2024 ANNUAL WATER QUALITY REPORT

FOR THE
SCISWA LANDFILL
63-SDP-02-77P
TRACY, IOWA

by:
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Certification

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Section 1.0 Background Information

1.1 Report Format

Table 1 through Table 13 are attached to this report and satisfy the IDNR requirement to provide the tables to meet the IDNR format requirements included in Special Provision 4.i. of the Permit Revision #2, dated October 8, 2024 (Doc #111018).

1.2 Report Priority - Low

Sampling in accordance with Table 1 and Table 2 is recommended. It is recommended that detection and assessment monitoring continue in accordance with the HMSP as approved in Special Provision 4 of the Permit, October 8, 2024 (Doc #111018). An Alternate Source Demonstration (ASD) related to metals was completed in 2014 (Doc #79861). The ASD indicates that acid mine drainage (AMD) is the contributing factor associated with the inorganic groundwater impacts historically identified in most monitoring well locations, making spatial variability impractical to sufficiently quantify. AMD is characterized by low pH levels combined with elevated metals and elevated sulfate concentrations in groundwater. With IDNR approval, intrawell statistical evaluations (along with interwell statistical methods) are employed. It is recognized that the intrawell control limits and the interwell prediction limits are at times elevated above the groundwater protection standards (GWPS) published in Iowa Administrative Code (IAC) 567, Chapter 137. In these instances, Site-Specific GWPS are developed and are equal to the elevated control/prediction limit value.

Based on the ASD, continued acid mine drainage constituent monitoring is required and Assessment of Corrective Measures activities are not required at wells impacted by AMD. Statistically Significant Increases (SSI) and Significantly Significant Levels (SSL) for inorganic constituents would only be realized in monitoring points where AMD effects are minor (below SSI/SSL levels) <u>and</u> where both SSI/SSL are identified by <u>both</u> intrawell and interwell statistical methods at a monitoring point. The AMD impacts are addressed in Special Provision 4.k. of the Permit Revision #2, dated October 8, 2024 (Doc #111018)

There are no SSI or SSL identified for inorganic compounds at any monitoring point in 2024. There are Volatile Organic Compound (VOC) SSI identified at MW-344 and MW-382R in 2024. No VOC SSL are identified in 2024.

IDNR has also approved the use of field measured turbidity in lieu of Total Suspended Solids (TSS) testing (Doc #103471).

1.3 Period of Report Coverage

Water quality data evaluation is based on a running compilation of data beginning in March, 2008. Statistical evaluations herein are based on the most recent water quality data collected on March 19, 2024 and October 3, 2024.

1.4 Current Site Map

Figure 1 and Figure 2 are attached illustrating the current site and property boundaries. The figures include all monitoring well locations, leachate piezometer locations, the groundwater monitoring point location, and subsurface gas probe locations in relation to waste boundaries.

1.5 Site Status and Applicable Rules

Site Location

The SCISWA Sanitary Landfill is located in parts of Sections 20, 21, 28, and 29, T75N, R18W, Marion County, Iowa. The facility is situated on Highway T17 near Tracy and Pershing, Iowa. The facility operates under the Iowa Department of Natural Resources (IDNR) Permit Number 63-SDP-02-77P.

Landfill Layout

The site is situated within a former coal strip mine. Completed landfill areas include the Original Landfill (Areas A1 and A2 (and associated vertical expansions)) Cells N-1, N-2, and N-3 (alternate lined (4 ft clay)), Cells 4A-4F (prescriptive liner), and Cell NW1/NW2 (prescriptive liner). Cells N-1, N-2, N-3, Cells 4A-4F, and Cells NW1/NW2 are actively receiving waste from the planning area.

Applicable Rules

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

1.6 Summary of Hydrologic Monitoring System Plan (HMSP)

The HMSP sampling performed on March 19, 2024 and October 3, 2024 conforms to Permit Provisions.

Water monitoring points and the gas monitoring network are illustrated on Figure 1 and Figure 2. A Water Contour Map is included as Figure 3. The current HMSP is summarized in Table 1. The HMSP Implementation Schedule for 2025 is itemized in Table 2. A listing of all monitoring points that currently exist on site is included in Appendix A.

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

The current year water elevation data is included on Table 4. Historic water elevation data is included in Table 4A – Comprehensive Historical Data. The Water Contour Map (Figure 3) dated October 2024 is included with this report. The Water Contour Map illustrates the water surfaces in the unconsolidated formation. Review of the 2024 data does not indicate excessive variability compared to historic water elevation data.

Well Depth & Sedimentation

*D*epth measurements were made in each well on October 3, 2024. Review of the well depth data included on Table 4 indicate that well sedimentation is estimated to be less than one (1) foot at all site monitoring wells.

Well Recharge Rates & Chemistry

The originally measured horizontal hydraulic conductivity testing results for each site monitoring well is included on Table 4. Field bail and recovery testing was performed in 2024 at monitoring wells MW-380, MW-381, MW-382R, MW-390, and MW-604 to update the available horizontal hydraulic conductivity data. The horizontal hydraulic conductivities ranged between 10^{-3} cm/sec and 10^{-7} cm/sec.

Field recovery data recorded on March 19, 2024 (on Table 4) indicates that the monitoring wells demonstrate minimal to moderate drawdown during pumping. All site monitoring wells recovered within 24 hours following pump. Most recovered within 6 hours or less.

The 2024 evaluation 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". Well recovery information will be collected at all site monitoring wells in March 2026 as required by rule (113.10(2)"f"(4)).

Based on the apparent static condition of the water table across the site, the conclusions of the well recharge evaluation, and the existing water elevation database, it appears that the semi-annual water elevation data is sufficient to adequately monitor the hydrologic condition of the site. Therefore, it appears that the integrity of monitoring wells is intact, that the wells are appropriately located to detect impact from the fill, and that no changes in the monitoring system are recommended.

Monitoring Well Abandonments & Groundwater Underdrain Modifications
In 2024 the following monitoring wells were properly plugged and abandoned at the site.

MW-309 (May 1, 2024 – Doc #109970)
PZ-20-1 (May 1, 2024 – Doc #109970)
PZ-20-2 (May 1, 2024 – Doc #109970)
MW-384 (May 1, 2024 – Doc #109970)
MW-385 (May 1, 2024 – Doc #109970)
LHPZ-N3 (May 6, 2024 – Doc #109992)

The plugging was required due to the construction of the Cell NW1/MW2 Expansion in 2024.

In addition, GU-4A was modified and was connected to additional groundwater collection piping and now drains by gravity northwest of Cell NW1/NW2. The new underdrain discharge point is designated GU-4AR.

Monitoring Well Installation
Construction of the Cell NW1/NW2 expansion was completed in October of 2024. Monitoring wells MW-604 and MW-605 were constructed along the north temporary boundary of the Cell NW1/NW2 Expansion Area (Figure 2). Documentation of the well construction was submitted to IDNR on October 4, 2024 (Appendix R of the QCA Report (Doc #111015).

The HMSP has been modified for 2025 by eliminating GU-4A, MW-384, and MW-385 and adding GU-4AR, MW-604, and MW-605 (Table 2).

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 all sampling episodes to date are included in the Table 2A. Field sampling data related to the March 19, 2024 and October 3, 2024 events are included on the field forms (IDNR Form 542-1322) in Appendix B.

A comprehensive summary of Analytical Data for the episodes between September 2012 and October 3, 2024, is included on Table 9.

Per the Permit Revision #2, dated October 8, 2024 (Doc #111018) the HMSP includes the following:

Background Wells
MW-307
MW-312
MW-390

Downgradient Wells/Points
MW-300 (Detection Monitoring Program)
MW-303 (Detection Monitoring Program)
MW-304 (Detection Monitoring Program)
MW-313 (Detection Monitoring Program)
MW-335 (Detection Monitoring Program)
MW-344 (***Assessment*** Monitoring Program)
MW-380 (Detection Monitoring Program)
MW-381 (Detection Monitoring Program)
MW-382R (***Assessment*** Monitoring Program)
MW-601 (Detection Monitoring Program)
MW-602 (Detection Monitoring Program)
MW-603 (Detection Monitoring Program)
MW-604 (Detection Monitoring Program)
MW-605 (Detection Monitoring Program)
GU-4AR (Detection Monitoring Program)

Alternate Source Demonstration (ASD) Acid Mine Drainage Parameters
MW-300
MW-303
MW-304
MW-313
MW-335
MW-344
MW-380
MW-381
MW-382R
MW-601
MW-602
MW-603
MW-604
MW-605
GU-4AR
Surface Water SW-1

2.1 Current Detection Monitoring Activities/Sampling Requirements

At the downgradient monitoring wells listed above, detection monitoring includes Appendix I analyses on a semi-annual frequency. In addition, the Acid Mine Drainage (AMD) parameters (alkalinity, aluminum, iron, pH, and sulfate) are tested at all wells, GU-4AR, and surface water SW-1. AMD sample collection occurs on a semi-annual frequency to confirm the on-going conditions at the site related to elevated metals based on the acid mine drainage.

2.2 Current Assessment Monitoring Activities

At the downgradient monitoring wells MW-344 and MW-382R, assessment monitoring includes Appendix II compounds on a five (5) year frequency (once two (2) annual Appendix II episodes are completed) and Appendix I compound testing on a semi-annual frequency.

2.3 Current Corrective Action Monitoring Activities

There are currently no corrective actions required at this facility and there is no associated Corrective Action Monitoring required. AMD impacts are documented across the site and have not decreased to date. SSI and SSL for metals at site monitoring points are not recorded, rather the elevated metals are recognized as due to an alternate source. The management of AMD impacts are addressed in Special Provision 4.k. of the Permit Revision #2, dated October 8, 2024 (Doc #111018).

Section 3.0 Data Evaluation and Summary

Statistical Evaluations included herein are prepared by Otter Creek Environmental Services for the monitoring episodes completed March 19, 2024 and October 3, 2024. The Groundwater Statistics Report for the South Central Iowa Solid Waste Agency (SCISWA) Landfill, First Semi-Annual Monitoring Event in 2024, dated April, 2024 is included in Appendix C.1. The Groundwater Statistics Report for the South Central Iowa Solid Waste Agency (SCISWA) Landfill, Second Semi-Annual Monitoring Event in 2024, dated October, 2024 is included in Appendix C.2.

Intrawell statistical evaluations are employed at this site in accordance with the IDNR preferred method as described in the June 5, 2014 IDNR Letter (Doc # 80411) and are relied upon based on the documented spatial variability that results from on-going Acid Mine Drainage impacts. Note that interwell statistics are also completed in the statistical evaluation report as a means to further evaluate groundwater quality.

Based on the approved ASD, continued AMD constituent monitoring is required and Assessment of Corrective Measures activities are not required at wells impacted by AMD.

Statistically Significant Increases (SSI) and Significantly Significant Levels (SSL) for inorganic constituents would only be realized in monitoring points where AMD effects are minor (below SSI/SSL levels) and where both SSI/SSL are identified by both intrawell and interwell statistical methods at a monitoring point. The AMD impacts are addressed in Special Provision 4.k. of the Permit Revision #2, dated October 8, 2024 (Doc #111018).

The Analytical Reports for the laboratory testing of March 19, 2024, and October 3, 2024, sampling episodes are included in Appendix D.

QUALITY ASSURANCE/QUALITY CONTROL

A blind duplicate sample was collected at MW-381 during the March 19, 2024, sampling episode. A blind duplicate sample was collected at MW-601 during the October 3, 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 the 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) A result is non-detected.

The results of the blind duplicate and the monitoring well results in 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 # 80700). A TSS and Field Turbidity Evaluation Report was prepared and submitted on June 17, 2022 (Doc# 103453) and was approved by IDNR on June 22, 2022 (Doc #103471).

"No-Purge" sample methods were employed at this site beginning September 1, 2022. The background data for sample collection episodes that occurred prior to September 1, 2022 have been evaluated statistically for outliers and is validated. Outliers that failed the Dixon Test are summarized in the Dixon Test Outlier Table, Attachment C, Table 6, included in the October, 2024 Statistical Evaluation Report (Appendix C.2). The Control Limits established in the October, 2024 Statistical Evaluation Report (Appendix C.2) are based on the validated background with outliers removed. The calculated Intrawell Control Limits are itemized in Table 5.

SITE SPECIFIC GWPS

Table 5 includes the calculated Intrawell Control Limits and the Interwell Prediction Limits. Comparison of the Control Limits and the Prediction Limits to the published IAC 567, Chapter 137 Statewide Standard indicates that inorganic Control Limits and/or Prediction Limits are frequently in excess of the published standards. The interpretation is made that the elevated metals concentrations in background reflect the character of the disturbed soils that result from historic mining and the subsequent AMD. The instances where the Control Limits and/or Prediction Limits exceeds the published IAC 567, Chapter 137 Statewide Standard are highlighted in yellow in Table 5.

The Site-Specific GWPS should not be set lower than the Control Limit and/or the Prediction Limit calculated from the site background data. For this report, the Site-Specific GWPS for the HMSP Systems are summarized in the far right-hand column of Table 5. For all other compounds the published IAC 567, Chapter 137 Statewide Standard are utilized as the GWPS.

EVALUATION OF ACID MINE DRAINAGE IMPACTS

Acid Mine Drainage is evaluated using the water quality parameters alkalinity (as calcium carbonate), aluminum, iron, sulfate, and pH at site monitoring wells and GU-4AR, and at SW-1. The 2024 Acid Mine Drainage constituents are summarized in Table 5A. Table 5A illustrates that all wells are impacted by AMD which is the source of all elevated metals. It follows that AMD impacts are not minor and that any inorganic SSI are attributed to AMD effects, rather than to landfill impact.

Time Series Plots are also included in Appendix G. Review of the Time Series Plots of the AMD constituents indicates the following trends:

Sulfate demonstrates decreasing trends at GU-4AR, MW-307, MW-380, MW-381, and MW-603.

Aluminum indicates an increasing trend at MW-380 and MW-602.

Alkalinity indicates an increasing trend at MW-382R.

Iron demonstrates a decreasing trend at MW-307 and an increasing trend at MW-382R.

pH indicates a decreasing trend at MW-312, MW-602 and an increasing trend at MW-380.

Further review of the pH data included on the Time Series Plots indicates that the pH values at most monitoring points are consistently below 7 (acidic) except at SW-1. The observed pH values are typically observed to be lowest at MW-380, but an increasing trend has been recorded recently at MW-380.

Conditions confirm that acid mine drainage impacts are endemic to the site and the approved alternate source demonstrated for the inorganic compound concentrations continues to be appropriately applied at this site.

Time Series Plots for the Appendix I metal compounds are also included in Appendix G for GU-4AR and MW-601 through MW-605 since less than thirteen (13) data points are available and the intrawell statistical evaluations of data at these points are considered preliminary at this time.

STATISTICALLY SIGNIFICANT INCREASE (SSI) EVALUATION

Inorganic Compounds - The detected concentrations of each compound are compared to the Intrawell Control Limit and the Interwell Prediction Limit for each respective compound. In the detection monitoring wells, the detected concentrations that are in excess of the calculated Control Limit and/or Prediction Limit are:

Well	Season	AMD Impacted?	Statistical Method	Compounds	SSI
MW-300	Spring	Yes	Interwell	Co, Ni	No
MW-300	Spring	Yes	*Intrawell*	Co, Ni, Zn	No
MW-303	Spring	Yes	Interwell	Ba	No
MW-304	Spring	Yes	Interwell	Ba	No
MW-312	Spring	Yes	*Intrawell*	Ba	No
MW-313	Spring	Yes	Interwell	As	No
MW-335	Spring	Yes	*Intrawell*	As	No
MW-344	Spring	Yes	Interwell	Co	No
MW-380	Spring	Yes	Interwell	Be,Cd,Co,Cu,Ni,Se	No
MW-380	Spring	Yes	*Intrawell*	Cd, Cu	No

Well	Season	AMD Impacted?	Statistical Method	Compounds	SSI
MW-300	Fall	Yes	Interwell	Co, Ni	No
MW-300	Fall	Yes	*Intrawell*	As, Co, Ni, Zn	No
MW-303	Fall	Yes	Interwell	Ba	No
MW-304	Fall	Yes	Interwell	Ba	No
MW-312	Fall	Yes	*Intrawell*	Ba	No
MW-335	Fall	Yes	*Intrawell*	As	No
MW-344	Fall	Yes	Interwell	Co, Ni	No
MW-380	Fall	Yes	Interwell	Co, Ni	No
MW-382R	Fall	Yes	*Intrawell*	Ni	No
MW-602	Fall	Yes	Interwell	Co, Ni	No
MW-602	Fall	Yes	*Intrawell*	Ba	No

It is noted that the March 19, 2024 and October 3, 2024 results for MW-300 recorded an exceedance of Cobalt and Nickel by both intrawell and interwell statistical methods.

It is noted that the March 19, 2024 results for MW-380 recorded an exceedance of Cadmium and Copper by both intrawell and interwell statistical methods.

However, as recorded on Table 5A, both MW-300 and MW-380 demonstrate ongoing significant impact by AMD and the exceedances are therefore not attributable to landfill impact. No other monitoring point(s) had compounds recorded in excess of both the Intrawell Control Limit and the Interwell Prediction Limit. Further all site monitoring points exhibit AMD impacts. Therefore, there are no SSI for inorganic compounds recorded for the site in 2024. *The documented prevalence of the AMD impacts across the site (specifically at MW-300 and MW-380) and recognition of the AMD as the alternate source demonstration (in accordance with IAC567-113.10(5)"c"(3)), the Control Limit and/or Prediction Limit exceedances summarized above are not classified as SSI and Assessment Monitoring is not required. All site monitoring points remain in the Detection Monitoring System related to inorganics since the alternate source of elevated metals (due to acid mine drainage) is documented at the site.*

Volatile Organic Compounds (VOC) – VOC compounds are evaluated by the "double quantification rule" described as a preliminary detection followed by a verification detection. At the SCISWA facility there were no VOC reported in the Detection Monitoring System wells in 2024.

VOC have been historically detected in the Assessment Monitoring System wells MW-344 and MW-382R. In 2024, cis-1,2-dichloroethylene was detected in MW-344, while 1,1-dichloroethane was detected in MW-382R. The detections are verified exceedances according to double quantification. Table 6 summarizes the *current year* VOC exceedances for the site.

Table 7 includes brown highlighted values that signify detected VOC concentrations in excess of the quantification limits (SSI) over time in the site monitoring wells.

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

ASSESSMENT MONITORING SUMMARY

Assessment monitoring is required to be repeated annually per IAC 567-113.10(6)b. However, a five (5) year full Appendix II sampling frequency is approved (Special Provision 4.f. of the Revised Permit, dated

July 12, 2022 (Doc #103579)) for all site Point of Compliance Monitoring Wells where at least two (2) full Appendix II samples have been collected.

Full rounds of Appendix II assessment monitoring have been completed at MW-344 (5 episodes) and at MW-382R (5 episodes). The next round of full Appendix II sampling at MW-344 and MW-382R is scheduled to occur in September, 2028. The full Appendix II sampling episodes are listed in Table 2. Results of bis(2-ethylhexyl)phthalate, dichlorofluoromethane, and tin testing are itemized in Appendix H. Results recorded during the full Appendix II sample collection events at MW-344 and MW-382R are highlighted in green in Appendix H.

Bis(2-ethylhexyl)phthalate testing at MW-382R is returned to a five (5) year frequency to coincide with the full Appendix II sample collection event (2028) based on the fact that bis(2-ethylhexyl)phthalate was undetected at MW-382R in both March 19, 2024 and October 3, 2024.

There are no SSI or SSL identified for inorganic compounds at any monitoring point in 2024. There are Volatile Organic Compound (VOC) SSI identified at MW-344 and MW-382R in 2024. No VOC SSL are identified in 2024.

STATISTICALLY SIGNIFICANT LEVEL (SSL) EVALUATION

Validation of the significant AMD impacts at monitoring points precludes inorganic SSI and SSL from being detected at the site. However, those compounds with detections that exceed the VOC quantification limits (see summary in Table 1) 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 for VOC are compared to applicable GWPS. Any 95% LCL value for VOC that exceeds an applicable GWPS is recorded as an SSL. All wells with a recorded SSL require the plume of impact to be defined in the horizontal and vertical directions and require completion of an Assessment of Corrective Measures (ACM).

The SSL Evaluation is based on data for each VOC impacted monitoring well (MW-344 and MW-382R). 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 for VOC at MW-344 and MW-382R is presented in Table 7. Review of the data in Table 7 indicate that the 95% LCL values for VOC at assessment monitoring wells MW-344 and MW-382R are below the applicable Statewide Standards published in IAC 567, Chapter 137 (the GWPS) and no SSL are identified.

Standard IDNR Tables 8, 10, and 11 are not required for this report based on the absence of SSL.

ASSESSMENT OF CORRECTIVE MEASURES

Assessment of Corrective Measures is not warranted at this site.

Section 4.0 Leachate Collection System Performance Evaluation

Leachate Recirculation and Disposal

Between January 1, 2024, and December 31, 2024, staff reported that approximately 2,635,000 gallons of leachate were recirculated to Cells 4A, 4B, 4C, 4D, 4E, and 4F in accordance with Special Provision X.5 of the SDP Permit. Dates and reported volumes of leachate recirculation are included in Appendix I.1. LHPZ-4A measures leachate head on the Subtitle D composite lined areas Cells 4A, 4B, 4C, 4D, 4E, and 4F. Based on the leachate head data included in Table 12, leachate levels in LHPZ-4A did not exceed 12" during 2024 so leachate recirculation does not appear to influence leachate levels recorded on the Subtitle D composite liner. No changes are recommended.

The facility also utilizes the Des Moines Metropolitan Wastewater Reclamation Authority (WRA) as a backup leachate treatment and disposal option in the event that leachate recirculation and evaporation from the leachate storage lagoon are not adequate to keep up with leachate generation volumes. Note that no leachate was disposed of at the WRA in 2024.

RCRA Subtitle D Cells N-1, N-2, N-3, 4A, 4B, 4C, 4D, 4E, and 4F

Cells N-1, N-2, and N-3 were constructed with Subtitle D compliant alternative liner systems in 2001, 2002, and 2004, respectively. Leachate collected in these cells drains by gravity to the sump in the Cell NW1/NW2 Expansion. The pump in the Cell NW1/NW2 sump transfers accumulated leachate to the leachate storage lagoon via a dual walled forcemain as needed. Leachate head was monitored in leachate head piezometer LHPZ-N3 January to June, 2024 as LHPZ-N3 was removed during June, 2024 during construction of the Cell NW1/NW2 Expansion. Leachate head monitoring is now monitored by LHPZ-NW1 located in the low point of the Cell NW1 Expansion Area (starting November 2024). LHPZ-NW1 is illustrated on the figure in Appendix I.2. The LHPZ-N3 measurements are included in Table 12. The data indicates that liquid levels in LHPZ-N3 were below the 12-inch maximum limit.

Cells 4A, 4B, 4C, 4D, 4E, and 4F were constructed with Subtitle D compliant composite liner systems. Cell 4A was constructed in 2009. A portion of the liner system in Cell 4A was constructed over previously placed waste in Subtitle D compliant lined Cell N-3. Cells 4B, 4C, and 4D were constructed in 2012. The liner system in Cells 4B, 4C, and 4D was constructed entirely over previously placed waste either in Subtitle D compliant lined Cells N-1, N-2, and N-3 or in unlined (and previously closed) Cell A-2. Cell 4F was constructed in 2015. The liner system in Cell 4F was constructed entirely over previously placed waste in unlined (and previously closed) Cell A-2. Leachate collected in Cells 4A, 4B, 4C, 4D, and 4F is directed into the leachate collection system of Expansion Cell NW1/NW-2. The leachate flows by gravity to the Cell NW1/NW-2 sump and is then pumped from the sump to the leachate storage lagoon via a dual walled forcemain as needed. Cell 4E was constructed in 2019. The liner system in Cell 4E was constructed entirely over previously placed waste either in Subtitle D compliant lined Cells N-1 and N-2 or in unlined (and previously closed) Cells A-1 and A-2. Leachate collected in Cell 4E is also directed by gravity into the Cell NW1/NW2 Expansion. A map illustrating leachate collection lines and groundwater diversion lines is included in Appendix I.2.

LHPZ-4A was installed in Cell 4A to monitor the leachate head on the Subtitle D composite lined areas. The location of LHPZ-4A is included on the figure in Appendix I.2 The LHPZ-4A measurements are included in Table 12. The data indicates that liquid levels LHPZ-4A were below the 12-inch maximum limit.

RCRA Subtitle D Cells NW1/NW2

Cells NW1/NW2 were constructed with Subtitle D compliant composite liner systems. Cell NW1/NW2 was constructed in 2024. The leachate flows by gravity to the Cell NW1/NW-2 sump and is then pumped from the sump to the leachate storage lagoon via a dual walled forcemain as needed. A map illustrating leachate collection lines and groundwater diversion lines is included in Appendix I.2.

LHPZ-NW1 was installed in Cells NW1/NW2 to monitor the leachate head on the Subtitle D composite lined areas. The location of LHPZ-NW1 is included on the figure in Appendix I.2 The LHPZ-NW1 measurements (starting November 2024) are included in Table 12. The data indicates that liquid levels LHPZ-NW1 were below the 12-inch maximum limit.

Closed Landfill LCP

The closed unlined disposal areas, Cells A1 and A2, do not have a leachate collection system as per Special Provision X.7 of the SDP Permit. Leachate head monitoring piezometers (LW-471R, LW-477, LW-478R, and LW-479) have been installed in these areas and are measured on a monthly basis (see Table 12).

Leachate Storage System

There is currently one component to the leachate storage system, a leachate storage lagoon with a Subtitle D composite liner (approximate storage capacity is 2,500,000 gallons). The former 10,000-gallon capacity double walled underground leachate storage tank was removed during construction of the Cell NW1/NW2 expansion project in 2024.

Leachate Line Cleaning

The leachate gravity collection and conveyance lines in the Subtitle D lined areas are illustrated in the Figure in Appendix I.2. The leachate lines were cleaned during October, 2022. As per IDNR regulations, the lines should be cleaned every 3 years at a minimum (next cleaning tentatively scheduled for 2025).

Section 5.0 Gas Monitoring

Explosive gas monitoring per 113.9(2) and the approved GMSP was conducted quarterly during the last reporting period (2024). Recorded gas concentrations are below actionable levels.

Explosive gas concentrations are recorded as percent lower explosive limit (% LEL) and were undetected or below action levels at all points during the monitoring episodes. A Summary table of gas monitoring is as Table 13.

Section 6.0 Recommendations

Sampling in accordance with Table 2 is recommended. It is recommended that detection and assessment monitoring continue in accordance with the approved HMSP.

The documentation of inorganic compounds in excess of the control limit and the prediction limit at MW-300 and MW-380 are not designated as SSI due to the demonstrate *ongoing significant impact* by AMD at MW-300 and MW-380. All site monitoring points should remain in the Detection Monitoring System related to inorganic compounds since the alternate source of elevated metals (due to acid mine drainage) is documented at the site.

Based on the Alternate Source Demonstration (Acid Mine Drainage) we recommend that the inorganic compounds continue to be evaluated by intrawell and interwell statistical methods and that the alternate source demonstration of AMD continue to be monitored.

MW-344 and MW-382R have documented VOC SSI. We recommend that MW-344 and MW-382R remain in the Assessment Monitoring System due to the continued exceedance of the double quantification rule for VOC.

Figures

SITE PLAN
ENTIRE SITE

SOUTH CENTRAL IOWA SOLID WASTE AGENCY SLF
TRACY, IOWA

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

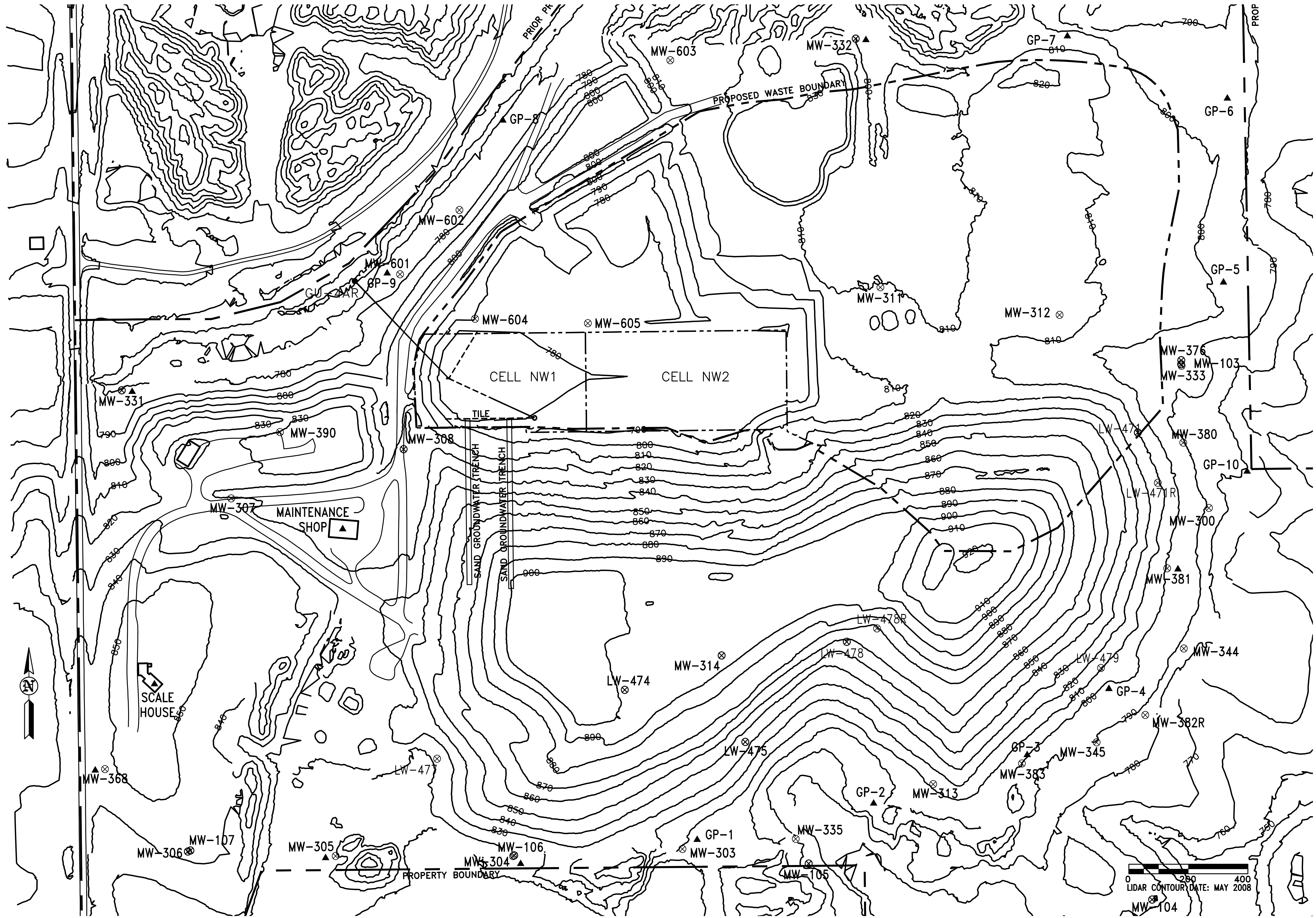
HLW
HLW Engineering Group

FIGURE:	1
REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6009	DATE 1-6-25

FIGURE: 2

SITE PLAN WITH GAS PROBES AREA OF INTEREST

SOUTH CENTRAL IOWA SOLID WASTE AGENCY SLF
TRACY, IOWA



REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6009	DATE 1-6-25

HLW Engineering Group
204 West Broad Street, P.O. Box 314
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HLW
HLW Engineering Group

WATER ELEVATION – OCTOBER 3, 2024			
WELL	ELEV.	WELL	ELEV.
MW-300	779.23	MW-381	782.56
MW-303	776.56	MW-382R	776.34
MW-304	797.30	MW-383	783.83
MW-305	799.34	MW-390	797.55
MW-307	788.83	MW-601	768.63
MW-311	790.49	MW-602	761.37
MW-312	789.38	MW-603	780.76
MW-313	787.57	MW-604	766.93
MW-333	785.45	MW-605	764.91
MW-335	775.09	LW-471R	DRY
MW-344	773.32	LW-477	793.68
MW-345	773.09	LW-478R	DRY
MW-368	835.39	LW-479	768.31
MW-380	781.96		

NOTES:
LEACHATE MEASUREMENTS TAKEN 10-21-24.

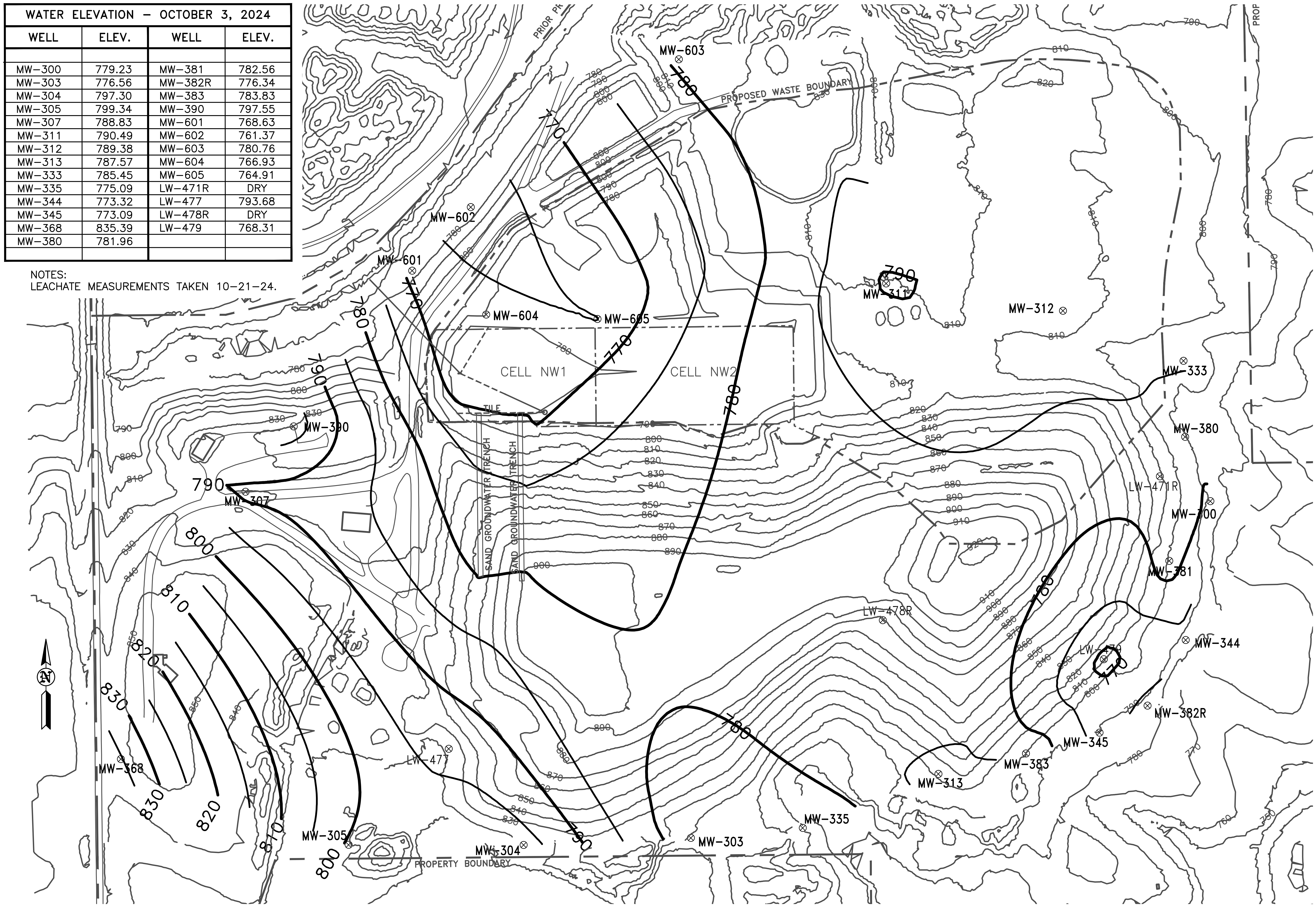

FIGURE: 3

GROUNDWATER CONTOURS

SOUTH CENTRAL IOWA SOLID WASTE AGENCY SLF
TRACY, IOWA

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6009	DATE 1-6-25

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Tables
(in IDNR Format)

Table Index

Table 1 – Monitoring Program Summary

Table 1
Monitoring Program Summary
Annual Water Quality Report
SCISWA Landfill
63-SDP-02-77P

Monitoring Well	Formation - Soil Type	Current Monitoring Program	Change for next sampling event	Constituents w/ SSI	Constituents w/ SSL	Total # of Samples in Each Monitoring Program		
						Detection	Assessment	Corrective Action
HMSP Monitoring Points								
GU-4AR	Underdrain System	Detection	NC	None	None	1	0	0
MW-300	Silty Clay with Shale	Detection	NC	None	None	37	0	0
MW-303	Fill - Clayey Shale/Coal	Detection	NC	None	None	37	0	0
MW-304	Fill - Disturbed Clay & Shale	Detection	NC	None	None	20	0	0
MW-307	Fill - Disturbed Clay & Shale	Background	NC	None	None	34	0	0
MW-312	Fill - Disturbed Clay/Shale/Coal	Background	NC	None	None	34	0	0
MW-313	Fill - Disturbed Clay/Shale/Coal	Detection	NC	None	None	34	0	0
MW-335	Fill - Disturbed Clay/Shale/Coal	Detection	NC	None	None	37	0	0
MW-344	Fill - Disturbed Clay/Shale/Coal	Assessment	NC	cis-1,2-dichloroethene	None	0	37	0
MW-380	Fill - Disturbed Clay & Shale	Detection	NC	None	None	37	0	0
MW-381	Fill - Disturbed Clay & Shale	Detection	NC	None	None	37	0	0
MW-382R	Fill - Disturbed Clay & Shale	Assessment	NC	1,1-dichloroethane	None	0	31	0
MW-390	Silty Clay with Shale	Background	NC	None	None	31	0	0
MW-601	Sandy Lean Clay with Shale	Preliminary	NC	None	None	10	0	0
MW-602	Lean Clay with Shale	Preliminary	NC	None	None	10	0	0
MW-603	Sandy Lean Clay with Shale	Preliminary	NC	None	None	10	0	0
MW-604	Shaley Lean Clay with Shale	Preliminary	NC	None	None	2	0	0
MW-605	Shale bedrock	Preliminary	NC	None	None	0	0	0
Other monitoring points								
SW-1[1]	N/A	Surface Water	NC	N/A	N/A	N/A	N/A	N/A

[1]Surface water sample SW-1 is monitored for Acid Mine Drainage (AMD) constituents.

Table 2 – Monitoring Program Implementation Schedule

Table 2
Monitoring Implementation Schedule
Annual Water Quality Report
SCISWA Landfill
63-SDP-02-77P

Monitoring Well	Recent Sampling Events		Upcoming Sampling		Full Appendix II Sample Dates	
	March 2024	October 2024	March 2025	September 2025	Previously Collected	Next Event
GU-4A	Dry	*Removed*	*Removed*	*Removed*		
GU-4AR	*DNE*	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-300	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-303	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-304	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-307	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-310	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-312	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-313	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-335	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-344	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	3/16/2012, 9/20/2012, 9/25/2013, 10/02/2018, 9/29/2023	Fall 2028
MW-380	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-381	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-382R	Appendix I (1), AMD	Appendix I (1), AMD	Appendix I, AMD	Appendix I, AMD	3/16/2012, 9/20/2012, 9/25/2013, 10/02/2018, 9/29/2023	Fall 2028
MW-384	Appendix I, AMD	*Plugged & Removed*	*Plugged & Removed*	*Plugged & Removed*		
MW-385	Appendix I, AMD	*Plugged & Removed*	*Plugged & Removed*	*Plugged & Removed*		
MW-601	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-602	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-603	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-604	*DNE*	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
MW-605	*DNE*	Dry	Appendix I, AMD	Appendix I, AMD		
MW-390	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD		
Surface Water Monitoring						
SW-1	Dry	Dry	AMD	AMD		

AMD = Acid Mine Drainage parameters (alkalinity (as CaCO3), aluminum, iron, pH, turbidity, and sulfate.

