ug/L
Vinyl chloride	MW-4	11/06/2009		4.4	1.0	ug/L
Vinyl chloride	MW-4	4/05/2010		16.1	1.0	ug/L
Vinyl chloride	MW-4	10/08/2010		5.0	1.0	ug/L
Vinyl chloride	MW-4	4/13/2011		2.9	1.0	ug/L
Vinyl chloride	MW-4	9/22/2011		3.9	1.0	ug/L
Vinyl chloride	MW-4	4/09/2012		1.6	1.0	ug/L
Vinyl chloride	MW-4	9/05/2012		4.0	1.0	ug/L
Vinyl chloride	MW-4	4/26/2013		2.3	1.0	ug/L
Vinyl chloride	MW-4	4/10/2014		1.7	1.0	ug/L
Vinyl chloride	MW-4	10/16/2014		4.9	1.0	ug/L
Vinyl chloride	MW-4	4/04/2015		1.3	1.0	ug/L
Vinyl chloride	MW-4	10/01/2015		2.3	1.0	ug/L
Vinyl chloride	MW-4	9/20/2016		2.2	1.0	ug/L
Vinyl chloride	MW-4	10/09/2017		1.8	1.0	ug/L
Vinyl chloride	MW-4	3/21/2018		1.8	1.0	ug/L
Vinyl chloride	MW-4	9/07/2018		1.9	1.0	ug/L
Vinyl chloride	MW-4	4/02/2019		1.8	1.0	ug/L
Vinyl chloride	MW-4	9/18/2019		1.8	1.0	ug/L
Vinyl chloride	MW-4	3/25/2020		1.0	1.0	ug/L
Vinyl chloride	MW-4	9/15/2020		3.3	1.0	ug/L
Vinyl chloride	MW-4	9/28/2021		2.8	1.0	ug/L
Vinyl chloride	MW-4	8/30/2022		1.8	1.0	ug/L
Vinyl chloride	MW-4	9/11/2023		4.2	1.0	ug/L
Alpha-bhc	MW-5	3/25/2020		8.52	.05	ug/L
Bis(2-ethylhexyl) phthalate	MW-5	9/20/2016		10	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-5	3/25/2020		8	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-5	9/12/2024		9	6	ug/L
Chloroethane	MW-5	4/23/2008		3.9	1.0	ug/L
Chloroethane	MW-5	6/23/2008		6.3	1.0	ug/L
Chloroethane	MW-5	8/13/2008		4.4	1.0	ug/L
Chloroethane	MW-5	10/02/2008		7.6	1.0	ug/L
Chloroethane	MW-5	12/13/2008		8.1	1.0	ug/L

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

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Chloroethane	MW-5	3/04/2009		4.7	1.0	ug/L
Chloroethane	MW-5	9/17/2009		5.4	1.0	ug/L
Chloroethane	MW-5	11/06/2009		7.2	1.0	ug/L
Chloroethane	MW-5	4/05/2010		4.8	1.0	ug/L
Chloroethane	MW-5	4/13/2011		3.3	1.0	ug/L
Chloroethane	MW-5	9/22/2011		2.9	1.0	ug/L
Chloroethane	MW-5	9/05/2012		1.0	1.0	ug/L
Chloroethane	MW-5	4/26/2013		1.5	1.0	ug/L
Chloroethane	MW-5	9/26/2013		2.1	1.0	ug/L
Chloroethane	MW-5	4/10/2014		1.3	1.0	ug/L
Chloroethane	MW-5	10/16/2014		3.2	1.0	ug/L
Chloroethane	MW-5	10/01/2015		2.0	1.0	ug/L
Chloroethane	MW-5	4/04/2016		2.7	1.0	ug/L
Chloroethane	MW-5	4/24/2017		1.9	1.0	ug/L
Chloroethane	MW-5	4/02/2019		1.0	1.0	ug/L
Chloroethane	MW-5	6/05/2019		1.3	1.0	ug/L
Chloroethane	MW-5	9/18/2019		2.0	1.0	ug/L
Chloroethane	MW-5	3/25/2020		2.0	1.0	ug/L
Chloroethane	MW-5	9/15/2020		1.9	1.0	ug/L
Chloroethane	MW-5	3/08/2021		1.8	1.0	ug/L
Chloroethane	MW-5	8/30/2022		2.7	1.0	ug/L
Chloroethane	MW-5	3/07/2023		3.1	1.0	ug/L
Cis-1,2-dichloroethylene	MW-5	4/23/2008		1.0	1.0	ug/L
Cis-1,2-dichloroethylene	MW-5	6/23/2008		1.4	1.0	ug/L
Cis-1,2-dichloroethylene	MW-5	12/13/2008		1.0	1.0	ug/L
Di-n-octyl phthalate	MW-5	9/20/2016		64	8	ug/L
1,1-dichloroethylene	MW-9	1/24/1994		4.1	1.0	ug/L
Benzene	MW-9	1/24/1994		2.7	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-9	4/10/2014		9	8	ug/L
Trichloroethylene	MW-9	1/24/1994		4.4	1.0	ug/L

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

Attachment F

Assessment Statistics for Verified VOC Detections

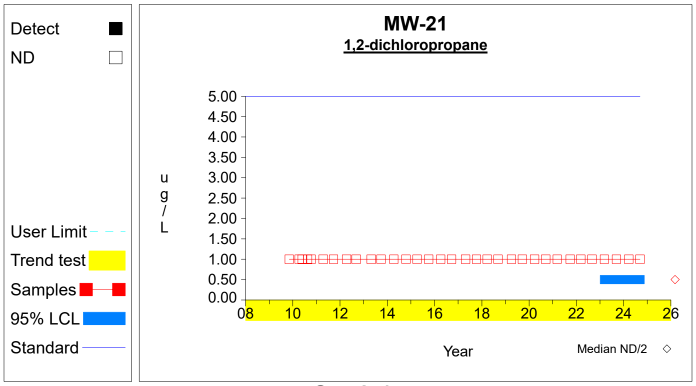
Table 1

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

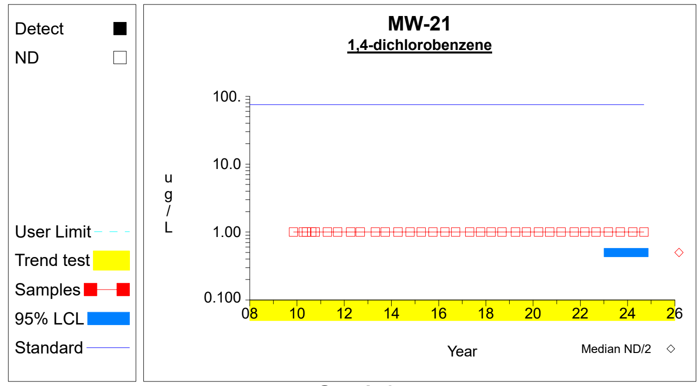
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
1,2-dichloropropane	ug/L	MW-21	4	0.500	0.000	1.176	0.500	0.500	5.000		
1,4-dichlorobenzene	ug/L	MW-21	4	0.500	0.000	1.176	0.500	0.500	75.000		
Benzene	ug/L	MW-21	4	0.500	0.000	1.176	0.500	0.500	5.000		
Bis(2-ethylhexyl) phthalate	ug/L	MW-21	3								*
Chloroethane	ug/L	MW-21	4	0.725	0.450	1.176	0.196	1.254	2800.000		
Cis-1,2-dichloroethylene	ug/L	MW-21	4	0.500	0.000	1.176	0.500	0.500	70.000		
Vinyl chloride	ug/L	MW-21	4	0.500	0.000	1.176	0.500	0.500	2.000		
1,2-dichloropropane	ug/L	MW-4	4	0.775	0.320	1.176	0.398	1.152	5.000		
1,4-dichlorobenzene	ug/L	MW-4	4	6.250	0.777	1.176	5.336	7.164	75.000		
Benzene	ug/L	MW-4	4	1.475	0.171	1.176	1.274	1.676	5.000	dec	
Bis(2-ethylhexyl) phthalate	ug/L	MW-4	4	8.000	3.559	1.176	3.814	12.186	6.000		
Chloroethane	ug/L	MW-4	4	1.525	0.320	1.176	1.148	1.902	2800.000	dec	
Cis-1,2-dichloroethylene	ug/L	MW-4	4	1.525	1.190	1.176	0.125	2.925	70.000		
Vinyl chloride	ug/L	MW-4	4	1.425	1.850	1.176	0.000	3.601	2.000	dec	
1,2-dichloropropane	ug/L	MW-5	4	0.500	0.000	1.176	0.500	0.500	5.000		
1,4-dichlorobenzene	ug/L	MW-5	4	0.500	0.000	1.176	0.500	0.500	75.000		
Benzene	ug/L	MW-5	4	0.500	0.000	1.176	0.500	0.500	5.000		
Bis(2-ethylhexyl) phthalate	ug/L	MW-5	4	4.500	3.000	1.176	0.971	8.029	6.000		
Chloroethane	ug/L	MW-5	4	1.150	1.300	1.176	0.000	2.679	2800.000	dec	
Cis-1,2-dichloroethylene	ug/L	MW-5	4	0.500	0.000	1.176	0.500	0.500	70.000		
Vinyl chloride	ug/L	MW-5	4	0.500	0.000	1.176	0.500	0.500	2.000		

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

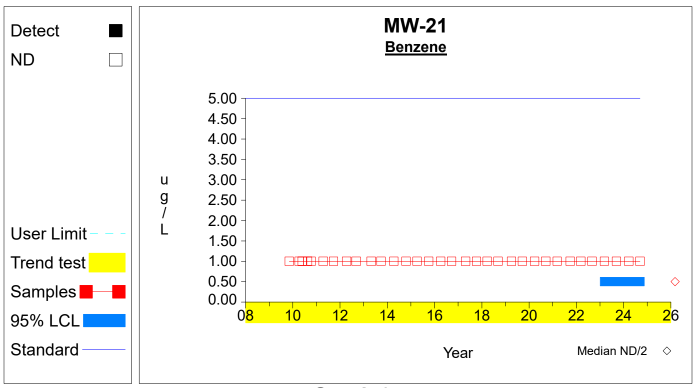
Confidence Limits (Assessment)



Graph 1



Graph 2



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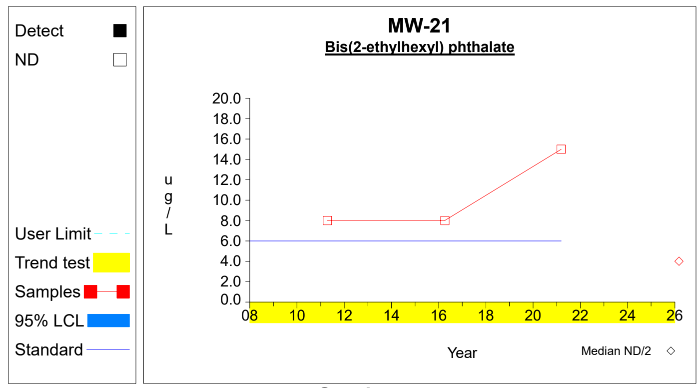

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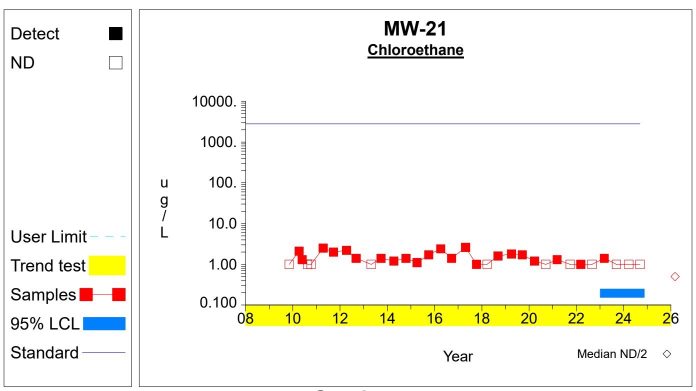
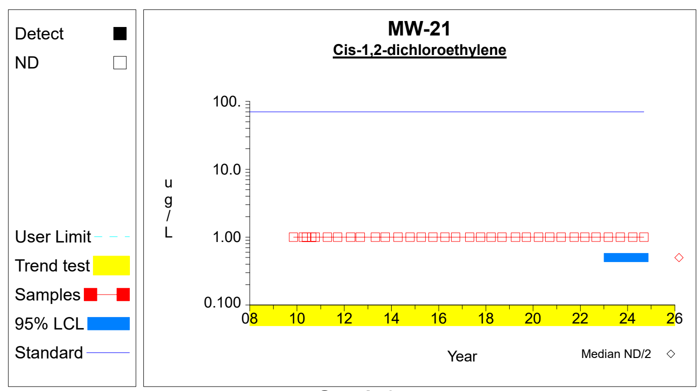
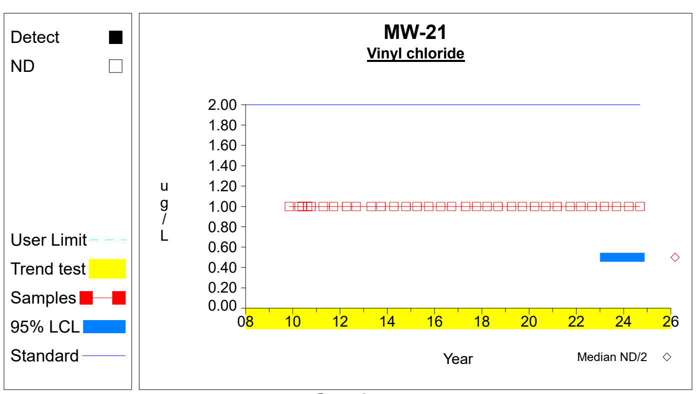


Graph 5

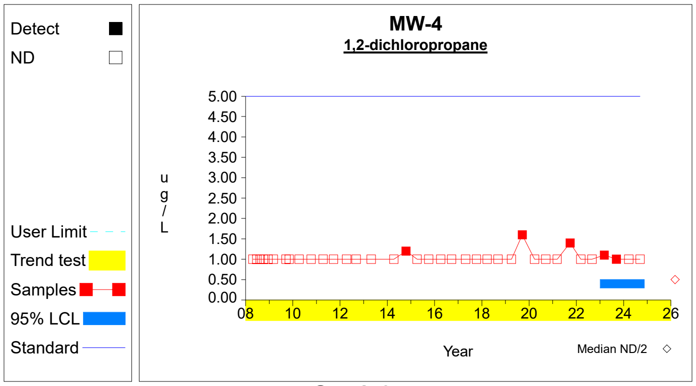


Graph 6

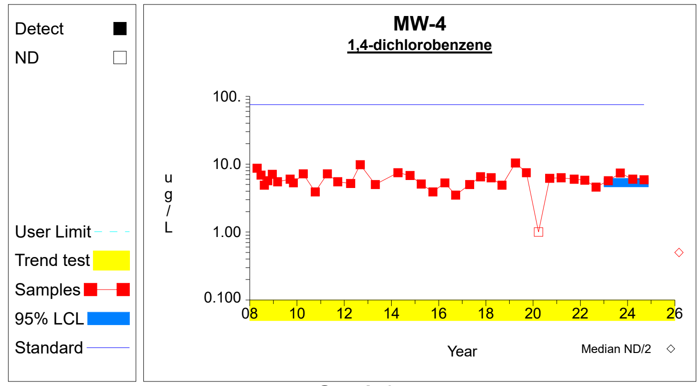


Graph 7

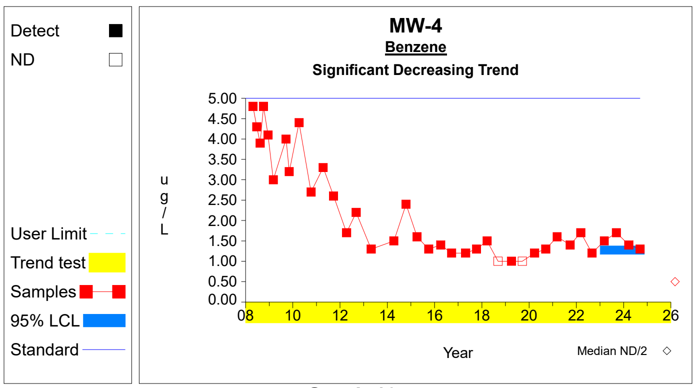
Confidence Limits (Assessment)



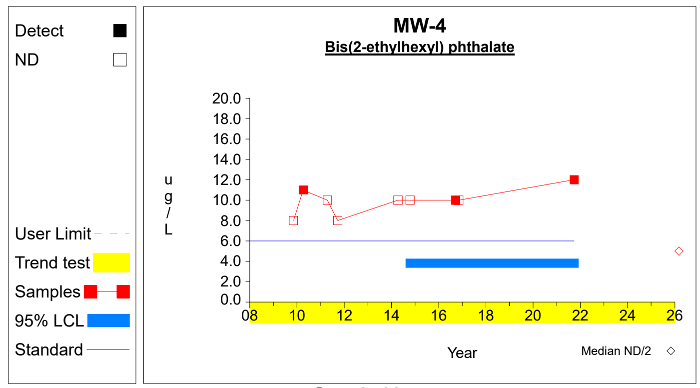
Graph 8



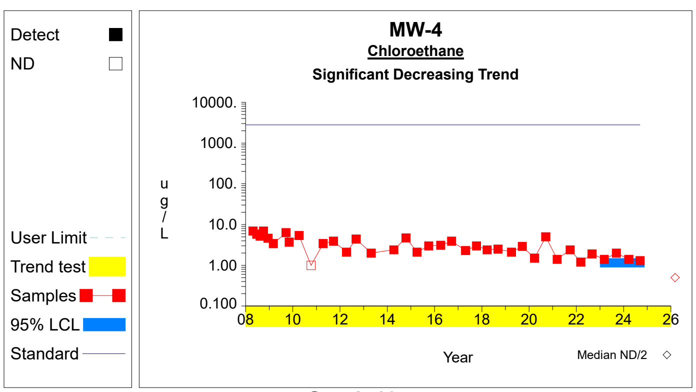
Graph 9



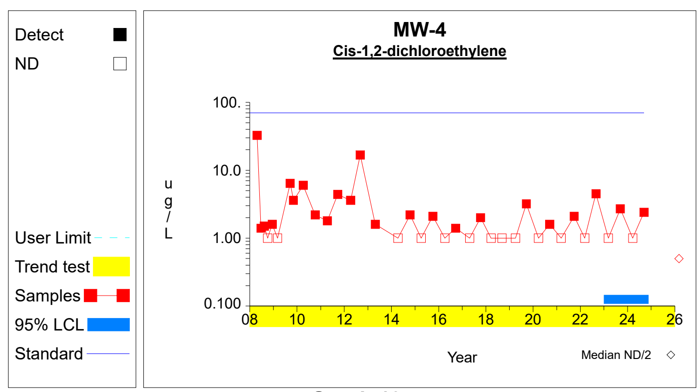
Graph 10



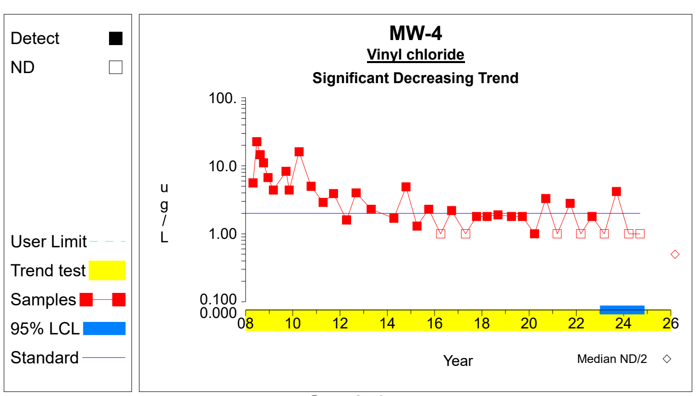
Graph 11



Graph 12

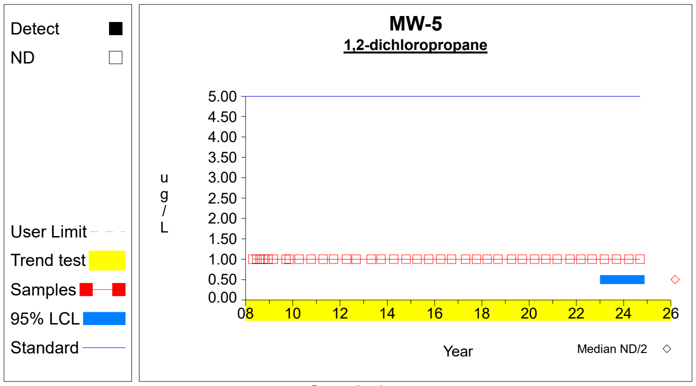


Graph 13

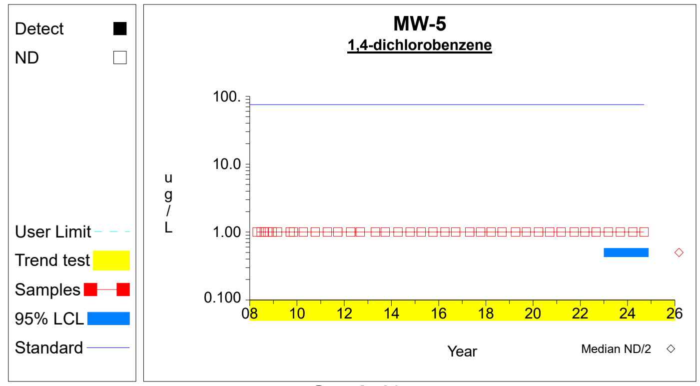


Graph 14

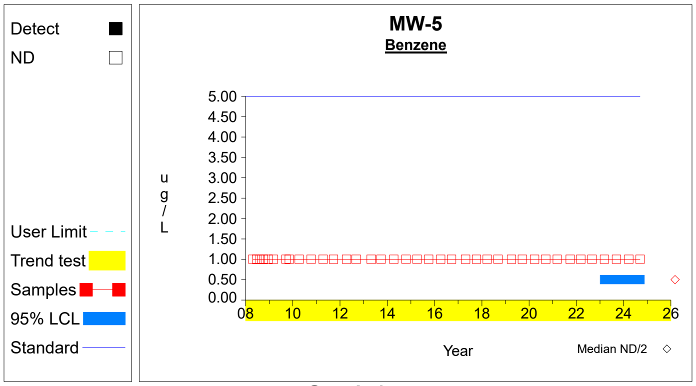
Confidence Limits (Assessment)



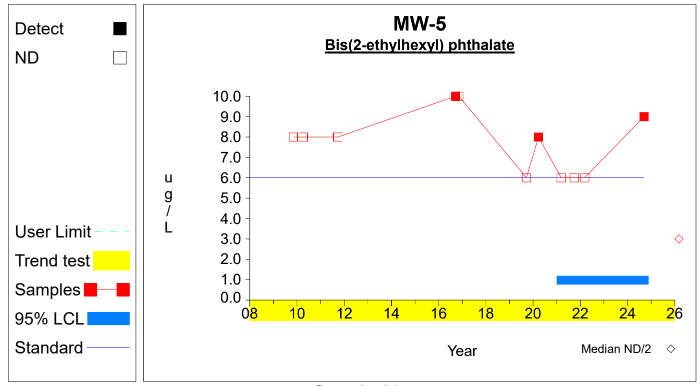
Graph 15



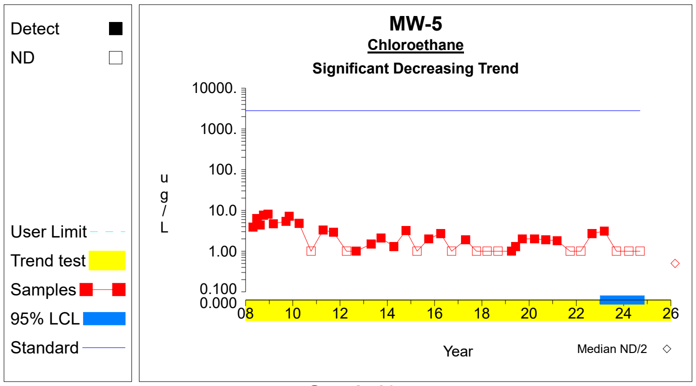
Graph 16



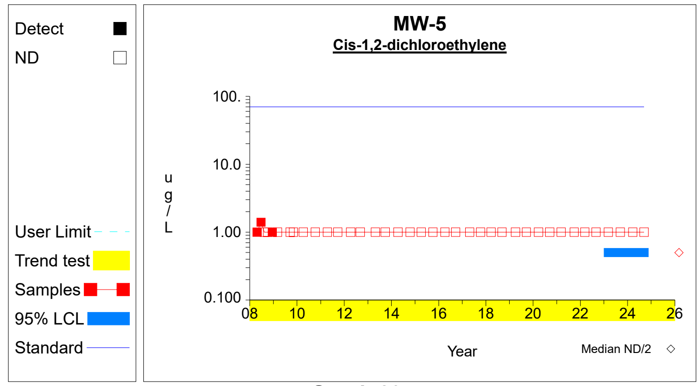
Graph 17



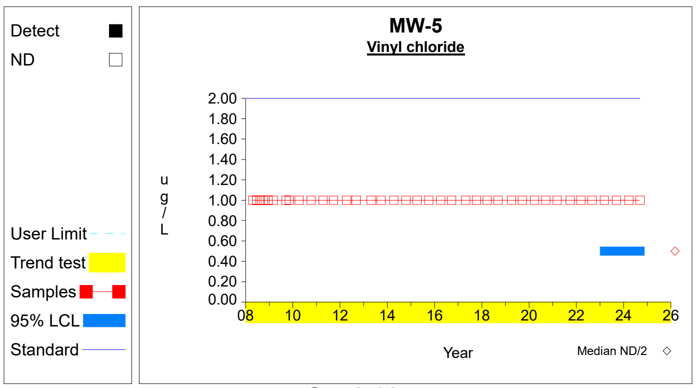
Graph 18



Graph 19



Graph 20



Graph 21

Worksheet 6 - Assessment Monitoring
1,2-dichloropropane (ug/L) at MW-21

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{2.0} / \mathbf{4}$ $= \mathbf{0.5}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{1.0} - \mathbf{4.0/4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \mathbf{\overline{X}} - \mathbf{tS/N}^{½}$ $= \mathbf{0.5} - \mathbf{2.353} * \mathbf{0.0/4}^{½}$ $= \mathbf{0.5}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \mathbf{\overline{X}} + \mathbf{tS/N}^{½}$ $= \mathbf{0.5} + \mathbf{2.353} * \mathbf{0.0/4}^{½}$ $= \mathbf{0.5}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{33} * (\mathbf{33}-1) / 2$ $= \mathbf{528}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{528} \pm \mathbf{2.576} * \mathbf{0.0}^{½}) / 2$ $= [\ \mathbf{264.0}, \mathbf{264.0}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
1,4-dichlorobenzene (ug/L) at MW-21

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.0 - 4.0/4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N^{½}** = **0.5** - **2.353** * **0.0/4^{½}** = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N^{½}** = **0.5** + **2.353** * **0.0/4^{½}** = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **33** * (**33**-1) / 2 = **528**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z$_{.995}$** * **var(S)^{½}**) / 2 = (**528** ± **2.576** * **0.0^{½}**) / 2 = [**264.0**, **264.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Benzene (ug/L) at MW-21

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**1.0** - **4.0**/**4**) / (**4**-1))^{½} = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **0.5** - **2.353** * **0.0**/**4**^{½} = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **0.5** + **2.353** * **0.0**/**4**^{½} = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **33** * (**33**-1) / 2 = **528**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**528** ± **2.576** * **0.0**^{½}) / 2 = [**264.0**, **264.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Bis(2-ethylhexyl) phthalate (ug/L) at MW-21

Insufficient data to perform analysis

Worksheet 6 - Assessment Monitoring
Chloroethane (ug/L) at MW-21

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.9** / **4** = **0.725**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**2.71** - **8.41**/**4**) / (**4**-1))^{½} = **0.45**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **0.725** - **2.353** * **0.45**/**4**^{½} = **0.196**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **0.725** + **2.353** * **0.45**/**4**^{½} = **1.254**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **33** * (**33**-1) / 2 = **528**	Number of sample pairs during trend detection period.
6	S = **-0.042**	Sen's estimator of trend.
7	var(S) = **3979.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**528** ± **2.576** * **3979.667**^{½}) / 2 = [**182.747**, **345.253**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.119**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cis-1,2-dichloroethylene (ug/L) at MW-21

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{2.0} / \mathbf{4}$ $= \mathbf{0.5}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2] - sum[X]^2/N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{1.0 - 4.0/4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N}^{½}$ $= \mathbf{0.5} - \mathbf{2.353} * \mathbf{0.0/4}^{½}$ $= \mathbf{0.5}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N}^{½}$ $= \mathbf{0.5} + \mathbf{2.353} * \mathbf{0.0/4}^{½}$ $= \mathbf{0.5}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{33} * (\mathbf{33}-1) / 2$ $= \mathbf{528}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{0.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{528} \pm \mathbf{2.576} * \mathbf{0.0}^{½}) / 2$ $= [\ \mathbf{264.0}, \mathbf{264.0}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Vinyl chloride (ug/L) at MW-21

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.0** / **4** = **0.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**1.0** - **4.0**/**4**) / (**4**-1))$^{1/2}$ = **0.0**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS/N**$^{1/2}$ = **0.5** - **2.353** * **0.0/4**$^{1/2}$ = **0.5**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS/N**$^{1/2}$ = **0.5** + **2.353** * **0.0/4**$^{1/2}$ = **0.5**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **33** * (**33**-1) / 2 = **528**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **0.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**528** ± **2.576** * **0.0**$^{1/2}$) / 2 = [**264.0**, **264.0**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
1,2-dichloropropane (ug/L) at MW-4

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{3.1} / \textbf{4}$ $= \textbf{0.775}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{2.71} - \textbf{9.61}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{0.32}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{0.775} - \textbf{2.353} * \textbf{0.32}/\textbf{4}^{1/2}$ $= \textbf{0.398}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{0.775} + \textbf{2.353} * \textbf{0.32}/\textbf{4}^{1/2}$ $= \textbf{1.152}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{37} * (\textbf{37}-1) / 2$ $= \textbf{666}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{2043.333}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{666} \pm \textbf{2.576} * \textbf{2043.333}^{1/2}) / 2$ $= [\ \textbf{274.778},\ \textbf{391.222}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{0.0},\ \textbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

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

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{25.0} / \mathbf{4}$ $= \mathbf{6.25}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{158.06} - \mathbf{625.0}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{0.777}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{6.25} - \mathbf{2.353} * \mathbf{0.777}/\mathbf{4}^{1/2}$ $= \mathbf{5.336}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{6.25} + \mathbf{2.353} * \mathbf{0.777}/\mathbf{4}^{1/2}$ $= \mathbf{7.164}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{37} * (\mathbf{37}-1) / 2$ $= \mathbf{666}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{-0.043}$	Sen's estimator of trend.
7	$var(S) = \mathbf{5833.333}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{666} \pm \mathbf{2.576} * \mathbf{5833.333}^{1/2}) / 2$ $= [\ \mathbf{234.627}, \mathbf{431.373}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{-0.141}, \mathbf{0.085}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Benzene (ug/L) at MW-4

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **5.9** / **4** = **1.475**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**8.79** - **34.81/4**) / (**4**-1))^{½} = **0.171**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**^{½} = **1.475** - **2.353** * **0.171/4**^{½} = **1.274**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**^{½} = **1.475** + **2.353** * **0.171/4**^{½} = **1.676**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **37** * (**37**-1) / 2 = **666**	Number of sample pairs during trend detection period.
6	S = **-0.184**	Sen's estimator of trend.
7	var(S) = **5806.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**^{½}) / 2 = (**666** ± **2.576** * **5806.667**^{½}) / 2 = [**234.852**, **431.148**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.261**, **-0.096**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Bis(2-ethylhexyl) phthalate (ug/L) at MW-4

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{32.0} / \mathbf{4}$ $= \mathbf{8.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{294.0} - \mathbf{1024.0}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{3.559}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{X} - tS/N^{1/2}$ $= \mathbf{8.0} - \mathbf{2.353} * \mathbf{3.559}/\mathbf{4}^{1/2}$ $= \mathbf{3.814}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{X} + tS/N^{1/2}$ $= \mathbf{8.0} + \mathbf{2.353} * \mathbf{3.559}/\mathbf{4}^{1/2}$ $= \mathbf{12.186}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{9} * (\mathbf{9}-1) / 2$ $= \mathbf{36}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{63.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{36} \pm \mathbf{2.576} * \mathbf{63.667}^{1/2}) / 2$ $= [\ \mathbf{7.723}, \mathbf{28.277}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{-0.043}, \mathbf{0.781}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chloroethane (ug/L) at MW-4

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **6.1** / **4** = **1.525**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½} = ((**9.61** - **37.21**/**4**) / (**4**-1))^{½} = **0.32**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **1.525** - **2.353** * **0.32**/**4**^{½} = **1.148**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **1.525** + **2.353** * **0.32**/**4**^{½} = **1.902**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **37** * (**37**-1) / 2 = **666**	Number of sample pairs during trend detection period.
6	S = **-0.224**	Sen's estimator of trend.
7	var(S) = **5830.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**666** ± **2.576** * **5830.0**^{½}) / 2 = [**234.655**, **431.345**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.334**, **-0.123**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Cis-1,2-dichloroethylene (ug/L) at MW-4

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **6.1** / **4** = **1.525**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**13.55** - **37.21/4**) / (**4**-1))^{½} = **1.19**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS/N**^{½} = **1.525** - **2.353** * **1.19/4**^{½} = **0.125**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS/N**^{½} = **1.525** + **2.353** * **1.19/4**^{½} = **2.925**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **37** * (**37**-1) / 2 = **666**	Number of sample pairs during trend detection period.
6	S = **-0.055**	Sen's estimator of trend.
7	var(S) = **5504.667**	Variance estimate for slope.
8	M(S) = (**N'** ± $\mathbf{Z}_{.995}$ * **var(S)**^{½}) / 2 = (**666** ± **2.576** * **5504.667**^{½}) / 2 = [**237.439**, **428.561**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.23**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Vinyl chloride (ug/L) at MW-4

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **5.7** / **4** = **1.425**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**18.39 - 32.49/4**) / (**4**-1))^{½} = **1.85**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N^{½}** = **1.425 - 2.353 * 1.85/4^{½}** = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N^{½}** = **1.425 + 2.353 * 1.85/4^{½}** = **3.601**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **37** * (**37**-1) / 2 = **666**	Number of sample pairs during trend detection period.
6	S = **-0.334**	Sen's estimator of trend.
7	var(S) = **5783.0**	Variance estimate for slope.
8	M(S) = (**N' ± $Z_{.995}$ * var(S)^{½}**) / 2 = (**666 ± 2.576 * 5783.0^{½}**) / 2 = [**235.053**, **430.947**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.605**, **-0.188**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
1,2-dichloropropane (ug/L) at MW-5

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

Worksheet 6 - Assessment Monitoring
1,4-dichlorobenzene (ug/L) at MW-5

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

Worksheet 6 - Assessment Monitoring
Benzene (ug/L) at MW-5

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

Worksheet 6 - Assessment Monitoring
Bis(2-ethylhexyl) phthalate (ug/L) at MW-5

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **18.0** / **4** = **4.5**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{108.0} - \mathbf{324.0}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ = **3.0**	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{4.5} - \mathbf{2.353} * \mathbf{3.0}/\mathbf{4}^{1/2}$ = **0.971**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{4.5} + \mathbf{2.353} * \mathbf{3.0}/\mathbf{4}^{1/2}$ = **8.029**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **11** * (**11**-1) / 2 = **55**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **99.667**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{55} \pm \mathbf{2.576} * \mathbf{99.667}^{1/2}) / 2$ = [**14.641**, **40.359**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.408**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Chloroethane (ug/L) at MW-5

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **4.6** / **4** = **1.15**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{10.36} - \mathbf{21.16}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ = **1.3**	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{1.15} - \mathbf{2.353} * \mathbf{1.3}/\mathbf{4}^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{1.15} + \mathbf{2.353} * \mathbf{1.3}/\mathbf{4}^{1/2}$ = **2.679**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **39** * (**39**-1) / 2 = **741**	Number of sample pairs during trend detection period.
6	S = **-0.222**	Sen's estimator of trend.
7	var(S) = **6613.333**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{741} \pm \mathbf{2.576} * \mathbf{6613.333}^{1/2}) / 2$ = [**265.757**, **475.243**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.375**, **-0.053**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Cis-1,2-dichloroethylene (ug/L) at MW-5

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{2.0} / \mathbf{4}$ $= \mathbf{0.5}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{1.0} - \mathbf{4.0/4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N}^{½}$ $= \mathbf{0.5} - \mathbf{2.353} * \mathbf{0.0/4}^{½}$ $= \mathbf{0.5}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N}^{½}$ $= \mathbf{0.5} + \mathbf{2.353} * \mathbf{0.0/4}^{½}$ $= \mathbf{0.5}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{38} * (\mathbf{38}-1) / 2$ $= \mathbf{703}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{1367.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{703} \pm \mathbf{2.576} * \mathbf{1367.667}^{½}) / 2$ $= [\ \mathbf{303.867}, \mathbf{399.133}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Vinyl chloride (ug/L) at MW-5

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

Appendix C

Laboratory Reports for Reporting Period

With Chain of Custody

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

Project Description

Appendix Sampling

For:

Todd Whipple

HLW Engineering

PO Box 314

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Wednesday, April 10, 2024

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

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

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

HLW Engineering

Todd Whipple
PO Box 314
Story City, IA 50248

Project Name: Appendix Sampling

Project / PO Number: N/A
Received: 03/21/2024
Reported: 04/10/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-9	1HC1561-01	Water	GRAB		03/20/24 13:08	03/21/24 13:08
MW-17	1HC1561-02	Water	GRAB		03/20/24 11:28	03/21/24 13:08
MW-18	1HC1561-03	Water	GRAB		03/20/24 13:42	03/21/24 13:08
MW-19A	1HC1561-04	Water	GRAB		03/19/24 11:59	03/21/24 13:08
MW-24	1HC1561-05	Water	GRAB		03/12/24 12:48	03/21/24 13:08
MW-4	1HC1561-06	Water	GRAB		03/20/24 10:47	03/21/24 13:08
MW-5	1HC1561-07	Water	GRAB		03/20/24 09:36	03/21/24 13:08
MW-12	1HC1561-08	Water	GRAB		03/20/24 08:55	03/21/24 13:08
MW-15R	1HC1561-09	Water	GRAB		03/20/24 08:09	03/21/24 13:08
MW-20R	1HC1561-10	Water	GRAB		03/20/24 08:35	03/21/24 13:08
MW-21	1HC1561-11	Water	GRAB		03/20/24 09:15	03/21/24 13:08
MW-22	1HC1561-12	Water	GRAB		03/20/24 11:01	03/21/24 13:08
MW-25	1HC1561-13	Water	GRAB		03/20/24 09:58	03/21/24 13:08
MW-26	1HC1561-14	Water	GRAB		03/20/24 10:21	03/21/24 13:08
Duplicate	1HC1561-15	Water	GRAB		03/20/24 00:00	03/21/24 13:08

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CERTIFICATE OF ANALYSIS

1HC1561

Analytical Testing Parameters

Client Sample ID:	MW-9		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-01	**Collection Date:**	03/20/2024 13:08

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-9		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-01	**Collection Date:**	03/20/2024 13:08

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1728	CSM
Surrogate: Dibromofluoromethane	98.1	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1728	CSM
Surrogate: Dibromofluoromethane	98.1	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1728	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1728	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1728	CSM
Surrogate: Toluene-d8	98.3	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1728	CSM
Surrogate: Toluene-d8	98.3	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1728	CSM
Surrogate: 4-Bromofluorobenzene	98.8	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1728	CSM
Surrogate: 4-Bromofluorobenzene	98.8	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1728	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Arsenic, total	**0.0070**	0.0040	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Barium, total	**0.295**	0.0040	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Cobalt, total	**0.0045**	0.0004	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Nickel, total	**0.0092**	0.0040	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/01/24 2348	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/01/24 2348	RVV

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CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-17		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-02	**Collection Date:**	03/20/2024 11:28

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM

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CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-17		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-02	**Collection Date:**	03/20/2024 11:28

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1751	CSM
Surrogate: Dibromofluoromethane	96.3	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1751	CSM
Surrogate: Dibromofluoromethane	96.3	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1751	CSM
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1751	CSM
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1751	CSM
Surrogate: Toluene-d8	98.4	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1751	CSM
Surrogate: Toluene-d8	98.4	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1751	CSM
Surrogate: 4-Bromofluorobenzene	99.1	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1751	CSM
Surrogate: 4-Bromofluorobenzene	99.1	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1751	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Barium, total	**0.149**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Cobalt, total	**0.0007**	0.0004	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Nickel, total	**0.0049**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Selenium, total	**0.0075**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0013	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0013	RVV

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-18		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-03	**Collection Date:**	03/20/2024 13:42

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM

Client Sample ID:	MW-18		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-03	**Collection Date:**	03/20/2024 13:42

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1814	CSM
Surrogate: Dibromofluoromethane	96.6	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1814	CSM
Surrogate: Dibromofluoromethane	96.6	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1814	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1814	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1814	CSM
Surrogate: Toluene-d8	98.6	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1814	CSM
Surrogate: Toluene-d8	98.6	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1814	CSM
Surrogate: 4-Bromofluorobenzene	98.7	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1814	CSM
Surrogate: 4-Bromofluorobenzene	98.7	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1814	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Arsenic, total	**0.0168**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Barium, total	**0.623**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Cobalt, total	**0.0122**	0.0004	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Nickel, total	**0.0216**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0019	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0019	RVV

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CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-19A		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-04	**Collection Date:**	03/19/2024 11:59

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM

Client Sample ID:	MW-19A		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-04	**Collection Date:**	03/19/2024 11:59

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1837	CSM
Surrogate: Dibromofluoromethane	96.9	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1837	CSM
Surrogate: Dibromofluoromethane	96.9	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1837	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1837	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1837	CSM
Surrogate: Toluene-d8	98.2	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1837	CSM
Surrogate: Toluene-d8	98.2	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1837	CSM
Surrogate: 4-Bromofluorobenzene	98.7	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1837	CSM
Surrogate: 4-Bromofluorobenzene	98.7	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1837	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Arsenic, total	**0.0040**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Barium, total	**0.622**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Cobalt, total	**0.0069**	0.0004	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Nickel, total	**0.0066**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0025	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0025	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-24		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-05	**Collection Date:**	03/12/2024 12:48

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM

Client Sample ID:	MW-24			
Sample Matrix:	Water		**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-05		**Collection Date:**	03/12/2024 12:48

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1859	CSM
Surrogate: Dibromofluoromethane	97.0	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1859	CSM
Surrogate: Dibromofluoromethane	97.0	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1859	CSM
Surrogate: 1,2-Dichloroethane-d4	99.2	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1859	CSM
Surrogate: 1,2-Dichloroethane-d4	99.2	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1859	CSM
Surrogate: Toluene-d8	98.7	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1859	CSM
Surrogate: Toluene-d8	98.7	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1859	CSM
Surrogate: 4-Bromofluorobenzene	98.6	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1859	CSM
Surrogate: 4-Bromofluorobenzene	98.6	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1859	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Arsenic, total	**0.0133**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Barium, total	**0.459**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0044	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0044	RVV

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CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-4		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-06	**Collection Date:**	03/20/2024 10:47

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Chloroethane	**1.4**	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Benzene	**1.4**	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-4		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-06	**Collection Date:**	03/20/2024 10:47

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,4-Dichlorobenzene	**6.0**	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1922	CSM
Surrogate: Dibromofluoromethane	97.5	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1922	CSM
Surrogate: Dibromofluoromethane	97.5	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1922	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1922	CSM
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1922	CSM
Surrogate: Toluene-d8	98.7	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1922	CSM
Surrogate: Toluene-d8	98.7	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1922	CSM
Surrogate: 4-Bromofluorobenzene	99.0	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1922	CSM
Surrogate: 4-Bromofluorobenzene	99.0	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1922	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Arsenic, total	**0.0572**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Barium, total	**1.01**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Cobalt, total	**0.0015**	0.0004	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0050	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0050	RVV

Client Sample ID:	MW-5		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-07	**Collection Date:**	03/20/2024 9:36

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-5		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-07	**Collection Date:**	03/20/2024 9:36

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1945	CSM
Surrogate: Dibromofluoromethane	97.0	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1945	CSM
Surrogate: Dibromofluoromethane	97.0	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1945	CSM
Surrogate: 1,2-Dichloroethane-d4	99.9	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1945	CSM
Surrogate: 1,2-Dichloroethane-d4	99.9	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1945	CSM
Surrogate: Toluene-d8	98.6	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1945	CSM
Surrogate: Toluene-d8	98.6	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1945	CSM
Surrogate: 4-Bromofluorobenzene	98.3	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1945	CSM
Surrogate: 4-Bromofluorobenzene	98.3	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1945	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Arsenic, total	**0.166**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Barium, total	**0.415**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Cobalt, total	**0.0026**	0.0004	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Copper, total	**0.0268**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Nickel, total	**0.0090**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0056	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0056	RVV

Client Sample ID:	MW-12			
Sample Matrix:	Water		**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-08		**Collection Date:**	03/20/2024 8:55

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM

Client Sample ID:	MW-12		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-08	**Collection Date:**	03/20/2024 8:55