Appendix (1) = add bis(2-ethylhexyl)phthalate

Table 2A – Summary of All Well Testing to Date

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

WELL	Mar-2008	Apr-2008	Jul-2008	Aug-2008	Sep-2008
GUA-4					
MW-300	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-303	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-304					
MW-307(b)					
MW-312(b)					
MW-313	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-335	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-344	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-380	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-381	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-382R					
MW-384					
MW-385					
MW-390(b)					
SW-1					

WELL	Nov-2008	Mar-2009	May-2009	Jul-2009	Sep-2009
GUA-4					Appendix I
MW-300		Appendix I			Appendix I
MW-303		Appendix I			Appendix I
MW-304					
MW-307(b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-312(b)					
MW-313		Appendix I			Appendix I
MW-335		Appendix I			Appendix I
MW-344		Appendix I			Appendix I
MW-380		Appendix I			Appendix I
MW-381		Appendix I			Appendix I
MW-382R					
MW-384					Appendix I
MW-385					Appendix I
MW-390(b)					
SW-1					

WELL	Dec-2009	Mar-2010	Jul-2010	Sep-2010	Jan-2011
GUA-4	Appendix I	Appendix I	Appendix I	Appendix I	
MW-300		Appendix I		Appendix I	
MW-303		Appendix I		Appendix I	
MW-304					
MW-307(b)		**Appendix II**	**Appendix II**	**Appendix II**	
MW-312(b)					
MW-313		Appendix I		Appendix I	
MW-335		Appendix I		Appendix I	
MW-344		Appendix I		Appendix I	
MW-380		Appendix I		Appendix I	
MW-381		Appendix I		Appendix I	
MW-382R					
MW-384	Appendix I	Appendix I	Appendix I	Appendix I	
MW-385	Appendix I	Appendix I	Appendix I	Appendix I	
MW-390(b)				Appendix I	Appendix I
SW-1					

WELL	Mar-2011	Jun-2011	Aug-2011	Sep-2011	Dec-2011
GUA-4	Appendix I			Appendix I	
MW-300	Appendix I			Appendix I	
MW-303	Appendix I			Appendix I	
MW-304					
MW-307(b)	Appendix I			Appendix I	
MW-312(b)					
MW-313	Appendix I			Appendix I	
MW-335	Appendix I			Appendix I	
MW-344	Appendix I			Appendix I	
MW-380	Appendix I			Appendix I	
MW-381	Appendix I			Appendix I	
MW-382R	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-384	Appendix I			Appendix I	
MW-385	Appendix I			Appendix I	
MW-390(b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
SW-1					

WELL	Mar-2012	Sep-2012	Mar-2013	Sep-2013	Apr-2014
GUA-4	Appendix I		Appendix I		Appendix I
MW-300	Appendix I	**Appendix II**	Appendix I	**Appendix II**	Appendix I
MW-303	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-304					
MW-307(b)	**Appendix II**	**Appendix II**	Appendix I	**Appendix II**	Appendix I
MW-312(b)					
MW-313	Appendix I	**Appendix II**	Appendix I	**Appendix II**	Appendix I
MW-335	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-344	**Appendix II**	**Appendix II**	Appendix I	**Appendix II**	Appendix I
MW-380	Appendix I	**Appendix II**	Appendix I	**Appendix II**	Appendix I
MW-381	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-382R	**Appendix II**	**Appendix II**	Appendix I	**Appendix II**	Appendix I
MW-384	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-385	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-390(b)	**Appendix II**	**Appendix II**	Appendix I	**Appendix II**	Appendix I
SW-1					

WELL	Sep-2014	Mar-2015	Sep-2015	Mar-2016	Oct-2016
GUA-4	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-300	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-303	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-304				Appendix I, AMD	Appendix I, AMD
MW-307(b)	Appendix I, AMD		Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-312(b)			Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-313	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-335	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-344	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-380	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-381	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-382R	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-384	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-385	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-390(b)			Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
SW-1	AMD	AMD	AMD	AMD	AMD

WELL	Jan-2017	Mar-2017	Jum-2017	Sep-2017	Mar-2018
GUA-4		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-300		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-303		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-304	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-307(b)		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-312(b)		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-313		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-335		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-344		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-380		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-381		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-382R		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-384		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-385		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
MW-390(b)		Appendix I, AMD		Appendix I, AMD	Appendix I, AMD
SW-1		AMD		AMD	AMD

WELL	Oct-2018	Mar-2019	Sep-2019	Mar-2020	Sep-2020
GUA-4	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-300	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-303	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-304	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-307(b)	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	App I, AMD, S^{2-}	App I, AMD, S^{2-}
MW-312(b)	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	App I, AMD, S^{2-}	App I, AMD, S^{2-}
MW-313	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-335	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	**Appendix II**, AMD	Appendix I, AMD
MW-344	**Appendix II**, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-380	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-381	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-382R	**Appendix II**, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-384	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-385	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD
MW-390(b)	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	App I, AMD, S^{2-}	App I, AMD, S^{2-}
SW-1	AMD	AMD	AMD	AMD	AMD

WELL	Apr-2021	Oct-2021	Apr-2022	9/1/2022	11/15/2022
GUA-4			Appendix I, AMD	Appendix I, AMD	
MW-300	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Co, Ni, Se
MW-303	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	
MW-304	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	
MW-307(b)	App I, AMD, S^{2-}	App I, AMD, S^{2-}	App I, AMD, S^{2-}	App I, AMD, S^{2-}	
MW-312(b)	App I, AMD, S^{2-}	App I, AMD, S^{2-}	App I, AMD, S^{2-}	App I, AMD, S^{2-}	
MW-313	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	
MW-335	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	
MW-344	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	
MW-380	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	
MW-381	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	
MW-382R	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	
MW-384	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	
MW-385	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	
MW-390(b)	App I, AMD, S^{2-}	App I, AMD, S^{2-}	App I, AMD, S^{2-}	App I, AMD, S^{2-}	
SW-1	AMD	AMD	AMD	AMD	
Duplicate				At MW-601	

WELL	3/6/2023	9/29/2023	3/19/2024	9/26/2024	10/3/2024
GU-4A	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	---
GU-4AR	---	---	---	---	Appendix I, AMD
MW-300	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-303	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-304	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-307(b)	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-312(b)	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-313	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-335	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-344	Appendix I, AMD	**Appendix II**, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-380	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-381	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-382R	Appendix I, AMD	**Appendix II**, AMD	App I, bis, AMD	---	App I, bis, AMD
MW-384	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	---
MW-385	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	---
MW-390(b)	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
SW-1	AMD	AMD	Dry	---	Dry
MW-601	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-602	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-603	Appendix I, AMD	Appendix I, AMD	Appendix I, AMD	---	Appendix I, AMD
MW-604	---	---	---	Appendix I	Appendix I, AMD
MW-605	---	---	---	Dry	Dry
Duplicate	At MW-601	At MW-390	At MW-381	---	At MW-601

(b) = Background
App I = Appendix I
AMD = Acid mine drainage parameters alkalinity, aluminum, iron, pH, and sulfate
S^{2-} = Sulfide
bis = bis(2-ethylhexyl)phthalate

Table 3 – Monitoring Well Maintenance Performance Reevaluation Schedule

Table 3
Monitoring Well Maintenance and Performance Reevaluation Schedule
Annual Water Quality Report
SCISWA Landfill
Permit No. 63-SDP-02-77P

Compliance with:	Monitoring Calendar Years								
	2015	2016	2017	2018	2019	2020	2021	2022	2023
567 IAC 113.10(2)"f"(1): high and low water levels (biennial)	Completed		Completed		Completed		Completed		Completed
567 IAC 113.10(2)"f"(2): changes in the hydrologic setting and flow paths (biennial)	Completed		Completed		Completed		Completed		Completed
567 IAC 113.10(2)"f"(3): well depths (annual)	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed
567 IAC 113.10(2)"f"(4): well recharge rates and chemistry (biennial)	Completed		Completed		Completed		Completed	Completed	
567 IAC 113.6(2)"i": Waste separation from ground water (semi-annual)	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed

Compliance with:	Monitoring Calendar Years								
	2024	2025	2026	2027	2028	2029	2030	2031	2032
567 IAC 113.10(2)"f"(1): high and low water levels (biennial)	Completed		Scheduled		Scheduled		Scheduled		Scheduled
567 IAC 113.10(2)"f"(2): changes in the hydrologic setting and flow paths (biennial)	Completed		Scheduled		Scheduled		Scheduled		Scheduled
567 IAC 113.10(2)"f"(3): well depths (annual)	Completed	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled
567 IAC 113.10(2)"f"(4): well recharge rates and chemistry (biennial)	Completed		Scheduled		Scheduled		Scheduled		Scheduled
567 IAC 113.6(2)"i": Waste separation from ground water (semi-annual)	Completed	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled

Table 4 – Monitoring Well Maintenance Performance Reevaluation Summary

Table 4
Monitoring Well Maintenance and Performance Summary
Annual Water Quality Report
SCISWA Landfill
Permit No. 63-SDP-02-77P

Well	Top of Casing (ft. AMSL)	Top of Screen (ft. AMSL)	Screen Length (ft.)	Total Depth (ft.)		Date of Measurements 3/19/2024	Date of Measurements 10/3/2024	Maximum Depth Discrepancy (ft.)	Hydraulic Cond. (cm/sec)/date	Most Recent Recharge Rate[2] 3/19/2024	Most Recent Recharge Rate[2] Change
MW-300	793.22	783.24	10.00	19.98	Groundwater Level (ft.)	14.44	13.99	0	0.0000033 1997	Minimal Drawdown recovery in 4 hrs	None percieved
					Groundwater Elevation (Ft MSL)	778.78	779.23				
					Measured Well Depth (ft.)	19.98	19.98				
					Submerged screen	N	N				
MW-303	810.22	762.60	10.00	57.62	Groundwater Level (ft.)	34.06	33.66	0	0.0001 1997	No Drawdown	None percieved
					Groundwater Elevation (Ft MSL)	776.16	776.56				
					Measured Well Depth (ft.)	57.62	57.62				
					Submerged screen	Y	Y				
MW-304	818.51	786.25	10.00	42.26	Groundwater Level (ft.)	22.2	21.21	0	0.0000028 1997	Some Drawdown recovery in 3 hrs	None percieved
					Groundwater Elevation (Ft MSL)	796.31	797.3				
					Measured Well Depth (ft.)	42.26	42.26				
					Submerged screen	Y	Y				
MW-307	822.23	794.71	10.00	37.52	Groundwater Level (ft.)	34.1	33.40	0	0.0001 1995	No Drawdown	None percieved
					Groundwater Elevation (Ft MSL)	788.13	788.83				
					Measured Well Depth (ft.)	37.52	37.52				
					Submerged screen	N	N				
MW-312	828.05	798.02	10.00	40.03	Groundwater Level (ft.)	28.21	27.11	0	0.0001 1995	No Drawdown	None percieved
					Groundwater Elevation (Ft MSL)	799.84	800.94				
					Measured Well Depth (ft.)	40.03	40.03				
					Submerged screen	Y	Y				
MW-313	813.06	773.85	10.00	49.21	Groundwater Level (ft.)	26.81	25.49	0.09	0.000000594 1997	Some Drawdown recovery in >4 hrs	None percieved
					Groundwater Elevation (Ft MSL)	786.25	787.57				
					Measured Well Depth (ft.)	49.12	49.12				
					Submerged screen	Y	Y				
MW-335	791.74	759.65	10.00	42.09	Groundwater Level (ft.)	16.95	16.65	0	0.0001 1992	No Drawdown	None percieved
					Groundwater Elevation (Ft MSL)	774.79	775.09				
					Measured Well Depth (ft.)	42.09	42.09				
					Submerged screen	Y	Y				
MW-344	786.50	766.29	10.00	30.21	Groundwater Level (ft.)	13.85	13.18	-0.29	0.0002 1992	Some Drawdown recovery in 5 hrs	None percieved
					Groundwater Elevation (Ft MSL)	772.65	773.32				
					Measured Well Depth (ft.)	30.5	30.5				
					Submerged screen	Y	Y				
MW-380	789.92	782.30	10.00	17.62	Groundwater Level (ft.)	9.09	7.96	0	0.0000957 2024	Some Drawdown recovery in 1 hr	None percieved
					Groundwater Elevation (Ft MSL)	780.83	781.96				
					Measured Well Depth (ft.)	17.62	17.62				
					Submerged screen	N	N				
MW-381	801.43	787.31	10.00	24.12	Groundwater Level (ft.)	7.50	18.87	0	0.00000145 2024	Some Drawdown recovery in >6 hrs	None percieved
					Groundwater Elevation (Ft MSL)	793.93	782.56				
					Measured Well Depth (ft.)	24.12	24.12				
					Submerged screen	Y	N				

Table 4
Monitoring Well Maintenance and Performance Summary
Annual Water Quality Report
SCISWA Landfill
Permit No. 63-SDP-02-77P

Well	Top of Casing (ft. AMSL)	Top of Screen (ft. AMSL)	Screen Length (ft.)	Total Depth (ft.)		Date of Measurements 3/19/2024	Date of Measurements 10/3/2024	Maximum Depth Discrepancy (ft.)	Hydraulic Cond. (cm/sec)/date	Most Recent Recharge Rate (2) 3/19/2024	Most Recent Recharge Rate (2) Change
MW-382R	789.90	767.08	10.00	32.82	Groundwater Level (ft.)	14.90	13.58	0	0.0000872 2024	Some Drawdown recovery in <2 hrs	None percieved
					Groundwater Elevation (Ft MSL)	775	776.32				
					Measured Well Depth (ft.)	32.82	32.82				
					Submerged screen	Y	Y				
MW-390	834.97	793.32	10.00	51.65	Groundwater Level (ft.)	38.18	37.42	0	0.0000034 2024	Some Drawdown recovery in >18 hrs	None percieved
					Groundwater Elevation (Ft MSL)	796.79	797.55				
					Measured Well Depth (ft.)	51.65	51.65				
					Submerged screen	Y	Y				
MW-601	782.44	773.37	10.00	19.07	Groundwater Level (ft.)	12.99	13.81	-0.68	0.000188 2022	Some Drawdown recovery in <2 hrs	None percieved
					Groundwater Elevation (Ft MSL)	769.45	768.63				
					Measured Well Depth (ft.)	19.75	19.75				
					Submerged screen	N	N				
MW-602	780.46	763.91	10.00	26.55	Groundwater Level (ft.)	18.96	19.09	-0.76	0.0000514 2022	Some Drawdown recovery in <2 hrs	None percieved
					Groundwater Elevation (Ft MSL)	761.5	761.37				
					Measured Well Depth (ft.)	27.31	27.31				
					Submerged screen	N	N				
MW-603	818.55	776.49	10.00	52.06	Groundwater Level (ft.)	39.05	37.79	-0.25	0.000789 2022	Some Drawdown recovery in <2 hrs	None percieved
					Groundwater Elevation (Ft MSL)	779.5	780.76				
					Measured Well Depth (ft.)	52.31	52.31				
					Submerged screen	Y	Y				
MW-604	792.43	763.43	10.00	39.45	Groundwater Level (ft.)	25.50	25.5	0	0.000706 2024	Some Drawdown recovery in <0.5 hrs	None percieved
					Groundwater Elevation (Ft MSL)	766.93	766.93				
					Measured Well Depth (ft.)	39.45	39.45				
					Submerged screen	Y	Y				
MW-605	787.21	775.36	10.00	22.30	Groundwater Level (ft.)	22.30	22.30	0	pending (dry well)	pending (dry well)	pending (dry well)
					Groundwater Elevation (Ft MSL)	764.91	764.91				
					Measured Well Depth (ft.)	22.3	22.3				
					Submerged screen	N	N				

Groundwater Separation Transducer

Transducer Location		Date of Measurements 3/12/2024	Date of Measurements 9/13/2024
4A-GW (Cell 4A)	Bottom of Waste (in. above transducer)	69.00	69.00
	Transducer in horizontal Screen (datum)	0.00	0.00
	Water above transducer (inches)	0.00	0.00
	Separation Distance (inches)	69.00	69.00
	Separation Distance (ft.)	5.75	5.75

Table 4A – Historic Water Elevation Data

					WO		WO		WO			WO			WO	WO	
	Monitoring Well	**MW-300**	**MW-303**	**MW-304**	**MW-305**	**MW-307**	**MW-309**	**MW-310**	**MW-311**	**MW-312**	**MW-313**	**MW-333**	**MW-335**	**MW-344**	**MW-345**	**MW-368**	**MW-380**
	Original TOC Elevation	793.22	810.22	818.51	821.49	822.23	820.51	806.58	826.69	828.05	813.06	794.26	791.74	786.50	790.11	850.70	789.92
	Current TOC Elevation	793.22	810.22	818.51	821.49	822.23	820.51	806.58	816.59	816.49	813.06	794.26	791.74	786.50	790.11	850.70	789.92
	Screen Top	784.72	767.22	785.51	784.61	800.23	779.01	780.58	791.25	790.75	776.86	779.40	767.10	768.40	772.10	843.60	786.98
	Screen Bottom	772.64	751.32	775.51	774.61	784.23	763.01	767.00	776.25	775.75	758.86	767.01	749.79	755.40	759.10	829.60	772.12
	NORTHING	1180.53	53.79	36.48	43.76	1249.62	1652.60	1636.33	1934.55	1834.98	262.51	1659.44	83.45	708.65	396.80	344.32	
	EASTING	3802.11	2020.61	1450.86	854.88	517.70	1641.25	2180.25	2706.89	3307.75	2865.58	3715.91	2401.57	3712.67	3415.97	83.04	
2012 - Mar	Static Water Level	12.58	33.97	NM	NM	33.53	NM	24.60	38.12	39.44	24.28	10.04	17.48	9.94	16.80	NM	5.40
	Total Depth	20.10	57.55	NM	NM	37.60	NM	38.50	NM	NM	49.30	27.20	41.95	30.25	30.30	NM	17.70
	Static Water Elevation	780.64	776.25	NM	NM	788.70	NM	781.98	778.47	777.05	788.78	784.22	774.26	776.56	773.31	NM	784.52
2012 - Sep	Static Water Level	14.41	34.77	NM	NM	33.96	50.13	26.97	38.52	39.95	27.22	11.60	17.78	15.49	18.30	NM	6.36
	Total Depth	20.05	57.60	NM	NM	37.60	53.80	38.50	48.70	50.70	49.50	27.25	41.95	30.25	30.25	NM	17.80
	Static Water Elevation	778.81	775.45	NM	NM	788.27	770.38	779.61	778.07	776.54	785.84	782.66	773.96	771.01	771.81	NM	783.56
2013 - Mar	Static Water Level	12.83	33.36	NM	NM	33.98	50.27	26.37	38.22	39.54	27.64	11.15	17.06	10.31	18.28	NM	6.02
	Total Depth	20.05	57.60	NM	NM	37.60	53.80	38.50	48.70	50.70	49.50	27.25	41.95	30.25	30.25	NM	17.80
	Static Water Elevation	780.39	776.86	NM	NM	788.25	770.24	780.21	778.37	776.95	785.42	783.11	774.68	776.19	771.83	NM	783.90
2013 - Jun	Static Water Level	12.10	NM	NM	NM	NM	50.12	NM	36.40	37.69	24.50	9.06	NM	8.89	15.24	12.46	8.62
	Total Depth	20.05	NM	NM	NM	NM	53.80	NM	48.70	50.70	49.50	27.25	NM	30.25	30.25	21.10	17.80
	Static Water Elevation	781.12	NM	NM	NM	NM	770.39	NM	780.19	778.80	788.56	785.20	NM	777.61	774.87	838.24	781.30
2013 - Sep	Static Water Level	14.32	35.15	NM	NM	33.67	50.42	26.28	37.48	27.17	27.48	10.98	18.11	14.50	17.51	16.92	5.87
	Total Depth	19.90	57.70	NM	NM	37.55	54.20	38.40	48.65	38.55	48.25	27.10	41.95	30.50	29.90	21.10	17.60
	Static Water Elevation	778.90	775.07	NM	NM	788.56	770.09	780.30	779.11	789.32	785.58	783.28	773.63	772.00	772.60	833.78	784.05
2014 - Apr	Static Water Level	12.94	34.43	NM	NM	34.37	47.04	25.19	27.46	28.67	31.28	13.13	17.39	11.27	20.20	NM	9.87
	Total Depth	19.90	57.70	NM	NM	37.55	54.20	38.60	38.60	40.10	49.30	27.10	41.95	30.50	29.90	NM	17.60
	Static Water Elevation	780.28	775.79	NM	NM	787.86	773.47	781.39	789.13	787.82	781.78	781.13	774.35	775.23	769.91	#VALUE!	780.05
2014 - Sep	Static Water Level	12.10	32.85	NM	NM	31.49	45.35	25.08	26.39	27.37	26.34	9.33	16.95	9.62	15.51	12.11	8.75
	Total Depth	19.90	57.70	NM	NM	37.55	54.20	38.60	38.60	40.10	49.35	27.10	41.95	30.50	29.90	21.10	17.60
	Static Water Elevation	781.12	777.37	NM	NM	790.74	775.16	781.50	790.20	789.12	786.72	784.93	774.79	776.88	774.60	838.59	781.17
2015 - Mar	Static Water Level	13.75	33.82	NM	NM	33.62	48.21	25.15	26.88	27.84	10.15	10.57	17.21	9.96	16.15	13.10	9.20
	Total Depth	19.90	57.70	NM	NM	37.55	54.20	38.60	38.60	40.10	49.35	27.10	41.95	30.50	29.90	21.10	17.60
	Static Water Elevation	779.47	776.40	NM	NM	788.61	772.30	781.43	789.71	788.65	802.91	783.69	774.53	776.54	773.96	837.60	780.72
2015 - Sep	Static Water Level	11.88	33.03	NM	NM	30.89	46.65	26.57	25.65	26.64	24.00	7.89	16.96	10.44	14.58	12.01	6.83
	Total Depth	19.90	57.70	NM	NM	37.55	54.20	38.60	38.60	40.10	49.35	27.10	41.95	30.50	29.90	21.10	17.60
	Static Water Elevation	781.34	777.19	NM	NM	791.34	773.86	780.01	790.94	789.85	789.06	786.37	774.78	776.06	775.53	838.69	783.09
2016 - Mar	Static Water Level	11.89	32.40	10.97	24.86	32.55	45.66	25.35	25.53	26.55	4.85	8.20	16.58	8.89	14.24	10.48	6.62
	Total Depth	19.90	57.70	42.75	NM	37.55	NM	38.60	NM	40.10	49.35	NM	41.95	30.50	NM	NM	17.60
	Static Water Elevation	781.33	777.82	807.54	796.63	789.68	774.85	781.23	791.06	789.94	808.21	786.06	775.16	777.61	775.87	840.22	783.30
2016 - Oct	Static Water Level	13.89	34.09	17.82	26.62	33.75	46.96	26.12	27.08	28.15	26.62	9.43	17.41	14.46	17.46	14.91	8.15
	Total Depth	19.98	57.62	42.26	NM	37.52	NM	38.51	NM	40.03	49.21	NM	42.09	30.21	NM	NM	17.62
	Static Water Elevation	779.33	776.13	800.69	794.87	788.48	773.55	780.46	789.51	788.34	786.44	784.83	774.33	772.04	772.65	835.79	781.77
2017 - Mar	Static Water Level	13.66	34.39	18.89	26.96	34.16	46.86	25.88	27.89	28.88	27.90	10.99	17.51	13.22	18.75	13.93	9.43
	Total Depth	20.05	57.76	42.41	NM	37.55	NM	38.63	NM	40.06	49.35	NM	42.08	30.19	NM	NM	17.78
	Static Water Elevation	779.56	775.83	799.62	794.53	788.07	773.65	780.70	788.70	787.61	785.16	783.27	774.23	773.28	771.36	836.77	780.49
2017 - Sept	Static Water Level	14.48	34.45	19.51	26.92	34.21	45.98	25.78	27.45	28.41	27.59	10.32	17.58	15.65	18.21	17.25	8.77
	Total Depth	20.04	57.73	42.41	NM	37.52	NM	38.60	NM	40.04	49.35	NM	42.05	30.15	NM	NM	17.76
	Static Water Elevation	778.74	775.77	799.00	794.57	788.02	774.53	780.80	789.14	788.08	785.47	783.94	774.16	770.85	771.90	833.45	781.15
2018 - Mar	Static Water Level	13.45	34.20	21.15	27.05	34.34	48.26	24.46	27.75	28.95	28.40	11.28	17.33	13.05	19.32	14.35	9.70
	Total Depth	20.05	57.76	42.41	NM	37.55	NM	38.63	NM	40.06	49.35	NM	42.08	30.19	NM	NM	17.78
	Static Water Elevation	779.77	776.02	797.36	794.44	787.89	772.25	782.12	788.84	787.54	784.66	782.98	774.41	773.45	770.79	836.35	780.22
2018 - Oct	Static Water Level	13.05	33.43	20.60	26.39	33.35	59.60	27.21	26.95	27.94	27.05	9.15	16.92	11.95	16.98	14.71	8.08
	Total Depth	20.05	57.76	42.41	26.92	37.55	NM	38.63	27.45	40.06	49.35	10.32	42.08	30.19	18.21	17.25	17.78
	Static Water Elevation	780.17	776.79	797.91	795.10	788.88	760.91	779.37	789.64	788.55	786.01	785.11	774.82	774.55	773.13	835.99	781.84
2019 - Mar	Static Water Level	12.15	30.95	12.95	27.98	31.95	46.43	26.20	24.85	25.90	4.60	8.50	15.90	8.22	13.80	10.98	6.95
	Total Depth	20.05	57.76	42.41	NM	37.55	NM	38.60	27.45	40.06	49.35	10.32	42.08	30.19	18.21	17.25	17.76
	Static Water Elevation	781.07	779.27	805.56	793.51	790.28	774.08	780.38	791.74	790.59	808.46	785.76	775.84	778.28	776.31	839.72	782.97
2019 - Sep	Static Water Level	13.18	33.50	16.40	23.37	33.20	47.79	26.75	25.58	26.61	6.62	8.05	16.82	11.37	15.31	12.28	6.85
	Total Depth	20.05	57.76	42.41	NM	37.55	NM	38.60	27.45	40.06	49.35	10.32	42.08	30.19	18.21	17.25	17.76
	Static Water Elevation	780.04	776.72	802.11	798.12	789.03	772.72	779.83	791.01	789.88	806.44	786.21	774.92	775.13	774.80	838.42	783.07
2020 - Mar	Static Water Level	13.05	32.69	12.42	22.34	32.71	51.31		25.72	26.70	4.65	8.20	16.40	9.38	14.35	10.55	7.18
	Total Depth	20.05	57.76	42.41	26.92	37.55	54.20		27.08	40.04	49.35	10.32	42.05	30.15	18.21	17.25	17.76
	Static Water Elevation	780.17	777.53	806.09	799.15	789.52	769.20		790.87	789.79	808.41	786.06	775.34	777.12	775.76	840.15	782.74
2020 - Sep	Static Water Level	14.23	33.22	16.43	22.11	33.53	51.37		25.54	26.49	8.40	8.65	11.94	13.22	16.25	14.30	7.46
	Total Depth	20.28	58.37	42.68	46.51	37.94	54.64		38.84	40.30	49.62	27.37	16.78	30.23	30.32	21.50	18.04
	Static Water Elevation	778.99	777.00	802.08	799.38	788.70	769.14		791.05	790.00	804.66	785.61	779.80	773.28	773.86	836.40	782.46
2021 - Apr	Static Water Level	12.64	31.91	13.96	21.61	32.39	50.90		25.14	26.18	4.68	8.01	9.33	8.65	15.06	11.96	6.77
	Total Depth	20.23	57.95	42.70	46.42	37.79	54.29	Abandoned December 19, 2019.	38.69	40.31	49.60	27.40	16.80	36.45	30.34	21.96	18.00
	Static Water Elevation	780.58	778.31	804.55	799.88	789.84	769.61		791.45	790.31	808.38	786.25	782.41	777.85	775.05	838.74	783.15
2021 - Oct	Static Water Level	13.60	33.51	18.96	22.79	30.97	52.27		26.31	27.38	24.99	11.84	16.68	12.92	17.09	12.96	8.03
	Total Depth	20.25	57.97	42.73	46.46	37.84	54.33		38.71	40.35	49.92	27.43	42.15	36.48	30.38	21.62	18.03
	Static Water Elevation	779.62	776.71	799.55	798.70	791.26	768.24		790.28	789.11	788.07	782.42	775.06	773.58	773.02	837.74	781.89
2022 - Apr	Static Water Level	12.59	32.17	14.61	22.27	33.03	51.64		25.94	28.31	7.64	10.09	6.06	8.31	NM	12.24	7.81
	Total Depth	20.20	57.98	42.75	46.47	37.85	54.34		38.73	40.37	49.93	27.49	42.16	36.49	NM	21.63	18.04
	Static Water Elevation	780.63	778.05	803.90	799.22	789.20	768.87		790.65	788.18	805.42	784.17	785.68	778.19	#VALUE!	838.46	782.11
2022 - Sep	Static Water Level	14.90	33.76	18.18	22.29	33.86			26.73	27.78	24.58	9.31	16.90	14.35	17.19	16.20	8.27
	Total Depth	19.98	57.62	42.26	46.47	37.52			38.73	40.03	49.12	27.49	42.09	30.50	30.38	21.63	17.62
	Static Water Elevation	778.32	776.46	800.33	799.20	788.37			789.86	788.71	788.48	784.95	774.84	772.15	772.92	834.50	781.65
2023 - Mar	Static Water Level	12.23	32.45	18.36	22.15	33.60	Abandoned 2022		26.47	27.45	5.96	8.66	16.10	8.35	17.37	12.12	7.75
	Total Depth	20.20	57.98	42.75	46.47	37.85			38.73	40.03	49.12	27.49	42.09	30.50	30.38	21.63	17.62
	Static Water Elevation	780.99	777.77	800.15	799.34	788.63			790.12	789.04	807.10	785.60	775.64	778.15	772.74	838.58	782.17
2023 - Sep	Static Water Level	15.68	34.26	20.50	22.76	34.41			27.25	28.33	26.03	10.19	17.16	15.63	18.26	17.48	9.17
	Total Depth	19.98	57.62	42.26	46.47	37.52			38.73	40.03	49.12	27.49	42.09	30.50	30.38	21.63	17.62
	Static Water Elevation	777.54	775.96	798.01	798.73	787.82			789.34	788.16	787.03	784.07	774.58	770.87	771.85	833.22	780.75
2024 - Mar	Static Water Level	14.44	34.06	22.20	23.30	34.10			27.17	28.21	26.81	10.40	16.95	13.85	18.66	15.97	9.09
	Total Depth	20.20	57.98	42.75	46.47	37.85			38.73	40.03	49.12	27.49	42.09	30.50	30.38	21.63	17.62
	Static Water Elevation	778.78	776.16	796.31	798.19	788.13			789.42	788.28	786.25	783.86	774.79	772.65	771.45	834.73	780.83
2024 - Oct	Static Water Level	13.99	33.66	21.21	22.15	33.40			26.10	27.11	25.49	8.81	16.65	13.18	17.02	15.31	7.96
	Total Depth	19.98	57.62	42.26	46.47	37.52			38.73	40.03	49.12	27.49	42.09	30.50	30.38	21.63	17.62
	Static Water Elevation	779.23	776.56	797.30	799.34	788.83			790.49	789.38	787.57	785.45	775.09	773.32	773.09	835.39	781.96

				WO														
	Monitoring Well	**MW-381**	**MW-382R**	**MW-383**	**MW-384**	**MW-385**	**MW-390**	**MW-601**	**MW-602**	**MW-603**	**MW-604**	**MW-605**	**SB20-01**	**SB20-02**	**LW-471R**	**LW-477**	**LW-478R**	**LW-479**
	Original TOC Elevation	801.43	789.92	802.15	787.00	786.34	834.97	782.44	780.46	818.55	792.43	787.21	813.35	807.85				
	Current TOC Elevation	801.43	789.92	802.15	787.00	786.34	834.97	782.44	780.46	818.55	792.43	787.21	813.35	807.85		821.38		793.41
	Screen Top	789.46	768.50	778.62	776.66	780.93	799.67	773.37	763.91	776.49	763.43	775.36	790.08	776.21				
	Screen Bottom	777.18	756.50	767.15	764.55	768.93	782.67	763.37	753.91	766.49	753.43	765.36	780.08	766.21	20.1	40.5	86.9	36.9
	NORTHING				1504.39	1495.89		465204.5240'	465420.7480'	465924.3890'	465055.04	465040.15	464823.91	464983.51				
	EASTING				1489.38	1904.40		1790786.9980'	1790986.2930'	1791695.0190'	1791039.04	1791417.79	1790857.73	1790904.03				
2012 - Mar	Static Water Level	19.97	12.85	17.52	16.49	11.20	36.03											
	Total Depth	24.25	32.90	35.00	22.45	17.05	52.10											
	Static Water Elevation	781.46	777.07	784.63	770.51	775.14	798.94											
2012 - Sep	Static Water Level	22.33	15.36	19.40	16.60	12.08	36.57											
	Total Depth	24.25	32.75	33.55	22.40	17.10	52.05											
	Static Water Elevation	779.10	774.56	782.75	770.40	774.26	798.40											
2013 - Mar	Static Water Level	18.39	13.81	19.13	16.79	12.41	37.00											
	Total Depth	24.25	32.75	33.55	22.40	17.10	52.05											
	Static Water Elevation	783.04	776.11	783.02	770.21	773.93	797.97											
2013 - Jun	Static Water Level	NM	11.24	NM	NM	NM	34.32											
	Total Depth	NM	32.75	NM	NM	NM	52.05											
	Static Water Elevation	NM	778.68	NM	NM	NM	800.65											
2013 - Sep	Static Water Level	21.36	14.12	18.23	17.19	12.72	35.38											
	Total Depth	24.05	32.75	35.00	22.30	16.90	52.00											
	Static Water Elevation	780.07	775.80	783.92	769.81	773.62	799.59											
2014 - Apr	Static Water Level	8.09	17.00	20.90	16.49	12.19	37.58											
	Total Depth	24.05	32.75	35.00	22.30	16.90	52.00											
	Static Water Elevation	793.34	772.92	781.25	770.51	774.15	797.39											
2014 - Sep	Static Water Level	16.62	11.10	16.31	11.85	9.95	34.78											
	Total Depth	24.05	32.75	35.00	22.30	16.90	52.00											
	Static Water Elevation	784.81	778.82	785.84	775.15	776.39	800.19											
2015 - Mar	Static Water Level	11.75	12.30	17.39	18.41	11.55	36.73											
	Total Depth	24.05	32.75	35.00	22.30	16.90	52.00											
	Static Water Elevation	789.68	777.62	784.76	768.59	774.79	798.24											
2015 - Sep	Static Water Level	18.14	11.11	16.42	15.41	10.05	33.80	Monitoring Wells Installed December 18 and December 19, 2019.										
	Total Depth	24.05	32.75	35.00	22.30	16.90	52.00											
	Static Water Elevation	783.29	778.81	785.73	771.59	776.29	801.17											
2016 - Mar	Static Water Level	11.83	10.85	15.05	15.14	9.73	34.61											
	Total Depth	24.05	32.75	NM	22.30	16.90	52.00						Installed 10-7-2020					
	Static Water Elevation	789.60	779.07	787.10	771.86	776.61	800.36											
2016 - Oct	Static Water Level	19.81	14.21	19.21	18.46	10.31	36.38											
	Total Depth	24.12	32.82	NM	22.32	16.98	51.65											
	Static Water Elevation	781.62	775.71	782.94	768.54	776.03	798.59											
2017 - Mar	Static Water Level	10.51	15.26	19.99	17.69	10.31	37.75											
	Total Depth	24.10	32.87	NM	22.31	17.01	51.65											
	Static Water Elevation	790.92	774.66	782.16	769.31	776.03	797.22				Monitoring Wells Installed 9/18/2024 and 9/19/24							
2017 - Sept	Static Water Level	20.94	15.26	19.39	17.75	10.28	36.73											
	Total Depth	24.10	32.80	NM	22.31	17.00	51.59											
	Static Water Elevation	780.49	774.66	782.76	769.25	776.06	798.24											
2018 - Mar	Static Water Level	6.95	15.50	20.65	18.20	10.60	37.34											
	Total Depth	24.10	32.87	NM	22.31	17.01	51.65											
	Static Water Elevation	794.48	774.42	781.50	768.80	775.74	797.63											
2018 - Oct	Static Water Level	18.95	13.30	18.12	18.60	13.25	35.65											
	Total Depth	24.10	32.87	19.39	22.31	17.01	51.65											
	Static Water Elevation	782.48	776.62	784.03	768.40	773.09	799.32											
2019 - Mar	Static Water Level	8.42	10.30	13.70	12.90	11.74	34.02											
	Total Depth	24.10	32.87	19.39	22.31	17.01	51.65											
	Static Water Elevation	793.01	779.62	788.45	774.10	774.60	800.95											
2019 - Sep	Static Water Level	15.00	12.28	17.07	16.62	12.05	34.80											
	Total Depth	24.10	32.87	19.39	22.31	17.01	51.65											
	Static Water Elevation	786.43	777.64	785.08	770.38	774.29	800.17											
2020 - Mar	Static Water Level	4.00	11.42	15.71	12.25	14.05	35.40	11.84	17.19	46.4								
	Total Depth	24.10	32.80	19.39	22.31	17.00	51.59	19.65	27.22	51.88								
	Static Water Elevation	797.43	778.50	786.44	774.75	772.29	799.57	770.60	763.27	772.15								
2020 - Sep	Static Water Level	14.94	13.45	18.29	18.20	13.57	35.59	11.7	17.63	46.53								
	Total Depth	24.33	33.13	35.38	22.79	NM	54.52	19.66	27.21	52.33								
	Static Water Elevation	786.49	776.47	783.86	768.80	772.77	799.38	770.74	762.83	772.02								
2021 - Apr	Static Water Level	8.04	11.36	15.50	17.92	13.09	35.76	9.07	15.47	45.83								
	Total Depth	24.33	33.12	35.38	22.80	17.21	52.23	19.69	27.22	51.90								
	Static Water Elevation	793.39	778.56	786.65	769.08	773.25	799.21	773.37	764.99	772.72								
2021 - Oct	Static Water Level	9.37	14.53	19.11	15.12	13.34	36.75	16.30	17.92	36.64								
	Total Depth	24.35	33.16	35.41	22.86	17.29	52.48	19.75	27.31	52.31								
	Static Water Elevation	792.06	775.39	783.04	771.88	773.00	798.22	766.14	762.54	781.91								
2022 - Apr	Static Water Level	7.12	12.11	17.26	14.58	12.73	36.81	11.36	17.44	38.54								
	Total Depth	24.30	33.17	35.42	22.87	17.30	52.44	19.76	27.51	52.72								
	Static Water Elevation	794.31	777.81	784.89	772.42	773.61	798.16	771.08	763.02	780.01								
2022 - Sep	Static Water Level	19.08	14.09	18.61	17.55	13.72	37.50	12.36	19.09	38.21			41.94	36.85	Dry	28.5	Dry	25.8
	Total Depth	24.12	32.82	35.42	22.32	16.98	51.65	19.75	27.31	52.31			33.27	41.64	0	40.5	0	36.9
	Static Water Elevation	782.35	775.83	783.54	769.45	772.62	797.47	770.08	761.37	780.34			771.41	771.00	Dry	792.88	Dry	767.61
2023 - Mar	Static Water Level	7.73	12.88	17.21	16.61	12.11	36.96	11.22	17.16	37.62			40.53	34.51	Dry	28.7	Dry	25.1
	Total Depth	24.12	32.82	35.42	22.32	16.98	51.65	19.75	27.31	52.31			33.27	41.64	0	40.5	0	36.9
	Static Water Elevation	793.70	777.04	784.94	770.39	774.23	798.01	771.22	763.30	780.93			772.82	773.34	Dry	792.68	Dry	768.31
2023 - Sep	Static Water Level	20.00	15.30	19.47	17.65	13.52	38.22	13.20	19.77	38.68			42.75	37.25	Dry	29	Dry	25.4
	Total Depth	24.12	32.82	35.42	22.32	16.98	51.65	19.75	27.31	52.31			33.27	41.64	0	40.5	0	36.9
	Static Water Elevation	781.43	774.62	782.68	769.35	772.82	796.75	769.24	760.69	779.87			770.60	770.60	Dry	792.38	Dry	768.01
2024 - Mar	Static Water Level	7.50	14.90	19.25	17.67	13.26	38.18	12.99	18.96	39.05			42.35	37.37	Dry	28.3	Dry	25.1
	Total Depth	24.12	32.82	35.42	22.32	16.98	51.65	19.75	27.31	52.31			33.27	41.64	0	40.5	0	36.9
	Static Water Elevation	793.93	775.02	782.90	769.33	773.08	796.79	769.45	761.50	779.50			771.00	770.48	Dry	793.08	Dry	768.31
2024 - Oct	Static Water Level	18.87	13.58	18.32			37.42	13.81	19.09	37.79	25.5	22.3			Dry	27.7	Dry	25.1
	Total Depth	24.12	32.82	35.42	*Abandoned*	*4/24/2024*	51.65	19.75	27.31	52.31	39.45	22.3	*Abandoned*	*4/24/2024*	0	40.5	0	36.9
	Static Water Elevation	782.56	776.34	783.83			797.55	768.63	761.37	780.76	766.93	764.91			Dry	793.68	Dry	768.31

Notes:
Total Depth is the depth to from top of casing to bottom of well, measured during the sampling event.
The well depths recorded at MW-344 in 2021 and in April 2022 were erroneous. Well depth was confirmed on September 1, 2022 in satisfaction of IDNR requirements (Doc #103587 and Doc #103598).
NM = Not Measured During Sampling Event

Table 5 – Background and GWPS Summary

Table 5
Background Data Summary Tables - Control Limits
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Permit No. 63-SDP-02-77P

(Control/Prediction Limits that exceed the Statewide Standard are highlighted yellow)
(Site Specific GWPS that vary from the Statewide Standard are in red text)

Monitoring Point	Compound	Units	IAC 567-137 Statewide Standards	Intrawell Statistical Control Limit	Interwell Statistical Prediction Limit	Site-Specific GWPS Utilized
GU-4A/GU-4AR	Antimony, total	ug/L	6	0.74	4.40	6
GU-4A/GU-4AR	Arsenic, total	ug/L	10	5.30	22.50	22.5
GU-4A/GU-4AR	Barium, total	ug/L	2000	19.06	49.90	2000
GU-4A/GU-4AR	Beryllium, total	ug/L	4	2.05	1.00	4
GU-4A/GU-4AR	Cadmium, totall	ug/L	5	0.40	1.19	5
GU-4A/GU-4AR	Chromium, total	ug/L	100	2.92	5.51	100
GU-4A/GU-4AR	Cobalt, total	ug/L	2.1	138.11	139.58	139.58
GU-4A/GU-4AR	Copper, total	ug/L	1300	2.19	7.99	1300
GU-4A/GU-4AR	Lead, total	ug/L	15	0.32	4.78	15
GU-4A/GU-4AR	Nickel, total	ug/L	100	231.54	143.98	231.54
GU-4A/GU-4AR	Selenium, total	ug/L	50	3.34	6.40	50
GU-4A/GU-4AR	Silver, total	ug/L	100	0.37	0.56	100
GU-4A/GU-4AR	Thallium, total	ug/L	2	0.26	1.17	2
GU-4A/GU-4AR	Vanadium, total	ug/L	35	2.15	8.91	35
GU-4A/GU-4AR	Zinc, total	ug/L	2000	262.67	13569.08	13569.08

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MW-300	Antimony, total	ug/L	6	1.00	4.40	6
MW-300	Arsenic, total	ug/L	10	4.77	22.50	22.5
MW-300	Barium, total	ug/L	2000	23.94	49.90	2000
MW-300	Beryllium, total	ug/L	4	0.53	1.00	4
MW-300	Cadmium, totall	ug/L	5	10.61	1.19	10.61
MW-300	Chromium, total	ug/L	100	3.69	5.51	100
MW-300	Cobalt, total	ug/L	2.1	653.25	139.58	635.25
MW-300	Copper, total	ug/L	1300	32.00	7.99	1300
MW-300	Lead, total	ug/L	15	2.45	4.78	15
MW-300	Nickel, total	ug/L	100	535.68	143.98	535.68
MW-300	Selenium, total	ug/L	50	3.34	6.40	50
MW-300	Silver, total	ug/L	100	0.56	0.56	100
MW-300	Thallium, total	ug/L	2	0.51	1.17	2
MW-300	Vanadium, total	ug/L	35	2.15	8.91	35
MW-300	Zinc, total	ug/L	2000	1649.11	13569.08	13569.08

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MW-303	Antimony, total	ug/L	6	0.53	4.40	6
MW-303	Arsenic, total	ug/L	10	3.56	22.50	22.5
MW-303	Barium, total	ug/L	2000	179.90	49.90	2000
MW-303	Beryllium, total	ug/L	4	0.27	1.00	4
MW-303	Cadmium, totall	ug/L	5	0.10	1.19	5
MW-303	Chromium, total	ug/L	100	4.76	5.51	100
MW-303	Cobalt, total	ug/L	2.1	37.33	139.58	139.58
MW-303	Copper, total	ug/L	1300	2.00	7.99	1300
MW-303	Lead, total	ug/L	15	3.86	4.78	15
MW-303	Nickel, total	ug/L	100	104.03	143.98	143.98
MW-303	Selenium, total	ug/L	50	1.00	6.40	50
MW-303	Silver, total	ug/L	100	0.37	0.56	100
MW-303	Thallium, total	ug/L	2	0.90	1.17	2
MW-303	Vanadium, total	ug/L	35	8.73	8.91	35
MW-303	Zinc, total	ug/L	2000	271.62	13569.08	13569.08

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MW-304	Antimony, total	ug/L	6	0.82	4.40	6
MW-304	Arsenic, total	ug/L	10	14.68	22.50	22.50
MW-304	Barium, total	ug/L	2000	171.80	49.90	2000
MW-304	Beryllium, total	ug/L	4	0.22	1.00	4
MW-304	Cadmium, totall	ug/L	5	0.37	1.19	5
MW-304	Chromium, total	ug/L	100	1.28	5.51	100
MW-304	Cobalt, total	ug/L	2.1	26.80	139.58	139.58
MW-304	Copper, total	ug/L	1300	2.87	7.99	1300
MW-304	Lead, total	ug/L	15	0.74	4.78	15
MW-304	Nickel, total	ug/L	100	19.25	143.98	143.98
MW-304	Selenium, total	ug/L	50	1.24	6.40	50
MW-304	Silver, total	ug/L	100	0.18	0.56	100
MW-304	Thallium, total	ug/L	2	0.26	1.17	2
MW-304	Vanadium, total	ug/L	35	0.84	8.91	35
MW-304	Zinc, total	ug/L	2000	18.91	13569.08	13569.08

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MW-307	Antimony, total	ug/L	6	1.00	4.40	6
MW-307	Arsenic, total	ug/L	10	10.80	22.50	22.50
MW-307	Barium, total	ug/L	2000	22.48	49.90	2000
MW-307	Beryllium, total	ug/L	4	2.26	1.00	4
MW-307	Cadmium, totall	ug/L	5	1.57	1.19	5
MW-307	Chromium, total	ug/L	100	1.60	5.51	100
MW-307	Cobalt, total	ug/L	2.1	121.65	139.58	139.58
MW-307	Copper, total	ug/L	1300	2.19	7.99	1300
MW-307	Lead, total	ug/L	15	0.77	4.78	15
MW-307	Nickel, total	ug/L	100	208.84	143.98	208.84
MW-307	Selenium, total	ug/L	50	10.65	6.40	50
MW-307	Silver, total	ug/L	100	0.42	0.56	100
MW-307	Thallium, total	ug/L	2	0.27	1.17	2
MW-307	Vanadium, total	ug/L	35	1.10	8.91	35
MW-307	Zinc, total	ug/L	2000	1065.97	13569.08	13569.08

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MW-312	Antimony, total	ug/L	6	1.00	4.40	6
MW-312	Arsenic, total	ug/L	10	3.49	22.50	22.50
MW-312	Barium, total	ug/L	2000	33.65	49.90	2000
MW-312	Beryllium, total	ug/L	4	1.19	1.00	4
MW-312	Cadmium, totall	ug/L	5	0.25	1.19	5
MW-312	Chromium, total	ug/L	100	3.90	5.51	100
MW-312	Cobalt, total	ug/L	2.1	82.41	139.58	139.58
MW-312	Copper, total	ug/L	1300	2.19	7.99	1300
MW-312	Lead, total	ug/L	15	1.67	4.78	15
MW-312	Nickel, total	ug/L	100	227.83	143.98	227.83
MW-312	Selenium, total	ug/L	50	1.00	6.40	50
MW-312	Silver, total	ug/L	100	0.42	0.56	100
MW-312	Thallium, total	ug/L	2	0.27	1.17	2
MW-312	Vanadium, total	ug/L	35	1.10	8.91	35
MW-312	Zinc, total	ug/L	2000	307.97	13569.08	13569.08

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MW-313	Antimony, total	ug/L	6	1.00	4.40	6
MW-313	Arsenic, total	ug/L	10	38.65	22.50	38.65
MW-313	Barium, total	ug/L	2000	94.69	49.90	2000
MW-313	Beryllium, total	ug/L	4	0.27	1.00	4
MW-313	Cadmium, totall	ug/L	5	0.39	1.19	5
MW-313	Chromium, total	ug/L	100	2.98	5.51	100
MW-313	Cobalt, total	ug/L	2.1	105.21	139.58	139.58
MW-313	Copper, total	ug/L	1300	2.99	7.99	1300
MW-313	Lead, total	ug/L	15	1.71	4.78	15
MW-313	Nickel, total	ug/L	100	151.76	143.98	151.76
MW-313	Selenium, total	ug/L	50	1.00	6.40	50
MW-313	Silver, total	ug/L	100	0.37	0.56	100
MW-313	Thallium, total	ug/L	2	0.26	1.17	2
MW-313	Vanadium, total	ug/L	35	131.26	8.91	131.26
MW-313	Zinc, total	ug/L	2000	161.45	13569.08	13569.08

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MW-335	Antimony, total	ug/L	6	0.74	4.40	6
MW-335	Arsenic, total	ug/L	10	11.69	22.50	22.50
MW-335	Barium, total	ug/L	2000	33.34	49.90	2000
MW-335	Beryllium, total	ug/L	4	1.02	1.00	4
MW-335	Cadmium, totall	ug/L	5	1.24	1.19	5
MW-335	Chromium, total	ug/L	100	2.93	5.51	100
MW-335	Cobalt, total	ug/L	2.1	198.93	139.58	198.93
MW-335	Copper, total	ug/L	1300	2.00	7.99	1300
MW-335	Lead, total	ug/L	15	1.82	4.78	15
MW-335	Nickel, total	ug/L	100	520.13	143.98	520.13
MW-335	Selenium, total	ug/L	50	1.00	6.40	50
MW-335	Silver, total	ug/L	100	0.37	0.56	100
MW-335	Thallium, total	ug/L	2	0.27	1.17	2
MW-335	Vanadium, total	ug/L	35	1.10	8.91	35
MW-335	Zinc, total	ug/L	2000	375.56	13569.08	13569.08

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MW-344	Antimony, total	ug/L	6	5.02	4.40	6
MW-344	Arsenic, total	ug/L	10	4.80	22.50	22.50
MW-344	Barium, total	ug/L	2000	34.26	49.90	2000
MW-344	Beryllium, total	ug/L	4	0.04	1.00	4
MW-344	Cadmium, totall	ug/L	5	1.31	1.19	5
MW-344	Chromium, total	ug/L	100	5.52	5.51	100
MW-344	Cobalt, total	ug/L	2.1	558.63	139.58	558.63
MW-344	Copper, total	ug/L	1300	2.00	7.99	1300
MW-344	Lead, total	ug/L	15	0.73	4.78	15
MW-344	Nickel, total	ug/L	100	496.86	143.98	496.86
MW-344	Selenium, total	ug/L	50	1.06	6.40	50
MW-344	Silver, total	ug/L	100	0.37	0.56	100
MW-344	Thallium, total	ug/L	2	0.26	1.17	2
MW-344	Vanadium, total	ug/L	35	1.10	8.91	35
MW-344	Zinc, total	ug/L	2000	288.40	13569.08	13569.08

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MW-380	Antimony, total	ug/L	6	1.10	4.40	6
MW-380	Arsenic, total	ug/L	10	14.66	22.50	22.50
MW-380	Barium, total	ug/L	2000	17.51	49.90	2000
MW-380	Beryllium, total	ug/L	4	26.02	1.00	26.02
MW-380	Cadmium, totall	ug/L	5	33.24	1.19	33.24
MW-380	Chromium, total	ug/L	100	61.90	5.51	100
MW-380	Cobalt, total	ug/L	2.1	2927.73	139.58	2927.73
MW-380	Copper, total	ug/L	1300	60.98	7.99	1300
MW-380	Lead, total	ug/L	15	11.41	4.78	15
MW-380	Nickel, total	ug/L	100	4173.93	143.98	4173.93
MW-380	Selenium, total	ug/L	50	48.19	6.40	50
MW-380	Silver, total	ug/L	100	1.00	0.56	100
MW-380	Thallium, total	ug/L	2	2.79	1.17	2.79
MW-380	Vanadium, total	ug/L	35	27.41	8.91	35
MW-380	Zinc, total	ug/L	2000	12325.21	13569.08	13569.08

Table 5
Background Data Summary Tables - Control Limits
Annual Water Quality Report
SCISWA Landfill
Permit No. 63-SDP-02-77P

(Control/Prediction Limits that exceed the Statewide Standard are highlighted yellow)
(Site Specific GWPS that vary from the Statewide Standard are in red text)

MW-381	Antimony, total	ug/L	6	0.74	4.40	6
MW-381	Arsenic, total	ug/L	10	7.14	22.50	22.5
MW-381	Barium, total	ug/L	2000	32.10	49.90	2000
MW-381	Beryllium, total	ug/L	4	0.27	1.00	4
MW-381	Cadmium, totall	ug/L	5	1.77	1.19	5
MW-381	Chromium, total	ug/L	100	3.90	5.51	100
MW-381	Cobalt, total	ug/L	2.1	65.49	139.58	139.58
MW-381	Copper, total	ug/L	1300	6.39	7.99	1300
MW-381	Lead, total	ug/L	15	1.62	4.78	15
MW-381	Nickel, total	ug/L	100	133.45	143.98	143.98
MW-381	Selenium, total	ug/L	50	1.00	6.40	50
MW-381	Silver, total	ug/L	100	0.37	0.56	100
MW-381	Thallium, total	ug/L	2	0.26	1.17	2
MW-381	Vanadium, total	ug/L	35	2.98	8.91	35
MW-381	Zinc, total	ug/L	2000	269.67	13569.08	13569.08

Table 5
Background Data Summary Tables - Control Limits
Annual Water Quality Report
SCISWA Landfill
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(Control/Prediction Limits that exceed the Statewide Standard are highlighted yellow)
(Site Specific GWPS that vary from the Statewide Standard are in red text)

MW-382R	Antimony, total	ug/L	6	0.74	4.40	6
MW-382R	Arsenic, total	ug/L	10	0.88	22.50	22.5
MW-382R	Barium, total	ug/L	2000	40.43	49.90	2000
MW-382R	Beryllium, total	ug/L	4	0.27	1.00	4
MW-382R	Cadmium, totall	ug/L	5	0.11	1.19	5
MW-382R	Chromium, total	ug/L	100	5.91	5.51	100
MW-382R	Cobalt, total	ug/L	2.1	16.55	139.58	139.58
MW-382R	Copper, total	ug/L	1300	2.00	7.99	1300
MW-382R	Lead, total	ug/L	15	0.59	4.78	15
MW-382R	Nickel, total	ug/L	100	10.33	143.98	143.98
MW-382R	Selenium, total	ug/L	50	1.00	6.40	50
MW-382R	Silver, total	ug/L	100	0.42	0.56	100
MW-382R	Thallium, total	ug/L	2	0.26	1.17	2
MW-382R	Vanadium, total	ug/L	35	2.15	8.91	35
MW-382R	Zinc, total	ug/L	2000	175.00	13569.08	13569.08

Table 5
Background Data Summary Tables - Control Limits
Annual Water Quality Report
SCISWA Landfill
Permit No. 63-SDP-02-77P

(Control/Prediction Limits that exceed the Statewide Standard are highlighted yellow)
(Site Specific GWPS that vary from the Statewide Standard are in red text)

MW-390	Antimony, total	ug/L	6	1.00	4.40	6
MW-390	Arsenic, total	ug/L	10	33.72	22.50	33.72
MW-390	Barium, total	ug/L	2000	70.39	49.90	2000
MW-390	Beryllium, total	ug/L	4	0.27	1.00	4
MW-390	Cadmium, totall	ug/L	5	1.75	1.19	5
MW-390	Chromium, total	ug/L	100	5.51	5.51	100
MW-390	Cobalt, total	ug/L	2.1	155.48	139.58	155.48
MW-390	Copper, total	ug/L	1300	2.19	7.99	1300
MW-390	Lead, total	ug/L	15	5.38	4.78	15
MW-390	Nickel, total	ug/L	100	85.05	143.98	143.98
MW-390	Selenium, total	ug/L	50	1.00	6.40	50
MW-390	Silver, total	ug/L	100	0.42	0.56	100
MW-390	Thallium, total	ug/L	2	1.17	1.17	2
MW-390	Vanadium, total	ug/L	35	8.91	8.91	35
MW-390	Zinc, total	ug/L	2000	598.18	13569.08	13569.08

Table 5
Background Data Summary Tables - Control Limits
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SCISWA Landfill
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(Control/Prediction Limits that exceed the Statewide Standard are highlighted yellow)
(Site Specific GWPS that vary from the Statewide Standard are in red text)

MW-601	Antimony, total	ug/L	6	2.00	4.40	6
MW-601	Arsenic, total	ug/L	10	3.82	22.50	22.5
MW-601	Barium, total	ug/L	2000	53.27	49.90	2000
MW-601	Beryllium, total	ug/L	4	1.08	1.00	4
MW-601	Cadmium, totall	ug/L	5	2.46	1.19	5
MW-601	Chromium, total	ug/L	100	4.40	5.51	100
MW-601	Cobalt, total	ug/L	2.1	708.16	139.58	708.16
MW-601	Copper, total	ug/L	1300	4.00	7.99	1300
MW-601	Lead, total	ug/L	15	2.57	4.78	15
MW-601	Nickel, total	ug/L	100	1124.38	143.98	1124.38
MW-601	Selenium, total	ug/L	50	3.84	6.40	50
MW-601	Silver, total	ug/L	100	1.68	0.56	100
MW-601	Thallium, total	ug/L	2	1.04	1.17	2
MW-601	Vanadium, total	ug/L	35	4.40	8.91	35
MW-601	Zinc, total	ug/L	2000	753.48	13569.08	13569.08

Table 5
Background Data Summary Tables - Control Limits
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SCISWA Landfill
Permit No. 63-SDP-02-77P

(Control/Prediction Limits that exceed the Statewide Standard are highlighted yellow)
(Site Specific GWPS that vary from the Statewide Standard are in red text)

MW-602	Antimony, total	ug/L	6	1.10	4.40	6
MW-602	Arsenic, total	ug/L	10	9.42	22.50	22.5
MW-602	Barium, total	ug/L	2000	16.64	49.90	2000
MW-602	Beryllium, total	ug/L	4	0.54	1.00	4
MW-602	Cadmium, totall	ug/L	5	2.45	1.19	5
MW-602	Chromium, total	ug/L	100	1.10	5.51	100
MW-602	Cobalt, total	ug/L	2.1	344.66	139.58	344.66
MW-602	Copper, total	ug/L	1300	4.00	7.99	1300
MW-602	Lead, total	ug/L	15	0.96	4.78	15
MW-602	Nickel, total	ug/L	100	527.13	143.98	527.13
MW-602	Selenium, total	ug/L	50	1.00	6.40	50
MW-602	Silver, total	ug/L	100	0.42	0.56	100
MW-602	Thallium, total	ug/L	2	0.26	1.17	2
MW-602	Vanadium, total	ug/L	35	1.10	8.91	35
MW-602	Zinc, total	ug/L	2000	277.09	13569.08	13569.08

Table 5
Background Data Summary Tables - Control Limits
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(Control/Prediction Limits that exceed the Statewide Standard are highlighted yellow)
(Site Specific GWPS that vary from the Statewide Standard are in red text)

MW-603	Antimony, total	ug/L	6	1.10	4.40	6
MW-603	Arsenic, total	ug/L	10	10.36	22.50	22.5
MW-603	Barium, total	ug/L	2000	77.09	49.90	2000
MW-603	Beryllium, total	ug/L	4	0.27	1.00	4
MW-603	Cadmium, totall	ug/L	5	0.52	1.19	5
MW-603	Chromium, total	ug/L	100	4.40	5.51	100
MW-603	Cobalt, total	ug/L	2.1	113.83	139.58	139.58
MW-603	Copper, total	ug/L	1300	3.20	7.99	1300
MW-603	Lead, total	ug/L	15	3.94	4.78	15
MW-603	Nickel, total	ug/L	100	67.72	143.98	143.98
MW-603	Selenium, total	ug/L	50	1.00	6.40	50
MW-603	Silver, total	ug/L	100	0.42	0.56	100
MW-603	Thallium, total	ug/L	2	0.26	1.17	2
MW-603	Vanadium, total	ug/L	35	4.40	8.91	35
MW-603	Zinc, total	ug/L	2000	40.04	13569.08	13569.08

Table 5A – Acid Mine Drainage Testing Parameters Summary

Table 5A
Alternate Source Evaluation Summary
Annual Water Quality Report
SCISWA Sanitary Landfill
Permit No. 63-SDP-02-77P

Acid Mine Drainage Constituents - March 19, 2024						
Monitoring Location	pH	Alkalinity ($CaCO_3$)	Aluminum	Iron	Sulfate	Turbidity
	(S.U.)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(NTU)
Limit	**≤ 6.5**	**1,000**	**0.1**	**0.3**	**100**	**5.0**
MW-300	5.8	183	0.421	88.6	2,870	3.67
MW-303	6.5	584	0.264	1.42	82.7	41.19
MW-304	6.8	359	0.051	4.97	45.5	2.60
MW-307	5.7	102	0.236	243	2,020	2.50
MW-312	6.1	298	<0.050	2.48	614	2.00
MW-313	6.9	488	0.128	47.2	359	21.82
MW-335	6.2	522	0.239	9.46	2,500	21.04
MW-344	6.1	1050	0.085	6.17	1,750	5.59
MW-380	4.0	<50	16.0	217	3,590	22.41
MW-381	6.6	157	0.078	0.138	1,150	2.17
MW-382R	7.0	372	0.130	0.167	1,030	13.86
MW-384	5.9	164	0.087	91.3	2,590	8.93
MW-385	6.5	494	0.065	52.2	2,100	13.19
MW-390	6.0	244	0.129	130	2,000	4.20
MW-601	6.4	160	<0.05	3.84	1,090	2.23
MW-602	5.4	<50	0.245	29.2	2,020	42.15
MW-603	6.4	381	0.104	43.2	2,410	4.48
GU-4A	Dry	Dry	Dry	Dry	Dry	Dry
SW-1	Dry	Dry	Dry	Dry	Dry	Dry

Acid Mine Drainage Constituents - October 3, 2024						
Monitoring Location	pH	Alkalinity ($CaCO_3$)	Aluminum	Iron	Sulfate	Turbidity
	(S.U.)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(NTU)
Limit	**≤ 6.5**	**1,000**	**0.1**	**0.3**	**100**	**5.0**
MW-300	5.7	230	0.502	113	2,810	3.67
MW-303	6.4	608	<0.05	0.984	76.6	2.44
MW-304	6.7	392	<0.050	0.513	75.7	3.27
MW-307	5.6	117	0.245	225	1,910	3.59
MW-312	6.1	354	0.058	0.815	445	2.42
MW-313	6.7	584	0.086	9.62	1,140	28.39
MW-335	6.0	548	0.127	14.0	2,620	6.19
MW-344	5.7	214	0.057	1.84	2,410	4.67
MW-380	5.0	32	1.42	184	2,020	4.38
MW-381	6.3	250	0.096	<0.100	792	2.20
MW-382R	6.4	399	0.169	1.02	1,130	8.42
MW-390	6.0	231	0.162	134	2,160	7.14
MW-601	6.3	200	0.105	19.1	829	3.94
MW-602	5.3	47	0.248	10.1	1,900	23.71
MW-603	6.3	434	<0.050	47.7	2,970	2.13
MW-604	5.8	164	0.111	61.7	2,170	2.81
MW-605	Dry	Dry	Dry	Dry	Dry	Dry
GU-4AR	5.8	146	0.111	162	2,600	2.04
SW-1	Dry	Dry	Dry	Dry	Dry	Dry

Notes:
= elevated above standards.
Discussion on acid mine drainage (AMD) is provided in the AWQR.

Table 6 – Summary of Detections

Table 6
Summary of Well/Detected Constituent Pairs that Exceed the Prediction Limit
Annual Water Quality Report
SCISWA Sanitary Landfill
Permit No. 63-SDP-02-77P

Well	Compound	Date	Result (ug/L)	Prediction Limit (ug/L)	Monitoring Program
MW-344	cis-1,2-DCE	3/19/2024	1.100	1.0	Assessment Monitoring
MW-344	cis-1,2-DCE	10/3/2024	1.800	1.0	Assessment Monitoring
MW-382R	1,1-dichloroethane	10/3/2024	1.40	1.0	Assessment Monitoring

Table 7 – Summary of Ongoing and Newly Identified SSI

Table 7

Summary of Ongoing & Newly Identified SSI

Annual Water Quality Report

SCISWA Sanitary Landfill

Permit No. 63-SDP-02-77P

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-344	1,1-dichloroethane	3/27/2013	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	9/25/2013	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	4/15/2014	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	9/26/2014	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	3/12/2015	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	9/2/2015	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	3/23/2016	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	10/19/2016	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	3/7/2017	0.290	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	9/26/2017	0.475	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	3/14/2018	0.474	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	10/2/2018	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	3/28/2019	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	9/24/2019	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	3/10/2020	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	9/15/2020	0.408	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	4/15/2021	0.345	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	10/27/2021	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	4/14/2022	<1	1.00	---	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	9/1/2022	<1	1.00	0.031	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	3/6/2023	<1	1.00	0.500	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	9/29/2023	<1	1.00	0.500	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	3/19/2024	<1	1.00	0.500	140	N/A	N/A	3/27/2013
MW-344	1,1-dichloroethane	10/3/2024	<1	1.00	0.500	140	N/A	N/A	3/27/2013

Table 7	KEY:	SSI	SSL LCL>GWPS

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
SCISWA Sanitary Landfill
Permit No. 63-SDP-02-77P

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-344	Benzene	3/27/2013	<1	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	9/25/2013	0.215	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	4/15/2014	0.268	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	9/26/2014	0.198	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	3/12/2015	0.281	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	9/2/2015	<1	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	3/23/2016	<1	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	10/19/2016	0.594	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	3/7/2017	0.543	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	9/26/2017	0.894	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	3/14/2018	0.715	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	10/2/2018	0.732	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	3/28/2019	<1	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	9/24/2019	0.541	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	3/10/2020	<1	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	9/15/2020	0.836	1.00	---	5	N/A	N/A	3/27/2013
MW-344	Benzene	4/15/2021	0.722	1.00	0.220	5	N/A	N/A	3/27/2013
MW-344	Benzene	10/27/2021	0.918	1.00	0.268	5	N/A	N/A	3/27/2013
MW-344	Benzene	4/14/2022	0.390	1.00	0.310	5	N/A	N/A	3/27/2013
MW-344	Benzene	9/1/2022	<1	1.00	0.211	5	N/A	N/A	3/27/2013
MW-344	Benzene	3/6/2023	<1	1.00	0.078	5	N/A	N/A	3/27/2013
MW-344	Benzene	9/29/2023	1.10	1.00	0.019	5	N/A	N/A	3/27/2013
MW-344	Benzene	3/19/2024	<1	1.00	0.390	5	N/A	N/A	3/27/2013
MW-344	Benzene	10/3/2024	<1	1.00	0.390	5	N/A	N/A	3/27/2013

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
SCISWA Sanitary Landfill
Permit No. 63-SDP-02-77P

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-344	cis-1,2-DCE	3/27/2013	0.301	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	9/25/2013	0.976	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	4/15/2014	1.30	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	9/26/2014	0.819	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	3/12/2015	<1	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	9/2/2015	1.14	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	3/23/2016	1.12	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	10/19/2016	2.04	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	3/7/2017	1.82	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	9/26/2017	2.48	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	3/14/2018	2.24	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	10/2/2018	1.90	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	3/28/2019	1.18	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	9/24/2019	1.82	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	3/10/2020	1.36	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	9/15/2020	2.44	1.00	---	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	4/15/2021	2.02	1.00	1.077	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	10/27/2021	2.18	1.00	1.125	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	4/14/2022	1.27	1.00	1.134	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	9/1/2022	1.90	1.00	1.374	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	3/6/2023	<1	1.00	0.585	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	9/29/2023	2.40	1.00	0.552	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	3/19/2024	1.10	1.00	0.484	70	4/15/2014	N/A	3/27/2013
MW-344	cis-1,2-DCE	10/3/2024	1.80	1.00	0.478	70	4/15/2014	N/A	3/27/2013

Table 7
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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-344	Vinyl Chloride	3/27/2013	1.32	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	9/25/2013	0.858	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	4/15/2014	0.884	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	9/26/2014	0.484	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	3/12/2015	0.428	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	9/2/2015	<1	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	3/23/2016	<1	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	10/19/2016	0.587	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	3/7/2017	1.05	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	9/26/2017	0.705	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	3/14/2018	0.569	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	10/2/2018	<1	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	3/28/2019	<1	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	9/24/2019	0.513	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	3/10/2020	<1	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	9/15/2020	0.903	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	4/15/2021	0.840	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	10/27/2021	0.986	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	4/14/2022	0.383	1.00	---	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	9/1/2022	<1	1.00	0.231	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	3/6/2023	<1	1.00	0.277	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	9/29/2023	<1	1.00	0.402	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	3/19/2024	<1	1.00	0.500	2	3/27/2013	N/A	3/27/2013
MW-344	Vinyl Chloride	10/3/2024	<1	1.00	0.500	2	3/27/2013	N/A	3/27/2013

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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KEY:	SSI	SSL LCL>GWPS

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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-382R	1,1-dichloroethane	3/27/2013	2.43	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	9/25/2013	2.00	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	4/15/2014	3.54	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	9/26/2014	2.00	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	3/12/2015	2.23	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	9/2/2015	1.62	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	3/23/2016	1.65	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	10/19/2016	2.31	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	3/7/2017	1.81	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	9/26/2017	1.93	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	3/14/2018	2.60	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	10/2/2018	1.51	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	3/28/2019	1.60	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	9/24/2019	1.71	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	3/10/2020	1.74	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	9/15/2020	2.00	1.00	---	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	4/15/2021	1.41	1.00	1.712	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	10/27/2021	1.69	1.00	1.710	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	4/14/2022	1.09	1.00	1.653	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	9/1/2022	<1	1.00	0.571	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	3/6/2023	1.40	1.00	0.571	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	9/29/2023	<1	1.00	0.345	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	3/19/2024	<1	1.00	0.339	140	3/27/2013	N/A	3/27/2013
MW-382R	1,1-dichloroethane	10/3/2024	1.40	1.00	0.339	140	3/27/2013	N/A	3/27/2013

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KEY:	SSI	SSL LCL>GWPS

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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-382R	cis-1,2-DCE	3/27/2013	0.383	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	9/25/2013	0.320	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	4/15/2014	0.267	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	9/26/2014	0.270	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	3/12/2015	<1	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	9/2/2015	<1	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	3/23/2016	<1	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	10/19/2016	0.414	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	3/7/2017	0.385	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	9/26/2017	0.484	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	3/14/2018	0.449	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	10/2/2018	0.401	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	3/28/2019	0.439	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	9/24/2019	0.345	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	3/10/2020	<1	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	9/15/2020	0.487	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	4/15/2021	0.289	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	10/27/2021	0.406	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	4/14/2022	0.307	1.00	---	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	9/1/2022	<1	1.00	0.261	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	3/6/2023	<1	1.00	0.320	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	9/29/2023	<1	1.00	0.338	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	3/19/2024	<1	1.00	0.500	70	N/A	N/A	3/27/2013
MW-382R	cis-1,2-DCE	10/3/2024	<1	1.00	0.500	70	N/A	N/A	3/27/2013

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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-382R	Vinyl Chloride	3/27/2013	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	9/25/2013	0.345	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	4/15/2014	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	9/26/2014	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	3/12/2015	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	9/2/2015	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	3/23/2016	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	10/19/2016	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	3/7/2017	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	9/26/2017	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	3/14/2018	0.295	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	10/2/2018	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	3/28/2019	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	9/24/2019	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	3/10/2020	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	9/15/2020	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	4/15/2021	0.206	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	10/27/2021	0.241	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	4/14/2022	<1	1.00	---	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	9/1/2022	<1	1.00	0.207	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	3/6/2023	<1	1.00	0.251	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	9/29/2023	<1	1.00	0.500	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	3/19/2024	<1	1.00	0.500	2	N/A	N/A	3/27/2013
MW-382R	Vinyl Chloride	10/3/2024	<1	1.00	0.500	2	N/A	N/A	3/27/2013

Table 7

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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-382R	bis(2-ethylhexyl)phthalate	3/27/2013	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	9/25/2013	<6	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	4/15/2014	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	9/26/2014	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	3/12/2015	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	9/2/2015	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	3/23/2016	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	10/19/2016	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	3/7/2017	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	9/26/2017	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	3/14/2018	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	10/2/2018	<6	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	3/28/2019	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	9/24/2019	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	3/10/2020	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	9/15/2020	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	4/15/2021	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	10/27/2021	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	4/14/2022	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	9/1/2022	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	3/6/2023	NT	6.00	---	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	9/29/2023	16.000	6.00	1.280	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	3/19/2024	<6	6.00	1.280	6	9/29/2023	N/A	pending
MW-382R	bis(2-ethylhexyl)phthalate	10/3/2024	<6	6.00	1.280	6	9/29/2023	N/A	pending

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

Table 8 - Summary of Ongoing and Newly Identified SSL

NOT REQUIRED

Table 8
Summary of Ongoing & Newly Identified SSL
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NOT REQUIRED

Table 9 – Analytical Data Summary

Table 9

Analytical Data Summary for GU-4A

Constituents	Units	3/28/2013	4/15/2014	9/25/2014	3/11/2015	9/1/2015	3/22/2016	10/20/2016	3/8/2017
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21	<.21
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12	<.12
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10	<.10
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12	<.12
1,1-Dichloroethane	ug/L	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21	<.21
1,1-Dichloroethene	ug/L	<2.00	<2.00	<.15	<2.00	<2.00	<2.00	<.15	<.15
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19	<.19
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<.12	<10.00	<10.00	<10.00	<.50	<.50
1,2-Dibromoethane	ug/L	<10.00	<10.00	<.13	<10.00	<10.00	<10.00	<.13	<.13
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<.14	<1.00	<1.00	<1.00	<.14	<.14
1,2-Dichloroethane	ug/L	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18	<.18
1,2-Dichloropropane	ug/L	<1.00	<1.00	<.87	<1.00	<1.00	<1.00	<.87	<.87
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<.20	<1.00	<1.00	<1.00	<.20	<.20
2-Butanone	ug/L	<10.00	<10.00	<.47	<10.00	<10.00	<10.00	<1.04	<1.04
2-Hexanone	ug/L	<10.0	<10.0	<.2	<10.0	<10.0	<10.0	<.2	<.2
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<.22	<10.00	<10.00	<10.00	<.22	<.22
Acetone	ug/L	<10.00	<10.00	<1.79	<10.00	<10.00	<10.00	<1.79	<1.79
Acrylonitrile	ug/L	<10.00	<10.00	<.53	<10.00	<10.00	<10.00	<.53	<.53
Alkalinity as CaCO3	mg/L			227.0	130.0	150.0	197.0	155.0	175.0
Aluminum	ug/L			37.3	19.1	35.9	23.8	<20.8	<41.3
Ammonia as N	mg/L								
Antimony	ug/L	<6.000	<6.000	<.161	<1.000	<1.000	<.237	<.237	<.185
Arsenic	ug/L	<1.00	<1.00	1.41	1.33	<2.00	1.65	1.58	1.30
Barium	ug/L	8.70	<10.00	15.60	9.71	13.30	11.30	10.50	12.70
Benzene	ug/L	<.50	<.50	<.11	<.50	<.50	<.50	<.11	<.11
Beryllium	ug/L	<1.000	<1.000	.351	<1.000	<1.000	.336	.341	.165
Biochemical Oxygen Demand	mg/L								
Boron	ug/L								
Bromochloromethane	ug/L	<5.00	<5.00	<.12	<5.00	<5.00	<5.00	<.12	<.12
Bromodichloromethane	ug/L	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12	<.12
Bromoform	ug/L	<5.00	<5.00	<.14	<5.00	<5.00	<5.00	<.14	<.14
Bromomethane	ug/L	<4.000	<4.000	<.220	<4.000	<4.000	<4.000	.433	<.220
Cadmium	ug/L	<.5000	.2230	.2710	<.5000	<.5000	.0580	.0420	<.0441
Carbon Disulfide	ug/L	<1.00	<1.00	<.15	<1.00	<1.00	<1.00	<.15	<.15
Carbon Tetrachloride	ug/L	<2.00	<2.00	<.24	<2.00	<2.00	<2.00	<.24	<.24
Chloride	mg/L								
Chlorobenzene	ug/L	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19	<.19
Chlorodibromomethane	ug/L	<5.00	<5.00	<.20	<5.00	<5.00	<5.00	<.20	<.20
Chloroethane	ug/L	<4.00	<4.00	<.15	<4.00	<4.00	<4.00	<.15	<.15
Chloroform	ug/L	<1.00	<1.00	<.28	<1.00	<1.00	<1.00	<.28	<.28
Chloromethane	ug/L	<3.00	<3.00	<.31	<3.00	<3.00	<3.00	<.31	<.31
Chromium	ug/L	<20.000	<20.000	<1.240	<5.000	<5.000	<.355	.461	<.729
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<.13	<1.00	<1.00	<1.00	<.13	<.13
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<.15	<5.00	<5.00	<5.00	<.15	<.15
Cobalt	ug/L	28.1	21.7	111.0	41.7	65.6	65.5	49.6	68.4
Copper	ug/L	<20.000	<20.000	<.485	<2.000	<2.000	<1.220	<1.220	<2.190
Dibromomethane	ug/L	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18	<.18
Ethylbenzene	ug/L	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21	<.21
Fluoride	mg/L								
Iodomethane	ug/L	<10.0	<10.0	<.8	<10.0	<10.0	<10.0	<.8	<.8
Iron	ug/L			140000	82700	155000	88200	79900	59100
Lead	ug/L	<4.0000	<4.0000	<.0967	<.5000	<.5000	<.2110	<.2110	<.3240
Lithium	ug/L								
Manganese	ug/L								
Methylene Chloride	ug/L	<5.000	<5.000	.802	<5.000	<5.000	<5.000	.303	<.170
Molybdenum	ug/L								
Nickel	ug/L	67.4	64.9	173.0	91.7	144.0	109.0	88.7	95.5
Nitrate Nitrite as N	mg/L								
pH	SU			6.01	6.19	6.27	6.27	6.41	6.40
Selenium	ug/L	<5.000	<5.000	<3.340	<5.000	<5.000	<.630	<.630	<.928
Silica (SiO2), molybdate-reactive	mg/L								
Silver	ug/L	<20.000	<20.000	<.042	<1.000	<1.000	<.153	<.153	<.140
Styrene	ug/L	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10	<.10
Sulfate	mg/L			3070	3270	2690	2950	2860	2830
Tetrachloroethene	ug/L	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18	<.18
Thallium	ug/L	<2.0000	<2.0000	<.0325	<1.0000	<1.0000	<.0255	<.0255	<.0644
Toluene	ug/L								
Total Kjeldahl Nitrogen	mg/L								
Total Suspended Solids	mg/L			33.00	14.00	8.00	8.63	14.00	6.00
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21	<.21
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<.22	<5.00	<5.00	<5.00	<.22	<.22
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<.13	<10.00	<10.00	<10.00	<.13	<.13
Trichloroethene	ug/L	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19	<.19
Trichlorofluoromethane	ug/L	<4.00	<4.00	<.17	<4.00	<4.00	<4.00	<.17	<.17
Vanadium	ug/L	<50.000	<50.000	<.449	<5.000	<5.000	<.255	<.255	<.840
Vinyl Acetate	ug/L	<2.00	<2.00	<.74	<10.00	<10.00	<10.00	<.74	<.74
Vinyl Chloride	ug/L	<1.000	<1.000	<.100	<1.000	<1.000	<1.000	<.100	<.100

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

Table 9

Analytical Data Summary for GU-4A

Constituents	9/27/2017	3/14/2018	10/1/2018	3/28/2019	9/23/2019	3/10/2020	9/15/2020	4/16/2021	4/13/2022
1,1,1,2-Tetrachloroethane	<.21	<.21	<.38	<.38	<.38	<.38	<.38		<.38
1,1,1-Trichloroethane	<.12	<.12	<.19	<.19	<.19	<.19	<.19		<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.47	<.47	<.47	<.47	<.47		<.47
1,1,2-Trichloroethane	<.12	<.12	<.45	<.45	<.45	<.45	<.45		<.45
1,1-Dichloroethane	<.21	<.21	<.22	<.22	<.22	<.22	<.22		<.22
1,1-Dichloroethene	<.15	<.15	<.56	<.56	<.56	<.56	<.56		<.56
1,2,3-Trichloropropane	<.19	<.19	<.59	<.59	<.59	<.59	<.59		<.59
1,2-Dibromo-3-chloropropane	<.50	<.50	<1.20	<1.20	<1.20	<1.20	<1.20		<1.20
1,2-Dibromoethane	<.13	<.13	<.34	<.34	<.34	<.34	<.34		<.34
1,2-Dichlorobenzene	<.14	<.14	<.37	<.37	<.37	<.37	<.37		<.37
1,2-Dichloroethane	<.18	<.18	<.39	<.39	<.39	<.39	<.39		<.39
1,2-Dichloropropane	<.87	<.87	<.27	<.27	<.27	<.27	<.27		<.27
1,4-Dichlorobenzene	<.20	<.20	<.23	<.23	<.23	<.23	<.23		<.23
2-Butanone	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10		<2.10
2-Hexanone	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0		<2.0
4-Methyl-2-pentanone	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10		<2.10
Acetone	3.19	2.79	<3.10	<3.10	<3.10	<3.10	<3.10		<3.10
Acrylonitrile	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20		<2.20
Alkalinity as CaCO3	206.0	99.0	201.0	82.4	163.0	200.0	216.0		343.0
Aluminum	<41.3	<165.0	36.0	<108.0	<108.0	<30.0	34.5		<68.0
Ammonia as N								1.44	
Antimony	<.185	<.740	<1.320	<2.120	<2.120	<.580	<.510		<2.760
Arsenic	1.85	<2.02	2.87	<3.00	3.99	2.31	3.03		<3.00
Barium	12.00	10.40	10.30	9.76	14.80	9.50	10.40		10.30
Benzene	<.11	<.11	<.22	<.22	<.22	<.22	<.22		<.22
Beryllium	<.125	<.500	<.530	<1.080	<1.080	.504	.594		<1.080
Biochemical Oxygen Demand								16.1	
Boron								831	
Bromochloromethane	<.12	<.12	<.54	<.54	<.54	<.54	<.54		<.54
Bromodichloromethane	<.12	<.12	<.39	<.39	<.39	<.39	<.39		<.39
Bromoform	<.14	<.14	<.78	<.78	<.78	<.78	<.78		<.78
Bromomethane	<.220	<.220	<1.100	<1.100	<1.100	<1.100	<1.100		<1.100
Cadmium	<.0441	<.1760	.1900	<.3080	<.1560	.0570	<.0490		<.2200
Carbon Disulfide	<.15	<.15	<.45	<.45	<.45	<.45	<.45		<.45
Carbon Tetrachloride	<.24	<.24	<.65	<.65	<.65	<.65	<.65		<.65
Chloride								8.49	
Chlorobenzene	<.19	<.19	<.40	<.40	<.40	<.40	<.40		<.40
Chlorodibromomethane	<.20	<.20	<.75	<.75	<.75	<.75	<.75		<.75
Chloroethane	<.15	<.15	<.79	<.79	<.79	<.79	<.79		<.79
Chloroform	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30		<1.30
Chloromethane	<.31	<.31	<.61	<.61	<.61	<.61	<.61		<.61
Chromium	<.729	<2.920	1.170	<3.920	<3.920	<1.100	<1.100		<4.400
cis-1,2-Dichloroethene	<.13	<.13	<.21	<.21	<.21	<.21	<.21		<.21
cis-1,3-Dichloropropene	<.15	<.15	<.25	<.25	<.25	<.25	<.25		<.25
Cobalt	47.3	48.0	44.7	60.2	69.0	39.5	48.9		15.6
Copper	<2.190	<8.760	<.497	<8.000	<8.000	<3.200	<1.500		<7.200
Dibromomethane	<.18	<.18	<.33	<.33	<.33	<.33	<.33		<.33
Ethylbenzene	<.21	<.21	<.31	<.31	<.31	<.31	<.31		<.31
Fluoride								1.56	
Iodomethane	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0		<7.0
Iron	47800	65200	122000	158000	212000	152000	161000		65500
Lead	<.3240	<1.3000	<.1860	<1.0800	<1.0800	<.2700	<.1100		<.9600
Lithium								195	
Manganese								10700	
Methylene Chloride	.335	<.170	<1.700	<1.700	<1.700	<1.700	<1.700		<1.700
Molybdenum								<5.2	
Nickel	94.5	86.7	110.0	113.0	161.0	104.0	129.0		36.1
Nitrate Nitrite as N								<1.26	
pH	6.34	6.28	6.21	6.16	5.97	6.07	6.21		6.56
Selenium	<.928	<3.710	<.982	<4.000	<4.000	<1.000	<1.000		<3.840
Silica (SiO2), molybdate-reactive								12.6	
Silver	<.140	<.560	<.115	<1.480	<1.480	<.370	<.370		<1.960
Styrene	<.10	<.10	<.37	<.37	<.37	<.37	<.37		<.37
Sulfate	2930	2720	3000	2910	2700	2620	2790		2390
Tetrachloroethene	<.18	<.18	<.48	<.48	<.48	<.48	<.48		<.48
Thallium	<.0644	<.2580	<.5700	<1.0800	<1.0800	<.2600	<.2600		<1.0400
Toluene			<.43	<.43	<.43	<.43	<.43		<.43
Total Kjeldahl Nitrogen								1.65	
Total Suspended Solids	3.87	6.62	13.30	12.70	37.00	7.50	16.00		116.00
trans-1,2-Dichloroethene	<.21	<.21	<.27	<.27	<.27	<.27	<.27		<.27
trans-1,3-Dichloropropene	<.22	<.22	<.56	<.56	<.56	<.56	<.56		<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10		<1.10
Trichloroethene	<.19	<.19	<.43	<.43	<.43	<.43	<.43		<.43
Trichlorofluoromethane	<.17	<.17	<.38	<.38	<.38	<.38	<.38		<.38
Vanadium	<.840	<3.360	<2.150	<3.280	<3.280	<.820	<.850		<4.400
Vinyl Acetate	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50		<2.50
Vinyl Chloride	<.100	.103	<.600	<.600	<.180	<.180	<.180		<.180

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

Table 9

Analytical Data Summary for GU-4A

Constituents	3/6/2023
1,1,1,2-Tetrachloroethane	<1.00
1,1,1-Trichloroethane	<1.00
1,1,2,2-Tetrachloroethane	<1.00
1,1,2-Trichloroethane	<1.00
1,1-Dichloroethane	<1.00
1,1-Dichloroethene	<1.00
1,2,3-Trichloropropane	<1.00
1,2-Dibromo-3-chloropropane	<5.00
1,2-Dibromoethane	<1.00
1,2-Dichlorobenzene	<1.00
1,2-Dichloroethane	<1.00
1,2-Dichloropropane	<1.00
1,4-Dichlorobenzene	<1.00
2-Butanone	<10.00
2-Hexanone	<5.0
4-Methyl-2-pentanone	<5.00
Acetone	<10.00
Acrylonitrile	<5.00
Alkalinity as CaCO3	179.0
Aluminum	<50.0
Ammonia as N	
Antimony	<2.000
Arsenic	<4.00
Barium	14.40
Benzene	<1.00
Beryllium	<4.000
Biochemical Oxygen Demand	
Boron	
Bromochloromethane	<1.00
Bromodichloromethane	<1.00
Bromoform	<1.00
Bromomethane	<1.000
Cadmium	<.8000
Carbon Disulfide	<1.00
Carbon Tetrachloride	<1.00
Chloride	
Chlorobenzene	<1.00
Chlorodibromomethane	<1.00
Chloroethane	<1.00
Chloroform	<1.00
Chloromethane	<1.00
Chromium	<8.000
cis-1,2-Dichloroethene	<1.00
cis-1,3-Dichloropropene	<1.00
Cobalt	38.2
Copper	<4.000
Dibromomethane	<1.00
Ethylbenzene	<1.00
Fluoride	
Iodomethane	<1.0
Iron	114000
Lead	<4.0000
Lithium	
Manganese	
Methylene Chloride	<5.000
Molybdenum	
Nickel	90.9
Nitrate Nitrite as N	
pH	6.00
Selenium	<4.000
Silica (SiO2), molybdate-reactive	
Silver	<4.000
Styrene	<1.00
Sulfate	2560
Tetrachloroethene	<1.00
Thallium	<2.0000
Toluene	<1.00
Total Kjeldahl Nitrogen	
Total Suspended Solids	
trans-1,2-Dichloroethene	<1.00
trans-1,3-Dichloropropene	<1.00
trans-1,4-Dichloro-2-butene	<5.00
Trichloroethene	<1.00
Trichlorofluoromethane	<1.00
Vanadium	<20.000
Vinyl Acetate	<5.00
Vinyl Chloride	<1.000

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

Table 9

Analytical Data Summary for GU-4A

Constituents	Units	3/28/2013	4/15/2014	9/25/2014	3/11/2015	9/1/2015	3/22/2016	10/20/2016	3/8/2017
Xylenes, Total	ug/L	<3.00	<3.00	<.13	<3.00	<3.00	<3.00	<.13	<.13
Zinc	ug/L	89.8	<60.0	158.0	84.1	152.0	83.5	71.7	52.8

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

Table 9

Analytical Data Summary for GU-4A

Constituents	9/27/2017	3/14/2018	10/1/2018	3/28/2019	9/23/2019	3/10/2020	9/15/2020	4/16/2021	4/13/2022
Xylenes, Total	<.13	<.13	<.40	<.40	<.40	<.40	<.40		<.40
Zinc	35.8	50.1	83.1	150.0	170.0	71.4	92.6		<40.0

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

Table 9

Analytical Data Summary for GU-4A

Constituents	3/6/2023
Xylenes, Total	<2.00
Zinc	81.2

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

Table 9

Analytical Data Summary for GU-4AR

Constituents	Units	10/3/2024
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-Dichloroethene	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	ug/L	<10
2-Hexanone	ug/L	<5
4-Methyl-2-pentanone	ug/L	<5
Acetone	ug/L	<10
Acrylonitrile	ug/L	<5
Alkalinity as CaCO3	mg/L	146
Aluminum	ug/L	111
Antimony	ug/L	<2
Arsenic	ug/L	4.1
Barium	ug/L	12.1
Benzene	ug/L	<1
Beryllium	ug/L	<4
Bromochloromethane	ug/L	<1
Bromodichloromethane	ug/L	<1
Bromoform	ug/L	<1
Bromomethane	ug/L	<1
Cadmium	ug/L	<.8
Carbon Disulfide	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Chlorobenzene	ug/L	<1
Chlorodibromomethane	ug/L	<1
Chloroethane	ug/L	<1
Chloroform	ug/L	<1
Chloromethane	ug/L	<1
Chromium	ug/L	<8
cis-1,2-Dichloroethene	ug/L	<1
cis-1,3-Dichloropropene	ug/L	<1
Cobalt	ug/L	56.2
Copper	ug/L	<4
Dibromomethane	ug/L	<1
Ethylbenzene	ug/L	<1
Iodomethane	ug/L	<1
Iron	ug/L	162000
Lead	ug/L	<4
Methylene Chloride	ug/L	<5
Nickel	ug/L	103
pH	SU	5.8
Selenium	ug/L	<4
Silver	ug/L	<4
Styrene	ug/L	<1
Sulfate	mg/L	2600
Tetrachloroethene	ug/L	<1
Thallium	ug/L	<2
Toluene	ug/L	<1
trans-1,2-Dichloroethene	ug/L	<1
trans-1,3-Dichloropropene	ug/L	<1
trans-1,4-Dichloro-2-butene	ug/L	<5
Trichloroethene	ug/L	<1
Trichlorofluoromethane	ug/L	<1
Vanadium	ug/L	<20
Vinyl Acetate	ug/L	<5
Vinyl Chloride	ug/L	<1
Xylenes, Total	ug/L	<2
Zinc	ug/L	188