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1302	CSM
Surrogate: Dibromofluoromethane	110	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1302	CSM
Surrogate: Dibromofluoromethane	110	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1302	CSM
Surrogate: 1,2-Dichloroethane-d4	110	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1302	CSM
Surrogate: 1,2-Dichloroethane-d4	110	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1302	CSM
Surrogate: Toluene-d8	99.2	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1302	CSM
Surrogate: Toluene-d8	99.2	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1302	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1302	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1302	CSM

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Arsenic, total	**0.0120**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Barium, total	**0.324**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Cobalt, total	**0.0034**	0.0004	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Nickel, total	**0.0061**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0102	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0102	RVV

MICROBAC

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-15R		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-09	**Collection Date:**	03/20/2024 8:09

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM

Client Sample ID:	MW-15R		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-09	**Collection Date:**	03/20/2024 8:09

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1328	CSM
Surrogate: Dibromofluoromethane	111	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1328	CSM
Surrogate: Dibromofluoromethane	111	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1328	CSM
Surrogate: 1,2-Dichloroethane-d4	110	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1328	CSM
Surrogate: 1,2-Dichloroethane-d4	110	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1328	CSM
Surrogate: Toluene-d8	99.3	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1328	CSM
Surrogate: Toluene-d8	99.3	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1328	CSM
Surrogate: 4-Bromofluorobenzene	102	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1328	CSM
Surrogate: 4-Bromofluorobenzene	102	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1328	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Arsenic, total	**0.0133**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Barium, total	**0.318**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Cobalt, total	**0.0022**	0.0004	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0108	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0108	RVV

Client Sample ID:	MW-20R		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-10	**Collection Date:**	03/20/2024 8:35

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-20R		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-10	**Collection Date:**	03/20/2024 8:35

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1355	CSM
Surrogate: Dibromofluoromethane	111	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1355	CSM
Surrogate: Dibromofluoromethane	111	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1355	CSM
Surrogate: 1,2-Dichloroethane-d4	110	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1355	CSM
Surrogate: 1,2-Dichloroethane-d4	110	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1355	CSM
Surrogate: Toluene-d8	98.5	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1355	CSM
Surrogate: Toluene-d8	98.5	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1355	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1355	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1355	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Arsenic, total	**0.0750**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Barium, total	**0.821**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Cobalt, total	**0.0004**	0.0004	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0114	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0114	RVV

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CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-21		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-11	**Collection Date:**	03/20/2024 9:15

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM

Client Sample ID:	MW-21		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-11	**Collection Date:**	03/20/2024 9:15

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1422	CSM
Surrogate: Dibromofluoromethane	114	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1422	CSM
Surrogate: Dibromofluoromethane	114	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1422	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1422	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1422	CSM
Surrogate: Toluene-d8	99.0	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1422	CSM
Surrogate: Toluene-d8	99.0	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1422	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1422	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1422	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Barium, total	**0.369**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0121	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0121	RVV

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CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-22		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-12	**Collection Date:**	03/20/2024 11:01

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Bromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Chloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Acetone	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Chloroform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Benzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Dibromomethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Toluene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Xylenes, total	<2.0	2.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Styrene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Bromoform	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-22		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-12	**Collection Date:**	03/20/2024 11:01

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/25/24 0000	03/25/24 1448	CSM
Surrogate: Dibromofluoromethane	114	Limit: 75-136	% Rec	1		03/25/24 0000	03/25/24 1448	CSM
Surrogate: Dibromofluoromethane	114	Limit: 80-126	% Rec	1		03/25/24 0000	03/25/24 1448	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 61-142	% Rec	1		03/25/24 0000	03/25/24 1448	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 63-138	% Rec	1		03/25/24 0000	03/25/24 1448	CSM
Surrogate: Toluene-d8	99.2	Limit: 87-116	% Rec	1		03/25/24 0000	03/25/24 1448	CSM
Surrogate: Toluene-d8	99.2	Limit: 82-121	% Rec	1		03/25/24 0000	03/25/24 1448	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 80-116	% Rec	1		03/25/24 0000	03/25/24 1448	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 85-111	% Rec	1		03/25/24 0000	03/25/24 1448	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Arsenic, total	**0.0598**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Barium, total	**0.439**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Cobalt, total	**0.0018**	0.0004	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0127	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0127	RVV

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CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	MW-25		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-13	**Collection Date:**	03/20/2024 9:58

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Vinyl Chloride	<1.0	1.0	ug/L	1		03/27/24 0000	03/27/24 1620	CSM
Surrogate: Dibromofluoromethane	91.8	Limit: 80-126	% Rec	1		03/27/24 0000	03/27/24 1620	CSM
Surrogate: 1,2-Dichloroethane-d4	96.3	Limit: 63-138	% Rec	1		03/27/24 0000	03/27/24 1620	CSM
Surrogate: Toluene-d8	97.4	Limit: 87-116	% Rec	1		03/27/24 0000	03/27/24 1620	CSM
Surrogate: 4-Bromofluorobenzene	97.7	Limit: 85-111	% Rec	1		03/27/24 0000	03/27/24 1620	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Arsenic, total	**0.0274**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0133	RVV
Barium, total	**0.515**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0133	RVV

Client Sample ID:	MW-26		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-14	**Collection Date:**	03/20/2024 10:21

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Vinyl Chloride	<1.0	1.0	ug/L	1		03/27/24 0000	03/27/24 1643	CSM
Surrogate: Dibromofluoromethane	92.3	Limit: 80-126	% Rec	1		03/27/24 0000	03/27/24 1643	CSM
Surrogate: 1,2-Dichloroethane-d4	97.3	Limit: 63-138	% Rec	1		03/27/24 0000	03/27/24 1643	CSM
Surrogate: Toluene-d8	98.4	Limit: 87-116	% Rec	1		03/27/24 0000	03/27/24 1643	CSM
Surrogate: 4-Bromofluorobenzene	97.3	Limit: 85-111	% Rec	1		03/27/24 0000	03/27/24 1643	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Arsenic, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0139	RVV
Barium, total	**0.0941**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0139	RVV

CERTIFICATE OF ANALYSIS

1HC1561

Client Sample ID:	Duplicate		
Sample Matrix:	Water	**Collected By:**	Todd Whipple
Lab Sample ID:	1HC1561-15	**Collection Date:**	03/20/2024

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Barium, total	**0.250**	0.0040	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0157	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/29/24 1050	04/02/24 0157	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HC1381	1HC1381-BS1	
		1HC1381-BSD1	
		1HC1381-BLK1	
		1HC1561-01	MW-9
		1HC1561-02	MW-17
		1HC1561-03	MW-18
		1HC1561-04	MW-19A
		1HC1561-05	MW-24
		1HC1561-06	MW-4
		1HC1561-07	MW-5
		1HC1381-MS1	1HC1559-01
		1HC1381-MSD1	1HC1559-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HC1382	1HC1382-BS1	
		1HC1382-BSD1	
		1HC1382-BLK1	
		1HC1561-08	MW-12
		1HC1561-09	MW-15R
		1HC1561-10	MW-20R
		1HC1561-11	MW-21
		1HC1561-12	MW-22
		1HC1382-MS1	1HC1561-10
		1HC1382-MSD1	1HC1561-10

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HC1543	1HC1543-BS1	
		1HC1543-BSD1	
		1HC1543-BLK1	
		1HC1561-13	MW-25
		1HC1561-14	MW-26
		1HC1543-MS1	1HC1329-01
		1HC1543-MSD1	1HC1329-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HC1642	1HC1642-BLK1	
		1HC1642-BS1	
		1HC1561-01	MW-9
		1HC1642-MS1	1HC1561-01
		1HC1642-MSD1	1HC1561-01

EPA 6020A	1HC1642	1HC1642-PS1	1HC1561-01
		1HC1561-02	MW-17
		1HC1561-03	MW-18
		1HC1561-04	MW-19A
		1HC1561-05	MW-24
		1HC1561-06	MW-4
		1HC1561-07	MW-5
		1HC1561-08	MW-12
		1HC1561-09	MW-15R
		1HC1561-10	MW-20R
		1HC1561-11	MW-21
		1HC1561-12	MW-22
		1HC1561-13	MW-25
		1HC1561-14	MW-26
		1HC1561-15	Duplicate

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 1HC1381 - EPA 5030B - EPA 8260B										
Blank (1HC1381-BLK1)				Prepared: 03/25/24 00:00 Analyzed: 03/25/24 10:56						
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							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1381 - EPA 5030B - EPA 8260B										
Blank (1HC1381-BLK1)			Prepared: 03/25/24 00:00 Analyzed: 03/25/24 10:56							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*46.1*		ug/L	*50.2*		*92.0*	*80-126*			
Surrogate: Dibromofluoromethane	*46.1*		ug/L	*50.2*		*92.0*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*47.8*		ug/L	*50.1*		*95.4*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*47.8*		ug/L	*50.1*		*95.4*	*61-142*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.4*		*98.1*	*87-116*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.4*		*98.1*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.7*		ug/L	*50.1*		*99.0*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*49.7*		ug/L	*50.1*		*99.0*	*80-116*			
LCS (1HC1381-BS1)			Prepared: 03/25/24 00:00 Analyzed: 03/25/24 09:47							
Chloromethane	34.14	1.0	ug/L	30.6		111	63-155			
Vinyl Chloride	30.00	1.0	ug/L	30.2		99.3	70-154			
Bromomethane	33.25	1.0	ug/L	28.8		115	52-176			
Chloroethane	31.64	1.0	ug/L	31.6		100	72-148			
Trichlorofluoromethane	28.39	1.0	ug/L	32.6		87.1	70-152			
1,1-Dichloroethylene	47.49	1.0	ug/L	50.0		95.0	70-148			
Acetone	101.0	10.0	ug/L	102		99.0	43-172			
Methyl Iodide	99.35	1.0	ug/L	99.7		99.7	69-170			
Carbon Disulfide	85.11	1.0	ug/L	101		84.3	72-162			
Methylene Chloride	45.53	5.0	ug/L	50.0		91.1	68-142			
Acrylonitrile	92.04	5.0	ug/L	100		91.7	67-144			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1381 - EPA 5030B - EPA 8260B										
LCS (1HC1381-BS1)			Prepared: 03/25/24 00:00 Analyzed: 03/25/24 09:47							
trans-1,2-Dichloroethylene	45.81	1.0	ug/L	50.0		91.6	66-148			
1,1-Dichloroethane	45.39	1.0	ug/L	50.0		90.8	66-143			
Vinyl Acetate	97.68	5.0	ug/L	102		95.9	43-153			
cis-1,2-Dichloroethylene	55.83	1.0	ug/L	49.5		113	71-149			
2-Butanone (MEK)	84.64	10.0	ug/L	103		81.9	52-159			
Bromochloromethane	48.63	1.0	ug/L	50.0		97.3	69-143			
Chloroform	46.67	1.0	ug/L	50.0		93.3	69-144			
1,1,1-Trichloroethane	38.46	1.0	ug/L	50.0		77.0	62-129			
Carbon Tetrachloride	41.91	1.0	ug/L	50.0		83.8	63-141			
Benzene	48.21	1.0	ug/L	50.0		96.4	71-134			
1,2-Dichloroethane	49.00	1.0	ug/L	50.0		98.0	72-132			
Trichloroethylene	46.32	1.0	ug/L	50.0		92.6	71-135			
1,2-Dichloropropane	48.61	1.0	ug/L	50.0		97.2	69-136			
Dibromomethane	53.24	1.0	ug/L	50.0		106	73-147			
Bromodichloromethane	45.46	1.0	ug/L	50.0		90.9	68-129			
cis-1,3-Dichloropropene	47.84	1.0	ug/L	50.3		95.1	65-134			
4-Methyl-2-pentanone (MIBK)	100.2	5.0	ug/L	101		98.9	58-147			
Toluene	47.28	1.0	ug/L	50.0		94.6	72-133			
trans-1,3-Dichloropropene	47.21	1.0	ug/L	50.4		93.6	67-130			
1,1,2-Trichloroethane	49.60	1.0	ug/L	50.0		99.2	69-135			
Tetrachloroethylene	46.89	1.0	ug/L	50.0		93.8	69-130			
2-Hexanone (MBK)	98.01	5.0	ug/L	103		94.9	55-144			
Dibromochloromethane	50.79	1.0	ug/L	49.5		103	73-127			
1,2-Dibromoethane	50.74	1.0	ug/L	50.0		101	67-132			
Chlorobenzene	50.47	1.0	ug/L	50.0		101	72-123			
1,1,1,2-Tetrachloroethane	50.50	1.0	ug/L	50.0		101	73-127			
Ethylbenzene	47.05	1.0	ug/L	50.0		94.1	71-127			
Xylenes, total	141.7	2.0	ug/L	150		94.4	74-127			
Styrene	48.09	1.0	ug/L	50.0		96.2	66-126			
Bromoform	50.35	1.0	ug/L	50.0		101	68-130			
1,2,3-Trichloropropane	52.57	1.0	ug/L	50.0		105	63-136			
trans-1,4-Dichloro-2-butene	92.41	5.0	ug/L	104		88.9	54-134			
1,1,2,2-Tetrachloroethane	49.48	1.0	ug/L	49.8		99.3	61-131			
1,4-Dichlorobenzene	49.17	1.0	ug/L	50.0		98.3	70-129			
1,2-Dichlorobenzene	48.34	1.0	ug/L	50.0		96.7	69-126			
1,2-Dibromo-3-chloropropane	48.81	5.0	ug/L	50.0		97.6	50-143			
Surrogate: Dibromofluoromethane	*46.3*		ug/L	*50.2*		*92.2*	*80-126*			
Surrogate: Dibromofluoromethane	*46.3*		ug/L	*50.2*		*92.2*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*46.4*		ug/L	*50.1*		*92.7*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*46.4*		ug/L	*50.1*		*92.7*	*61-142*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.4*		*98.1*	*87-116*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.4*		*98.1*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.1*		*99.8*	*85-111*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1381 - EPA 5030B - EPA 8260B										
LCS (1HC1381-BS1)				Prepared: 03/25/24 00:00 Analyzed: 03/25/24 09:47						
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.1*		*99.8*	*80-116*			
LCS Dup (1HC1381-BSD1)				Prepared: 03/25/24 00:00 Analyzed: 03/25/24 10:10						
Chloromethane	32.35	1.0	ug/L	30.6		106	63-155	5.38	24	
Vinyl Chloride	28.38	1.0	ug/L	30.2		93.9	70-154	5.55	25	
Bromomethane	32.01	1.0	ug/L	28.8		111	52-176	3.80	27	
Chloroethane	32.75	1.0	ug/L	31.6		104	72-148	3.45	25	
Trichlorofluoromethane	27.60	1.0	ug/L	32.6		84.6	70-152	2.82	26	
1,1-Dichloroethylene	47.96	1.0	ug/L	50.0		95.9	70-148	0.985	24	
Acetone	97.53	10.0	ug/L	102		95.6	43-172	3.46	30	
Methyl Iodide	98.76	1.0	ug/L	99.7		99.1	69-170	0.596	30	
Carbon Disulfide	87.63	1.0	ug/L	101		86.8	72-162	2.92	24	
Methylene Chloride	46.61	5.0	ug/L	50.0		93.2	68-142	2.34	21	
Acrylonitrile	85.58	5.0	ug/L	100		85.3	67-144	7.27	24	
trans-1,2-Dichloroethylene	43.73	1.0	ug/L	50.0		87.5	66-148	4.65	27	
1,1-Dichloroethane	42.85	1.0	ug/L	50.0		85.7	66-143	5.76	24	
Vinyl Acetate	98.82	5.0	ug/L	102		97.0	43-153	1.16	30	
cis-1,2-Dichloroethylene	44.52	1.0	ug/L	49.5		90.0	71-149	22.5	26	
2-Butanone (MEK)	93.63	10.0	ug/L	103		90.6	52-159	10.1	27	
Bromochloromethane	46.35	1.0	ug/L	50.0		92.7	69-143	4.80	23	
Chloroform	44.50	1.0	ug/L	50.0		89.0	69-144	4.76	23	
1,1,1-Trichloroethane	36.47	1.0	ug/L	50.0		73.0	62-129	5.31	24	
Carbon Tetrachloride	39.43	1.0	ug/L	50.0		78.9	63-141	6.10	25	
Benzene	45.92	1.0	ug/L	50.0		91.8	71-134	4.87	24	
1,2-Dichloroethane	46.98	1.0	ug/L	50.0		94.0	72-132	4.21	24	
Trichloroethylene	44.32	1.0	ug/L	50.0		88.6	71-135	4.41	24	
1,2-Dichloropropane	46.64	1.0	ug/L	50.0		93.3	69-136	4.14	24	
Dibromomethane	50.53	1.0	ug/L	50.0		101	73-147	5.22	25	
Bromodichloromethane	43.46	1.0	ug/L	50.0		86.9	68-129	4.50	22	
cis-1,3-Dichloropropene	45.18	1.0	ug/L	50.3		89.8	65-134	5.72	23	
4-Methyl-2-pentanone (MIBK)	95.41	5.0	ug/L	101		94.1	58-147	4.95	27	
Toluene	45.10	1.0	ug/L	50.0		90.2	72-133	4.72	24	
trans-1,3-Dichloropropene	44.55	1.0	ug/L	50.4		88.3	67-130	5.80	24	
1,1,2-Trichloroethane	47.36	1.0	ug/L	50.0		94.7	69-135	4.62	23	
Tetrachloroethylene	44.44	1.0	ug/L	50.0		88.9	69-130	5.37	25	
2-Hexanone (MBK)	100.1	5.0	ug/L	103		96.9	55-144	2.09	25	
Dibromochloromethane	48.34	1.0	ug/L	49.5		97.7	73-127	4.94	22	
1,2-Dibromoethane	48.54	1.0	ug/L	50.0		97.1	67-132	4.43	24	
Chlorobenzene	47.77	1.0	ug/L	50.0		95.5	72-123	5.50	23	
1,1,1,2-Tetrachloroethane	48.01	1.0	ug/L	50.0		96.0	73-127	5.06	24	
Ethylbenzene	44.68	1.0	ug/L	50.0		89.4	71-127	5.17	26	
Xylenes, total	134.0	2.0	ug/L	150		89.4	74-127	5.53	25	
Styrene	45.53	1.0	ug/L	50.0		91.1	66-126	5.47	23	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1381 - EPA 5030B - EPA 8260B										
LCS Dup (1HC1381-BSD1)			Prepared: 03/25/24 00:00 Analyzed: 03/25/24 10:10							
Bromoform	47.57	1.0	ug/L	50.0		95.1	68-130	5.68	23	
1,2,3-Trichloropropane	49.45	1.0	ug/L	50.0		98.9	63-136	6.12	24	
trans-1,4-Dichloro-2-butene	87.50	5.0	ug/L	104		84.2	54-134	5.46	27	
1,1,2,2-Tetrachloroethane	48.05	1.0	ug/L	49.8		96.4	61-131	2.93	29	
1,4-Dichlorobenzene	46.99	1.0	ug/L	50.0		94.0	70-129	4.53	24	
1,2-Dichlorobenzene	46.18	1.0	ug/L	50.0		92.4	69-126	4.57	26	
1,2-Dibromo-3-chloropropane	46.61	5.0	ug/L	50.0		93.2	50-143	4.61	30	
Surrogate: Dibromofluoromethane	*46.3*		ug/L	*50.2*		*92.3*	*80-126*			
Surrogate: Dibromofluoromethane	*46.3*		ug/L	*50.2*		*92.3*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*46.9*		ug/L	*50.1*		*93.6*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*46.9*		ug/L	*50.1*		*93.6*	*61-142*			
Surrogate: Toluene-d8	*49.6*		ug/L	*50.4*		*98.4*	*87-116*			
Surrogate: Toluene-d8	*49.6*		ug/L	*50.4*		*98.4*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.9*		ug/L	*50.1*		*99.6*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*49.9*		ug/L	*50.1*		*99.6*	*80-116*			
Matrix Spike (1HC1381-MS1)	**Source: 1HC1559-01**		Prepared: 03/25/24 00:00 Analyzed: 03/25/24 20:08							
Chloromethane	366.9	10.0	ug/L	306	ND	120	61-152			
Vinyl Chloride	341.5	10.0	ug/L	302	ND	113	66-149			
Bromomethane	345.5	10.0	ug/L	288	ND	120	43-171			
Chloroethane	379.3	10.0	ug/L	316	ND	120	69-148			
Trichlorofluoromethane	349.4	10.0	ug/L	326	ND	107	62-163			
1,1-Dichloroethylene	576.9	10.0	ug/L	500	ND	115	70-148			
Acetone	836.2	100	ug/L	1020	ND	82.0	45-173			
Methyl Iodide	1122	10.0	ug/L	997	ND	113	62-167			
Carbon Disulfide	1026	10.0	ug/L	1010	ND	102	71-163			
Methylene Chloride	459.8	50.0	ug/L	500	ND	92.0	69-140			
Acrylonitrile	798.7	50.0	ug/L	1000	ND	79.6	58-151			
trans-1,2-Dichloroethylene	495.2	10.0	ug/L	500	ND	99.0	69-144			
1,1-Dichloroethane	476.1	10.0	ug/L	500	ND	95.2	70-138			
Vinyl Acetate	972.7	50.0	ug/L	1020	ND	95.5	58-142			
cis-1,2-Dichloroethylene	477.9	10.0	ug/L	495	ND	96.6	68-151			
2-Butanone (MEK)	649.7	100	ug/L	1030	ND	62.9	50-160			
Bromochloromethane	492.1	10.0	ug/L	500	ND	98.4	65-143			
Chloroform	487.6	10.0	ug/L	500	ND	97.5	71-143			
1,1,1-Trichloroethane	421.4	10.0	ug/L	500	ND	84.3	63-133			
Carbon Tetrachloride	464.7	10.0	ug/L	500	ND	92.9	63-142			
Benzene	483.9	10.0	ug/L	500	ND	96.8	69-133			
1,2-Dichloroethane	465.1	10.0	ug/L	500	ND	93.0	63-138			
Trichloroethylene	476.0	10.0	ug/L	500	ND	95.2	71-133			
1,2-Dichloropropane	477.8	10.0	ug/L	500	ND	95.6	69-132			
Dibromomethane	501.9	10.0	ug/L	500	ND	100	70-147			
Bromodichloromethane	433.8	10.0	ug/L	500	ND	86.8	67-130			
cis-1,3-Dichloropropene	438.6	10.0	ug/L	503	ND	87.2	61-126			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1381 - EPA 5030B - EPA 8260B										
Matrix Spike (1HC1381-MS1)	**Source: 1HC1559-01**	Prepared: 03/25/24 00:00 Analyzed: 03/25/24 20:08								
4-Methyl-2-pentanone (MIBK)	890.1	50.0	ug/L	1010	ND	87.8	55-147			
Toluene	479.4	10.0	ug/L	500	ND	95.9	71-133			
trans-1,3-Dichloropropene	424.6	10.0	ug/L	504	ND	84.2	63-124			
1,1,2-Trichloroethane	473.3	10.0	ug/L	500	ND	94.7	69-133			
Tetrachloroethylene	483.4	10.0	ug/L	500	ND	96.7	70-124			
2-Hexanone (MBK)	910.3	50.0	ug/L	1030	ND	88.1	53-141			
Dibromochloromethane	469.4	10.0	ug/L	495	ND	94.8	74-122			
1,2-Dibromoethane	480.4	10.0	ug/L	500	ND	96.1	66-127			
Chlorobenzene	491.2	10.0	ug/L	500	ND	98.2	76-116			
1,1,1,2-Tetrachloroethane	482.9	10.0	ug/L	500	ND	96.6	77-121			
Ethylbenzene	471.9	10.0	ug/L	500	ND	94.4	73-124			
Xylenes, total	1410	20.0	ug/L	1500	ND	94.0	75-123			
Styrene	467.2	10.0	ug/L	500	ND	93.4	70-120			
Bromoform	449.4	10.0	ug/L	500	ND	89.9	70-124			
1,2,3-Trichloropropane	498.3	10.0	ug/L	500	ND	99.7	62-135			
trans-1,4-Dichloro-2-butene	812.2	50.0	ug/L	1040	ND	78.2	50-120			
1,1,2,2-Tetrachloroethane	469.3	10.0	ug/L	498	ND	94.1	63-126			
1,4-Dichlorobenzene	471.7	10.0	ug/L	500	ND	94.3	72-119			
1,2-Dichlorobenzene	463.7	10.0	ug/L	500	ND	92.7	71-117			
1,2-Dibromo-3-chloropropane	429.7	50.0	ug/L	500	ND	85.9	49-134			
Surrogate: Dibromofluoromethane	*494*		ug/L	*502*		*98.5*	*80-126*			
Surrogate: Dibromofluoromethane	*494*		ug/L	*502*		*98.5*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*493*		ug/L	*501*		*98.4*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*493*		ug/L	*501*		*98.4*	*61-142*			
Surrogate: Toluene-d8	*503*		ug/L	*504*		*99.8*	*87-116*			
Surrogate: Toluene-d8	*503*		ug/L	*504*		*99.8*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*504*		ug/L	*501*		*101*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*504*		ug/L	*501*		*101*	*80-116*			
Matrix Spike Dup (1HC1381-MSD1)	**Source: 1HC1559-01**	Prepared: 03/25/24 00:00 Analyzed: 03/25/24 20:31								
Chloromethane	194.2	10.0	ug/L	306	ND	63.4	61-152	61.6	26	QM-05
Vinyl Chloride	176.5	10.0	ug/L	302	ND	58.4	66-149	63.7	23	QM-05
Bromomethane	191.4	10.0	ug/L	288	ND	66.5	43-171	57.4	29	QM-05
Chloroethane	195.7	10.0	ug/L	316	ND	61.9	69-148	63.9	25	QM-05
Trichlorofluoromethane	178.1	10.0	ug/L	326	ND	54.6	62-163	64.9	25	QM-05
1,1-Dichloroethylene	298.0	10.0	ug/L	500	ND	59.6	70-148	63.8	22	QM-05
Acetone	439.0	100	ug/L	1020	ND	43.0	45-173	62.3	30	QM-05
Methyl Iodide	577.6	10.0	ug/L	997	ND	57.9	62-167	64.1	24	QM-05
Carbon Disulfide	523.5	10.0	ug/L	1010	ND	51.8	71-163	64.9	22	QM-05
Methylene Chloride	271.1	50.0	ug/L	500	ND	54.2	69-140	51.6	19	QM-05
Acrylonitrile	431.0	50.0	ug/L	1000	ND	42.9	58-151	59.8	15	QM-05
trans-1,2-Dichloroethylene	258.9	10.0	ug/L	500	ND	51.8	69-144	62.7	22	QM-05
1,1-Dichloroethane	249.3	10.0	ug/L	500	ND	49.9	70-138	62.5	20	QM-05
Vinyl Acetate	481.0	50.0	ug/L	1020	ND	47.2	58-142	67.6	24	QM-05

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1381 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HC1381-MSD1)	**Source: 1HC1559-01**	Prepared: 03/25/24 00:00 Analyzed: 03/25/24 20:31								
cis-1,2-Dichloroethylene	252.3	10.0	ug/L	495	ND	51.0	68-151	61.8	22	QM-05
2-Butanone (MEK)	295.5	100	ug/L	1030	ND	28.6	50-160	74.9	23	QM-05
Bromochloromethane	262.0	10.0	ug/L	500	ND	52.4	65-143	61.0	22	QM-05
Chloroform	259.5	10.0	ug/L	500	ND	51.9	71-143	61.1	21	QM-05
1,1,1-Trichloroethane	221.8	10.0	ug/L	500	ND	44.4	63-133	62.1	23	QM-05
Carbon Tetrachloride	242.9	10.0	ug/L	500	ND	48.6	63-142	62.7	22	QM-05
Benzene	256.5	10.0	ug/L	500	ND	51.3	69-133	61.4	18	QM-05
1,2-Dichloroethane	253.1	10.0	ug/L	500	ND	50.6	63-138	59.0	20	QM-05
Trichloroethylene	251.5	10.0	ug/L	500	ND	50.3	71-133	61.7	23	QM-05
1,2-Dichloropropane	255.9	10.0	ug/L	500	ND	51.2	69-132	60.5	20	QM-05
Dibromomethane	272.8	10.0	ug/L	500	ND	54.6	70-147	59.1	22	QM-05
Bromodichloromethane	233.9	10.0	ug/L	500	ND	46.8	67-130	59.9	21	QM-05
cis-1,3-Dichloropropene	239.2	10.0	ug/L	503	ND	47.5	61-126	58.8	21	QM-05
4-Methyl-2-pentanone (MIBK)	479.4	50.0	ug/L	1010	ND	47.3	55-147	60.0	23	QM-05
Toluene	250.4	10.0	ug/L	500	ND	50.1	71-133	62.8	19	QM-05
trans-1,3-Dichloropropene	229.2	10.0	ug/L	504	ND	45.5	63-124	59.8	21	QM-05
1,1,2-Trichloroethane	256.0	10.0	ug/L	500	ND	51.2	69-133	59.6	19	QM-05
Tetrachloroethylene	256.8	10.0	ug/L	500	ND	51.4	70-124	61.2	24	QM-05
2-Hexanone (MBK)	487.9	50.0	ug/L	1030	ND	47.2	53-141	60.4	24	QM-05
Dibromochloromethane	258.8	10.0	ug/L	495	ND	52.3	74-122	57.8	21	QM-05
1,2-Dibromoethane	260.3	10.0	ug/L	500	ND	52.1	66-127	59.4	23	QM-05
Chlorobenzene	262.3	10.0	ug/L	500	ND	52.5	76-116	60.8	21	QM-05
1,1,1,2-Tetrachloroethane	261.1	10.0	ug/L	500	ND	52.2	77-121	59.6	25	QM-05
Ethylbenzene	246.3	10.0	ug/L	500	ND	49.3	73-124	62.8	20	QM-05
Xylenes, total	732.4	20.0	ug/L	1500	ND	48.8	75-123	63.2	20	QM-05
Styrene	248.1	10.0	ug/L	500	ND	49.6	70-120	61.3	23	QM-05
Bromoform	248.4	10.0	ug/L	500	ND	49.7	70-124	57.6	22	QM-05
1,2,3-Trichloropropane	266.5	10.0	ug/L	500	ND	53.3	62-135	60.6	28	QM-05
trans-1,4-Dichloro-2-butene	433.6	50.0	ug/L	1040	ND	41.7	50-120	60.8	26	QM-05
1,1,2,2-Tetrachloroethane	247.9	10.0	ug/L	498	ND	49.7	63-126	61.7	24	QM-05
1,4-Dichlorobenzene	246.8	10.0	ug/L	500	ND	49.4	72-119	62.6	24	QM-05
1,2-Dichlorobenzene	245.8	10.0	ug/L	500	ND	49.2	71-117	61.4	24	QM-05
1,2-Dibromo-3-chloropropane	234.0	50.0	ug/L	500	ND	46.8	49-134	59.0	28	QM-05
Surrogate: Dibromofluoromethane	*490*		ug/L	*502*		*97.7*	*80-126*			
Surrogate: Dibromofluoromethane	*490*		ug/L	*502*		*97.7*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*483*		ug/L	*501*		*96.4*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*483*		ug/L	*501*		*96.4*	*61-142*			
Surrogate: Toluene-d8	*498*		ug/L	*504*		*98.8*	*87-116*			
Surrogate: Toluene-d8	*498*		ug/L	*504*		*98.8*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*506*		ug/L	*501*		*101*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*506*		ug/L	*501*		*101*	*80-116*			