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

Table 9

Analytical Data Summary for MW-300

Constituents	Units	9/18/2012	3/27/2013	9/25/2013	4/16/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	<2.00
1,1-Dichloropropene	ug/L	<1		<1					
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene	ug/L	<10.0		<11.2					
1,2,4-Trichlorobenzene	ug/L	<5		<5					
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	<10.00
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	<1.00
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	<1.00
1,3,5-Trinitrobenzene	ug/L	<10.0		<11.2					
1,3-Dichlorobenzene	ug/L	<1		<1					
1,3-Dichloropropane	ug/L	<1		<1					
1,3-Dinitrobenzene	ug/L	<10.0		<11.2					
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.20	<1.00	<1.00	<1.00
1,4-Naphthoquinone	ug/L	<10.0		<11.2					
1-Naphthylamine	ug/L	<10.0		<11.2					
2,2`-oxybis[1-Chloropropane]	ug/L	<10.0		<11.2					
2,2-Dichloropropane	ug/L	<4		<4					
2,3,4,6-Tetrachlorophenol	ug/L	<10.0		<11.2					
2,4,5-T	ug/L	<1.00		<1.12					
2,4,5-TP [Silvex]	ug/L	<1.00		<1.12					
2,4,5-Trichlorophenol	ug/L	<10.0		<11.2					
2,4,6-Trichlorophenol	ug/L	<10.0		<11.2					
2,4-D	ug/L	<1.00		<1.12					
2,4-Dichlorophenol	ug/L	<10.0		<11.2					
2,4-Dimethylphenol	ug/L	<10.0		<11.2					
2,4-Dinitrophenol	ug/L	<20.0		<22.5					
2,4-Dinitrotoluene	ug/L	<10.0		<11.2					
2,6-Dichlorophenol	ug/L	<10.0		<11.2					
2,6-Dinitrotoluene	ug/L	<10.0		<11.2					
2-Acetylaminofluorene	ug/L	<10.0		<11.2					
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	<10.00
2-Chloronaphthalene	ug/L	<10.0		<11.2					
2-Chlorophenol	ug/L	<10.0		<11.2					
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	<10.0
2-Methylnaphthalene	ug/L	<10.0		<11.2					
2-Methylphenol [o-Cresol]	ug/L	<10.0		<11.2					
2-Naphthylamine	ug/L	<10.0		<11.2					
2-Nitroaniline	ug/L	<10.0		<11.2					
2-Nitrophenol	ug/L	<10.0		<11.2					
3,3-Dichlorobenzidine	ug/L	<10.0		<56.2					
3,3-Dimethylbenzidine	ug/L	<10.0		<11.2					
3-Methylcholanthrene	ug/L	<10.0		<11.2					
3-Nitroaniline	ug/L	<10.0		<11.2					
4,4`-DDD	ug/L	<.0320		<.0356					
4,4`-DDE	ug/L	<.0320		<.0356					
4,4`-DDT	ug/L	<.0320		<.0356					
4,6-Dinitro-2-methylphenol	ug/L	<10.0		<11.2					
4-Aminobiphenyl	ug/L	<10.0		<11.2					
4-Bromophenyl phenyl ether	ug/L	<10.0		<11.2					
4-Chloro-3-methylphenol	ug/L	<10.0		<11.2					
4-Chloroaniline	ug/L	<10.0		<11.2					
4-Chlorophenyl phenyl ether	ug/L	<10.0		<11.2					
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	<10.00
4-Nitroaniline	ug/L	<10.0		<11.2					
4-Nitrophenol	ug/L	<10.0		<11.2					
5-Nitro-o-toluidine	ug/L	<10.0		<11.2					
7,12-Dimethylbenz[a]anthracene	ug/L	<10.0		<11.2					
Acenaphthene	ug/L	<10.0		<11.2					
Acetone	ug/L	<10.00	<10.00	<10.00	47.80	<1.79	<10.00	<10.00	<10.00
Acetonitrile	ug/L	<10000		<10000					
Acetophenone	ug/L	<10.0		<11.2					
Acrolein	ug/L	<10		<10					
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	<10.00
Aldrin	ug/L	<.0320		<.0356					
Alkalinity as CaCO3	mg/L					284	265	258	370
Allyl Chloride	ug/L	<20		<2					
alpha-BHC	ug/L	<.0320		<.0356					
Aluminum	ug/L					39.1	37.3	70.1	33.5
Anthracene	ug/L	<10.0		<11.2					
Antimony	ug/L	<12.000	<6.000	<6.000	<6.000	<.161	<1.000	<1.000	<.237

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

Table 9

Analytical Data Summary for MW-300

Constituents	10/20/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/15/2020
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.21	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.12	<.12	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.10	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.12	<.12	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	<.21	<.21	<.21	<.21	<.22	<.22	<.22	<.22	<.22
1,1-Dichloroethene	<.15	<.15	<.15	<.15	<.56	<.56	<.56	<.56	<.56
1,1-Dichloropropene									
1,2,3-Trichloropropane	<.19	<.19	<.19	<.19	<.59	<.59	<.59	<.59	<.59
1,2,4,5-Tetrachlorobenzene									
1,2,4-Trichlorobenzene									
1,2-Dibromo-3-chloropropane	<.50	<.50	<.50	<.50	<1.20	<1.20	<1.20	<1.20	<1.20
1,2-Dibromoethane	<.13	<.13	<.13	<.13	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.14	<.14	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.18	<.18	<.18	<.18	<.39	<.39	<.39	<.39	<.39
1,2-Dichloropropane	<.87	<.87	<.87	<.87	<.27	<.27	<.27	<.27	<.27
1,3,5-Trinitrobenzene									
1,3-Dichlorobenzene									
1,3-Dichloropropane									
1,3-Dinitrobenzene									
1,4-Dichlorobenzene	<.20	<.20	<.20	<.20	<.23	<.23	<.23	<.23	<.23
1,4-Naphthoquinone									
1-Naphthylamine									
2,2`-oxybis[1-Chloropropane]									
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	<1.04	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10
2-Chloronaphthalene									
2-Chlorophenol									
2-Hexanone	<.2	<.2	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0
2-Methylnaphthalene									
2-Methylphenol [o-Cresol]									
2-Naphthylamine									
2-Nitroaniline									
2-Nitrophenol									
3,3-Dichlorobenzidine									
3,3-Dimethylbenzidine									
3-Methylcholanthrene									
3-Nitroaniline									
4,4`-DDD									
4,4`-DDE									
4,4`-DDT									
4,6-Dinitro-2-methylphenol									
4-Aminobiphenyl									
4-Bromophenyl phenyl ether									
4-Chloro-3-methylphenol									
4-Chloroaniline									
4-Chlorophenyl phenyl ether									
4-Methyl-2-pentanone	<.22	<.22	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10
4-Nitroaniline									
4-Nitrophenol									
5-Nitro-o-toluidine									
7,12-Dimethylbenz[a]anthracene									
Acenaphthene									
Acetone	<1.79	<1.79	4.29	48.60	<3.10	3.10	<3.10	<3.10	<3.10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<.53	<.53	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20
Aldrin									
Alkalinity as CaCO3	242	288	283	292	258	134	252	333	329
Allyl Chloride									
alpha-BHC									
Aluminum	26.4	47.6	<413.0	<165.0	34.8	<108.0	<108.0	<30.0	16.5
Anthracene									
Antimony	<.237	<.185	<.925	<.740	<1.320	<2.120	<2.120	<.580	<.510

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

Table 9

Analytical Data Summary for MW-300

Constituents	4/15/2021	10/27/2021	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
1,1,1,2-Tetrachloroethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloropropene								
1,2,3-Trichloropropane	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene								
1,2,4-Trichlorobenzene								
1,2-Dibromo-3-chloropropane	<1.20	<1.20	<1.20	<5.00	<5.00	<5.00	<5.00	<5.00
1,2-Dibromoethane	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
1,3,5-Trinitrobenzene								
1,3-Dichlorobenzene								
1,3-Dichloropropane								
1,3-Dinitrobenzene								
1,4-Dichlorobenzene	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00	<1.00
1,4-Naphthoquinone								
1-Naphthylamine								
2,2`-oxybis[1-Chloropropane]								
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	<2.10	<2.10	<2.10	<10.00	<10.00	<10.00	<10.00	<10.00
2-Chloronaphthalene								
2-Chlorophenol								
2-Hexanone	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene								
2-Methylphenol [o-Cresol]								
2-Naphthylamine								
2-Nitroaniline								
2-Nitrophenol								
3,3-Dichlorobenzidine								
3,3-Dimethylbenzidine								
3-Methylcholanthrene								
3-Nitroaniline								
4,4`-DDD								
4,4`-DDE								
4,4`-DDT								
4,6-Dinitro-2-methylphenol								
4-Aminobiphenyl								
4-Bromophenyl phenyl ether								
4-Chloro-3-methylphenol								
4-Chloroaniline								
4-Chlorophenyl phenyl ether								
4-Methyl-2-pentanone	<2.10	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00	<5.00
4-Nitroaniline								
4-Nitrophenol								
5-Nitro-o-toluidine								
7,12-Dimethylbenz[a]anthracene								
Acenaphthene								
Acetone	5.12	5.67	<3.10	<10.00	<10.00	<10.00	<10.00	<10.00
Acetonitrile								
Acetophenone								
Acrolein								
Acrylonitrile	<2.20	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00	<5.00
Aldrin								
Alkalinity as CaCO3	356	266	167	158	270	172	183	230
Allyl Chloride								
alpha-BHC								
Aluminum	63.8	<17.0	<68.0	1390.0	138.0	663.0	421.0	502.0
Anthracene								
Antimony	<1.100	<1.100	<2.760	<2.000	<2.000	<2.000	<2.000	<2.000

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

Table 9

Analytical Data Summary for MW-300

Constituents	Units	9/18/2012	3/27/2013	9/25/2013	4/16/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
Arsenic	ug/L	<1.000	1.350	<2.000	<1.000	2.160	2.830	<2.000	2.230
Barium	ug/L	14.20	12.90	14.50	3.44	16.60	11.70	17.70	10.70
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50	<.50
Benzo[a]anthracene	ug/L	<10.0		<11.2					
Benzo[a]pyrene	ug/L	<10.0		<11.2					
Benzo[b]fluoranthene	ug/L	<10.0		<11.2					
Benzo[ghi]perylene	ug/L	<10.0		<11.2					
Benzo[k]fluoranthene	ug/L	<10.0		<11.2					
Benzyl alcohol	ug/L	<10.0		<11.2					
Beryllium	ug/L	<1.000	<1.000	.230	<1.000	.138	<1.000	<1.000	<.221
beta-BHC	ug/L	<.0320		<.0356					
Bis(2-chloroethoxy)methane	ug/L	<10.0		<11.2					
Bis(2-chloroethyl)ether	ug/L	<10.0		<11.2					
Bis(2-ethylhexyl)phthalate	ug/L	<10.0		<11.2					
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	<5.00
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	<5.00
Bromomethane	ug/L	<20.00	<4.00	<4.00	<4.00	<.22	<4.00	<4.00	<4.00
Butylbenzylphthalate	ug/L	<10.0		<11.2					
Cadmium	ug/L	<.500	1.050	.240	8.080	.656	.259	<.500	.094
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00	<1.00
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	<2.00
Chlordane	ug/L	<2.00		<2.22					
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
Chlorobenzilate	ug/L	<10.0		<11.2					
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.20	<5.00	<5.00	<5.00
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00	<4.00
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	<1.00
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00	<3.00
Chloroprene	ug/L	<1		<1					
Chromium	ug/L	<20.000	<20.000	3.690	<20.000	<1.240	<5.000	<5.000	<.355
Chrysene	ug/L	<10.0		<11.2					
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	<5.00
Cobalt	ug/L	357.0	330.0	332.0	42.3	289.0	251.0	383.0	328.0
Copper	ug/L	<20.00	32.00	<20.00	<20.00	22.90	1.38	<2.00	<1.22
Cyanide	mg/L	<.01		<.01					
delta-BHC	ug/L	<.0320		<.0356					
Diallate	ug/L	<10.0		<11.2					
Dibenzo(a,h)anthracene	ug/L	<10.0		<11.2					
Dibenzofuran	ug/L	<10.0		<11.2					
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
Dichlorodifluoromethane	ug/L	<3		<3					
Dieldrin	ug/L	<.0320		<.0356					
Diethyl phthalate	ug/L	<10.0		<11.2					
Dimethoate	ug/L	<10.0		<11.2					
Dimethyl phthalate	ug/L	<10.0		<11.2					
Di-n-butylphthalate	ug/L	<10.0		<11.2					
Di-n-octylphthalate	ug/L	<10.0		<22.5					
Dinoseb	ug/L	<10.0		<11.2					
Diphenylamine	ug/L	<10.0		<11.2					
Disulfoton	ug/L	<10.0		<11.2					
Endosulfan I	ug/L	<.0320		<.0356					
Endosulfan II	ug/L	<.0320		<.0356					
Endosulfan Sulfate	ug/L	<.0320		<.0356					
Endrin	ug/L	<.0320		<.0356					
Endrin Aldehyde	ug/L	<.0320		<.0356					
Ethyl Methacrylate	ug/L	<2		<2					
Ethyl Methanesulfonate	ug/L	<10.0		<11.2					
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
Famphur	ug/L	<20.0		<22.5					
Fluoranthene	ug/L	<10.0		<11.2					
Fluorene	ug/L	<10.0		<11.2					
gamma-BHC (Lindane)	ug/L	<.0320		<.0356					
Heptachlor	ug/L	<.0320		<.0356					
Heptachlor Epoxide	ug/L	<.0320		<.0356					
Hexachlorobenzene	ug/L	<10.0		<11.2					
Hexachlorobutadiene	ug/L	<10.0		<11.2					
Hexachlorocyclopentadiene	ug/L	<10.0		<22.5					
Hexachloroethane	ug/L	<10.0		<11.2					
Hexachloropropene	ug/L	<10.0		<11.2					
Indeno[1,2,3-cd]pyrene	ug/L	<10.0		<11.2					
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0	<10.0
Iron	ug/L					29200	40400	139000	129000
Isobutanol	ug/L	<10000		<10000					
Isodrin	ug/L	<10.0		<11.2					
Isophorone	ug/L	<10.0		<11.2					

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

Table 9

Analytical Data Summary for MW-300

Constituents	10/20/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/15/2020
Arsenic	2.480	1.800	1.920	<2.020	1.450	<3.000	<3.000	.942	2.580
Barium	13.60	12.30	13.90	11.60	14.00	11.30	12.10	9.65	13.30
Benzene	<.11	<.11	<.11	<.11	<.22	<.22	<.22	<.22	<.22
Benzo[a]anthracene									
Benzo[a]pyrene									
Benzo[b]fluoranthene									
Benzo[ghi]perylene									
Benzo[k]fluoranthene									
Benzyl alcohol									
Beryllium	<.221	.149	<1.250	<.500	<.530	<1.080	<1.080	<.270	<.270
beta-BHC									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-ethylhexyl)phthalate									
Bromochloromethane	<.12	<.12	<.12	<.12	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.12	<.12	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.14	<.14	<.78	<.78	<.78	<.78	<.78
Bromomethane	<.22	<.22	<.22	<.22	<1.10	<1.10	<1.10	<1.10	<1.10
Butylbenzylphthalate									
Cadmium	.231	.258	<.221	.360	.263	<.308	.156	.041	<.049
Carbon Disulfide	<.15	<.15	<.15	<.15	<.45	<.45	<.45	<.45	<.45
Carbon Tetrachloride	<.24	<.24	<.24	<.24	<.65	<.65	<.65	<.65	<.65
Chlordane									
Chlorobenzene	<.19	<.19	<.19	<.19	<.40	<.40	<.40	<.40	<.40
Chlorobenzilate									
Chlorodibromomethane	<.20	<.20	<.20	<.20	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.15	<.15	<.15	<.15	<.79	<.79	<.79	<.79	<.79
Chloroform	<.28	<.28	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	<.31	<.31	<.31	<.31	<.61	<.61	<.61	<.61	<.61
Chloroprene									
Chromium	<.355	<.729	<7.290	<2.920	<1.140	<3.920	<3.920	<1.100	<1.100
Chrysene									
cis-1,2-Dichloroethene	<.13	<.13	<.13	<.13	<.21	<.21	<.21	<.21	<.21
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.15	<.25	<.25	<.25	<.25	<.25
Cobalt	337.0	315.0	306.0	143.0	232.0	344.0	292.0	215.0	282.0
Copper	<1.22	<2.19	<11.00	<8.76	2.84	<8.00	<8.00	<3.20	<1.50
Cyanide									
delta-BHC									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromomethane	<.18	<.18	<.18	<.18	<.33	<.33	<.33	<.33	<.33
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butylphthalate									
Di-n-octylphthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan I									
Endosulfan II									
Endosulfan Sulfate									
Endrin									
Endrin Aldehyde									
Ethyl Methacrylate									
Ethyl Methanesulfonate									
Ethylbenzene	<.21	<.21	<.21	<.21	<.31	<.31	<.31	<.31	<.31
Famphur									
Fluoranthene									
Fluorene									
gamma-BHC (Lindane)									
Heptachlor									
Heptachlor Epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno[1,2,3-cd]pyrene									
Iodomethane	<.8	<.8	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0
Iron	125000	158000	147000	31300	133000	168000	174000	173000	174000
Isobutanol									
Isodrin									
Isophorone									

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

Table 9

Analytical Data Summary for MW-300

Constituents	4/15/2021	10/27/2021	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Arsenic	1.860	3.110	<3.000	<4.000	<4.000	<4.000	<4.000	6.300
Barium	12.10	13.40	10.70	12.60	13.40	11.30	11.90	14.10
Benzene	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
Benzo[a]anthracene								
Benzo[a]pyrene								
Benzo[b]fluoranthene								
Benzo[ghi]perylene								
Benzo[k]fluoranthene								
Benzyl alcohol								
Beryllium	<.270	<.270	<1.080	<4.000	<4.000	<4.000	<4.000	<4.000
beta-BHC								
Bis(2-chloroethoxy)methane								
Bis(2-chloroethyl)ether								
Bis(2-ethylhexyl)phthalate								
Bromochloromethane	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.10	<1.10	<1.10	<1.00	<1.00	<1.00	<1.00	<1.00
Butylbenzylphthalate								
Cadmium	.075	.077	<.220	.900	<.800	<.800	<.800	<.800
Carbon Disulfide	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00	<1.00
Chlordane								
Chlorobenzene	<.40	<.40	<.40	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorobenzilate								
Chlorodibromomethane	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<.79	<.79	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<.61	<.61	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroprene								
Chromium	<1.100	<1.100	<4.400	<8.000	<8.000	<8.000	<8.000	<8.000
Chrysene								
cis-1,2-Dichloroethene	<.21	<.21	<.21	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00	<1.00
Cobalt	152.0	260.0	339.0	1370.0	294.0	881.0	691.0	799.0
Copper	<1.40	<1.40	<7.20	<4.00	<4.00	<4.00	<4.00	<4.00
Cyanide								
delta-BHC								
Diallate								
Dibenzo(a,h)anthracene								
Dibenzofuran								
Dibromomethane	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00	<1.00
Dichlorodifluoromethane								
Dieldrin								
Diethyl phthalate								
Dimethoate								
Dimethyl phthalate								
Di-n-butylphthalate								
Di-n-octylphthalate								
Dinoseb								
Diphenylamine								
Disulfoton								
Endosulfan I								
Endosulfan II								
Endosulfan Sulfate								
Endrin								
Endrin Aldehyde								
Ethyl Methacrylate								
Ethyl Methanesulfonate								
Ethylbenzene	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00	<1.00
Famphur								
Fluoranthene								
Fluorene								
gamma-BHC (Lindane)								
Heptachlor								
Heptachlor Epoxide								
Hexachlorobenzene								
Hexachlorobutadiene								
Hexachlorocyclopentadiene								
Hexachloroethane								
Hexachloropropene								
Indeno[1,2,3-cd]pyrene								
Iodomethane	<7.0	<7.0	<7.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	127000	163000	177000	92700	69800	116000	88600	113000
Isobutanol								
Isodrin								
Isophorone								

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

Table 9

Analytical Data Summary for MW-300

Constituents	Units	9/18/2012	3/27/2013	9/25/2013	4/16/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
Isosafrole	ug/L	<10.0		<11.2					
Kepone	ug/L	<10.0		<11.2					
Lead	ug/L	<4.000	<4.000	1.020	<4.000	1.380	.291	<.500	1.290
Mercury	ug/L	<.267		<.200					
Methacrylonitrile	ug/L	<1		<1					
Methapyrilene	ug/L	<10.0		<11.2					
Methoxychlor	ug/L	<.0320		<.0356					
Methyl Methacrylate	ug/L	<2		<2					
Methyl Methanesulfonate	ug/L	<10.0		<11.2					
Methyl Parathion	ug/L	<10.0		<11.2					
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	<.170	<5.000	<5.000	<5.000
Naphthalene	ug/L	<5		<5					
Nickel	ug/L	269.0	225.0	279.0	98.6	286.0	204.0	329.0	250.0
Nitrobenzene	ug/L	<10.0		<11.2					
N-Nitrosodiethylamine	ug/L	<10.0		<11.2					
N-Nitrosodimethylamine	ug/L	<10.0		<11.2					
N-Nitrosodi-n-butylamine	ug/L	<10.0		<11.2					
N-Nitrosodi-n-propylamine	ug/L	<10.0		<11.2					
N-Nitrosodiphenylamine	ug/L	<10.0		<11.2					
N-Nitrosomethylethylamine	ug/L	<10.0		<11.2					
N-Nitrosopiperidine	ug/L	<10.0		<11.2					
N-Nitrosopyrrolidine	ug/L	<10.0		<11.2					
o,o,o-Triethylphosphorothioate	ug/L	<10.0		<11.2					
o-Toluidine	ug/L	<10.0		<11.2					
p-[Dimethylamino]azobenzene	ug/L	<10.0		<11.2					
Parathion	ug/L	<10.0		<11.2					
PCB-1016	ug/L	<.800		<.816					
PCB-1221	ug/L	<.800		<.816					
PCB-1232	ug/L	<.800		<.816					
PCB-1242	ug/L	<.800		<.816					
PCB-1248	ug/L	<.800		<.816					
PCB-1254	ug/L	<.800		<.816					
PCB-1260	ug/L	<.800		<.816					
Pentachlorobenzene	ug/L	<10.0		<11.2					
Pentachloronitrobenzene	ug/L	<10.0		<11.2					
Pentachlorophenol	ug/L	<10.0		<11.2					
pH	SU					5.90	5.89	6.02	6.00
Phenacetin	ug/L	<10.0		<11.2					
Phenanthrene	ug/L	<10.0		<11.2					
Phenol	ug/L	<10.0		<11.2					
Phorate	ug/L	<10.0		<11.2					
p-Phenylenediamine	ug/L	<10.0		<11.2					
Pronamide	ug/L	<10.0		<11.2					
Propionitrile	ug/L	<10		<10					
Pyrene	ug/L	<10.0		<11.2					
Safrole	ug/L	<10.0		<11.2					
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<3.340	<5.000	<5.000	<.630
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<.042	<1.000	<1.000	.163
Styrene	ug/L	<1.000	<1.000	<1.000	<1.000	<.100	<1.000	<1.000	<1.000
Sulfate	mg/L					2510	3090	2760	2820
Sulfide	mg/L	<1		<1					
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
Thallium	ug/L	<2.000	<2.000	<2.000	<2.000	.355	.219	.251	.160
Thionazin	ug/L	<10.0		<11.2					
Tin	ug/L	160	<100	515	<100				
Toluene	ug/L								
Total Suspended Solids	mg/L					23.00	6.83	8.67	20.00
Toxaphene	ug/L	<2.00		<2.22					
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	<5.00
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	<4.00
Vanadium	ug/L	<50.000	<50.000	<50.000	<50.000	<.449	.462	<5.000	<.255
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	<10.00
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
Xylenes, Total	ug/L	<3.00	<3.00	1.11	<3.00	<.13	<3.00	<3.00	<3.00
Zinc	ug/L	<20.0	838.0	248.0	522.0	669.0	712.0	171.0	187.0

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

Table 9

Analytical Data Summary for MW-300

Constituents	10/20/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/15/2020
Isosafrole									
Kepone									
Lead	.219	<.324	<1.620	<1.300	.717	<1.080	<.270	<.270	<.110
Mercury									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl Methacrylate									
Methyl Methanesulfonate									
Methyl Parathion									
Methylene Chloride	.264	.214	<.170	<.170	<1.700	<1.700	<1.700	<1.700	<1.700
Naphthalene									
Nickel	221.0	288.0	218.0	149.0	189.0	253.0	257.0	185.0	248.0
Nitrobenzene									
N-Nitrosodiethylamine									
N-Nitrosodimethylamine									
N-Nitrosodi-n-butylamine									
N-Nitrosodi-n-propylamine									
N-Nitrosodiphenylamine									
N-Nitrosomethylethylamine									
N-Nitrosopiperidine									
N-Nitrosopyrrolidine									
o,o,o-Triethylphosphorothioate									
o-Toluidine									
p-[Dimethylamino]azobenzene									
Parathion									
PCB-1016									
PCB-1221									
PCB-1232									
PCB-1242									
PCB-1248									
PCB-1254									
PCB-1260									
Pentachlorobenzene									
Pentachloronitrobenzene									
Pentachlorophenol									
pH	5.94	5.96	6.10	6.13	5.97	6.06	6.22	5.96	6.12
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
p-Phenylenediamine									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium	<.630	<.928	<.928	<3.710	1.010	<4.000	<4.000	<1.000	<1.000
Silver	<.153	.148	<.700	<.560	<.115	<1.480	<.370	<.370	<.370
Styrene	<.100	<.100	<.100	<.100	<.370	<.370	<.370	<.370	<.370
Sulfate	3190	2900	3070	2290	2590	2890	2880	2510	2930
Sulfide									
Tetrachloroethene	<.18	<.18	<.18	<.18	<.48	<.48	<.48	<.48	<.48
Thallium	.238	.208	.132	<.258	<.570	<1.080	<.270	<.260	<.260
Thionazin									
Tin									
Toluene					<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	18.30	12.40	15.90	64.00	44.00	20.00	15.50	7.00	25.00
Toxaphene									
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.22	<.56	<.56	<.56	<.56	<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.19	<.19	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.17	<.17	<.38	<.38	<.38	<.38	<.38
Vanadium	<.255	<.840	<8.400	<3.360	<2.150	<3.280	<3.280	<.820	<.850
Vinyl Acetate	<.74	<.74	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	<.10	<.10	<.10	<.10	<.60	<.60	<.18	<.18	<.18
Xylenes, Total	<.13	<.13	<.13	<.13	<.40	<.40	<.40	<.40	<.40
Zinc	308.0	257.0	77.8	209.0	33.6	176.0	63.7	17.7	31.0

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

Table 9

Analytical Data Summary for MW-300

Constituents	4/15/2021	10/27/2021	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Isosafrole								
Kepone								
Lead	<.210	1.190	<.960	<4.000	<4.000	<4.000	<4.000	<4.000
Mercury								
Methacrylonitrile								
Methapyrilene								
Methoxychlor								
Methyl Methacrylate								
Methyl Methanesulfonate								
Methyl Parathion								
Methylene Chloride	<1.700	<1.700	<1.700	<5.000	<5.000	<5.000	<5.000	<5.000
Naphthalene								
Nickel	156.0	237.0	365.0	1720.0	343.0	955.0	719.0	829.0
Nitrobenzene								
N-Nitrosodiethylamine								
N-Nitrosodimethylamine								
N-Nitrosodi-n-butylamine								
N-Nitrosodi-n-propylamine								
N-Nitrosodiphenylamine								
N-Nitrosomethylethylamine								
N-Nitrosopiperidine								
N-Nitrosopyrrolidine								
o,o,o-Triethylphosphorothioate								
o-Toluidine								
p-[Dimethylamino]azobenzene								
Parathion								
PCB-1016								
PCB-1221								
PCB-1232								
PCB-1242								
PCB-1248								
PCB-1254								
PCB-1260								
Pentachlorobenzene								
Pentachloronitrobenzene								
Pentachlorophenol								
pH	6.12	5.99	6.58	5.60	6.10	5.80	5.80	5.70
Phenacetin								
Phenanthrene								
Phenol								
Phorate								
p-Phenylenediamine								
Pronamide								
Propionitrile								
Pyrene								
Safrole								
Selenium	<.960	<.960	<3.840	4.800	<4.000	4.500	<4.000	<4.000
Silver	<.420	<.420	<1.960	<4.000	<4.000	<4.000	<4.000	<4.000
Styrene	<.370	.383	<.370	<1.000	<1.000	<1.000	<1.000	<1.000
Sulfate	2330	2860	3070	3570	1760	3280	2870	2810
Sulfide								
Tetrachloroethene	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00	<1.00
Thallium	<.260	<.260	<1.040	<2.000	<2.000	<2.000	<2.000	<2.000
Thionazin								
Tin								
Toluene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	23.40	38.50	250.00					
Toxaphene								
trans-1,2-Dichloroethene	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
Vanadium	<1.100	<1.100	<4.400	<20.000	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<.18	<.18	<1.00	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.40	<.40	<.40	<2.00	<2.00	<2.00	<2.00	<2.00
Zinc	50.5	51.2	73.5	1230.0	122.0	925.0	1350.0	1030.0

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

Table 9

Analytical Data Summary for MW-303

Constituents	Units	9/19/2012	3/27/2013	9/26/2013	4/15/2014	9/25/2014	3/11/2015	9/2/2015	3/22/2016	10/21/2016
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	<2.00	<.15
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	<10.00	<.50
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00	<.13
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	<1.00	<.14
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	<1.00	<.87
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.20	<1.00	<1.00	<1.00	<.20
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	<10.00	<1.04
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	<10.0	<.2
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	<10.00	<.22
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00	<10.00	<1.79
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	<10.00	<.53
Alkalinity as CaCO3	mg/L					614	621	619	617	618
Aluminum	ug/L					12.0	<50.0	1380.0	<20.8	<20.8
Antimony	ug/L	<6.000	<6.000	<6.000	3.690	<.161	<1.000	<1.000	<.237	<.237
Arsenic	ug/L	<1.000	<1.000	2.030	<1.000	<.945	<2.000	<2.000	<.672	<.672
Barium	ug/L	31.9	26.8	39.1	26.1	106.0	72.5	36.6	66.8	69.2
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50	<.50	<.11
Beryllium	ug/L	<1.000	<1.000	<1.000	<1.000	<.039	<1.000	<1.000	<.221	<.221
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	<5.00	<.12
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	<5.00	<.14
Bromomethane	ug/L	<20.00	<4.00	<4.00	<4.00	<.22	<4.00	<4.00	<4.00	<.22
Cadmium	ug/L	<.5000	<.5000	<.5000	.0936	<.1120	<.5000	<.5000	<.0351	<.0351
Carbon Disulfide	ug/L	<1.000	<1.000	<1.000	<1.000	<.150	<1.000	<1.000	<1.000	.231
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	<2.00	<.24
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.20	<5.00	<5.00	<5.00	<.20
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00	<4.00	<.15
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	<1.00	<.28
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00	<3.00	<.31
Chromium	ug/L	<20.000	<20.000	4.760	<20.000	<1.240	<5.000	<5.000	<.355	<.355
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00	<1.00	<.13
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	<5.00	<.15
Cobalt	ug/L	22.3	24.3	21.1	16.9	20.8	18.0	26.3	15.8	14.7
Copper	ug/L	<20.000	<20.000	<20.000	<20.000	<.485	<2.000	42.800	<1.220	<1.220
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0	<10.0	<.8
Iron	ug/L					568	202	16800	271	179
Lead	ug/L	<4.000	<4.000	<4.000	<4.000	.097	.115	2.980	<.211	<.211
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	.573	<5.000	<5.000	<5.000	.308
Nickel	ug/L	51.2	51.8	56.2	44.5	38.5	31.3	52.8	30.2	28.9
pH	SU					6.45	6.41	6.57	6.53	6.50
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<3.340	<5.000	<5.000	<.630	<.630
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<.042	<1.000	<1.000	.174	<.153
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10
Sulfate	mg/L					79.6	116.0	740.0	97.9	89.3
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	.0340	.0460	<1.0000	.0500	<.0255
Toluene	ug/L									
Total Suspended Solids	mg/L					2.570	<5.000	900.000	3.670	1.250
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	<5.00	<.22
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00	<.13
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	<4.00	<.17
Vanadium	ug/L	<50.000	<50.000	<50.000	<50.000	<.449	<5.000	8.730	<.255	<.255
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	<10.00	<.74
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10
Xylenes, Total	ug/L	<3.000	<3.000	.232	<3.000	<.130	<3.000	<3.000	<3.000	.390
Zinc	ug/L	<20.00	74.80	199.00	<60.00	18.40	<10.00	30.80	<5.21	<5.21

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

Table 9

Analytical Data Summary for MW-303

Constituents	3/8/2017	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/10/2020	9/15/2020	4/14/2021
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.38	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.12	<.19	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.47	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.12	<.45	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	<.21	<.21	<.21	<.22	<.22	<.22	<.22	<.22	<.22
1,1-Dichloroethene	<.15	<.15	<.15	<.56	<.56	<.56	<.56	<.56	<.56
1,2,3-Trichloropropane	<.19	<.19	<.19	<.59	<.59	<.59	<.59	<.59	<.59
1,2-Dibromo-3-chloropropane	<.50	<.50	<.50	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20
1,2-Dibromoethane	<.13	<.13	<.13	<.34	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.14	<.37	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.18	<.18	<.18	<.39	<.39	<.39	<.39	<.39	<.39
1,2-Dichloropropane	<.87	<.87	<.87	<.27	<.27	<.27	<.27	<.27	<.27
1,4-Dichlorobenzene	<.20	<.20	<.20	<.23	<.23	<.23	<.23	<.23	<.23
2-Butanone	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10
2-Hexanone	<.2	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Methyl-2-pentanone	<.22	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10
Acetone	<1.79	2.21	<1.79	<3.10	<3.10	<3.10	<3.10	<3.10	<3.10
Acrylonitrile	<.53	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20	<2.20
Alkalinity as CaCO3	628	582	627	664	659	648	580	680	644
Aluminum	<41.3	<41.3	<41.3	33.0	<27.0	<27.0	<30.0	<12.0	215.0
Antimony	<.185	<.185	<.185	<1.320	<.530	<.530	<.580	<.510	<1.100
Arsenic	.508	<.505	<.505	.370	1.910	<.750	<.880	<.880	2.070
Barium	42.9	68.4	66.1	37.4	20.8	39.1	59.0	25.0	14.5
Benzene	<.11	<.11	<.11	<.22	<.22	<.22	<.22	<.22	<.22
Beryllium	<.125	<.125	<.125	<.530	<.270	<.270	<.270	<.270	<.270
Bromochloromethane	<.12	<.12	<.12	<.54	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.12	<.39	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.14	<.78	<.78	<.78	<.78	<.78	<.78
Bromomethane	<.22	<.22	<.22	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10
Cadmium	<.0441	<.0441	<.0441	<.1670	<.0770	<.0390	<.0390	<.0490	.1000
Carbon Disulfide	<.150	<.150	<.150	<.450	<.450	<.450	<.450	<.450	<.450
Carbon Tetrachloride	<.24	<.24	<.24	<.65	<.65	<.65	<.65	<.65	<.65
Chlorobenzene	<.19	<.19	<.19	<.40	<.40	<.40	<.40	<.40	<.40
Chlorodibromomethane	<.20	<.20	<.20	<.75	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.15	<.15	<.15	<.79	<.79	<.79	<.79	<.79	<.79
Chloroform	<.28	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	<.31	<.31	<.31	<.61	<.61	<.61	<.61	<.61	<.61
Chromium	<.729	<.729	<.729	1.180	<.980	<.980	16.000	<1.100	<1.100
cis-1,2-Dichloroethene	<.13	<.13	<.13	<.21	<.21	<.21	<.21	<.21	<.21
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.25	<.25	<.25	<.25	<.25	<.25
Cobalt	19.1	17.2	16.3	14.7	19.9	16.0	15.5	13.8	20.5
Copper	<2.190	<2.190	<2.190	.502	<2.000	<2.000	<3.200	<1.500	1.620
Dibromomethane	<.18	<.18	<.18	<.33	<.33	<.33	<.33	<.33	<.33
Ethylbenzene	<.21	<.21	<.21	<.31	<.31	<.31	<.31	<.31	<.31
Iodomethane	<.8	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0
Iron	3120	176	426	523	4100	617	489	1390	9030
Lead	<.324	<.324	<.324	<.186	<.270	<.270	<.270	<.110	.439
Methylene Chloride	<.170	<.170	.226	<1.700	<1.700	<1.700	<1.700	<1.700	<1.700
Nickel	42.5	27.6	28.7	27.4	50.8	29.5	25.9	31.6	61.6
pH	6.56	7.23	6.56	6.54	6.50	6.52	6.43	6.77	6.48
Selenium	<.928	<.928	<.928	<.982	<1.000	<1.000	<1.000	<1.000	<.960
Silver	<.140	<.140	.170	<.115	<.370	<.370	<.370	<.370	<.420
Styrene	<.10	<.10	<.10	<.37	<.37	<.37	<.37	<.37	<.37
Sulfate	963.0	106.0	93.1	295.0	1860.0	306.0	116.0	415.0	2070.0
Tetrachloroethene	<.18	<.18	<.18	<.48	<.48	<.48	<.48	<.48	<.48
Thallium	<.0644	<.0644	<.0644	<.5700	<.2700	<.2700	<.2600	<.2600	.9040
Toluene				<.43	<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	3.380	1.130	1.000	2.130	3.000	2.630	<.638	2.000	69.500
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.27	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.56	<.56	<.56	<.56	<.56	<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.19	<.43	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.17	<.38	<.38	<.38	<.38	<.38	<.38
Vanadium	<.840	<.840	<.840	<2.150	<.820	<.820	<.820	<.850	1.360
Vinyl Acetate	<.74	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	<.10	<.10	<.10	<.60	<.60	<.18	<.18	<.18	<.18
Xylenes, Total	.459	<.130	<.130	<.400	<.400	<.400	<.400	<.400	<.400
Zinc	<11.50	<11.50	<11.50	7.91	<10.00	<10.00	<10.00	<10.00	11.70

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

Table 9

Analytical Data Summary for MW-303

Constituents	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
1,1,1,2-Tetrachloroethane	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
1,2,3-Trichloropropane	<.59	<.59	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dibromo-3-chloropropane	<1.20	<1.20	<5.00	<5.00	<5.00	<5.00	<5.00
1,2-Dibromoethane	<.34	<.34	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
1,4-Dichlorobenzene	<.23	<.23	<1.00	<1.00	<1.00	<1.00	<1.00
2-Butanone	<2.10	<2.10	<10.00	<10.00	<10.00	<10.00	<10.00
2-Hexanone	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0
4-Methyl-2-pentanone	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00	<5.00
Acetone	<3.10	<3.10	<10.00	<10.00	<10.00	<10.00	<10.00
Acrylonitrile	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00	<5.00
Alkalinity as CaCO3	654	627	522	530	536	584	608
Aluminum	22.3	28.5	199.0	142.0	76.0	264.0	<50.0
Antimony	<1.100	<.690	<2.000	<2.000	<2.000	<2.000	<2.000
Arsenic	<.750	<.750	<4.000	<4.000	<4.000	<4.000	<4.000
Barium	73.3	58.8	58.0	73.9	35.5	92.9	83.1
Benzene	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
Beryllium	<.270	<.270	<4.000	<4.000	<4.000	<4.000	<4.000
Bromochloromethane	<.54	<.54	<1.00	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<1.00	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.10	<1.10	<1.00	<1.00	<1.00	<1.00	<1.00
Cadmium	<.0510	<.0550	<.8000	<.8000	<.8000	<.8000	<.8000
Carbon Disulfide	<.450	<.450	<1.000	<1.000	<1.000	<1.000	<1.000
Carbon Tetrachloride	<.65	<.65	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorobenzene	<.40	<.40	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorodibromomethane	<.75	<.75	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<.79	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<.61	<1.00	<1.00	<1.00	<1.00	<1.00
Chromium	<1.100	<1.100	<8.000	<8.000	<8.000	<8.000	<8.000
cis-1,2-Dichloroethene	<.21	<.21	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<.25	<1.00	<1.00	<1.00	<1.00	<1.00
Cobalt	16.9	14.7	9.9	27.9	17.5	23.1	14.0
Copper	<1.400	<1.800	<4.000	<4.000	<4.000	<4.000	<4.000
Dibromomethane	<.33	<.33	<1.00	<1.00	<1.00	<1.00	<1.00
Ethylbenzene	<.31	<.31	<1.00	<1.00	<1.00	<1.00	<1.00
Iodomethane	<7.0	<7.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	580	776	733	1860	1360	1420	984
Lead	.457	<.240	<4.000	<4.000	<4.000	<4.000	<4.000
Methylene Chloride	<1.700	<1.700	<5.000	<5.000	<5.000	<5.000	<5.000
Nickel	28.8	27.8	30.9	28.6	41.5	28.1	13.5
pH	6.49	6.66	6.40	6.50	6.40	6.50	6.40
Selenium	<.960	.966	<4.000	<4.000	<4.000	<4.000	<4.000
Silver	<.420	.580	<4.000	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
Sulfate	86.0	187.0	137.0	99.8	272.0	82.7	76.6
Tetrachloroethene	<.48	<.48	<1.00	<1.00	<1.00	<1.00	<1.00
Thallium	<.2600	<.2600	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000
Toluene	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	4.880	2.630					
trans-1,2-Dichloroethene	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
Vanadium	<1.100	<1.100	<20.000	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<.18	<1.00	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.400	<.400	<2.000	<2.000	<2.000	<2.000	<2.000
Zinc	<10.00	<10.00	<20.00	<20.00	<20.00	<20.00	<20.00

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

Table 9

Analytical Data Summary for MW-304

Constituents	Units	3/22/2016	10/20/2016	1/18/2017	3/7/2017	6/28/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<.21	<.21	<.21	<.21	<.21	<.21	<.38	<.38
1,1,1-Trichloroethane	ug/L	<1.00	<.12	<.12	<.12	<.12	<.12	<.12	<.19	<.19
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<.10	<.10	<.10	<.10	<.10	<.10	<.47	<.47
1,1,2-Trichloroethane	ug/L	<1.00	<.12	<.12	<.12	<.12	<.12	<.12	<.45	<.45
1,1-Dichloroethane	ug/L	<1.00	<.21	<.21	<.21	<.21	<.21	<.21	<.22	<.22
1,1-Dichloroethene	ug/L	<2.00	<.15	<.15	<.15	<.15	<.15	<.15	<.56	<.56
1,2,3-Trichloropropane	ug/L	<1.00	<.19	<.19	<.19	<.19	<.19	<.19	<.59	<.59
1,2-Dibromo-3-chloropropane	ug/L	<10.0	<.5	<.5	<.5	<.5	<.5	<.5	<1.2	<1.2
1,2-Dibromoethane	ug/L	<10.00	<.13	<.13	<.13	<.13	<.13	<.13	<.34	<.34
1,2-Dichlorobenzene	ug/L	<1.00	<.14	<.14	<.14	<.14	<.14	<.14	<.37	<.37
1,2-Dichloroethane	ug/L	<1.00	<.18	<.18	<.18	<.18	<.18	<.18	<.39	<.39
1,2-Dichloropropane	ug/L	<1.00	<.87	<.87	<.87	<.87	<.87	<.87	<.27	<.27
1,4-Dichlorobenzene	ug/L	<1.00	<.20	<.20	<.20	<.20	<.20	<.20	<.23	<.23
2-Butanone	ug/L	<10.00	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<2.10	<2.10
2-Hexanone	ug/L	<10.0	<.2	<.2	<.2	<.2	<.2	<.2	<2.0	<2.0
4-Methyl-2-pentanone	ug/L	<10.00	<.22	<.22	<.22	<.22	<.22	<.22	<2.10	<2.10
Acetone	ug/L	<10.00	<1.79	<1.79	<1.79	3.74	2.99	<1.79	<3.10	<3.10
Acrylonitrile	ug/L	<10.00	<.53	<.53	<.53	<.53	<.53	<.53	<2.20	<2.20
Alkalinity as CaCO3	mg/L	464	448		422		422	361	397	412
Aluminum	ug/L	65.4	106.0		<41.3		<41.3	<41.3	<24.6	<27.0
Antimony	ug/L	<.237	<.237	<.237	.816	<.185	<.185	<.185	<1.320	<.530
Arsenic	ug/L	1.060	<.672	3.480	3.760	<.505	<.505	3.680	.509	<.750
Barium	ug/L	77.5	85.1	43.2	103.0	74.3	73.1	39.9	72.3	75.6
Benzene	ug/L	<.50	<.11	<.11	<.11	<.11	<.11	<.11	<.22	<.22
Beryllium	ug/L	<.221	<.221	<.221	<.125	<.125	<.125	<.125	<.530	<.270
Bromochloromethane	ug/L	<5.00	<.12	<.12	<.12	<.12	<.12	<.12	<.54	<.54
Bromodichloromethane	ug/L	<1.00	<.12	<.12	<.12	<.12	<.12	<.12	<.39	<.39
Bromoform	ug/L	<5.00	<.14	<.14	<.14	<.14	<.14	<.14	<.78	<.78
Bromomethane	ug/L	<4.000	<.220	<.220	<.220	<.220	.372	.448	<1.100	<1.100
Cadmium	ug/L	.3710	<.0351	<.0351	.0470	<.0441	<.0441	<.0441	<.1670	<.0770
Carbon Disulfide	ug/L	<1.00	<.15	<.15	<.15	<.15	<.15	<.15	<.45	<.45
Carbon Tetrachloride	ug/L	<2.00	<.24	<.24	<.24	<.24	<.24	<.24	<.65	<.65
Chlorobenzene	ug/L	<1.00	<.19	<.19	<.19	<.19	<.19	<.19	<.40	<.40
Chlorodibromomethane	ug/L	<5.00	<.20	<.20	<.20	<.20	<.20	<.20	<.75	<.75
Chloroethane	ug/L	<4.00	<.15	<.15	<.15	<.15	<.15	<.15	<.79	<.79
Chloroform	ug/L	<1.00	<.28	<.28	<.28	<.28	<.28	<.28	<1.30	<1.30
Chloromethane	ug/L	<3.00	<.31	<.31	<.31	<.31	<.31	<.31	<.61	<.61
Chromium	ug/L	<.355	.436	<.355	<.729	<.729	<.729	<.729	1.280	<.980
cis-1,2-Dichloroethene	ug/L	<1.00	<.13	<.13	<.13	<.13	<.13	<.13	<.21	<.21
cis-1,3-Dichloropropene	ug/L	<5.00	<.15	<.15	<.15	<.15	<.15	<.15	<.25	<.25
Cobalt	ug/L	8.49	6.44	6.64	8.48	4.59	6.39	7.20	7.33	4.75
Copper	ug/L	2.870	<1.220	<1.220	<2.190	<2.190	<2.190	<2.190	.864	<2.000
Dibromomethane	ug/L	<1.00	<.18	<.18	<.18	<.18	<.18	<.18	<.33	<.33
Ethylbenzene	ug/L	<1.00	<.21	<.21	<.21	<.21	<.21	<.21	<.31	<.31
Iodomethane	ug/L	<10.0	<.8	<.8	<.8	<.8	<.8	<.8	<7.0	<7.0
Iron	ug/L	2250	7870		12200		716	5170	2280	512
Lead	ug/L	.378	<.211	<.211	<.324	<.324	<.324	<.324	<.186	<.270
Methylene Chloride	ug/L	<5.000	<.170	.264	<.170	<.170	<.170	<.170	<1.700	<1.700
Nickel	ug/L	6.13	5.33	4.80	8.29	4.61	4.86	4.76	5.60	4.52
pH	SU	6.87	6.79		6.81		6.88	6.85	7.27	7.17
Selenium	ug/L	<.630	<.630	<.630	1.240	<.928	<.928	<.928	<.982	<1.000
Silver	ug/L	<.153	<.153	<.153	<.140	<.140	.180	<.140	<.115	<.370
Styrene	ug/L	<1.00	<.10	<.10	<.10	<.10	<.10	<.10	<.37	<.37
Sulfate	mg/L	68.0	116.0		86.9		98.2	170.0	85.6	86.0
Tetrachloroethene	ug/L	<1.00	<.18	<.18	<.18	<.18	<.18	<.18	<.48	<.48
Thallium	ug/L	<.0255	.0300	.0340	.1290	<.0644	<.0644	<.0644	<.5700	<.2700
Toluene	ug/L								<.43	<.43
Total Suspended Solids	mg/L	33.20	12.00	6.38	10.50	2.25	5.75	14.30	5.00	3.00
trans-1,2-Dichloroethene	ug/L	<1.00	<.21	<.21	<.21	<.21	<.21	<.21	<.27	<.27
trans-1,3-Dichloropropene	ug/L	<5.00	<.22	<.22	<.22	<.22	<.22	<.22	<.56	<.56
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<.13	<.13	<.13	<.13	<.13	<.13	<1.10	<1.10
Trichloroethene	ug/L	<1.00	<.19	<.19	<.19	<.19	<.19	<.19	<.43	<.43
Trichlorofluoromethane	ug/L	<4.00	<.17	<.17	<.17	<.17	<.17	<.17	<.38	<.38
Vanadium	ug/L	<.255	<.255	<.255	<.840	<.840	<.840	<.840	<2.150	<.820
Vinyl Acetate	ug/L	<10.00	<.74	<.74	<.74	<.74	<.74	<.74	<2.50	<2.50
Vinyl Chloride	ug/L	<1.00	<.10	<.10	<.10	<.10	<.10	<.10	<.60	<.60
Xylenes, Total	ug/L	<3.00	<.13	<.13	<.13	<.13	<.13	<.13	<.40	<.40
Zinc	ug/L	6.66	<5.21	10.60	13.50	<11.50	<11.50	<11.50	7.48	<10.00