Batch 1HC1382 - EPA 5030B - EPA 8260B

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1382 - EPA 5030B - EPA 8260B										
Blank (1HC1382-BLK1)				Prepared: 03/25/24 00:00 Analyzed: 03/25/24 11:10						
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							
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							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1382 - EPA 5030B - EPA 8260B										
Blank (1HC1382-BLK1)			Prepared: 03/25/24 00:00 Analyzed: 03/25/24 11:10							
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	*54.0*		ug/L	*50.2*		*108*	*80-126*			
Surrogate: Dibromofluoromethane	*54.0*		ug/L	*50.2*		*108*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*53.8*		ug/L	*50.1*		*107*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*53.8*		ug/L	*50.1*		*107*	*61-142*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.4*		*99.2*	*87-116*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.4*		*99.2*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*51.4*		ug/L	*50.1*		*102*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*51.4*		ug/L	*50.1*		*102*	*80-116*			
LCS (1HC1382-BS1)			Prepared: 03/25/24 00:00 Analyzed: 03/25/24 09:50							
Chloromethane	33.80	1.0	ug/L	30.6		110	63-155			
Vinyl Chloride	30.27	1.0	ug/L	30.2		100	70-154			
Bromomethane	34.21	1.0	ug/L	28.8		119	52-176			
Chloroethane	33.05	1.0	ug/L	31.6		104	72-148			
Trichlorofluoromethane	31.57	1.0	ug/L	32.6		96.8	70-152			
1,1-Dichloroethylene	54.33	1.0	ug/L	50.0		109	70-148			
Acetone	102.3	10.0	ug/L	102		100	43-172			
Methyl Iodide	100.6	1.0	ug/L	99.7		101	69-170			
Carbon Disulfide	96.11	1.0	ug/L	101		95.2	72-162			
Methylene Chloride	45.80	5.0	ug/L	50.0		91.6	68-142			
Acrylonitrile	100.2	5.0	ug/L	100		99.9	67-144			
trans-1,2-Dichloroethylene	50.18	1.0	ug/L	50.0		100	66-148			
1,1-Dichloroethane	49.12	1.0	ug/L	50.0		98.2	66-143			
Vinyl Acetate	93.76	5.0	ug/L	102		92.0	43-153			
cis-1,2-Dichloroethylene	59.45	1.0	ug/L	49.5		120	71-149			
2-Butanone (MEK)	91.09	10.0	ug/L	103		88.2	52-159			
Bromochloromethane	50.90	1.0	ug/L	50.0		102	69-143			
Chloroform	48.77	1.0	ug/L	50.0		97.5	69-144			
1,1,1-Trichloroethane	45.55	1.0	ug/L	50.0		91.1	62-129			
Carbon Tetrachloride	49.44	1.0	ug/L	50.0		98.9	63-141			
Benzene	47.19	1.0	ug/L	50.0		94.4	71-134			
1,2-Dichloroethane	46.00	1.0	ug/L	50.0		92.0	72-132			
Trichloroethylene	46.19	1.0	ug/L	50.0		92.4	71-135			
1,2-Dichloropropane	47.00	1.0	ug/L	50.0		94.0	69-136			
Dibromomethane	50.27	1.0	ug/L	50.0		101	73-147			
Bromodichloromethane	45.67	1.0	ug/L	50.0		91.3	68-129			
cis-1,3-Dichloropropene	45.74	1.0	ug/L	50.3		90.9	65-134			
4-Methyl-2-pentanone (MIBK)	92.99	5.0	ug/L	101		91.7	58-147			
Toluene	46.58	1.0	ug/L	50.0		93.2	72-133			
trans-1,3-Dichloropropene	45.40	1.0	ug/L	50.4		90.0	67-130			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1382 - EPA 5030B - EPA 8260B										
LCS (1HC1382-BS1)			Prepared: 03/25/24 00:00 Analyzed: 03/25/24 09:50							
1,1,2-Trichloroethane	46.78	1.0	ug/L	50.0		93.6	69-135			
Tetrachloroethylene	45.83	1.0	ug/L	50.0		91.7	69-130			
2-Hexanone (MBK)	91.64	5.0	ug/L	103		88.7	55-144			
Dibromochloromethane	47.82	1.0	ug/L	49.5		96.6	73-127			
1,2-Dibromoethane	45.94	1.0	ug/L	50.0		91.9	67-132			
Chlorobenzene	43.89	1.0	ug/L	50.0		87.8	72-123			
1,1,1,2-Tetrachloroethane	47.61	1.0	ug/L	50.0		95.2	73-127			
Ethylbenzene	45.00	1.0	ug/L	50.0		90.0	71-127			
Xylenes, total	134.0	2.0	ug/L	150		89.3	74-127			
Styrene	44.12	1.0	ug/L	50.0		88.2	66-126			
Bromoform	49.97	1.0	ug/L	50.0		99.9	68-130			
1,2,3-Trichloropropane	47.30	1.0	ug/L	50.0		94.6	63-136			
trans-1,4-Dichloro-2-butene	78.81	5.0	ug/L	104		75.9	54-134			
1,1,2,2-Tetrachloroethane	45.24	1.0	ug/L	49.8		90.8	61-131			
1,4-Dichlorobenzene	46.47	1.0	ug/L	50.0		92.9	70-129			
1,2-Dichlorobenzene	45.01	1.0	ug/L	50.0		90.0	69-126			
1,2-Dibromo-3-chloropropane	45.52	5.0	ug/L	50.0		91.0	50-143			
Surrogate: Dibromofluoromethane	*53.3*		ug/L	*50.2*		*106*	*80-126*			
Surrogate: Dibromofluoromethane	*53.3*		ug/L	*50.2*		*106*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*52.3*		ug/L	*50.1*		*104*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*52.3*		ug/L	*50.1*		*104*	*61-142*			
Surrogate: Toluene-d8	*50.7*		ug/L	*50.4*		*101*	*87-116*			
Surrogate: Toluene-d8	*50.7*		ug/L	*50.4*		*101*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.6*		ug/L	*50.1*		*98.9*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*49.6*		ug/L	*50.1*		*98.9*	*80-116*			
LCS Dup (1HC1382-BSD1)			Prepared: 03/25/24 00:00 Analyzed: 03/25/24 10:17							
Chloromethane	31.37	1.0	ug/L	30.6		102	63-155	7.46	24	
Vinyl Chloride	27.96	1.0	ug/L	30.2		92.5	70-154	7.93	25	
Bromomethane	32.25	1.0	ug/L	28.8		112	52-176	5.90	27	
Chloroethane	31.33	1.0	ug/L	31.6		99.0	72-148	5.34	25	
Trichlorofluoromethane	29.51	1.0	ug/L	32.6		90.5	70-152	6.75	26	
1,1-Dichloroethylene	51.34	1.0	ug/L	50.0		103	70-148	5.66	24	
Acetone	92.31	10.0	ug/L	102		90.5	43-172	10.3	30	
Methyl Iodide	95.70	1.0	ug/L	99.7		96.0	69-170	4.99	30	
Carbon Disulfide	90.72	1.0	ug/L	101		89.8	72-162	5.77	24	
Methylene Chloride	44.16	5.0	ug/L	50.0		88.3	68-142	3.65	21	
Acrylonitrile	96.27	5.0	ug/L	100		95.9	67-144	4.04	24	
trans-1,2-Dichloroethylene	47.60	1.0	ug/L	50.0		95.2	66-148	5.28	27	
1,1-Dichloroethane	47.51	1.0	ug/L	50.0		95.0	66-143	3.33	24	
Vinyl Acetate	99.66	5.0	ug/L	102		97.8	43-153	6.10	30	
cis-1,2-Dichloroethylene	57.13	1.0	ug/L	49.5		115	71-149	3.98	26	
2-Butanone (MEK)	98.61	10.0	ug/L	103		95.5	52-159	7.93	27	
Bromochloromethane	48.92	1.0	ug/L	50.0		97.8	69-143	3.97	23	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1382 - EPA 5030B - EPA 8260B										
LCS Dup (1HC1382-BSD1)				Prepared: 03/25/24 00:00 Analyzed: 03/25/24 10:17						
Chloroform	47.16	1.0	ug/L	50.0		94.3	69-144	3.36	23	
1,1,1-Trichloroethane	42.99	1.0	ug/L	50.0		86.0	62-129	5.78	24	
Carbon Tetrachloride	47.47	1.0	ug/L	50.0		94.9	63-141	4.07	25	
Benzene	44.97	1.0	ug/L	50.0		89.9	71-134	4.82	24	
1,2-Dichloroethane	44.30	1.0	ug/L	50.0		88.6	72-132	3.77	24	
Trichloroethylene	44.49	1.0	ug/L	50.0		89.0	71-135	3.75	24	
1,2-Dichloropropane	45.50	1.0	ug/L	50.0		91.0	69-136	3.24	24	
Dibromomethane	48.86	1.0	ug/L	50.0		97.7	73-147	2.84	25	
Bromodichloromethane	44.07	1.0	ug/L	50.0		88.1	68-129	3.57	22	
cis-1,3-Dichloropropene	44.06	1.0	ug/L	50.3		87.6	65-134	3.74	23	
4-Methyl-2-pentanone (MIBK)	91.55	5.0	ug/L	101		90.3	58-147	1.56	27	
Toluene	45.19	1.0	ug/L	50.0		90.4	72-133	3.03	24	
trans-1,3-Dichloropropene	44.00	1.0	ug/L	50.4		87.3	67-130	3.13	24	
1,1,2-Trichloroethane	45.42	1.0	ug/L	50.0		90.8	69-135	2.95	23	
Tetrachloroethylene	43.98	1.0	ug/L	50.0		88.0	69-130	4.12	25	
2-Hexanone (MBK)	90.82	5.0	ug/L	103		87.9	55-144	0.899	25	
Dibromochloromethane	46.96	1.0	ug/L	49.5		94.9	73-127	1.81	22	
1,2-Dibromoethane	44.16	1.0	ug/L	50.0		88.3	67-132	3.95	24	
Chlorobenzene	42.41	1.0	ug/L	50.0		84.8	72-123	3.43	23	
1,1,1,2-Tetrachloroethane	45.83	1.0	ug/L	50.0		91.7	73-127	3.81	24	
Ethylbenzene	43.15	1.0	ug/L	50.0		86.3	71-127	4.20	26	
Xylenes, total	130.6	2.0	ug/L	150		87.0	74-127	2.56	25	
Styrene	43.56	1.0	ug/L	50.0		87.1	66-126	1.28	23	
Bromoform	48.90	1.0	ug/L	50.0		97.8	68-130	2.16	23	
1,2,3-Trichloropropane	46.15	1.0	ug/L	50.0		92.3	63-136	2.46	24	
trans-1,4-Dichloro-2-butene	76.84	5.0	ug/L	104		74.0	54-134	2.53	27	
1,1,2,2-Tetrachloroethane	43.56	1.0	ug/L	49.8		87.4	61-131	3.78	29	
1,4-Dichlorobenzene	44.81	1.0	ug/L	50.0		89.6	70-129	3.64	24	
1,2-Dichlorobenzene	43.70	1.0	ug/L	50.0		87.4	69-126	2.95	26	
1,2-Dibromo-3-chloropropane	44.55	5.0	ug/L	50.0		89.1	50-143	2.15	30	
Surrogate: Dibromofluoromethane	*53.0*		ug/L	*50.2*		*106*	*80-126*			
Surrogate: Dibromofluoromethane	*53.0*		ug/L	*50.2*		*106*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*51.6*		ug/L	*50.1*		*103*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*51.6*		ug/L	*50.1*		*103*	*61-142*			
Surrogate: Toluene-d8	*50.9*		ug/L	*50.4*		*101*	*87-116*			
Surrogate: Toluene-d8	*50.9*		ug/L	*50.4*		*101*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*50.6*		ug/L	*50.1*		*101*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*50.6*		ug/L	*50.1*		*101*	*80-116*			
Matrix Spike (1HC1382-MS1)	**Source: 1HC1561-10**			Prepared: 03/25/24 00:00 Analyzed: 03/25/24 15:42						
Chloromethane	391.6	10.0	ug/L	306	ND	128	61-152			
Vinyl Chloride	352.4	10.0	ug/L	302	ND	117	66-149			
Bromomethane	410.7	10.0	ug/L	288	ND	143	43-171			
Chloroethane	383.4	10.0	ug/L	316	ND	121	69-148			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1382 - EPA 5030B - EPA 8260B										
Matrix Spike (1HC1382-MS1)		**Source: 1HC1561-10**	Prepared: 03/25/24 00:00 Analyzed: 03/25/24 15:42							
Trichlorofluoromethane	376.7	10.0	ug/L	326	ND	116	62-163			
1,1-Dichloroethylene	633.7	10.0	ug/L	500	ND	127	70-148			
Acetone	1408	100	ug/L	1020	ND	138	45-173			
Methyl Iodide	1100	10.0	ug/L	997	ND	110	62-167			
Carbon Disulfide	1121	10.0	ug/L	1010	ND	111	71-163			
Methylene Chloride	527.0	50.0	ug/L	500	ND	105	69-140			
Acrylonitrile	1106	50.0	ug/L	1000	ND	110	58-151			
trans-1,2-Dichloroethylene	577.8	10.0	ug/L	500	ND	116	69-144			
1,1-Dichloroethane	558.9	10.0	ug/L	500	ND	112	70-138			
Vinyl Acetate	902.0	50.0	ug/L	1020	ND	88.5	58-142			
cis-1,2-Dichloroethylene	673.2	10.0	ug/L	495	ND	136	68-151			
2-Butanone (MEK)	1040	100	ug/L	1030	ND	101	50-160			
Bromochloromethane	574.1	10.0	ug/L	500	ND	115	65-143			
Chloroform	548.8	10.0	ug/L	500	ND	110	71-143			
1,1,1-Trichloroethane	518.0	10.0	ug/L	500	ND	104	63-133			
Carbon Tetrachloride	575.7	10.0	ug/L	500	ND	115	63-142			
Benzene	507.2	10.0	ug/L	500	ND	101	69-133			
1,2-Dichloroethane	484.0	10.0	ug/L	500	ND	96.8	63-138			
Trichloroethylene	502.1	10.0	ug/L	500	ND	100	71-133			
1,2-Dichloropropane	498.8	10.0	ug/L	500	ND	99.8	69-132			
Dibromomethane	530.2	10.0	ug/L	500	ND	106	70-147			
Bromodichloromethane	480.9	10.0	ug/L	500	ND	96.2	67-130			
cis-1,3-Dichloropropene	481.3	10.0	ug/L	503	ND	95.6	61-126			
4-Methyl-2-pentanone (MIBK)	981.6	50.0	ug/L	1010	ND	96.8	55-147			
Toluene	495.7	10.0	ug/L	500	ND	99.1	71-133			
trans-1,3-Dichloropropene	473.0	10.0	ug/L	504	ND	93.8	63-124			
1,1,2-Trichloroethane	492.2	10.0	ug/L	500	ND	98.4	69-133			
Tetrachloroethylene	490.0	10.0	ug/L	500	ND	98.0	70-124			
2-Hexanone (MBK)	1022	50.0	ug/L	1030	ND	98.9	53-141			
Dibromochloromethane	493.9	10.0	ug/L	495	ND	99.8	74-122			
1,2-Dibromoethane	477.6	10.0	ug/L	500	ND	95.5	66-127			
Chlorobenzene	463.9	10.0	ug/L	500	ND	92.8	76-116			
1,1,1,2-Tetrachloroethane	490.3	10.0	ug/L	500	ND	98.1	77-121			
Ethylbenzene	473.9	10.0	ug/L	500	ND	94.8	73-124			
Xylenes, total	1426	20.0	ug/L	1500	ND	95.0	75-123			
Styrene	469.6	10.0	ug/L	500	ND	93.9	70-120			
Bromoform	508.2	10.0	ug/L	500	ND	102	70-124			
1,2,3-Trichloropropane	489.3	10.0	ug/L	500	ND	97.9	62-135			
trans-1,4-Dichloro-2-butene	796.9	50.0	ug/L	1040	ND	76.7	50-120			
1,1,2,2-Tetrachloroethane	459.7	10.0	ug/L	498	ND	92.2	63-126			
1,4-Dichlorobenzene	473.7	10.0	ug/L	500	ND	94.7	72-119			
1,2-Dichlorobenzene	469.6	10.0	ug/L	500	ND	93.9	71-117			
1,2-Dibromo-3-chloropropane	456.3	50.0	ug/L	500	ND	91.3	49-134			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1382 - EPA 5030B - EPA 8260B										
Matrix Spike (1HC1382-MS1)	**Source: 1HC1561-10**		Prepared: 03/25/24 00:00 Analyzed: 03/25/24 15:42							
Surrogate: Dibromofluoromethane	*574*		ug/L	*502*		*114*	*80-126*			
Surrogate: Dibromofluoromethane	*574*		ug/L	*502*		*114*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*552*		ug/L	*501*		*110*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*552*		ug/L	*501*		*110*	*61-142*			
Surrogate: Toluene-d8	*509*		ug/L	*504*		*101*	*87-116*			
Surrogate: Toluene-d8	*509*		ug/L	*504*		*101*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*501*		*99.7*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*501*		*99.7*	*80-116*			
Matrix Spike Dup (1HC1382-MSD1)	**Source: 1HC1561-10**		Prepared: 03/25/24 00:00 Analyzed: 03/25/24 16:08							
Chloromethane	356.3	10.0	ug/L	306	ND	116	61-152	9.44	26	
Vinyl Chloride	321.1	10.0	ug/L	302	ND	106	66-149	9.29	23	
Bromomethane	367.5	10.0	ug/L	288	ND	128	43-171	11.1	29	
Chloroethane	362.6	10.0	ug/L	316	ND	115	69-148	5.58	25	
Trichlorofluoromethane	346.7	10.0	ug/L	326	ND	106	62-163	8.29	25	
1,1-Dichloroethylene	600.9	10.0	ug/L	500	ND	120	70-148	5.31	22	
Acetone	1256	100	ug/L	1020	ND	123	45-173	11.4	30	
Methyl Iodide	1097	10.0	ug/L	997	ND	110	62-167	0.282	24	
Carbon Disulfide	1043	10.0	ug/L	1010	ND	103	71-163	7.18	22	
Methylene Chloride	505.3	50.0	ug/L	500	ND	101	69-140	4.20	19	
Acrylonitrile	1049	50.0	ug/L	1000	ND	105	58-151	5.30	15	
trans-1,2-Dichloroethylene	549.5	10.0	ug/L	500	ND	110	69-144	5.02	22	
1,1-Dichloroethane	541.3	10.0	ug/L	500	ND	108	70-138	3.20	20	
Vinyl Acetate	977.8	50.0	ug/L	1020	ND	96.0	58-142	8.06	24	
cis-1,2-Dichloroethylene	646.5	10.0	ug/L	495	ND	131	68-151	4.05	22	
2-Butanone (MEK)	925.8	100	ug/L	1030	ND	89.6	50-160	11.6	23	
Bromochloromethane	564.7	10.0	ug/L	500	ND	113	65-143	1.65	22	
Chloroform	532.9	10.0	ug/L	500	ND	107	71-143	2.94	21	
1,1,1-Trichloroethane	500.6	10.0	ug/L	500	ND	100	63-133	3.42	23	
Carbon Tetrachloride	549.6	10.0	ug/L	500	ND	110	63-142	4.64	22	
Benzene	493.0	10.0	ug/L	500	ND	98.6	69-133	2.84	18	
1,2-Dichloroethane	481.6	10.0	ug/L	500	ND	96.3	63-138	0.497	20	
Trichloroethylene	486.5	10.0	ug/L	500	ND	97.3	71-133	3.16	23	
1,2-Dichloropropane	492.5	10.0	ug/L	500	ND	98.5	69-132	1.27	20	
Dibromomethane	530.5	10.0	ug/L	500	ND	106	70-147	0.0566	22	
Bromodichloromethane	476.2	10.0	ug/L	500	ND	95.2	67-130	0.982	21	
cis-1,3-Dichloropropene	479.9	10.0	ug/L	503	ND	95.4	61-126	0.291	21	
4-Methyl-2-pentanone (MIBK)	953.9	50.0	ug/L	1010	ND	94.1	55-147	2.86	23	
Toluene	489.3	10.0	ug/L	500	ND	97.9	71-133	1.30	19	
trans-1,3-Dichloropropene	471.5	10.0	ug/L	504	ND	93.5	63-124	0.318	21	
1,1,2-Trichloroethane	487.8	10.0	ug/L	500	ND	97.6	69-133	0.898	19	
Tetrachloroethylene	472.1	10.0	ug/L	500	ND	94.4	70-124	3.72	24	
2-Hexanone (MBK)	957.5	50.0	ug/L	1030	ND	92.7	53-141	6.50	24	
Dibromochloromethane	489.1	10.0	ug/L	495	ND	98.8	74-122	0.977	21	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1382 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HC1382-MSD1)	**Source: 1HC1561-10**		Prepared: 03/25/24 00:00 Analyzed: 03/25/24 16:08							
1,2-Dibromoethane	469.8	10.0	ug/L	500	ND	94.0	66-127	1.65	23	
Chlorobenzene	453.0	10.0	ug/L	500	ND	90.6	76-116	2.38	21	
1,1,1,2-Tetrachloroethane	487.8	10.0	ug/L	500	ND	97.6	77-121	0.511	25	
Ethylbenzene	462.4	10.0	ug/L	500	ND	92.5	73-124	2.46	20	
Xylenes, total	1381	20.0	ug/L	1500	ND	92.1	75-123	3.18	20	
Styrene	457.9	10.0	ug/L	500	ND	91.6	70-120	2.52	23	
Bromoform	504.7	10.0	ug/L	500	ND	101	70-124	0.691	22	
1,2,3-Trichloropropane	481.2	10.0	ug/L	500	ND	96.2	62-135	1.67	28	
trans-1,4-Dichloro-2-butene	779.0	50.0	ug/L	1040	ND	75.0	50-120	2.27	26	
1,1,2,2-Tetrachloroethane	453.4	10.0	ug/L	498	ND	91.0	63-126	1.38	24	
1,4-Dichlorobenzene	468.1	10.0	ug/L	500	ND	93.6	72-119	1.19	24	
1,2-Dichlorobenzene	462.9	10.0	ug/L	500	ND	92.6	71-117	1.44	24	
1,2-Dibromo-3-chloropropane	442.5	50.0	ug/L	500	ND	88.5	49-134	3.07	28	
Surrogate: Dibromofluoromethane	*570*		ug/L	*502*		*114*	*80-126*			
Surrogate: Dibromofluoromethane	*570*		ug/L	*502*		*114*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*552*		ug/L	*501*		*110*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*552*		ug/L	*501*		*110*	*61-142*			
Surrogate: Toluene-d8	*512*		ug/L	*504*		*102*	*87-116*			
Surrogate: Toluene-d8	*512*		ug/L	*504*		*102*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*504*		ug/L	*501*		*100*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*504*		ug/L	*501*		*100*	*80-116*			
Batch 1HC1543 - EPA 5030B - EPA 8260B										
Blank (1HC1543-BLK1)			Prepared: 03/27/24 00:00 Analyzed: 03/27/24 11:10							
Vinyl Chloride	<1.0	1.0	ug/L							
Surrogate: Dibromofluoromethane	*56.7*		ug/L	*50.2*		*113*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*60.6*		ug/L	*50.1*		*121*	*63-138*			
Surrogate: Toluene-d8	*42.4*		ug/L	*50.4*		*84.2*	*87-116*			*S-GC*
Surrogate: 4-Bromofluorobenzene	*53.0*		ug/L	*50.1*		*106*	*85-111*			
LCS (1HC1543-BS1)			Prepared: 03/27/24 00:00 Analyzed: 03/27/24 10:02							
Vinyl Chloride	30.34	1.0	ug/L	30.2		100	62-151			
Surrogate: Dibromofluoromethane	*47.6*		ug/L	*50.2*		*94.9*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*47.7*		ug/L	*50.1*		*95.2*	*63-138*			
Surrogate: Toluene-d8	*49.9*		ug/L	*50.4*		*99.0*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*49.9*		ug/L	*50.1*		*99.5*	*85-111*			
LCS Dup (1HC1543-BSD1)			Prepared: 03/27/24 00:00 Analyzed: 03/27/24 10:24							
Vinyl Chloride	31.01	1.0	ug/L	30.2		103	62-151	2.18	28	
Surrogate: Dibromofluoromethane	*47.9*		ug/L	*50.2*		*95.4*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*47.3*		ug/L	*50.1*		*94.4*	*63-138*			
Surrogate: Toluene-d8	*49.9*		ug/L	*50.4*		*99.0*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.1*		*99.6*	*85-111*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1543 - EPA 5030B - EPA 8260B										
Matrix Spike (1HC1543-MS1)	**Source: 1HC1329-01**		Prepared: 03/27/24 00:00 Analyzed: 03/27/24 18:14							
Vinyl Chloride	296.8	10.0	ug/L	302	ND	98.2	61-152			
Surrogate: Dibromofluoromethane	*462*		ug/L	*502*		*92.0*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*468*		ug/L	*501*		*93.6*	*63-138*			
Surrogate: Toluene-d8	*498*		ug/L	*504*		*98.8*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*502*		ug/L	*501*		*100*	*85-111*			
Matrix Spike Dup (1HC1543-MSD1)	**Source: 1HC1329-01**		Prepared: 03/27/24 00:00 Analyzed: 03/27/24 18:37							
Vinyl Chloride	298.7	10.0	ug/L	302	ND	98.8	61-152	0.638	24	
Surrogate: Dibromofluoromethane	*463*		ug/L	*502*		*92.3*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*463*		ug/L	*501*		*92.4*	*63-138*			
Surrogate: Toluene-d8	*498*		ug/L	*504*		*98.8*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*498*		ug/L	*501*		*99.2*	*85-111*			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1642 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HC1642-BLK1)			Prepared: 03/29/24 10:50 Analyzed: 04/01/24 23:36							
Antimony, total	<0.0020	0.0020	mg/L							
Arsenic, total	<0.0040	0.0040	mg/L							
Barium, total	<0.0040	0.0040	mg/L							
Beryllium, total	<0.0040	0.0040	mg/L							
Cadmium, total	<0.0008	0.0008	mg/L							
Chromium, total	<0.0080	0.0080	mg/L							
Cobalt, total	<0.0004	0.0004	mg/L							
Copper, total	<0.0040	0.0040	mg/L							
Lead, total	<0.0040	0.0040	mg/L							
Nickel, total	<0.0040	0.0040	mg/L							
Selenium, total	<0.0040	0.0040	mg/L							
Silver, total	<0.0040	0.0040	mg/L							
Thallium, total	<0.0020	0.0020	mg/L							
Vanadium, total	<0.0200	0.0200	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1HC1642-BS1)			Prepared: 03/29/24 10:50 Analyzed: 04/01/24 23:42							
Antimony, total	0.100	0.0020	mg/L	0.100		100	80-120			
Arsenic, total	0.0995	0.0040	mg/L	0.100		99.5	80-120			
Barium, total	0.105	0.0040	mg/L	0.100		105	80-120			
Beryllium, total	0.103	0.0040	mg/L	0.100		103	80-120			
Cadmium, total	0.100	0.0008	mg/L	0.100		100	80-120			
Chromium, total	0.0987	0.0080	mg/L	0.100		98.7	80-120			
Cobalt, total	0.101	0.0004	mg/L	0.100		101	80-120			
Copper, total	0.0991	0.0040	mg/L	0.100		99.1	80-120			
Lead, total	0.101	0.0040	mg/L	0.100		101	80-120			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1642 - EPA 3005A Total Recoverable Metals - EPA 6020A										
LCS (1HC1642-BS1)			Prepared: 03/29/24 10:50 Analyzed: 04/01/24 23:42							
Nickel, total	0.0989	0.0040	mg/L	0.100		98.9	80-120			
Selenium, total	0.0984	0.0040	mg/L	0.100		98.4	80-120			
Silver, total	0.107	0.0040	mg/L	0.100		107	80-120			
Thallium, total	0.102	0.0020	mg/L	0.100		102	80-120			
Vanadium, total	0.103	0.0200	mg/L	0.100		103	80-120			
Zinc, total	0.102	0.0200	mg/L	0.100		102	80-120			
Matrix Spike (1HC1642-MS1)	**Source: 1HC1561-01**		Prepared: 03/29/24 10:50 Analyzed: 04/01/24 23:55							
Antimony, total	0.0971	0.0020	mg/L	0.100	ND	97.1	75-125			
Arsenic, total	0.104	0.0040	mg/L	0.100	0.0070	97.3	75-125			
Barium, total	0.393	0.0040	mg/L	0.100	0.295	98.1	75-125			
Beryllium, total	0.0987	0.0040	mg/L	0.100	ND	98.7	75-125			
Cadmium, total	0.0954	0.0008	mg/L	0.100	0.0003	95.2	75-125			
Chromium, total	0.0955	0.0080	mg/L	0.100	0.0008	94.6	75-125			
Cobalt, total	0.104	0.0004	mg/L	0.100	0.0045	99.0	75-125			
Copper, total	0.0929	0.0040	mg/L	0.100	0.0021	90.8	75-125			
Lead, total	0.0958	0.0040	mg/L	0.100	ND	95.8	75-125			
Nickel, total	0.103	0.0040	mg/L	0.100	0.0092	94.1	75-125			
Selenium, total	0.0953	0.0040	mg/L	0.100	ND	95.3	75-125			
Silver, total	0.102	0.0040	mg/L	0.100	ND	102	75-125			
Thallium, total	0.0988	0.0020	mg/L	0.100	0.0002	98.5	75-125			
Vanadium, total	0.102	0.0200	mg/L	0.100	ND	102	75-125			
Zinc, total	0.0943	0.0200	mg/L	0.100	ND	94.3	75-125			
Matrix Spike Dup (1HC1642-MSD1)	**Source: 1HC1561-01**		Prepared: 03/29/24 10:50 Analyzed: 04/02/24 00:01							
Antimony, total	0.100	0.0020	mg/L	0.100	ND	100	75-125	3.00	20	
Arsenic, total	0.106	0.0040	mg/L	0.100	0.0070	98.7	75-125	1.38	20	
Barium, total	0.399	0.0040	mg/L	0.100	0.295	105	75-125	1.66	20	
Beryllium, total	0.0992	0.0040	mg/L	0.100	ND	99.2	75-125	0.422	20	
Cadmium, total	0.0985	0.0008	mg/L	0.100	0.0003	98.3	75-125	3.20	20	
Chromium, total	0.0976	0.0080	mg/L	0.100	0.0008	96.8	75-125	2.24	20	
Cobalt, total	0.105	0.0004	mg/L	0.100	0.0045	101	75-125	1.78	20	
Copper, total	0.0953	0.0040	mg/L	0.100	0.0021	93.3	75-125	2.64	20	
Lead, total	0.0969	0.0040	mg/L	0.100	ND	96.9	75-125	1.20	20	
Nickel, total	0.105	0.0040	mg/L	0.100	0.0092	96.3	75-125	2.07	20	
Selenium, total	0.0971	0.0040	mg/L	0.100	ND	97.1	75-125	1.81	20	
Silver, total	0.105	0.0040	mg/L	0.100	ND	105	75-125	2.60	20	
Thallium, total	0.101	0.0020	mg/L	0.100	0.0002	100	75-125	1.75	20	
Vanadium, total	0.104	0.0200	mg/L	0.100	ND	104	75-125	1.46	20	
Zinc, total	0.0982	0.0200	mg/L	0.100	ND	98.2	75-125	4.07	20	
Post Spike (1HC1642-PS1)	**Source: 1HC1561-01**		Prepared: 03/29/24 10:50 Analyzed: 04/02/24 00:07							
Antimony, total	0.0792		mg/L	0.0800	0.0003	98.7	80-120			
Arsenic, total	0.0861		mg/L	0.0800	0.0068	99.1	80-120			
Barium, total	0.376		mg/L	0.0800	0.289	109	80-120			
Beryllium, total	0.0789		mg/L	0.0800	-0.000005	98.6	80-120			

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1561

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1642 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Post Spike (1HC1642-PS1)	**Source: 1HC1561-01**		Prepared: 03/29/24 10:50 Analyzed: 04/02/24 00:07							
Cadmium, total	0.0767		mg/L	0.0800	0.0003	95.6	80-120			
Chromium, total	0.0793		mg/L	0.0800	0.0008	98.1	80-120			
Cobalt, total	0.0861		mg/L	0.0800	0.0044	102	80-120			
Copper, total	0.0770		mg/L	0.0800	0.0020	93.8	80-120			
Lead, total	0.0783		mg/L	0.0800	0.00009	97.8	80-120			
Nickel, total	0.0876		mg/L	0.0800	0.0090	98.3	80-120			
Selenium, total	0.0732		mg/L	0.0800	0.0003	91.2	80-120			
Silver, total	0.0837		mg/L	0.0800	-0.0011	105	80-120			
Thallium, total	0.0811		mg/L	0.0800	0.0002	101	80-120			
Vanadium, total	0.0864		mg/L	0.0800	0.0075	98.7	80-120			
Zinc, total	0.0777		mg/L	0.0800	0.0028	93.6	80-120			

Definitions

I-02:	This result was analyzed outside of the EPA recommended holding time.
QM-05:	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
RL:	Reporting Limit
RPD:	Relative Percent Difference
S-GC:	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

Cooler Receipt Log

Cooler ID: Default Cooler   Temp: 0.0°C

Cooler Inspection Checklist

Custody Seals	No	Containers Intact	Yes
COC/Labels Agree	No	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
04/10/24 16:49

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES A Microbac Company

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

1HC1561
HLW Engineering
PM: Heather Murphy

Printed: 3/4/2024 3:54:33P

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: South Dallas Co. - New Regs Appendix Sampling

REPORT TO

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

INVOICE

Mike Fountas
South Dallas County Landfill
2000 Main Street, PO Box 263
Adel, IA 50003

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HC1561
Temperature 0.0
Turn-Cooler: No

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

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	MW-5	Water	GRAB	3/20/24	9:36	7	lndfill-app1-voc-group lndfll-app1-metals-6020	~~01~~ 07
-001	MW-10 DRY	Water	GRAB	3/20/24	—	0	lndfill-app1-voc-group lndfll-app1-metals-6020	— —
-001	MW-12	Water	GRAB	3/20/24	8:55	7	lndfill-app1-voc-group lndfll-app1-metals-6020	~~02~~ 08
-001	MW-15R	Water	GRAB	3/20/24	8:09	7	lndfill-app1-voc-group lndfll-app1-metals-6020	~~03~~ 09
-001	MW-20R	Water	GRAB	3/20/24	8:35	7	lndfill-app1-voc-group lndfll-app1-metals-6020	~~04~~ 10
-001	MW-21	Water	GRAB	3/20/24	9:15	7	lndfill-app1-voc-group lndfll-app1-metals-6020	~~05~~ 11
-001	MW-22	Water	GRAB	3/20/24	11:01	7	lndfill-app1-voc-group lndfll-app1-metals-6020	~~06~~ 12 EF amp

Relinquished By: Todd Whipple Date/Time: 3/21/24

Received By ___ Date/Time ___

Relinquished By ___ Date/Time ___

Received for Lab By: Maher Date/Time: 3/21/24 9:48

Remarks:

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES A Microbac Company

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

1HC1561
HLW Engineering
PM: Heather Murphy

Printed: 3/4/2024 3:54:33P
www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: South Dallas Co. - New Regs Appendix Sampling

REPORT TO

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

INVOICE

Mike Fountas
South Dallas County Landfill
2000 Main Street, PO Box 263
Adel, IA 50003

SPECIAL INSTRUCTIONS

None

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

LAB USE ONLY

Work Order: 1HC1561
Temperature: 0.8
Turn-Cooler: No

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

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses		Lab Sample Number
-001	MW-2 DRY	Water	GRAB	3/20/24	—	0	lndfill-app1-voc-group	lndfll-app1-metals-6020	—
-001	MW-9	Water	GRAB	3/20/24	13:08	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	01
-001	MW-17	Water	GRAB	3/20/24	11:28	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	02
-001	MW-18	Water	GRAB	3/20/24	13:42	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	03
-001	MW-19A	Water	GRAB	3/20/24	11:59	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	04
-001	MW-24	Water	GRAB	3/20/24	12:48	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	05
-001	MW-4	Water	GRAB	3/20/24	10:47	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	06

Relinquished By: Todd Whipple Date/Time: 3/21/24

Received By Date/Time

Relinquished By Date/Time

Received for Lab By: Maher Date/Time: 3/21/24 9:48

Remarks:

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES
A Microbac Company

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

1HC1561
HLW Engineering
PM: Heather Murphy

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: South Dallas Co. - New Regs Appendix Sampling

REPORT TO

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

INVOICE TO

Mike Fountas
South Dallas County Landfill
2000 Main Street, PO Box 263
Adel, IA 50003

SPECIAL INSTRUCTIONS

None

Turn Around Time

☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order: 1HC1561

Temperature: 0.0

Turn-Cooler: No

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

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses		Lab Sample Number
-001	MW-25	Water	GRAB	3/20/24	9:58	4	8260@vc as-t-6020	8260-base-analysis ba-t-6020	13
-001	MW-26	Water	GRAB	3/20/24	10:21	4	8260@vc as-t-6020	8260-base-analysis ba-t-6020	14
-001	Duplicate	Water	GRAB	3/20/24	✓	1	~~lndfll-app1-voc-group~~	lndfll-app1-metals-6020	15

Relinquished By: Todd Whipple Date/Time: 3/21/24

Received By: Date/Time:

Relinquished By: Date/Time:

Received for Lab By: Maher Date/Time: 3/21/24 9:48

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HE1346

Project Description

Appendix Sampling

For:

Todd Whipple

HLW Engineering

PO Box 314

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Friday, May 24, 2024

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

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

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HE1346

HLW Engineering

Todd Whipple
PO Box 314
Story City, IA 50248

Project Name: Appendix Sampling

Project / PO Number: N/A
Received: 05/15/2024
Reported: 05/24/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-12	1HE1346-01	Aqueous	GRAB		05/09/24 17:20	05/15/24 10:03

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HE1346

Analytical Testing Parameters

Client Sample ID:	MW-12		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HE1346-01	**Collection Date:**	05/09/2024 17:20

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Arsenic, total	**0.0050**	0.0040	mg/L	4		05/22/24 0816	05/22/24 2200	RVV

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CERTIFICATE OF ANALYSIS

1HE1346

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HE1232	1HE1232-BLK1	
		1HE1232-BS1	
		1HE1346-01	MW-12
		1HE1232-MS1	1HE1512-01
		1HE1232-MSD1	1HE1512-01
		1HE1232-PS1	1HE1512-01

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

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HE1232 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HE1232-BLK1)			Prepared: 05/22/24 08:16 Analyzed: 05/22/24 21:47							
Arsenic, total	<0.0040	0.0040	mg/L							
LCS (1HE1232-BS1)			Prepared: 05/22/24 08:16 Analyzed: 05/22/24 21:54							
Arsenic, total	0.102	0.0040	mg/L	0.100		102	80-120			
Matrix Spike (1HE1232-MS1)	**Source: 1HE1512-01**		Prepared: 05/22/24 08:16 Analyzed: 05/22/24 22:12							
Arsenic, total	0.103	0.0040	mg/L	0.100	0.0018	101	75-125			
Matrix Spike Dup (1HE1232-MSD1)	**Source: 1HE1512-01**		Prepared: 05/22/24 08:16 Analyzed: 05/22/24 22:30							
Arsenic, total	0.103	0.0040	mg/L	0.100	0.0018	102	75-125	0.286	20	
Post Spike (1HE1232-PS1)	**Source: 1HE1512-01**		Prepared: 05/22/24 08:16 Analyzed: 05/22/24 22:37							
Arsenic, total	0.0813		mg/L	0.0800	0.0018	99.4	80-120			

Definitions

RL: Reporting Limit

RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 2.9°C

Cooler Inspection Checklist

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

Report Comments

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

Reviewed and Approved By:

Heather Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
05/24/24 08:08

CHAIN OF CUSTODY

Keystone LABORATORIES, INC.

☐ 600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

☐ 3012 Ansborough Ave.
Waterloo, IA 50701
Phone: 319-235-4440
Fax: 319-235-2480

n St
52544
7-7023
7-7040

1HE1346
HLW Engineering
PM: Heather Murphy

PAGE 1 OF 1

PRINT OR TYPE INFORMATION BELOW	REPORT TO:	BILL TO:
SAMPLER: TODD WHIPPLE	NAME: TODD WHIPPLE	NAME: Mike Fountas, Director
SITE NAME: SOUTH DALLAS Co SLF	COMPANY NAME: HLW Group	COMPANY NAME: SOUTH DALLAS Co Landfill
ADDRESS:	ADDRESS: P.O Box 314	ADDRESS: P.O Box 263
CITY/ST/ZIP: Adel	CITY/ST/ZIP: STORY City IA 50248	CITY/ST/ZIP: Adel, IA 50003
PHONE:	PHONE: 515 733 4144	PHONE:
	FAX: 4146	Keystone Quote No: (If Applicable)

LAB USE ONLY
LABORATORY WORK ORDER NO. 1HE1346
SAMPLE TEMPERATURE UPON RECEIPT: 2.9 ice ✓ °C

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED: Arsenic, Total							SAMPLE CONDITION/COMMENTS	LABORATORY SAMPLE NUMBER
MW-12	5-9-24	17:20	MW-12	1	W	G	✓								01

Relinquished by: (Signature)	Date	Received by: (Signature)	Date	Turn-Around:
[signature]	5-15-24			☐ Standard ☐ Rush ______
	Time		Time	Contact Lab Prior to Submission
Relinquished by: (Signature)	**Date**	**Received for Lab by: (Signature)**	**Date**	**Remarks:**
		[signature]	5-15-24	
	Time		Time 10:03	

Original - Lab Copy • Yellow - Sampler Copy

FORM: CCR 7-97

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI0968

Project Description

Appendix Sampling

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Monday, October 7, 2024

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

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

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI0968

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: Appendix Sampling

Project / PO Number: N/A
Received: 09/13/2024
Reported: 10/07/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-9	1HI0968-01	Aqueous	GRAB		09/12/24 10:12	09/13/24 10:55
MW-17	1HI0968-02	Aqueous	GRAB		09/12/24 11:35	09/13/24 10:55
MW-18	1HI0968-03	Aqueous	GRAB		09/12/24 10:49	09/13/24 10:55
MW-19A	1HI0968-04	Aqueous	GRAB		09/12/24 11:07	09/13/24 10:55
MW-4	1HI0968-05	Aqueous	GRAB		09/12/24 12:11	09/13/24 10:55
MW-24	1HI0968-06	Aqueous	GRAB		09/12/24 10:30	09/13/24 10:55
MW-5	1HI0968-07	Aqueous	GRAB		09/12/24 13:17	09/13/24 10:55
MW-12	1HI0968-08	Aqueous	GRAB		09/12/24 14:58	09/13/24 10:55
MW-15R	1HI0968-09	Aqueous	GRAB		09/12/24 14:40	09/13/24 10:55
MW-20R	1HI0968-10	Aqueous	GRAB		09/12/24 14:31	09/13/24 10:55
MW-21	1HI0968-11	Aqueous	GRAB		09/11/24 13:47	09/13/24 10:55
MW-22	1HI0968-12	Aqueous	GRAB		09/12/24 11:36	09/13/24 10:55
MW-25	1HI0968-13	Aqueous	GRAB		09/12/24 12:26	09/13/24 10:55
MW-26	1HI0968-14	Aqueous	GRAB		09/12/24 12:40	09/13/24 10:55
Duplicate	1HI0968-15	Aqueous	GRAB		09/12/24 13:47	09/13/24 10:55

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI0968

Analytical Testing Parameters

Client Sample ID:	MW-9			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HI0968-01		**Collection Date:**	09/12/2024 10:12

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0533	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0533	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/17/24 2044	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0533	09/30/24 2010	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0533	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0533	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0533	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0533	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF

Client Sample ID:	MW-9			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HI0968-01		**Collection Date:**	09/12/2024 10:12

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0533	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0533	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0533	BDF
Surrogate: Dibromofluoromethane	94.0	Limit: 75-136	% Rec	1			09/18/24 0533	BDF
Surrogate: Dibromofluoromethane	75.9	Limit: 57-134	% Rec	1			09/17/24 2044	BDF
Surrogate: Dibromofluoromethane	88.9	Limit: 75-136	% Rec	1		09/18/24 0533	09/30/24 2010	BDF
Surrogate: 1,2-Dichloroethane-d4	88.3	Limit: 61-142	% Rec	1		09/18/24 0533	09/30/24 2010	BDF
Surrogate: 1,2-Dichloroethane-d4	98.2	Limit: 61-142	% Rec	1			09/18/24 0533	BDF
Surrogate: 1,2-Dichloroethane-d4	88.4	Limit: 53-140	% Rec	1			09/17/24 2044	BDF
Surrogate: Toluene-d8	88.5	Limit: 86-114	% Rec	1			09/17/24 2044	BDF
Surrogate: Toluene-d8	97.8	Limit: 82-121	% Rec	1			09/18/24 0533	BDF
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		09/18/24 0533	09/30/24 2010	BDF
Surrogate: 4-Bromofluorobenzene	96.3	Limit: 80-116	% Rec	1			09/18/24 0533	BDF
Surrogate: 4-Bromofluorobenzene	94.9	Limit: 78-121	% Rec	1			09/17/24 2044	BDF
Surrogate: 4-Bromofluorobenzene	91.5	Limit: 80-116	% Rec	1		09/18/24 0533	09/30/24 2010	BDF

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Arsenic, total	**0.0043**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Barium, total	**0.305**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Cobalt, total	**0.0045**	0.0004	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Nickel, total	**0.0095**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1748	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1748	RVV

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-17			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HI0968-02		**Collection Date:**	09/12/2024 11:35

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0555	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0555	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0053	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0555	09/30/24 2032	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0555	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0555	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0555	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0555	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF

CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-17		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-02	**Collection Date:**	09/12/2024 11:35

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0555	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0555	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0555	BDF
Surrogate: Dibromofluoromethane	94.0	Limit: 75-136	% Rec	1			09/18/24 0555	BDF
Surrogate: Dibromofluoromethane	89.8	Limit: 75-136	% Rec	1		09/18/24 0555	09/30/24 2032	BDF
Surrogate: Dibromofluoromethane	68.2	Limit: 57-134	% Rec	1			09/18/24 0053	BDF
Surrogate: 1,2-Dichloroethane-d4	89.1	Limit: 61-142	% Rec	1		09/18/24 0555	09/30/24 2032	BDF
Surrogate: 1,2-Dichloroethane-d4	98.3	Limit: 61-142	% Rec	1			09/18/24 0555	BDF
Surrogate: 1,2-Dichloroethane-d4	75.5	Limit: 53-140	% Rec	1			09/18/24 0053	BDF
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		09/18/24 0555	09/30/24 2032	BDF
Surrogate: Toluene-d8	86.4	Limit: 86-114	% Rec	1			09/18/24 0053	BDF
Surrogate: Toluene-d8	98.0	Limit: 82-121	% Rec	1			09/18/24 0555	BDF
Surrogate: 4-Bromofluorobenzene	96.2	Limit: 80-116	% Rec	1			09/18/24 0555	BDF
Surrogate: 4-Bromofluorobenzene	89.4	Limit: 80-116	% Rec	1		09/18/24 0555	09/30/24 2032	BDF
Surrogate: 4-Bromofluorobenzene	113	Limit: 78-121	% Rec	1			09/18/24 0053	BDF

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Barium, total	**0.153**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Cobalt, total	**0.0036**	0.0004	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Nickel, total	**0.0066**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Selenium, total	**0.0068**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1812	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1812	RVV

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-18		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-03	**Collection Date:**	09/12/2024 10:49

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0618	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0618	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0116	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0618	09/30/24 2055	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0618	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0618	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0618	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0618	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF

Client Sample ID:	MW-18		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-03	**Collection Date:**	09/12/2024 10:49

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0618	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0618	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0618	BDF
Surrogate: Dibromofluoromethane	70.8	Limit: 57-134	% Rec	1			09/18/24 0116	BDF
Surrogate: Dibromofluoromethane	88.2	Limit: 75-136	% Rec	1		09/18/24 0618	09/30/24 2055	BDF
Surrogate: Dibromofluoromethane	92.2	Limit: 75-136	% Rec	1			09/18/24 0618	BDF
Surrogate: 1,2-Dichloroethane-d4	78.9	Limit: 53-140	% Rec	1			09/18/24 0116	BDF
Surrogate: 1,2-Dichloroethane-d4	97.7	Limit: 61-142	% Rec	1			09/18/24 0618	BDF
Surrogate: 1,2-Dichloroethane-d4	86.2	Limit: 61-142	% Rec	1		09/18/24 0618	09/30/24 2055	BDF
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		09/18/24 0618	09/30/24 2055	BDF
Surrogate: Toluene-d8	97.4	Limit: 82-121	% Rec	1			09/18/24 0618	BDF
Surrogate: Toluene-d8	87.0	Limit: 86-114	% Rec	1			09/18/24 0116	BDF
Surrogate: 4-Bromofluorobenzene	96.3	Limit: 80-116	% Rec	1			09/18/24 0618	BDF
Surrogate: 4-Bromofluorobenzene	83.0	Limit: 78-121	% Rec	1			09/18/24 0116	BDF
Surrogate: 4-Bromofluorobenzene	91.2	Limit: 80-116	% Rec	1		09/18/24 0618	09/30/24 2055	BDF

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Arsenic, total	**0.0162**	0.0040	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Barium, total	**0.621**	0.0040	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Cobalt, total	**0.0058**	0.0004	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Nickel, total	**0.0106**	0.0040	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/19/24 1100	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/19/24 1100	RVV

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-19A		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-04	**Collection Date:**	09/12/2024 11:07

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0641	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0641	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0138	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0641	09/30/24 2117	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0641	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0641	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0641	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0641	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-19A		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-04	**Collection Date:**	09/12/2024 11:07

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0641	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0641	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0641	BDF
Surrogate: Dibromofluoromethane	68.7	Limit: 57-134	% Rec	1			09/18/24 0138	BDF
Surrogate: Dibromofluoromethane	92.0	Limit: 75-136	% Rec	1		09/18/24 0641	09/30/24 2117	BDF
Surrogate: Dibromofluoromethane	93.5	Limit: 75-136	% Rec	1			09/18/24 0641	BDF
Surrogate: 1,2-Dichloroethane-d4	98.0	Limit: 61-142	% Rec	1			09/18/24 0641	BDF
Surrogate: 1,2-Dichloroethane-d4	95.5	Limit: 61-142	% Rec	1		09/18/24 0641	09/30/24 2117	BDF
Surrogate: 1,2-Dichloroethane-d4	81.8	Limit: 53-140	% Rec	1			09/18/24 0138	BDF
Surrogate: Toluene-d8	97.9	Limit: 82-121	% Rec	1			09/18/24 0641	BDF
Surrogate: Toluene-d8	100	Limit: 82-121	% Rec	1		09/18/24 0641	09/30/24 2117	BDF
Surrogate: Toluene-d8	86.1	Limit: 86-114	% Rec	1			09/18/24 0138	BDF
Surrogate: 4-Bromofluorobenzene	93.9	Limit: 80-116	% Rec	1		09/18/24 0641	09/30/24 2117	BDF
Surrogate: 4-Bromofluorobenzene	97.2	Limit: 80-116	% Rec	1			09/18/24 0641	BDF
Surrogate: 4-Bromofluorobenzene	115	Limit: 78-121	% Rec	1			09/18/24 0138	BDF

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Barium, total	**0.0382**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Cadmium, total	**0.0010**	0.0008	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Cobalt, total	**0.0004**	0.0004	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Nickel, total	**0.0090**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1836	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1836	RVV

Client Sample ID:	MW-4			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HI0968-05		**Collection Date:**	09/12/2024 12:11

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Chloroethane	**1.3**	1.0	ug/L	1			09/18/24 0703	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0703	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0703	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0201	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0703	09/30/24 2139	BDF
cis-1,2-Dichloroethylene	**2.4**	1.0	ug/L	1			09/18/24 0703	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0703	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Benzene	**1.3**	1.0	ug/L	1			09/18/24 0703	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0703	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0703	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0703	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF

Client Sample ID:	MW-4		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-05	**Collection Date:**	09/12/2024 12:11

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0703	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
1,4-Dichlorobenzene	**5.9**	1.0	ug/L	1			09/18/24 0703	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0703	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0703	BDF
Surrogate: Dibromofluoromethane	91.5	Limit: 75-136	% Rec	1			09/18/24 0703	BDF
Surrogate: Dibromofluoromethane	104	Limit: 75-136	% Rec	1		09/18/24 0703	09/30/24 2139	BDF
Surrogate: Dibromofluoromethane	68.2	Limit: 57-134	% Rec	1			09/18/24 0201	BDF
Surrogate: 1,2-Dichloroethane-d4	78.4	Limit: 53-140	% Rec	1			09/18/24 0201	BDF
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec	1		09/18/24 0703	09/30/24 2139	BDF
Surrogate: 1,2-Dichloroethane-d4	98.1	Limit: 61-142	% Rec	1			09/18/24 0703	BDF
Surrogate: Toluene-d8	97.2	Limit: 82-121	% Rec	1			09/18/24 0703	BDF
Surrogate: Toluene-d8	100	Limit: 82-121	% Rec	1		09/18/24 0703	09/30/24 2139	BDF
Surrogate: Toluene-d8	86.3	Limit: 86-114	% Rec	1			09/18/24 0201	BDF
Surrogate: 4-Bromofluorobenzene	96.6	Limit: 80-116	% Rec	1			09/18/24 0703	BDF
Surrogate: 4-Bromofluorobenzene	90.2	Limit: 80-116	% Rec	1		09/18/24 0703	09/30/24 2139	BDF
Surrogate: 4-Bromofluorobenzene	96.6	Limit: 78-121	% Rec	1			09/18/24 0201	BDF

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Arsenic, total	**0.0584**	0.0040	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Barium, total	**1.02**	0.0040	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Cobalt, total	**0.0015**	0.0004	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/19/24 1106	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/19/24 1106	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-24		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-06	**Collection Date:**	09/12/2024 10:30

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0726	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0726	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0223	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0726	09/30/24 2202	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0726	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0726	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0726	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0726	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-24		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-06	**Collection Date:**	09/12/2024 10:30

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0726	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0726	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0726	BDF
Surrogate: Dibromofluoromethane	67.4	Limit: 57-134	% Rec	1			09/18/24 0223	BDF
Surrogate: Dibromofluoromethane	92.8	Limit: 75-136	% Rec	1			09/18/24 0726	BDF
Surrogate: Dibromofluoromethane	92.7	Limit: 75-136	% Rec	1		09/18/24 0726	09/30/24 2202	BDF
Surrogate: 1,2-Dichloroethane-d4	99.0	Limit: 61-142	% Rec	1			09/18/24 0726	BDF
Surrogate: 1,2-Dichloroethane-d4	77.9	Limit: 53-140	% Rec	1			09/18/24 0223	BDF
Surrogate: 1,2-Dichloroethane-d4	93.5	Limit: 61-142	% Rec	1		09/18/24 0726	09/30/24 2202	BDF
Surrogate: Toluene-d8	74.2	Limit: 86-114	% Rec	1	**S2**		09/18/24 0223	BDF
Surrogate: Toluene-d8	97.2	Limit: 82-121	% Rec	1			09/18/24 0726	BDF
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		09/18/24 0726	09/30/24 2202	BDF
Surrogate: 4-Bromofluorobenzene	90.2	Limit: 80-116	% Rec	1		09/18/24 0726	09/30/24 2202	BDF
Surrogate: 4-Bromofluorobenzene	95.1	Limit: 78-121	% Rec	1			09/18/24 0223	BDF
Surrogate: 4-Bromofluorobenzene	96.3	Limit: 80-116	% Rec	1			09/18/24 0726	BDF

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Arsenic, total	**0.0136**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Barium, total	**0.509**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Cadmium, total	**0.0009**	0.0008	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Cobalt, total	**0.0006**	0.0004	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1849	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1849	RVV

Client Sample ID:	MW-5		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-07	**Collection Date:**	09/12/2024 13:17

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Dichlorodifluoromethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Bromomethane	<1.0	1.0	ug/L	1	**H2**	09/30/24 0000	09/30/24 2001	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Acrolein	<10.0	10.0	ug/L	1			09/18/24 0246	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0748	BDF
Methyl Iodide	<2.0	2.0	ug/L	1			09/18/24 0748	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Acetonitrile	<10.0	10.0	ug/L	1			09/18/24 0748	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0748	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0246	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
2,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
2-Butanone (MEK)	<5.0	5.0	ug/L	1			09/18/24 0748	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,1-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0748	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Ethyl Methacrylate	<10.0	10.0	ug/L	1			09/18/24 0748	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,3-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0748	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF

Client Sample ID:	MW-5			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HI0968-07		**Collection Date:**	09/12/2024 13:17

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0748	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0748	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,3-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,2-Dibromo-3-chloropropane	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
1,2,4-Trichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0748	BDF
Allyl chloride	<1.0	1.0	ug/L	1			09/26/24 2158	CSM
Chloroprene	<1.0	1.0	ug/L	1			09/26/24 2158	CSM
Methacrylonitrile	<1.0	1.0	ug/L	1	**AC**		09/26/24 2158	CSM
Methyl Methacrylate	<1.0	1.0	ug/L	1			09/26/24 2158	CSM
Propionitrile	<10.0	10.0	ug/L	1	**M1**		09/26/24 2158	CSM
Surrogate: Dibromofluoromethane	99.5	Limit: 57-134	% Rec	1			09/26/24 2158	CSM
Surrogate: Dibromofluoromethane	94.4	Limit: 57-134	% Rec	1			09/18/24 0748	BDF
Surrogate: Dibromofluoromethane	104	Limit: 57-134	% Rec	1		09/30/24 0000	09/30/24 2001	BDF
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 53-140	% Rec	1		09/30/24 0000	09/30/24 2001	BDF
Surrogate: 1,2-Dichloroethane-d4	98.5	Limit: 53-140	% Rec	1			09/18/24 0748	BDF
Surrogate: 1,2-Dichloroethane-d4	100	Limit: 53-140	% Rec	1			09/26/24 2158	CSM
Surrogate: 1,2-Dichloroethane-d4	81.1	Limit: 53-140	% Rec	1			09/18/24 0246	BDF
Surrogate: Toluene-d8	107	Limit: 86-114	% Rec	1			09/26/24 2158	CSM
Surrogate: Toluene-d8	87.2	Limit: 86-114	% Rec	1			09/18/24 0246	BDF
Surrogate: Toluene-d8	97.4	Limit: 86-114	% Rec	1			09/18/24 0748	BDF
Surrogate: Toluene-d8	99.9	Limit: 86-114	% Rec	1		09/30/24 0000	09/30/24 2001	BDF
Surrogate: 4-Bromofluorobenzene	96.8	Limit: 78-121	% Rec	1			09/18/24 0748	BDF
Surrogate: 4-Bromofluorobenzene	104	Limit: 78-121	% Rec	1		09/30/24 0000	09/30/24 2001	BDF
Surrogate: 4-Bromofluorobenzene	100	Limit: 78-121	% Rec	1			09/26/24 2158	CSM
Surrogate: 4-Bromofluorobenzene	95.3	Limit: 78-121	% Rec	1			09/18/24 0246	BDF

Determination of General Solvents	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 8015C								
Isobutanol	<1.0	1.0	mg/L	1		09/19/24 1159	09/24/24 0142	PDS

Determination of Base/Neutral/Acid Extractable Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3520C/EPA 8270C								
N-Nitrosodimethylamine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Methyl Methanesulfonate	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
N-Nitrosodiethylamine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP

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1HI0968

Client Sample ID:	MW-5		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-07	**Collection Date:**	09/12/2024 13:17

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
N-Nitrosomethylethylamine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Ethyl Methanesulfonate	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Phenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Bis(2-Chloroethyl) Ether	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2-Chlorophenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Benzyl Alcohol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2-Methylphenol (o-Cresol)	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Bis[2-Chloroisopropyl]ether	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
n-Nitroso-di-n-propylamine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
N-Nitrosopyrrolidine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Acetophenone	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
o-Toluidine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
(3 & 4)-Methylphenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Hexachloroethane	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Nitrobenzene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
N-Nitrosopiperidine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Isophorone	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2-Nitrophenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2,4-Dimethylphenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Bis (2-Chloroethoxy) Methane	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2,4-Dichlorophenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Naphthalene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
4-Chloroaniline	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2,6-Dichlorophenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Hexachloropropene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Hexachlorobutadiene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
N-Nitrosodi-n-butylamine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
1,4-Phenylenediamine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
4-Chloro-3-methylphenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2-Methylnaphthalene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Isosafrole	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
1,2,4,5-Tetrachlorobenzene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Hexachlorocyclopentadiene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2,4,6-Trichlorophenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2,4,5-Trichlorophenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Safrole	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2-Chloronaphthalene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2-Nitroaniline	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
1,4-Naphthoquinone	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Dimethylphthalate	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
1,3-Dinitrobenzene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
1,2-Dinitrobenzene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2,6-Dinitrotoluene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP

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1HI0968

Client Sample ID:	MW-5		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-07	**Collection Date:**	09/12/2024 13:17

Determination of Base/Neutral/Acid Extractable Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
Acenaphthylene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
3-Nitroaniline	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Acenaphthene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2,4-Dinitrophenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
4-Nitrophenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Dibenzofuran	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2,4-Dinitrotoluene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2,3,4,6-Tetrachlorophenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Pentachlorobenzene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
1-Naphthylamine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2-Naphthylamine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Diethyl Phthalate	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Fluorene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
4-Chlorophenyl Phenyl Ether	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
4-Nitroaniline	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
5-Nitro-o-toluidine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
4,6-Dinitro-2-methylphenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
N-Nitrosodiphenylamine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Diphenylamine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Azobenzene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Diallate	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
1,3,5-Trinitrobenzene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Phenacetin	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
4-Bromophenyl Phenyl Ether	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
4-Aminobiphenyl	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Pentachlorophenol	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Pronamide	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Pentachloronitrobenzene (PCNB)	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Phenanthrene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Anthracene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Di-n-butyl Phthalate	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Methapyrilene	<8	8	ug/L	1	**Q3**	09/18/24 1256	09/26/24 1458	EPP
Fluoranthene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Isodrin	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Chlorobenzilate	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Pyrene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
p-(Dimethylamino)azobenzene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
3,3-Dimethylbenzidine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Butyl Benzyl Phthalate	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Benzo(a)anthracene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Chrysene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Bis(2-Ethylhexyl) Phthalate	**9**	6	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Kepone	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP

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1HI0968

Client Sample ID:	MW-5		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-07	**Collection Date:**	09/12/2024 13:17

Determination of Base/Neutral/Acid Extractable Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
3,3´-Dichlorobenzidine	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
2-Acetylaminofluorene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Di-n-octyl Phthalate	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Benzo(b)Fluoranthene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
7,12-Dimethylbenz [a] anthracene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Benzo(k)Fluoranthene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Benzo(a)Pyrene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
3-Methylcholanthrene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Dibenzo(a,h)anthracene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Indeno(1,2,3-cd)Pyrene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Benzo(g,h,i)perylene	<8	8	ug/L	1		09/18/24 1256	09/26/24 1458	EPP
Surrogate: 2-Fluorophenol	52.9	Limit: 10-149	% Rec	1		09/18/24 1256	09/26/24 1458	EPP
Surrogate: Phenol-d6	57.6	Limit: 10-143	% Rec	1		09/18/24 1256	09/26/24 1458	EPP
Surrogate: Nitrobenzene-d5	54.0	Limit: 20-149	% Rec	1		09/18/24 1256	09/26/24 1458	EPP
Surrogate: 2-Fluorobiphenyl	60.6	Limit: 11-146	% Rec	1		09/18/24 1256	09/26/24 1458	EPP
Surrogate: 2,4,6-Tribromophenol	72.5	Limit: 10-153	% Rec	1		09/18/24 1256	09/26/24 1458	EPP
Surrogate: Terphenyl-dl4	59.9	Limit: 27-155	% Rec	1		09/18/24 1256	09/26/24 1458	EPP

Determination of Organophosphorus Insecticides	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3510C/EPA 8141								
O,O,O-Triethyl phosphorothioate	<0.4	0.4	ug/L	1		09/19/24 1134	09/24/24 2003	EPP
Thionazin	<0.4	0.4	ug/L	1		09/19/24 1134	09/24/24 2003	EPP
Phorate	<0.4	0.4	ug/L	1		09/19/24 1134	09/24/24 2003	EPP
Dimethoate	<0.4	0.4	ug/L	1		09/19/24 1134	09/24/24 2003	EPP
Disulfoton	<0.4	0.4	ug/L	1		09/19/24 1134	09/24/24 2003	EPP
Methyl Parathion	<0.4	0.4	ug/L	1		09/19/24 1134	09/24/24 2003	EPP
Parathion	<0.4	0.4	ug/L	1		09/19/24 1134	09/24/24 2003	EPP
Famphur	<0.4	0.4	ug/L	1		09/19/24 1134	09/24/24 2003	EPP
Surrogate: 2-Nitro-m-xylene	61.5	Limit: 15-154	% Rec	1		09/19/24 1134	09/24/24 2003	EPP

Determination of Chlorinated Phenoxy Herbicides	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 8151A								
2,4-D	<2.0	2.0	ug/L	1		09/18/24 1712	09/24/24 1656	EPP
2,4,5-TP (Silvex)	<0.5	0.5	ug/L	1		09/18/24 1712	09/24/24 1656	EPP
2,4,5-T	<0.5	0.5	ug/L	1		09/18/24 1712	09/24/24 1656	EPP
Dinoseb	<0.5	0.5	ug/L	1		09/18/24 1712	09/24/24 1656	EPP
Surrogate: 2,5-Dichlorobenzoic Acid	88.9	Limit: 36-159	% Rec	1		09/18/24 1712	09/24/24 1656	EPP

Determination of Organochlorine Insecticides & Metabolites	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3510C/EPA 8081								
Alpha-BHC	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP

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1HI0968

Client Sample ID:	MW-5		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-07	**Collection Date:**	09/12/2024 13:17

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Gamma-BHC [Lindane]	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Beta-BHC	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Heptachlor	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Delta-BHC	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Aldrin	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Heptachlor Epoxide	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Endosulfan I	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
4,4`-DDE	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Dieldrin	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Endrin	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
4,4`-DDD	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Endosulfan II	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
4,4`-DDT	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Endrin Aldehyde	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Endosulfan Sulfate	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Methoxychlor	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Chlordane	<0.10	0.10	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Toxaphene	<0.20	0.20	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Hexachlorobenzene	<0.05	0.05	ug/L	1		09/19/24 1132	09/24/24 1210	EPP
Surrogate: Tetrachloro-m-xylene	72.7	Limit: 40-116	% Rec	1		09/19/24 1132	09/24/24 1210	EPP

Determination of Polychlorinated Biphenyls (PCB)	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082								
Arochlor 1016	<0.20	0.20	ug/L	1		09/19/24 1129	09/24/24 1210	EPP
Arochlor 1221	<0.20	0.20	ug/L	1		09/19/24 1129	09/24/24 1210	EPP
Arochlor 1232	<0.20	0.20	ug/L	1		09/19/24 1129	09/24/24 1210	EPP
Arochlor 1242	<0.20	0.20	ug/L	1		09/19/24 1129	09/24/24 1210	EPP
Arochlor 1248	<0.20	0.20	ug/L	1		09/19/24 1129	09/24/24 1210	EPP
Arochlor 1254	<0.20	0.20	ug/L	1		09/19/24 1129	09/24/24 1210	EPP
Arochlor 1260	<0.20	0.20	ug/L	1		09/19/24 1129	09/24/24 1210	EPP
Surrogate: Tetrachloro-m-xylene	68.8	Limit: 37-120	% Rec	1		09/19/24 1129	09/24/24 1210	EPP
Surrogate: Decachlorobiphenyl	66.5	Limit: 22-116	% Rec	1		09/19/24 1129	09/24/24 1210	EPP

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 376.2								
Sulfide, total	<0.10	0.10	mg/L	1		09/17/24 0835	09/17/24 1323	AKK
EPA 9010B								
Cyanide, total	<0.010	0.010	mg/L	1		09/26/24 1021	09/26/24 1454	KKJ

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-5		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-07	**Collection Date:**	09/12/2024 13:17

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Arsenic, total	**0.0097**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Barium, total	**0.269**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Cadmium, total	**0.0009**	0.0008	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Cobalt, total	**0.0106**	0.0004	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Copper, total	**0.0073**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Nickel, total	**0.0333**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Tin, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1855	RVV
EPA 7470A								
Mercury, total	<0.00050	0.00050	mg/L	1		09/18/24 1052	09/19/24 1402	JAR

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-12			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HI0968-08		**Collection Date:**	09/12/2024 14:58

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0811	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0811	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0309	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0811	09/30/24 2224	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0811	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0811	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0811	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0811	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF

Client Sample ID:	MW-12		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-08	**Collection Date:**	09/12/2024 14:58

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0811	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0811	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0811	BDF
Surrogate: Dibromofluoromethane	92.0	Limit: 75-136	% Rec	1		09/18/24 0811	09/30/24 2224	BDF
Surrogate: Dibromofluoromethane	93.4	Limit: 75-136	% Rec	1			09/18/24 0811	BDF
Surrogate: Dibromofluoromethane	68.5	Limit: 57-134	% Rec	1			09/18/24 0309	BDF
Surrogate: 1,2-Dichloroethane-d4	98.9	Limit: 61-142	% Rec	1			09/18/24 0811	BDF
Surrogate: 1,2-Dichloroethane-d4	81.5	Limit: 53-140	% Rec	1			09/18/24 0309	BDF
Surrogate: 1,2-Dichloroethane-d4	91.9	Limit: 61-142	% Rec	1		09/18/24 0811	09/30/24 2224	BDF
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		09/18/24 0811	09/30/24 2224	BDF
Surrogate: Toluene-d8	97.2	Limit: 82-121	% Rec	1			09/18/24 0811	BDF
Surrogate: Toluene-d8	86.0	Limit: 86-114	% Rec	1			09/18/24 0309	BDF
Surrogate: 4-Bromofluorobenzene	96.1	Limit: 80-116	% Rec	1			09/18/24 0811	BDF
Surrogate: 4-Bromofluorobenzene	91.0	Limit: 80-116	% Rec	1		09/18/24 0811	09/30/24 2224	BDF
Surrogate: 4-Bromofluorobenzene	95.8	Limit: 78-121	% Rec	1			09/18/24 0309	BDF

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Arsenic, total	**0.0056**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Barium, total	**0.310**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Cobalt, total	**0.0011**	0.0004	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1901	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1901	RVV

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-15R		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-09	**Collection Date:**	09/12/2024 14:40

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0834	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0834	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0331	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0834	09/30/24 2247	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0834	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0834	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0834	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0834	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF

Client Sample ID:	MW-15R		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-09	**Collection Date:**	09/12/2024 14:40

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0834	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0834	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0834	BDF
Surrogate: Dibromofluoromethane	68.3	Limit: 57-134	% Rec	1			09/18/24 0331	BDF
Surrogate: Dibromofluoromethane	93.2	Limit: 75-136	% Rec	1			09/18/24 0834	BDF
Surrogate: Dibromofluoromethane	86.3	Limit: 75-136	% Rec	1		09/18/24 0834	09/30/24 2247	BDF
Surrogate: 1,2-Dichloroethane-d4	85.8	Limit: 61-142	% Rec	1		09/18/24 0834	09/30/24 2247	BDF
Surrogate: 1,2-Dichloroethane-d4	99.0	Limit: 61-142	% Rec	1			09/18/24 0834	BDF
Surrogate: 1,2-Dichloroethane-d4	81.3	Limit: 53-140	% Rec	1			09/18/24 0331	BDF
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec	1		09/18/24 0834	09/30/24 2247	BDF
Surrogate: Toluene-d8	86.1	Limit: 86-114	% Rec	1			09/18/24 0331	BDF
Surrogate: Toluene-d8	97.6	Limit: 82-121	% Rec	1			09/18/24 0834	BDF
Surrogate: 4-Bromofluorobenzene	95.8	Limit: 78-121	% Rec	1			09/18/24 0331	BDF
Surrogate: 4-Bromofluorobenzene	97.4	Limit: 80-116	% Rec	1			09/18/24 0834	BDF
Surrogate: 4-Bromofluorobenzene	91.4	Limit: 80-116	% Rec	1		09/18/24 0834	09/30/24 2247	BDF

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Arsenic, total	**0.0173**	0.0040	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Barium, total	**0.332**	0.0040	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Cobalt, total	**0.0033**	0.0004	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Nickel, total	**0.0041**	0.0040	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/19/24 1112	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/19/24 1112	RVV

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-20R		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-10	**Collection Date:**	09/12/2024 14:31

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0856	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0856	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0354	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0856	09/30/24 2309	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0856	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0856	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0856	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0856	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-20R		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-10	**Collection Date:**	09/12/2024 14:31

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0856	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0856	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0856	BDF
Surrogate: Dibromofluoromethane	93.8	Limit: 75-136	% Rec	1			09/18/24 0856	BDF
Surrogate: Dibromofluoromethane	94.2	Limit: 75-136	% Rec	1		09/18/24 0856	09/30/24 2309	BDF
Surrogate: Dibromofluoromethane	67.5	Limit: 57-134	% Rec	1			09/18/24 0354	BDF
Surrogate: 1,2-Dichloroethane-d4	80.0	Limit: 53-140	% Rec	1			09/18/24 0354	BDF
Surrogate: 1,2-Dichloroethane-d4	99.0	Limit: 61-142	% Rec	1			09/18/24 0856	BDF
Surrogate: 1,2-Dichloroethane-d4	94.7	Limit: 61-142	% Rec	1		09/18/24 0856	09/30/24 2309	BDF
Surrogate: Toluene-d8	88.0	Limit: 86-114	% Rec	1			09/18/24 0354	BDF
Surrogate: Toluene-d8	97.3	Limit: 82-121	% Rec	1			09/18/24 0856	BDF
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		09/18/24 0856	09/30/24 2309	BDF
Surrogate: 4-Bromofluorobenzene	89.2	Limit: 80-116	% Rec	1		09/18/24 0856	09/30/24 2309	BDF
Surrogate: 4-Bromofluorobenzene	83.0	Limit: 78-121	% Rec	1			09/18/24 0354	BDF
Surrogate: 4-Bromofluorobenzene	96.9	Limit: 80-116	% Rec	1			09/18/24 0856	BDF

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Arsenic, total	**0.0215**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Barium, total	**0.657**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Cobalt, total	**0.0006**	0.0004	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1913	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1913	RVV

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-21			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HI0968-11		**Collection Date:**	09/11/2024 13:47

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0919	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0919	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0416	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0919	09/30/24 2332	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0919	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0919	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0919	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0919	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-21		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-11	**Collection Date:**	09/11/2024 13:47

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0919	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0919	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0919	BDF
Surrogate: Dibromofluoromethane	93.2	Limit: 75-136	% Rec	1		09/18/24 0919	09/30/24 2332	BDF
Surrogate: Dibromofluoromethane	92.9	Limit: 75-136	% Rec	1			09/18/24 0919	BDF
Surrogate: Dibromofluoromethane	68.7	Limit: 57-134	% Rec	1			09/18/24 0416	BDF
Surrogate: 1,2-Dichloroethane-d4	82.5	Limit: 53-140	% Rec	1			09/18/24 0416	BDF
Surrogate: 1,2-Dichloroethane-d4	92.4	Limit: 61-142	% Rec	1		09/18/24 0919	09/30/24 2332	BDF
Surrogate: 1,2-Dichloroethane-d4	98.8	Limit: 61-142	% Rec	1			09/18/24 0919	BDF
Surrogate: Toluene-d8	87.2	Limit: 86-114	% Rec	1			09/18/24 0416	BDF
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		09/18/24 0919	09/30/24 2332	BDF
Surrogate: Toluene-d8	97.6	Limit: 82-121	% Rec	1			09/18/24 0919	BDF
Surrogate: 4-Bromofluorobenzene	90.7	Limit: 80-116	% Rec	1		09/18/24 0919	09/30/24 2332	BDF
Surrogate: 4-Bromofluorobenzene	94.4	Limit: 78-121	% Rec	1			09/18/24 0416	BDF
Surrogate: 4-Bromofluorobenzene	96.1	Limit: 80-116	% Rec	1			09/18/24 0919	BDF

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Arsenic, total	**0.0065**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Barium, total	**0.517**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Cobalt, total	**0.0010**	0.0004	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Nickel, total	**0.0085**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1919	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1919	RVV

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	MW-22			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HI0968-12		**Collection Date:**	09/12/2024 11:36

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 0942	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 0942	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0439	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 0942	09/30/24 2354	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 0942	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 0942	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 0942	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 0942	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF

Client Sample ID:	MW-22		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-12	**Collection Date:**	09/12/2024 11:36

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 0942	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 0942	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 0942	BDF
Surrogate: Dibromofluoromethane	93.1	Limit: 75-136	% Rec	1			09/18/24 0942	BDF
Surrogate: Dibromofluoromethane	90.8	Limit: 75-136	% Rec	1		09/18/24 0942	09/30/24 2354	BDF
Surrogate: Dibromofluoromethane	67.8	Limit: 57-134	% Rec	1			09/18/24 0439	BDF
Surrogate: 1,2-Dichloroethane-d4	81.1	Limit: 53-140	% Rec	1			09/18/24 0439	BDF
Surrogate: 1,2-Dichloroethane-d4	89.8	Limit: 61-142	% Rec	1		09/18/24 0942	09/30/24 2354	BDF
Surrogate: 1,2-Dichloroethane-d4	98.4	Limit: 61-142	% Rec	1			09/18/24 0942	BDF
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		09/18/24 0942	09/30/24 2354	BDF
Surrogate: Toluene-d8	97.4	Limit: 82-121	% Rec	1			09/18/24 0942	BDF
Surrogate: Toluene-d8	103	Limit: 86-114	% Rec	1			09/18/24 0439	BDF
Surrogate: 4-Bromofluorobenzene	80.8	Limit: 78-121	% Rec	1			09/18/24 0439	BDF
Surrogate: 4-Bromofluorobenzene	96.5	Limit: 80-116	% Rec	1			09/18/24 0942	BDF
Surrogate: 4-Bromofluorobenzene	89.6	Limit: 80-116	% Rec	1		09/18/24 0942	09/30/24 2354	BDF

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Arsenic, total	**0.0631**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Barium, total	**0.418**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Cobalt, total	**0.0040**	0.0004	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Nickel, total	**0.0074**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1925	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1925	RVV

Client Sample ID:	MW-25		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-13	**Collection Date:**	09/12/2024 12:26

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Vinyl Chloride	<1.0	1.0	ug/L	1		09/25/24 0000	09/25/24 1551	BDF
Surrogate: Dibromofluoromethane	95.3	Limit: 57-134	% Rec	1		09/25/24 0000	09/25/24 1551	BDF
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 53-140	% Rec	1		09/25/24 0000	09/25/24 1551	BDF
Surrogate: Toluene-d8	97.5	Limit: 86-114	% Rec	1		09/25/24 0000	09/25/24 1551	BDF
Surrogate: 4-Bromofluorobenzene	96.6	Limit: 78-121	% Rec	1		09/25/24 0000	09/25/24 1551	BDF

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Arsenic, total	**0.0047**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1944	RVV
Barium, total	**0.131**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1944	RVV

Client Sample ID:	MW-26		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-14	**Collection Date:**	09/12/2024 12:40

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Vinyl Chloride	<1.0	1.0	ug/L	1		09/25/24 0000	09/25/24 1529	BDF
Surrogate: Dibromofluoromethane	94.1	Limit: 57-134	% Rec	1		09/25/24 0000	09/25/24 1529	BDF
Surrogate: 1,2-Dichloroethane-d4	100	Limit: 53-140	% Rec	1		09/25/24 0000	09/25/24 1529	BDF
Surrogate: Toluene-d8	98.4	Limit: 86-114	% Rec	1		09/25/24 0000	09/25/24 1529	BDF
Surrogate: 4-Bromofluorobenzene	97.5	Limit: 78-121	% Rec	1		09/25/24 0000	09/25/24 1529	BDF

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Arsenic, total	**0.0143**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1950	RVV
Barium, total	**0.420**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1950	RVV

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CERTIFICATE OF ANALYSIS

1HI0968

Client Sample ID:	Duplicate		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-15	**Collection Date:**	09/12/2024 13:47

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Bromomethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Chloroethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Acetone	<10.0	10.0	ug/L	1			09/18/24 1004	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			09/18/24 1004	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			09/18/24 0502	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1		09/18/24 1004	10/01/24 0016	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			09/18/24 1004	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Chloroform	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Benzene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Dibromomethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			09/18/24 1004	BDF
Toluene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			09/18/24 1004	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Xylenes, total	<2.0	2.0	ug/L	1			09/18/24 1004	BDF
Styrene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
Bromoform	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF

Client Sample ID:	Duplicate		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI0968-15	**Collection Date:**	09/12/2024 13:47

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			09/18/24 1004	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			09/18/24 1004	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			09/18/24 1004	BDF
Surrogate: Dibromofluoromethane	67.2	Limit: 57-134	% Rec	1			09/18/24 0502	BDF
Surrogate: Dibromofluoromethane	95.1	Limit: 75-136	% Rec	1		09/18/24 1004	10/01/24 0016	BDF
Surrogate: Dibromofluoromethane	92.8	Limit: 75-136	% Rec	1			09/18/24 1004	BDF
Surrogate: 1,2-Dichloroethane-d4	94.9	Limit: 61-142	% Rec	1		09/18/24 1004	10/01/24 0016	BDF
Surrogate: 1,2-Dichloroethane-d4	99.0	Limit: 61-142	% Rec	1			09/18/24 1004	BDF
Surrogate: 1,2-Dichloroethane-d4	77.4	Limit: 53-140	% Rec	1			09/18/24 0502	BDF
Surrogate: Toluene-d8	88.0	Limit: 86-114	% Rec	1			09/18/24 0502	BDF
Surrogate: Toluene-d8	97.1	Limit: 82-121	% Rec	1			09/18/24 1004	BDF
Surrogate: Toluene-d8	100	Limit: 82-121	% Rec	1		09/18/24 1004	10/01/24 0016	BDF
Surrogate: 4-Bromofluorobenzene	88.5	Limit: 80-116	% Rec	1		09/18/24 1004	10/01/24 0016	BDF
Surrogate: 4-Bromofluorobenzene	96.4	Limit: 80-116	% Rec	1			09/18/24 1004	BDF
Surrogate: 4-Bromofluorobenzene	95.2	Limit: 78-121	% Rec	1			09/18/24 0502	BDF

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Arsenic, total	**0.0066**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Barium, total	**0.574**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Cobalt, total	**0.0005**	0.0004	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Copper, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Lead, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Nickel, total	**0.0074**	0.0040	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Silver, total	<0.0040	0.0040	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1956	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		09/17/24 1528	09/18/24 1956	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 376.2	1HI0843	1HI0843-MS1	1HI0427-26
		1HI0968-07	MW-5
		1HI0843-BLK1	
		1HI0843-MRL2	
		1HI0843-MRL3	
		1HI0843-MSD1	1HI0427-26
		1HI0843-BS1	
		1HI0843-MRL1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HI0903	1HI0903-BLK1	
		1HI0903-BS1	
		1HI0968-01	MW-9
		1HI0903-MS1	1HI0968-01
		1HI0968-02	MW-17
		1HI0968-04	MW-19A
		1HI0968-06	MW-24
		1HI0968-07	MW-5
		1HI0968-08	MW-12
		1HI0968-10	MW-20R
		1HI0968-11	MW-21
		1HI0968-12	MW-22
		1HI0968-13	MW-25
		1HI0968-14	MW-26
		1HI0968-15	Duplicate
		1HI0903-MSD1	1HI0968-01
		1HI0903-PS1	1HI0968-01
		1HI0968-03	MW-18
		1HI0968-05	MW-4
		1HI0968-09	MW-15R

Method	Batch	Laboratory ID	Client / Source ID
EPA 7470A	1HI0948	1HI0948-BLK1	
		1HI0948-BS1	
		1HI0948-MS1	1HI0334-02
		1HI0948-MSD1	1HI0334-02
		1HI0968-07	MW-5

Method	Batch	Laboratory ID	Client / Source ID
EPA 8270C	1HI0972	1HI0972-BLK1	

EPA 8270C	1HI0972	1HI0968-07	MW-5
		1HI0972-BS1	
		1HI0972-BSD1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HI0990	1HI0990-BS1	
		1HI0990-MS1	1HI0965-11
		1HI0990-MSD1	1HI0965-11
		1HI0990-BLK1	
		1HI0968-01	MW-9
		1HI0968-02	MW-17
		1HI0968-03	MW-18
		1HI0968-04	MW-19A
		1HI0968-05	MW-4
		1HI0968-06	MW-24
		1HI0968-07	MW-5
		1HI0968-08	MW-12
		1HI0968-09	MW-15R
		1HI0968-10	MW-20R
		1HI0968-11	MW-21
		1HI0968-12	MW-22
		1HI0968-15	Duplicate

Method	Batch	Laboratory ID	Client / Source ID
EPA 8151A	1HI1011	1HI1011-BLK1	
		1HI0968-07	MW-5
		1HI1011-BS1	
		1HI1011-BSD1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HI1040	1HI1040-BS1	
		1HI1040-BLK1	
		1HI0968-01	MW-9
		1HI1040-MS1	1HI0965-01
		1HI1040-MSD1	1HI0965-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HI1041	1HI1041-BS1	
		1HI1041-MS1	1HI0968-04
		1HI1041-MSD1	1HI0968-04
		1HI1041-BLK1	
		1HI0968-02	MW-17
		1HI0968-03	MW-18
		1HI0968-04	MW-19A

EPA 8260B	1HI1041	1HI0968-05	MW-4
		1HI0968-06	MW-24
		1HI0968-07	MW-5
		1HI0968-08	MW-12
		1HI0968-09	MW-15R
		1HI0968-10	MW-20R
		1HI0968-11	MW-21
		1HI0968-12	MW-22
		1HI0968-15	Duplicate

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082	1HI1045	1HI1045-BLK1	
		1HI0968-07	MW-5
		1HI1045-BS1	
		1HI1045-BSD1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 8081	1HI1046	1HI1046-BLK1	
		1HI1046-BS1	
		1HI1046-BSD1	
		1HI0968-07	MW-5

Method	Batch	Laboratory ID	Client / Source ID
EPA 8141	1HI1047	1HI1047-BLK1	
		1HI0968-07	MW-5
		1HI1047-BS1	
		1HI1047-BSD1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 8015C	1HI1052	1HI1052-BS1	
		1HI1052-BLK1	
		1HI0968-07	MW-5
		1HI1052-MS1	1HI0968-07
		1HI1052-MSD1	1HI0968-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 9010B	1HI1430	1HI0968-07	MW-5
		1HI1430-MSD1	1HI0968-07
		1HI1430-MS1	1HI0968-07
		1HI1430-BLK1	
		1HI1430-BS1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HI1533	1HI1533-BS1	
		1HI1533-BSD1	

EPA 8260B	1HI1533	1HI1533-BLK1	
		1HI0968-14	MW-26
		1HI0968-13	MW-25
		1HI1533-MS1	1HI1157-02
		1HI1533-MSD1	1HI1157-02

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ0001	1HJ0001-BS1	
		1HJ0001-BSD1	
		1HJ0001-BLK1	
		1HI0968-01RE1	MW-9
		1HI0968-02RE1	MW-17
		1HI0968-03RE1	MW-18
		1HI0968-04RE1	MW-19A
		1HI0968-05RE1	MW-4
		1HI0968-06RE1	MW-24
		1HI0968-08RE1	MW-12
		1HI0968-09RE1	MW-15R
		1HI0968-10RE1	MW-20R
		1HI0968-11RE1	MW-21
		1HI0968-12RE1	MW-22
		1HI0968-15RE1	Duplicate

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ0018	1HJ0018-BS1	
		1HJ0018-BSD1	
		1HJ0018-BLK1	
		1HI0968-07RE1	MW-5
		1HJ0018-MS1	1HI1410-21
		1HJ0018-MSD1	1HI1410-21

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ0303	1HJ0303-BS1	
		1HJ0303-BLK1	
		1HI0968-07	MW-5
		1HJ0303-MS1	1HI0968-07
		1HJ0303-MSD1	1HI0968-07

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 1HI0990 - EPA 5030B - EPA 8260B										
Blank (1HI0990-BLK1)			Prepared & Analyzed: 09/18/24 03:39							

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI0968

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0990 - EPA 5030B - EPA 8260B										
Blank (1HI0990-BLK1)				Prepared & Analyzed: 09/18/24 03:39						
Dichlorodifluoromethane	<1.0	1.0	ug/L							
Chloromethane	<1.0	1.0	ug/L							
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Methyl Iodide	<2.0	2.0	ug/L							
Methyl Iodide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Acetonitrile	<10.0	10.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
2,2-Dichloropropane	<1.0	1.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
2-Butanone (MEK)	<5.0	5.0	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
1,1-Dichloropropene	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0990 - EPA 5030B - EPA 8260B										
Blank (1HI0990-BLK1)			Prepared & Analyzed: 09/18/24 03:39							
Trichloroethylene	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
Ethyl Methacrylate	<10.0	10.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
1,3-Dichloropropane	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0990 - EPA 5030B - EPA 8260B										
Blank (1HI0990-BLK1)			Prepared & Analyzed: 09/18/24 03:39							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,3-Dichlorobenzene	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
1,2,4-Trichlorobenzene	<1.0	1.0	ug/L							
Surrogate: Dibromofluoromethane	*47.4*		ug/L	*50.2*		*94.5*	*57-134*			
Surrogate: Dibromofluoromethane	*47.4*		ug/L	*50.2*		*94.5*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*49.7*		ug/L	*50.4*		*98.7*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*49.7*		ug/L	*50.4*		*98.7*	*61-142*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.5*		*98.0*	*86-114*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.5*		*98.0*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.0*		ug/L	*50.2*		*97.6*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*49.0*		ug/L	*50.2*		*97.6*	*80-116*			
LCS (1HI0990-BS1)			Prepared & Analyzed: 09/18/24 01:01							
Dichlorodifluoromethane	30.64	1.0	ug/L	30.3		101	49-138			
Chloromethane	27.45	1.0	ug/L	30.3		90.5	60-141			
Chloromethane	27.45	1.0	ug/L	30.3		90.5	63-155			
Vinyl Chloride	30.95	1.0	ug/L	30.2		102	65-137			
Vinyl Chloride	30.95	1.0	ug/L	30.2		102	70-154			
Bromomethane	23.21	1.0	ug/L	30.1		77.1	52-176			
Chloroethane	31.77	1.0	ug/L	30.3		105	67-145			
Chloroethane	31.77	1.0	ug/L	30.3		105	72-148			
Trichlorofluoromethane	31.29	1.0	ug/L	30.3		103	63-127			
Trichlorofluoromethane	31.29	1.0	ug/L	30.3		103	70-152			
1,1-Dichloroethylene	51.56	1.0	ug/L	50.1		103	69-136			
1,1-Dichloroethylene	51.56	1.0	ug/L	50.1		103	70-148			
Acetone	88.57	10.0	ug/L	100		88.5	45-153			
Acetone	88.57	10.0	ug/L	100		88.5	43-172			
Methyl Iodide	108.7	2.0	ug/L	100		108	58-156			
Methyl Iodide	108.7	1.0	ug/L	100		108	69-170			
Carbon Disulfide	100.2	1.0	ug/L	100		100	68-128			
Carbon Disulfide	100.2	1.0	ug/L	100		100	72-162			
Acetonitrile	83.53	10.0	ug/L	100		83.4	35-177			
Methylene Chloride	51.65	5.0	ug/L	50.2		103	65-124			
Methylene Chloride	51.65	5.0	ug/L	50.2		103	68-142			
trans-1,2-Dichloroethylene	50.25	1.0	ug/L	50.3		99.9	74-126			
trans-1,2-Dichloroethylene	50.25	1.0	ug/L	50.3		99.9	66-148			

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI0968

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0990 - EPA 5030B - EPA 8260B										
LCS (1HI0990-BS1)				Prepared & Analyzed: 09/18/24 01:01						
1,1-Dichloroethane	50.36	1.0	ug/L	50.3		100	73-122			
1,1-Dichloroethane	50.36	1.0	ug/L	50.3		100	66-143			
2,2-Dichloropropane	41.92	1.0	ug/L	50.4		83.1	68-120			
cis-1,2-Dichloroethylene	47.53	1.0	ug/L	50.5		94.1	65-149			
cis-1,2-Dichloroethylene	47.53	1.0	ug/L	50.5		94.1	71-149			
2-Butanone (MEK)	93.50	5.0	ug/L	100		93.4	57-147			
2-Butanone (MEK)	93.50	10.0	ug/L	100		93.4	52-159			
Bromochloromethane	47.77	1.0	ug/L	50.4		94.7	76-125			
Bromochloromethane	47.77	1.0	ug/L	50.4		94.7	69-143			
Chloroform	47.77	1.0	ug/L	50.2		95.2	71-125			
Chloroform	47.77	1.0	ug/L	50.2		95.2	69-144			
1,1,1-Trichloroethane	51.11	1.0	ug/L	50.3		102	66-118			
1,1,1-Trichloroethane	51.11	1.0	ug/L	50.3		102	62-129			
1,1-Dichloropropene	50.80	1.0	ug/L	50.4		101	69-130			
Carbon Tetrachloride	43.86	1.0	ug/L	50.2		87.4	68-126			
Carbon Tetrachloride	43.86	1.0	ug/L	50.2		87.4	63-141			
Benzene	49.26	1.0	ug/L	50.4		97.6	81-123			
Benzene	49.26	1.0	ug/L	50.4		97.6	71-134			
1,2-Dichloroethane	48.21	1.0	ug/L	50.2		96.1	70-130			
1,2-Dichloroethane	48.21	1.0	ug/L	50.2		96.1	72-132			
Trichloroethylene	50.20	1.0	ug/L	50.3		99.7	84-118			
Trichloroethylene	50.20	1.0	ug/L	50.3		99.7	71-135			
1,2-Dichloropropane	50.10	1.0	ug/L	50.2		99.8	87-118			
1,2-Dichloropropane	50.10	1.0	ug/L	50.2		99.8	69-136			
Dibromomethane	48.56	1.0	ug/L	50.5		96.2	82-126			
Dibromomethane	48.56	1.0	ug/L	50.5		96.2	73-147			
Bromodichloromethane	50.13	1.0	ug/L	50.3		99.7	80-116			
Bromodichloromethane	50.13	1.0	ug/L	50.3		99.7	68-129			
cis-1,3-Dichloropropene	46.28	1.0	ug/L	50.2		92.2	83-116			
cis-1,3-Dichloropropene	46.28	1.0	ug/L	50.2		92.2	65-134			
4-Methyl-2-pentanone (MIBK)	98.73	5.0	ug/L	100		98.5	74-138			
4-Methyl-2-pentanone (MIBK)	98.73	5.0	ug/L	100		98.5	58-147			
Toluene	48.75	1.0	ug/L	50.5		96.6	78-123			
Toluene	48.75	1.0	ug/L	50.5		96.6	72-133			
trans-1,3-Dichloropropene	46.83	1.0	ug/L	50.3		93.2	75-120			
trans-1,3-Dichloropropene	46.83	1.0	ug/L	50.3		93.2	67-130			
Ethyl Methacrylate	100.9	10.0	ug/L	100		101	77-129			
1,1,2-Trichloroethane	49.10	1.0	ug/L	50.2		97.8	81-121			
1,1,2-Trichloroethane	49.10	1.0	ug/L	50.2		97.8	69-135			
Tetrachloroethylene	49.67	1.0	ug/L	50.2		98.9	76-120			
Tetrachloroethylene	49.67	1.0	ug/L	50.2		98.9	69-130			
1,3-Dichloropropane	48.29	1.0	ug/L	50.4		95.8	86-131			
2-Hexanone (MBK)	99.03	5.0	ug/L	100		98.9	76-139			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0990 - EPA 5030B - EPA 8260B										
LCS (1HI0990-BS1)			Prepared & Analyzed: 09/18/24 01:01							
2-Hexanone (MBK)	99.03	5.0	ug/L	100		98.9	55-144			
Dibromochloromethane	51.03	1.0	ug/L	50.3		101	83-123			
Dibromochloromethane	51.03	1.0	ug/L	50.3		101	73-127			
1,2-Dibromoethane	48.83	1.0	ug/L	50.4		96.8	86-115			
1,2-Dibromoethane	48.83	1.0	ug/L	50.4		96.8	67-132			
Chlorobenzene	48.14	1.0	ug/L	50.2		95.8	82-117			
Chlorobenzene	48.14	1.0	ug/L	50.2		95.8	72-123			
1,1,1,2-Tetrachloroethane	50.08	1.0	ug/L	50.4		99.3	86-119			
1,1,1,2-Tetrachloroethane	50.08	1.0	ug/L	50.4		99.3	73-127			
Ethylbenzene	51.06	1.0	ug/L	50.5		101	80-122			
Ethylbenzene	51.06	1.0	ug/L	50.5		101	71-127			
Xylenes, total	153.3	2.0	ug/L	151		101	81-122			
Xylenes, total	153.3	2.0	ug/L	151		101	74-127			
Styrene	52.65	1.0	ug/L	50.4		104	85-118			
Styrene	52.65	1.0	ug/L	50.4		104	66-126			
Bromoform	49.52	1.0	ug/L	50.2		98.6	80-123			
Bromoform	49.52	1.0	ug/L	50.2		98.6	68-130			
1,2,3-Trichloropropane	48.89	1.0	ug/L	50.4		96.9	83-126			
1,2,3-Trichloropropane	48.89	1.0	ug/L	50.4		96.9	63-136			
trans-1,4-Dichloro-2-butene	93.15	5.0	ug/L	100		92.9	67-118			
trans-1,4-Dichloro-2-butene	93.15	5.0	ug/L	100		92.9	54-134			
1,1,2,2-Tetrachloroethane	48.41	1.0	ug/L	50.2		96.4	81-124			
1,1,2,2-Tetrachloroethane	48.41	1.0	ug/L	50.2		96.4	61-131			
1,3-Dichlorobenzene	47.98	1.0	ug/L	50.3		95.4	83-114			
1,4-Dichlorobenzene	47.41	1.0	ug/L	50.2		94.5	83-117			
1,4-Dichlorobenzene	47.41	1.0	ug/L	50.2		94.5	70-129			
1,2-Dichlorobenzene	47.66	1.0	ug/L	50.2		95.0	83-116			
1,2-Dichlorobenzene	47.66	1.0	ug/L	50.2		95.0	69-126			
1,2-Dibromo-3-chloropropane	48.47	1.0	ug/L	50.5		96.0	77-128			
1,2-Dibromo-3-chloropropane	48.47	5.0	ug/L	50.5		96.0	50-143			
1,2,4-Trichlorobenzene	45.79	1.0	ug/L	50.5		90.7	66-134			
Surrogate: Dibromofluoromethane	*49.0*		ug/L	*50.2*		*97.6*	*57-134*			
Surrogate: Dibromofluoromethane	*49.0*		ug/L	*50.2*		*97.6*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*49.7*		ug/L	*50.4*		*98.7*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*49.7*		ug/L	*50.4*		*98.7*	*61-142*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.5*		*99.1*	*86-114*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.5*		*99.1*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*50.3*		ug/L	*50.2*		*100*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*50.3*		ug/L	*50.2*		*100*	*80-116*			
Matrix Spike (1HI0990-MS1)	**Source: 1HI0965-11**		Prepared & Analyzed: 09/18/24 02:32							
Dichlorodifluoromethane	302.1	10.0	ug/L	303	ND	99.7	37-140			
Chloromethane	271.0	10.0	ug/L	303	ND	89.4	47-147			
Chloromethane	271.0	10.0	ug/L	303	ND	89.4	61-152			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0990 - EPA 5030B - EPA 8260B										
Matrix Spike (1HI0990-MS1)	**Source: 1HI0965-11**		Prepared & Analyzed: 09/18/24 02:32							
Vinyl Chloride	304.6	10.0	ug/L	302	ND	101	55-142			
Vinyl Chloride	304.6	10.0	ug/L	302	ND	101	66-149			
Bromomethane	269.1	10.0	ug/L	301	ND	89.3	43-171			
Chloroethane	308.9	10.0	ug/L	303	ND	102	54-154			
Chloroethane	308.9	10.0	ug/L	303	ND	102	69-148			
Trichlorofluoromethane	312.5	10.0	ug/L	303	ND	103	49-131			
Trichlorofluoromethane	312.5	10.0	ug/L	303	ND	103	62-163			
1,1-Dichloroethylene	506.3	10.0	ug/L	501	ND	101	57-143			
1,1-Dichloroethylene	506.3	10.0	ug/L	501	ND	101	70-148			
Acetone	937.3	100	ug/L	1000	ND	93.6	27-173			
Acetone	937.3	100	ug/L	1000	ND	93.6	45-173			
Methyl Iodide	1047	20.0	ug/L	1000	ND	104	39-157			
Methyl Iodide	1047	10.0	ug/L	1000	ND	104	62-167			
Carbon Disulfide	987.6	10.0	ug/L	1000	ND	98.7	53-136			
Carbon Disulfide	987.6	10.0	ug/L	1000	ND	98.7	71-163			
Acetonitrile	895.2	100	ug/L	1000	ND	89.4	11-189			
Methylene Chloride	499.5	50.0	ug/L	502	ND	99.5	57-128			
Methylene Chloride	499.5	50.0	ug/L	502	ND	99.5	69-140			
trans-1,2-Dichloroethylene	490.3	10.0	ug/L	503	ND	97.5	61-135			
trans-1,2-Dichloroethylene	490.3	10.0	ug/L	503	ND	97.5	69-144			
1,1-Dichloroethane	493.7	10.0	ug/L	503	ND	98.2	60-131			
1,1-Dichloroethane	493.7	10.0	ug/L	503	ND	98.2	70-138			
2,2-Dichloropropane	396.2	10.0	ug/L	504	ND	78.6	37-112			
cis-1,2-Dichloroethylene	457.9	10.0	ug/L	505	ND	90.7	47-162			
cis-1,2-Dichloroethylene	457.9	10.0	ug/L	505	ND	90.7	68-151			
2-Butanone (MEK)	908.7	50.0	ug/L	1000	ND	90.7	45-156			
2-Butanone (MEK)	908.7	100	ug/L	1000	ND	90.7	50-160			
Bromochloromethane	463.7	10.0	ug/L	504	ND	91.9	55-132			
Bromochloromethane	463.7	10.0	ug/L	504	ND	91.9	65-143			
Chloroform	467.9	10.0	ug/L	502	ND	93.3	45-142			
Chloroform	467.9	10.0	ug/L	502	ND	93.3	71-143			
1,1,1-Trichloroethane	502.8	10.0	ug/L	503	ND	99.9	52-128			
1,1,1-Trichloroethane	502.8	10.0	ug/L	503	ND	99.9	63-133			
1,1-Dichloropropene	502.9	10.0	ug/L	504	ND	99.7	49-138			
Carbon Tetrachloride	442.9	10.0	ug/L	502	ND	88.2	56-132			
Carbon Tetrachloride	442.9	10.0	ug/L	502	ND	88.2	63-142			
Benzene	493.4	10.0	ug/L	504	ND	97.8	77-124			
Benzene	493.4	10.0	ug/L	504	ND	97.8	69-133			
1,2-Dichloroethane	488.7	10.0	ug/L	502	ND	97.4	67-130			
1,2-Dichloroethane	488.7	10.0	ug/L	502	ND	97.4	63-138			
Trichloroethylene	510.5	10.0	ug/L	503	ND	101	75-123			
Trichloroethylene	510.5	10.0	ug/L	503	ND	101	71-133			
1,2-Dichloropropane	509.1	10.0	ug/L	502	ND	101	75-126			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0990 - EPA 5030B - EPA 8260B										
Matrix Spike (1HI0990-MS1)		**Source: 1HI0965-11**	Prepared & Analyzed: 09/18/24 02:32							
1,2-Dichloropropane	509.1	10.0	ug/L	502	ND	101	69-132			
Dibromomethane	494.0	10.0	ug/L	505	ND	97.9	72-131			
Dibromomethane	494.0	10.0	ug/L	505	ND	97.9	70-147			
Bromodichloromethane	507.8	10.0	ug/L	503	ND	101	70-123			
Bromodichloromethane	507.8	10.0	ug/L	503	ND	101	67-130			
cis-1,3-Dichloropropene	463.9	10.0	ug/L	502	ND	92.4	68-119			
cis-1,3-Dichloropropene	463.9	10.0	ug/L	502	ND	92.4	61-126			
4-Methyl-2-pentanone (MIBK)	971.3	50.0	ug/L	1000	ND	96.9	57-153			
4-Methyl-2-pentanone (MIBK)	971.3	50.0	ug/L	1000	ND	96.9	55-147			
Toluene	488.6	10.0	ug/L	505	ND	96.8	63-131			
Toluene	488.6	10.0	ug/L	505	ND	96.8	71-133			
trans-1,3-Dichloropropene	472.4	10.0	ug/L	503	ND	94.0	65-121			
trans-1,3-Dichloropropene	472.4	10.0	ug/L	503	ND	94.0	63-124			
Ethyl Methacrylate	1033	100	ug/L	1000	ND	103	62-137			
1,1,2-Trichloroethane	493.0	10.0	ug/L	502	ND	98.2	76-124			
1,1,2-Trichloroethane	493.0	10.0	ug/L	502	ND	98.2	69-133			
Tetrachloroethylene	510.0	10.0	ug/L	502	ND	102	77-117			
Tetrachloroethylene	510.0	10.0	ug/L	502	ND	102	70-124			
1,3-Dichloropropane	491.8	10.0	ug/L	504	ND	97.5	81-132			
2-Hexanone (MBK)	981.8	50.0	ug/L	1000	ND	98.1	63-152			
2-Hexanone (MBK)	981.8	50.0	ug/L	1000	ND	98.1	53-141			
Dibromochloromethane	530.2	10.0	ug/L	503	ND	105	77-124			
Dibromochloromethane	530.2	10.0	ug/L	503	ND	105	74-122			
1,2-Dibromoethane	497.5	10.0	ug/L	504	ND	98.6	82-117			
1,2-Dibromoethane	497.5	10.0	ug/L	504	ND	98.6	66-127			
Chlorobenzene	489.5	10.0	ug/L	502	ND	97.4	82-114			
Chlorobenzene	489.5	10.0	ug/L	502	ND	97.4	76-116			
1,1,1,2-Tetrachloroethane	506.4	10.0	ug/L	504	ND	100	82-118			
1,1,1,2-Tetrachloroethane	506.4	10.0	ug/L	504	ND	100	77-121			
Ethylbenzene	518.0	10.0	ug/L	505	ND	103	80-119			
Ethylbenzene	518.0	10.0	ug/L	505	ND	103	73-124			
Xylenes, total	1549	20.0	ug/L	1510	ND	102	81-119			
Xylenes, total	1549	20.0	ug/L	1510	ND	102	75-123			
Styrene	532.7	10.0	ug/L	504	ND	106	81-119			
Styrene	532.7	10.0	ug/L	504	ND	106	70-120			
Bromoform	513.1	10.0	ug/L	502	ND	102	74-122			
Bromoform	513.1	10.0	ug/L	502	ND	102	70-124			
1,2,3-Trichloropropane	496.6	10.0	ug/L	504	ND	98.5	72-138			
1,2,3-Trichloropropane	496.6	10.0	ug/L	504	ND	98.5	62-135			
trans-1,4-Dichloro-2-butene	942.0	50.0	ug/L	1000	ND	94.0	56-116			
trans-1,4-Dichloro-2-butene	942.0	50.0	ug/L	1000	ND	94.0	50-120			
1,1,2,2-Tetrachloroethane	496.0	10.0	ug/L	502	ND	98.8	78-126			
1,1,2,2-Tetrachloroethane	496.0	10.0	ug/L	502	ND	98.8	63-126			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0990 - EPA 5030B - EPA 8260B										
Matrix Spike (1HI0990-MS1)	**Source: 1HI0965-11**	Prepared & Analyzed: 09/18/24 02:32								
1,3-Dichlorobenzene	490.1	10.0	ug/L	503	ND	97.4	81-113			
1,4-Dichlorobenzene	483.1	10.0	ug/L	502	ND	96.3	81-116			
1,4-Dichlorobenzene	483.1	10.0	ug/L	502	ND	96.3	72-119			
1,2-Dichlorobenzene	488.7	10.0	ug/L	502	ND	97.4	81-116			
1,2-Dichlorobenzene	488.7	10.0	ug/L	502	ND	97.4	71-117			
1,2-Dibromo-3-chloropropane	496.1	10.0	ug/L	505	ND	98.3	63-138			
1,2-Dibromo-3-chloropropane	496.1	50.0	ug/L	505	ND	98.3	49-134			
1,2,4-Trichlorobenzene	479.1	10.0	ug/L	505	ND	94.9	65-132			
Surrogate: Dibromofluoromethane	*475*		ug/L	*502*		*94.7*	*57-134*			
Surrogate: Dibromofluoromethane	*475*		ug/L	*502*		*94.7*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*484*		ug/L	*504*		*96.2*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*484*		ug/L	*504*		*96.2*	*61-142*			
Surrogate: Toluene-d8	*495*		ug/L	*505*		*98.2*	*86-114*			
Surrogate: Toluene-d8	*495*		ug/L	*505*		*98.2*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*507*		ug/L	*502*		*101*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*507*		ug/L	*502*		*101*	*80-116*			
Matrix Spike Dup (1HI0990-MSD1)	**Source: 1HI0965-11**	Prepared & Analyzed: 09/18/24 02:54								
Dichlorodifluoromethane	277.4	10.0	ug/L	303	ND	91.6	37-140	8.52	18	
Chloromethane	249.8	10.0	ug/L	303	ND	82.4	47-147	8.14	18	
Chloromethane	249.8	10.0	ug/L	303	ND	82.4	61-152	8.14	26	
Vinyl Chloride	277.7	10.0	ug/L	302	ND	91.8	55-142	9.24	20	
Vinyl Chloride	277.7	10.0	ug/L	302	ND	91.8	66-149	9.24	23	
Bromomethane	257.4	10.0	ug/L	301	ND	85.5	43-171	4.44	29	
Chloroethane	284.5	10.0	ug/L	303	ND	93.8	54-154	8.22	20	
Chloroethane	284.5	10.0	ug/L	303	ND	93.8	69-148	8.22	25	
Trichlorofluoromethane	283.1	10.0	ug/L	303	ND	93.4	49-131	9.87	14	
Trichlorofluoromethane	283.1	10.0	ug/L	303	ND	93.4	62-163	9.87	25	
1,1-Dichloroethylene	465.3	10.0	ug/L	501	ND	92.8	57-143	8.44	15	
1,1-Dichloroethylene	465.3	10.0	ug/L	501	ND	92.8	70-148	8.44	22	
Acetone	896.2	100	ug/L	1000	ND	89.5	27-173	4.48	30	
Acetone	896.2	100	ug/L	1000	ND	89.5	45-173	4.48	30	
Methyl Iodide	956.1	20.0	ug/L	1000	ND	95.4	39-157	9.05	12	
Methyl Iodide	956.1	10.0	ug/L	1000	ND	95.4	62-167	9.05	24	
Carbon Disulfide	902.7	10.0	ug/L	1000	ND	90.2	53-136	8.98	20	
Carbon Disulfide	902.7	10.0	ug/L	1000	ND	90.2	71-163	8.98	22	
Acetonitrile	869.9	100	ug/L	1000	ND	86.9	11-189	2.87	24	
Methylene Chloride	472.5	50.0	ug/L	502	ND	94.2	57-128	5.56	14	
Methylene Chloride	472.5	50.0	ug/L	502	ND	94.2	69-140	5.56	19	
trans-1,2-Dichloroethylene	451.0	10.0	ug/L	503	ND	89.7	61-135	8.35	12	
trans-1,2-Dichloroethylene	451.0	10.0	ug/L	503	ND	89.7	69-144	8.35	22	
1,1-Dichloroethane	459.5	10.0	ug/L	503	ND	91.4	60-131	7.18	15	
1,1-Dichloroethane	459.5	10.0	ug/L	503	ND	91.4	70-138	7.18	20	
2,2-Dichloropropane	360.6	10.0	ug/L	504	ND	71.5	37-112	9.41	13	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0990 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HI0990-MSD1)	**Source: 1HI0965-11**	Prepared & Analyzed: 09/18/24 02:54								
cis-1,2-Dichloroethylene	428.7	10.0	ug/L	505	ND	84.9	47-162	6.59	22	
cis-1,2-Dichloroethylene	428.7	10.0	ug/L	505	ND	84.9	68-151	6.59	22	
2-Butanone (MEK)	896.0	50.0	ug/L	1000	ND	89.5	45-156	1.41	20	
2-Butanone (MEK)	896.0	100	ug/L	1000	ND	89.5	50-160	1.41	23	
Bromochloromethane	442.9	10.0	ug/L	504	ND	87.8	55-132	4.59	15	
Bromochloromethane	442.9	10.0	ug/L	504	ND	87.8	65-143	4.59	22	
Chloroform	439.3	10.0	ug/L	502	ND	87.6	45-142	6.31	12	
Chloroform	439.3	10.0	ug/L	502	ND	87.6	71-143	6.31	21	
1,1,1-Trichloroethane	458.7	10.0	ug/L	503	ND	91.2	52-128	9.17	14	
1,1,1-Trichloroethane	458.7	10.0	ug/L	503	ND	91.2	63-133	9.17	23	
1,1-Dichloropropene	456.9	10.0	ug/L	504	ND	90.6	49-138	9.59	12	
Carbon Tetrachloride	405.5	10.0	ug/L	502	ND	80.8	56-132	8.82	12	
Carbon Tetrachloride	405.5	10.0	ug/L	502	ND	80.8	63-142	8.82	22	
Benzene	457.6	10.0	ug/L	504	ND	90.7	77-124	7.53	12	
Benzene	457.6	10.0	ug/L	504	ND	90.7	69-133	7.53	18	
1,2-Dichloroethane	461.2	10.0	ug/L	502	ND	91.9	67-130	5.79	13	
1,2-Dichloroethane	461.2	10.0	ug/L	502	ND	91.9	63-138	5.79	20	
Trichloroethylene	464.9	10.0	ug/L	503	ND	92.3	75-123	9.35	11	
Trichloroethylene	464.9	10.0	ug/L	503	ND	92.3	71-133	9.35	23	
1,2-Dichloropropane	478.0	10.0	ug/L	502	ND	95.2	75-126	6.30	11	
1,2-Dichloropropane	478.0	10.0	ug/L	502	ND	95.2	69-132	6.30	20	
Dibromomethane	469.0	10.0	ug/L	505	ND	92.9	72-131	5.19	12	
Dibromomethane	469.0	10.0	ug/L	505	ND	92.9	70-147	5.19	22	
Bromodichloromethane	476.7	10.0	ug/L	503	ND	94.8	70-123	6.32	10	
Bromodichloromethane	476.7	10.0	ug/L	503	ND	94.8	67-130	6.32	21	
cis-1,3-Dichloropropene	439.3	10.0	ug/L	502	ND	87.5	68-119	5.45	10	
cis-1,3-Dichloropropene	439.3	10.0	ug/L	502	ND	87.5	61-126	5.45	21	
4-Methyl-2-pentanone (MIBK)	932.5	50.0	ug/L	1000	ND	93.1	57-153	4.08	11	
4-Methyl-2-pentanone (MIBK)	932.5	50.0	ug/L	1000	ND	93.1	55-147	4.08	23	
Toluene	454.3	10.0	ug/L	505	ND	90.0	63-131	7.28	15	
Toluene	454.3	10.0	ug/L	505	ND	90.0	71-133	7.28	19	
trans-1,3-Dichloropropene	450.2	10.0	ug/L	503	ND	89.6	65-121	4.81	14	
trans-1,3-Dichloropropene	450.2	10.0	ug/L	503	ND	89.6	63-124	4.81	21	
Ethyl Methacrylate	983.1	100	ug/L	1000	ND	98.2	62-137	4.95	10	
1,1,2-Trichloroethane	473.3	10.0	ug/L	502	ND	94.3	76-124	4.08	12	
1,1,2-Trichloroethane	473.3	10.0	ug/L	502	ND	94.3	69-133	4.08	19	
Tetrachloroethylene	467.2	10.0	ug/L	502	ND	93.0	77-117	8.76	12	
Tetrachloroethylene	467.2	10.0	ug/L	502	ND	93.0	70-124	8.76	24	
1,3-Dichloropropane	469.7	10.0	ug/L	504	ND	93.1	81-132	4.60	12	
2-Hexanone (MBK)	941.4	50.0	ug/L	1000	ND	94.0	63-152	4.20	19	
2-Hexanone (MBK)	941.4	50.0	ug/L	1000	ND	94.0	53-141	4.20	24	
Dibromochloromethane	502.2	10.0	ug/L	503	ND	99.8	77-124	5.42	17	
Dibromochloromethane	502.2	10.0	ug/L	503	ND	99.8	74-122	5.42	21	