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

Table 9

Analytical Data Summary for MW-304

Constituents	9/24/2019	3/10/2020	9/15/2020	4/16/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023
1,1,1,2-Tetrachloroethane	<.38	<.38	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<.19	<.19	<.19	<.19	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<.47	<.47	<.47	<.47	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<.22	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<.56	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00
1,2,3-Trichloropropane	<.59	<.59	<.59	<.59	<.59	<.59	<1.00	<1.00	<1.00
1,2-Dibromo-3-chloropropane	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<5.0	<5.0	<5.0
1,2-Dibromoethane	<.34	<.34	<.34	<.34	<.34	<.34	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<.39	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<.27	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00
1,4-Dichlorobenzene	<.23	<.23	<.23	<.23	<.23	<.23	<1.00	<1.00	<1.00
2-Butanone	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10	<10.00	<10.00	<10.00
2-Hexanone	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0
4-Methyl-2-pentanone	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10	<5.00	<5.00	<5.00
Acetone	<3.10	<3.10	<3.10	<3.10	<3.10	<3.10	<10.00	<10.00	<10.00
Acrylonitrile	<2.20	<2.20	<2.20	<2.20	<2.20	<2.20	<5.00	<5.00	<5.00
Alkalinity as CaCO3	406	418	421	287	445	314	349	367	343
Aluminum	<27.0	<30.0	<12.0	<15.0	<17.0	<68.0	<100.0	<50.0	<50.0
Antimony	<.530	<.580	<.510	<1.100	<1.100	<2.760	<2.000	<2.000	<2.000
Arsenic	<.750	<.880	<.880	7.670	5.620	5.980	<4.000	<4.000	<4.000
Barium	68.9	71.1	68.1	42.4	36.8	40.8	60.2	66.5	61.0
Benzene	<.22	<.22	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00
Beryllium	<.270	<.270	<.270	<.270	<.270	<1.080	<4.000	<4.000	<4.000
Bromochloromethane	<.54	<.54	<.54	<.54	<.54	<.54	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<.78	<.78	<.78	<.78	<1.00	<1.00	<1.00
Bromomethane	<1.100	<1.100	<1.100	<1.100	<1.100	<1.100	<1.000	<1.000	<1.000
Cadmium	<.0390	<.0390	<.0490	<.0510	<.0510	<.2200	<.8000	<.8000	<.8000
Carbon Disulfide	<.45	<.45	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<.65	<.65	<.65	<.65	<1.00	<1.00	<1.00
Chlorobenzene	<.40	<.40	<.40	<.40	<.40	<.40	<1.00	<1.00	<1.00
Chlorodibromomethane	<.75	<.75	<.75	<.75	<.75	<.75	<1.00	<1.00	<1.00
Chloroethane	<.79	<.79	<.79	<.79	<.79	<.79	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.30	<1.30	<1.30	<1.30	<1.30	<1.00	<1.00	<1.00
Chloromethane	<.61	<.61	<.61	<.61	<.61	<.61	<1.00	<1.00	<1.00
Chromium	<.980	<1.100	<1.100	<1.100	<1.100	<4.400	<8.000	<8.000	<8.000
cis-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<.21	<.21	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<.25	<.25	<.25	<.25	<.25	<1.00	<1.00	<1.00
Cobalt	9.79	8.06	8.98	37.20	18.20	28.90	7.80	4.40	7.10
Copper	<2.000	<3.200	<1.500	<1.400	<1.400	<7.200	<4.000	<4.000	<4.000
Dibromomethane	<.33	<.33	<.33	<.33	<.33	<.33	<1.00	<1.00	<1.00
Ethylbenzene	<.31	<.31	<.31	<.31	<.31	<.31	<1.00	<1.00	<1.00
Iodomethane	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<1.0	<1.0	<1.0
Iron	3890	334	7840	13100	8080	12300	1580	6290	3780
Lead	<.270	<.270	<.110	<.210	.737	<.960	<4.000	<4.000	<4.000
Methylene Chloride	<1.700	<1.700	<1.700	<1.700	<1.700	<1.700	<5.000	<5.000	<5.000
Nickel	6.82	4.71	6.13	27.10	13.20	21.40	6.80	4.10	5.50
pH	7.08	6.93	6.90	6.45	6.66	6.83	6.60	7.00	6.80
Selenium	<1.000	<1.000	<1.000	<.960	<.960	<3.840	<4.000	<4.000	<4.000
Silver	<.370	<.370	<.370	<.420	<.420	<1.960	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00
Sulfate	135.0	96.1	151.0	1080.0	599.0	1120.0	162.0	80.9	92.6
Tetrachloroethene	<.48	<.48	<.48	<.48	<.48	<.48	<1.00	<1.00	<1.00
Thallium	<.2700	<.2600	<.2600	<.2600	<.2600	<1.0400	<2.0000	<2.0000	<2.0000
Toluene	<.43	<.43	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00
Total Suspended Solids	6.25	1.00	11.10	21.40	9.50	10.30			
trans-1,2-Dichloroethene	<.27	<.27	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00
Vanadium	<.820	<.820	<.850	<1.100	<1.100	<4.400	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<.18	<.18	<.18	<.18	<.18	<1.00	<1.00	<1.00
Xylenes, Total	<.40	<.40	<.40	<.40	<.40	<.40	<2.00	<2.00	<2.00
Zinc	<10.00	<10.00	<10.00	66.30	31.10	52.60	<20.00	<20.00	<20.00

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

Table 9

Analytical Data Summary for MW-304

Constituents	3/19/2024	10/3/2024
1,1,1,2-Tetrachloroethane	<1.00	<1.00
1,1,1-Trichloroethane	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<1.00	<1.00
1,1,2-Trichloroethane	<1.00	<1.00
1,1-Dichloroethane	<1.00	<1.00
1,1-Dichloroethene	<1.00	<1.00
1,2,3-Trichloropropane	<1.00	<1.00
1,2-Dibromo-3-chloropropane	<5.0	<5.0
1,2-Dibromoethane	<1.00	<1.00
1,2-Dichlorobenzene	<1.00	<1.00
1,2-Dichloroethane	<1.00	<1.00
1,2-Dichloropropane	<1.00	<1.00
1,4-Dichlorobenzene	<1.00	<1.00
2-Butanone	<10.00	<10.00
2-Hexanone	<5.0	<5.0
4-Methyl-2-pentanone	<5.00	<5.00
Acetone	<10.00	<10.00
Acrylonitrile	<5.00	<5.00
Alkalinity as CaCO3	359	392
Aluminum	51.0	<50.0
Antimony	<2.000	<2.000
Arsenic	<4.000	<4.000
Barium	78.6	87.0
Benzene	<1.00	<1.00
Beryllium	<4.000	<4.000
Bromochloromethane	<1.00	<1.00
Bromodichloromethane	<1.00	<1.00
Bromoform	<1.00	<1.00
Bromomethane	<1.000	<1.000
Cadmium	<.8000	<.8000
Carbon Disulfide	<1.00	<1.00
Carbon Tetrachloride	<1.00	<1.00
Chlorobenzene	<1.00	<1.00
Chlorodibromomethane	<1.00	<1.00
Chloroethane	<1.00	<1.00
Chloroform	<1.00	<1.00
Chloromethane	<1.00	<1.00
Chromium	<8.000	<8.000
cis-1,2-Dichloroethene	<1.00	<1.00
cis-1,3-Dichloropropene	<1.00	<1.00
Cobalt	4.60	4.30
Copper	<4.000	<4.000
Dibromomethane	<1.00	<1.00
Ethylbenzene	<1.00	<1.00
Iodomethane	<1.0	<1.0
Iron	4970	513
Lead	<4.000	<4.000
Methylene Chloride	<5.000	<5.000
Nickel	4.00	6.50
pH	6.80	6.70
Selenium	<4.000	<4.000
Silver	<4.000	<4.000
Styrene	<1.00	<1.00
Sulfate	45.5	75.7
Tetrachloroethene	<1.00	<1.00
Thallium	<2.0000	<2.0000
Toluene	<1.00	<1.00
Total Suspended Solids		
trans-1,2-Dichloroethene	<1.00	<1.00
trans-1,3-Dichloropropene	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<5.00	<5.00
Trichloroethene	<1.00	<1.00
Trichlorofluoromethane	<1.00	<1.00
Vanadium	<20.000	<20.000
Vinyl Acetate	<5.00	<5.00
Vinyl Chloride	<1.00	<1.00
Xylenes, Total	<2.00	<2.00
Zinc	<20.00	<20.00

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

Table 9

Analytical Data Summary for MW-307

Constituents	Units	9/18/2012	3/27/2013	9/26/2013	4/15/2014	9/1/2015	3/22/2016	10/21/2016	3/8/2017
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.21	<.21
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.12	<.12
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.10	<.10
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.12	<.12
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.21	<.21
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<.15	<.15
1,1-Dichloropropene	ug/L	<1		<1					
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.19	<.19
1,2,4,5-Tetrachlorobenzene	ug/L	<10.0		<10.2					
1,2,4-Trichlorobenzene	ug/L	<5		<5					
1,2-Dibromo-3-chloropropane	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<.5	<.5
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<.13	<.13
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.14	<.14
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.18	<.18
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.87	<.87
1,3,5-Trinitrobenzene	ug/L	<10.0		<10.2					
1,3-Dichlorobenzene	ug/L	<1		<1					
1,3-Dichloropropane	ug/L	<1		<1					
1,3-Dinitrobenzene	ug/L	<10.0		<10.2					
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.20	<.20
1,4-Naphthoquinone	ug/L	<10.0		<10.2					
1-Naphthylamine	ug/L	<10.0		<10.2					
2,2`-oxybis[1-Chloropropane]	ug/L	<10.0		<10.2					
2,2-Dichloropropane	ug/L	<4		<4					
2,3,4,6-Tetrachlorophenol	ug/L	<10.0		<10.2					
2,4,5-T	ug/L	<1.00		<1.16					
2,4,5-TP [Silvex]	ug/L	<1.00		<1.16					
2,4,5-Trichlorophenol	ug/L	<10.0		<10.2					
2,4,6-Trichlorophenol	ug/L	<10.0		<10.2					
2,4-D	ug/L	<1.00		<1.16					
2,4-Dichlorophenol	ug/L	<10.0		<10.2					
2,4-Dimethylphenol	ug/L	<10.0		<10.2					
2,4-Dinitrophenol	ug/L	<20.0		<20.4					
2,4-Dinitrotoluene	ug/L	<10.0		<10.2					
2,6-Dichlorophenol	ug/L	<10.0		<10.2					
2,6-Dinitrotoluene	ug/L	<10.0		<10.2					
2-Acetylaminofluorene	ug/L	<10.0		<10.2					
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<1.04	<1.04
2-Chloronaphthalene	ug/L	<10.0		<10.2					
2-Chlorophenol	ug/L	<10.0		<10.2					
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<.2	<.2
2-Methylnaphthalene	ug/L	<10.0		<10.2					
2-Methylphenol [o-Cresol]	ug/L	<10.0		<10.2					
2-Naphthylamine	ug/L	<10.0		<10.2					
2-Nitroaniline	ug/L	<10.0		<10.2					
2-Nitrophenol	ug/L	<10.0		<10.2					
3,3-Dichlorobenzidine	ug/L	<10		<51					
3,3-Dimethylbenzidine	ug/L	<10.0		<10.2					
3-Methylcholanthrene	ug/L	<10.0		<10.2					
3-Nitroaniline	ug/L	<10.0		<10.2					
4,4`-DDD	ug/L	<.0320		<.0327					
4,4`-DDE	ug/L	<.0320		<.0327					
4,4`-DDT	ug/L	<.0320		<.0327					
4,6-Dinitro-2-methylphenol	ug/L	<10.0		<10.2					
4-Aminobiphenyl	ug/L	<10.0		<10.2					
4-Bromophenyl phenyl ether	ug/L	<10.0		<10.2					
4-Chloro-3-methylphenol	ug/L	<10.0		<10.2					
4-Chloroaniline	ug/L	<10.0		<10.2					
4-Chlorophenyl phenyl ether	ug/L	<10.0		<10.2					
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<.22	<.22
4-Nitroaniline	ug/L	<10.0		<10.2					
4-Nitrophenol	ug/L	<10.0		<10.2					
5-Nitro-o-toluidine	ug/L	<10.0		<10.2					
7,12-Dimethylbenz[a]anthracene	ug/L	<10.0		<10.2					
Acenaphthene	ug/L	<10.0		<10.2					
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<1.79	2.61
Acetonitrile	ug/L	<10000		739					
Acetophenone	ug/L	<10.0		<10.2					
Acrolein	ug/L	<10		<10					
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<.53	<.53
Aldrin	ug/L	<.0320		<.0327					
Alkalinity as CaCO3	mg/L					<5.0	44.4	67.0	97.9
Allyl Chloride	ug/L	<20		<2					
alpha-BHC	ug/L	<.0320		<.0327					
Aluminum	ug/L					252.0	229.0	180.0	264.0
Anthracene	ug/L	<10.0		<10.2					
Antimony	ug/L	<12.000	<6.000	<6.000	<6.000	<1.000	<.237	<.237	<.185

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

Table 9

Analytical Data Summary for MW-307

Constituents	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/9/2020	9/17/2020	4/16/2021	10/28/2021
1,1,1,2-Tetrachloroethane	<.21	<.21	<.38	<.38	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.19	<.19	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.47	<.47	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.45	<.45	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	<.21	<.21	<.22	<.22	<.22	<.22	<.22	<.22	<.22
1,1-Dichloroethene	<.15	<.15	<.56	<.56	<.56	<.56	<.56	<.56	<.56
1,1-Dichloropropene									
1,2,3-Trichloropropane	<.19	<.19	<.59	<.59	<.59	<.59	<.59	<.59	<.59
1,2,4,5-Tetrachlorobenzene									
1,2,4-Trichlorobenzene									
1,2-Dibromo-3-chloropropane	<.5	<.5	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
1,2-Dibromoethane	<.13	<.13	<.34	<.34	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.37	<.37	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.18	<.18	<.39	<.39	<.39	<.39	<.39	<.39	<.39
1,2-Dichloropropane	<.87	<.87	<.27	<.27	<.27	<.27	<.27	<.27	<.27
1,3,5-Trinitrobenzene									
1,3-Dichlorobenzene									
1,3-Dichloropropane									
1,3-Dinitrobenzene									
1,4-Dichlorobenzene	<.20	<.20	<.23	<.23	<.23	<.23	<.23	<.23	<.23
1,4-Naphthoquinone									
1-Naphthylamine									
2,2`-oxybis[1-Chloropropane]									
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	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10
2-Chloronaphthalene									
2-Chlorophenol									
2-Hexanone	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Methylnaphthalene									
2-Methylphenol [o-Cresol]									
2-Naphthylamine									
2-Nitroaniline									
2-Nitrophenol									
3,3-Dichlorobenzidine									
3,3-Dimethylbenzidine									
3-Methylcholanthrene									
3-Nitroaniline									
4,4`-DDD									
4,4`-DDE									
4,4`-DDT									
4,6-Dinitro-2-methylphenol									
4-Aminobiphenyl									
4-Bromophenyl phenyl ether									
4-Chloro-3-methylphenol									
4-Chloroaniline									
4-Chlorophenyl phenyl ether									
4-Methyl-2-pentanone	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10
4-Nitroaniline									
4-Nitrophenol									
5-Nitro-o-toluidine									
7,12-Dimethylbenz[a]anthracene									
Acenaphthene									
Acetone	2.41	<1.79	<3.10	<3.10	<3.10	<3.10	<3.10	<3.10	<3.10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20	<2.20	<2.20
Aldrin									
Alkalinity as CaCO3	82.4	37.8	82.4	56.7	89.1	95.0	130.0	79.2	200.0
Allyl Chloride									
alpha-BHC									
Aluminum	158.0	284.0	283.0	174.0	187.0	157.0	138.0	225.0	80.3
Anthracene									
Antimony	<.185	<.740	<1.320	<.530	<2.120	<.580	<.510	<1.100	<1.100

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

Table 9

Analytical Data Summary for MW-307

Constituents	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
1,1,1,2-Tetrachloroethane	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloropropene						
1,2,3-Trichloropropane	<.59	<1.00	<1.00	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene						
1,2,4-Trichlorobenzene						
1,2-Dibromo-3-chloropropane	<1.2	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dibromoethane	<.34	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
1,3,5-Trinitrobenzene						
1,3-Dichlorobenzene						
1,3-Dichloropropane						
1,3-Dinitrobenzene						
1,4-Dichlorobenzene	<.23	<1.00	<1.00	<1.00	<1.00	<1.00
1,4-Naphthoquinone						
1-Naphthylamine						
2,2`-oxybis[1-Chloropropane]						
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	<2.10	<10.00	<10.00	<10.00	<10.00	<10.00
2-Chloronaphthalene						
2-Chlorophenol						
2-Hexanone	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene						
2-Methylphenol [o-Cresol]						
2-Naphthylamine						
2-Nitroaniline						
2-Nitrophenol						
3,3-Dichlorobenzidine						
3,3-Dimethylbenzidine						
3-Methylcholanthrene						
3-Nitroaniline						
4,4`-DDD						
4,4`-DDE						
4,4`-DDT						
4,6-Dinitro-2-methylphenol						
4-Aminobiphenyl						
4-Bromophenyl phenyl ether						
4-Chloro-3-methylphenol						
4-Chloroaniline						
4-Chlorophenyl phenyl ether						
4-Methyl-2-pentanone	<2.10	<5.00	<5.00	<5.00	<5.00	<5.00
4-Nitroaniline						
4-Nitrophenol						
5-Nitro-o-toluidine						
7,12-Dimethylbenz[a]anthracene						
Acenaphthene						
Acetone	<3.10	<10.00	<10.00	<10.00	<10.00	<10.00
Acetonitrile						
Acetophenone						
Acrolein						
Acrylonitrile	<2.20	<5.00	<5.00	<5.00	<5.00	<5.00
Aldrin						
Alkalinity as CaCO3	103.0	62.0	53.0	84.0	102.0	117.0
Allyl Chloride						
alpha-BHC						
Aluminum	198.0	237.0	213.0	695.0	236.0	245.0
Anthracene						
Antimony	<2.760	<2.000	<2.000	4.400	<2.000	<2.000

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

Table 9

Analytical Data Summary for MW-307

Constituents	Units	9/18/2012	3/27/2013	9/26/2013	4/15/2014	9/1/2015	3/22/2016	10/21/2016	3/8/2017
Arsenic	ug/L	2.01	<2.00	4.67	<1.00	3.70	4.35	3.96	<5.05
Barium	ug/L	<10.00	10.40	<30.00	<10.00	9.59	8.51	8.92	8.71
Benzene	ug/L	<.50	<.50	<.50	<.50	<.50	<.50	<.11	<.11
Benzo[a]anthracene	ug/L	<10.0		<10.2					
Benzo[a]pyrene	ug/L	<10.0		<10.2					
Benzo[b]fluoranthene	ug/L	<10.0		<10.2					
Benzo[ghi]perylene	ug/L	<10.0		<10.2					
Benzo[k]fluoranthene	ug/L	<10.0		<10.2					
Benzyl alcohol	ug/L	<10.0		<10.2					
Beryllium	ug/L	<1.000	.624	.580	.265	<1.000	.539	.477	.455
beta-BHC	ug/L	<.0320		<.0327					
Bis(2-chloroethoxy)methane	ug/L	<10.0		<10.2					
Bis(2-chloroethyl)ether	ug/L	<10.0		<10.2					
Bis(2-ethylhexyl)phthalate	ug/L	<10.0		<10.2					
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<.12	<.12
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.12	<.12
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<.14	<.14
Bromomethane	ug/L	<20.00	<4.00	<4.00	<4.00	<4.00	<4.00	<.22	<.22
Butylbenzylphthalate	ug/L	<10.0		<10.2					
Cadmium	ug/L	<.500	<.500	<.500	.147	<.500	.162	.115	.106
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.15	<.15
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<.24	<.24
Chlordane	ug/L	<2.00		<2.04					
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.19	<.19
Chlorobenzilate	ug/L	<10.0		<10.2					
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<.20	<.20
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<.15	<.15
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.28	<.28
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<.31	<.31
Chloroprene	ug/L	<1		<1					
Chromium	ug/L	<20.000	<20.000	<60.000	<20.000	<5.000	<.355	<.355	<7.290
Chrysene	ug/L	<10.0		<10.2					
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.13	<.13
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<.15	<.15
Cobalt	ug/L	60.1	83.8	44.3	59.8	41.9	50.9	59.1	68.4
Copper	ug/L	<20.00	<20.00	<60.00	<20.00	<2.00	<1.22	<1.22	<2.19
Cyanide	mg/L	<.01		<.01					
delta-BHC	ug/L	<.0320		<.0327					
Diallate	ug/L	<10.0		<10.2					
Dibenzo(a,h)anthracene	ug/L	<10.0		<10.2					
Dibenzofuran	ug/L	<10.0		<10.2					
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.18	<.18
Dichlorodifluoromethane	ug/L	<3.00	<3.00	<3.00	<3.00			<.20	<.20
Dieldrin	ug/L	<.0320		<.0327					
Diethyl phthalate	ug/L	<10.0		<10.2					
Dimethoate	ug/L	<10.0		<10.2					
Dimethyl phthalate	ug/L	<10.0		<10.2					
Di-n-butylphthalate	ug/L	<10.0		<10.2					
Di-n-octylphthalate	ug/L	<10.0		<20.4					
Dinoseb	ug/L	<10.0		<10.2					
Diphenylamine	ug/L	<10.0		<10.2					
Disulfoton	ug/L	<10.0		<10.2					
Endosulfan I	ug/L	<.0320		<.0327					
Endosulfan II	ug/L	<.0320		<.0327					
Endosulfan Sulfate	ug/L	<.0320		<.0327					
Endrin	ug/L	<.0320		<.0327					
Endrin Aldehyde	ug/L	<.0320		<.0327					
Ethyl Methacrylate	ug/L	<2		<2					
Ethyl Methanesulfonate	ug/L	<10.0		<10.2					
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.21	<.21
Famphur	ug/L	<20.0		<20.4					
Fluoranthene	ug/L	<10.0		<10.2					
Fluorene	ug/L	<10.0		<10.2					
gamma-BHC (Lindane)	ug/L	<.0320		<.0327					
Heptachlor	ug/L	<.0320		<.0327					
Heptachlor Epoxide	ug/L	<.0320		<.0327					
Hexachlorobenzene	ug/L	<10.0		<10.2					
Hexachlorobutadiene	ug/L	<10.0		<10.2					
Hexachlorocyclopentadiene	ug/L	<10.0		<20.4					
Hexachloroethane	ug/L	<10.0		<10.2					
Hexachloropropene	ug/L	<10.0		<10.2					
Indeno[1,2,3-cd]pyrene	ug/L	<10.0		<10.2					
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<.8	<.8
Iron	ug/L					380000	354000	349000	343000
Isobutanol	ug/L	<10000		<10000					
Isodrin	ug/L	<10.0		<10.2					
Isophorone	ug/L	<10.0		<10.2					

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

Table 9

Analytical Data Summary for MW-307

Constituents	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/9/2020	9/17/2020	4/16/2021	10/28/2021
Arsenic	3.89	3.72	4.41	3.69	3.91	3.97	3.92	4.34	<.75
Barium	8.57	9.27	7.24	7.86	7.97	8.26	7.67	9.91	17.60
Benzene	<.11	<.11	<.22	<.22	<.22	<.22	<.22	<.22	<.22
Benzo[a]anthracene									
Benzo[a]pyrene									
Benzo[b]fluoranthene									
Benzo[ghi]perylene									
Benzo[k]fluoranthene									
Benzyl alcohol									
Beryllium	.427	<.500	<.530	.375	<1.080	.330	<1.080	.577	<.270
beta-BHC									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-ethylhexyl)phthalate									
Bromochloromethane	<.12	<.12	<.54	<.54	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.39	<.39	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.78	<.78	<.78	<.78	<.78	<.78	<.78
Bromomethane	<.22	<.22	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10
Butylbenzylphthalate									
Cadmium	.075	<.176	.817	.091	<.156	.128	.086	.116	.084
Carbon Disulfide	<.15	<.15	<.45	<.45	<.45	<.45	<.45	<.45	<.45
Carbon Tetrachloride	<.24	<.24	<.65	<.65	<.65	<.65	<.65	<.65	<.65
Chlordane									
Chlorobenzene	<.19	<.19	<.40	<.40	<.40	<.40	<.40	<.40	<.40
Chlorobenzilate									
Chlorodibromomethane	<.20	<.20	<.75	<.75	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.15	<.15	<.79	<.79	<.79	<.79	<.79	<.79	<.79
Chloroform	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	<.31	<.31	<.61	<.61	<.61	<.61	<.61	<.61	<.61
Chloroprene									
Chromium	<.729	<2.920	1.600	<.980	<3.920	<1.100	<1.100	<1.100	<1.100
Chrysene									
cis-1,2-Dichloroethene	<.13	<.13	<.21	<.21	<.21	<.21	<.21	<.21	<.21
cis-1,3-Dichloropropene	<.15	<.15	<.25	<.25	<.25	<.25	<.25	<.25	<.25
Cobalt	58.0	65.1	52.4	35.6	44.9	42.0	45.8	59.1	14.8
Copper	<2.19	<8.76	1.24	<2.00	<8.00	<3.20	<1.50	<1.40	1.54
Cyanide									
delta-BHC									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromomethane	<.18	<.18	<.33	<.33	<.33	<.33	<.33	<.33	<.33
Dichlorodifluoromethane	<.20	<.20	<.25		<.25				
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butylphthalate									
Di-n-octylphthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan I									
Endosulfan II									
Endosulfan Sulfate									
Endrin									
Endrin Aldehyde									
Ethyl Methacrylate									
Ethyl Methanesulfonate									
Ethylbenzene	<.21	<.21	<.31	<.31	<.31	<.31	<.31	<.31	<.31
Famphur									
Fluoranthene									
Fluorene									
gamma-BHC (Lindane)									
Heptachlor									
Heptachlor Epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno[1,2,3-cd]pyrene									
Iodomethane	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0
Iron	322000	310000	293000	250000	287000	313000	290000	350000	1490
Isobutanol									
Isodrin									
Isophorone									

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

Table 9

Analytical Data Summary for MW-307

Constituents	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Arsenic	3.92	<4.00	4.30	31.90	4.00	4.50
Barium	8.82	8.30	8.90	21.80	9.00	12.80
Benzene	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
Benzo[a]anthracene						
Benzo[a]pyrene						
Benzo[b]fluoranthene						
Benzo[ghi]perylene						
Benzo[k]fluoranthene						
Benzyl alcohol						
Beryllium	<1.080	<4.000	<4.000	<4.000	<4.000	<4.000
beta-BHC						
Bis(2-chloroethoxy)methane						
Bis(2-chloroethyl)ether						
Bis(2-ethylhexyl)phthalate						
Bromochloromethane	<.54	<1.00	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<1.00	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.10	<1.00	<1.00	<1.00	<1.00	<1.00
Butylbenzylphthalate						
Cadmium	<.220	<.800	<.800	<.800	<.800	<.800
Carbon Disulfide	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<1.00	<1.00	<1.00	<1.00	<1.00
Chlordane						
Chlorobenzene	<.40	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorobenzilate						
Chlorodibromomethane	<.75	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.00	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroprene						
Chromium	<4.400	<8.000	<8.000	<8.000	<8.000	<8.000
Chrysene						
cis-1,2-Dichloroethene	<.21	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<1.00	<1.00	<1.00	<1.00	<1.00
Cobalt	53.5	39.9	48.5	36.6	42.8	39.7
Copper	<7.20	<4.00	<4.00	4.20	<4.00	<4.00
Cyanide						
delta-BHC						
Diallate						
Dibenzo(a,h)anthracene						
Dibenzofuran						
Dibromomethane	<.33	<1.00	<1.00	<1.00	<1.00	<1.00
Dichlorodifluoromethane						
Dieldrin						
Diethyl phthalate						
Dimethoate						
Dimethyl phthalate						
Di-n-butylphthalate						
Di-n-octylphthalate						
Dinoseb						
Diphenylamine						
Disulfoton						
Endosulfan I						
Endosulfan II						
Endosulfan Sulfate						
Endrin						
Endrin Aldehyde						
Ethyl Methacrylate						
Ethyl Methanesulfonate						
Ethylbenzene	<.31	<1.00	<1.00	<1.00	<1.00	<1.00
Famphur						
Fluoranthene						
Fluorene						
gamma-BHC (Lindane)						
Heptachlor						
Heptachlor Epoxide						
Hexachlorobenzene						
Hexachlorobutadiene						
Hexachlorocyclopentadiene						
Hexachloroethane						
Hexachloropropene						
Indeno[1,2,3-cd]pyrene						
Iodomethane	<7.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	272000	268000	280000	266000	243000	225000
Isobutanol						
Isodrin						
Isophorone						

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

Table 9

Analytical Data Summary for MW-307

Constituents	Units	9/18/2012	3/27/2013	9/26/2013	4/15/2014	9/1/2015	3/22/2016	10/21/2016	3/8/2017
Isosafrole	ug/L	<10.0		<10.2					
Kepone	ug/L	<10.0		<10.2					
Lead	ug/L	<4.000	<4.000	<4.000	<4.000	<.500	<.211	<.211	<.324
Mercury	ug/L	<.267		<.200					
Methacrylonitrile	ug/L	<1		<1					
Methapyrilene	ug/L	<10.0		<10.2					
Methoxychlor	ug/L	<.0320		<.0327					
Methyl Methacrylate	ug/L	<2		<2					
Methyl Methanesulfonate	ug/L	<10.0		<10.2					
Methyl Parathion	ug/L	<10.0		<10.2					
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	<5.000	<5.000	.231	<.170
Naphthalene	ug/L	<5		<5					
Nickel	ug/L	115.0	122.0	79.6	101.0	70.9	84.3	69.8	112.0
Nitrobenzene	ug/L	<10.0		<10.2					
N-Nitrosodiethylamine	ug/L	<10.0		<10.2					
N-Nitrosodimethylamine	ug/L	<10.0		<10.2					
N-Nitrosodi-n-butylamine	ug/L	<10.0		<10.2					
N-Nitrosodi-n-propylamine	ug/L	<10.0		<10.2					
N-Nitrosodiphenylamine	ug/L	<10.0		<10.2					
N-Nitrosomethylethylamine	ug/L	<10.0		<10.2					
N-Nitrosopiperidine	ug/L	<10.0		<10.2					
N-Nitrosopyrrolidine	ug/L	<10.0		<10.2					
o,o,o-Triethylphosphorothioate	ug/L	<10.0		<10.2					
o-Toluidine	ug/L	<10.0		<10.2					
p-[Dimethylamino]azobenzene	ug/L	<10.0		<10.2					
Parathion	ug/L	<10.0		<10.2					
PCB-1016	ug/L	<.800		<.816					
PCB-1221	ug/L	<.800		<.816					
PCB-1232	ug/L	<.800		<.816					
PCB-1242	ug/L	<.800		<.816					
PCB-1248	ug/L	<.800		<.816					
PCB-1254	ug/L	<.800		<.816					
PCB-1260	ug/L	<.800		<.816					
Pentachlorobenzene	ug/L	<10.0		<10.2					
Pentachloronitrobenzene	ug/L	<10.0		<10.2					
Pentachlorophenol	ug/L	<10.0		<10.2					
pH	SU					5.88	5.90	5.92	5.67
Phenacetin	ug/L	<10.0		<10.2					
Phenanthrene	ug/L	<10.0		<10.2					
Phenol	ug/L	<10.0		<10.2					
Phorate	ug/L	<10.0		<10.2					
p-Phenylenediamine	ug/L	<10.0		<10.2					
Pronamide	ug/L	<10.0		<10.2					
Propionitrile	ug/L	<10		<10					
Pyrene	ug/L	<10.0		<10.2					
Safrole	ug/L	<10.0		<10.2					
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<5.000	.643	1.480	2.310
Silver	ug/L	36.000	<20.000	18.100	<20.000	<1.000	<.153	<.153	<1.400
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.10	<.10
Sulfate	mg/L					475	3380	3260	2690
Sulfide	mg/L	<1.000	.696	1.400	5.280			<.180	3.340
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.18	<.18
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<1.0000	.0460	.0440	<.0644
Thionazin	ug/L	<10.0		<10.2					
Tin	ug/L	<100.000	<100.000	913.000	<100.000			<.832	<1.620
Toluene	ug/L								
Total Suspended Solids	mg/L					34.70	19.50	14.00	3.75
Toxaphene	ug/L	<2.00		<2.04					
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.21	<.21
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<.22	<.22
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<.13	<.13
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.19	<.19
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<.17	<.17
Vanadium	ug/L	<50.000	22.700	<150.000	<50.000	<5.000	<.255	<.255	<.840
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<10.00	<10.00	<.74	<.74
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.10	<.10
Xylenes, Total	ug/L	<3.000	<3.000	<3.000	<3.000	<3.000	<3.000	.324	.362
Zinc	ug/L	434.0	663.0	695.0	356.0	338.0	385.0	456.0	492.0

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

Table 9

Analytical Data Summary for MW-307

Constituents	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/9/2020	9/17/2020	4/16/2021	10/28/2021
Isosafrole									
Kepone									
Lead	<.324	<1.300	<.186	<.270	<1.080	<.270	<.110	<.210	.770
Mercury									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl Methacrylate									
Methyl Methanesulfonate									
Methyl Parathion									
Methylene Chloride	<.170	<.170	<1.700	<1.700	<1.700	<1.700	<1.700	<1.700	<1.700
Naphthalene									
Nickel	62.0	98.9	92.9	79.1	75.9	71.1	76.9	104.0	31.5
Nitrobenzene									
N-Nitrosodiethylamine									
N-Nitrosodimethylamine									
N-Nitrosodi-n-butylamine									
N-Nitrosodi-n-propylamine									
N-Nitrosodiphenylamine									
N-Nitrosomethylethylamine									
N-Nitrosopiperidine									
N-Nitrosopyrrolidine									
o,o,o-Triethylphosphorothioate									
o-Toluidine									
p-[Dimethylamino]azobenzene									
Parathion									
PCB-1016									
PCB-1221									
PCB-1232									
PCB-1242									
PCB-1248									
PCB-1254									
PCB-1260									
Pentachlorobenzene									
Pentachloronitrobenzene									
Pentachlorophenol									
pH	5.82	5.73	5.73	5.75	5.63	5.77	5.84	5.85	6.82
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
p-Phenylenediamine									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium	1.060	<3.710	1.040	1.230	<4.000	1.240	<1.000	<.960	<.960
Silver	<.140	<.560	<.115	<.370	<1.480	<.370	<.370	<.420	<.420
Styrene	<.10	<.10	<.37	<.37	<.37	<.37	<.37	<.37	<.37
Sulfate	2380	2590	3200	2510	2140	2130	2140	2400	1010
Sulfide	6.740	6.990	7.200	2.360	1.450	3.680	11.400	<10.000	<.231
Tetrachloroethene	<.18	<.18	<.48	<.48	<.48	<.48	<.48	<.48	<.48
Thallium	<.0644	<.2580	<.5700	<.2700	<1.0800	<.2600	<.2600	<.2600	<.2600
Thionazin									
Tin	<1.620	<6.480	<1.300	<1.800	<1.800				
Toluene			<.43	<.43	<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	7.00	15.80	10.80	6.63	33.50	5.63	12.80	11.80	6.60
Toxaphene									
trans-1,2-Dichloroethene	<.21	<.21	<.27	<.27	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.56	<.56	<.56	<.56	<.56	<.56	<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.43	<.43	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.38	<.38	<.38	<.38	<.38	<.38	<.38
Vanadium	<.840	<3.360	<2.150	<.820	<3.280	<.820	<.850	<1.100	<1.100
Vinyl Acetate	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	<.10	<.10	<.60	<.60	<.18	<.18	<.18	<.18	<.18
Xylenes, Total	<.130	<.130	<.400	.481	<.400	<.400	<.400	<.400	<.400
Zinc	283.0	447.0	424.0	346.0	322.0	308.0	349.0	443.0	10.6

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

Table 9

Analytical Data Summary for MW-307

Constituents	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Isosafrole						
Kepone						
Lead	<.960	<4.000	<4.000	<4.000	<4.000	<4.000
Mercury						
Methacrylonitrile						
Methapyrilene						
Methoxychlor						
Methyl Methacrylate						
Methyl Methanesulfonate						
Methyl Parathion						
Methylene Chloride	<1.700	<5.000	<5.000	<5.000	<5.000	<5.000
Naphthalene						
Nickel	88.8	70.0	83.7	68.1	74.2	69.8
Nitrobenzene						
N-Nitrosodiethylamine						
N-Nitrosodimethylamine						
N-Nitrosodi-n-butylamine						
N-Nitrosodi-n-propylamine						
N-Nitrosodiphenylamine						
N-Nitrosomethylethylamine						
N-Nitrosopiperidine						
N-Nitrosopyrrolidine						
o,o,o-Triethylphosphorothioate						
o-Toluidine						
p-[Dimethylamino]azobenzene						
Parathion						
PCB-1016						
PCB-1221						
PCB-1232						
PCB-1242						
PCB-1248						
PCB-1254						
PCB-1260						
Pentachlorobenzene						
Pentachloronitrobenzene						
Pentachlorophenol						
pH	5.85	5.70	5.50	5.60	5.70	5.60
Phenacetin						
Phenanthrene						
Phenol						
Phorate						
p-Phenylenediamine						
Pronamide						
Propionitrile						
Pyrene						
Safrole						
Selenium	<3.840	<4.000	<4.000	6.400	<4.000	<4.000
Silver	<1.960	<4.000	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
Sulfate	2230	1990	2130	1980	2020	1910
Sulfide	<.231	<.300				
Tetrachloroethene	<.48	<1.00	<1.00	<1.00	<1.00	<1.00
Thallium	<1.0400	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000
Thionazin						
Tin						
Toluene	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	29.00					
Toxaphene						
trans-1,2-Dichloroethene	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<5.00	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
Vanadium	<4.400	<20.000	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<1.00	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.400	<2.000	<2.000	<2.000	<2.000	<2.000
Zinc	374.0	271.0	324.0	383.0	304.0	253.0

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

Table 9

Analytical Data Summary for MW-309

Constituents	Units	9/1/2015
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-Dichloroethene	ug/L	<2
1,2,3-Trichloropropane	ug/L	<1
1,2-Dibromo-3-chloropropane	ug/L	<10
1,2-Dibromoethane	ug/L	<10
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	ug/L	<10
2-Hexanone	ug/L	<10
4-Methyl-2-pentanone	ug/L	<10
Acetone	ug/L	<10
Acrylonitrile	ug/L	<10
Alkalinity as CaCO3	mg/L	268
Aluminum	ug/L	229
Antimony	ug/L	<1
Arsenic	ug/L	<2
Barium	ug/L	17.2
Benzene	ug/L	<.5
Beryllium	ug/L	<1
Bromochloromethane	ug/L	<5
Bromodichloromethane	ug/L	<1
Bromoform	ug/L	<5
Bromomethane	ug/L	<4
Cadmium	ug/L	.519
Carbon Disulfide	ug/L	<1
Carbon Tetrachloride	ug/L	<2
Chlorobenzene	ug/L	<1
Chlorodibromomethane	ug/L	<5
Chloroethane	ug/L	<4
Chloroform	ug/L	<1
Chloromethane	ug/L	<3
Chromium	ug/L	<5
cis-1,2-Dichloroethene	ug/L	<1
cis-1,3-Dichloropropene	ug/L	<5
Cobalt	ug/L	3.61
Copper	ug/L	6.93
Dibromomethane	ug/L	<1
Ethylbenzene	ug/L	<1
Iodomethane	ug/L	<10
Iron	ug/L	1690
Lead	ug/L	1.43
Methylene Chloride	ug/L	<5
Nickel	ug/L	34
pH	SU	6.56
Selenium	ug/L	<5
Silver	ug/L	<1
Styrene	ug/L	<1
Sulfate	mg/L	3020
Tetrachloroethene	ug/L	<1
Thallium	ug/L	<1
Total Suspended Solids	mg/L	221
trans-1,2-Dichloroethene	ug/L	<1
trans-1,3-Dichloropropene	ug/L	<5
trans-1,4-Dichloro-2-butene	ug/L	<10
Trichloroethene	ug/L	<1
Trichlorofluoromethane	ug/L	<4
Vanadium	ug/L	<5
Vinyl Acetate	ug/L	<10
Vinyl Chloride	ug/L	<1
Xylenes, Total	ug/L	<3
Zinc	ug/L	162

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

Table 9

Analytical Data Summary for MW-310

Constituents	Units	9/20/2012	3/27/2013	9/26/2013	4/16/2014	9/25/2014	3/11/2015	9/1/2015	3/22/2016
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	<2.00
1,1-Dichloropropene	ug/L	<1		<1					
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene	ug/L	<10.0		<11.2					
1,2,4-Trichlorobenzene	ug/L	<5		<5					
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	<10.00
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	<1.00
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	<1.00
1,3,5-Trinitrobenzene	ug/L	<10.0		<11.2					
1,3-Dichlorobenzene	ug/L	<1		<1					
1,3-Dichloropropane	ug/L	<1		<1					
1,3-Dinitrobenzene	ug/L	<10.0		<11.2					
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.20	<1.00	<1.00	<1.00
1,4-Naphthoquinone	ug/L	<10.0		<11.2					
1-Naphthylamine	ug/L	<10.0		<11.2					
2,2`-oxybis[1-Chloropropane]	ug/L	<10.0		<11.2					
2,2-Dichloropropane	ug/L	<4		<4					
2,3,4,6-Tetrachlorophenol	ug/L	<10.0		<11.2					
2,4,5-T	ug/L	<1.00		<1.08					
2,4,5-TP [Silvex]	ug/L	<1.00		<1.08					
2,4,5-Trichlorophenol	ug/L	<10.0		<11.2					
2,4,6-Trichlorophenol	ug/L	<10.0		<11.2					
2,4-D	ug/L	<1.00		<1.08					
2,4-Dichlorophenol	ug/L	<10.0		<11.2					
2,4-Dimethylphenol	ug/L	<10.0		<11.2					
2,4-Dinitrophenol	ug/L	<20.0		<22.5					
2,4-Dinitrotoluene	ug/L	<10.0		<11.2					
2,6-Dichlorophenol	ug/L	<10.0		<11.2					
2,6-Dinitrotoluene	ug/L	<10.0		<11.2					
2-Acetylaminofluorene	ug/L	<10.0		<11.2					
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	<10.00
2-Chloronaphthalene	ug/L	<10.0		<11.2					
2-Chlorophenol	ug/L	<10.0		<11.2					
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	<10.0
2-Methylnaphthalene	ug/L	<10.0		<11.2					
2-Methylphenol [o-Cresol]	ug/L	<10.0		<11.2					
2-Naphthylamine	ug/L	<10.0		<11.2					
2-Nitroaniline	ug/L	<10.0		<11.2					
2-Nitrophenol	ug/L	<10.0		<11.2					
3,3-Dichlorobenzidine	ug/L	<10.0		<56.2					
3,3-Dimethylbenzidine	ug/L	<10.0		<11.2					
3-Methylcholanthrene	ug/L	<10.0		<11.2					
3-Nitroaniline	ug/L	<10.0		<11.2					
4,4`-DDD	ug/L	<.0320		<.0356					
4,4`-DDE	ug/L	<.0320		<.0356					
4,4`-DDT	ug/L	<.0320		<.0356					
4,6-Dinitro-2-methylphenol	ug/L	<10.0		<11.2					
4-Aminobiphenyl	ug/L	<10.0		<11.2					
4-Bromophenyl phenyl ether	ug/L	<10.0		<11.2					
4-Chloro-3-methylphenol	ug/L	<10.0		<11.2					
4-Chloroaniline	ug/L	<10.0		<11.2					
4-Chlorophenyl phenyl ether	ug/L	<10.0		<11.2					
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	<10.00
4-Nitroaniline	ug/L	<10.0		<11.2					
4-Nitrophenol	ug/L	<10.0		<11.2					
5-Nitro-o-toluidine	ug/L	<10.0		<11.2					
7,12-Dimethylbenz[a]anthracene	ug/L	<10.0		<11.2					
Acenaphthene	ug/L	<10.0		<11.2					
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00	<10.00
Acetonitrile	ug/L	<10000		841					
Acetophenone	ug/L	<10.0		<11.2					
Acrolein	ug/L	<10		<10					
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	<10.00
Aldrin	ug/L	<.0320		<.0356					
Alkalinity as CaCO3	mg/L					341	443	547	494
Allyl Chloride	ug/L	<20		<2					
alpha-BHC	ug/L	<.0320		<.0356					
Aluminum	ug/L					1200.0	157.0	196.0	187.0
Anthracene	ug/L	<10.0		<11.2					
Antimony	ug/L	<6.000	<6.000	<6.000	<6.000	<.161	<1.000	<1.000	<.237

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

Table 9

Analytical Data Summary for MW-310

Constituents	10/20/2016	3/8/2017	9/27/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	11/7/2019
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.21	<.38	<.38	<.38	
1,1,1-Trichloroethane	<.12	<.12	<.12	<.12	<.19	<.19	<.19	
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.10	<.47	<.47	<.47	
1,1,2-Trichloroethane	<.12	<.12	<.12	<.12	<.45	<.45	<.45	
1,1-Dichloroethane	<.21	<.21	<.21	<.21	<.22	<.22	<.22	
1,1-Dichloroethene	<.15	<.15	<.15	<.15	<.56	<.56	<.56	
1,1-Dichloropropene								
1,2,3-Trichloropropane	<.19	<.19	<.19	<.19	<.59	<.59	<.59	
1,2,4,5-Tetrachlorobenzene								
1,2,4-Trichlorobenzene								
1,2-Dibromo-3-chloropropane	<.50	<.50	<.50	<.50	<1.20	<1.20	<1.20	
1,2-Dibromoethane	<.13	<.13	<.13	<.13	<.34	<.34	<.34	
1,2-Dichlorobenzene	<.14	<.14	<.14	<.14	<.37	<.37	<.37	
1,2-Dichloroethane	<.18	<.18	<.18	<.18	<.39	<.39	<.39	
1,2-Dichloropropane	<.87	<.87	<.87	<.87	<.27	<.27	<.27	
1,3,5-Trinitrobenzene								
1,3-Dichlorobenzene								
1,3-Dichloropropane								
1,3-Dinitrobenzene								
1,4-Dichlorobenzene	<.20	<.20	<.20	<.20	<.23	<.23	<.23	
1,4-Naphthoquinone								
1-Naphthylamine								
2,2`-oxybis[1-Chloropropane]								
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	<1.04	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10	
2-Chloronaphthalene								
2-Chlorophenol								
2-Hexanone	<.2	<.2	<.2	<.2	<2.0	<2.0	<2.0	
2-Methylnaphthalene								
2-Methylphenol [o-Cresol]								
2-Naphthylamine								
2-Nitroaniline								
2-Nitrophenol								
3,3-Dichlorobenzidine								
3,3-Dimethylbenzidine								
3-Methylcholanthrene								
3-Nitroaniline								
4,4`-DDD								
4,4`-DDE								
4,4`-DDT								
4,6-Dinitro-2-methylphenol								
4-Aminobiphenyl								
4-Bromophenyl phenyl ether								
4-Chloro-3-methylphenol								
4-Chloroaniline								
4-Chlorophenyl phenyl ether								
4-Methyl-2-pentanone	<.22	<.22	<.22	<.22	<2.10	<2.10	<2.10	
4-Nitroaniline								
4-Nitrophenol								
5-Nitro-o-toluidine								
7,12-Dimethylbenz[a]anthracene								
Acenaphthene								
Acetone	<1.79	2.61	3.78	1.96	<3.10	<3.10	<3.10	
Acetonitrile								
Acetophenone								
Acrolein								
Acrylonitrile	<.53	<.53	<.53	<.53	<2.20	<2.20	<2.20	
Aldrin								
Alkalinity as CaCO3	448	355	345	381	644	474	386	
Allyl Chloride								
alpha-BHC								
Aluminum	178.0	336.0	425.0	585.0	33.9	110.0	582.0	
Anthracene								
Antimony	<.237	<.185	<.185	<1.850	<1.320	<.530	<1.060	<.530

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

Table 9

Analytical Data Summary for MW-310

Constituents	Units	9/20/2012	3/27/2013	9/26/2013	4/16/2014	9/25/2014	3/11/2015	9/1/2015	3/22/2016
Arsenic	ug/L	<1.00	<1.00	1.49	<1.00	1.02	<6.00	<2.00	2.02
Barium	ug/L	14.10	14.80	8.27	8.45	21.80	17.80	16.80	14.30
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50	<.50
Benzo[a]anthracene	ug/L	<10.0		<11.2					
Benzo[a]pyrene	ug/L	<10.0		<11.2					
Benzo[b]fluoranthene	ug/L	<10.0		<11.2					
Benzo[ghi]perylene	ug/L	<10.0		<11.2					
Benzo[k]fluoranthene	ug/L	<10.0		<11.2					
Benzyl alcohol	ug/L	<10.0		<11.2					
Beryllium	ug/L	1.400	.439	.570	.366	.618	<3.000	<1.000	.337
beta-BHC	ug/L	<.0320		<.0356					
Bis(2-chloroethoxy)methane	ug/L	<10.0		<11.2					
Bis(2-chloroethyl)ether	ug/L	<10.0		<11.2					
Bis(2-ethylhexyl)phthalate	ug/L	<10.0		<11.2					
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	<5.00
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	<5.00
Bromomethane	ug/L	<20.00	<4.00	<4.00	<4.00	<.22	<4.00	<4.00	<4.00
Butylbenzylphthalate	ug/L	<10.0		<11.2					
Cadmium	ug/L	5.150	.638	.540	2.650	8.160	1.630	2.570	1.010
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00	<1.00
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	<2.00
Chlordane	ug/L	<2.00		<2.22					
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
Chlorobenzilate	ug/L	<10.0		<11.2					
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.20	<5.00	<5.00	<5.00
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00	<4.00
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	<1.00
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00	<3.00
Chloroprene	ug/L	<1		<1					
Chromium	ug/L	25.100	<20.000	2.250	<40.000	<1.240	<15.000	<5.000	<.355
Chrysene	ug/L	<10.0		<11.2					
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	<5.00
Cobalt	ug/L	190.0	94.6	86.6	146.0	109.0	147.0	70.9	214.0
Copper	ug/L	<20.00	<20.00	<20.00	<40.00	5.06	<6.00	<2.00	<1.22
Cyanide	mg/L	<.01		<.01					
delta-BHC	ug/L	<.0320		<.0356					
Diallate	ug/L	<10.0		<11.2					
Dibenzo(a,h)anthracene	ug/L	<10.0		<11.2					
Dibenzofuran	ug/L	<10.0		<11.2					
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
Dichlorodifluoromethane	ug/L	<3		<3					
Dieldrin	ug/L	<.0320		<.0356					
Diethyl phthalate	ug/L	<10.0		<11.2					
Dimethoate	ug/L	<10.0		<11.2					
Dimethyl phthalate	ug/L	<10.0		<11.2					
Di-n-butylphthalate	ug/L	<10.0		<11.2					
Di-n-octylphthalate	ug/L	<10.0		<22.5					
Dinoseb	ug/L	<10.0		<11.2					
Diphenylamine	ug/L	<10.0		<11.2					
Disulfoton	ug/L	<10.0		<11.2					
Endosulfan I	ug/L	<.0320		<.0356					
Endosulfan II	ug/L	<.0320		<.0356					
Endosulfan Sulfate	ug/L	<.0320		<.0356					
Endrin	ug/L	<.0320		<.0356					
Endrin Aldehyde	ug/L	<.0320		<.0356					
Ethyl Methacrylate	ug/L	<2		<2					
Ethyl Methanesulfonate	ug/L	<10.0		<11.2					
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
Famphur	ug/L	<20.0		<22.5					
Fluoranthene	ug/L	<10.0		<11.2					
Fluorene	ug/L	<10.0		<11.2					
gamma-BHC (Lindane)	ug/L	<.0320		<.0356					
Heptachlor	ug/L	<.0320		<.0356					
Heptachlor Epoxide	ug/L	<.0320		<.0356					
Hexachlorobenzene	ug/L	<10.0		<11.2					
Hexachlorobutadiene	ug/L	<10.0		<11.2					
Hexachlorocyclopentadiene	ug/L	<10.0		<22.5					
Hexachloroethane	ug/L	<10.0		<11.2					
Hexachloropropene	ug/L	<10.0		<11.2					
Indeno[1,2,3-cd]pyrene	ug/L	<10.0		<11.2					
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0	<10.0
Iron	ug/L					2720	15800	14400	19500
Isobutanol	ug/L	<10000		<10000					
Isodrin	ug/L	<10.0		<11.2					
Isophorone	ug/L	<10.0		<11.2					

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

Table 9

Analytical Data Summary for MW-310

Constituents	10/20/2016	3/8/2017	9/27/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	11/7/2019
Arsenic	1.24	<2.53	<2.53	<5.05	2.93	1.68	<1.50	2.36
Barium	13.40	14.20	14.90	18.60	13.30	14.70	16.00	14.70
Benzene	<.11	<.11	<.11	<.11	<.22	<.22	<.22	
Benzo[a]anthracene								
Benzo[a]pyrene								
Benzo[b]fluoranthene								
Benzo[ghi]perylene								
Benzo[k]fluoranthene								
Benzyl alcohol								
Beryllium	.652	.710	.745	<1.250	<.530	.391	1.090	.586
beta-BHC								
Bis(2-chloroethoxy)methane								
Bis(2-chloroethyl)ether								
Bis(2-ethylhexyl)phthalate								
Bromochloromethane	<.12	<.12	<.12	<.12	<.54	<.54	<.54	
Bromodichloromethane	<.12	<.12	<.12	<.12	<.39	<.39	<.39	
Bromoform	<.14	<.14	<.14	<.14	<.78	<.78	<.78	
Bromomethane	<.22	<.22	<.22	<.22	<1.10	<1.10	<1.10	
Butylbenzylphthalate								
Cadmium	.478	.681	.748	.940	.282	.299	1.850	1.340
Carbon Disulfide	<.15	<.15	<.15	<.15	<.45	<.45	<.45	
Carbon Tetrachloride	<.24	<.24	<.24	<.24	<.65	<.65	<.65	
Chlordane								
Chlorobenzene	<.19	<.19	<.19	<.19	<.40	<.40	<.40	
Chlorobenzilate								
Chlorodibromomethane	<.20	<.20	<.20	<.20	<.75	<.75	<.75	
Chloroethane	<.15	<.15	<.15	<.15	<.79	<.79	<.79	
Chloroform	<.28	<.28	<.28	<.28	<1.30	<1.30	<1.30	
Chloromethane	<.31	<.31	<.31	<.31	<.61	<.61	<.61	
Chloroprene								
Chromium	<.355	<3.650	<.729	<7.290	<1.140	<.980	<1.960	<.980
Chrysene								
cis-1,2-Dichloroethene	<.13	<.13	<.13	<.13	<.21	<.21	<.21	
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.15	<.25	<.25	<.25	
Cobalt	210.0	160.0	142.0	169.0	39.1	168.0	338.0	235.0
Copper	<1.22	<11.00	<2.19	<21.90	1.16	<2.00	<4.00	<2.00
Cyanide								
delta-BHC								
Diallate								
Dibenzo(a,h)anthracene								
Dibenzofuran								
Dibromomethane	<.18	<.18	<.18	<.18	<.33	<.33	<.33	
Dichlorodifluoromethane								
Dieldrin								
Diethyl phthalate								
Dimethoate								
Dimethyl phthalate								
Di-n-butylphthalate								
Di-n-octylphthalate								
Dinoseb								
Diphenylamine								
Disulfoton								
Endosulfan I								
Endosulfan II								
Endosulfan Sulfate								
Endrin								
Endrin Aldehyde								
Ethyl Methacrylate								
Ethyl Methanesulfonate								
Ethylbenzene	<.21	<.21	<.21	<.21	<.31	<.31	<.31	
Famphur								
Fluoranthene								
Fluorene								
gamma-BHC (Lindane)								
Heptachlor								
Heptachlor Epoxide								
Hexachlorobenzene								
Hexachlorobutadiene								
Hexachlorocyclopentadiene								
Hexachloroethane								
Hexachloropropene								
Indeno[1,2,3-cd]pyrene								
Iodomethane	<.8	<.8	<.8	<.8	<7.0	<7.0	<7.0	
Iron	22100	20100	20700	34500	13700	19800	24200	
Isobutanol								
Isodrin								
Isophorone								

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

Table 9

Analytical Data Summary for MW-310

Constituents	Units	9/20/2012	3/27/2013	9/26/2013	4/16/2014	9/25/2014	3/11/2015	9/1/2015	3/22/2016
Isosafrole	ug/L	<10.0		<11.2					
Kepone	ug/L	<10.0		<11.2					
Lead	ug/L	<4.000	<4.000	<4.000	<4.000	4.760	.117	<.500	<.211
Mercury	ug/L	<.267		<.200					
Methacrylonitrile	ug/L	<1		<1					
Methapyrilene	ug/L	<10.0		<11.2					
Methoxychlor	ug/L	<.0320		<.0356					
Methyl Methacrylate	ug/L	<2		<2					
Methyl Methanesulfonate	ug/L	<10.0		<11.2					
Methyl Parathion	ug/L	<10.0		<11.2					
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	.756	<5.000	<5.000	<5.000
Naphthalene	ug/L	<5		<5					
Nickel	ug/L	400.0	205.0	196.0	294.0	183.0	247.0	140.0	429.0
Nitrobenzene	ug/L	<10.0		<11.2					
N-Nitrosodiethylamine	ug/L	<10.0		<11.2					
N-Nitrosodimethylamine	ug/L	<10.0		<11.2					
N-Nitrosodi-n-butylamine	ug/L	<10.0		<11.2					
N-Nitrosodi-n-propylamine	ug/L	<10.0		<11.2					
N-Nitrosodiphenylamine	ug/L	<10.0		<11.2					
N-Nitrosomethylethylamine	ug/L	<10.0		<11.2					
N-Nitrosopiperidine	ug/L	<10.0		<11.2					
N-Nitrosopyrrolidine	ug/L	<10.0		<11.2					
o,o,o-Triethylphosphorothioate	ug/L	<10.0		<11.2					
o-Toluidine	ug/L	<10.0		<11.2					
p-[Dimethylamino]azobenzene	ug/L	<10.0		<11.2					
Parathion	ug/L	<10.0		<11.2					
PCB-1016	ug/L	<.800		<.879					
PCB-1221	ug/L	<.800		<.879					
PCB-1232	ug/L	<.800		<.879					
PCB-1242	ug/L	<.800		<.879					
PCB-1248	ug/L	<.800		<.879					
PCB-1254	ug/L	<.800		<.879					
PCB-1260	ug/L	<.800		<.879					
Pentachlorobenzene	ug/L	<10.0		<11.2					
Pentachloronitrobenzene	ug/L	<10.0		<11.2					
Pentachlorophenol	ug/L	<10.0		<11.2					
pH	SU					5.99	6.13	6.48	6.33
Phenacetin	ug/L	<10.0		<11.2					
Phenanthrene	ug/L	<10.0		<11.2					
Phenol	ug/L	<10.0		<11.2					
Phorate	ug/L	<10.0		<11.2					
p-Phenylenediamine	ug/L	<10.0		<11.2					
Pronamide	ug/L	<10.0		<11.2					
Propionitrile	ug/L	<10		<10					
Pyrene	ug/L	<10.0		<11.2					
Safrole	ug/L	<10.0		<11.2					
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<3.340	<15.000	<5.000	.692
Silver	ug/L	<20.000	<20.000	<20.000	<40.000	<.042	<1.000	<1.000	<.153
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
Sulfate	mg/L					2990	3410	2570	3570
Sulfide	mg/L	<1		<1					
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	.0810	.0480	<1.0000	.0360
Thionazin	ug/L	<10.0		<11.2					
Tin	ug/L	432	<100	450	<200				
Toluene	ug/L								
Total Suspended Solids	mg/L					114.00	5.67	7.67	6.50
Toxaphene	ug/L	<2.00		<2.22					
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	<5.00
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	<4.00
Vanadium	ug/L	<50.000	<50.000	<50.000	<100.000	<.449	<5.000	<5.000	<.255
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	<10.00
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
Xylenes, Total	ug/L	<3.000	<3.000	<3.000	<3.000	<.130	<3.000	<3.000	<3.000
Zinc	ug/L	384.0	211.0	344.0	142.0	168.0	194.0	94.8	231.0

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

Table 9

Analytical Data Summary for MW-310

Constituents	10/20/2016	3/8/2017	9/27/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	11/7/2019
Isosafrole								
Kepone								
Lead	<.211	<.324	<.324	<3.240	<.186	<.270	<.270	<.270
Mercury								
Methacrylonitrile								
Methapyrilene								
Methoxychlor								
Methyl Methacrylate								
Methyl Methanesulfonate								
Methyl Parathion								
Methylene Chloride	.186	<.170	<.170	<.170	<1.700	<1.700	<1.700	
Naphthalene								
Nickel	254.0	228.0	226.0	224.0	75.3	300.0	722.0	349.0
Nitrobenzene								
N-Nitrosodiethylamine								
N-Nitrosodimethylamine								
N-Nitrosodi-n-butylamine								
N-Nitrosodi-n-propylamine								
N-Nitrosodiphenylamine								
N-Nitrosomethylethylamine								
N-Nitrosopiperidine								
N-Nitrosopyrrolidine								
o,o,o-Triethylphosphorothioate								
o-Toluidine								
p-[Dimethylamino]azobenzene								
Parathion								
PCB-1016								
PCB-1221								
PCB-1232								
PCB-1242								
PCB-1248								
PCB-1254								
PCB-1260								
Pentachlorobenzene								
Pentachloronitrobenzene								
Pentachlorophenol								
pH	6.22	6.20	6.04	6.22	6.65	6.58	6.19	
Phenacetin								
Phenanthrene								
Phenol								
Phorate								
p-Phenylenediamine								
Pronamide								
Propionitrile								
Pyrene								
Safrole								
Selenium	<.630	2.480	2.720	<9.280	<.982	<1.000	3.370	1.850
Silver	<.153	<.140	<.700	<1.400	<.115	<.370	<.370	<.370
Styrene	<.10	<.10	<.10	<.10	<.37	<.37	<.37	
Sulfate	3370	3120	2980	2980	2920	3480	3600	
Sulfide								
Tetrachloroethene	<.18	<.18	<.18	<.18	<.48	<.48	<.48	
Thallium	.0390	<.0644	<.0644	<.6440	<.5700	<.2700	<.2700	<.2700
Thionazin								
Tin								
Toluene					<.43	<.43	<.43	
Total Suspended Solids	8.20	3.25	2.38	6.25	11.80	7.00	5.25	3.87
Toxaphene								
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<.27	<.27	<.27	
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.22	<.56	<.56	<.56	
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<.13	<1.10	<1.10	<1.10	
Trichloroethene	<.19	<.19	<.19	<.19	<.43	<.43	<.43	
Trichlorofluoromethane	<.17	<.17	<.17	<.17	<.38	<.38	<.38	
Vanadium	<.255	<.840	<.840	<8.400	<2.150	<.820	<1.640	<.820
Vinyl Acetate	<.74	<.74	<.74	<.74	<2.50	<2.50	<2.50	
Vinyl Chloride	<.10	<.10	<.10	<.10	<.60	<.60	<.18	
Xylenes, Total	.351	1.090	.363	<.130	<.400	<.400	<.400	
Zinc	297.0	223.0	165.0	199.0	31.6	192.0	524.0	287.0

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

Table 9

Analytical Data Summary for MW-311

Constituents	Units	9/20/2012	12/12/2012	3/28/2013	6/20/2013	9/25/2013	4/16/2014	9/1/2015
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-Dichloroethene	ug/L							<2
1,2,3-Trichloropropane	ug/L							<1
1,2-Dibromo-3-chloropropane	ug/L							<10
1,2-Dibromoethane	ug/L							<10
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	ug/L							<10
2-Hexanone	ug/L							<10
4-Methyl-2-pentanone	ug/L							<10
Acetone	ug/L							<10
Acrylonitrile	ug/L							<10
Alkalinity as CaCO3	mg/L							<5
Aluminum	ug/L							90
Antimony	ug/L	<6	<6	<6	<6	<6	<6	<1
Arsenic	ug/L	9.27	33.20	<2.00	<5.00	6.59	3.71	3.01
Barium	ug/L	15.30	13.00	10.90	6.35	8.88	<20.00	14.90
Benzene	ug/L							<.5
Beryllium	ug/L	<1.00	<1.00	<1.00	<1.00	.27	<1.00	<1.00
Bromochloromethane	ug/L							<5
Bromodichloromethane	ug/L							<1
Bromoform	ug/L							<5
Bromomethane	ug/L							<4
Cadmium	ug/L	<.500	<.500	.233	.244	<.500	.127	<.500
Carbon Disulfide	ug/L							<1
Carbon Tetrachloride	ug/L							<2
Chlorobenzene	ug/L							<1
Chlorodibromomethane	ug/L							<5
Chloroethane	ug/L							<4
Chloroform	ug/L							<1
Chloromethane	ug/L							<3
Chromium	ug/L	<20.00	<20.00	<20.00	<20.00	2.87	<40.00	<5.00
cis-1,2-Dichloroethene	ug/L							<1
cis-1,3-Dichloropropene	ug/L							<5
Cobalt	ug/L	247	262	260	237	258	266	309
Copper	ug/L	<20	<20	<20	<20	<20	<40	<2
Dibromomethane	ug/L							<1
Ethylbenzene	ug/L							<1
Iodomethane	ug/L							<10
Iron	ug/L							179000
Lead	ug/L	<4.000	<4.000	<4.000	4.350	2.370	<4.000	.597
Mercury	ug/L	<.267	<.200	<.200	<.200	<.200	<.200	
Methylene Chloride	ug/L							<5
Nickel	ug/L	210	241	238	235	258	258	270
pH	SU							5.78
Selenium	ug/L	<5	<5	<5	<5	<5	<5	<5
Silver	ug/L	<20	<20	<20	<20	<20	<40	<1
Styrene	ug/L							<1
Sulfate	mg/L							3120
Sulfide	mg/L				<1	<1	<1	
Tetrachloroethene	ug/L							<1
Thallium	ug/L	<2	<2	<2	<2	<2	<2	<1
Tin	ug/L	292	<100	<100	<100	419	<200	
Total Suspended Solids	mg/L							7.67
trans-1,2-Dichloroethene	ug/L							<1
trans-1,3-Dichloropropene	ug/L							<5
trans-1,4-Dichloro-2-butene	ug/L							<10
Trichloroethene	ug/L							<1
Trichlorofluoromethane	ug/L							<4
Vanadium	ug/L	<50	<50	<50	<50	<50	<100	<5
Vinyl Acetate	ug/L							<10
Vinyl Chloride	ug/L							<1
Xylenes, Total	ug/L							<3
Zinc	ug/L	188	315	328	311	438	186	278

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

Table 9

Analytical Data Summary for MW-312

Constituents	Units	9/20/2012	12/12/2012	3/28/2013	6/19/2013	9/26/2013	4/16/2014	9/1/2015	3/22/2016
1,1,1,2-Tetrachloroethane	ug/L							<1.00	<1.00
1,1,1-Trichloroethane	ug/L							<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L							<1.00	<1.00
1,1,2-Trichloroethane	ug/L							<1.00	<1.00
1,1-Dichloroethane	ug/L							<1.00	<1.00
1,1-Dichloroethene	ug/L							<2.00	<2.00
1,2,3-Trichloropropane	ug/L							<1.00	<1.00
1,2-Dibromo-3-chloropropane	ug/L							<10.0	<10.0
1,2-Dibromoethane	ug/L							<10.00	<10.00
1,2-Dichlorobenzene	ug/L							<1.00	<1.00
1,2-Dichloroethane	ug/L							<1.00	<1.00
1,2-Dichloropropane	ug/L							<1.00	<1.00
1,4-Dichlorobenzene	ug/L							<1.00	<1.00
2-Butanone	ug/L							<10.00	<10.00
2-Hexanone	ug/L							<10.0	<10.0
4-Methyl-2-pentanone	ug/L							<10.00	<10.00
Acetone	ug/L							<10.00	<10.00
Acrylonitrile	ug/L							<10.00	<10.00
Alkalinity as CaCO3	mg/L							310	538
Aluminum	ug/L							152.0	<20.8
Antimony	ug/L	<6.000	<6.000	<6.000	<6.000	<6.000	<6.000	<1.000	<.237
Arsenic	ug/L	<1.000	<2.000	<1.000	<3.000	2.320	<1.000	<2.000	<.672
Barium	ug/L	16.60	18.50	12.30	16.70	8.47	10.70	15.40	24.90
Benzene	ug/L							<.50	<.50
Beryllium	ug/L	<1.000	<1.000	<1.000	<1.000	.280	<1.000	<1.000	<.221
Bromochloromethane	ug/L							<5.00	<5.00
Bromodichloromethane	ug/L							<1.00	<1.00
Bromoform	ug/L							<5.00	<5.00
Bromomethane	ug/L							<4.000	<4.000
Cadmium	ug/L	<.5000	<.5000	<.5000	.2460	<.5000	<.5000	<.5000	.0670
Carbon Disulfide	ug/L							<1.00	<1.00
Carbon Tetrachloride	ug/L							<2.00	<2.00
Chlorobenzene	ug/L							<1.00	<1.00
Chlorodibromomethane	ug/L							<5.00	<5.00
Chloroethane	ug/L							<4.00	<4.00
Chloroform	ug/L							<1.00	<1.00
Chloromethane	ug/L							<3.00	<3.00
Chromium	ug/L	<20.000	<20.000	<20.000	<20.000	3.900	<20.000	<5.000	<.355
cis-1,2-Dichloroethene	ug/L							<1.00	<1.00
cis-1,3-Dichloropropene	ug/L							<5.00	<5.00
Cobalt	ug/L	36.2	34.3	54.5	43.7	44.9	20.8	32.4	37.1
Copper	ug/L	<20.00	<20.00	2.19	<20.00	<20.00	<20.00	<2.00	<1.22
Dibromomethane	ug/L							<1.00	<1.00
Dichlorodifluoromethane	ug/L								
Ethylbenzene	ug/L							<1.00	<1.00
Iodomethane	ug/L							<10.0	<10.0
Iron	ug/L							46400	3180
Lead	ug/L	<4.000	<4.000	<4.000	1.670	<4.000	<4.000	<.500	<.211
Mercury	ug/L	<.267	<.200	<.200	<.200	<.200	<.200		
Methylene Chloride	ug/L							<5.000	<5.000
Nickel	ug/L	89.5	82.0	121.0	119.0	117.0	101.0	108.0	45.0
pH	SU							6.39	6.36
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<5.000	<5.000	<5.000	<.630
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<20.000	<20.000	<1.000	<.153
Styrene	ug/L							<1.00	<1.00
Sulfate	mg/L							2260	530
Sulfide	mg/L				<1.000	<1.000	<1.000		
Tetrachloroethene	ug/L							<1.00	<1.00
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000	<1.0000	.0650
Tin	ug/L	<100.000	<100.000	<100.000	<100.000	572.000	<100.000		
Toluene	ug/L								
Total Suspended Solids	mg/L							32.00	5.00
trans-1,2-Dichloroethene	ug/L							<1.00	<1.00
trans-1,3-Dichloropropene	ug/L							<5.00	<5.00
trans-1,4-Dichloro-2-butene	ug/L							<10.00	<10.00
Trichloroethene	ug/L							<1.00	<1.00
Trichlorofluoromethane	ug/L							<4.00	<4.00
Vanadium	ug/L	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<5.000	<.255
Vinyl Acetate	ug/L							<10.00	<10.00
Vinyl Chloride	ug/L							<1.00	<1.00
Xylenes, Total	ug/L							<3.000	<3.000
Zinc	ug/L	<20.0	85.0	84.9	70.1	209.0	<60.0	<10.0	6.8

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

Table 9

Analytical Data Summary for MW-312

Constituents	10/21/2016	3/8/2017	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/9/2020	9/15/2020
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.21	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.12	<.12	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.10	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.12	<.12	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	<.21	<.21	<.21	<.21	<.22	<.22	<.22	<.22	<.22
1,1-Dichloroethene	<.15	<.15	<.15	<.15	<.56	<.56	<.56	<.56	<.56
1,2,3-Trichloropropane	<.19	<.19	<.19	<.19	<.59	<.59	<.59	<.59	<.59
1,2-Dibromo-3-chloropropane	<.5	<.5	<.5	<.5	<1.2	<1.2	<1.2	<1.2	<1.2
1,2-Dibromoethane	<.13	<.13	<.13	<.13	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.14	<.14	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.18	<.18	<.18	<.18	<.39	<.39	<.39	<.39	<.39
1,2-Dichloropropane	<.87	<.87	<.87	<.87	<.27	<.27	<.27	<.27	<.27
1,4-Dichlorobenzene	<.20	<.20	<.20	<.20	<.23	<.23	<.23	<.23	<.23
2-Butanone	<1.04	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10
2-Hexanone	<.2	<.2	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0
4-Methyl-2-pentanone	<.22	<.22	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10
Acetone	<1.79	2.39	<1.79	<1.79	<3.10	<3.10	<3.10	<3.10	<3.10
Acrylonitrile	<.53	<.53	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20
Alkalinity as CaCO3	371	376	366	362	371	350	297	342	367
Aluminum	85.9	64.1	47.6	<165.0	27.0	44.5	35.4	<30.0	92.6
Antimony	<.237	<.185	<.185	<.740	<1.320	<.530	<.530	<.580	<.510
Arsenic	1.430	1.020	1.230	<2.020	1.840	1.130	1.220	<.880	2.150
Barium	13.80	14.10	16.50	12.80	13.40	14.60	11.10	14.90	13.60
Benzene	<.11	<.11	<.11	<.11	<.22	<.22	<.22	<.22	<.22
Beryllium	<.221	.143	.198	<.500	<.530	<.270	.318	<.270	<.270
Bromochloromethane	<.12	<.12	<.12	<.12	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.12	<.12	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.14	<.14	<.78	<.78	<.78	<.78	<.78
Bromomethane	<.220	<.220	.233	<.220	<1.100	<1.100	<1.100	<1.100	<1.100
Cadmium	<.0351	<.0441	<.0441	<.1760	<.1670	<.0770	<.0390	.0680	<.0490
Carbon Disulfide	<.15	<.15	<.15	<.15	<.45	<.45	<.45	<.45	<.45
Carbon Tetrachloride	<.24	<.24	<.24	<.24	<.65	<.65	<.65	<.65	<.65
Chlorobenzene	<.19	<.19	<.19	<.19	<.40	<.40	<.40	<.40	<.40
Chlorodibromomethane	<.20	<.20	<.20	<.20	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.15	<.15	<.15	<.15	<.79	<.79	<.79	<.79	<.79
Chloroform	<.28	<.28	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	<.31	<.31	<.31	<.31	<.61	<.61	<.61	<.61	<.61
Chromium	<.355	<.729	<.729	<2.920	1.260	<.980	<.980	<1.100	<1.100
cis-1,2-Dichloroethene	<.13	<.13	<.13	<.13	<.21	<.21	<.21	<.21	<.21
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.15	<.25	<.25	<.25	<.25	<.25
Cobalt	36.4	35.0	30.3	24.1	29.8	32.7	34.9	34.7	41.4
Copper	<1.22	<2.19	<2.19	<8.76	1.18	<2.00	<2.00	<3.20	<1.50
Dibromomethane	<.18	<.18	<.18	<.18	<.33	<.33	<.33	<.33	<.33
Dichlorodifluoromethane	<.20	<.20	<.20	<.20	<.25		<.25		
Ethylbenzene	<.21	<.21	<.21	<.21	<.31	<.31	<.31	<.31	<.31
Iodomethane	<.8	<.8	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0
Iron	32000	40300	33000	39000	34400	38100	47400	24800	39300
Lead	<.211	<.324	<.324	<1.300	<.186	<.270	.274	<.270	.177
Mercury									
Methylene Chloride	.295	<.170	<.170	.334	<1.700	<1.700	<1.700	<1.700	<1.700
Nickel	94.4	100.0	80.1	88.8	91.6	101.0	120.0	85.8	119.0
pH	6.23	6.36	6.40	6.37	6.56	6.28	6.28	6.34	6.25
Selenium	<.630	<.928	<.928	<3.710	<.982	<1.000	<1.000	<1.000	<1.000
Silver	<.153	<.140	<.140	<.560	<.115	<.370	<.370	<.370	<.370
Styrene	<.10	<.10	<.10	<.10	<.37	<.37	<.37	<.37	<.37
Sulfate	2210	2450	2160	2350	2240	2080	2260	1650	2240
Sulfide	<.180	<.180	1.530	<.231	<.231	<.231	<.231	<.231	10.000
Tetrachloroethene	<.18	<.18	<.18	<.18	<.48	<.48	<.48	<.48	<.48
Thallium	<.0255	<.0644	<.0644	<.2580	<.5700	<.2700	<.2700	<.2600	<.2600
Tin	<.832	<1.620	<1.620	<6.480	<1.300	<1.800	<1.800		
Toluene					<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	13.50	11.50	8.12	11.50	7.62	6.12	37.00	3.87	34.80
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.22	<.56	<.56	<.56	<.56	<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.19	<.19	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.17	<.17	<.38	<.38	<.38	<.38	<.38
Vanadium	<.255	<.840	<.840	<3.360	<2.150	<.820	<.820	<.820	<.850
Vinyl Acetate	<.74	<.74	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	<.10	<.10	<.10	<.10	<.60	<.60	<.18	<.18	<.18
Xylenes, Total	<.130	.654	<.130	<.130	<.400	<.400	<.400	<.400	<.400
Zinc	12.3	17.6	<11.5	<46.0	10.0	<10.0	<10.0	<10.0	12.9

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

Table 9

Analytical Data Summary for MW-312

Constituents	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
1,1,1,2-Tetrachloroethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
1,2,3-Trichloropropane	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dibromo-3-chloropropane	<1.2	<1.2	<1.2	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dibromoethane	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
1,4-Dichlorobenzene	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00	<1.00
2-Butanone	<2.10	<2.10	<2.10	<10.00	<10.00	<10.00	<10.00	<10.00
2-Hexanone	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0
4-Methyl-2-pentanone	<2.10	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00	<5.00
Acetone	<3.10	<3.10	<3.10	<10.00	<10.00	<10.00	<10.00	<10.00
Acrylonitrile	<2.20	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00	<5.00
Alkalinity as CaCO3	327	481	353	325	328	312	298	354
Aluminum	28.4	27.1	286.0	193.0	92.0	53.0	<50.0	58.0
Antimony	<1.100	<1.100	<2.760	<2.000	<2.000	<2.000	<2.000	<2.000
Arsenic	1.280	1.290	<3.000	<4.000	<4.000	<4.000	<4.000	<4.000
Barium	12.50	11.90	14.60	23.90	25.30	22.90	24.30	24.90
Benzene	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
Beryllium	.312	.275	<1.080	<4.000	<4.000	<4.000	<4.000	<4.000
Bromochloromethane	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.100	<1.100	<1.100	<1.000	<1.000	<1.000	<1.000	<1.000
Cadmium	<.0510	<.0510	<.2200	<.8000	<.8000	<.8000	<.8000	<.8000
Carbon Disulfide	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorobenzene	<.40	<.40	<.40	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorodibromomethane	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<.79	<.79	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<.61	<.61	<1.00	<1.00	<1.00	<1.00	<1.00
Chromium	<1.100	<1.100	<4.400	<8.000	<8.000	<8.000	<8.000	<8.000
cis-1,2-Dichloroethene	<.21	<.21	<.21	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00	<1.00
Cobalt	52.3	38.6	47.4	34.0	44.8	42.9	44.2	38.9
Copper	<1.40	<1.40	7.99	<4.00	<4.00	<4.00	<4.00	<4.00
Dibromomethane	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00	<1.00
Dichlorodifluoromethane								
Ethylbenzene	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00	<1.00
Iodomethane	<7.0	<7.0	<7.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	50200	50300	46100	4070	5270	800	2480	815
Lead	<.210	1.410	<.960	<4.000	<4.000	<4.000	<4.000	<4.000
Mercury								
Methylene Chloride	<1.700	<1.700	<1.700	<5.000	<5.000	<5.000	<5.000	<5.000
Nickel	150.0	128.0	141.0	64.5	64.8	72.1	58.4	57.6
pH	6.30	6.34	6.39	6.20	6.20	6.10	6.10	6.10
Selenium	<.960	<.960	<3.840	<4.000	<4.000	<4.000	<4.000	<4.000
Silver	<.420	<.420	<1.960	<4.000	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
Sulfate	2480	2320	2310	907	373	422	614	445
Sulfide	14.700	<.231	<.231	<.100				
Tetrachloroethene	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00	<1.00
Thallium	<.2600	<.2600	<1.0400	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000
Tin								
Toluene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	12.50	29.10	140.00					
trans-1,2-Dichloroethene	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
Vanadium	<1.100	<1.100	<4.400	<20.000	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<.18	<.18	<1.00	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.400	1.050	<.400	<2.000	<2.000	<2.000	<2.000	<2.000
Zinc	<10.0	<10.0	<40.0	<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-313

Constituents	Units	9/18/2012	3/28/2013	9/25/2013	4/16/2014	9/26/2014	3/11/2015	9/2/2015	3/22/2016
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	<2.00
1,1-Dichloropropene	ug/L	<1		<1					
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene	ug/L	<10.0		<10.3					
1,2,4-Trichlorobenzene	ug/L	<5		<5					
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	<10.00
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	<1.00
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	<1.00
1,3,5-Trinitrobenzene	ug/L	<10.0		<10.3					
1,3-Dichlorobenzene	ug/L	<1		<1					
1,3-Dichloropropane	ug/L	<1		<1					
1,3-Dinitrobenzene	ug/L	<10.0		<10.3					
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.20	<1.00	<1.00	<1.00
1,4-Naphthoquinone	ug/L	<10.0		<10.3					
1-Naphthylamine	ug/L	<10.0		<10.3					
2,2`-oxybis[1-Chloropropane]	ug/L	<10.0		<10.3					
2,2-Dichloropropane	ug/L	<4		<4					
2,3,4,6-Tetrachlorophenol	ug/L	<10.0		<10.3					
2,4,5-T	ug/L	<1.00		<1.09					
2,4,5-TP [Silvex]	ug/L	<1.00		<1.09					
2,4,5-Trichlorophenol	ug/L	<10.0		<10.3					
2,4,6-Trichlorophenol	ug/L	<10.0		<10.3					
2,4-D	ug/L	<1.00		<1.09					
2,4-Dichlorophenol	ug/L	<10.0		<10.3					
2,4-Dimethylphenol	ug/L	<10.0		<10.3					
2,4-Dinitrophenol	ug/L	<20.0		<20.6					
2,4-Dinitrotoluene	ug/L	<10.0		<10.3					
2,6-Dichlorophenol	ug/L	<10.0		<10.3					
2,6-Dinitrotoluene	ug/L	<10.0		<10.3					
2-Acetylaminofluorene	ug/L	<10.0		<10.3					
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	<10.00
2-Chloronaphthalene	ug/L	<10.0		<10.3					
2-Chlorophenol	ug/L	<10.0		<10.3					
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	<10.0
2-Methylnaphthalene	ug/L	<10.0		<10.3					
2-Methylphenol [o-Cresol]	ug/L	<10.0		<10.3					
2-Naphthylamine	ug/L	<10.0		<10.3					
2-Nitroaniline	ug/L	<10.0		<10.3					
2-Nitrophenol	ug/L	<10.0		<10.3					
3,3-Dichlorobenzidine	ug/L	<10.0		<51.5					
3,3-Dimethylbenzidine	ug/L	<10.0		<10.3					
3-Methylcholanthrene	ug/L	<10.0		<10.3					
3-Nitroaniline	ug/L	<10.0		<10.3					
4,4`-DDD	ug/L	<.03200		.00214					
4,4`-DDE	ug/L	<.0320		.0032					
4,4`-DDT	ug/L	<.0320		<.0333					
4,6-Dinitro-2-methylphenol	ug/L	<10.0		<10.3					
4-Aminobiphenyl	ug/L	<10.0		<10.3					
4-Bromophenyl phenyl ether	ug/L	<10.0		<10.3					
4-Chloro-3-methylphenol	ug/L	<10.0		<10.3					
4-Chloroaniline	ug/L	<10.0		<10.3					
4-Chlorophenyl phenyl ether	ug/L	<10.0		<10.3					
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	<10.00
4-Nitroaniline	ug/L	<10.0		<10.3					
4-Nitrophenol	ug/L	<10.0		<10.3					
5-Nitro-o-toluidine	ug/L	<10.0		<10.3					
7,12-Dimethylbenz[a]anthracene	ug/L	<10.0		<10.3					
Acenaphthene	ug/L	<10.0		<10.3					
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	1.88	<10.00	<10.00	<10.00
Acetonitrile	ug/L	<10000		<10000					
Acetophenone	ug/L	<10.0		<10.3					
Acrolein	ug/L	<10		<10					
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	<10.00
Aldrin	ug/L	<.0320		<.0333					
Alkalinity as CaCO3	mg/L					330	724	583	582
Allyl Chloride	ug/L	<20		<2					
alpha-BHC	ug/L	<.03200		.00451					
Aluminum	ug/L					172.0	<50.0	<50.0	50.3
Anthracene	ug/L	<10.0		<10.3					
Antimony	ug/L	<12.000	<6.000	8.010	<6.000	.223	<1.000	<1.000	.329

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

Table 9

Analytical Data Summary for MW-313

Constituents	10/21/2016	3/8/2017	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/10/2020	9/16/2020
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.21	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.12	<.12	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.10	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.12	<.12	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	<.21	<.21	<.21	<.21	<.22	<.22	<.22	<.22	<.22
1,1-Dichloroethene	<.15	<.15	<.15	<.15	<.56	<.56	<.56	<.56	<.56
1,1-Dichloropropene									
1,2,3-Trichloropropane	<.19	<.19	<.19	<.19	<.59	<.59	<.59	<.59	<.59
1,2,4,5-Tetrachlorobenzene									
1,2,4-Trichlorobenzene									
1,2-Dibromo-3-chloropropane	<.50	<.50	<.50	<.50	<1.20	<1.20	<1.20	<1.20	<1.20
1,2-Dibromoethane	<.13	<.13	<.13	<.13	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.14	<.14	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.18	<.18	<.18	<.18	<.39	<.39	<.39	<.39	<.39
1,2-Dichloropropane	<.87	<.87	<.87	<.87	<.27	<.27	<.27	<.27	<.27
1,3,5-Trinitrobenzene									
1,3-Dichlorobenzene									
1,3-Dichloropropane									
1,3-Dinitrobenzene									
1,4-Dichlorobenzene	<.20	<.20	<.20	<.20	<.23	<.23	<.23	<.23	<.23
1,4-Naphthoquinone									
1-Naphthylamine									
2,2`-oxybis[1-Chloropropane]									
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	<1.04	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10
2-Chloronaphthalene									
2-Chlorophenol									
2-Hexanone	<.2	<.2	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0
2-Methylnaphthalene									
2-Methylphenol [o-Cresol]									
2-Naphthylamine									
2-Nitroaniline									
2-Nitrophenol									
3,3-Dichlorobenzidine									
3,3-Dimethylbenzidine									
3-Methylcholanthrene									
3-Nitroaniline									
4,4`-DDD									
4,4`-DDE									
4,4`-DDT									
4,6-Dinitro-2-methylphenol									
4-Aminobiphenyl									
4-Bromophenyl phenyl ether									
4-Chloro-3-methylphenol									
4-Chloroaniline									
4-Chlorophenyl phenyl ether									
4-Methyl-2-pentanone	<.22	<.22	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10
4-Nitroaniline									
4-Nitrophenol									
5-Nitro-o-toluidine									
7,12-Dimethylbenz[a]anthracene									
Acenaphthene									
Acetone	<1.79	1.87	2.76	<1.79	<3.10	3.82	<3.10	<3.10	<3.10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<.53	<.53	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20
Aldrin									
Alkalinity as CaCO3	551	556	484	443	448	520	545	475	551
Allyl Chloride									
alpha-BHC									
Aluminum	<20.8	<41.3	<41.3	<41.3	65.7	<27.0	<27.0	<30.0	13.0
Anthracene									
Antimony	<.237	.189	<.185	.309	<1.320	<.530	<.530	<.580	<.510