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

Batch 1HI0990 - EPA 5030B - EPA 8260B

Matrix Spike Dup (1HI0990-MSD1) **Source: 1HI0965-11** Prepared & Analyzed: 09/18/24 02:54

	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dibromoethane	473.2	10.0	ug/L	504	ND	93.8	82-117	5.01	14	
1,2-Dibromoethane	473.2	10.0	ug/L	504	ND	93.8	66-127	5.01	23	
Chlorobenzene	456.8	10.0	ug/L	502	ND	90.9	82-114	6.91	11	
Chlorobenzene	456.8	10.0	ug/L	502	ND	90.9	76-116	6.91	21	
1,1,1,2-Tetrachloroethane	480.0	10.0	ug/L	504	ND	95.2	82-118	5.35	15	
1,1,1,2-Tetrachloroethane	480.0	10.0	ug/L	504	ND	95.2	77-121	5.35	25	
Ethylbenzene	480.2	10.0	ug/L	505	ND	95.2	80-119	7.57	11	
Ethylbenzene	480.2	10.0	ug/L	505	ND	95.2	73-124	7.57	20	
Xylenes, total	1442	20.0	ug/L	1510	ND	95.3	81-119	7.11	11	
Xylenes, total	1442	20.0	ug/L	1510	ND	95.3	75-123	7.11	20	
Styrene	496.4	10.0	ug/L	504	ND	98.5	81-119	7.05	12	
Styrene	496.4	10.0	ug/L	504	ND	98.5	70-120	7.05	23	
Bromoform	489.8	10.0	ug/L	502	ND	97.5	74-122	4.65	12	
Bromoform	489.8	10.0	ug/L	502	ND	97.5	70-124	4.65	22	
1,2,3-Trichloropropane	476.4	10.0	ug/L	504	ND	94.4	72-138	4.15	14	
1,2,3-Trichloropropane	476.4	10.0	ug/L	504	ND	94.4	62-135	4.15	28	
trans-1,4-Dichloro-2-butene	892.7	50.0	ug/L	1000	ND	89.0	56-116	5.37	10	
trans-1,4-Dichloro-2-butene	892.7	50.0	ug/L	1000	ND	89.0	50-120	5.37	26	
1,1,2,2-Tetrachloroethane	475.3	10.0	ug/L	502	ND	94.7	78-126	4.26	13	
1,1,2,2-Tetrachloroethane	475.3	10.0	ug/L	502	ND	94.7	63-126	4.26	24	
1,3-Dichlorobenzene	461.7	10.0	ug/L	503	ND	91.8	81-113	5.97	14	
1,4-Dichlorobenzene	457.4	10.0	ug/L	502	ND	91.2	81-116	5.47	14	
1,4-Dichlorobenzene	457.4	10.0	ug/L	502	ND	91.2	72-119	5.47	24	
1,2-Dichlorobenzene	464.2	10.0	ug/L	502	ND	92.5	81-116	5.14	13	
1,2-Dichlorobenzene	464.2	10.0	ug/L	502	ND	92.5	71-117	5.14	24	
1,2-Dibromo-3-chloropropane	484.7	10.0	ug/L	505	ND	96.0	63-138	2.32	17	
1,2-Dibromo-3-chloropropane	484.7	50.0	ug/L	505	ND	96.0	49-134	2.32	28	
1,2,4-Trichlorobenzene	452.7	10.0	ug/L	505	ND	89.7	65-132	5.67	15	
Surrogate: Dibromofluoromethane	*475*		ug/L	*502*		*94.7*	*57-134*			
Surrogate: Dibromofluoromethane	*475*		ug/L	*502*		*94.7*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*484*		ug/L	*504*		*96.1*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*484*		ug/L	*504*		*96.1*	*61-142*			
Surrogate: Toluene-d8	*497*		ug/L	*505*		*98.4*	*86-114*			
Surrogate: Toluene-d8	*497*		ug/L	*505*		*98.4*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*505*		ug/L	*502*		*101*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*505*		ug/L	*502*		*101*	*80-116*			

Batch 1HI1040 - EPA 5030B - EPA 8260B

Blank (1HI1040-BLK1) Prepared & Analyzed: 09/17/24 10:27

	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acrylonitrile	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*37.9*		ug/L	*50.2*		*75.5*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*44.3*		ug/L	*50.4*		*88.0*	*53-140*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1040 - EPA 5030B - EPA 8260B										
Blank (1HI1040-BLK1)			Prepared & Analyzed: 09/17/24 10:27							
Surrogate: Toluene-d8	*44.4*		ug/L	*50.5*		*88.1*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*48.8*		ug/L	*50.2*		*97.2*	*78-121*			
LCS (1HI1040-BS1)			Prepared & Analyzed: 09/17/24 09:20							
Acrylonitrile	65.63	5.0	ug/L	50.2		131	56-135			
Surrogate: Dibromofluoromethane	*39.0*		ug/L	*50.2*		*77.7*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*44.0*		ug/L	*50.4*		*87.4*	*53-140*			
Surrogate: Toluene-d8	*46.5*		ug/L	*50.5*		*92.1*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*45.6*		ug/L	*50.2*		*90.9*	*78-121*			
Matrix Spike (1HI1040-MS1)	**Source: 1HI0965-01**		Prepared & Analyzed: 09/17/24 23:22							
Acrylonitrile	343.3	50.0	ug/L	502	ND	68.4	38-147			
Surrogate: Dibromofluoromethane	*349*		ug/L	*502*		*69.6*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*394*		ug/L	*504*		*78.3*	*53-140*			
Surrogate: Toluene-d8	*459*		ug/L	*505*		*90.9*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*475*		ug/L	*502*		*94.6*	*78-121*			
Matrix Spike Dup (1HI1040-MSD1)	**Source: 1HI0965-01**		Prepared & Analyzed: 09/17/24 23:45							
Acrylonitrile	355.4	50.0	ug/L	502	ND	70.8	38-147	3.46	30	
Surrogate: Dibromofluoromethane	*345*		ug/L	*502*		*68.7*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*394*		ug/L	*504*		*78.2*	*53-140*			
Surrogate: Toluene-d8	*446*		ug/L	*505*		*88.4*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*476*		ug/L	*502*		*95.0*	*78-121*			
Batch 1HI1041 - EPA 5030B - EPA 8260B										
Blank (1HI1041-BLK1)			Prepared & Analyzed: 09/18/24 00:30							
Acrolein	<10.0	10.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*34.7*		ug/L	*50.2*		*69.1*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*41.4*		ug/L	*50.4*		*82.2*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*41.4*		ug/L	*50.4*		*82.2*	*53-140*			
Surrogate: Toluene-d8	*43.5*		ug/L	*50.5*		*86.2*	*86-114*			
Surrogate: Toluene-d8	*43.5*		ug/L	*50.5*		*86.2*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*48.5*		ug/L	*50.2*		*96.6*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*48.5*		ug/L	*50.2*		*96.6*	*78-121*			
LCS (1HI1041-BS1)			Prepared & Analyzed: 09/17/24 22:15							
Acrolein	30.64	10.0	ug/L	50.4		60.9	21-142			
Acrylonitrile	39.82	5.0	ug/L	50.2		79.3	56-135			
Acrylonitrile	39.82	5.0	ug/L	50.2		79.3	56-135			
Surrogate: Dibromofluoromethane	*36.2*		ug/L	*50.2*		*72.1*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*42.0*		ug/L	*50.4*		*83.3*	*53-140*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1041 - EPA 5030B - EPA 8260B										
LCS (1HI1041-BS1)			Prepared & Analyzed: 09/17/24 22:15							
Surrogate: 1,2-Dichloroethane-d4	*42.0*		ug/L	*50.4*		*83.3*	*53-140*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.5*		*104*	*86-114*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.5*		*104*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*46.5*		ug/L	*50.2*		*92.6*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*46.5*		ug/L	*50.2*		*92.6*	*78-121*			
Matrix Spike (1HI1041-MS1)	**Source: 1HI0968-04**		Prepared & Analyzed: 09/17/24 22:37							
Acrolein	318.7	100	ug/L	504	ND	63.3	22-138			
Acrylonitrile	357.8	50.0	ug/L	502	ND	71.3	38-147			
Acrylonitrile	357.8	50.0	ug/L	502	ND	71.3	38-147			
Surrogate: Dibromofluoromethane	*354*		ug/L	*502*		*70.5*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*398*		ug/L	*504*		*79.0*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*398*		ug/L	*504*		*79.0*	*53-140*			
Surrogate: Toluene-d8	*463*		ug/L	*505*		*91.7*	*86-114*			
Surrogate: Toluene-d8	*463*		ug/L	*505*		*91.7*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*478*		ug/L	*502*		*95.2*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*478*		ug/L	*502*		*95.2*	*78-121*			
Matrix Spike Dup (1HI1041-MSD1)	**Source: 1HI0968-04**		Prepared & Analyzed: 09/17/24 23:00							
Acrolein	370.2	100	ug/L	504	ND	73.5	22-138	15.0	30	
Acrylonitrile	397.3	50.0	ug/L	502	ND	79.1	38-147	10.5	30	
Acrylonitrile	397.3	50.0	ug/L	502	ND	79.1	38-147	10.5	30	
Surrogate: Dibromofluoromethane	*352*		ug/L	*502*		*70.2*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*412*		ug/L	*504*		*81.9*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*412*		ug/L	*504*		*81.9*	*53-140*			
Surrogate: Toluene-d8	*402*		ug/L	*505*		*79.7*	*86-114*			*S2*
Surrogate: Toluene-d8	*402*		ug/L	*505*		*79.7*	*86-114*			*S2*
Surrogate: 4-Bromofluorobenzene	*467*		ug/L	*502*		*93.2*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*467*		ug/L	*502*		*93.2*	*78-121*			
Batch 1HI1533 - EPA 5030B - EPA 8260B										
Blank (1HI1533-BLK1)			Prepared: 09/25/24 00:00 Analyzed: 09/25/24 11:17							
Vinyl Chloride	<1.0	1.0	ug/L							
Surrogate: Dibromofluoromethane	*47.3*		ug/L	*50.2*		*94.3*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*49.9*		ug/L	*50.4*		*99.1*	*53-140*			
Surrogate: Toluene-d8	*48.9*		ug/L	*50.5*		*97.0*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*48.9*		ug/L	*50.2*		*97.5*	*78-121*			
LCS (1HI1533-BS1)			Prepared: 09/25/24 00:00 Analyzed: 09/25/24 10:09							
Vinyl Chloride	26.71	1.0	ug/L	30.2		88.3	65-137			
Surrogate: Dibromofluoromethane	*46.2*		ug/L	*50.2*		*92.1*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*48.7*		ug/L	*50.4*		*96.8*	*53-140*			
Surrogate: Toluene-d8	*49.9*		ug/L	*50.5*		*98.8*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*50.5*		ug/L	*50.2*		*101*	*78-121*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1533 - EPA 5030B - EPA 8260B										
LCS Dup (1HI1533-BSD1)			Prepared: 09/25/24 00:00 Analyzed: 09/25/24 10:31							
Vinyl Chloride	26.39	1.0	ug/L	30.2		87.2	65-137	1.21	20	
Surrogate: Dibromofluoromethane	*46.7*		ug/L	*50.2*		*92.9*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*48.2*		ug/L	*50.4*		*95.8*	*53-140*			
Surrogate: Toluene-d8	*49.7*		ug/L	*50.5*		*98.5*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*51.1*		ug/L	*50.2*		*102*	*78-121*			
Matrix Spike (1HI1533-MS1)	**Source: 1HI1157-02**		Prepared: 09/25/24 00:00 Analyzed: 09/25/24 21:31							
Vinyl Chloride	249.3	10.0	ug/L	302	ND	82.5	55-142			
Surrogate: Dibromofluoromethane	*464*		ug/L	*502*		*92.4*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*492*		ug/L	*504*		*97.7*	*53-140*			
Surrogate: Toluene-d8	*501*		ug/L	*505*		*99.3*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*505*		ug/L	*502*		*101*	*78-121*			
Matrix Spike Dup (1HI1533-MSD1)	**Source: 1HI1157-02**		Prepared: 09/25/24 00:00 Analyzed: 09/25/24 21:53							
Vinyl Chloride	243.2	10.0	ug/L	302	ND	80.5	55-142	2.48	20	
Surrogate: Dibromofluoromethane	*468*		ug/L	*502*		*93.3*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*489*		ug/L	*504*		*97.1*	*53-140*			
Surrogate: Toluene-d8	*498*		ug/L	*505*		*98.7*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*512*		ug/L	*502*		*102*	*78-121*			
Batch 1HJ0001 - EPA 5030B - EPA 8260B										
Blank (1HJ0001-BLK1)			Prepared: 09/30/24 00:00 Analyzed: 09/30/24 17:51							
Vinyl Acetate	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*37.7*		ug/L	*50.2*		*75.0*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*38.0*		ug/L	*50.4*		*75.5*	*61-142*			
Surrogate: Toluene-d8	*51.1*		ug/L	*50.5*		*101*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*46.0*		ug/L	*50.2*		*91.6*	*80-116*			
LCS (1HJ0001-BS1)			Prepared: 09/30/24 00:00 Analyzed: 09/30/24 16:43							
Vinyl Acetate	100.5	5.0	ug/L	100		100	43-153			
Surrogate: Dibromofluoromethane	*53.8*		ug/L	*50.2*		*107*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*54.5*		ug/L	*50.4*		*108*	*61-142*			
Surrogate: Toluene-d8	*48.8*		ug/L	*50.5*		*96.8*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*52.4*		ug/L	*50.2*		*104*	*80-116*			
LCS Dup (1HJ0001-BSD1)			Prepared: 09/30/24 00:00 Analyzed: 09/30/24 17:06							
Vinyl Acetate	117.0	5.0	ug/L	100		117	43-153	15.2	30	
Surrogate: Dibromofluoromethane	*54.7*		ug/L	*50.2*		*109*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*56.2*		ug/L	*50.4*		*112*	*61-142*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.5*		*96.0*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*52.3*		ug/L	*50.2*		*104*	*80-116*			
Batch 1HJ0018 - EPA 5030B - EPA 8260B										

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0018 - EPA 5030B - EPA 8260B										
Blank (1HJ0018-BLK1)			Prepared: 09/30/24 00:00 Analyzed: 09/30/24 17:45							
Bromomethane	<1.0	1.0	ug/L							
Surrogate: Dibromofluoromethane	*51.6*		ug/L	*50.2*		*103*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*54.0*		ug/L	*50.4*		*107*	*53-140*			
Surrogate: Toluene-d8	*50.8*		ug/L	*50.5*		*101*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*52.4*		ug/L	*50.2*		*104*	*78-121*			
LCS (1HJ0018-BS1)			Prepared: 09/30/24 00:00 Analyzed: 09/30/24 16:38							
Bromomethane	29.07	1.0	ug/L	30.0		96.9	47-173			
Surrogate: Dibromofluoromethane	*51.5*		ug/L	*50.2*		*103*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*50.1*		ug/L	*50.4*		*99.5*	*53-140*			
Surrogate: Toluene-d8	*52.2*		ug/L	*50.5*		*103*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*44.8*		ug/L	*50.2*		*89.3*	*78-121*			
LCS Dup (1HJ0018-BSD1)			Prepared: 09/30/24 00:00 Analyzed: 09/30/24 17:00							
Bromomethane	30.40	1.0	ug/L	30.0		101	47-173	4.47	17	
Surrogate: Dibromofluoromethane	*51.2*		ug/L	*50.2*		*102*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*52.6*		ug/L	*50.4*		*104*	*53-140*			
Surrogate: Toluene-d8	*58.3*		ug/L	*50.5*		*116*	*86-114*			*S1*
Surrogate: 4-Bromofluorobenzene	*49.5*		ug/L	*50.2*		*98.7*	*78-121*			
Matrix Spike (1HJ0018-MS1)	**Source: 1HI1410-21**		Prepared: 09/30/24 00:00 Analyzed: 10/01/24 02:24							
Bromomethane	198.7	10.0	ug/L	300	ND	66.2	34-160			
Surrogate: Dibromofluoromethane	*519*		ug/L	*502*		*103*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*520*		ug/L	*504*		*103*	*53-140*			
Surrogate: Toluene-d8	*534*		ug/L	*505*		*106*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*502*		*99.7*	*78-121*			
Matrix Spike Dup (1HJ0018-MSD1)	**Source: 1HI1410-21**		Prepared: 09/30/24 00:00 Analyzed: 10/01/24 02:46							
Bromomethane	223.3	10.0	ug/L	300	ND	74.4	34-160	11.7	22	
Surrogate: Dibromofluoromethane	*512*		ug/L	*502*		*102*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*530*		ug/L	*504*		*105*	*53-140*			
Surrogate: Toluene-d8	*482*		ug/L	*505*		*95.5*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*544*		ug/L	*502*		*109*	*78-121*			
Batch 1HJ0303 - EPA 5030B - EPA 8260B										
Blank (1HJ0303-BLK1)			Prepared & Analyzed: 09/26/24 21:36							
Allyl chloride	<1.0	1.0	ug/L							
Chloroprene	<1.0	1.0	ug/L							
Methacrylonitrile	<1.0	1.0	ug/L							
Methyl Methacrylate	<1.0	1.0	ug/L							
Propionitrile	<10.0	10.0	ug/L							
Surrogate: Dibromofluoromethane	*49.6*		ug/L	*50.2*		*98.8*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*50.0*		ug/L	*50.4*		*99.2*	*53-140*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0303 - EPA 5030B - EPA 8260B										
Blank (1HJ0303-BLK1)			Prepared & Analyzed: 09/26/24 21:36							
Surrogate: Toluene-d8	*54.7*		ug/L	*50.5*		*108*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*41.7*		ug/L	*50.2*		*83.2*	*78-121*			
LCS (1HJ0303-BS1)			Prepared & Analyzed: 09/26/24 20:28							
Allyl chloride	56.06	1.0	ug/L	74.6		75.1	40-154			
Chloroprene	47.87	1.0	ug/L	50.0		95.7	57-134			
Methyl Methacrylate	108.3	1.0	ug/L	124		87.0	64-130			
Propionitrile	75.18	10.0	ug/L	50.0		150	32-180			
Surrogate: Dibromofluoromethane	*50.1*		ug/L	*50.2*		*99.8*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*50.1*		ug/L	*50.4*		*99.5*	*53-140*			
Surrogate: Toluene-d8	*53.5*		ug/L	*50.5*		*106*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*48.4*		ug/L	*50.2*		*96.4*	*78-121*			
Matrix Spike (1HJ0303-MS1)	**Source: 1HI0968-07**		Prepared & Analyzed: 09/26/24 22:20							
Allyl chloride	241.9	4.0	ug/L	298	ND	81.1	60-140			
Chloroprene	208.3	4.0	ug/L	200	ND	104	62-121			
Methyl Methacrylate	522.0	4.0	ug/L	498	ND	105	60-140			
Propionitrile	325.2	40.0	ug/L	200	ND	163	60-140			M1
Surrogate: Dibromofluoromethane	*198*		ug/L	*201*		*98.7*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*200*		ug/L	*201*		*99.1*	*53-140*			
Surrogate: Toluene-d8	*213*		ug/L	*202*		*105*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*169*		ug/L	*201*		*84.2*	*78-121*			
Matrix Spike Dup (1HJ0303-MSD1)	**Source: 1HI0968-07**		Prepared & Analyzed: 09/26/24 22:43							
Allyl chloride	234.4	4.0	ug/L	298	ND	78.6	60-140	3.12	30	
Chloroprene	202.0	4.0	ug/L	200	ND	101	62-121	3.04	30	
Methyl Methacrylate	440.9	4.0	ug/L	498	ND	88.5	60-140	16.8	30	
Propionitrile	305.3	40.0	ug/L	200	ND	153	60-140	6.33	30	M1
Surrogate: Dibromofluoromethane	*198*		ug/L	*201*		*98.8*	*57-134*			
Surrogate: 1,2-Dichloroethane-d4	*198*		ug/L	*201*		*98.4*	*53-140*			
Surrogate: Toluene-d8	*213*		ug/L	*202*		*106*	*86-114*			
Surrogate: 4-Bromofluorobenzene	*169*		ug/L	*201*		*84.1*	*78-121*			

Determination of General Solvents	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1052 - Semi-Vol GC - EPA 8015C										
Blank (1HI1052-BLK1)			Prepared: 09/19/24 11:59 Analyzed: 09/24/24 01:04							
Isobutanol	<1.0	1.0	mg/L							
LCS (1HI1052-BS1)			Prepared: 09/19/24 11:59 Analyzed: 09/23/24 22:34							
Isobutanol	24.85	1.0	mg/L	24.0		104	77-128			
Matrix Spike (1HI1052-MS1)	**Source: 1HI0968-07**		Prepared: 09/19/24 11:59 Analyzed: 09/24/24 02:20							

Determination of General Solvents	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1052 - Semi-Vol GC - EPA 8015C										
Matrix Spike (1HI1052-MS1)		**Source: 1HI0968-07**	Prepared: 09/19/24 11:59 Analyzed: 09/24/24 02:20							
Isobutanol	24.28	1.0	mg/L	24.0	ND	101	63-135			
Matrix Spike Dup (1HI1052-MSD1)		**Source: 1HI0968-07**	Prepared: 09/19/24 11:59 Analyzed: 09/24/24 02:57							
Isobutanol	23.71	1.0	mg/L	24.0	ND	98.8	63-135	2.39	30	

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0972 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HI0972-BLK1)			Prepared: 09/18/24 12:56 Analyzed: 09/26/24 14:34							
N-Nitrosodimethylamine	<8	8	ug/L							
Methyl Methanesulfonate	<8	8	ug/L							
N-Nitrosodiethylamine	<8	8	ug/L							
N-Nitrosomethylethylamine	<8	8	ug/L							
Ethyl Methanesulfonate	<8	8	ug/L							
Phenol	<8	8	ug/L							
Bis(2-Chloroethyl) Ether	<8	8	ug/L							
2-Chlorophenol	<8	8	ug/L							
Benzyl Alcohol	<8	8	ug/L							
2-Methylphenol (o-Cresol)	<8	8	ug/L							
Bis[2-Chloroisopropyl]ether	<8	8	ug/L							
n-Nitroso-di-n-propylamine	<8	8	ug/L							
N-Nitrosopyrrolidine	<8	8	ug/L							
Acetophenone	<8	8	ug/L							
o-Toluidine	<8	8	ug/L							
(3 & 4)-Methylphenol	<8	8	ug/L							
Hexachloroethane	<8	8	ug/L							
Nitrobenzene	<8	8	ug/L							
N-Nitrosopiperidine	<8	8	ug/L							
Isophorone	<8	8	ug/L							
2-Nitrophenol	<8	8	ug/L							
2,4-Dimethylphenol	<8	8	ug/L							
Bis (2-Chloroethoxy) Methane	<8	8	ug/L							
2,4-Dichlorophenol	<8	8	ug/L							
Naphthalene	<8	8	ug/L							
4-Chloroaniline	<8	8	ug/L							
2,6-Dichlorophenol	<8	8	ug/L							
Hexachloropropene	<8	8	ug/L							
Hexachlorobutadiene	<8	8	ug/L							
N-Nitrosodi-n-butylamine	<8	8	ug/L							
1,4-Phenylenediamine	<8	8	ug/L							
4-Chloro-3-methylphenol	<8	8	ug/L							

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0972 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HI0972-BLK1)			Prepared: 09/18/24 12:56 Analyzed: 09/26/24 14:34							
2-Methylnaphthalene	<8	8	ug/L							
Isosafrole	<8	8	ug/L							
1,2,4,5-Tetrachlorobenzene	<8	8	ug/L							
Hexachlorocyclopentadiene	<8	8	ug/L							
2,4,6-Trichlorophenol	<8	8	ug/L							
2,4,5-Trichlorophenol	<8	8	ug/L							
Safrole	<8	8	ug/L							
2-Chloronaphthalene	<8	8	ug/L							
2-Nitroaniline	<8	8	ug/L							
1,4-Naphthoquinone	<8	8	ug/L							
Dimethylphthalate	<8	8	ug/L							
1,3-Dinitrobenzene	<8	8	ug/L							
1,2-Dinitrobenzene	<8	8	ug/L							
2,6-Dinitrotoluene	<8	8	ug/L							
Acenaphthylene	<8	8	ug/L							
3-Nitroaniline	<8	8	ug/L							
Acenaphthene	<8	8	ug/L							
2,4-Dinitrophenol	<8	8	ug/L							
4-Nitrophenol	<8	8	ug/L							
Dibenzofuran	<8	8	ug/L							
2,4-Dinitrotoluene	<8	8	ug/L							
2,3,4,6-Tetrachlorophenol	<8	8	ug/L							
Pentachlorobenzene	<8	8	ug/L							
1-Naphthylamine	<8	8	ug/L							
2-Naphthylamine	<8	8	ug/L							
Diethyl Phthalate	<8	8	ug/L							
Fluorene	<8	8	ug/L							
4-Chlorophenyl Phenyl Ether	<8	8	ug/L							
4-Nitroaniline	<8	8	ug/L							
5-Nitro-o-toluidine	<8	8	ug/L							
4,6-Dinitro-2-methylphenol	<8	8	ug/L							
N-Nitrosodiphenylamine	<8	8	ug/L							
Diphenylamine	<8	8	ug/L							
Azobenzene	<8	8	ug/L							
Diallate	<8	8	ug/L							
1,3,5-Trinitrobenzene	<8	8	ug/L							
Phenacetin	<8	8	ug/L							
4-Bromophenyl Phenyl Ether	<8	8	ug/L							
4-Aminobiphenyl	<8	8	ug/L							
Pentachlorophenol	<8	8	ug/L							
Pronamide	<8	8	ug/L							
Pentachloronitrobenzene (PCNB)	<8	8	ug/L							

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0972 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HI0972-BLK1)			Prepared: 09/18/24 12:56 Analyzed: 09/26/24 14:34							
Phenanthrene	<8	8	ug/L							
Anthracene	<8	8	ug/L							
Di-n-butyl Phthalate	<8	8	ug/L							
Methapyrilene	<8	8	ug/L							
Fluoranthene	<8	8	ug/L							
Isodrin	<8	8	ug/L							
Chlorobenzilate	<8	8	ug/L							
Pyrene	<8	8	ug/L							
p-(Dimethylamino)azobenzene	<8	8	ug/L							
3,3-Dimethylbenzidine	<8	8	ug/L							
Butyl Benzyl Phthalate	<8	8	ug/L							
Benzo(a)anthracene	<8	8	ug/L							
Chrysene	<8	8	ug/L							
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L							
Kepone	<8	8	ug/L							
3,3´-Dichlorobenzidine	<8	8	ug/L							
2-Acetylaminofluorene	<8	8	ug/L							
Di-n-octyl Phthalate	<8	8	ug/L							
Benzo(b)Fluoranthene	<8	8	ug/L							
7,12-Dimethylbenz [a] anthracene	<8	8	ug/L							
Benzo(k)Fluoranthene	<8	8	ug/L							
Benzo(a)Pyrene	<8	8	ug/L							
3-Methylcholanthrene	<8	8	ug/L							
Dibenzo(a,h)anthracene	<8	8	ug/L							
Indeno(1,2,3-cd)Pyrene	<8	8	ug/L							
Benzo(g,h,i)perylene	<8	8	ug/L							
Surrogate: 2-Fluorophenol	*16.5*		ug/L	*30.9*		*53.3*	*10-149*			
Surrogate: Phenol-d6	*16.8*		ug/L	*29.4*		*57.3*	*10-143*			
Surrogate: Nitrobenzene-d5	*15.5*		ug/L	*30.8*		*50.3*	*20-149*			
Surrogate: 2-Fluorobiphenyl	*15.8*		ug/L	*29.3*		*53.9*	*11-146*			
Surrogate: 2,4,6-Tribromophenol	*18.2*		ug/L	*30.1*		*60.5*	*10-153*			
Surrogate: Terphenyl-dl4	*23.4*		ug/L	*30.9*		*75.8*	*27-155*			
LCS (1HI0972-BS1)			Prepared: 09/18/24 12:56 Analyzed: 09/26/24 15:22							
N-Nitrosodimethylamine	14.9	8	ug/L	21.4		69.5	22-124			
Methyl Methanesulfonate	16.3	8	ug/L	25.0		65.0	25-115			
N-Nitrosodiethylamine	36.0	8	ug/L	50.0		72.0	19-133			
N-Nitrosomethylethylamine	40.8	8	ug/L	50.0		81.6	10-149			
Ethyl Methanesulfonate	17.2	8	ug/L	25.0		68.7	29-118			
Phenol	16.1	8	ug/L	21.4		75.2	19-130			
Bis(2-Chloroethyl) Ether	13.8	8	ug/L	21.4		64.6	23-131			
2-Chlorophenol	15.7	8	ug/L	21.4		73.3	20-159			
Benzyl Alcohol	16.1	8	ug/L	21.4		75.3	17-138			

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0972 - 3520C BNA Cont Liq - EPA 8270C										
LCS (1HI0972-BS1)			Prepared: 09/18/24 12:56 Analyzed: 09/26/24 15:22							
2-Methylphenol (o-Cresol)	16.9	8	ug/L	21.4		79.1	29-130			
Bis[2-Chloroisopropyl]ether	14.5	8	ug/L	21.4		67.7	29-121			
n-Nitroso-di-n-propylamine	16.7	8	ug/L	21.4		78.1	33-130			
N-Nitrosopyrrolidine	41.9	8	ug/L	50.0		83.8	24-135			
Acetophenone	18.2	8	ug/L	25.0		73.0	35-129			
o-Toluidine	36.2	8	ug/L	50.0		72.4	10-119			
(3 & 4)-Methylphenol	17.5	8	ug/L	21.4		81.8	27-136			
Hexachloroethane	8.5	8	ug/L	21.4		39.7	18-88			
Nitrobenzene	14.7	8	ug/L	21.4		68.7	32-133			
N-Nitrosopiperidine	36.1	8	ug/L	50.0		72.3	24-134			
Isophorone	15.6	8	ug/L	21.4		73.1	37-131			
2-Nitrophenol	15.5	8	ug/L	21.4		72.3	41-127			
2,4-Dimethylphenol	16.4	8	ug/L	21.4		76.4	34-133			
Bis (2-Chloroethoxy) Methane	14.7	8	ug/L	21.4		68.8	29-117			
2,4-Dichlorophenol	16.8	8	ug/L	21.4		78.6	41-134			
Naphthalene	12.4	8	ug/L	21.4		57.7	31-107			
4-Chloroaniline	14.7	8	ug/L	21.4		68.7	10-129			
2,6-Dichlorophenol	18.1	8	ug/L	25.0		72.4	21-151			
Hexachloropropene	8.4	8	ug/L	25.0		33.8	19-70			
Hexachlorobutadiene	9.2	8	ug/L	21.4		43.2	12-100			
N-Nitrosodi-n-butylamine	38.7	8	ug/L	50.0		77.4	13-144			
4-Chloro-3-methylphenol	20.3	8	ug/L	21.4		94.8	46-141			
2-Methylnaphthalene	13.4	8	ug/L	21.4		62.8	35-110			
Isosafrole	15.7	8	ug/L	25.0		62.7	38-122			
1,2,4,5-Tetrachlorobenzene	14.8	8	ug/L	25.0		59.3	31-102			
Hexachlorocyclopentadiene	8.5	8	ug/L	21.4		39.8	10-113			
2,4,6-Trichlorophenol	19.0	8	ug/L	21.4		88.6	41-146			
2,4,5-Trichlorophenol	20.3	8	ug/L	21.4		94.9	45-149			
Safrole	18.2	8	ug/L	25.0		72.6	36-122			
2-Chloronaphthalene	14.5	8	ug/L	21.4		67.7	20-146			
2-Nitroaniline	21.3	8	ug/L	21.4		99.6	38-149			
1,4-Naphthoquinone	26.2	8	ug/L	25.0		105	45-170			
Dimethylphthalate	20.4	8	ug/L	21.4		95.6	40-149			
1,3-Dinitrobenzene	20.1	8	ug/L	21.4		93.9	30-171			
1,2-Dinitrobenzene	21.2	8	ug/L	21.4		98.9	35-159			
2,6-Dinitrotoluene	21.5	8	ug/L	21.4		101	40-148			
Acenaphthylene	16.6	8	ug/L	21.4		77.4	35-128			
3-Nitroaniline	21.7	8	ug/L	21.4		101	10-171			
Acenaphthene	16.9	8	ug/L	21.4		79.1	34-132			
2,4-Dinitrophenol	23.2	8	ug/L	21.4		109	27-165			
4-Nitrophenol	23.5	8	ug/L	21.4		110	35-159			
Dibenzofuran	17.7	8	ug/L	21.4		82.7	37-136			

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0972 - 3520C BNA Cont Liq - EPA 8270C										
LCS (1HI0972-BS1)			Prepared: 09/18/24 12:56 Analyzed: 09/26/24 15:22							
2,4-Dinitrotoluene	20.7	8	ug/L	21.4		96.9	42-154			
2,3,4,6-Tetrachlorophenol	21.2	8	ug/L	21.4		99.1	29-163			
Pentachlorobenzene	19.2	8	ug/L	25.0		76.6	53-128			
1-Naphthylamine	43.1	8	ug/L	50.0		86.2	10-152			
2-Naphthylamine	43.3	8	ug/L	50.0		86.6	19-128			
Diethyl Phthalate	20.8	8	ug/L	21.4		97.2	39-156			
Fluorene	19.8	8	ug/L	21.4		92.4	34-139			
4-Chlorophenyl Phenyl Ether	18.4	8	ug/L	21.4		86.0	39-138			
4-Nitroaniline	23.5	8	ug/L	21.4		110	10-151			
5-Nitro-o-toluidine	47.7	8	ug/L	50.0		95.4	10-145			
4,6-Dinitro-2-methylphenol	20.8	8	ug/L	21.4		97.4	36-161			
N-Nitrosodiphenylamine	20.1	8	ug/L	21.4		93.9	56-108			
Diphenylamine	20.1	8	ug/L	21.4		93.9	20-160			
Azobenzene	19.7	8	ug/L	21.4		92.0	31-153			
Diallate	22.1	8	ug/L	25.0		88.2	43-167			
1,3,5-Trinitrobenzene	24.9	8	ug/L	25.0		99.6	50-167			
Phenacetin	24.3	8	ug/L	25.0		97.3	55-146			
4-Bromophenyl Phenyl Ether	19.2	8	ug/L	21.4		89.5	31-156			
4-Aminobiphenyl	24.6	8	ug/L	50.0		49.2	10-178			
Pentachlorophenol	20.9	8	ug/L	21.4		97.8	13-159			
Pronamide	22.6	8	ug/L	25.0		90.5	53-139			
Pentachloronitrobenzene (PCNB)	25.0	8	ug/L	25.0		100	56-165			
Phenanthrene	20.6	8	ug/L	21.4		96.1	35-147			
Anthracene	20.7	8	ug/L	21.4		96.7	36-146			
Di-n-butyl Phthalate	23.0	8	ug/L	21.4		108	37-164			
Methapyrilene	10.0	8	ug/L	70.0		14.3	60-140			Q3
Fluoranthene	22.6	8	ug/L	21.4		105	38-155			
Isodrin	23.4	8	ug/L	25.0		93.4	34-148			
Chlorobenzilate	26.7	8	ug/L	25.0		107	60-136			
Pyrene	21.4	8	ug/L	21.4		99.9	37-157			
p-(Dimethylamino)azobenzene	55.4	8	ug/L	50.0		111	10-155			
3,3-Dimethylbenzidine	9.9	8	ug/L	50.0		19.7	10-145			
Butyl Benzyl Phthalate	19.8	8	ug/L	21.4		92.3	52-150			
Benzo(a)anthracene	21.1	8	ug/L	21.4		98.7	39-149			
Chrysene	21.2	8	ug/L	21.4		99.3	39-149			
Bis(2-Ethylhexyl) Phthalate	22.8	6	ug/L	21.4		106	27-186			
2-Acetylaminofluorene	53.3	8	ug/L	50.0		107	20-171			
Di-n-octyl Phthalate	21.0	8	ug/L	21.4		98.3	39-171			
Benzo(b)Fluoranthene	22.5	8	ug/L	21.4		105	39-165			
7,12-Dimethylbenz [a] anthracene	23.9	8	ug/L	25.0		95.4	22-155			
Benzo(k)Fluoranthene	21.4	8	ug/L	21.4		100	41-160			
Benzo(a)Pyrene	22.1	8	ug/L	21.4		103	37-151			

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0972 - 3520C BNA Cont Liq - EPA 8270C										
LCS (1HI0972-BS1)			Prepared: 09/18/24 12:56 Analyzed: 09/26/24 15:22							
3-Methylcholanthrene	25.8	8	ug/L	25.0		103	28-140			
Dibenzo(a,h)anthracene	20.6	8	ug/L	21.4		96.3	17-178			
Indeno(1,2,3-cd)Pyrene	20.5	8	ug/L	21.4		95.7	18-176			
Benzo(g,h,i)perylene	20.5	8	ug/L	21.4		95.8	11-179			
Surrogate: 2-Fluorophenol	*15.0*		ug/L	*30.9*		*48.6*	*10-149*			
Surrogate: Phenol-d6	*17.1*		ug/L	*29.4*		*58.2*	*10-143*			
Surrogate: Nitrobenzene-d5	*15.1*		ug/L	*30.8*		*48.8*	*31-137*			
Surrogate: 2-Fluorobiphenyl	*16.3*		ug/L	*29.3*		*55.7*	*29-131*			
Surrogate: 2,4,6-Tribromophenol	*22.5*		ug/L	*30.1*		*75.0*	*10-153*			
Surrogate: Terphenyl-dl4	*23.1*		ug/L	*30.9*		*74.7*	*30-142*			
LCS Dup (1HI0972-BSD1)			Prepared: 09/18/24 12:56 Analyzed: 09/26/24 15:47							
N-Nitrosodimethylamine	15.2	8	ug/L	21.4		71.1	22-124	2.19	27	
Methyl Methanesulfonate	15.7	8	ug/L	25.0		62.7	25-115	3.63	16	
N-Nitrosodiethylamine	36.4	8	ug/L	50.0		72.8	19-133	1.19	30	
N-Nitrosomethylethylamine	40.0	8	ug/L	50.0		79.9	10-149	2.06	30	
Ethyl Methanesulfonate	16.5	8	ug/L	25.0		66.1	29-118	3.86	17	
Phenol	15.7	8	ug/L	21.4		73.5	19-130	2.26	30	
Bis(2-Chloroethyl) Ether	15.9	8	ug/L	21.4		74.3	23-131	13.9	24	
2-Chlorophenol	16.1	8	ug/L	21.4		75.1	20-159	2.46	30	
Benzyl Alcohol	15.5	8	ug/L	21.4		72.5	17-138	3.80	30	
2-Methylphenol (o-Cresol)	16.6	8	ug/L	21.4		77.5	29-130	2.09	30	
Bis[2-Chloroisopropyl]ether	14.7	8	ug/L	21.4		68.7	29-121	1.37	26	
n-Nitroso-di-n-propylamine	16.4	8	ug/L	21.4		76.7	33-130	1.93	21	
N-Nitrosopyrrolidine	37.6	8	ug/L	50.0		75.3	24-135	10.7	30	
Acetophenone	17.1	8	ug/L	25.0		68.5	35-129	6.28	22	
o-Toluidine	34.7	8	ug/L	50.0		69.5	10-119	4.09	30	
(3 & 4)-Methylphenol	16.9	8	ug/L	21.4		78.8	27-136	3.73	30	
Hexachloroethane	9.0	8	ug/L	21.4		42.2	18-88	6.16	30	
Nitrobenzene	15.8	8	ug/L	21.4		73.8	32-133	7.15	26	
N-Nitrosopiperidine	36.9	8	ug/L	50.0		73.8	24-134	2.11	30	
Isophorone	16.1	8	ug/L	21.4		75.1	37-131	2.71	28	
2-Nitrophenol	16.6	8	ug/L	21.4		77.6	41-127	7.17	30	
2,4-Dimethylphenol	17.5	8	ug/L	21.4		81.7	34-133	6.74	30	
Bis (2-Chloroethoxy) Methane	15.6	8	ug/L	21.4		73.0	29-117	5.93	30	
2,4-Dichlorophenol	17.0	8	ug/L	21.4		79.7	41-134	1.36	30	
Naphthalene	13.2	8	ug/L	21.4		61.9	31-107	7.03	30	
4-Chloroaniline	14.8	8	ug/L	21.4		69.1	10-129	0.610	30	
2,6-Dichlorophenol	17.5	8	ug/L	25.0		70.2	21-151	3.09	30	
Hexachloropropene	8.4	8	ug/L	25.0		33.4	19-70	1.19	30	
Hexachlorobutadiene	10.2	8	ug/L	21.4		47.7	12-100	9.88	30	
N-Nitrosodi-n-butylamine	37.9	8	ug/L	50.0		75.9	13-144	1.93	30	
4-Chloro-3-methylphenol	20.4	8	ug/L	21.4		95.3	46-141	0.492	30	

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0972 - 3520C BNA Cont Liq - EPA 8270C										
LCS Dup (1HI0972-BSD1)			Prepared: 09/18/24 12:56 Analyzed: 09/26/24 15:47							
2-Methylnaphthalene	14.0	8	ug/L	21.4		65.5	35-110	4.23	30	
Isosafrole	17.2	8	ug/L	25.0		68.6	38-122	9.01	29	
1,2,4,5-Tetrachlorobenzene	16.4	8	ug/L	25.0		65.5	31-102	9.93	30	
Hexachlorocyclopentadiene	9.8	8	ug/L	21.4		45.8	10-113	14.0	30	
2,4,6-Trichlorophenol	19.2	8	ug/L	21.4		89.8	41-146	1.41	30	
2,4,5-Trichlorophenol	21.1	8	ug/L	21.4		98.7	45-149	3.91	30	
Safrole	19.1	8	ug/L	25.0		76.4	36-122	5.15	30	
2-Chloronaphthalene	15.6	8	ug/L	21.4		73.1	20-146	7.63	30	
2-Nitroaniline	22.8	8	ug/L	21.4		107	38-149	6.71	30	
1,4-Naphthoquinone	27.7	8	ug/L	25.0		111	45-170	5.38	30	
Dimethylphthalate	21.4	8	ug/L	21.4		100	40-149	4.49	23	
1,3-Dinitrobenzene	22.4	8	ug/L	21.4		105	30-171	10.8	26	
1,2-Dinitrobenzene	23.3	8	ug/L	21.4		109	35-159	9.54	26	
2,6-Dinitrotoluene	22.2	8	ug/L	21.4		104	40-148	3.29	30	
Acenaphthylene	17.4	8	ug/L	21.4		81.2	35-128	4.71	30	
3-Nitroaniline	21.8	8	ug/L	21.4		102	10-171	0.644	30	
Acenaphthene	17.5	8	ug/L	21.4		81.8	34-132	3.37	30	
2,4-Dinitrophenol	21.1	8	ug/L	21.4		98.8	27-165	9.42	30	
4-Nitrophenol	20.7	8	ug/L	21.4		96.6	35-159	12.8	30	
Dibenzofuran	18.5	8	ug/L	21.4		86.3	37-136	4.20	30	
2,4-Dinitrotoluene	21.4	8	ug/L	21.4		100	42-154	3.13	30	
2,3,4,6-Tetrachlorophenol	21.7	8	ug/L	21.4		101	29-163	2.19	30	
Pentachlorobenzene	19.4	8	ug/L	25.0		77.7	53-128	1.40	30	
1-Naphthylamine	40.9	8	ug/L	50.0		81.8	10-152	5.21	30	
2-Naphthylamine	42.1	8	ug/L	50.0		84.2	19-128	2.86	30	
Diethyl Phthalate	21.5	8	ug/L	21.4		100	39-156	3.26	30	
Fluorene	20.5	8	ug/L	21.4		95.6	34-139	3.43	30	
4-Chlorophenyl Phenyl Ether	19.0	8	ug/L	21.4		89.0	39-138	3.42	30	
4-Nitroaniline	24.1	8	ug/L	21.4		113	10-151	2.31	30	
5-Nitro-o-toluidine	47.9	8	ug/L	50.0		95.7	10-145	0.335	30	
4,6-Dinitro-2-methylphenol	20.4	8	ug/L	21.4		95.3	36-161	2.09	30	
N-Nitrosodiphenylamine	21.8	8	ug/L	21.4		102	56-108	8.16	30	
Diphenylamine	21.8	8	ug/L	21.4		102	20-160	8.16	30	
Azobenzene	22.0	8	ug/L	21.4		103	31-153	11.2	30	
Diallate	23.6	8	ug/L	25.0		94.5	43-167	6.87	30	
1,3,5-Trinitrobenzene	26.0	8	ug/L	25.0		104	50-167	4.09	30	
Phenacetin	24.9	8	ug/L	25.0		99.6	55-146	2.36	24	
4-Bromophenyl Phenyl Ether	21.1	8	ug/L	21.4		98.7	31-156	9.74	30	
4-Aminobiphenyl	26.6	8	ug/L	50.0		53.1	10-178	7.71	30	
Pentachlorophenol	19.7	8	ug/L	21.4		92.0	13-159	6.06	30	
Pronamide	23.2	8	ug/L	25.0		92.7	53-139	2.45	30	
Pentachloronitrobenzene (PCNB)	26.1	8	ug/L	25.0		104	56-165	4.23	30	

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0972 - 3520C BNA Cont Liq - EPA 8270C										
LCS Dup (1HI0972-BSD1)			Prepared: 09/18/24 12:56 Analyzed: 09/26/24 15:47							
Phenanthrene	21.9	8	ug/L	21.4		102	35-147	6.36	30	
Anthracene	22.3	8	ug/L	21.4		104	36-146	7.36	30	
Di-n-butyl Phthalate	24.2	8	ug/L	21.4		113	37-164	5.12	30	
Methapyrilene	10.5	8	ug/L	70.0		15.0	60-140	4.98	30	Q3
Fluoranthene	22.9	8	ug/L	21.4		107	38-155	1.58	30	
Isodrin	25.2	8	ug/L	25.0		101	34-148	7.54	30	
Chlorobenzilate	28.6	8	ug/L	25.0		114	60-136	6.70	30	
Pyrene	23.1	8	ug/L	21.4		108	37-157	7.73	30	
p-(Dimethylamino)azobenzene	58.7	8	ug/L	50.0		117	10-155	5.70	30	
3,3-Dimethylbenzidine	14.2	8	ug/L	50.0		28.4	10-145	36.1	30	R3
Butyl Benzyl Phthalate	20.8	8	ug/L	21.4		97.5	52-150	5.42	30	
Benzo(a)anthracene	22.1	8	ug/L	21.4		103	39-149	4.53	30	
Chrysene	22.5	8	ug/L	21.4		105	39-149	5.72	30	
Bis(2-Ethylhexyl) Phthalate	27.6	6	ug/L	21.4		129	27-186	19.2	30	
2-Acetylaminofluorene	55.0	8	ug/L	50.0		110	20-171	3.03	30	
Di-n-octyl Phthalate	21.3	8	ug/L	21.4		99.6	39-171	1.28	30	
Benzo(b)Fluoranthene	23.5	8	ug/L	21.4		110	39-165	4.26	30	
7,12-Dimethylbenz [a] anthracene	24.3	8	ug/L	25.0		97.4	22-155	1.99	30	
Benzo(k)Fluoranthene	22.5	8	ug/L	21.4		105	41-160	5.05	30	
Benzo(a)Pyrene	23.6	8	ug/L	21.4		110	37-151	6.61	30	
3-Methylcholanthrene	26.7	8	ug/L	25.0		107	28-140	3.66	30	
Dibenzo(a,h)anthracene	23.3	8	ug/L	21.4		109	17-178	12.4	30	
Indeno(1,2,3-cd)Pyrene	23.3	8	ug/L	21.4		109	18-176	12.8	30	
Benzo(g,h,i)perylene	23.3	8	ug/L	21.4		109	11-179	12.7	30	
Surrogate: 2-Fluorophenol	*14.8*		ug/L	*30.9*		*47.7*	*10-149*			
Surrogate: Phenol-d6	*15.8*		ug/L	*29.4*		*53.9*	*10-143*			
Surrogate: Nitrobenzene-d5	*15.1*		ug/L	*30.8*		*49.1*	*31-137*			
Surrogate: 2-Fluorobiphenyl	*16.9*		ug/L	*29.3*		*57.7*	*29-131*			
Surrogate: 2,4,6-Tribromophenol	*21.2*		ug/L	*30.1*		*70.6*	*10-153*			
Surrogate: Terphenyl-dl4	*24.0*		ug/L	*30.9*		*77.6*	*30-142*			

Determination of Organophosphorus Insecticides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1047 - 3510C NP/OC Sep Fnl - EPA 8141										
Blank (1HI1047-BLK1)			Prepared: 09/19/24 11:34 Analyzed: 09/24/24 19:05							
O,O,O-Triethyl phosphorothioate	<0.4	0.4	ug/L							
Thionazin	<0.4	0.4	ug/L							
Phorate	<0.4	0.4	ug/L							
Dimethoate	<0.4	0.4	ug/L							
Disulfoton	<0.4	0.4	ug/L							

Determination of Organophosphorus Insecticides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1047 - 3510C NP/OC Sep Fnl - EPA 8141										
Blank (1HI1047-BLK1)			Prepared: 09/19/24 11:34 Analyzed: 09/24/24 19:05							
Methyl Parathion	<0.4	0.4	ug/L							
Parathion	<0.4	0.4	ug/L							
Famphur	<0.4	0.4	ug/L							
Surrogate: 2-Nitro-m-xylene	*7.00*		ug/L	*8.34*		*84.0*	*15-154*			
LCS (1HI1047-BS1)			Prepared: 09/19/24 11:34 Analyzed: 09/24/24 21:01							
O,O,O-Triethyl phosphorothioate	3.08	0.4	ug/L	4.00		76.9	29-156			
Thionazin	3.26	0.4	ug/L	4.00		81.6	63-131			
Phorate	2.74	0.4	ug/L	4.00		68.6	51-136			
Dimethoate	4.62	0.4	ug/L	4.00		116	42-157			
Disulfoton	3.40	0.4	ug/L	4.00		84.9	37-158			
Methyl Parathion	3.46	0.4	ug/L	4.00		86.6	66-140			
Parathion	3.28	0.4	ug/L	4.00		81.9	66-120			
Famphur	3.70	0.4	ug/L	4.00		92.5	67-129			
Surrogate: 2-Nitro-m-xylene	*6.93*		ug/L	*8.34*		*83.1*	*15-154*			
LCS Dup (1HI1047-BSD1)			Prepared: 09/19/24 11:34 Analyzed: 09/24/24 21:59							
O,O,O-Triethyl phosphorothioate	3.22	0.4	ug/L	4.00		80.5	29-156	4.61	30	
Thionazin	3.14	0.4	ug/L	4.00		78.5	63-131	3.90	30	
Phorate	2.98	0.4	ug/L	4.00		74.5	51-136	8.21	30	
Dimethoate	4.84	0.4	ug/L	4.00		121	42-157	4.65	30	
Disulfoton	3.44	0.4	ug/L	4.00		85.9	37-158	1.17	30	
Methyl Parathion	3.64	0.4	ug/L	4.00		90.9	66-140	4.79	30	
Parathion	3.42	0.4	ug/L	4.00		85.5	66-120	4.33	26	
Famphur	3.92	0.4	ug/L	4.00		98.0	67-129	5.77	30	
Surrogate: 2-Nitro-m-xylene	*6.98*		ug/L	*8.34*		*83.8*	*15-154*			

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1011 - EPA 8151A - EPA 8151A										
Blank (1HI1011-BLK1)			Prepared: 09/18/24 17:12 Analyzed: 09/24/24 16:24							
2,4-D	<2.0	2.0	ug/L							
2,4,5-TP (Silvex)	<0.5	0.5	ug/L							
2,4,5-T	<0.5	0.5	ug/L							
Dinoseb	<0.5	0.5	ug/L							
Surrogate: 2,5-Dichlorobenzoic Acid	*1.59*		ug/L	*2.02*		*78.7*	*36-159*			
LCS (1HI1011-BS1)			Prepared: 09/18/24 17:12 Analyzed: 09/24/24 17:59							
2,4-D	<2.0	2.0	ug/L	1.00		103	34-138			
2,4,5-TP (Silvex)	0.52	0.5	ug/L	0.500		104	35-145			

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1011 - EPA 8151A - EPA 8151A										
LCS (1HI1011-BS1)			Prepared: 09/18/24 17:12 Analyzed: 09/24/24 17:59							
2,4,5-T	0.56	0.5	ug/L	0.500		111	17-168			
Dinoseb	0.88	0.5	ug/L	1.00		87.5	10-140			
Surrogate: 2,5-Dichlorobenzoic Acid	*1.62*		ug/L	*2.02*		*80.4*	*36-159*			
LCS Dup (1HI1011-BSD1)			Prepared: 09/18/24 17:12 Analyzed: 09/24/24 18:31							
2,4-D	<2.0	2.0	ug/L	1.00		106	34-138	2.40	30	
2,4,5-TP (Silvex)	0.56	0.5	ug/L	0.500		113	35-145	8.29	30	
2,4,5-T	0.62	0.5	ug/L	0.500		124	17-168	11.1	30	
Dinoseb	0.84	0.5	ug/L	1.00		84.5	10-140	3.49	30	
Surrogate: 2,5-Dichlorobenzoic Acid	*1.58*		ug/L	*2.02*		*78.5*	*36-159*			

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1046 - 3510C NP/OC Sep Fnl - EPA 8081										
Blank (1HI1046-BLK1)			Prepared: 09/19/24 11:32 Analyzed: 09/24/24 11:25							
Alpha-BHC	<0.05	0.05	ug/L							
Gamma-BHC [Lindane]	<0.05	0.05	ug/L							
Beta-BHC	<0.05	0.05	ug/L							
Heptachlor	<0.05	0.05	ug/L							
Delta-BHC	<0.05	0.05	ug/L							
Aldrin	<0.05	0.05	ug/L							
Heptachlor Epoxide	<0.05	0.05	ug/L							
Endosulfan I	<0.05	0.05	ug/L							
4,4`-DDE	<0.05	0.05	ug/L							
Dieldrin	<0.05	0.05	ug/L							
Endrin	<0.05	0.05	ug/L							
4,4`-DDD	<0.05	0.05	ug/L							
Endosulfan II	<0.05	0.05	ug/L							
4,4`-DDT	<0.05	0.05	ug/L							
Endrin Aldehyde	<0.05	0.05	ug/L							
Endosulfan Sulfate	<0.05	0.05	ug/L							
Methoxychlor	<0.05	0.05	ug/L							
Chlordane	<0.10	0.10	ug/L							
Toxaphene	<0.20	0.20	ug/L							
Hexachlorobenzene	<0.05	0.05	ug/L							
Surrogate: Tetrachloro-m-xylene	*0.487*		ug/L	*0.600*		*81.1*	*40-116*			
LCS (1HI1046-BS1)			Prepared: 09/19/24 11:32 Analyzed: 09/24/24 11:39							
Alpha-BHC	0.231	0.05	ug/L	0.250		92.2	52-118			
Gamma-BHC [Lindane]	0.226	0.05	ug/L	0.250		90.3	53-122			

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1046 - 3510C NP/OC Sep Fnl - EPA 8081										
LCS (1HI1046-BS1)				Prepared: 09/19/24 11:32 Analyzed: 09/24/24 11:39						
Beta-BHC	0.223	0.05	ug/L	0.250		89.3	54-116			
Heptachlor	0.249	0.05	ug/L	0.250		99.6	58-126			
Delta-BHC	0.248	0.05	ug/L	0.250		99.2	54-134			
Aldrin	0.195	0.05	ug/L	0.250		78.2	47-122			
Heptachlor Epoxide	0.215	0.05	ug/L	0.250		86.2	50-123			
Endosulfan I	0.244	0.05	ug/L	0.250		97.5	55-124			
4,4`-DDE	0.226	0.05	ug/L	0.250		90.2	49-141			
Dieldrin	0.220	0.05	ug/L	0.250		87.9	50-118			
Endrin	0.253	0.05	ug/L	0.250		101	39-170			
4,4`-DDD	0.231	0.05	ug/L	0.250		92.3	59-135			
Endosulfan II	0.240	0.05	ug/L	0.250		96.0	56-127			
4,4`-DDT	0.251	0.05	ug/L	0.250		100	67-150			
Endrin Aldehyde	0.233	0.05	ug/L	0.250		93.3	57-125			
Endosulfan Sulfate	0.233	0.05	ug/L	0.250		93.1	53-131			
Methoxychlor	0.251	0.05	ug/L	0.250		100	63-153			
Surrogate: Tetrachloro-m-xylene	*0.478*		ug/L	*0.600*		*79.7*	*40-116*			
LCS Dup (1HI1046-BSD1)				Prepared: 09/19/24 11:32 Analyzed: 09/24/24 11:55						
Alpha-BHC	0.237	0.05	ug/L	0.250		94.7	52-118	2.66	30	
Gamma-BHC [Lindane]	0.235	0.05	ug/L	0.250		93.9	53-122	3.92	30	
Beta-BHC	0.229	0.05	ug/L	0.250		91.5	54-116	2.48	30	
Heptachlor	0.244	0.05	ug/L	0.250		97.5	58-126	2.11	30	
Delta-BHC	0.255	0.05	ug/L	0.250		102	54-134	2.97	30	
Aldrin	0.202	0.05	ug/L	0.250		80.6	47-122	3.06	30	
Heptachlor Epoxide	0.225	0.05	ug/L	0.250		89.8	50-123	4.17	30	
Endosulfan I	0.253	0.05	ug/L	0.250		101	55-124	3.88	30	
4,4`-DDE	0.236	0.05	ug/L	0.250		94.3	49-141	4.41	30	
Dieldrin	0.231	0.05	ug/L	0.250		92.3	50-118	4.82	30	
Endrin	0.267	0.05	ug/L	0.250		107	39-170	5.26	30	
4,4`-DDD	0.245	0.05	ug/L	0.250		98.0	59-135	5.97	30	
Endosulfan II	0.252	0.05	ug/L	0.250		101	56-127	4.76	30	
4,4`-DDT	0.263	0.05	ug/L	0.250		105	67-150	4.95	30	
Endrin Aldehyde	0.244	0.05	ug/L	0.250		97.5	57-125	4.44	30	
Endosulfan Sulfate	0.241	0.05	ug/L	0.250		96.4	53-131	3.52	30	
Methoxychlor	0.259	0.05	ug/L	0.250		104	63-153	3.01	30	
Surrogate: Tetrachloro-m-xylene	*0.482*		ug/L	*0.600*		*80.3*	*40-116*			

Determination of Polychlorinated Biphenyls (PCB)	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Determination of Polychlorinated Biphenyls (PCB)	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1045 - 3510C NP/OC Sep Fnl - EPA 8082										
Blank (1HI1045-BLK1)			Prepared: 09/19/24 11:29 Analyzed: 09/24/24 11:25							
Arochlor 1016	<0.20	0.20	ug/L							
Arochlor 1221	<0.20	0.20	ug/L							
Arochlor 1232	<0.20	0.20	ug/L							
Arochlor 1242	<0.20	0.20	ug/L							
Arochlor 1248	<0.20	0.20	ug/L							
Arochlor 1254	<0.20	0.20	ug/L							
Arochlor 1260	<0.20	0.20	ug/L							
Surrogate: Tetrachloro-m-xylene	*0.458*		ug/L	*0.600*		*76.4*	*37-120*			
Surrogate: Decachlorobiphenyl	*0.583*		ug/L	*0.600*		*97.2*	*22-116*			
LCS (1HI1045-BS1)			Prepared: 09/19/24 11:29 Analyzed: 09/24/24 12:24							
Arochlor 1016	2.379	0.20	ug/L	2.60		91.5	42-132			
Arochlor 1260	2.481	0.20	ug/L	2.60		95.4	50-139			
Surrogate: Tetrachloro-m-xylene	*0.492*		ug/L	*0.600*		*82.0*	*37-120*			
Surrogate: Decachlorobiphenyl	*0.563*		ug/L	*0.600*		*93.9*	*22-116*			
LCS Dup (1HI1045-BSD1)			Prepared: 09/19/24 11:29 Analyzed: 09/24/24 12:39							
Arochlor 1016	2.131	0.20	ug/L	2.60		81.9	42-132	11.0	20	
Arochlor 1260	2.249	0.20	ug/L	2.60		86.5	50-139	9.82	24	
Surrogate: Tetrachloro-m-xylene	*0.415*		ug/L	*0.600*		*69.1*	*37-120*			
Surrogate: Decachlorobiphenyl	*0.544*		ug/L	*0.600*		*90.7*	*22-116*			

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0843 - Wet Chem Preparation - EPA 376.2										
Blank (1HI0843-BLK1)			Prepared: 09/17/24 08:35 Analyzed: 09/17/24 13:23							
Sulfide, total	<0.10	0.10	mg/L							
LCS (1HI0843-BS1)			Prepared: 09/17/24 08:35 Analyzed: 09/17/24 13:23							
Sulfide, total	0.343	0.10	mg/L	0.31		109	56-118			
Matrix Spike (1HI0843-MS1)	**Source: 1HI0427-26**		Prepared: 09/17/24 08:35 Analyzed: 09/17/24 13:23							
Sulfide, total	0.462	0.10	mg/L	0.31	ND	147	50-150			
Matrix Spike Dup (1HI0843-MSD1)	**Source: 1HI0427-26**		Prepared: 09/17/24 08:35 Analyzed: 09/17/24 13:23							
Sulfide, total	0.494	0.10	mg/L	0.31	ND	157	50-150	6.74	30	M1
Batch 1HI1430 - Wet Chem Preparation - EPA 9010B										
Blank (1HI1430-BLK1)			Prepared: 09/26/24 10:21 Analyzed: 09/26/24 14:54							
Cyanide, total	<0.010	0.010	mg/L							
LCS (1HI1430-BS1)			Prepared: 09/26/24 10:21 Analyzed: 09/26/24 14:54							

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI1430 - Wet Chem Preparation - EPA 9010B										
LCS (1HI1430-BS1)			Prepared: 09/26/24 10:21 Analyzed: 09/26/24 14:54							
Cyanide, total	0.0356	0.010	mg/L	0.0300		119	66-127			
Matrix Spike (1HI1430-MS1)	**Source: 1HI0968-07**		Prepared: 09/26/24 10:21 Analyzed: 09/26/24 14:54							
Cyanide, total	0.0285	0.010	mg/L	0.0300	ND	95.2	56-132			
Matrix Spike Dup (1HI1430-MSD1)	**Source: 1HI0968-07**		Prepared: 09/26/24 10:21 Analyzed: 09/26/24 14:54							
Cyanide, total	0.0290	0.010	mg/L	0.0300	ND	96.8	56-132	1.67	28	

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0903 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HI0903-BLK1)			Prepared: 09/17/24 15:28 Analyzed: 09/18/24 17:35							
Antimony, total	<0.0020	0.0020	mg/L							
Arsenic, total	<0.0040	0.0040	mg/L							
Barium, total	<0.0040	0.0040	mg/L							
Beryllium, total	<0.0040	0.0040	mg/L							
Cadmium, total	<0.0008	0.0008	mg/L							
Chromium, total	<0.0080	0.0080	mg/L							
Cobalt, total	<0.0004	0.0004	mg/L							
Copper, total	<0.0040	0.0040	mg/L							
Lead, total	<0.0040	0.0040	mg/L							
Nickel, total	<0.0040	0.0040	mg/L							
Selenium, total	<0.0040	0.0040	mg/L							
Silver, total	<0.0040	0.0040	mg/L							
Thallium, total	<0.0020	0.0020	mg/L							
Tin, total	<0.0200	0.0200	mg/L							
Vanadium, total	<0.0200	0.0200	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1HI0903-BS1)			Prepared: 09/17/24 15:28 Analyzed: 09/18/24 17:41							
Antimony, total	0.0995	0.0020	mg/L	0.100		99.5	80-120			
Arsenic, total	0.0979	0.0040	mg/L	0.100		97.9	80-120			
Barium, total	0.108	0.0040	mg/L	0.100		108	80-120			
Beryllium, total	0.100	0.0040	mg/L	0.100		100	80-120			
Cadmium, total	0.0983	0.0008	mg/L	0.100		98.3	80-120			
Chromium, total	0.100	0.0080	mg/L	0.100		100	80-120			
Cobalt, total	0.102	0.0004	mg/L	0.100		102	80-120			
Copper, total	0.103	0.0040	mg/L	0.100		103	80-120			
Lead, total	0.104	0.0040	mg/L	0.100		104	80-120			
Nickel, total	0.102	0.0040	mg/L	0.100		102	80-120			
Selenium, total	0.0972	0.0040	mg/L	0.100		97.2	80-120			
Silver, total	0.101	0.0040	mg/L	0.100		101	80-120			
Thallium, total	0.104	0.0020	mg/L	0.100		104	80-120			
Tin, total	0.0969	0.0200	mg/L	0.100		96.9	80-120			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0903 - EPA 3005A Total Recoverable Metals - EPA 6020A										
LCS (1HI0903-BS1)			Prepared: 09/17/24 15:28 Analyzed: 09/18/24 17:41							
Vanadium, total	0.101	0.0200	mg/L	0.100		101	80-120			
Zinc, total	0.0984	0.0200	mg/L	0.100		98.4	80-120			
Matrix Spike (1HI0903-MS1)	**Source: 1HI0968-01**		Prepared: 09/17/24 15:28 Analyzed: 09/18/24 17:54							
Antimony, total	0.0993	0.0020	mg/L	0.100	ND	99.3	75-125			
Arsenic, total	0.103	0.0040	mg/L	0.100	0.0043	98.3	75-125			
Barium, total	0.428	0.0040	mg/L	0.100	0.305	123	75-125			
Beryllium, total	0.0973	0.0040	mg/L	0.100	ND	97.3	75-125			
Cadmium, total	0.0965	0.0008	mg/L	0.100	0.0002	96.3	75-125			
Chromium, total	0.0958	0.0080	mg/L	0.100	ND	95.8	75-125			
Cobalt, total	0.106	0.0004	mg/L	0.100	0.0045	101	75-125			
Copper, total	0.0980	0.0040	mg/L	0.100	0.0035	94.5	75-125			
Lead, total	0.0971	0.0040	mg/L	0.100	ND	97.1	75-125			
Nickel, total	0.108	0.0040	mg/L	0.100	0.0095	98.2	75-125			
Selenium, total	0.0954	0.0040	mg/L	0.100	ND	95.4	75-125			
Silver, total	0.0990	0.0040	mg/L	0.100	ND	99.0	75-125			
Thallium, total	0.0980	0.0020	mg/L	0.100	0.0003	97.7	75-125			
Tin, total	0.0961	0.0200	mg/L	0.100	ND	96.1	75-125			
Vanadium, total	0.103	0.0200	mg/L	0.100	ND	103	75-125			
Zinc, total	0.0990	0.0200	mg/L	0.100	ND	99.0	75-125			
Matrix Spike Dup (1HI0903-MSD1)	**Source: 1HI0968-01**		Prepared: 09/17/24 15:28 Analyzed: 09/19/24 10:47							
Antimony, total	0.0973	0.0020	mg/L	0.100	ND	97.3	75-125	2.07	20	
Arsenic, total	0.0998	0.0040	mg/L	0.100	0.0043	95.5	75-125	2.86	20	
Barium, total	0.403	0.0040	mg/L	0.100	0.305	97.8	75-125	6.03	20	
Beryllium, total	0.101	0.0040	mg/L	0.100	ND	101	75-125	3.87	20	
Cadmium, total	0.0930	0.0008	mg/L	0.100	0.0002	92.8	75-125	3.68	20	
Chromium, total	0.0972	0.0080	mg/L	0.100	ND	97.2	75-125	1.50	20	
Cobalt, total	0.103	0.0004	mg/L	0.100	0.0045	98.2	75-125	3.14	20	
Copper, total	0.0962	0.0040	mg/L	0.100	0.0035	92.7	75-125	1.85	20	
Lead, total	0.0929	0.0040	mg/L	0.100	ND	92.9	75-125	4.40	20	
Nickel, total	0.106	0.0040	mg/L	0.100	0.0095	96.0	75-125	2.07	20	
Selenium, total	0.0872	0.0040	mg/L	0.100	ND	87.2	75-125	9.01	20	
Silver, total	0.0920	0.0040	mg/L	0.100	ND	92.0	75-125	7.32	20	
Thallium, total	0.0945	0.0020	mg/L	0.100	0.0003	94.2	75-125	3.64	20	
Tin, total	0.0929	0.0200	mg/L	0.100	ND	92.9	75-125	3.32	20	
Vanadium, total	0.106	0.0200	mg/L	0.100	ND	106	75-125	2.18	20	
Zinc, total	0.0919	0.0200	mg/L	0.100	ND	91.9	75-125	7.44	20	
Post Spike (1HI0903-PS1)	**Source: 1HI0968-01**		Prepared: 09/17/24 15:28 Analyzed: 09/19/24 10:53							
Antimony, total	0.0780		mg/L	0.0800	0.0004	97.0	80-120			
Arsenic, total	0.0810		mg/L	0.0800	0.0042	96.0	80-120			
Barium, total	0.375		mg/L	0.0800	0.299	96.0	80-120			
Beryllium, total	0.0797		mg/L	0.0800	0.00002	99.6	80-120			
Cadmium, total	0.0739		mg/L	0.0800	0.0002	92.1	80-120			
Chromium, total	0.0782		mg/L	0.0800	0.0005	97.1	80-120			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HI0903 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Post Spike (1HI0903-PS1)	**Source: 1HI0968-01**		Prepared: 09/17/24 15:28 Analyzed: 09/19/24 10:53							
Cobalt, total	0.0829		mg/L	0.0800	0.0045	98.0	80-120			
Copper, total	0.0786		mg/L	0.0800	0.0034	94.0	80-120			
Lead, total	0.0752		mg/L	0.0800	0.0003	93.7	80-120			
Nickel, total	0.0872		mg/L	0.0800	0.0093	97.3	80-120			
Selenium, total	0.0707		mg/L	0.0800	0.0001	88.2	80-120			
Silver, total	0.0746		mg/L	0.0800	0.0005	92.7	80-120			
Thallium, total	0.0759		mg/L	0.0800	0.0003	94.5	80-120			
Tin, total	0.0774		mg/L	0.0800	0.0007	95.9	75-125			
Vanadium, total	0.0866		mg/L	0.0800	0.0044	103	80-120			
Zinc, total	0.0750		mg/L	0.0800	0.0042	88.5	80-120			
Batch 1HI0948 - EPA 7470A Hg Water - EPA 7470A										
Blank (1HI0948-BLK1)			Prepared: 09/18/24 10:52 Analyzed: 09/19/24 13:30							
Mercury, total	<0.00050	0.00050	mg/L							
LCS (1HI0948-BS1)			Prepared: 09/18/24 10:52 Analyzed: 09/19/24 13:32							
Mercury, total	0.00253	0.00050	mg/L	0.00250		101	80-120			
Matrix Spike (1HI0948-MS1)	**Source: 1HI0334-02**		Prepared: 09/18/24 10:52 Analyzed: 09/19/24 13:37							
Mercury, total	0.00249	0.00050	mg/L	0.00250	ND	99.6	75-125			
Matrix Spike Dup (1HI0948-MSD1)	**Source: 1HI0334-02**		Prepared: 09/18/24 10:52 Analyzed: 09/19/24 13:39							
Mercury, total	0.00259	0.00050	mg/L	0.00250	ND	104	75-125	3.92	20	

Definitions

AC:	Analyte not added to spike samples. Value considered an estimate.
H2:	Initial analysis was within holding time. Reanalysis was done past holding time.
M1:	Matrix spike recovery is above acceptance limits.
Q3:	LCS recovery is below acceptance limits. The reported value is estimated.
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
S1:	Surrogate recovery is above acceptance limits.
S2:	Surrogate recovery is below acceptance limits.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 0.0°C

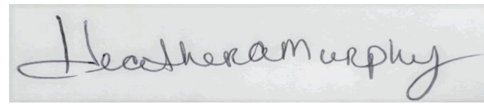
Cooler Inspection Checklist

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

Report Comments

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

Reviewed and Approved By:



Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
10/07/24 11:14

CHAIN OF CUSTODY RECORD

MICROBAC®

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

1HI0968
HLW Engineering
PM: Heather Murphy

Printed: 8/26/2024 4:25:03P

www.keystonelabs.com

SITE INFORMATION

Sampler: JGH

Project: South Dallas Co. - New Regs Appendix Sampling

REPORT TO

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

INVOICE TO

Mike Fountas
South Dallas County Landfill
2000 Main Street, PO Box 263
Adel, IA 50003

SPECIAL INSTRUCTIONS

None

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

LAB USE ONLY

Work Order 1HI0968
Temperature 0.0
Turn-Cooler: No

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

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses		Lab Sample Number
-001	MW-2 NO SAMPLE	Aqueous	GRAB	/ /			lndfill-app1-voc-group	lndfill-app1-metals-6020	—
-001	MW-9	Aqueous	GRAB	9/12/24	10:12	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	01
-001	MW-17	Aqueous	GRAB	9/12/24	11:35	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	02
-001	MW-18	Aqueous	GRAB	9/12/24	10:49	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	03
-001	MW-19A	Aqueous	GRAB	9/12/24	11:07	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	04
-001	MW-4	Aqueous	GRAB	9/12/24	12:11	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	05
-001	MW-24	Aqueous	GRAB	9/12/24	10:30	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	06

Relinquished By: J. C. [signature] Date/Time

Received By Date/Time

Relinquished By Date/Time

Received for Lab By: [signature] Date/Time: 9/13/24 1055

Remarks:

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF CUSTODY RECORD

MICROBAC®

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

1HI0968
HLW Engineering
PM: Heather Murphy

rinted: 8/26/2024 4:25:03P

www.keystonelabs.cor

SITE INFORMATION

Sampler: J&H

Project: South Dallas Co. - New Regs
Appendix Sampling

REPORT TO

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

INVOICE TO

Mike Fountas
South Dallas County Landfill
2000 Main Street, PO Box 263
Adel, IA 50003

SPECIAL INSTRUCTIONS

None

Turn Around Time

☒ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HI0968

Temperature 0.0

Turn-Cooler: No

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

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses		Lab Sample Number
-001	MW-5	Aqueous	GRAB	9/12/24	13:17	18	lndfll-app2-inorg-6020	lndfll-app2-org	07
-001	MW-10 NO SAMPLE	Aqueous	GRAB	/ /			lndfill-app1-voc-group	lndfll-app1-metals-6020	—
-001	MW-12	Aqueous	GRAB	9/12/24	14:58	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	08
-001	MW-15R	Aqueous	GRAB	9/12/24	14:40	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	09
-001	MW-20R	Aqueous	GRAB	9/12/24	14:31	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	10
-001	MW-21	Aqueous	GRAB	9/12/24	13:47	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	11
-001	MW-22	Aqueous	GRAB	9/12/24	11:56	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	12

Relinquished By: T. [signature] Date/Time

Relinquished By Date/Time

Received By Date/Time

Received for Lab By: [signature] 9/13/24 Date/Time 10:55

Remarks:

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF CUSTODY RECORD

MICROBAC®

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

1HI0968
HLW Engineering
PM: Heather Murphy

Printed: 8/26/2024 4:25:03P

www.keystonelabs.com

SITE INFORMATION

Sampler: Jeff H

Project: South Dallas Co. - New Regs Appendix Sampling

REPORT TO

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

INVOICE TO

Mike Fountas
South Dallas County Landfill
2000 Main Street, PO Box 263
Adel, IA 50003

SPECIAL INSTRUCTIONS

None

Turn Around Time

☒ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HI0968

Temperature 0.0

Turn-Cooler: No

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

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses		Lab Sample Number
-001	MW-25	Aqueous	GRAB	9/12/24	12:26	4	8260@vc as-t-6020	8260-base-analysis ba-t-6020	13
-001	MW-26	Aqueous	GRAB	9/12/24	12:40	4	8260@vc as-t-6020	8260-base-analysis ba-t-6020	14
-001	Duplicate	Aqueous	GRAB	9/12/24	13:47	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	15