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

Table 9

Analytical Data Summary for MW-313

Constituents	4/15/2021	10/26/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
1,1,1,2-Tetrachloroethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloropropene								
1,2,3-Trichloropropane	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene								
1,2,4-Trichlorobenzene								
1,2-Dibromo-3-chloropropane	<1.20	<1.20	<1.20	<5.00	<5.00	<5.00	<5.00	<5.00
1,2-Dibromoethane	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
1,3,5-Trinitrobenzene								
1,3-Dichlorobenzene								
1,3-Dichloropropane								
1,3-Dinitrobenzene								
1,4-Dichlorobenzene	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00	<1.00
1,4-Naphthoquinone								
1-Naphthylamine								
2,2`-oxybis[1-Chloropropane]								
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	<2.10	<2.10	<2.10	<10.00	<10.00	<10.00	<10.00	<10.00
2-Chloronaphthalene								
2-Chlorophenol								
2-Hexanone	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene								
2-Methylphenol [o-Cresol]								
2-Naphthylamine								
2-Nitroaniline								
2-Nitrophenol								
3,3-Dichlorobenzidine								
3,3-Dimethylbenzidine								
3-Methylcholanthrene								
3-Nitroaniline								
4,4`-DDD								
4,4`-DDE								
4,4`-DDT								
4,6-Dinitro-2-methylphenol								
4-Aminobiphenyl								
4-Bromophenyl phenyl ether								
4-Chloro-3-methylphenol								
4-Chloroaniline								
4-Chlorophenyl phenyl ether								
4-Methyl-2-pentanone	<2.10	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00	<5.00
4-Nitroaniline								
4-Nitrophenol								
5-Nitro-o-toluidine								
7,12-Dimethylbenz[a]anthracene								
Acenaphthene								
Acetone	<3.10	<3.10	<3.10	<10.00	<10.00	<10.00	<10.00	<10.00
Acetonitrile								
Acetophenone								
Acrolein								
Acrylonitrile	<2.20	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00	<5.00
Aldrin								
Alkalinity as CaCO3	465	587	539	484	472	478	488	584
Allyl Chloride								
alpha-BHC								
Aluminum	94.9	65.1	76.7	<100.0	<50.0	115.0	128.0	86.0
Anthracene								
Antimony	<1.100	<1.100	<2.760	<2.000	<2.000	<2.000	<2.000	<2.000

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

Table 9

Analytical Data Summary for MW-313

Constituents	Units	9/18/2012	3/28/2013	9/25/2013	4/16/2014	9/26/2014	3/11/2015	9/2/2015	3/22/2016
Arsenic	ug/L	4.57	3.60	<1.00	10.90	25.70	1.49	<2.00	13.50
Barium	ug/L	40.1	51.7	15.6	30.4	61.3	26.0	16.2	28.1
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50	<.50
Benzo[a]anthracene	ug/L	<10.0		<10.3					
Benzo[a]pyrene	ug/L	<10.0		<10.3					
Benzo[b]fluoranthene	ug/L	<10.0		<10.3					
Benzo[ghi]perylene	ug/L	<10.0		<10.3					
Benzo[k]fluoranthene	ug/L	<10.0		<10.3					
Benzyl alcohol	ug/L	<10.0		<10.3					
Beryllium	ug/L	<1.000	<1.000	<1.000	<1.000	.199	<1.000	<1.000	<.221
beta-BHC	ug/L	<.03200		.00598					
Bis(2-chloroethoxy)methane	ug/L	<10.0		<10.3					
Bis(2-chloroethyl)ether	ug/L	<10.0		<10.3					
Bis(2-ethylhexyl)phthalate	ug/L	<10.0		<10.3					
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	<5.00
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	<5.00
Bromomethane	ug/L	<20.000	<4.000	<4.000	<4.000	<.220	<4.000	<4.000	<4.000
Butylbenzylphthalate	ug/L	<10.0		<10.3					
Cadmium	ug/L	<.5000	<.5000	<.5000	<.5000	.1320	<.5000	<.5000	.0860
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00	<1.00
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	<2.00
Chlordane	ug/L	<2.00		<2.08					
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
Chlorobenzilate	ug/L	<10.0		<10.3					
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.20	<5.00	<5.00	<5.00
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00	<4.00
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	<1.00
Chloromethane	ug/L	<3.000	<3.000	<3.000	<3.000	<.310	<3.000	<3.000	<3.000
Chloroprene	ug/L	<1		<1					
Chromium	ug/L	<20.000	<20.000	2.980	<20.000	<1.240	<5.000	<5.000	.655
Chrysene	ug/L	<10.0		<10.3					
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	<5.00
Cobalt	ug/L	4.640	3.020	<7.000	<7.000	9.690	7.370	2.150	17.400
Copper	ug/L	<20.00	<20.00	<20.00	<20.00	2.99	<2.00	<2.00	1.68
Cyanide	mg/L	<.01		<.01					
delta-BHC	ug/L	<.03200		.00444					
Diallate	ug/L	<10.0		<10.3					
Dibenzo(a,h)anthracene	ug/L	<10.0		<10.3					
Dibenzofuran	ug/L	<10.0		<10.3					
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
Dichlorodifluoromethane	ug/L	<3		<3					
Dieldrin	ug/L	<.0320		<.0333					
Diethyl phthalate	ug/L	<10.0		<10.3					
Dimethoate	ug/L	<10.0		<10.3					
Dimethyl phthalate	ug/L	<10.0		<10.3					
Di-n-butylphthalate	ug/L	<10.0		<10.3					
Di-n-octylphthalate	ug/L	<10.0		<20.6					
Dinoseb	ug/L	<10.0		<10.3					
Diphenylamine	ug/L	<10.0		<10.3					
Disulfoton	ug/L	<10.0		<10.3					
Endosulfan I	ug/L	<.0320		<.0333					
Endosulfan II	ug/L	<.0320		<.0333					
Endosulfan Sulfate	ug/L	<.0320		<.0333					
Endrin	ug/L	<.0320		<.0333					
Endrin Aldehyde	ug/L	<.0320		<.0333					
Ethyl Methacrylate	ug/L	<2		<2					
Ethyl Methanesulfonate	ug/L	<10.0		<10.3					
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
Famphur	ug/L	<20.0		<20.6					
Fluoranthene	ug/L	<10.0		<10.3					
Fluorene	ug/L	<10.0		<10.3					
gamma-BHC (Lindane)	ug/L	<.0320		<.0333					
Heptachlor	ug/L	<.0320		<.0333					
Heptachlor Epoxide	ug/L	<.0320		<.0333					
Hexachlorobenzene	ug/L	<10.0		<10.3					
Hexachlorobutadiene	ug/L	<10.0		<10.3					
Hexachlorocyclopentadiene	ug/L	<10.0		<20.6					
Hexachloroethane	ug/L	<10.0		<10.3					
Hexachloropropene	ug/L	<10.0		<10.3					
Indeno[1,2,3-cd]pyrene	ug/L	<10.0		<10.3					
Iodomethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.80	<10.00	<10.00	<10.00
Iron	ug/L					47600	1310	589	17900
Isobutanol	ug/L	<10000		<10000					
Isodrin	ug/L	<10.0		<10.3					
Isophorone	ug/L	<10.0		<10.3					

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

Table 9

Analytical Data Summary for MW-313

Constituents	10/21/2016	3/8/2017	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/10/2020	9/16/2020
Arsenic	1.54	6.87	7.49	1.26	2.19	3.17	3.04	4.79	2.64
Barium	16.4	24.7	20.7	15.7	15.3	23.5	24.4	17.3	22.0
Benzene	<.11	<.11	<.11	<.11	<.22	<.22	<.22	<.22	<.22
Benzo[a]anthracene									
Benzo[a]pyrene									
Benzo[b]fluoranthene									
Benzo[ghi]perylene									
Benzo[k]fluoranthene									
Benzyl alcohol									
Beryllium	<.221	<.125	<.125	<.125	<.530	<.270	<.270	<.270	<.270
beta-BHC									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-ethylhexyl)phthalate									
Bromochloromethane	<.12	<.12	<.12	<.12	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.12	<.12	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.14	<.14	<.78	<.78	<.78	<.78	<.78
Bromomethane	2.660	<.220	.344	<.220	<1.100	<1.100	<1.100	<1.100	<1.100
Butylbenzylphthalate									
Cadmium	<.0351	.0510	.0560	<.0441	<.1670	.1190	.1640	.0500	<.0490
Carbon Disulfide	<.15	<.15	<.15	<.15	<.45	<.45	<.45	<.45	<.45
Carbon Tetrachloride	<.24	<.24	<.24	<.24	<.65	<.65	<.65	<.65	<.65
Chlordane									
Chlorobenzene	<.19	<.19	<.19	<.19	<.40	<.40	<.40	<.40	<.40
Chlorobenzilate									
Chlorodibromomethane	<.20	<.20	<.20	<.20	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.15	<.15	<.15	<.15	<.79	<.79	<.79	<.79	<.79
Chloroform	<.28	<.28	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	.701	<.310	<.310	<.310	<.610	<.610	<.610	<.610	<.610
Chloroprene									
Chromium	<.355	<.729	<.729	<.729	1.380	<.980	<.980	<1.100	<1.100
Chrysene									
cis-1,2-Dichloroethene	<.13	<.13	<.13	<.13	<.21	<.21	<.21	<.21	<.21
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.15	<.25	<.25	<.25	<.25	<.25
Cobalt	.968	.501	.175	.107	.403	32.700	39.600	40.300	43.600
Copper	<1.22	<2.19	<2.19	<2.19	1.53	<2.00	<2.00	<3.20	<1.50
Cyanide									
delta-BHC									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromomethane	<.18	<.18	<.18	<.18	<.33	<.33	<.33	<.33	<.33
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butylphthalate									
Di-n-octylphthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan I									
Endosulfan II									
Endosulfan Sulfate									
Endrin									
Endrin Aldehyde									
Ethyl Methacrylate									
Ethyl Methanesulfonate									
Ethylbenzene	<.21	<.21	<.21	<.21	<.31	<.31	<.31	<.31	<.31
Famphur									
Fluoranthene									
Fluorene									
gamma-BHC (Lindane)									
Heptachlor									
Heptachlor Epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno[1,2,3-cd]pyrene									
Iodomethane	1.41	<.80	<.80	<.80	<7.00	<7.00	<7.00	<7.00	<7.00
Iron	1310	9270	9510	979	1640	3380	3720	7970	3840
Isobutanol									
Isodrin									
Isophorone									

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

Table 9

Analytical Data Summary for MW-313

Constituents	4/15/2021	10/26/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Arsenic	8.83	3.08	9.44	6.00	4.90	12.20	29.00	4.60
Barium	21.3	22.5	27.7	15.3	22.6	26.8	42.0	29.8
Benzene	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
Benzo[a]anthracene								
Benzo[a]pyrene								
Benzo[b]fluoranthene								
Benzo[ghi]perylene								
Benzo[k]fluoranthene								
Benzyl alcohol								
Beryllium	<.270	<.270	<1.080	<4.000	<4.000	<4.000	<4.000	<4.000
beta-BHC								
Bis(2-chloroethoxy)methane								
Bis(2-chloroethyl)ether								
Bis(2-ethylhexyl)phthalate								
Bromochloromethane	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.100	1.280	<1.100	<1.000	<1.000	<1.000	<1.000	<1.000
Butylbenzylphthalate								
Cadmium	<.0510	<.0510	.4640	<.8000	<.8000	<.8000	<.8000	<.8000
Carbon Disulfide	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00	<1.00
Chlordane								
Chlorobenzene	<.40	<.40	<.40	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorobenzilate								
Chlorodibromomethane	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<.79	<.79	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.610	<.610	<.610	<1.000	<1.000	<1.000	<1.000	<1.000
Chloroprene								
Chromium	<1.100	<1.100	<4.400	<8.000	<8.000	<8.000	<8.000	<8.000
Chrysene								
cis-1,2-Dichloroethene	<.21	<.21	<.21	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00	<1.00
Cobalt	42.900	2.990	13.900	2.800	1.400	.800	.900	.700
Copper	<1.40	<1.40	<7.20	<4.00	<4.00	<4.00	<4.00	<4.00
Cyanide								
delta-BHC								
Diallate								
Dibenzo(a,h)anthracene								
Dibenzofuran								
Dibromomethane	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00	<1.00
Dichlorodifluoromethane								
Dieldrin								
Diethyl phthalate								
Dimethoate								
Dimethyl phthalate								
Di-n-butylphthalate								
Di-n-octylphthalate								
Dinoseb								
Diphenylamine								
Disulfoton								
Endosulfan I								
Endosulfan II								
Endosulfan Sulfate								
Endrin								
Endrin Aldehyde								
Ethyl Methacrylate								
Ethyl Methanesulfonate								
Ethylbenzene	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00	<1.00
Famphur								
Fluoranthene								
Fluorene								
gamma-BHC (Lindane)								
Heptachlor								
Heptachlor Epoxide								
Hexachlorobenzene								
Hexachlorobutadiene								
Hexachlorocyclopentadiene								
Hexachloroethane								
Hexachloropropene								
Indeno[1,2,3-cd]pyrene								
Iodomethane	<7.00	<7.00	<7.00	<1.00	<1.00	<1.00	<1.00	<1.00
Iron	12400	6230	12800	7300	4630	39400	47200	9620
Isobutanol								
Isodrin								
Isophorone								

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

Table 9

Analytical Data Summary for MW-313

Constituents	Units	9/18/2012	3/28/2013	9/25/2013	4/16/2014	9/26/2014	3/11/2015	9/2/2015	3/22/2016
Isosafrole	ug/L	<10.0		<10.3					
Kepone	ug/L	<10.0		<10.3					
Lead	ug/L	<4.000	<4.000	<4.000	<4.000	1.120	<.500	<.500	.401
Mercury	ug/L	<.267		<.200					
Methacrylonitrile	ug/L	<1		<1					
Methapyrilene	ug/L	<10.0		<10.3					
Methoxychlor	ug/L	<.0320		<.0333					
Methyl Methacrylate	ug/L	<2		<2					
Methyl Methanesulfonate	ug/L	<10.0		<10.3					
Methyl Parathion	ug/L	<10.0		<10.3					
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	<.170	<5.000	<5.000	<5.000
Naphthalene	ug/L	<5		<5					
Nickel	ug/L	<50.000	<50.000	2.610	<50.000	6.150	35.900	8.920	33.000
Nitrobenzene	ug/L	<10.0		<10.3					
N-Nitrosodiethylamine	ug/L	<10.0		<10.3					
N-Nitrosodimethylamine	ug/L	<10.0		<10.3					
N-Nitrosodi-n-butylamine	ug/L	<10.0		<10.3					
N-Nitrosodi-n-propylamine	ug/L	<10.0		<10.3					
N-Nitrosodiphenylamine	ug/L	<10.0		<10.3					
N-Nitrosomethylethylamine	ug/L	<10.0		<10.3					
N-Nitrosopiperidine	ug/L	<10.0		<10.3					
N-Nitrosopyrrolidine	ug/L	<10.0		<10.3					
o,o,o-Triethylphosphorothioate	ug/L	<10.0		<10.3					
o-Toluidine	ug/L	<10.0		<10.3					
p-[Dimethylamino]azobenzene	ug/L	<10.0		<10.3					
Parathion	ug/L	<10.0		<10.3					
PCB-1016	ug/L	<.800		<.808					
PCB-1221	ug/L	<.800		<.808					
PCB-1232	ug/L	<.800		<.808					
PCB-1242	ug/L	<.800		<.808					
PCB-1248	ug/L	<.800		<.808					
PCB-1254	ug/L	<.800		<.808					
PCB-1260	ug/L	<.800		<.808					
Pentachlorobenzene	ug/L	<10.0		<10.3					
Pentachloronitrobenzene	ug/L	<10.0		<10.3					
Pentachlorophenol	ug/L	<10.0		<10.3					
pH	SU					6.82	6.62	7.46	6.69
Phenacetin	ug/L	<10.0		<10.3					
Phenanthrene	ug/L	<10.0		<10.3					
Phenol	ug/L	<10.0		<10.3					
Phorate	ug/L	<10.0		<10.3					
p-Phenylenediamine	ug/L	<10.0		<10.3					
Pronamide	ug/L	<10.0		<10.3					
Propionitrile	ug/L	<10		<10					
Pyrene	ug/L	<10.0		<10.3					
Safrole	ug/L	<10.0		<10.3					
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<3.340	<5.000	<5.000	<.630
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<.042	<1.000	<1.000	<.153
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
Sulfate	mg/L					405	2300	603	2300
Sulfide	mg/L	<1		<1					
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<.0325	<1.0000	<1.0000	<.0255
Thionazin	ug/L	<10.0		<10.3					
Tin	ug/L	<100		453	<100				
Toluene	ug/L								
Total Suspended Solids	mg/L					304.00	6.33	<5.00	43.70
Toxaphene	ug/L	<2.00		<2.08					
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	<5.00
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	<4.00
Vanadium	ug/L	<50.00	<50.00	<50.00	<50.00	2.89	3.07	<5.00	15.40
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	<10.00
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
Xylenes, Total	ug/L	<3.000	<3.000	.321	<3.000	<.130	<3.000	<3.000	<3.000
Zinc	ug/L	<20.00	61.30	114.00	<40.00	32.20	13.50	<10.00	11.40

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

Table 9

Analytical Data Summary for MW-313

Constituents	10/21/2016	3/8/2017	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/10/2020	9/16/2020
Isosafrole									
Kepone									
Lead	1.030	<.324	<.324	<.324	<.186	<.270	<.270	<.270	<.110
Mercury									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl Methacrylate									
Methyl Methanesulfonate									
Methyl Parathion									
Methylene Chloride	.277	<.170	<.170	.207	<1.700	<1.700	<1.700	<1.700	<1.700
Naphthalene									
Nickel	3.000	2.540	<.929	3.290	4.060	44.900	49.800	51.400	53.100
Nitrobenzene									
N-Nitrosodiethylamine									
N-Nitrosodimethylamine									
N-Nitrosodi-n-butylamine									
N-Nitrosodi-n-propylamine									
N-Nitrosodiphenylamine									
N-Nitrosomethylethylamine									
N-Nitrosopiperidine									
N-Nitrosopyrrolidine									
o,o,o-Triethylphosphorothioate									
o-Toluidine									
p-[Dimethylamino]azobenzene									
Parathion									
PCB-1016									
PCB-1221									
PCB-1232									
PCB-1242									
PCB-1248									
PCB-1254									
PCB-1260									
Pentachlorobenzene									
Pentachloronitrobenzene									
Pentachlorophenol									
pH	7.16	6.91	7.02	6.87	6.89	6.67	6.65	6.54	6.48
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
p-Phenylenediamine									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium	<.630	<.928	<.928	<.928	<.982	<1.000	<1.000	<1.000	<1.000
Silver	<.153	<.140	<.140	<.140	<.115	<.370	<.370	<.370	<.370
Styrene	<.10	<.10	<.10	<.10	<.37	<.37	<.37	<.37	<.37
Sulfate	709	665	717	693	730	2230	2180	2290	2420
Sulfide									
Tetrachloroethene	<.18	<.18	<.18	<.18	<.48	<.48	<.48	<.48	<.48
Thallium	<.0255	<.0644	<.0644	<.0644	<.5700	<.2700	<.2700	<.2600	<.2600
Thionazin									
Tin									
Toluene					<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	3.38	18.60	14.50	5.00	22.00	12.70	11.80	13.30	10.00
Toxaphene									
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.22	<.56	<.56	<.56	<.56	<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.19	<.19	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.17	<.17	<.38	<.38	<.38	<.38	<.38
Vanadium	2.29	6.76	5.34	1.79	3.51	2.71	3.87	2.90	1.27
Vinyl Acetate	<.74	<.74	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	<.10	<.10	<.10	<.10	<.60	<.60	<.18	<.18	<.18
Xylenes, Total	1.890	.786	<.130	<.130	<.400	<.400	<.400	<.400	<.400
Zinc	6.37	<11.50	<11.50	<11.50	10.30	13.10	18.60	15.10	15.80

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

Table 9

Analytical Data Summary for MW-313

Constituents	4/15/2021	10/26/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Isosafrole								
Kepone								
Lead	.335	.356	<.960	<4.000	<4.000	<4.000	<4.000	<4.000
Mercury								
Methacrylonitrile								
Methapyrilene								
Methoxychlor								
Methyl Methacrylate								
Methyl Methanesulfonate								
Methyl Parathion								
Methylene Chloride	<1.700	<1.700	<1.700	<5.000	<5.000	<5.000	<5.000	<5.000
Naphthalene								
Nickel	51.100	5.050	38.800	7.200	19.800	4.000	<4.000	<4.000
Nitrobenzene								
N-Nitrosodiethylamine								
N-Nitrosodimethylamine								
N-Nitrosodi-n-butylamine								
N-Nitrosodi-n-propylamine								
N-Nitrosodiphenylamine								
N-Nitrosomethylethylamine								
N-Nitrosopiperidine								
N-Nitrosopyrrolidine								
o,o,o-Triethylphosphorothioate								
o-Toluidine								
p-[Dimethylamino]azobenzene								
Parathion								
PCB-1016								
PCB-1221								
PCB-1232								
PCB-1242								
PCB-1248								
PCB-1254								
PCB-1260								
Pentachlorobenzene								
Pentachloronitrobenzene								
Pentachlorophenol								
pH	6.57	6.93	6.59	6.70	6.80	6.90	6.90	6.70
Phenacetin								
Phenanthrene								
Phenol								
Phorate								
p-Phenylenediamine								
Pronamide								
Propionitrile								
Pyrene								
Safrole								
Selenium	<.960	<.960	4.890	<4.000	<4.000	<4.000	<4.000	<4.000
Silver	<.420	<.420	2.380	<4.000	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
Sulfate	2480	509	2090	510	1800	387	359	1140
Sulfide								
Tetrachloroethene	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00	<1.00
Thallium	<.2600	<.2600	<1.0400	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000
Thionazin								
Tin								
Toluene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	34.40	29.00	2.63					
Toxaphene								
trans-1,2-Dichloroethene	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
Vanadium	4.75	3.31	10.50	<20.00	<20.00	<20.00	<20.00	<20.00
Vinyl Acetate	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<.18	<.18	<1.00	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.400	<.400	<.400	<2.000	<2.000	<2.000	<2.000	<2.000
Zinc	15.90	<10.00	<40.00	<20.00	<20.00	<20.00	<20.00	<20.00

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

Table 9

Analytical Data Summary for MW-333

Constituents	Units	9/19/2012	3/27/2013	9/26/2013	4/16/2014	9/26/2014	3/11/2015	9/2/2015	11/10/2015
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	<1.0	<1.0	<1.0	<.1	<1.0	<1.0	
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	
1,1-Dichloropropene	ug/L	<1		<1					
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	
1,2,4,5-Tetrachlorobenzene	ug/L	<10.0		<11.2					
1,2,4-Trichlorobenzene	ug/L	<5		<5					
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	
1,3,5-Trinitrobenzene	ug/L	<10.0		<11.2					
1,3-Dichlorobenzene	ug/L	<1		<1					
1,3-Dichloropropane	ug/L	<1		<1					
1,3-Dinitrobenzene	ug/L	<10.0		<11.2					
1,4-Dichlorobenzene	ug/L	<1.0	<1.0	<1.0	<1.0	<.2	<1.0	<1.0	
1,4-Naphthoquinone	ug/L	<10.0		<11.2					
1-Naphthylamine	ug/L	<10.0		<11.2					
2,2`-oxybis[1-Chloropropane]	ug/L	<10.0		<11.2					
2,2-Dichloropropane	ug/L	<4		<4					
2,3,4,6-Tetrachlorophenol	ug/L	<10.0		<11.2					
2,4,5-T	ug/L	<1.00		<1.01					
2,4,5-TP [Silvex]	ug/L	<1.00		<1.01					
2,4,5-Trichlorophenol	ug/L	<10.0		<11.2					
2,4,6-Trichlorophenol	ug/L	<10.0		<11.2					
2,4-D	ug/L	<1.00		<1.01					
2,4-Dichlorophenol	ug/L	<10.0		<11.2					
2,4-Dimethylphenol	ug/L	<10.0		<11.2					
2,4-Dinitrophenol	ug/L	<20.0		<22.5					
2,4-Dinitrotoluene	ug/L	<10.0		<11.2					
2,6-Dichlorophenol	ug/L	<10.0		<11.2					
2,6-Dinitrotoluene	ug/L	<10.0		<11.2					
2-Acetylaminofluorene	ug/L	<10.0		<11.2					
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	
2-Chloronaphthalene	ug/L	<10.0		<11.2					
2-Chlorophenol	ug/L	<10.0		<11.2					
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	
2-Methylnaphthalene	ug/L	<10.0		<11.2					
2-Methylphenol [o-Cresol]	ug/L	<10.0		<11.2					
2-Naphthylamine	ug/L	<10.0		<11.2					
2-Nitroaniline	ug/L	<10.0		<11.2					
2-Nitrophenol	ug/L	<10.0		<11.2					
3,3-Dichlorobenzidine	ug/L	<10.0		<56.2					
3,3-Dimethylbenzidine	ug/L	<10.0		<11.2					
3-Methylcholanthrene	ug/L	<10.0		<11.2					
3-Nitroaniline	ug/L	<10.0		<11.2					
4,4`-DDD	ug/L	<.0320		<.0356					
4,4`-DDE	ug/L	<.0320		<.0356					
4,4`-DDT	ug/L	<.0320		<.0356					
4,6-Dinitro-2-methylphenol	ug/L	<10.0		<11.2					
4-Aminobiphenyl	ug/L	<10.0		<11.2					
4-Bromophenyl phenyl ether	ug/L	<10.0		<11.2					
4-Chloro-3-methylphenol	ug/L	<10.0		<11.2					
4-Chloroaniline	ug/L	<10.0		<11.2					
4-Chlorophenyl phenyl ether	ug/L	<10.0		<11.2					
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	
4-Nitroaniline	ug/L	<10.0		<11.2					
4-Nitrophenol	ug/L	<10.0		<11.2					
5-Nitro-o-toluidine	ug/L	<10.0		<11.2					
7,12-Dimethylbenz[a]anthracene	ug/L	<10.0		<11.2					
Acenaphthene	ug/L	<10.0		<11.2					
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00	
Acetonitrile	ug/L	<10000		964					
Acetophenone	ug/L	<10.0		<11.2					
Acrolein	ug/L	<10		<10					
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	
Aldrin	ug/L	<.0320		<.0356					
Alkalinity as CaCO3	mg/L					655	497	475	
Allyl Chloride	ug/L	<20		<2					
alpha-BHC	ug/L	<.0320		<.0356					
Aluminum	ug/L					11.6	16.8	55.0	
Anthracene	ug/L	<10.0		<11.2					
Antimony	ug/L	<12.000	<6.000	<6.000	<6.000	<.161	.206	<1.000	

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

Table 9

Analytical Data Summary for MW-333

Constituents	Units	9/19/2012	3/27/2013	9/26/2013	4/16/2014	9/26/2014	3/11/2015	9/2/2015	11/10/2015
Arsenic	ug/L	6.64	3.68	8.18	5.68	12.90	7.68	<2.00	
Barium	ug/L	222.0	158.0	107.0	149.0	240.0	132.0	12.6	
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50	
Benzo[a]anthracene	ug/L	<10.0		<11.2					
Benzo[a]pyrene	ug/L	<10.0		<11.2					
Benzo[b]fluoranthene	ug/L	<10.0		<11.2					
Benzo[ghi]perylene	ug/L	<10.0		<11.2					
Benzo[k]fluoranthene	ug/L	<10.0		<11.2					
Benzyl alcohol	ug/L	<10.0		<11.2					
Beryllium	ug/L	<1.000	<1.000	<1.000	<1.000	<.039	<1.000	<1.000	
beta-BHC	ug/L	<.0320		<.0356					
Bis(2-chloroethoxy)methane	ug/L	<10.0		<11.2					
Bis(2-chloroethyl)ether	ug/L	<10.0		<11.2					
Bis(2-ethylhexyl)phthalate	ug/L	<10.0		<11.2					
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	
Bromomethane	ug/L	<20.00	<4.00	<4.00	<4.00	<.22	<4.00	<4.00	
Butylbenzylphthalate	ug/L	<10.0		<11.2					
Cadmium	ug/L	<.500	<.500	<.500	<.500	<.112	<.500	1.440	<.112
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00	
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	
Chlordane	ug/L	<2.00		<2.22					
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	
Chlorobenzilate	ug/L	<10.0		<11.2					
Chlorodibromomethane	ug/L	<5.0	<5.0	<5.0	<5.0	<.2	<5.0	<5.0	
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00	
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00	
Chloroprene	ug/L	<1		<1					
Chromium	ug/L	<20.00	<20.00	4.33	<20.00	<1.24	<5.00	<5.00	
Chrysene	ug/L	<10.0		<11.2					
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00	
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	
Cobalt	ug/L	15.7	20.6	15.7	14.5	18.9	16.0	<.5	
Copper	ug/L	<20.000	<20.000	<20.000	<20.000	<.485	1.430	3.770	
Cyanide	mg/L	<.01		<.01					
delta-BHC	ug/L	<.0320		<.0356					
Diallate	ug/L	<10.0		<11.2					
Dibenzo(a,h)anthracene	ug/L	<10.0		<11.2					
Dibenzofuran	ug/L	<10.0		<11.2					
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	
Dichlorodifluoromethane	ug/L	<3		<3					
Dieldrin	ug/L	<.0320		<.0356					
Diethyl phthalate	ug/L	<10.0		<11.2					
Dimethoate	ug/L	<10.0		<11.2					
Dimethyl phthalate	ug/L	<10.0		<11.2					
Di-n-butylphthalate	ug/L	<10.0		<11.2					
Di-n-octylphthalate	ug/L	<10.0		<22.5					
Dinoseb	ug/L	<10.0		<11.2					
Diphenylamine	ug/L	<10.0		<11.2					
Disulfoton	ug/L	<10.0		<11.2					
Endosulfan I	ug/L	<.0320		<.0356					
Endosulfan II	ug/L	<.0320		<.0356					
Endosulfan Sulfate	ug/L	<.0320		<.0356					
Endrin	ug/L	<.0320		<.0356					
Endrin Aldehyde	ug/L	<.0320		<.0356					
Ethyl Methacrylate	ug/L	<2		<2					
Ethyl Methanesulfonate	ug/L	<10.0		<11.2					
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	
Famphur	ug/L	<20.0		<22.5					
Fluoranthene	ug/L	<10.0		<11.2					
Fluorene	ug/L	<10.0		<11.2					
gamma-BHC (Lindane)	ug/L	<.0320		<.0356					
Heptachlor	ug/L	<.0320		<.0356					
Heptachlor Epoxide	ug/L	<.0320		<.0356					
Hexachlorobenzene	ug/L	<10.0		<11.2					
Hexachlorobutadiene	ug/L	<10.0		<11.2					
Hexachlorocyclopentadiene	ug/L	<10.0		<22.5					
Hexachloroethane	ug/L	<10.0		<11.2					
Hexachloropropene	ug/L	<10.0		<11.2					
Indeno[1,2,3-cd]pyrene	ug/L	<10.0		<11.2					
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0	
Iron	ug/L					39600	29500	148	
Isobutanol	ug/L	<10000		<10000					
Isodrin	ug/L	<10.0		<11.2					
Isophorone	ug/L	<10.0		<11.2					

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

Table 9

Analytical Data Summary for MW-333

Constituents	Units	9/19/2012	3/27/2013	9/26/2013	4/16/2014	9/26/2014	3/11/2015	9/2/2015	11/10/2015
Isosafrole	ug/L	<10.0		<11.2					
Kepone	ug/L	<10.0		<11.2					
Lead	ug/L	<4.0000	<4.0000	<4.0000	<4.0000	<.0967	.1650	<.5000	
Mercury	ug/L	<.267		<.200					
Methacrylonitrile	ug/L	<1		<1					
Methapyrilene	ug/L	<10.0		<11.2					
Methoxychlor	ug/L	<.0320		<.0356					
Methyl Methacrylate	ug/L	<2		<2					
Methyl Methanesulfonate	ug/L	<10.0		<11.2					
Methyl Parathion	ug/L	<10.0		<11.2					
Methylene Chloride	ug/L	<5.00	<5.00	<5.00	<5.00	<.17	<5.00	<5.00	
Naphthalene	ug/L	<5		<5					
Nickel	ug/L	<50.000000	6.350000	14.400000	<50.000000	11.100000	9.549999	56.599998	
Nitrobenzene	ug/L	<10.0		<11.2					
N-Nitrosodiethylamine	ug/L	<10.0		<11.2					
N-Nitrosodimethylamine	ug/L	<10.0		<11.2					
N-Nitrosodi-n-butylamine	ug/L	<10.0		<11.2					
N-Nitrosodi-n-propylamine	ug/L	<10.0		<11.2					
N-Nitrosodiphenylamine	ug/L	<10.0		<11.2					
N-Nitrosomethylethylamine	ug/L	<10.0		<11.2					
N-Nitrosopiperidine	ug/L	<10.0		<11.2					
N-Nitrosopyrrolidine	ug/L	<10.0		<11.2					
o,o,o-Triethylphosphorothioate	ug/L	<10.0		<11.2					
o-Toluidine	ug/L	<10.0		<11.2					
p-[Dimethylamino]azobenzene	ug/L	<10.0		<11.2					
Parathion	ug/L	<10.0		<11.2					
PCB-1016	ug/L	<.800		<.909					
PCB-1221	ug/L	<.800		<.909					
PCB-1232	ug/L	<.800		<.909					
PCB-1242	ug/L	<.800		<.909					
PCB-1248	ug/L	<.800		<.909					
PCB-1254	ug/L	<.800		<.909					
PCB-1260	ug/L	<.800		<.909					
Pentachlorobenzene	ug/L	<10.0		<11.2					
Pentachloronitrobenzene	ug/L	<10.0		<11.2					
Pentachlorophenol	ug/L	<10.0		<11.2					
pH	SU					6.45	6.47	6.50	
Phenacetin	ug/L	<10.0		<11.2					
Phenanthrene	ug/L	<10.0		<11.2					
Phenol	ug/L	<10.0		<11.2					
Phorate	ug/L	<10.0		<11.2					
p-Phenylenediamine	ug/L	<10.0		<11.2					
Pronamide	ug/L	<10.0		<11.2					
Propionitrile	ug/L	<10		<10					
Pyrene	ug/L	<10.0		<11.2					
Safrole	ug/L	<10.0		<11.2					
Selenium	ug/L	<5.00	<5.00	<5.00	<5.00	<3.34	<5.00	<5.00	
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<.042	<1.000	<1.000	
Styrene	ug/L	<1.0	<1.0	<1.0	<1.0	<.1	<1.0	<1.0	
Sulfate	mg/L					212	997	1230	
Sulfide	mg/L	<1		<1					
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<.0325	.0470	<1.0000	
Thionazin	ug/L	<10.0		<11.2					
Tin	ug/L	<100		516	<100				
Total Suspended Solids	mg/L					56.0	79.7	35.0	
Toxaphene	ug/L	<2.00		<2.22					
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	
Vanadium	ug/L	<50.000	<50.000	<50.000	<50.000	.579	1.020	<5.000	
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	
Vinyl Chloride	ug/L	<1.0	<1.0	<1.0	<1.0	<.1	<1.0	<1.0	
Xylenes, Total	ug/L	<3.00	<3.00	<3.00	<3.00	<.13	<3.00	<3.00	
Zinc	ug/L	<20.00	39.80	107.00	<20.00	7.78	13.60	31.80	

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

Table 9

Analytical Data Summary for MW-335

Constituents	Units	9/19/2012	3/27/2013	9/25/2013	4/15/2014	9/25/2014	3/11/2015	9/2/2015	3/22/2016
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	<2.00
1,1-Dichloropropene	ug/L								
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene	ug/L								
1,2,4-Trichlorobenzene	ug/L								
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	<10.00
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	<1.00
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	<1.00
1,3,5-Trinitrobenzene	ug/L								
1,3-Dichlorobenzene	ug/L								
1,3-Dichloropropane	ug/L								
1,3-Dinitrobenzene	ug/L								
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.20	<1.00	<1.00	<1.00
1,4-Naphthoquinone	ug/L								
1,4-phenylenediamine	ug/L								
1-Naphthylamine	ug/L								
2,2-Dichloropropane	ug/L								
2,3,4,6-Tetrachlorophenol	ug/L								
2,4,5-T	ug/L								
2,4,5-TP [Silvex]	ug/L								
2,4,5-Trichlorophenol	ug/L								
2,4,6-Trichlorophenol	ug/L								
2,4-D	ug/L								
2,4-Dichlorophenol	ug/L								
2,4-Dimethylphenol	ug/L								
2,4-Dinitrophenol	ug/L								
2,4-Dinitrotoluene	ug/L								
2,6-Dichlorophenol	ug/L								
2,6-Dinitrotoluene	ug/L								
2-Acetylaminofluorene	ug/L								
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	<10.00
2-Chloronaphthalene	ug/L								
2-Chlorophenol	ug/L								
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	<10.0
2-Methylnaphthalene	ug/L								
2-Methylphenol	ug/L								
2-Naphthylamine	ug/L								
2-Nitroaniline	ug/L								
2-Nitrophenol	ug/L								
3,3'-Dichlorobenzidine	ug/L								
3,3'-Dimethylbenzidine	ug/L								
3-Methylcholanthrene	ug/L								
3-Nitroaniline	ug/L								
4,4'-DDD	ug/L								
4,4'-DDE	ug/L								
4,4'-DDT	ug/L								
4,6-Dinitro-2-methylphenol	ug/L								
4-Aminobiphenyl	ug/L								
4-Bromophenyl phenyl ether	ug/L								
4-Chloro-3-methylphenol	ug/L								
4-Chloroaniline	ug/L								
4-Chlorophenyl phenyl ether	ug/L								
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	<10.00
4-Nitroaniline	ug/L								
4-Nitrophenol	ug/L								
5-Nitro-o-toluidine	ug/L								
7,12-Dimethylbenz(a)anthracene	ug/L								
Acenaphthene	ug/L								
Acenaphthylene	ug/L								
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00	<10.00
Acetonitrile	ug/L								
Acetophenone	ug/L								
Acrolein	ug/L								
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	<10.00
Aldrin	ug/L								
Alkalinity as CaCO3	mg/L					609	594	593	666
Allyl Chloride	ug/L								
alpha-BHC	ug/L								
Aluminum	ug/L					391.0	51.5	413.0	83.1
Anthracene	ug/L								

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

Table 9

Analytical Data Summary for MW-335

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	11/7/2019	3/10/2020
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.21	<.38	<.38	<.38		<.38
1,1,1-Trichloroethane	<.12	<.12	<.12	<.12	<.19	<.19	<.19		<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.10	<.47	<.47	<.47		<.47
1,1,2-Trichloroethane	<.12	<.12	<.12	<.12	<.45	<.45	<.45		<.45
1,1-Dichloroethane	<.21	<.21	<.21	<.21	<.22	<.22	<.22		<.22
1,1-Dichloroethene	<.15	<.15	<.15	<.15	<.56	<.56	<.56		<.56
1,1-Dichloropropene									<.43
1,2,3-Trichloropropane	<.19	<.19	<.19	<.19	<.59	<.59	<.59		<.59
1,2,4,5-Tetrachlorobenzene									<1.7
1,2,4-Trichlorobenzene									<.75
1,2-Dibromo-3-chloropropane	<.50	<.50	<.50	<.50	<1.20	<1.20	<1.20		<1.20
1,2-Dibromoethane	<.13	<.13	<.13	<.13	<.34	<.34	<.34		<.34
1,2-Dichlorobenzene	<.14	<.14	<.14	<.14	<.37	<.37	<.37		<.37
1,2-Dichloroethane	<.18	<.18	<.18	<.18	<.39	<.39	<.39		<.39
1,2-Dichloropropane	<.87	<.87	<.87	<.87	<.27	<.27	<.27		<.27
1,3,5-Trinitrobenzene									<1.38
1,3-Dichlorobenzene									<.3
1,3-Dichloropropane									<.4
1,3-Dinitrobenzene									<1.06
1,4-Dichlorobenzene	<.20	<.20	<.20	<.20	<.23	<.23	<.23		<.23
1,4-Naphthoquinone									<1.04
1,4-phenylenediamine									<.532
1-Naphthylamine									<.936
2,2-Dichloropropane									<.69
2,3,4,6-Tetrachlorophenol									<1.05
2,4,5-T									<.474
2,4,5-TP [Silvex]									<.316
2,4,5-Trichlorophenol									<1.17
2,4,6-Trichlorophenol									<1.28
2,4-D									<.509
2,4-Dichlorophenol									<1.17
2,4-Dimethylphenol									<1.06
2,4-Dinitrophenol									<6.06
2,4-Dinitrotoluene									<1.17
2,6-Dichlorophenol									<1.17
2,6-Dinitrotoluene									<1.17
2-Acetylaminofluorene									<1.28
2-Butanone	<1.04	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10		<2.10
2-Chloronaphthalene									<1.38
2-Chlorophenol									<1.17
2-Hexanone	<.2	<.2	<.2	<.2	<2.0	<2.0	<2.0		<2.0
2-Methylnaphthalene									<1.38
2-Methylphenol									<1.06
2-Naphthylamine									<.915
2-Nitroaniline									<1.28
2-Nitrophenol									<1.7
3,3'-Dichlorobenzidine									<1.91
3,3'-Dimethylbenzidine									<2.13
3-Methylcholanthrene									<2.66
3-Nitroaniline									<1.06
4,4'-DDD									<.00189
4,4'-DDE									<.00221
4,4'-DDT									<.004
4,6-Dinitro-2-methylphenol									<2.66
4-Aminobiphenyl									<1.02
4-Bromophenyl phenyl ether									<2.02
4-Chloro-3-methylphenol									<1.01
4-Chloroaniline									<1.28
4-Chlorophenyl phenyl ether									<1.38
4-Methyl-2-pentanone	<.22	<.22	<.22	<.22	<2.10	<2.10	<2.10		<2.10
4-Nitroaniline									<1.81
4-Nitrophenol									<2.66
5-Nitro-o-toluidine									<3.3
7,12-Dimethylbenz(a)anthracene									<.979
Acenaphthene									<1.38
Acenaphthylene									<1.38
Acetone	<1.79	<1.79	2.49	2.33	<3.10	<3.10	<3.10		<3.10
Acetonitrile									<404
Acetophenone									<3.19
Acrolein									<3.6
Acrylonitrile	<.53	<.53	<.53	<.53	<2.20	<2.20	<2.20		<2.20
Aldrin									<.00474
Alkalinity as CaCO3	484	505	500	475	520	572	178		466
Allyl Chloride									<.7
alpha-BHC									<.00179
Aluminum	31.8	<41.3	<41.3	<165.0	<24.6	<27.0	63.7		41.9
Anthracene									<1.17

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

Table 9

Analytical Data Summary for MW-335

Constituents	9/16/2020	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
1,1,1,2-Tetrachloroethane	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloropropene									
1,2,3-Trichloropropane	<.59	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene									
1,2,4-Trichlorobenzene									
1,2-Dibromo-3-chloropropane	<1.20	<1.20	<1.20	<1.20	<5.00	<5.00	<5.00	<5.00	<5.00
1,2-Dibromoethane	<.34	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
1,3,5-Trinitrobenzene									
1,3-Dichlorobenzene									
1,3-Dichloropropane									
1,3-Dinitrobenzene									
1,4-Dichlorobenzene	<.23	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00	<1.00
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	<2.10	<2.10	<2.10	<2.10	<10.00	<10.00	<10.00	<10.00	<10.00
2-Chloronaphthalene									
2-Chlorophenol									
2-Hexanone	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0
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	<2.10	<2.10	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00	<5.00
4-Nitroaniline									
4-Nitrophenol									
5-Nitro-o-toluidine									
7,12-Dimethylbenz(a)anthracene									
Acenaphthene									
Acenaphthylene									
Acetone	<3.10	<3.10	<3.10	<3.10	<10.00	<10.00	<10.00	<10.00	<10.00
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<2.20	<2.20	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00	<5.00
Aldrin									
Alkalinity as CaCO3	400	228	518	647	592	443	558	522	548
Allyl Chloride									
alpha-BHC									
Aluminum	<12.0	37.4	51.8	336.0	173.0	372.0	342.0	239.0	127.0
Anthracene									