Relinquished By: J. C. Ott Date/Time

Received By Date/Time

Relinquished By Date/Time

Received for Lab By: Laura Ford Date/Time: 9/13/24 1055

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Appendix D

Summary of Field Turbidity Measurements

South Dallas County Sanitary Landfill

Field Turbidity Over Time

No-Purge Sampling

	4/24/17	10/9/17	3/21/18	6/11/18	9/7/18	4/2/19	6/5/19	9/18/19	3/25/20	8/18/20	9/15/20	12/2/20	3/8/21	9/28/21	12/3/21	3/8/22	8/30/22	3/7/23	9/11/23	3/20/24	5/9/24	9/12/24	Max	Min	Ave	Std Dev
Well	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**				
2	1.94					0.61			4.8														**4.80**	**0.61**	**2.45**	**2.14**
4	7.58	11.1	3.88		2.92	10.5		6.26	3.25		106		3.57	15.6	2.26	3.75	6.52	2.35	5.31	5.8		5.03	**106.00**	**2.26**	**11.86**	**24.52**
5	31.4	28.1	13.0		5.83	30.5	127.5	8.48	13.23		23.6		24.7	52.7		9.78	164	305	70.94	40.45		5.81	**305.00**	**5.81**	**56.18**	**77.63**
9	0.73	5.81	1.59	12.6	21.6	6.52		59.7	3.7		7.67		3.67	5.71		3.23	2.82	3.86	14.42	6.83		3.8	**59.70**	**0.73**	**9.66**	**13.93**
12	35.8	3.8	39.6		11.2	37.6		88.1	98.96		37.4		115	52.8		243	12.9	346	41.43	88.49	13.89	17.3	**346.00**	**3.80**	**75.49**	**90.65**
15R	87.6	7.03	38.7		4.55	81.3		6.54	45.99		13.5		168	35.4		50.9	5.74	94.7	4.3	11		24.1	**168.00**	**4.30**	**42.46**	**45.56**
17	5.23	7.9	10.1		8.9	10.5		6.02	8.71		3.09		5.1	47.5		13	1.72	6.41	4.58	7.35		9.34	**47.50**	**1.72**	**9.72**	**10.49**
18	1.63	1.69	2.37		4.99	1.14		3.07	2.86		4.81		3.1	4.21		5.98	3.66	11.7	89.88	12.26		9.29	**89.88**	**1.14**	**10.17**	**21.53**
19A	2.13	10.1	0.61		3.71	2.7		1.91	1.17		2.65	1.11	1.88	3.86		2.87	2.47	1.98	2.5	2.41		1.69	**10.10**	**0.61**	**2.69**	**2.09**
20R	724	15.3	23.5		4.11	121		2.66	7.22		1.16		69.5	2.6		14.5	3.51	5.58	3.89	53.88		5.46	**724.00**	**1.16**	**66.12**	**178.47**
21	68.9	17.9	51.3		15.1	216		3.96	380.3		1.77		25.4	11.4		152	3.12	1000	2.43	215.1		7.28	**1000.00**	**1.77**	**135.75**	**254.90**
22	2.09	6.61	1.55		3.4	6.76		2.34	1.76		2.95		3.5			4.87	21.5	5.88		2.22		5.56	**21.50**	**1.55**	**5.07**	**5.07**
24	22	15.1	179		160	63.5		13.8	23.07	161.2	6.96		12.7	4.71		13.2	3.24	2.59	8.34	12.22		3.52	**179.00**	**2.59**	**41.48**	**61.49**
25	10.1	42.2	8.52		2.93	4.15			14.2		3.15		22.1	5.51		8.79	2.45	7.9	4.46	12.12		6.01	**42.20**	**2.45**	**10.31**	**10.24**
26	27.2	11.6	106		445	745		301	626.8		385		9.64	437		20.8	1000	350	67.51	26.81		16.5	**1000.00**	**9.64**	**285.99**	**306.35**
Max	**724.00**	**46.80**	**179.00**	**47.30**	**445.00**	**745.00**	**127.50**	**301.00**	**626.80**	**161.20**	**385.00**	**1.11**	**370.00**	**437.00**	**2.26**	**243.00**	**1000.00**	**1000.00**	**89.88**	**215.10**	**14.80**	**24.10**				
Min	**0.73**	**1.69**	**0.61**	**12.60**	**2.92**	**0.61**	**127.50**	**1.51**	**1.15**	**161.20**	**1.16**	**1.11**	**1.88**	**2.60**	**2.26**	**2.87**	**1.72**	**1.98**	**2.43**	**2.22**	**13.89**	**1.69**				
Median	**14.00**	**11.35**	**13.00**	**29.95**	**5.56**	**10.50**	**127.50**	**6.26**	**10.97**	**161.20**	**5.89**	**1.11**	**17.40**	**13.50**	**2.26**	**13.00**	**3.66**	**7.90**	**5.31**	**12.22**	**14.35**	**5.91**				
Average	**76.16**	**15.99**	**33.66**	**29.95**	**45.41**	**76.53**	**127.50**	**41.02**	**72.67**	**161.20**	**41.81**	**1.11**	**54.84**	**50.67**	**2.26**	**40.12**	**83.56**	**143.92**	**24.61**	**34.44**	**14.35**	**8.62**				

Appendix E

Summary of Prediction Limit Exceedances
2020 - Present

Spring 2020		Fall 2020	
MW-4*	Benzene	MW-4*	1,1-dichloroethane
	Chloroethane		1,4-dichlorobenzene
	dichlorodifluoromethane		Benzene
	Vinyl Chloride		Chloroethane
			cis-1,2-dichloroethene
			Vinyl Chloride
MW-5*	Bis(2ethylhexyl)phthalate	MW-5*	Chloroethane
	Chloroethane		
MW-21*	Barium	MW-21*	None
	Chloroethane		
MW-22*	Benzene	MW-22*	Benzene
	Vinyl Chloride		Chloroethane
			Vinyl Chloride

*** = Assessment Monitoring Well**

Spring 2021		Fall 2021	
MW-4*	1,4-dichlorobenzene	MW-4*	1,1-dichloroethane
	Benzene		1,2-dichloropropane
	Chloroethane		1,4-dichlorobenzene
			Acetone
			Benzene
			Bis(2ethylhexyl)phthalate
			Chloroethane
			cis-1,2-dichloroethene
			Vinyl Chloride
MW-5*	Chloroethane	MW-5*	None
MW-21*	Chloroethane	MW-21*	None
MW-22*	Benzene	MW-22*	None
	Chloroethane		
	Vinyl Chloride		

*** = Assessment Monitoring Well**

Spring 2022		Fall 2022	
MW-4*	1,4-dichlorobenzene	MW-4*	1,4-dichlorobenzene
	Benzene		Benzene
	Chloroethane		Chloroethane
			cis-1,2-dichloroethene
			Vinyl Chloride
MW-5*	None	MW-5*	Arsenic
			Copper
			Chloroethane
MW-21*	Chloroethane	MW-21*	None
MW-22*	Benzene	MW-22*	None

*** = Assessment Monitoring Well**

Spring 2023		Fall 2023	
MW-4*	1,2-dichloropropane	MW-4*	1,2-dichloropropane
	1,4-dichlorobenzene		1,4-dichlorobenzene
	Benzene		Benzene
	Chloroethane		Chloroethane
			cis-1,2-dichloroethene
			Vinyl Chloride
			Chromium
			Nickel
MW-5*	Chloroethane	MW-5*	None
MW-21*	Chloroethane	MW-21*	None
	Barium		
MW-22*	Benzene	MW-22*	None
	Vinyl Chloride		

*** = Assessment Monitoring Well**

Spring 2024		Fall 2024	
MW-4*	1,4-dichlorobenzene	MW-4*	1,4-dichlorobenzene
	Benzene		Benzene
	Chloroethane		Chloroethane
			cis-1,2-dichloroethene
MW-5*	Copper	MW-5*	Bis(2ethylhexyl)phthalate
			Nickel
MW-21*	None	MW-21*	None
MW-22*	None	MW-22*	None

*** = Assessment Monitoring Well**

Appendix F

Summary of Assessment Monitoring Results

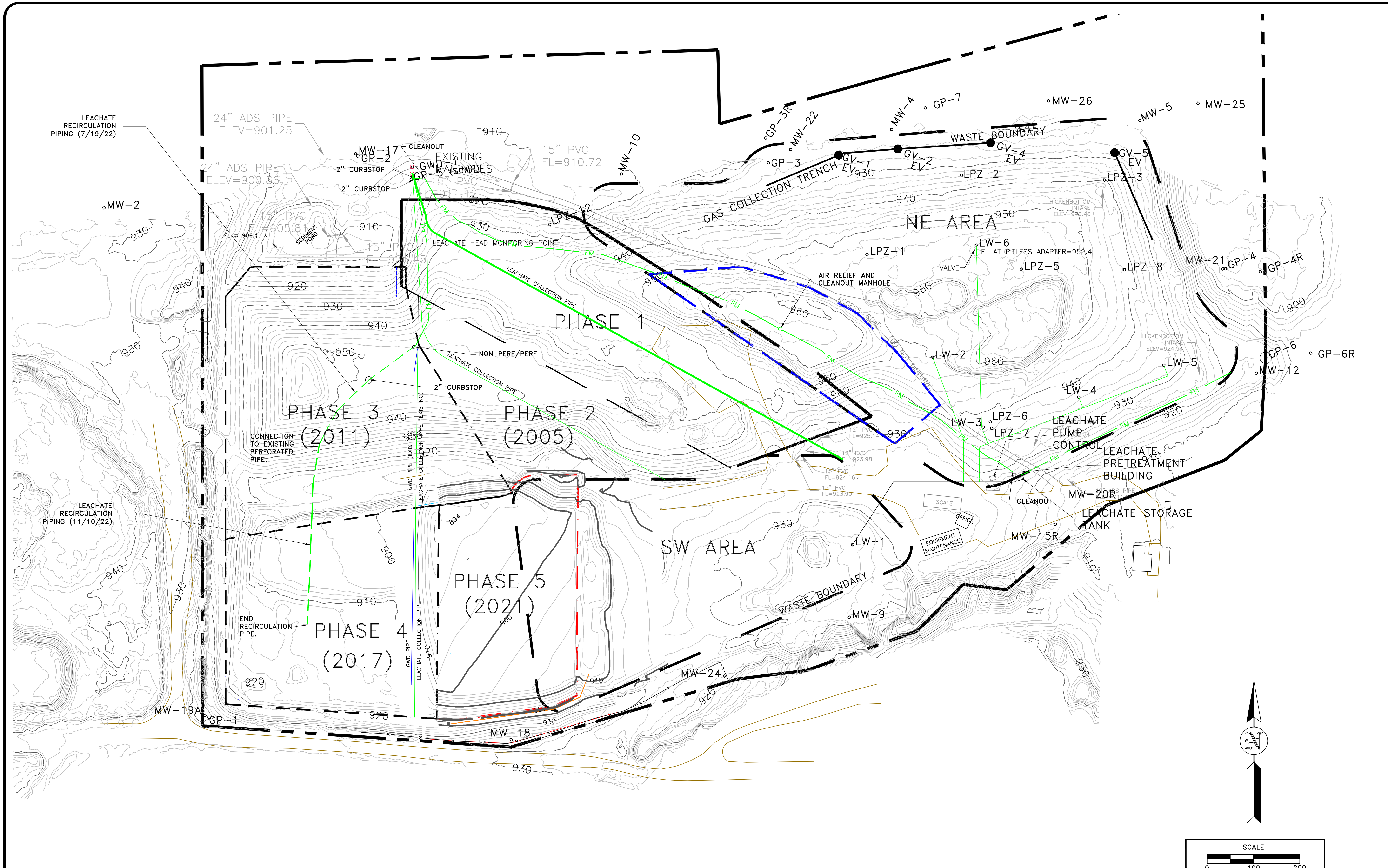
The full Appendix II sample events are highlighted in green.

Date	bis(2ethylhexyl)phthalate (ug/L)				
	MW-4	**MW-5**	**MW-21**	**MW-22**	
10/15/2014	<10	NT	NT	NT	
4/4/2015	NT	NT	NT	NT	
10/1/2015	NT	NT	NT	NT	
4/4/2016	NT	NT	<8	<8	
9/20/2016	**10.0**	**10.0**	NT	NT	
11/8/2016	<10	<10	NT	NT	
4/24/2017	NT	NT	NT	NT	
10/9/2017	NT	NT	NT	NT	
3/21/2018	NT	NT	NT	NT	
9/7/2018	NT	NT	NT	NT	
4/2/2019	NT	NT	NT	NT	
9/18/2019	NT	<6	NT	NT	
3/25/2020	NT	**8.0**	NT	NT	
9/15/2020	NT	NT	NT	NT	
3/8/2021	NT	<6	<15	<6	
9/28/2021	**12.0**	<6	NT	Dry	
3/8/2022	NT	<6	NT	NT	
8/30/2022	NT	NT	NT	NT	
3/7/2023	NT	NT	NT	NT	
9/11/2023	NT	NT	NT	NT	
3/20/2024	NT	NT	NT	NT	
9/12/2024	NT	**9.0**	NT	NT	

Date	dichlorodifluoromethane (ug/L)				
	MW-4	**MW-5**	**MW-21**	**MW-22**	
10/15/2014	**3.7**	NT	NT	NT	
4/4/2015	**1.1**	NT	NT	NT	
10/1/2015	<1.0	NT	NT	NT	
4/4/2016	**1.4**	NT	**1.0**	<1.0	
9/20/2016	**1.1**	<1.0	NT	NT	
4/24/2017	**1.3**	NT	NT	NT	
10/9/2017	**1.0**	NT	NT	NT	
3/21/2018	<1.0	NT	NT	NT	
9/7/2018	<1.0	NT	NT	NT	
4/2/2019	**2.6**	NT	NT	NT	
9/18/2019	<1.0	<1.0	NT	NT	
3/25/2020	**1.1**	<1.0	NT	NT	
9/15/2020	<1.0	NT	NT	NT	
3/8/2021	<1.0	NT	<1.0	<1.0	
9/28/2021	<1.0	NT	NT	Dry	
3/8/2022	<1.0	NT	NT	NT	
8/30/2022	NT	NT	NT	NT	
3/7/2023	NT	NT	NT	NT	
9/11/2023	NT	NT	NT	NT	
3/20/2024	NT	NT	NT	NT	
9/12/2024	NT	<1.0	NT	NT	

Appendix G

Leachate Collection System Layout Map



NOTES:
1. CONTOURS FROM DRONE SURVEY DATED JUNE 28, 2018.
2. CONTOURS IN PHASE 5 FROM FIELD SURVEY DATED JUNE 14, 2021.

FIGURE: G

REVISION	NO.	DATE
DRAWN JGH	PROJECT NO. 6045-21A	DATE 2/09/23

OVERALL SITE PLAN
LEACHATE COLLECTION SYSTEM
SOUTH DALLAS COUNTY SANITARY LANDFILL
ADEL, IOWA

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

Appendix H

Leachate Collection System Performance Evaluation Report

Appendix H.1- Volumes Pumped to Adel Wastewater Treatment Facility

Leachate Pumped to Adel
South Dallas County Sanitary Landfill
2024

Month	Gallons
January	4,600
February	2,428
March	8,106
April	864
May	2,115
June	1,131
July	1,091
August	1,633
September	1,933
October	1,594
November	1,834
December	1,344
TOTAL	**28,673** Gallons

Appendix H.2-Leachate Treatment Agreement with City of Adel

IOWA DEPARTMENT OF NATURAL RESOURCES

National Pollutant Discharge Elimination System (NPDES) Permit

OWNER NAME & ADDRESS

CITY OF ADEL
PO BOX 248
ADEL, IA 50003-0248

FACILITY NAME & ADDRESS

ADEL CITY OF STP
600 SOUTH 4TH STREET
ADEL, IA 50003

Section 33, T79N, R27W
Dallas County

IOWA NPDES PERMIT NUMBER: 2503001
DATE OF ISSUANCE: 12/01/2022
DATE OF EXPIRATION: 11/30/2027

YOU ARE REQUIRED TO FILE FOR RENEWAL OF THIS PERMIT BY: 06/03/2027
EPA NUMBER: IA0041921

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

Pursuant to rule 561-7.4, Iowa Administrative Code, you may appeal any condition of this permit by filing a written notice of appeal and request for administrative hearing with the director of the department within 60 days of permit issuance.

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

FOR THE DEPARTMENT OF NATURAL RESOURCES

By ____

Ryan Olive
NPDES Section, Environmental Services Division

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

Outfall No.: 001 DISCHARGE FROM A SEQUENCING BATCH REACTOR WASTEWATER TREATMENT FACILITY.

Receiving Stream: NORTH RACCOON RIVER

Route of Flow: NORTH RACCOON RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

Waters designated Class B(WW1) are those in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrates species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

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

Facility Name: ADEL CITY OF STP
Permit Number: 2503001

Effluent Limitations:

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

001 DISCHARGE FROM A SEQUENCING BATCH REACTOR WASTEWATER TREATMENT FACILITY.

Outfall: 001 Effective Dates: 12/01/2022 to 11/30/2027				
Parameter	**Season**	**Limit Type**	**Limits**	
CBOD5			**85% Removal Required**	
	Yearly	7 Day Average	40 MG/L	1,134 LBS/DAY
	Yearly	30 Day Average	25 MG/L	709 LBS/DAY
TOTAL SUSPENDED SOLIDS			**85% Removal Required**	
	Yearly	7 Day Average	45 MG/L	1,276 LBS/DAY
	Yearly	30 Day Average	30 MG/L	851 LBS/DAY
AMMONIA NITROGEN (N)				
	JAN	30 Day Average	17.6 MG/L	354.8 LBS/DAY
	JAN	Daily Maximum	17.6 MG/L	470.3 LBS/DAY
	FEB	30 Day Average	16.9 MG/L	407.4 LBS/DAY
	FEB	Daily Maximum	16.9 MG/L	446.3 LBS/DAY
	MAR	30 Day Average	11.3 MG/L	210.3 LBS/DAY
	MAR	Daily Maximum	17.0 MG/L	454.9 LBS/DAY
	APR	30 Day Average	8.5 MG/L	157.2 LBS/DAY
	APR	Daily Maximum	17.7 MG/L	477.9 LBS/DAY
	MAY	30 Day Average	9.7 MG/L	179.6 LBS/DAY
	MAY	Daily Maximum	17.3 MG/L	465.9 LBS/DAY
	JUN	30 Day Average	7.3 MG/L	135.4 LBS/DAY

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

Outfall: 001 Effective Dates: 12/01/2022 to 11/30/2027				
Parameter	**Season**	**Limit Type**	**Limits**	
AMMONIA NITROGEN (N)				
	JUN	Daily Maximum	16.5 MG/L	443.7 LBS/DAY
	JUL	30 Day Average	5.6 MG/L	103.6 LBS/DAY
	JUL	Daily Maximum	19.9 MG/L	538.1 LBS/DAY
	AUG	30 Day Average	5.3 MG/L	98.3 LBS/DAY
	AUG	Daily Maximum	18.4 MG/L	497.1 LBS/DAY
	SEP	30 Day Average	5.9 MG/L	109.0 LBS/DAY
	SEP	Daily Maximum	18.5 MG/L	501.8 LBS/DAY
	OCT	30 Day Average	8.7 MG/L	161.3 LBS/DAY
	OCT	Daily Maximum	17.7 MG/L	478.0 LBS/DAY
	NOV	30 Day Average	13.1 MG/L	241.2 LBS/DAY
	NOV	Daily Maximum	16.5 MG/L	447.5 LBS/DAY
	DEC	30 Day Average	13.9 MG/L	256.6 LBS/DAY
	DEC	Daily Maximum	17.9 MG/L	485.8 LBS/DAY
NITROGEN, TOTAL KJELDAHL (AS N)				
	Yearly	30 Day Average	252 LBS/DAY	
	Yearly	Daily Maximum	413 LBS/DAY	

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

Outfall: 001 Effective Dates: 12/01/2022 to 11/30/2027			
Parameter	**Season**	**Limit Type**	**Limits**
ACUTE TOXICITY, CERIODAPHNIA			
	Yearly	Daily Maximum	1 NO TOXICITY
ACUTE TOXICITY, PIMEPHALES			
	Yearly	Daily Maximum	1 NO TOXICITY
DISSOLVED OXYGEN			
	Yearly	Daily Minimum	1.2 MG/L
PH			
	Yearly	Daily Maximum	9.0 STD UNITS
	Yearly	Daily Minimum	6.3 STD UNITS
E. COLI			
	MAR	Geometric Mean	126 #/100 ML
	APR	Geometric Mean	126 #/100 ML
	MAY	Geometric Mean	126 #/100 ML
	JUN	Geometric Mean	126 #/100 ML
	JUL	Geometric Mean	126 #/100 ML
	AUG	Geometric Mean	126 #/100 ML
	SEP	Geometric Mean	126 #/100 ML
	OCT	Geometric Mean	126 #/100 ML
	NOV	Geometric Mean	126 #/100 ML

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

Monitoring and Reporting Requirements

(a) Samples and measurements taken shall be representative of the volume and nature of the monitored wastewater.

(b) Analytical and sampling methods specified in 40 CFR Part 136 or other methods approved in writing by the department shall be utilized. All effluent samples for which a limit applies must be analyzed using sufficiently sensitive methods (i.e. testing procedures) approved under 567 IAC Chapter 63 and 40 CFR Part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter I, subchapter N or O.

For the purposes of this paragraph, an approved method is sufficiently sensitive when:
(1) the method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or
(2) the method has the lowest ML of the approved analytical methods for the measured pollutant or pollutant parameter.

Samples collected for operational testing need not be analyzed by approved analytical methods; however, commonly accepted test methods should be used.

(c) You are required to report all data including calculated results needed to determine compliance with the limitations contained in this permit. The results of any monitoring not specified in this permit performed at the compliance monitoring point and analyzed according to 40 CFR Part 136 shall be included in the calculation and reporting of any data submitted in accordance with this permit. This includes daily maximums and minimums, 30-day averages and 7-day averages for all parameters that have concentration (mg/l) and mass (lbs/day) limits. In addition, flow data shall be reported in million gallons per day (MGD).

(d) Records of monitoring activities and results shall include for all samples: the date, exact place and time of the sampling; the dates the analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses.

(e) Results of all monitoring shall be recorded on forms provided by, or approved by, the department, and shall be submitted to the appropriate regional field office of the department by the fifteenth day following the close of the reporting period. Your reporting period is on a MONTHLY basis, ending on the last day of each reporting period.

(f) Operational performance monitoring for treatment unit process control shall be conducted to ensure that the facility is properly operated in accordance with its design. The results of any operational performance monitoring need not be reported to the department, but shall be maintained in accordance with rule 567 IAC 63.2 (455B). The results of any operational performance monitoring specified in this permit shall be submitted to the department in accordance with these reporting requirements.

(g) Chapter 63 of the rules provides you with further explanation of your monitoring requirements.

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from 12/01/2022 to 11/30/2027				
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE - TOTAL
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE - STORM WATER BASIN RETURN
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE - STORM WATER BASIN INFLUENT
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE - MECHANICAL PLANT INFLUENT
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	2 TIMES PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	NITROGEN, TOTAL KJELDAHL (AS N)	1 EVERY MONTH	24 HOUR COMPOSITE	RAW WASTE
001	PH	2 TIMES PER WEEK	GRAB	RAW WASTE
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	TEMPERATURE	2 TIMES PER WEEK	GRAB	RAW WASTE
001	TOTAL SUSPENDED SOLIDS	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	FINAL EFFLUENT
001	ACUTE TOXICITY, CERIODAPHNIA	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	ACUTE TOXICITY, PIMEPHALES	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	AMMONIA NITROGEN (N)	2 TIMES PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	CBOD5	2 TIMES PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	DISSOLVED OXYGEN	2 TIMES PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	E. COLI	GEO. MEAN 1/3 MONTHS	GRAB	EFFLUENT AFTER DISINFECTION
001	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	NITROGEN, TOTAL KJELDAHL (AS N)	1 EVERY MONTH	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	PH	2 TIMES PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	TEMPERATURE	2 TIMES PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	TOTAL SUSPENDED SOLIDS	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION

Facility Name: ADEL CITY OF STP
Permit Number: 2503001

Special Monitoring Requirements

Outfall # **Description**

001 **FLOW**

To calculate the total raw waste flow (TOTAL RAW WASTE FLOW = MECHAINICAL PLANT INFLUENT+ INFLUENT TO STORM WATER RETENTION BASIN- STORM WATER BASIN RETURN)

NITROGEN, TOTAL (AS N)

Total nitrogen shall be determined by testing for Total Kjeldahl Nitrogen (TKN) and nitrate + nitrite nitrogen and reporting the sum of the TKN and nitrate + nitrite results (reported as N). Nitrate + nitrite can be analyzed together or separately.

E. COLI

The limit for E. coli specified in the limit pages of this permit is a geometric mean. The disinfection season is established in the Iowa Administrative Code, Subparagraph 567 IAC 61.3(3)“a”(1), and is in effect from March 15 to November 15. Any disinfection system (chlorine, UV light, etc.) shall be operated to comply with the limit during the entire disinfection season.

The facility must collect and analyze a minimum of five samples in one calendar month during each 3-month period from March 15 to November 15. The 3-month periods are March – May, June – August, and September – November. The collection of five samples in each 3-month period will result in a minimum of 15 samples being collected during a calendar year. For example, for the first 3-month period, the operator may choose April as the calendar month to collect the 5 individual E. coli samples to determine compliance with the limits. The operator may also choose the months of March or May as well, as long as each of the 5 samples is collected during a single calendar month. The same principle applies to the other two 3-month periods during the disinfection season. The following requirements apply to the individual samples collected in one calendar month:

Samples must be spaced over one calendar month.
No more than one sample can be collected on any one day.
There must be a minimum of two days between each sample.
No more than two samples may be collected in a period of seven consecutive days.

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

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

E. COLI (Continued)

The geometric mean can be calculated in one of the following ways:

Use a scientific calculator that can calculate the powers of numbers.
Enter the samples in Microsoft Excel and use the function "GEOMEAN" to perform the calculation.
Use the geometric mean calculator on the Iowa DNR webpage at:
https://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting/NPDES-Operator-Information/Bacteria-Sampling

Facility Name: ADEL CITY OF STP
Permit Number: 2503001

ADDITIONAL OPERATING, MONITORING AND REPORTING REQUIREMENTS

1. In addition to the monitoring requirements specified elsewhere in this permit, by **December 1, 2023** you shall sample, analyze and submit the results of at least one analysis representative of the actual discharge for oil and grease, chloride, sulfate and nitrate + nitrite nitrogen from outfall 001 (SBR treatment facility). The samples you collect and analyze must be of the final effluent collected on a day when the plant is operating normally. The results of these analyses will be evaluated and the department will reopen this permit if it is determined that there is a reasonable potential for the discharge to cause or contribute to a violation of a water quality standard for any parameter. The lab report with the analysis results must be mailed to the address shown below within two months of permit issuance.

2. In addition to the monitoring requirements specified elsewhere in this permit, by **December 1, 2023** you shall sample, analyze and submit the results for one scan of Part B of the NPDES permit application from outfall 001 (SBR treatment facility). The samples you collect and analyze must be of the final effluent collected on a day when the plant is operating normally. The results of these analyses will be evaluated and the department will reopen this permit if it is determined that there is a reasonable potential for the discharge to cause or contribute to a violation of a water quality standard for any parameter. The lab report with the analysis results must be mailed to the address shown below within two months of permit issuance.

npdes.mail@dnr.iowa.gov
Subject: Effluent Test Results (2503001)
Part B Test Results (2503001)

Facility Name: ADEL CITY OF STP
Permit Number: 2503001

Significant Industrial User Discharges:

Significant Industrial User: SOUTH DALLAS COUNTY LANDFILL AGENCY

Outfall # **Outfall Description**

001 **LANDFILL LEACHATE IS PIPED TO THE WASTEWATER TREATMENT PLANT FOR DISPOSAL.**

Significant Industrial User Effluent Limitations

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

SOUTH DALLAS COUNTY LANDFILL AGENCY
Outfall: 001 Effective Dates: 12/01/2022 to 11/30/2027

Parameter	Season	Limit Type	Limit Values
FLOW			
	Yearly	30 Day Average	0.020 MGD
	Yearly	DAILY MAXIMUM	0.026 MGD
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	30 Day Average	139.0 LBS/DAY
	Yearly	DAILY MAXIMUM	216.7 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	30 Day Average	41.7 LBS/DAY
	Yearly	DAILY MAXIMUM	75.8 LBS/DAY
AMMONIA NITROGEN (N)			
	Yearly	30 Day Average	20.0 LBS/DAY
	Yearly	DAILY MAXIMUM	86.7 LBS/DAY
PH			
	Yearly	DAILY MAXIMUM	7.8 STD UNITS
	Yearly	DAILY MINIMUM	6.5 STD UNITS

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

Monitoring and Reporting Requirements

(a) Samples and measurements taken shall be representative of the volume and nature of the monitored wastewater.

(b) Analytical and sampling methods specified in 40 CFR Part 136 or other methods approved in writing by the department shall be utilized. All effluent samples for which a limit applies must be analyzed using sufficiently sensitive methods (i.e. testing procedures) approved under 567 IAC Chapter 63 and 40 CFR Part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter I, subchapter N or O.

For the purposes of this paragraph, an approved method is sufficiently sensitive when:
(1) the method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or
(2) the method has the lowest ML of the approved analytical methods for the measured pollutant or pollutant parameter.

Samples collected for operational testing need not be analyzed by approved analytical methods; however, commonly accepted test methods should be used.

(c) You are required to report all data including calculated results needed to determine compliance with the limitations contained in this permit. The results of any monitoring not specified in this permit performed at the compliance monitoring point and analyzed according to 40 CFR Part 136 shall be included in the calculation and reporting of any data submitted in accordance with this permit. This includes daily maximums and minimums, 30-day averages and 7-day averages for all parameters that have concentration (mg/l) and mass (lbs/day) limits. In addition, flow data shall be reported in million gallons per day (MGD).

(d) Records of monitoring activities and results shall include for all samples: the date, exact place and time of the sampling; the dates the analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses.

(e) Results of all monitoring shall be recorded on forms provided by, or approved by, the department, and shall be submitted to the appropriate regional field office of the department by the fifteenth day following the close of the reporting period. Your reporting period is on a MONTHLY basis, ending on the last day of each reporting period.

(f) Operational performance monitoring for treatment unit process control shall be conducted to ensure that the facility is properly operated in accordance with its design. The results of any operational performance monitoring need not be reported to the department, but shall be maintained in accordance with rule 567 IAC 63.2 (455B). The results of any operational performance monitoring specified in this permit shall be submitted to the department in accordance with these reporting requirements.

(g) Chapter 63 of the rules provides you with further explanation of your monitoring requirements.

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

SOUTH DALLAS COUNTY LANDFILL AGENCY				
Outfall	**Wastewater Parameter**	**Sample Frequency**	**Sample Type**	**Monitoring Location**
001	AMMONIA NITROGEN (N)	1 EVERY MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	1 EVERY MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	FLOW	1 EVERY MONTH	24 HOUR TOTAL	PRIOR TO DISCHARGE TO CITY SEWER
001	PH	1 EVERY MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	SANITARY LANDFILL LEACHATE	1 EVERY 12 MONTHS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	TOTAL SUSPENDED SOLIDS	1 EVERY MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

ADDITIONAL MONITORING REQUIREMENTS

SOUTH DALLAS COUNTY LANDFILL AGENCY

The permittee shall analyze a representative sample of the landfill leachate discharge from South Dallas County Landfill Agency at least annually for each of the pollutants listed below. In addition, the permittee shall monitor the volume of waste discharged and BOD5, TSS, Ammonia Nitrogen at the frequencies specified on page 12 of this permit.

Pollutant
Biochemical Oxygen Demand (BOD5)
Total Suspended Solids
Ammonia Nitrogen (NH3-N)
Oil and Grease (O&G)
pH
Chloride (as Cl)
Sulfate (as SO4)
Arsenic, Total (as As)
Chromium, Total (as Cr)
Copper, Total (as Cu)
Iron, Total (as Fe)
Lead, Total (as Pb)
Nickel, Total (as Ni)
Selenium, Total (as Se)
Zinc, Total (as Zn)
Benzoic Acid
Chlorobenzene
Ethylbenzene
p-Cresol
Phenol
Toluene

The permittee will indicate completion of the annual leachate monitoring by entering a “1” in the “LEACHAT” column on the Discharge Monitoring Report (DMR) spreadsheet on the day that the samples are collected. Select the No Discharge Indicator “NOT REQUIRED/MP” on the DMR spreadsheet during the months that the monitoring is not required.

Results of annual monitoring shall be submitted to the addresses below:

NPDES.mail@dnr.iowa.gov	Iowa DNR Field Office 5
Subject: Landfill Leachate Scan (2503001)	502 E. 9th St
	Des Moines, IA 50319-0034

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

Outfall Number: 001

Ceriodaphnia and Pimephales Toxicity Effluent Testing

1. For facilities that have not been required to conduct toxicity testing by a previous NPDES permit, the initial annual toxicity test shall be conducted within three (3) months of permit issuance. For facilities that have been required to conduct toxicity testing by a previous NPDES permit, the initial annual toxicity test shall be conducted within twelve months (12) of the last toxicity test.

2. The test organisms that shall be used for acute toxicity testing are Ceriodaphnia dubia and Pimephales promelas. The acute toxicity testing procedures used to demonstrate compliance with permit limits shall be those listed in 567 IAC 63.4 and 40 CFR Part 136 and adopted by reference in rule 567 IAC 63.1(1). The method for measuring acute toxicity is specified in the EPA document EPA-821-R-02-012, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th edition, October 2002.

3. The diluted effluent sample must contain a minimum of 76.90 % effluent and no more than 23.10 % of culture water.

4. One valid positive toxicity result will require, at a minimum, quarterly testing for effluent toxicity until three successive tests are determined not to be positive.

5. Two successive valid positive toxicity results or three positive results out of five successive valid effluent toxicity tests will require a toxicity reduction evaluation to be completed to eliminate the toxicity.

6. A non-toxic test result shall be indicated as a "1" on the discharge monitoring report (DMR). A toxic test result shall be indicated as a "2" on the DMR. DNR Form 542-1381 shall also be submitted to the DNR field office along with the DMR.

Ceriodaphnia and Pimephales Toxicity Effluent Limits

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

Definition: "Positive toxicity result" means a statistical difference of mortality rate between the control and the diluted effluent sample. For more information, see the EPA document EPA-821-R-02-012, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th edition, October 2002.

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

Design Capacity

Design: 2

The design capacity for the treatment works is specified in Construction Permit Number 2020-0362-S, issued April 24, 2020. The treatment plant is designed to treat:

* An average dry weather (ADW) flow of 0.980 Million Gallons Per Day (MGD).
* An average wet weather (AWW) flow of 3.400 Million Gallons Per Day (MGD).
* A maximum wet weather (MWW) flow of 5.440 Million Gallons Per Day (MGD).
* A design 5-day biochemical oxygen demand (BOD5) load of 1,935 lbs/day.
* A design Total Kjeldahl Nitrogen (TKN) load of 460 lbs/day.
* A design Total Suspended Solids (TSS) load of 6,015 lbs/day

Operator Certification Type/Grade: WW/III

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

SEWAGE SLUDGE HANDLING AND DISPOSAL REQUIREMENTS

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

1. The permittee shall comply with all existing Federal and State laws and regulations that apply to the use and disposal of sewage sludge and with technical standards developed pursuant to Section 405(d) of the Clean Water Act when such standards are promulgated. If an applicable numerical limit or management practice for pollutants in sewage sludge is promulgated after issuance of this permit that is more stringent than a sludge pollutant limit or management practice specified in existing Federal or State laws or regulations, this permit shall be modified, or revoked and reissued, to conform to the regulations promulgated under Section 405(d) of the Clean Water Act. The permittee shall comply with the limitation no later than the compliance deadline specified in the applicable regulations.

2. The permittee shall provide written notice to the Department of Natural Resources prior to any planned changes in sludge disposal practices.

3. Land application of sewage sludge shall be conducted in accordance with criteria established in rule IAC 567 67.1 through 67.11 (455B).

Facility Name: ADEL CITY OF STP

Permit Number: 2503001

SIGNIFICANT INDUSTRIAL USER LIMITATIONS, MONITORING AND REPORTING REQUIREMENTS

1. You must enforce the pollutant limits for each significant industrial user that are listed elsewhere in this permit. Violation of a treatment agreement limit is prohibited by subrule 567 IAC 62.1(6). Monitoring of each significant industrial user is required elsewhere in this permit.

2. Monitoring of each significant industrial user is required elsewhere in this permit. Results of the required monitoring shall be included on your discharge monitoring report, which must be submitted by the fifteenth of the following month.

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

   (a) 180 days prior to the introduction of pollutants to your facility from a significant industrial user. A significant industrial user means an industrial user of a treatment works that:
      (1) Discharges an average of 25,000 gallons per day or more of process wastewater excluding sanitary, noncontact cooling and boiler blowdown wastewater;
      (2) Contributes a process waste stream which makes up five percent or more of the average dry weather hydraulic or organic capacity of the publicly-owned treatment works:
      (3) Is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; or
      (4) Is designated by the department as a significant industrial user on the basis that the contributing industry, either singly or in combination with other contributing industries, has a reasonable potential for adversely affecting the operation of or effluent quality from the publicly-owned treatment works or for violating any pretreatment standards or requirements.

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

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

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

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

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

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

Nutrient Reduction Strategy Construction Schedule

Total Nitrogen and Total Phosphorus – Outfall 001

The City of Adel shall implement the strategy for reducing total nitrogen and total phosphorus in the final effluent. Construction of improvements shall be implemented according to the following schedule:

- Complete construction of improvements by **January 1, 2023.**
- Complete 1 year of treatment plant optimization for nutrient reduction by **January 1, 2024.**
- Submit one year of at least weekly total nitrogen and total phosphorus sampling data from the raw waste and final effluent by **February 1, 2025**. The report must include the results of all monitoring for total nitrogen and total phosphorus in the raw waste and final effluent between January 1, 2024 and December 31, 2024.

Progress reports shall be submitted by the required due dates. Within fourteen (14) days following all dates of construction completion, optimization completion, and one year of monitoring, the permittee shall provide written notice of compliance with the scheduled event along with any applicable data. All written notices and progress reports shall be sent to the following addresses:

npdes.mail@dnr.iowa.gov
Subject: NRS Report (2503001)

Iowa Department of Natural Resources
Environmental Services Division
Regional Office #5
502 East 9th Street
Des Moines, IA 50319

STANDARD CONDITIONS

1. **ADMINISTRATIVE RULES -** Rules of the Iowa Department of Natural Resources (department) that govern the operation of a facility in connection with this permit are published in Part 567 of the Iowa Administrative Code (IAC) in Chapters 60-65, 67, and 121. Reference to the term "rule" in this permit means the designated provision of Part 567 of the IAC. Reference to the term "CFR" means the Code of Federal Regulations.

2. **LIMIT DEFINITIONS -**
   (a) 7 day average means the arithmetic mean (average) of pollutant parameter values for samples collected in a period of seven consecutive days. The first 7-day period shall begin with the first day of the month. ***{567 IAC 60.2}***
   (b) 30 day average means the arithmetic mean of pollutant parameter values for samples collected in a period of 30 consecutive days. ***{567 IAC 60.2}***
   (c) Daily maximum means the total discharge by mass, volume, or concentration during a twenty-four hour period. ***{567 IAC 60.2}***

3. **MONITORING AND RECORDS OF OPERATION -**
   (a) Electronic reporting. Records of operation required by this permit shall be electronically submitted to the department within 15 days following the close of the monthly reporting period, in accordance with the monitoring requirements incorporated in this permit, unless an approval for paper submittal of records of operation has been obtained in accordance with 567 IAC 63.7(2).
   (b) Maintenance of records. You shall retain for a minimum of three years all paper and electronic records of monitoring activities and results including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records. ***{567 IAC 63.2(3)}***
   (c) Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years, or both. ***{40 CFR 122.41(j)(5)}***

4. **USE OF CERTIFIED LABORATORIES -** Analyses of wastewater, groundwater or sewage sludge that are required to be submitted as a result of this permit must be performed by a laboratory certified by the State of Iowa. Routine, on-site monitoring for pH, temperature, dissolved oxygen, total residual chlorine and other pollutants that must be analyzed immediately upon sample collection, physical measurements, and operational performance monitoring specified in 567 IAC 63.3(4) are excluded from this requirement. ***{567 IAC 63.1}***

5. **DUTY TO PROVIDE INFORMATION -** You must furnish to the director, within a reasonable time, any information the director may request to determine compliance with this permit or determine whether cause exists for amending, revoking and reissuing, or terminating this permit, in accordance with 567 IAC 64.3(11)"*c*". You must also furnish to the director, upon request, copies of any records required to be kept by this permit. If you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, you must promptly submit such facts or information. If you become aware that you failed to submit any relevant facts in any report to the director, including records of operation, you shall promptly submit such facts or information. ***{567 IAC 60.4(2)"a", 567 IAC 63.7(6), 40 CFR 122.41(h)}***

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

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

8. **DUTY TO MITIGATE -** You shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. ***{567 IAC 64.7(7)"i", 40 CFR 122.41(d)}***

9. **PROPER OPERATION AND MAINTENANCE -** All facilities and control systems shall be operated as efficiently as possible and maintained in good working order. A sufficient number of staff, adequately trained and knowledgeable in the operation of your facility, shall be retained at all times. Adequate laboratory controls and appropriate quality assurance procedures shall be provided to maintain compliance with the conditions of this permit. ***{567 IAC 64.7(7)"f", 40 CFR 122.41(e)}***

10. **SIGNATORY REQUIREMENTS -** Applications, discharge monitoring reports, or other information submitted to the department in connection with this permit must be signed and certified in accordance with 567 IAC 64.3(8).

11. **TRANSFER OF TITLE OR OWNER ADDRESS CHANGE -** If title to your facility, or any part of it, is transferred, the new owner shall be subject to this permit. You are required to notify the new owner of the requirements of this permit in writing prior to any transfer of title. The department shall be notified in writing within 30 days of the occurrence. No transfer of the authorization to discharge from the facility represented by the permit shall take place prior to notifying the department of the transfer of title. Whenever the address of the owner is changed, the department shall be notified in writing within 30 days of the address change. ***{567 IAC 64.14}***

STANDARD CONDITIONS

12. **PERMIT MODIFICATION, SUSPENSION OR REVOCATION -** This permit may be amended, revoked and reissued, or terminated in whole or in part for cause including, but not limited to, those specified in 567 IAC 64.3(11)*"b"*. This permit may be modified due to conditions or information on which this permit is based, including any new standard the department may adopt that would change the required effluent limits. If a toxic pollutant is present in your discharge and more stringent standards for toxic pollutants are established under Section 307(a) of the Clean Water Act, this permit will be modified in accordance with the new standards. The filing of a request for a permit amendment, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. ***{567 IAC 64.3(11)"d", 64.7(7)"b" and "g", 40 CFR 122.62(a)(6)}***

13. **TWENTY-FOUR HOUR REPORTING -** You shall report any noncompliance that may endanger human health or the environment, including, but not limited to, violations of maximum daily limits for any toxic pollutant (listed as toxic in Section 307(a)(1) of the Clean Water Act) or hazardous substance (as designated in 40 CFR Part 116 pursuant to 311 of the Act). Information shall be provided orally to the appropriate regional field office of the department within 24 hours from the time you become aware of the circumstances. A written submission that includes a description of noncompliance and its cause; the period of noncompliance including exact dates and times; whether the noncompliance has been corrected or the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent a reoccurrence of the noncompliance must be provided to the appropriate field office within 5 days of the occurrence. ***{567 IAC 63.12, 40 CFR 122.41(l)(6)}***

14. **OTHER NONCOMPLIANCE -** You shall report all instances of noncompliance not reported under Condition #13 at the time discharge monitoring reports are submitted. The report shall contain the information listed in Condition #13. You shall give advance notice to the appropriate regional field office of the department of any planned activity which may result in noncompliance with permit requirements. Notice is required only when previous notice has not been given to any other section of the department. ***{567 IAC 63.7(5), 63.14 and 63.15, 40 CFR 122.41(l)(7)}***

15. **INSPECTION OF PREMISES, RECORDS, EQUIPMENT, METHODS AND DISCHARGES -** You are required to permit authorized personnel to:
    (a) Enter upon the premises where a regulated facility or activity is located or conducted or where records are kept under conditions of this permit;
    (b) Provide access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    (c) Inspect, at reasonable times, any facilities, equipment, practices or operations regulated or required under this permit; and
    (d) Sample or monitor, at reasonable times, to assure compliance or as otherwise authorized by the Clean Water Act.
    {567 IAC 64.7(7)"c", 40 CFR 122.41(i)}

16. **NOTICE OF CHANGED CONDITIONS -** You are required to notify the director of any changes in existing conditions or information on which this permit is based, including, but not limited to, the following:
    (a) If your facility is a publicly owned treatment works (POTW) or otherwise accepts waste for treatment from an indirect discharger or industrial contributor, you must notify the director if there is any substantial change in the volume or character of pollutants being introduced to the POTW by an indirect discharger or industrial contributor. See 567 IAC 64.3(5) and 64.7(7)"*d*" for further requirements. ***{40 CFR 122.42(b)}***
    (b) If your facility has a manufacturing, commercial, mining, or silviculture discharge, you must notify the director as soon as you know or have reason to believe that any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in this permit. ***{40 CFR 122.42(a)}***
    (c) You must notify the director if you have begun or will begin to use or manufacture, as an intermediate or final product or byproduct, any toxic pollutant which was not reported in the permit application. ***{40 CFR 122.21(g)(9})***

17. **PLANNED CHANGES -** You shall give notice to the appropriate regional field office of the department 30 days prior to any planned physical alterations or additions to the permitted facility. Facility expansions, production increases, or process modifications which result in new or increased discharges of pollutants must be reported by submission of a new permit application. If any modification of, addition to, or construction of a disposal system is to be made, you must first obtain a written construction permit from this department. In addition, no construction activity that will result in disturbance of one acre or more shall be initiated without first obtaining coverage under NPDES General Permit No. 2.
    Notice is required only when:
    (a) Notice has not been given to any other section of the department:
    (b) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as defined in 567 IAC 60.2;
    (c) The alteration or addition results in a significant change in sludge use or disposal practices; or
    (d) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in the permit.
    {567 IAC 63.13, 567 IAC 64.2 and 64.7(7)"a"}

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

STANDARD CONDITIONS

19. BYPASSES - "Bypass" means the diversion of waste streams from any portion of a treatment facility or collection system. A bypass does not include internal operational waste stream diversions that are part of the design of the treatment facility, maintenance diversions where redundancy is provided, diversions of wastewater from one point in a collection system to another point in a collection system, or wastewater backups into buildings that are caused in the building lateral or private sewer line. ***{567 IAC 60.2)}***

(a) Prohibition. Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited, in accordance with 567 IAC 63.6(1). The department may not assess a civil penalty against a permittee for a bypass if the permittee has complied with all of the following:

i. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

iii. The permittee submitted notices as required by 567 IAC 63.6.

(b) Anticipated bypass. Except for bypasses that occur as a result of mechanical failure or acts beyond the control of the owner or operator of a waste disposal system (unanticipated bypasses), the owner or operator shall obtain written permission from the department prior to any discharge of sewage or wastes from a waste disposal system not authorized by this permit. The Director may approve an anticipated bypass after considering its adverse effects if the Director determines that it will meet the three conditions listed above and a request for bypass has been submitted to the appropriate regional field office of the department at least ten days prior to the expected event, in accordance with the requirements listed in 567 IAC 63.6(2).

(c) Unanticipated bypass. In the event that a bypass or upset occurs without prior notice having been provided pursuant to 567 IAC 63.6(2) or as a result of mechanical failure or acts beyond the control of the owner or operator, the owner or operator of the treatment facility or collection system shall notify the department by telephone as soon as possible but not later than 24 hours after the onset or discovery in accordance with the requirements in 567 IAC 63.6(3). A written submission describing the bypass shall also be provided within five days of the time the permittee becomes aware of the bypass, in accordance with the requirements in 567 IAC 63.6(3)"*d*".

(d) Reporting. Bypasses shall be reported in accordance with 567 IAC 63.6.

{567 IAC 63.6}

20. UPSETS - "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(a) Effect of an upset. An upset constitutes an affirmative defense to the assessment of a civil penalty for noncompliance with technology-based permit effluent limitations if the requirements of paragraph (b) of this condition are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(b) Conditions necessary for demonstration of an upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed operating logs or other relevant evidence, that;

i. An upset occurred and that the permittee can identify the cause(s) of the upset;

ii. The permitted facility was at the time being properly operated;

iii. The permittee submitted notice of the upset to the department in accordance with 567 IAC 63.6(3); and

iv. The permittee complied with any remedial measures required by the department in accordance with 567 IAC 63.6(6)"*b*"(4).

(c) Burden of Proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

{567 IAC 63.6}

21. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. ***{567 IAC 64.7(7)"j", 40 CFR 122.41(c)}***

22. PROPERTY RIGHTS - This permit does not convey any property rights of any sort or any exclusive privilege. ***{567 IAC 64.4(3)"b", 40 CFR 122.41(g)}***

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

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

Appendix H.3 – Leachate Testing Results

Keystone Laboratories - Newton

CERTIFICATE OF ANALYSIS

1HA0151

South Dallas County Landfill

Mike Fountas
2000 Main Street, PO Box 263
Adel, IA 50003

Project Name: Monthly Sampling

Project / PO Number: / [none]
Received: 01/03/2024
Reported: 01/17/2024

Analytical Testing Parameters

Client Sample ID: South Dallas County
Sample Matrix: Water
Lab Sample ID: 1HA0151-01
Collected By: MF
Collection Date: 01/03/2024 8:00

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 150.1								
pH	**7.5**	0.5	pH	1	**I-03**	01/04/24 0906	01/04/24 0944	CHP
SM 5210 B								
BOD (5 day)	**12**	5	mg/L	3		01/04/24 1252	01/04/24 1308	BDF
TIMBERLINE								
Nitrogen, Ammonia	**53.9**	1.00	mg/L	10		01/16/24 0900	01/16/24 1532	LJS
USGS I-3765-85								
Total Suspended Solids (TSS)	**44**	1	mg/L	1		01/05/24 0944	01/05/24 1640	RDH

Definitions

I-03: Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.

RL: Reporting Limit

Report Comments

Reviewed and Approved By:

Heather Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
01/17/24 11:32

Keystone LABORATORIES
A Microbac Company

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

1 H A 0 1 5 1
South Dallas County Landfill
PM: Heather Murphy

www.keystonelabs.com

SITE INFORMATION

Sampler:

Project: Monthly Sampling

REPORT TO

Mike Fountas
South Dallas County Landfill
2000 Main Street, PO Box 263
Adel, IA 50003

INVOICE TO

Mike Fountas
South Dallas County Landfill
2000 Main Street, PO Box 263
Adel, IA 50003

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

LAB USE ONLY

Work Order 1HA0151

Temperature 0.0

Turn-Cooler: Yes

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

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	South Dallas County	Water	GRAB	1/3/24	8 AM	2	bod-5210, nh3-timberline, ph-150.1, tss-i-3765-85	01

Relinquished By	Date/Time	Relinquished By	Date/Time
Owen	1-3-24 800 AM		

Received By	Date/Time	Received for Lab By	Date/Time
		Maher	1-3-24 12:10

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1446

Project Description

South Dallas Co- Leachate

For:

Todd Whipple

HLW Engineering

PO Box 314

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Thursday, April 4, 2024

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

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

Microbac Laboratories, Inc.

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

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1446

HLW Engineering

Todd Whipple
PO Box 314
Story City, IA 50248

Project Name: South Dallas Co- Leachate

Project / PO Number: N/A
Received: 03/21/2024
Reported: 04/04/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Leachate	1HC1446-01	Water	GRAB		03/20/24 15:10	03/21/24 09:48

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1446

Analytical Testing Parameters

Client Sample ID:	Leachate		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1446-01	**Collection Date:**	03/20/2024 15:10

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624		**Method Notes:** PH-6						
Toluene	<1.0	1.0	ug/L	1		03/27/24 0000	03/27/24 1425	CSM
Chlorobenzene	**2.0**	1.0	ug/L	1		03/27/24 0000	03/27/24 1425	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		03/27/24 0000	03/27/24 1425	CSM
Surrogate: Dibromofluoromethane	92.0	Limit: 79-129	% Rec	1		03/27/24 0000	03/27/24 1425	CSM
Surrogate: 1,2-Dichloroethane-d4	95.8	Limit: 66-134	% Rec	1		03/27/24 0000	03/27/24 1425	CSM
Surrogate: Toluene-d8	97.8	Limit: 91-113	% Rec	1		03/27/24 0000	03/27/24 1425	CSM
Surrogate: 4-Bromofluorobenzene	99.0	Limit: 83-112	% Rec	1		03/27/24 0000	03/27/24 1425	CSM

Determination of Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 625								
Phenol	<100	100	ug/L	10		03/25/24 1217	04/01/24 1249	EPP
(3 & 4)-Methylphenol	<100	100	ug/L	10		03/25/24 1217	04/01/24 1249	EPP
Surrogate: 2-Fluorophenol	73.7	Limit: 19-139	% Rec	10		03/25/24 1217	04/01/24 1249	EPP
Surrogate: Phenol-d6	77.1	Limit: 14-154	% Rec	10		03/25/24 1217	04/01/24 1249	EPP
Surrogate: 2,4,6-Tribromophenol	91.8	Limit: 21-151	% Rec	10		03/25/24 1217	04/01/24 1249	EPP

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
5310B								
Total Organic Carbon	**1.15**	0.50	mg/L	1		03/27/24 0000	03/27/24 1202	CSM
EPA 150.1								
pH	**7.1**	0.5	pH	1	**I-03**	03/26/24 0834	03/26/24 1516	BSS
EPA 1664A								
Oil and Grease	**17**	4	mg/L	1	**PH-3a**	03/26/24 0941	03/27/24 1600	CCB
SM 5210 B								
BOD (5 day)	**72**	6	mg/L	3		03/22/24 0921	03/22/24 1047	MND
TIMBERLINE								
Nitrogen, Ammonia	**100**	1.00	mg/L	10		04/01/24 1339	04/01/24 1656	LJS
USGS I-3765-85								
Total Suspended Solids (TSS)	**296**	1	mg/L	1		03/27/24 0801	03/27/24 1227	MEAH

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
300.0								
Chloride	**505**	50.0	mg/L	50			04/04/24 0634	MID
Sulfate	**115**	50.0	mg/L	50			04/04/24 0634	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
200.7								
Iron, total	**34.7**	0.100	mg/L	1		03/25/24 1529	03/26/24 2116	JAR

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1446

Client Sample ID:	Leachate		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1446-01	**Collection Date:**	03/20/2024 15:10

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.8								
Arsenic, total	**0.0200**	0.0020	mg/L	4		03/25/24 0850	03/26/24 0327	RVV
Chromium, total	**0.0200**	0.0020	mg/L	4		03/25/24 0850	03/26/24 0327	RVV
Copper, total	**0.0268**	0.0020	mg/L	4		03/25/24 0850	03/26/24 0327	RVV
Lead, total	**0.0018**	0.0008	mg/L	4		03/25/24 0850	03/26/24 0327	RVV
Nickel, total	**0.0250**	0.0040	mg/L	4		03/25/24 0850	03/26/24 0327	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0850	03/26/24 0327	RVV
Zinc, total	**0.0762**	0.0200	mg/L	4		03/25/24 0850	03/26/24 0327	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 5210 B	1HC1261	1HC1261-BLK1	
		1HC1261-SRM1	
		1HC1446-01	Leachate
		1HC1261-DUP1	1HC1429-03

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.8	1HC1319	1HC1319-BLK1	
		1HC1319-BS1	
		1HC1319-MS1	1HC1302-02
		1HC1319-MSD1	1HC1302-02
		1HC1319-PS1	1HC1302-02
		1HC1446-01	Leachate

Method	Batch	Laboratory ID	Client / Source ID
EPA 625	1HC1348	1HC1348-BLK1	
		1HC1348-BS1	
		1HC1348-BSD1	
		1HC1446-01	Leachate

Method	Batch	Laboratory ID	Client / Source ID
200.7	1HC1368	1HC1368-BLK1	
		1HC1368-BS1	
		1HC1368-MS1	1HC1428-01
		1HC1368-MSD1	1HC1428-01
		1HC1368-PS1	1HC1428-01
		1HC1446-01	Leachate

Method	Batch	Laboratory ID	Client / Source ID
EPA 150.1	1HC1389	1HC1389-SRM1	
		1HC1389-SRM2	
		1HC1446-01	Leachate
		1HC1389-DUP1	1HC1446-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 1664A	1HC1407	1HC1446-01	Leachate
		1HC1407-MS1	1HC1421-02
		1HC1407-MSD1	1HC1421-02
		1HC1407-BLK1	
		1HC1407-BS1	

Method	Batch	Laboratory ID	Client / Source ID

Method	Batch	Laboratory ID	Client / Source ID
USGS I-3765-85	1HC1459	1HC1446-01	Leachate
		1HC1459-BS1	
		1HC1459-DUP1	1HC1426-04
		1HC1459-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 624	1HC1543	1HC1543-BS1	
		1HC1543-BSD1	
		1HC1543-BLK1	
		1HC1446-01	Leachate
		1HC1543-MS1	1HC1329-01
		1HC1543-MSD1	1HC1329-01

Method	Batch	Laboratory ID	Client / Source ID
5310B	1HC1664	1HC1664-BS1	
		1HC1664-BSD1	
		1HC1664-BLK1	
		1HC1446-01	Leachate
		1HC1664-DUP1	1HC1212-01

Method	Batch	Laboratory ID	Client / Source ID
TIMBERLINE	1HD0048	1HD0048-BLK1	
		1HD0048-BS1	
		1HD0048-MS1	2HC0450-02
		1HD0048-MSD1	2HC0450-02
		1HC1446-01	Leachate

Method	Batch	Laboratory ID	Client / Source ID
300.0	1HD0332	1HD0332-BLK1	
		1HD0332-MRL1	
		1HD0332-BS1	
		1HD0332-BSD1	
		1HD0332-BLK2	
		1HD0332-BLK3	
		1HD0332-BLK4	
		1HD0332-BS2	
		1HD0332-BSD2	
		1HD0332-MS1	1HC1595-01
		1HD0332-MSD1	1HC1595-01
		1HD0332-MS2	1HC1434-01
		1HD0332-MSD2	1HC1434-01
		1HC1446-01	Leachate

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

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1543 - EPA 5030B - EPA 624										
Blank (1HC1543-BLK1)			Prepared: 03/27/24 00:00 Analyzed: 03/27/24 11:10							
Toluene	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Surrogate: Dibromofluoromethane	*56.7*		ug/L	*50.2*		*113*	*79-129*			
Surrogate: 1,2-Dichloroethane-d4	*60.6*		ug/L	*50.1*		*121*	*66-134*			
Surrogate: Toluene-d8	*42.4*		ug/L	*50.4*		*84.2*	*91-113*			*S-GC*
Surrogate: 4-Bromofluorobenzene	*53.0*		ug/L	*50.1*		*106*	*83-112*			
LCS (1HC1543-BS1)			Prepared: 03/27/24 00:00 Analyzed: 03/27/24 10:02							
Toluene	47.62	1.0	ug/L	50.0		95.2	76-128			
Chlorobenzene	49.37	1.0	ug/L	50.0		98.7	77-120			
Ethylbenzene	46.80	1.0	ug/L	50.0		93.6	76-118			
Surrogate: Dibromofluoromethane	*47.6*		ug/L	*50.2*		*94.9*	*79-129*			
Surrogate: 1,2-Dichloroethane-d4	*47.7*		ug/L	*50.1*		*95.2*	*66-134*			
Surrogate: Toluene-d8	*49.9*		ug/L	*50.4*		*99.0*	*91-113*			
Surrogate: 4-Bromofluorobenzene	*49.9*		ug/L	*50.1*		*99.5*	*83-112*			
LCS Dup (1HC1543-BSD1)			Prepared: 03/27/24 00:00 Analyzed: 03/27/24 10:24							
Toluene	46.20	1.0	ug/L	50.0		92.4	76-128	3.03	28	
Chlorobenzene	48.22	1.0	ug/L	50.0		96.4	77-120	2.36	27	
Ethylbenzene	45.41	1.0	ug/L	50.0		90.8	76-118	3.01	27	
Surrogate: Dibromofluoromethane	*47.9*		ug/L	*50.2*		*95.4*	*79-129*			
Surrogate: 1,2-Dichloroethane-d4	*47.3*		ug/L	*50.1*		*94.4*	*66-134*			
Surrogate: Toluene-d8	*49.9*		ug/L	*50.4*		*99.0*	*91-113*			
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.1*		*99.6*	*83-112*			
Matrix Spike (1HC1543-MS1)	**Source: 1HC1329-01**		Prepared: 03/27/24 00:00 Analyzed: 03/27/24 18:14							
Toluene	470.3	10.0	ug/L	500	ND	94.1	80-125			
Chlorobenzene	484.3	10.0	ug/L	500	ND	96.9	81-114			
Ethylbenzene	462.1	10.0	ug/L	500	ND	92.4	79-113			
Surrogate: Dibromofluoromethane	*462*		ug/L	*502*		*92.0*	*79-129*			
Surrogate: 1,2-Dichloroethane-d4	*468*		ug/L	*501*		*93.6*	*66-134*			
Surrogate: Toluene-d8	*498*		ug/L	*504*		*98.8*	*91-113*			
Surrogate: 4-Bromofluorobenzene	*502*		ug/L	*501*		*100*	*83-112*			
Matrix Spike Dup (1HC1543-MSD1)	**Source: 1HC1329-01**		Prepared: 03/27/24 00:00 Analyzed: 03/27/24 18:37							
Toluene	456.5	10.0	ug/L	500	ND	91.3	80-125	2.98	12	
Chlorobenzene	475.9	10.0	ug/L	500	ND	95.2	81-114	1.75	12	
Ethylbenzene	448.1	10.0	ug/L	500	ND	89.6	79-113	3.08	13	
Surrogate: Dibromofluoromethane	*463*		ug/L	*502*		*92.3*	*79-129*			
Surrogate: 1,2-Dichloroethane-d4	*463*		ug/L	*501*		*92.4*	*66-134*			
Surrogate: Toluene-d8	*498*		ug/L	*504*		*98.8*	*91-113*			
Surrogate: 4-Bromofluorobenzene	*498*		ug/L	*501*		*99.2*	*83-112*			

Determination of Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1348 - EPA 625 BNA - EPA 625										
Blank (1HC1348-BLK1)			Prepared: 03/25/24 12:17 Analyzed: 03/29/24 16:48							
Phenol	<10	10	ug/L							
(3 & 4)-Methylphenol	<10	10	ug/L							
Benzoic acid	<50	50	ug/L							
Surrogate: 2-Fluorophenol	*20.2*		ug/L	*29.6*		*68.3*	*19-139*			
Surrogate: Phenol-d6	*21.2*		ug/L	*30.5*		*69.4*	*14-154*			
Surrogate: 2,4,6-Tribromophenol	*27.2*		ug/L	*29.7*		*91.3*	*21-151*			
LCS (1HC1348-BS1)			Prepared: 03/25/24 12:17 Analyzed: 03/29/24 17:13							
Phenol	18.7	10	ug/L	25.0		74.7	42-118			
(3 & 4)-Methylphenol	19.3	10	ug/L	25.0		77.1	56-130			
Surrogate: 2-Fluorophenol	*21.5*		ug/L	*29.6*		*72.7*	*19-139*			
Surrogate: Phenol-d6	*22.1*		ug/L	*30.5*		*72.5*	*14-154*			
Surrogate: 2,4,6-Tribromophenol	*29.5*		ug/L	*29.7*		*99.2*	*21-151*			
LCS Dup (1HC1348-BSD1)			Prepared: 03/25/24 12:17 Analyzed: 03/29/24 17:37							
Phenol	18.0	10	ug/L	25.0		72.1	42-118	3.54	30	
(3 & 4)-Methylphenol	20.1	10	ug/L	25.0		80.2	56-130	4.02	26	
Surrogate: 2-Fluorophenol	*20.2*		ug/L	*29.6*		*68.2*	*19-139*			
Surrogate: Phenol-d6	*21.5*		ug/L	*30.5*		*70.6*	*14-154*			
Surrogate: 2,4,6-Tribromophenol	*30.6*		ug/L	*29.7*		*103*	*21-151*			

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1261 - General Prep Micro - SM 5210 B										
Blank (1HC1261-BLK1)			Prepared: 03/22/24 09:21 Analyzed: 03/22/24 10:33							
BOD (5 day)	<2	2	mg/L							B-06
Duplicate (1HC1261-DUP1)	**Source: 1HC1429-03**		Prepared: 03/22/24 09:21 Analyzed: 03/22/24 11:30							
BOD (5 day)	158	60	mg/L		163			3.17	29	
Reference (1HC1261-SRM1)			Prepared: 03/22/24 09:21 Analyzed: 03/22/24 10:40							
BOD (5 day)	193	100	mg/L	198		97.5	84.6-115.4			
Batch 1HC1389 - Wet Chem Preparation - EPA 150.1										
Duplicate (1HC1389-DUP1)	**Source: 1HC1446-01**		Prepared: 03/26/24 08:34 Analyzed: 03/26/24 15:16							
pH	7.1	0.5	pH		7.1			0.0283	10	
Reference (1HC1389-SRM1)			Prepared: 03/26/24 08:34 Analyzed: 03/26/24 15:16							
pH	7.0	0.5	pH	7.00		99.6	90-110			
Reference (1HC1389-SRM2)			Prepared: 03/26/24 08:34 Analyzed: 03/26/24 15:16							
pH	7.0	0.5	pH	7.00		101	90-110			

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1407 - Wet Chem Preparation - EPA 1664A										
Blank (1HC1407-BLK1)			Prepared: 03/26/24 09:41 Analyzed: 03/27/24 16:00							
Oil and Grease	<4	4	mg/L							
LCS (1HC1407-BS1)			Prepared: 03/26/24 09:41 Analyzed: 03/27/24 16:00							
Oil and Grease	31.9	4	mg/L	40.0		79.8	78-114			
Matrix Spike (1HC1407-MS1)		**Source: 1HC1421-02**	Prepared: 03/26/24 09:41 Analyzed: 03/27/24 16:00							
Oil and Grease	37.6	4	mg/L	40.0	7.3	75.7	78-114			PH-3, QM-07
Matrix Spike Dup (1HC1407-MSD1)		**Source: 1HC1421-02**	Prepared: 03/26/24 09:41 Analyzed: 03/27/24 16:00							
Oil and Grease	19.6	4	mg/L	40.0	7.3	30.6	78-114	63.1	18	PH-3, QM-07
Batch 1HC1459 - Wet Chem Preparation - USGS I-3765-85										
Blank (1HC1459-BLK1)			Prepared: 03/27/24 08:01 Analyzed: 03/27/24 12:27							
Total Suspended Solids (TSS)	<1	1	mg/L							
LCS (1HC1459-BS1)			Prepared: 03/27/24 08:01 Analyzed: 03/27/24 12:27							
Total Suspended Solids (TSS)	14.0	1	mg/L	15.0		93.3	74-114			
Duplicate (1HC1459-DUP1)		**Source: 1HC1426-04**	Prepared: 03/27/24 08:01 Analyzed: 03/27/24 12:27							
Total Suspended Solids (TSS)	<1	1	mg/L		3.5				30	
Batch 1HC1664 - TOC/DOC - 5310B										
Blank (1HC1664-BLK1)			Prepared: 03/27/24 00:00 Analyzed: 03/27/24 10:28							
Total Organic Carbon	<0.50	0.50	mg/L							
LCS (1HC1664-BS1)			Prepared: 03/27/24 00:00 Analyzed: 03/27/24 09:58							
Total Organic Carbon	5.42	0.50	mg/L	5.00		108	86-120			
LCS Dup (1HC1664-BSD1)			Prepared: 03/27/24 00:00 Analyzed: 03/27/24 10:14							
Total Organic Carbon	5.36	0.50	mg/L	5.00		107	86-120	1.00	10	
Duplicate (1HC1664-DUP1)		**Source: 1HC1212-01**	Prepared: 03/27/24 00:00 Analyzed: 03/29/24 15:17							
Total Organic Carbon	34.20	0.50	mg/L		35.49			3.70	20	
Batch 1HD0048 - General Prep HPLC/IC - TIMBERLINE										
Blank (1HD0048-BLK1)			Prepared: 04/01/24 13:39 Analyzed: 04/01/24 15:39							
Nitrogen, Ammonia	<0.10	0.10	mg/L							
LCS (1HD0048-BS1)			Prepared: 04/01/24 13:39 Analyzed: 04/01/24 15:40							
Nitrogen, Ammonia	5.09	0.10	mg/L	5.00		102	90-114			
Matrix Spike (1HD0048-MS1)		**Source: 2HC0450-02**	Prepared: 04/01/24 13:39 Analyzed: 04/01/24 15:42							
Nitrogen, Ammonia	5.21	0.10	mg/L	5.00	ND	104	84-115			
Matrix Spike Dup (1HD0048-MSD1)		**Source: 2HC0450-02**	Prepared: 04/01/24 13:39 Analyzed: 04/01/24 15:43							
Nitrogen, Ammonia	5.33	0.10	mg/L	5.00	ND	107	84-115	2.21	20	

Determination of Inorganic Anions	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0332 - General Prep HPLC/IC - 300.0										
Blank (1HD0332-BLK1)			Prepared & Analyzed: 04/03/24 10:00							
Chloride	<1.0	1.0	mg/L							
Sulfate	<1.0	1.0	mg/L							
Blank (1HD0332-BLK2)			Prepared & Analyzed: 04/03/24 15:27							
Chloride	<1.0	1.0	mg/L							
Sulfate	<1.0	1.0	mg/L							
Blank (1HD0332-BLK3)			Prepared & Analyzed: 04/03/24 19:23							
Chloride	<1.0	1.0	mg/L							
Sulfate	<1.0	1.0	mg/L							
Blank (1HD0332-BLK4)			Prepared & Analyzed: 04/03/24 23:55							
Chloride	<1.0	1.0	mg/L							
Sulfate	<1.0	1.0	mg/L							
LCS (1HD0332-BS1)			Prepared & Analyzed: 04/03/24 10:36							
Chloride	15.06	1.0	mg/L	15.3		98.7	90-110			
Sulfate	33.53	1.0	mg/L	33.8		99.1	90-110			
LCS (1HD0332-BS2)			Prepared & Analyzed: 04/04/24 00:49							
Chloride	15.07	1.0	mg/L	15.3		98.7	90-110			
Sulfate	33.50	1.0	mg/L	33.8		99.0	90-110			
LCS Dup (1HD0332-BSD1)			Prepared & Analyzed: 04/03/24 10:54							
Chloride	15.09	1.0	mg/L	15.3		98.9	90-110	0.199	10	
Sulfate	33.39	1.0	mg/L	33.8		98.7	90-110	0.415	10	
LCS Dup (1HD0332-BSD2)			Prepared & Analyzed: 04/04/24 01:08							
Chloride	15.07	1.0	mg/L	15.3		98.7	90-110	0.0332	10	
Sulfate	33.53	1.0	mg/L	33.8		99.1	90-110	0.101	10	
Matrix Spike (1HD0332-MS1)	**Source: 1HC1595-01**		Prepared & Analyzed: 04/04/24 01:44							
Chloride	282.9	10.0	mg/L	153	132.6	98.4	80-120			
Sulfate	403.3	10.0	mg/L	338	74.18	97.3	80-120			
Matrix Spike (1HD0332-MS2)	**Source: 1HC1434-01**		Prepared & Analyzed: 04/04/24 03:15							
Chloride	79.00	5.0	mg/L	76.3	2.58	100	80-120			
Sulfate	179.4	5.0	mg/L	169	4.67	103	80-120			
Matrix Spike Dup (1HD0332-MSD1)	**Source: 1HC1595-01**		Prepared & Analyzed: 04/04/24 02:02							
Chloride	284.3	10.0	mg/L	153	132.6	99.3	80-120	0.490	10	
Sulfate	408.1	10.0	mg/L	338	74.18	98.7	80-120	1.18	10	
Matrix Spike Dup (1HD0332-MSD2)	**Source: 1HC1434-01**		Prepared & Analyzed: 04/04/24 03:33							
Chloride	78.98	5.0	mg/L	76.3	2.58	100	80-120	0.0316	10	
Sulfate	180.0	5.0	mg/L	169	4.67	104	80-120	0.359	10	

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1319 - EPA 200.2 Total ICP-MS - EPA 200.8										

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1319 - EPA 200.2 Total ICP-MS - EPA 200.8										
Blank (1HC1319-BLK1)			Prepared: 03/25/24 08:50 Analyzed: 03/26/24 02:13							
Arsenic, total	<0.0020	0.0020	mg/L							
Chromium, total	<0.0008	0.0008	mg/L							
Copper, total	<0.0020	0.0020	mg/L							
Lead, total	<0.0008	0.0008	mg/L							
Nickel, total	<0.0040	0.0040	mg/L							
Selenium, total	<0.0040	0.0040	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1HC1319-BS1)			Prepared: 03/25/24 08:50 Analyzed: 03/26/24 02:20							
Arsenic, total	0.0943	0.0020	mg/L	0.100		94.3	85-115			
Chromium, total	0.0915	0.0008	mg/L	0.100		91.5	85-115			
Copper, total	0.0989	0.0020	mg/L	0.100		98.9	85-115			
Lead, total	0.0975	0.0008	mg/L	0.100		97.5	85-115			
Nickel, total	0.0938	0.0040	mg/L	0.100		93.8	85-115			
Selenium, total	0.0935	0.0040	mg/L	0.100		93.5	85-115			
Zinc, total	0.0956	0.0200	mg/L	0.100		95.6	85-115			
Matrix Spike (1HC1319-MS1)	**Source: 1HC1302-02**		Prepared: 03/25/24 08:50 Analyzed: 03/26/24 02:32							
Arsenic, total	0.0967	0.0020	mg/L	0.100	0.0015	95.2	70-130			
Chromium, total	0.0910	0.0008	mg/L	0.100	0.0009	90.1	70-130			
Copper, total	0.104	0.0020	mg/L	0.100	0.0109	93.2	70-130			
Lead, total	0.0911	0.0008	mg/L	0.100	ND	91.1	70-130			
Nickel, total	0.0930	0.0040	mg/L	0.100	0.0022	90.9	70-130			
Selenium, total	0.0908	0.0040	mg/L	0.100	0.0012	89.6	70-130			
Zinc, total	0.112	0.0200	mg/L	0.100	0.0221	90.4	70-130			
Matrix Spike Dup (1HC1319-MSD1)	**Source: 1HC1302-02**		Prepared: 03/25/24 08:50 Analyzed: 03/26/24 02:38							
Arsenic, total	0.0953	0.0020	mg/L	0.100	0.0015	93.9	70-130	1.42	20	
Chromium, total	0.0904	0.0008	mg/L	0.100	0.0009	89.5	70-130	0.693	20	
Copper, total	0.105	0.0020	mg/L	0.100	0.0109	93.7	70-130	0.434	20	
Lead, total	0.0915	0.0008	mg/L	0.100	ND	91.5	70-130	0.401	20	
Nickel, total	0.0922	0.0040	mg/L	0.100	0.0022	90.0	70-130	0.877	20	
Selenium, total	0.0938	0.0040	mg/L	0.100	0.0012	92.6	70-130	3.25	20	
Zinc, total	0.112	0.0200	mg/L	0.100	0.0221	89.8	70-130	0.525	20	
Post Spike (1HC1319-PS1)	**Source: 1HC1302-02**		Prepared: 03/25/24 08:50 Analyzed: 03/26/24 02:44							
Arsenic, total	0.0809		mg/L	0.0800	0.0014	99.4	70-130			
Chromium, total	0.0763		mg/L	0.0800	0.0008	94.4	70-130			
Copper, total	0.0885		mg/L	0.0800	0.0107	97.3	70-130			
Lead, total	0.0790		mg/L	0.0800	0.0004	98.3	70-130			
Nickel, total	0.0792		mg/L	0.0800	0.0021	96.4	70-130			
Selenium, total	0.0755		mg/L	0.0800	0.0011	92.9	70-130			
Zinc, total	0.0965		mg/L	0.0800	0.0217	93.6	70-130			
Batch 1HC1368 - EPA 200.2 Total ICP-OES (200.7) - 200.7										
Blank (1HC1368-BLK1)			Prepared: 03/25/24 15:29 Analyzed: 03/26/24 19:44							

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1368 - EPA 200.2 Total ICP-OES (200.7) - 200.7										
Blank (1HC1368-BLK1)			Prepared: 03/25/24 15:29 Analyzed: 03/26/24 19:44							
Iron, total	<0.100	0.100	mg/L							
LCS (1HC1368-BS1)			Prepared: 03/25/24 15:29 Analyzed: 03/26/24 19:49							
Iron, total	2.37	0.100	mg/L	2.20		108	85-115			
Matrix Spike (1HC1368-MS1)	**Source: 1HC1428-01**		Prepared: 03/25/24 15:29 Analyzed: 03/26/24 20:06							
Iron, total	43.7	0.100	mg/L	2.20	38.6	235	70-130			QM-4X
Matrix Spike Dup (1HC1368-MSD1)	**Source: 1HC1428-01**		Prepared: 03/25/24 15:29 Analyzed: 03/26/24 20:27							
Iron, total	44.2	0.100	mg/L	2.20	38.6	254	70-130	0.926	20	QM-4X
Post Spike (1HC1368-PS1)	**Source: 1HC1428-01**		Prepared: 03/25/24 15:29 Analyzed: 03/26/24 20:37							
Iron, total	47.8		mg/L	8.80	38.6	104	85-115			

Definitions

B-06:	Unseeded Blank equals .46mg/L
I-03:	Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.
PH-3:	Insufficient preservative to adjust the sample pH to less than 2, value measured at 5 pH units.
PH-3a:	Insufficient preservative to adjust the sample pH to less than 2, value measured at 6 pH units.
PH-6:	Insufficient preservative to adjust the sample pH to less than 2, value measured at 5 pH units. Sample was analyzed within 7 days recommended for non-preserved samples.
QM-07:	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-4X:	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration.
RL:	Reporting Limit
RPD:	Relative Percent Difference
S-GC:	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

Cooler Receipt Log

Cooler ID: Default Cooler   Temp: 0.0°C

Cooler Inspection Checklist

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

Report Comments

Reviewed and Approved By:

Heather Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
04/04/24 16:38

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

CHAIN OF CUSTO[DY]

Keystone LABORATORIES A Microbac Company

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

1 H C 1 4 4 6
HLW Engineering
PM: Heather Murphy

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: South Dallas Co- Leachate

REPORT TO

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

INVOICE TO

Mike Fountas
South Dallas County Landfill
2000 Main Street, PO Box 263
Adel, IA 50003

SPECIAL INSTRUCTIONS

None

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

LAB USE ONLY

Work Order: 1HC1446
Temperature: 0.0
Turn-Cooler: -

☐ 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	Leachate	Water	GRAB	3/20/24	15:10	13	624@chlorobenzene, 624@ethylbenzene, 624@toluene, 624-base-analysis, 625@benzoic-acid, 625-102, as-t-200.8, bod-5210, cl-300.0, cr-t-200.8, cu-t-200.8, fe-t-200.7, nh3-timberline, ni-t-200.8, og-t-1664, pb-t-200.8, ph-150.1, se-t-200.8, so4-300.0, toc-5310b, tss-i-3765-85, zn-t-200.8	01

Relinquished By: Todd Whipple — Date/Time: 3/21/24

Relinquished By — Date/Time

Received By — Date/Time

Received for Lab By: Maher — Date/Time: 3/21/24 9:48

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Appendix H.4 – Leachate Recirculation Volumes

Leachate Recirculation
South Dallas County Sanitary Landfill
2024

JANUARY					FEBRUARY					MARCH				
Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons	Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons	Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons
1/1/2024					2/1/2024	2	1,800			3/1/2024				
1/2/2024	3	2,700			2/2/2024	3	2,700			3/2/2024				
1/3/2024			2	4,000	2/3/2024					3/3/2024				
1/4/2024	1	900	2	4,000	2/4/2024					3/4/2024	2.5	2,250		
1/5/2024	1	900			2/5/2024	3	2,700			3/5/2024	2	1,800		
1/6/2024					2/6/2024			2	4,000	3/6/2024	1	900		
1/7/2024					2/7/2024			1	2,000	3/7/2024			2	4,000
1/8/2024	3	2,700			2/8/2024			1	2,000	3/8/2024				
1/9/2024	2	1,800			2/9/2024	2	1,800			3/9/2024				
1/10/2024	1	900			2/10/2024					3/10/2024				
1/11/2024	1	900			2/11/2024					3/11/2024	2	1,800		
1/12/2024	1	900			2/12/2024	2	1,800			3/12/2024				
1/13/2024					2/13/2024	3	2,700	1	2,000	3/13/2024			3	6,000
1/14/2024					2/14/2024					3/14/2024				
1/15/2024	2	1,800			2/15/2024	1	900	2	4,000	3/15/2024				
1/16/2024	1	900			2/16/2024	2	1,800			3/16/2024				
1/17/2024	1	900			2/17/2024					3/17/2024				
1/18/2024	1	900			2/18/2024					3/18/2024	3	2,700		
1/19/2024					2/19/2024	2	1,800	1	2,000	3/19/2024			2	4,000
1/20/2024					2/20/2024	2	1,800			3/20/2024				
1/21/2024					2/21/2024			5	10,000	3/21/2024				
1/22/2024					2/22/2024	1	900	4	8,000	3/22/2024	2	1,800	1	2,000
1/23/2024					2/23/2024			5	10,000	3/23/2024				
1/24/2024	3	2,700			2/24/2024					3/24/2024				
1/25/2024	1	900			2/25/2024					3/25/2024	3	2,700		
1/26/2024	1	900	2	4,000	2/26/2024			3.5	7,000	3/26/2024	3	2,700		
1/27/2024					2/27/2024			4	8,000	3/27/2024	2	1,800		
1/28/2024					2/28/2024	2	1,800			3/28/2024			3	6,000
1/29/2024	2	1,800			2/29/2024			2	4,000	3/29/2024	2	1,800		
1/30/2024	1	900								3/30/2024				
1/31/2024	1	900								3/31/2024				
	27	24,300	6	12,000		25	22,500	31.5	63,000		22.5	20,250	11	22,000
				36,300					**85,500**					**42,250**

APRIL					MAY					JUNE				
Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons	Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons	Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons
4/1/2024	4	3,600			5/1/2024	2	1,800	1	2,000	6/1/2024				
4/2/2024	2	1,800			5/2/2024	4	3,600	2	4,000	6/2/2024				
4/3/2024	3	2,700			5/3/2024	1	900			6/3/2024	3	2,700		
4/4/2024	2	1,800			5/4/2024					6/4/2024			2	4,000
4/5/2024			4	8,000	5/5/2024					6/5/2024	3	2,700	1	2,000
4/6/2024					5/6/2024	4	3,600			6/6/2024			2	4,000
4/7/2024					5/7/2024			3	6,000	6/7/2024			3	6,000
4/8/2024					5/8/2024	1	900			6/8/2024				
4/9/2024			3	6,000	5/9/2024	3	2,700			6/9/2024				
4/10/2024			4	8,000	5/10/2024	2	1,800			6/10/2024	2	1,800	1	2,000
4/11/2024			4.5	9,000	5/11/2024					6/11/2024			4	8,000
4/12/2024			3	6,000	5/12/2024					6/12/2024			3	6,000
4/13/2024					5/13/2024	4	3,600			6/13/2024			5	10,000
4/14/2024					5/14/2024	3	2,700			6/14/2024			1	2,000
4/15/2024			5.5	11,000	5/15/2024			5	10,000	6/15/2024				
4/16/2024			0.5	1,000	5/16/2024			5	10,000	6/16/2024				
4/17/2024					5/17/2024			6	12,000	6/17/2024	3	2,700		
4/18/2024	2	1,800			5/18/2024					6/18/2024			4	8,000
4/19/2024	1	900	2	4,000	5/19/2024					6/19/2024	3	2,700		
4/20/2024			1	2,000	5/20/2024	2	1,800			6/20/2024	2	1,800	1	2,000
4/21/2024					5/21/2024	3	2,700			6/21/2024			2	4,000
4/22/2024	1	900	2	4,000	5/22/2024	3	2,700			6/22/2024				
4/23/2024			3	6,000	5/23/2024	4	3,600			6/23/2024				
4/24/2024			4	8,000	5/24/2024	3	2,700			6/24/2024			3	6,000
4/25/2024			4	8,000	5/25/2024					6/25/2024			3	6,000
4/26/2024			2.5	5,000	5/26/2024					6/26/2024			3	6,000
4/27/2024					5/27/2024					6/27/2024			4	8,000
4/28/2024					5/28/2024	3	2,700			6/28/2024			2	4,000
4/29/2024	4	3,600			5/29/2024			4	8,000	6/29/2024				
4/30/2024			2	4,000	5/30/2024			4	8,000	6/30/2024				
					5/31/2024			2	4,000					
	19	17,100	45	90,000		42	37,800	32	64,000		16	14,400	44	88,000
				107,100					**101,800**					**102,400**

JULY					AUGUST					SEPTEMBER				
Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons	Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons	Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons
7/1/2024	3	2,700	2	4,000	8/1/2024			4	8,000	9/1/2024				
7/2/2024	3	2,700			8/2/2024			6	12,000	9/2/2024				
7/3/2024	2	1,800	1	2,000	8/3/2024					9/3/2024			5	10,000
7/4/2024					8/4/2024					9/4/2024			5	10,000
7/5/2024	3	2,700	3	6,000	8/5/2024			4	8,000	9/5/2024			2	4,000
7/6/2024					8/6/2024			4	8,000	9/6/2024			4	8,000
7/7/2024					8/7/2024			5	10,000	9/7/2024			3	6,000
7/8/2024	2	1,800	1	2,000	8/8/2024			5	10,000	9/8/2024			4	8,000
7/9/2024	1	900	3	6,000	8/9/2024			4	8,000	9/9/2024				
7/10/2024	1	900	4	8,000	8/10/2024			4	8,000	9/10/2024				
7/11/2024			5	10,000	8/11/2024					9/11/2024			5	10,000
7/12/2024			3	6,000	8/12/2024			1	2,000	9/12/2024			3	6,000
7/13/2024					8/13/2024			4	8,000	9/13/2024			4	8,000
7/14/2024					8/14/2024			1	2,000	9/14/2024				
7/15/2024			4	8,000	8/15/2024			5	10,000	9/15/2024				
7/16/2024			5	10,000	8/16/2024			5	10,000	9/16/2024			7	14,000
7/17/2024			3	6,000	8/17/2024					9/17/2024			4	8,000
7/18/2024			2	4,000	8/18/2024					9/18/2024			4	8,000
7/19/2024					8/19/2024			4	8,000	9/19/2024			3	6,000
7/20/2024					8/20/2024			4	8,000	9/20/2024				
7/21/2024					8/21/2024			4	8,000	9/21/2024				
7/22/2024					8/22/2024			2	4,000	9/22/2024				
7/23/2024			2	4,000	8/23/2024			4	8,000	9/23/2024			3	6,000
7/24/2024	3	2,700			8/24/2024					9/24/2024			4	8,000
7/25/2024			1	2,000	8/25/2024					9/25/2024			2	4,000
7/26/2024	4	3,600			8/26/2024			6	12,000	9/26/2024			3	6,000
7/27/2024					8/27/2024			3	6,000	9/27/2024			4	8,000
7/28/2024					8/28/2024			3	6,000	9/28/2024				
7/29/2024			2	4,000	8/29/2024			5	10,000	9/29/2024				
7/30/2024	2	1,800	1	2,000	8/30/2024			4	8,000	9/30/2024			5	10,000
7/31/2024			3	6,000	8/31/2024									
	24	21,600	45	90,000		-	-	91	182,000		-	-	74	148,000
				111,600					**182,000**					**148,000**

OCTOBER					NOVEMBER					DECEMBER				
Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons	Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons	Date	Pump Hours	Pump Gallons	Tank Loads	Tank Gallons
10/1/2024			4	8,000	11/1/2024			3	6,000	12/1/2024				
10/2/2024			3	6,000	11/2/2024					12/2/2024	2	1,800		
10/3/2024			2	4,000	11/3/2024					12/3/2024			1	2,000
10/4/2024			3	6,000	11/4/2024	3	2,700			12/4/2024			4	8,000
10/5/2024					11/5/2024	2	1,800			12/5/2024	3	2,700		
10/6/2024					11/6/2024	2	1,800			12/6/2024			2	4,000
10/7/2024			5	10,000	11/7/2024	2	1,800	2	4,000	12/7/2024				
10/8/2024			3	6,000	11/8/2024	2	1,800			12/8/2024				
10/9/2024			1	2,000	11/9/2024					12/9/2024	2	1,800		
10/10/2024			4	8,000	11/10/2024					12/10/2024			4	8,000
10/11/2024			2	4,000	11/11/2024	2	1,800			12/11/2024				
10/12/2024					11/12/2024	2	1,800			12/12/2024				
10/13/2024					11/13/2024			3	6,000	12/13/2024				
10/14/2024			5	10,000	11/14/2024			1	2,000	12/14/2024				
10/15/2024			2	4,000	11/15/2024					12/15/2024				
10/16/2024			3	6,000	11/16/2024					12/16/2024	1	900	3	6,000
10/17/2024			3	6,000	11/17/2024					12/17/2024			3	6,000
10/18/2024			2	4,000	11/18/2024			2	4,000	12/18/2024			4	8,000
10/19/2024					11/19/2024	1	900			12/19/2024			3	6,000
10/20/2024					11/20/2024					12/20/2024	2	1,800		
10/21/2024			4	8,000	11/21/2024					12/21/2024				
10/22/2024			2	4,000	11/22/2024			3	6,000	12/22/2024				
10/23/2024			1	2,000	11/23/2024					12/23/2024	2	1,800		
10/24/2024			2	4,000	11/24/2024					12/24/2024			4	8,000
10/25/2024			2	4,000	11/25/2024	2	1,800			12/25/2024				
10/26/2024					11/26/2024	1	900			12/26/2024	2	1,800		
10/27/2024					11/27/2024	2	1,800			12/27/2024	2	1,800		
10/28/2024			4	8,000	11/28/2024					12/28/2024				
10/29/2024			3	6,000	11/29/2024	2	1,800			12/29/2024				
10/30/2024			2.5	5,000	11/30/2024					12/30/2024			2	4,000
10/31/2024			1	2,000						12/31/2024	2	1,800		
	-	-	63.5	127,000		23	20,700	14	28,000		18	16,200	30	60,000
				127,000					**48,700**					**76,200**
													TOTAL	**1,168,850**

Notes: Pump flow rate estimated at 15 gallons per minute
Load estimated at 2,000 gallons per load

Appendix H.5 – Leachate Piezometer Elevation Monitoring

Table H1
South Dallas County Sanitary Landfill
25-SDP-01-75P
LEACHATE MEASUREMENTS - CLOSED LANDFILLING AREAS

	1/16/2024		**4/5/2024**		**7/15/2024**		**10/9/2024**	
Existing Well ID	Depth to Leachate (ft)	Leachate Elevation (ft)	Depth to Leachate (ft)	Leachate Elevation (ft)	Depth to Leachate (ft)	Leachate Elevation (ft)	Depth to Leachate (ft)	Leachate Elevation (ft)
LW-1	35.4	903.57	35.11	903.86	35.71	903.26	35.91	903.06
LW-2	59.7	894.93	59.60	895.03	59.81	894.82	59.11	895.52
LW-3	58.1	884.94	59	884.04	58.61	884.43	58.91	884.13
LW-4	40.7	899.36	44.3	895.76	43.91	896.15	44.21	895.85
LW-5	43.8	893.04	43.7	893.14	43.71	893.13	43.81	893.03
LW-6	70.3	886.90	69.7	887.50	69.81	887.39	69.61	887.59
LPZ-1	45.1	914.32	48.1	911.32	48	911.42	48	911.42
LPZ-3	37.5	906.96	36.7	907.76	36.81	907.65	37.5	906.96

blue text = dry well

Existing Well ID	Top of Casing Elev. (ft)
LW-1	938.97
LW-2	954.63
LW-3	943.04
LW-4	940.06
LW-5	936.84
LW-6	957.2
LPZ-1	959.42
LPZ-3	944.46

Table H2

South Dallas County Sanitary Landfill

25-SDP-01-75P

LEACHATE MEASUREMENTS - SUBTITLE D AREA

Date	LPZ-12 Phase 1 & 2	LPZ-13 Phase 3
	Leachate Thickness (in)	Leachate Thickness (in)
1/16/2024	<1	<1
2/22/2024	<1	<1
3/13/2024	<1	<1
4/5/2024	<1	<1
5/8/2024	<1	<1
6/13/2024	<1	<1
7/15/2024	<1	<1
8/5/2024	<1	<1
9/11/2024	<1	<1
10/9/2024	<1	<1
11/18/2024	<1	<1
12/23/2024	<1	<1