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

Table 9

Analytical Data Summary for MW-335

Constituents	Units	9/19/2012	3/27/2013	9/25/2013	4/15/2014	9/25/2014	3/11/2015	9/2/2015	3/22/2016
Antimony	ug/L	<6.000	<6.000	<6.000	<6.000	<.161	<1.000	<1.000	<.237
Arsenic	ug/L	6.810	1.580	4.150	1.740	4.180	2.510	4.860	3.660
Barium	ug/L	14.60	11.80	6.65	6.36	14.90	13.10	15.40	12.20
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50	<.50
Benzo[a]anthracene	ug/L								
Benzo[a]pyrene	ug/L								
Benzo[b]fluoranthene	ug/L								
Benzo[g,h,i]perylene	ug/L								
Benzo[k]fluoranthene	ug/L								
Benzyl alcohol	ug/L								
Beryllium	ug/L	<1.000	.331	.530	<1.000	.482	<1.000	<1.000	.311
beta-BHC	ug/L								
bis (2-chloroisopropyl) ether	ug/L								
Bis(2-chloroethoxy)methane	ug/L								
Bis(2-chloroethyl)ether	ug/L								
Bis(2-ethylhexyl)phthalate	ug/L								
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	<5.00
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	<5.00
Bromomethane	ug/L	<20.000	<4.000	<4.000	<4.000	<.220	<4.000	<4.000	<4.000
Butylbenzylphthalate	ug/L								
Cadmium	ug/L	<.500	<.500	<.500	.177	.311	<.500	<.500	.038
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00	<1.00
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	<2.00
Chlordane (technical)	ug/L								
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
Chlorobenzilate	ug/L								
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.20	<5.00	<5.00	<5.00
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00	<4.00
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	<1.00
Chloromethane	ug/L	<3.000	<3.000	<3.000	<3.000	<.310	<3.000	<3.000	<3.000
Chloroprene	ug/L								
Chromium	ug/L	30.500	<20.000	2.930	<40.000	<1.240	<5.000	<5.000	<.355
Chrysene	ug/L								
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	<5.00
Cobalt	ug/L	56.500	52.600	46.000	57.500	55.700	50.300	47.500	45.800
Copper	ug/L	<20.000	<20.000	<20.000	<40.000	.663	<2.000	<2.000	<1.220
Cyanide	mg/L								
delta-BHC	ug/L								
Diallate	ug/L								
Dibenzo(a,h)anthracene	ug/L								
Dibenzofuran	ug/L								
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
Dichlorodifluoromethane	ug/L								
Dieldrin	ug/L								
Diethyl phthalate	ug/L								
Dimethoate	ug/L								
Dimethyl phthalate	ug/L								
Di-n-butyl phthalate	ug/L								
Di-n-octyl phthalate	ug/L								
Dinoseb	ug/L								
Diphenylamine	ug/L								
Disulfoton	ug/L								
Endosulfan I	ug/L								
Endosulfan II	ug/L								
Endosulfan Sulfate	ug/L								
Endrin	ug/L								
Endrin Aldehyde	ug/L								
Ethyl Methacrylate	ug/L								
Ethyl Methanesulfonate	ug/L								
Ethyl Parathion	ug/L								
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
Famphur	ug/L								
Fluoranthene	ug/L								
Fluorene	ug/L								
gamma-BHC (Lindane)	ug/L								
Heptachlor	ug/L								
Heptachlor Epoxide	ug/L								
Hexachlorobenzene	ug/L								
Hexachlorobutadiene	ug/L								
Hexachlorocyclopentadiene	ug/L								
Hexachloroethane	ug/L								
Hexachloropropene	ug/L								
Indeno[1,2,3-cd]pyrene	ug/L								
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0	<10.0
Iron	ug/L					11600	7200	14300	10300

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

Table 9

Analytical Data Summary for MW-335

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	11/7/2019	3/10/2020
Antimony	<.237	<.185	<.185	<.740	<1.320	<.530	<1.060	<.530	<.580
Arsenic	1.300	.776	.713	<2.020	.876	.961	3.260	1.370	<.880
Barium	12.10	15.10	12.10	13.30	11.30	11.30	12.90	12.30	11.50
Benzene	<.11	<.11	<.11	<.11	<.22	<.22	<.22		<.22
Benzo[a]anthracene									<1.17
Benzo[a]pyrene									<1.6
Benzo[b]fluoranthene									<1.28
Benzo[g,h,i]perylene									<1.7
Benzo[k]fluoranthene									<1.28
Benzyl alcohol									<1.17
Beryllium	.225	.160	<.125	<.500	<.530	<.270	<.540	.447	<.270
beta-BHC									<.00505
bis (2-chloroisopropyl) ether									<1.28
Bis(2-chloroethoxy)methane									<1.17
Bis(2-chloroethyl)ether									<1.17
Bis(2-ethylhexyl)phthalate									<2.77
Bromochloromethane	<.12	<.12	<.12	<.12	<.54	<.54	<.54		<.54
Bromodichloromethane	<.12	<.12	<.12	<.12	<.39	<.39	<.39		<.39
Bromoform	<.14	<.14	<.14	<.14	<.78	<.78	<.78		<.78
Bromomethane	<.220	<.220	.402	<.220	<1.100	<1.100	<1.100		<1.100
Butylbenzylphthalate									<1.6
Cadmium	.197	.210	.133	<.176	.169	<.077	.122	.328	.221
Carbon Disulfide	<.15	<.15	<.15	<.15	<.45	<.45	<.45		<.45
Carbon Tetrachloride	<.24	<.24	<.24	<.24	<.65	<.65	<.65		<.65
Chlordane (technical)									<.0674
Chlorobenzene	<.19	<.19	<.19	<.19	<.40	<.40	<.40		<.40
Chlorobenzilate									<3.09
Chlorodibromomethane	<.20	<.20	<.20	<.20	<.75	<.75	<.75		<.75
Chloroethane	<.15	<.15	<.15	<.15	<.79	<.79	<.79		<.79
Chloroform	<.28	<.28	<.28	<.28	<1.30	<1.30	<1.30		<1.30
Chloromethane	.336	<.310	<.310	<.310	<.610	<.610	<.610		<.610
Chloroprene									<.23
Chromium	<.355	<.729	<.729	<2.920	<1.140	<.980	<1.960	<.980	<1.100
Chrysene									<1.17
cis-1,2-Dichloroethene	<.13	<.13	<.13	<.13	<.21	<.21	<.21		<.21
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.15	<.25	<.25	<.25		<.25
Cobalt	66.000	74.300	52.100	66.000	45.000	39.600	382.000	144.000	86.200
Copper	<1.220	<2.190	<2.190	<8.760	1.030	<2.000	<4.000	<2.000	<3.200
Cyanide									<.005
delta-BHC									<.00242
Diallate									<1.38
Dibenzo(a,h)anthracene									<2.02
Dibenzofuran									<1.28
Dibromomethane	<.18	<.18	<.18	<.18	<.33	<.33	<.33		<.33
Dichlorodifluoromethane									<.25
Dieldrin									<.00211
Diethyl phthalate									<1.17
Dimethoate									<1.06
Dimethyl phthalate									<2.66
Di-n-butyl phthalate									<1.28
Di-n-octyl phthalate									<3.19
Dinoseb									<.532
Diphenylamine									<.936
Disulfoton									<.681
Endosulfan I									<.00211
Endosulfan II									<.002
Endosulfan Sulfate									<.00263
Endrin									<.002
Endrin Aldehyde									<.00768
Ethyl Methacrylate									<.68
Ethyl Methanesulfonate									<.532
Ethyl Parathion									<1.7
Ethylbenzene	<.21	<.21	<.21	<.21	<.31	<.31	<.31		<.31
Famphur									<.681
Fluoranthene									<1
Fluorene									<1.38
gamma-BHC (Lindane)									<.002
Heptachlor									<.00274
Heptachlor Epoxide									<.00642
Hexachlorobenzene									<1.49
Hexachlorobutadiene									<1.28
Hexachlorocyclopentadiene									<2.23
Hexachloroethane									<1.38
Hexachloropropene									<1.7
Indeno[1,2,3-cd]pyrene									<2.13
Iodomethane	<.8	<.8	<.8	<.8	<7.0	<7.0	<7.0		<7.0
Iron	4110	4290	2420	1370	2650	7080	32700		2900

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

Table 9

Analytical Data Summary for MW-335

Constituents	9/16/2020	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Antimony	<.510	<1.100	<1.100	<2.760	<2.000	<2.000	<2.000	<2.000	<2.000
Arsenic	<.880	<.750	1.250	5.900	7.100	16.900	5.100	9.900	11.700
Barium	24.30	17.20	12.80	12.30	12.00	17.00	11.60	13.20	12.50
Benzene	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
Benzo[a]anthracene									
Benzo[a]pyrene									
Benzo[b]fluoranthene									
Benzo[g,h,i]perylene									
Benzo[k]fluoranthene									
Benzyl alcohol									
Beryllium	<.270	<.270	<.270	<1.080	<4.000	<4.000	<4.000	<4.000	<4.000
beta-BHC									
bis (2-chloroisopropyl) ether									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-ethylhexyl)phthalate									
Bromochloromethane	<.54	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.100	<1.100	<1.100	<1.100	<1.000	<1.000	<1.000	<1.000	<1.000
Butylbenzylphthalate									
Cadmium	.143	.066	.159	1.010	<.800	<.800	<.800	<.800	<.800
Carbon Disulfide	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00	<1.00
Chlordane (technical)									
Chlorobenzene	<.40	<.40	<.40	<.40	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorobenzilate									
Chlorodibromomethane	<.75	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<.79	<.79	<.79	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.30	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.610	<.610	<.610	<.610	<1.000	<1.000	<1.000	<1.000	<1.000
Chloroprene									
Chromium	<1.100	<1.100	<1.100	<4.400	<8.000	<8.000	<8.000	<8.000	<8.000
Chrysene									
cis-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00	<1.00
Cobalt	.138	.177	81.800	43.100	42.300	68.200	39.700	40.300	37.600
Copper	<1.500	<1.400	<1.400	<7.200	<4.000	4.700	<4.000	<4.000	<4.000
Cyanide									
delta-BHC									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromomethane	<.33	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00	<1.00
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan I									
Endosulfan II									
Endosulfan Sulfate									
Endrin									
Endrin Aldehyde									
Ethyl Methacrylate									
Ethyl Methanesulfonate									
Ethyl Parathion									
Ethylbenzene	<.31	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00	<1.00
Famphur									
Fluoranthene									
Fluorene									
gamma-BHC (Lindane)									
Heptachlor									
Heptachlor Epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno[1,2,3-cd]pyrene									
Iodomethane	<7.0	<7.0	<7.0	<7.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	<50	104	4540	9650	10100	9540	11000	9460	14000

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

Table 9

Analytical Data Summary for MW-335

Constituents	Units	9/19/2012	3/27/2013	9/25/2013	4/15/2014	9/25/2014	3/11/2015	9/2/2015	3/22/2016
Isobutanol	ug/L								
Isodrin	ug/L								
Isophorone	ug/L								
Isosafrole	ug/L								
Kepone	ug/L								
Lead	ug/L	<4.000	<4.000	<4.000	<4.000	.913	.134	1.280	.374
m,p-Xylene	ug/L								
Mercury	ug/L								
Methacrylonitrile	ug/L								
Methapyrilene	ug/L								
Methoxychlor	ug/L								
Methyl Methacrylate	ug/L								
Methyl Methanesulfonate	ug/L								
Methyl Parathion	ug/L								
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	.617	<5.000	<5.000	<5.000
Methylphenol, 3 4	ug/L								
Naphthalene	ug/L								
Nickel	ug/L	50.4	35.0	40.7	93.3	51.2	60.9	46.8	35.0
Nitrobenzene	ug/L								
N-Nitrosodiethylamine	ug/L								
N-Nitrosodimethylamine	ug/L								
N-Nitrosodi-n-butylamine	ug/L								
N-Nitrosodi-n-propylamine	ug/L								
N-Nitrosodiphenylamine	ug/L								
N-Nitrosomethylethylamine	ug/L								
N-Nitrosopiperidine	ug/L								
N-Nitrosopyrrolidine	ug/L								
o,o,o-Triethylphosphorothioate	ug/L								
o-Toluidine	ug/L								
o-Xylene	ug/L								
PCB-1016	ug/L								
PCB-1221	ug/L								
PCB-1232	ug/L								
PCB-1242	ug/L								
PCB-1248	ug/L								
PCB-1254	ug/L								
PCB-1260	ug/L								
p-Dimethylamino azobenzene	ug/L								
Pentachlorobenzene	ug/L								
Pentachloronitrobenzene	ug/L								
Pentachlorophenol	ug/L								
pH	SU					6.26	6.26	6.37	6.35
Phenacetin	ug/L								
Phenanthrene	ug/L								
Phenol	ug/L								
Phorate	ug/L								
Pronamide	ug/L								
Propionitrile	ug/L								
Pyrene	ug/L								
Safrole	ug/L								
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<3.340	<5.000	<5.000	.708
Silver	ug/L	<20.000	<20.000	<20.000	<40.000	<.042	<1.000	<1.000	<.153
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
Sulfate	mg/L					2810	3040	2580	2950
Sulfide	mg/L								
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<.0325	<1.0000	<1.0000	.0370
Thionazin	ug/L								
Tin	ug/L								
Toluene	ug/L								
Total Suspended Solids	mg/L					142.00	7.75	147.00	8.00
Toxaphene	ug/L								
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	<5.00
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	<4.00
Vanadium	ug/L	<50.000	<50.000	<50.000	<100.000	.508	<5.000	<5.000	<.255
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	<10.00
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
Xylenes, Total	ug/L	<3.000	<3.000	<3.000	<3.000	<.130	<3.000	<3.000	<3.000
Zinc	ug/L	77.2	138.0	251.0	<40.0	67.4	66.2	63.4	59.8

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

Table 9

Analytical Data Summary for MW-335

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	11/7/2019	3/10/2020
Isobutanol									<553
Isodrin									<.617
Isophorone									<1.05
Isosafrole									<.532
Kepone									<1.91
Lead	<.211	<.324	<.324	<1.300	<.186	<.270	<.270	<.270	<.270
m,p-Xylene									<.38
Mercury									<.1
Methacrylonitrile									<3.3
Methapyrilene									<2.02
Methoxychlor									<.00221
Methyl Methacrylate									<.76
Methyl Methanesulfonate									<.532
Methyl Parathion									<.798
Methylene Chloride	.260	<.170	<.170	<.170	<1.700	<1.700	<1.700		<1.700
Methylphenol, 3 4									<.809
Naphthalene									<3
Nickel	121.0	161.0	92.9	115.0	80.9	41.9	300.0	252.0	151.0
Nitrobenzene									<1.17
N-Nitrosodiethylamine									<.532
N-Nitrosodimethylamine									<.968
N-Nitrosodi-n-butylamine									<.532
N-Nitrosodi-n-propylamine									<1.06
N-Nitrosodiphenylamine									<1.01
N-Nitrosomethylethylamine									<1.38
N-Nitrosopiperidine									<.532
N-Nitrosopyrrolidine									<.532
o,o,o-Triethylphosphorothioate									<.532
o-Toluidine									<.713
o-Xylene									<.4
PCB-1016									<.274
PCB-1221									<.274
PCB-1232									<.274
PCB-1242									<.274
PCB-1248									<.221
PCB-1254									<.221
PCB-1260									<.221
p-Dimethylamino azobenzene									<.83
Pentachlorobenzene									<.617
Pentachloronitrobenzene									<.532
Pentachlorophenol									<2.45
pH	6.06	6.12	6.19	6.22	6.28	6.33	6.02		6.06
Phenacetin									<1.91
Phenanthrene									<1.17
Phenol									<2.55
Phorate									<.532
Pronamide									<.532
Propionitrile									<3.4
Pyrene									<1.49
Safrole									<.532
Selenium	<.630	<.928	<.928	<3.710	<.982	<1.000	<2.000	<1.000	<1.000
Silver	<.153	<.140	<.140	<.560	<.115	<.370	<.370	<.370	<.370
Styrene	<.10	<.10	<.10	<.10	<.37	<.37	<.37		<.37
Sulfate	3120	3160	3050	2820	3070	2730	2930		2880
Sulfide									<.231
Tetrachloroethene	<.18	<.18	<.18	<.18	<.48	<.48	<.48		<.48
Thallium	.0310	<.0644	.0680	<.2580	<.5700	<.2700	<.2700	<.2700	<.2600
Thionazin									<.809
Tin									<2.4
Toluene					<.43	<.43	<.43		<.43
Total Suspended Solids	2.00	1.50	1.75	1.88	2.25	4.00	5.75	2.25	2.25
Toxaphene									<.0611
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<.27	<.27	<.27		<.27
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.22	<.56	<.56	<.56		<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<.13	<1.10	<1.10	<1.10		<1.10
Trichloroethene	<.19	<.19	<.19	<.19	<.43	<.43	<.43		<.43
Trichlorofluoromethane	<.17	<.17	<.17	<.17	<.38	<.38	<.38		<.38
Vanadium	<.255	<.840	<.840	<3.360	<2.150	<.820	<1.640	<.820	<.820
Vinyl Acetate	<.74	<.74	<.74	<.74	<2.50	<2.50	<2.50		<2.50
Vinyl Chloride	<.10	<.10	<.10	<.10	<.60	<.60	<.18		<.18
Xylenes, Total	<.130	.173	<.130	<.130	<.400	<.400	<.400		<.400
Zinc	81.0	76.2	60.3	65.0	55.4	38.8	30.2	147.0	82.9

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

Table 9

Analytical Data Summary for MW-335

Constituents	9/16/2020	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead	<.110	<.210	.490	1.190	<4.000	<4.000	<4.000	<4.000	<4.000
m,p-Xylene									
Mercury									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl Methacrylate									
Methyl Methanesulfonate									
Methyl Parathion									
Methylene Chloride	<1.700	<1.700	<1.700	<1.700	<5.000	<5.000	<5.000	<5.000	<5.000
Methylphenol, 3 4									
Naphthalene									
Nickel	<1.9	<1.9	149.0	48.8	37.0	106.0	38.9	39.4	55.7
Nitrobenzene									
N-Nitrosodiethylamine									
N-Nitrosodimethylamine									
N-Nitrosodi-n-butylamine									
N-Nitrosodi-n-propylamine									
N-Nitrosodiphenylamine									
N-Nitrosomethylethylamine									
N-Nitrosopiperidine									
N-Nitrosopyrrolidine									
o,o,o-Triethylphosphorothioate									
o-Toluidine									
o-Xylene									
PCB-1016									
PCB-1221									
PCB-1232									
PCB-1242									
PCB-1248									
PCB-1254									
PCB-1260									
p-Dimethylamino azobenzene									
Pentachlorobenzene									
Pentachloronitrobenzene									
Pentachlorophenol									
pH	6.94	7.24	6.10	6.53	6.20	6.30	6.20	6.20	6.00
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium	<1.000	<.960	<.960	<3.840	<4.000	<4.000	<4.000	<4.000	<4.000
Silver	<.370	<.420	<.420	<1.960	<4.000	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
Sulfate	548	574	2870	2810	2610	2900	2650	2500	2620
Sulfide									
Tetrachloroethene	<.48	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00	<1.00
Thallium	<.2600	<.2600	<.2600	<1.0400	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000
Thionazin									
Tin									
Toluene	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	1.25	2.88	2.88	162.00					
Toxaphene									
trans-1,2-Dichloroethene	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
Vanadium	<.850	<1.100	<1.100	<4.400	<20.000	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<.18	<.18	<.18	<1.00	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.400	<.400	<.400	<.400	<2.000	<2.000	<2.000	<2.000	<2.000
Zinc	11.2	<10.0	81.0	56.9	43.9	69.2	41.6	42.4	26.4

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

Table 9

Analytical Data Summary for MW-344

Constituents	Units	9/20/2012	3/27/2013	9/25/2013	4/15/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
(3 4)-Methylphenol	ug/L								
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1-Dichloroethane	ug/L	<1.000	<1.000	<1.000	<1.000	<.210	<1.000	<1.000	<1.000
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	<1.00
1,1-Dichloropropene	ug/L	<1.00		<1.00					
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<10.00
1,2,4,5-Tetrachlorobenzene	ug/L	<10.000		<11.200					
1,2,4-Trichlorobenzene	ug/L	<5.00		<5.00					
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	<10.00
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<1.00
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	<1.00
1,2-Dichloroethane	ug/L	<1.000	<1.000	<1.000	<1.000	<.180	<1.000	<1.000	<2.000
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	<10.00
1,2-Dinitrobenzene	ug/L								
1,3,5-Trinitrobenzene	ug/L	<10.00		<11.20					
1,3-Dichlorobenzene	ug/L	<1.0		<1.0					
1,3-Dichloropropane	ug/L	<1.0		<1.0					
1,3-Dinitrobenzene	ug/L	<10.00		<11.20					
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.20	<1.00	<1.00	<10.00
1,4-Naphthoquinone	ug/L	<10.000		<11.200					
1,4-phenylenediamine	ug/L								
1-Naphthylamine	ug/L	<10.000		<11.200					
2,2`-oxybis[1-Chloropropane]	ug/L	<10.0		<11.2					
2,2-Dichloropropane	ug/L	<4.00		<4.00					
2,3,4,6-Tetrachlorophenol	ug/L	<10.000		<11.200					
2,4,5-T	ug/L	<1.000		<1.150					
2,4,5-TP [Silvex]	ug/L	<1.000		<1.150					
2,4,5-Trichlorophenol	ug/L	<10.000		<11.200					
2,4,6-Trichlorophenol	ug/L	<10.000		<11.200					
2,4-D	ug/L	<1.000		<1.150					
2,4-Dichlorophenol	ug/L	<10.000		<11.200					
2,4-Dimethylphenol	ug/L	<10.000		<11.200					
2,4-Dinitrophenol	ug/L	<20.00		<22.50					
2,4-Dinitrotoluene	ug/L	<10.000		<11.200					
2,6-Dichlorophenol	ug/L	<10.000		<11.200					
2,6-Dinitrotoluene	ug/L	<10.000		<11.200					
2-Acetylaminofluorene	ug/L	<10.00		<11.20					
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	<5.00
2-Chloronaphthalene	ug/L	<10.000		<11.200					
2-Chlorophenol	ug/L	<10.000		<11.200					
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	<1.0
2-Methylnaphthalene	ug/L	<10.0		<11.2					
2-Methylphenol	ug/L								
2-Methylphenol [o-Cresol]	ug/L	<10.000		<11.200					
2-Naphthylamine	ug/L	<10.000		<11.200					
2-Nitroaniline	ug/L	<10.00		<11.20					
2-Nitrophenol	ug/L	<10.00		<11.20					
3,3'-Dichlorobenzidine	ug/L								
3,3-Dichlorobenzidine	ug/L	<10.000		<56.200					
3,3-Dimethylbenzidine	ug/L	<10.000		<11.200					
3-Methylcholanthrene	ug/L	<10.000		<11.200					
3-Nitroaniline	ug/L	<10.000		<11.200					
4,4`-DDD	ug/L	<.03200		<.03520					
4,4`-DDE	ug/L	<.03200		<.03520					
4,4`-DDT	ug/L	<.03200		<.03520					
4,6-Dinitro-2-methylphenol	ug/L	<10.00		<11.20					
4-Aminobiphenyl	ug/L	<10.000		<11.200					
4-Bromophenyl phenyl ether	ug/L	<10.000		<11.200					
4-Chloro-3-methylphenol	ug/L	<10.000		<11.200					
4-Chloroaniline	ug/L	<10.000		<11.200					
4-Chlorophenyl phenyl ether	ug/L	<10.000		<11.200					
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	<10.00
4-Nitroaniline	ug/L	<10.000		<11.200					
4-Nitrophenol	ug/L	<10.00		<11.20					
5-Nitro-o-toluidine	ug/L	<10.000		<11.200					
7,12-Dimethylbenz(a)anthracene	ug/L								
7,12-Dimethylbenz[a]anthracene	ug/L	<10.000		<11.200					
Acenaphthene	ug/L	<10.000		<11.200					
Acenaphthylene	ug/L								
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00	<10.00
Acetonitrile	ug/L	<10000		<10000					
Acetophenone	ug/L	<10.000		<11.200					
Acrolein	ug/L	<10.0		<10.0					
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	<.50

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

Table 9

Analytical Data Summary for MW-344

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/15/2020
(3 4)-Methylphenol									
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.21	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.12	<.12	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.10	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.12	<.12	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	<.210	.290	.475	.474	<.220	<.220	<.220	<.220	.408
1,1-Dichloroethene	<.15	<.15	<.15	<.15	<.56	<.56	<.56	<.56	<.56
1,1-Dichloropropene					<.43				
1,2,3-Trichloropropane	<.19	<.19	<.19	<.19	<.59	<.59	<.59	<.59	<.59
1,2,4,5-Tetrachlorobenzene					<.147				
1,2,4-Trichlorobenzene					<.75				
1,2-Dibromo-3-chloropropane	<.50	<.50	<.50	<.50	<1.20	<1.20	<1.20	<1.20	<1.20
1,2-Dibromoethane	<.13	<.13	<.13	<.13	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.14	<.14	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.180	<.180	.207	<.180	<.390	<.390	<.390	<.390	<.390
1,2-Dichloropropane	<.87	<.87	<.87	<.87	<.27	<.27	<.27	<.27	<.27
1,2-Dinitrobenzene									
1,3,5-Trinitrobenzene					<1.35				
1,3-Dichlorobenzene					<.3				
1,3-Dichloropropane					<.4				
1,3-Dinitrobenzene					<1.06				
1,4-Dichlorobenzene	<.20	<.20	<.20	<.20	<.23	<.23	<.23	<.23	<.23
1,4-Naphthoquinone					<.379				
1,4-phenylenediamine					<8.84				
1-Naphthylamine					<.253				
2,2`-oxybis[1-Chloropropane]									
2,2-Dichloropropane					<.69				
2,3,4,6-Tetrachlorophenol					<.526				
2,4,5-T					<.473				
2,4,5-TP [Silvex]					<.316				
2,4,5-Trichlorophenol					<.737				
2,4,6-Trichlorophenol					<.737				
2,4-D					<.508				
2,4-Dichlorophenol					<.326				
2,4-Dimethylphenol					<.221				
2,4-Dinitrophenol					<2.72				
2,4-Dinitrotoluene					<.484				
2,6-Dichlorophenol					<.232				
2,6-Dinitrotoluene					<.253				
2-Acetylaminofluorene					<1.31				
2-Butanone	<1.04	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10
2-Chloronaphthalene					<.242				
2-Chlorophenol					<.158				
2-Hexanone	<.2	<.2	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0
2-Methylnaphthalene					<.2				
2-Methylphenol									
2-Methylphenol [o-Cresol]					<.189				
2-Naphthylamine					<.232				
2-Nitroaniline					<1.31				
2-Nitrophenol					<1.01				
3,3'-Dichlorobenzidine									
3,3-Dichlorobenzidine					<.853				
3,3-Dimethylbenzidine					<.221				
3-Methylcholanthrene					<.937				
3-Nitroaniline					<.611				
4,4`-DDD					<.00196				
4,4`-DDE					<.00228				
4,4`-DDT					<.00413				
4,6-Dinitro-2-methylphenol					<2.34				
4-Aminobiphenyl					<.316				
4-Bromophenyl phenyl ether					<.305				
4-Chloro-3-methylphenol					<.274				
4-Chloroaniline					<.158				
4-Chlorophenyl phenyl ether					<.263				
4-Methyl-2-pentanone	<.22	<.22	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10
4-Nitroaniline					<.337				
4-Nitrophenol					<1.45				
5-Nitro-o-toluidine					<.179				
7,12-Dimethylbenz(a)anthracene									
7,12-Dimethylbenz[a]anthracene					<.263				
Acenaphthene					<.316				
Acenaphthylene					<.611				
Acetone	<1.79	<1.79	<1.79	3.22	<3.10	3.61	<3.10	<3.10	<3.10
Acetonitrile					<126				
Acetophenone					<.368				
Acrolein					<3.6				
Acrylonitrile	<.53	<.53	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20

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

Table 9

Analytical Data Summary for MW-344

Constituents	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
(3 4)-Methylphenol						<8		
1,1,1,2-Tetrachloroethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	.345	<.220	<.220	<1.000	<1.000	<1.000	<1.000	<1.000
1,1-Dichloroethene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloropropene						<1.00		
1,2,3-Trichloropropane	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene						<8.000		
1,2,4-Trichlorobenzene						<1.00		
1,2-Dibromo-3-chloropropane	<1.20	<1.20	<1.20	<5.00	<5.00	<1.00	<5.00	<5.00
1,2-Dibromoethane	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.390	<.390	<.390	<1.000	<1.000	<1.000	<1.000	<1.000
1,2-Dichloropropane	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dinitrobenzene						<8		
1,3,5-Trinitrobenzene						<8.00		
1,3-Dichlorobenzene						<1.0		
1,3-Dichloropropane						<1.0		
1,3-Dinitrobenzene						<8.00		
1,4-Dichlorobenzene	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00	<1.00
1,4-Naphthoquinone						<8.000		
1,4-phenylenediamine						<8.00		
1-Naphthylamine						<8.000		
2,2`-oxybis[1-Chloropropane]								
2,2-Dichloropropane						<1.00		
2,3,4,6-Tetrachlorophenol						<8.000		
2,4,5-T						<.500		
2,4,5-TP [Silvex]						<.500		
2,4,5-Trichlorophenol						<8.000		
2,4,6-Trichlorophenol						<8.000		
2,4-D						<2.000		
2,4-Dichlorophenol						<8.000		
2,4-Dimethylphenol						<8.000		
2,4-Dinitrophenol						<8.00		
2,4-Dinitrotoluene						<8.000		
2,6-Dichlorophenol						<8.000		
2,6-Dinitrotoluene						<8.000		
2-Acetylaminofluorene						<8.00		
2-Butanone	<2.10	<2.10	<2.10	<10.00	<10.00	<5.00	<10.00	<10.00
2-Chloronaphthalene						<8.000		
2-Chlorophenol						<8.000		
2-Hexanone	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene						<8.0		
2-Methylphenol						<8		
2-Methylphenol [o-Cresol]								
2-Naphthylamine						<8.000		
2-Nitroaniline						<8.00		
2-Nitrophenol						<8.00		
3,3'-Dichlorobenzidine						<8		
3,3-Dichlorobenzidine								
3,3-Dimethylbenzidine						<8.000		
3-Methylcholanthrene						<8.000		
3-Nitroaniline						<8.000		
4,4`-DDD						<.05000		
4,4`-DDE						<.05000		
4,4`-DDT						<.05000		
4,6-Dinitro-2-methylphenol						<8.00		
4-Aminobiphenyl						<8.000		
4-Bromophenyl phenyl ether						<8.000		
4-Chloro-3-methylphenol						<8.000		
4-Chloroaniline						<8.000		
4-Chlorophenyl phenyl ether						<8.000		
4-Methyl-2-pentanone	<2.10	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00	<5.00
4-Nitroaniline						<8.000		
4-Nitrophenol						<8.00		
5-Nitro-o-toluidine						<8.000		
7,12-Dimethylbenz(a)anthracene						<8		
7,12-Dimethylbenz[a]anthracene								
Acenaphthene						<8.000		
Acenaphthylene						<8.000		
Acetone	<3.10	<3.10	<3.10	<10.00	<10.00	<10.00	<10.00	<10.00
Acetonitrile						<10		
Acetophenone						<8.000		
Acrolein						<10.0		
Acrylonitrile	<2.20	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00	<5.00

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

Table 9

Analytical Data Summary for MW-344

Constituents	Units	9/20/2012	3/27/2013	9/25/2013	4/15/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
Aldrin	ug/L	<.03200		<.03520					
Alkalinity as CaCO3	mg/L					175	184	170	165
Allyl Chloride	ug/L	<20.0		<2.0					
alpha-BHC	ug/L	<.03200		<.03520					
Aluminum	ug/L					33.0	19.3	<50.0	51.3
Anthracene	ug/L	<10.000		<11.200					
Antimony	ug/L	<6.000	<6.000	3.660	5.020	<.161	<1.000	<1.000	<.237
Arsenic	ug/L	<4.000	<1.000	<2.000	<1.000	<.945	1.050	<2.000	2.100
Azobenzene	ug/L								
Barium	ug/L	23.20	20.60	11.90	8.72	17.80	17.00	17.50	14.90
Benzene	ug/L	<.500	<.500	.215	.268	.198	.281	<.500	<5.000
Benzo[a]anthracene	ug/L	<10.000		<11.200					
Benzo[a]pyrene	ug/L	<10.00		<11.20					
Benzo[b]fluoranthene	ug/L	<10.00		<11.20					
Benzo[ghi]perylene	ug/L	<10.00		<11.20					
Benzo[k]fluoranthene	ug/L	<10.0		<11.2					
Benzyl alcohol	ug/L	<10.000		<11.200					
Beryllium	ug/L	<1.000	<1.000	<1.000	<1.000	.212	<1.000	<1.000	<.221
beta-BHC	ug/L	<.03200		<.03520					
bis (2-chloroisopropyl) ether	ug/L								
Bis(2-chloroethoxy)methane	ug/L	<10.000		<11.200					
Bis(2-chloroethyl)ether	ug/L	<10.0		<11.2					
Bis(2-ethylhexyl)phthalate	ug/L	<10.00		<11.20					
Bis[2-Chloroisopropyl]ether	ug/L								
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	<1.00
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<5.00
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	<1.00
Bromomethane	ug/L	<20.00	<4.00	<4.00	<4.00	<.22	<4.00	<4.00	<1.00
Butylbenzylphthalate	ug/L	<10.00		<11.20					
Cadmium	ug/L	<.500	<.500	<.500	.117	.142	.143	<.500	.156
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00	<2.00
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	<1.00
Chlordane	ug/L	<2.0000		<2.2000					
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<4.00
Chlorobenzilate	ug/L	<10.000		<11.200					
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.20	<5.00	<5.00	<10.00
Chloroethane	ug/L	<4.000	<4.000	.514	<4.000	<.150	<4.000	<4.000	<1.000
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	<5.00
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00	<4.00
Chloroprene	ug/L	<1.00		<1.00					
Chromium	ug/L	<20.000	<20.000	5.520	<20.000	<1.240	<5.000	<5.000	<.355
Chrysene	ug/L	<10.000		<11.200					
cis-1,2-Dichloroethene	ug/L	<1.000	.301	.976	1.300	.819	<1.000	1.140	1.120
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	<1.00
Cobalt	ug/L	93.2	172.0	105.0	50.0	164.0	176.0	202.0	269.0
Copper	ug/L	<20.000	<20.000	<20.000	<20.000	<.485	<2.000	<2.000	<1.220
Cyanide	mg/L	<.0100		<.0100					
delta-BHC	ug/L	<.0320		<.0352					
Diallate	ug/L	<10.000		<11.200					
Dibenzo(a,h)anthracene	ug/L	<10.00		<11.20					
Dibenzofuran	ug/L	<10.000		<11.200					
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<10.00
Dichlorodifluoromethane	ug/L	<3.00		<3.00					
Dieldrin	ug/L	<.03200		<.03520					
Diethyl phthalate	ug/L	<10.000		<11.200					
Dimethoate	ug/L	<10.000		<11.200					
Dimethyl phthalate	ug/L	<10.00		<11.20					
Di-n-butyl phthalate	ug/L								
Di-n-butylphthalate	ug/L	<10.00		<11.20					
Di-n-octyl phthalate	ug/L								
Di-n-octylphthalate	ug/L	<10.00		<22.50					
Dinoseb	ug/L	<10.000		<11.200					
Diphenylamine	ug/L	<10.000		<11.200					
Disulfoton	ug/L	<10.000		<11.200					
Endosulfan I	ug/L	<.03200		<.03520					
Endosulfan II	ug/L	<.03200		<.03520					
Endosulfan Sulfate	ug/L	<.03200		<.03520					
Endrin	ug/L	<.03200		<.03520					
Endrin Aldehyde	ug/L	<.03200		<.03520					
Ethyl Methacrylate	ug/L	<2.00		<2.00					
Ethyl Methanesulfonate	ug/L	<10.000		<11.200					
Ethyl Parathion	ug/L								
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<3.00
Famphur	ug/L	<20.000		<22.500					
Fluoranthene	ug/L	<10.000		<11.200					
Fluorene	ug/L	<10.000		<11.200					
gamma-BHC (Lindane)	ug/L	<.0320		<.0352					

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

Table 9

Analytical Data Summary for MW-344

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/15/2020
Aldrin					<.00489				
Alkalinity as CaCO3	232	221	237	198	206	175	371	153	194
Allyl Chloride					<.7				
alpha-BHC					<.00185				
Aluminum	<20.8	<41.3	<41.3	<165.0	25.1	<27.0	184.0	<30.0	28.6
Anthracene					<.179				
Antimony	<.237	<.185	<.185	<.740	<1.320	<.530	<.530	<.580	<.510
Arsenic	<.672	.739	.715	<2.020	1.450	<.750	1.040	<.880	1.810
Azobenzene									
Barium	13.40	15.50	13.30	13.70	13.20	10.70	12.30	10.00	11.80
Benzene	.594	.543	.894	.715	.732	<.220	.541	<.220	.836
Benzo[a]anthracene					<.358				
Benzo[a]pyrene					<1.34				
Benzo[b]fluoranthene					<1.05				
Benzo[ghi]perylene					<1.39				
Benzo[k]fluoranthene					<.6				
Benzyl alcohol					<.632				
Beryllium	<.221	<.125	<.125	<.500	<.530	<.270	.401	<.270	<.270
beta-BHC					<.00522				
bis (2-chloroisopropyl) ether					<.189				
Bis(2-chloroethoxy)methane					<.274				
Bis(2-chloroethyl)ether					<.2				
Bis(2-ethylhexyl)phthalate					<2.44				
Bis[2-Chloroisopropyl]ether									
Bromochloromethane	<.12	<.12	<.12	<.12	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.12	<.12	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.14	<.14	<.78	<.78	<.78	<.78	<.78
Bromomethane	<.22	<.22	<.22	<.22	<1.10	<1.10	<1.10	<1.10	<1.10
Butylbenzylphthalate					<1.61				
Cadmium	.094	.125	.077	<.176	.302	.085	.421	.055	.061
Carbon Disulfide	<.15	<.15	<.15	<.15	<.45	<.45	<.45	<.45	<.45
Carbon Tetrachloride	<.24	<.24	<.24	<.24	<.65	<.65	<.65	<.65	<.65
Chlordane					<.0696				
Chlorobenzene	<.19	<.19	<.19	<.19	<.40	<.40	<.40	<.40	<.40
Chlorobenzilate					<.221				
Chlorodibromomethane	<.20	<.20	<.20	<.20	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.150	<.150	.462	<.150	<.790	<.790	<.790	<.790	<.790
Chloroform	<.28	<.28	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	<.31	<.31	<.31	<.31	<.61	<.61	<.61	<.61	<.61
Chloroprene					<.23				
Chromium	<.355	<.729	<.729	<2.920	1.360	<.980	<.980	<1.100	<1.100
Chrysene					<.326				
cis-1,2-Dichloroethene	2.040	1.820	2.480	2.240	1.900	1.180	1.820	1.360	2.440
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.15	<.25	<.25	<.25	<.25	<.25
Cobalt	57.6	107.0	21.8	114.0	198.0	128.0	146.0	206.0	263.0
Copper	<1.220	<2.190	<2.190	<8.760	<.497	<2.000	<2.000	<3.200	<1.500
Cyanide					<.0042				
delta-BHC					.0029				
Diallate					<.242				
Dibenzo(a,h)anthracene					<1.93				
Dibenzofuran					<.253				
Dibromomethane	<.18	<.18	<.18	<.18	<.33	<.33	<.33	<.33	<.33
Dichlorodifluoromethane					<.25				
Dieldrin					<.00217				
Diethyl phthalate					<.284				
Dimethoate					<.284				
Dimethyl phthalate					<2.31				
Di-n-butyl phthalate									
Di-n-butylphthalate					<1.21				
Di-n-octyl phthalate									
Di-n-octylphthalate					<2.79				
Dinoseb					<.453				
Diphenylamine					<.695				
Disulfoton					<.305				
Endosulfan I					.00217				
Endosulfan II					<.00207				
Endosulfan Sulfate					<.00272				
Endrin					.00264				
Endrin Aldehyde					<.00793				
Ethyl Methacrylate					<.68				
Ethyl Methanesulfonate					<.158				
Ethyl Parathion					<.189				
Ethylbenzene	<.21	<.21	<.21	<.21	<.31	<.31	<.31	<.31	<.31
Famphur					<.495				
Fluoranthene					<.716				
Fluorene					<.305				
gamma-BHC (Lindane)					.0022				

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

Table 9

Analytical Data Summary for MW-344

Constituents	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Aldrin						<.05000		
Alkalinity as CaCO3	188	209	196	200	197	219	1050	214
Allyl Chloride						<1.0		
alpha-BHC						<.05000		
Aluminum	47.7	54.7	<68.0	<100.0	77.0	110.0	85.0	57.0
Anthracene						<8.000		
Antimony	<1.100	<1.100	<2.760	<2.000	<2.000	<2.000	<2.000	<2.000
Arsenic	2.590	3.050	<3.000	<4.000	<4.000	<4.000	<4.000	<4.000
Azobenzene						<8		
Barium	12.70	12.50	11.00	11.90	11.70	12.20	10.60	12.00
Benzene	.722	.918	.390	<1.000	<1.000	1.100	<1.000	<1.000
Benzo[a]anthracene						<8.000		
Benzo[a]pyrene						<8.00		
Benzo[b]fluoranthene						<8.00		
Benzo[ghi]perylene						<8.00		
Benzo[k]fluoranthene						<8.0		
Benzyl alcohol						<8.000		
Beryllium	<.270	<.270	<1.080	<4.000	<4.000	<4.000	<4.000	<4.000
beta-BHC						<.05000		
bis (2-chloroisopropyl) ether								
Bis(2-chloroethoxy)methane						<8.000		
Bis(2-chloroethyl)ether						<8.0		
Bis(2-ethylhexyl)phthalate						<6.00		
Bis[2-Chloroisopropyl]ether						<8		
Bromochloromethane	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.10	<1.10	<1.10	<1.00	<1.00	<1.00	<1.00	<1.00
Butylbenzylphthalate						<8.00		
Cadmium	<.051	.066	<.220	<.800	<.800	<.800	<.800	<.800
Carbon Disulfide	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00	<1.00
Chlordane						<.1000		
Chlorobenzene	<.40	<.40	<.40	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorobenzilate						<8.000		
Chlorodibromomethane	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.790	<.790	<.790	<1.000	<1.000	<1.000	<1.000	<1.000
Chloroform	<1.30	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<.61	<.61	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroprene						<1.00		
Chromium	<1.100	<1.100	<4.400	<8.000	<8.000	<8.000	<8.000	<8.000
Chrysene						<8.000		
cis-1,2-Dichloroethene	2.020	2.180	1.270	1.900	<1.000	2.400	1.100	1.800
cis-1,3-Dichloropropene	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00	<1.00
Cobalt	258.0	223.0	310.0	224.0	209.0	151.0	148.0	201.0
Copper	<1.400	<1.400	<7.200	<4.000	<4.000	<4.000	<4.000	<4.000
Cyanide						<.0050		
delta-BHC						<.0500		
Diallate						<8.000		
Dibenzo(a,h)anthracene						<8.00		
Dibenzofuran						<8.000		
Dibromomethane	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00	<1.00
Dichlorodifluoromethane						<1.00		
Dieldrin						<.05000		
Diethyl phthalate						<8.000		
Dimethoate						<.400		
Dimethyl phthalate						<8.00		
Di-n-butyl phthalate						<8		
Di-n-butylphthalate								
Di-n-octyl phthalate						<8		
Di-n-octylphthalate								
Dinoseb						<.500		
Diphenylamine						<8.000		
Disulfoton						<.400		
Endosulfan I						<.05000		
Endosulfan II						<.05000		
Endosulfan Sulfate						<.05000		
Endrin						<.05000		
Endrin Aldehyde						<.05000		
Ethyl Methacrylate						<10.00		
Ethyl Methanesulfonate						<8.000		
Ethyl Parathion								
Ethylbenzene	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00	<1.00
Famphur						<.400		
Fluoranthene						<8.000		
Fluorene						<8.000		
gamma-BHC (Lindane)						<.0500		

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

Table 9

Analytical Data Summary for MW-344

Constituents	Units	9/20/2012	3/27/2013	9/25/2013	4/15/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
Heptachlor	ug/L	<.03200		<.03520					
Heptachlor Epoxide	ug/L	<.03200		<.03520					
Hexachlorobenzene	ug/L	<10.000		<11.200					
Hexachlorobutadiene	ug/L	<10.000		<11.200					
Hexachlorocyclopentadiene	ug/L	<10.00		<22.50					
Hexachloroethane	ug/L	<10.000		<11.200					
Hexachloropropene	ug/L	<10.00		<11.20					
Indeno[1,2,3-cd]pyrene	ug/L	<10.00		<11.20					
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0	<1.0
Iron	ug/L					7680.0	10800.0	23000.0	32100.0
Isobutanol	ug/L	<10000		<10000					
Isodrin	ug/L	<10.0		<11.2					
Isophorone	ug/L	<10.000		<11.200					
Isosafrole	ug/L	<10.000		<11.200					
Kepone	ug/L	<10.000		<11.200					
Lead	ug/L	<4.0000	<4.0000	<4.0000	<4.0000	<.0967	<.5000	<.5000	.2710
m,p-Xylene	ug/L								
Mercury	ug/L	<.2670		<.2000					
Methacrylonitrile	ug/L	<1.0		<1.0					
Methapyrilene	ug/L	<10.00		<11.20					
Methoxychlor	ug/L	<.03200		<.03520					
Methyl Methacrylate	ug/L	<2.00		<2.00					
Methyl Methanesulfonate	ug/L	<10.000		<11.200					
Methyl Parathion	ug/L	<10.000		<11.200					
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	<.170	<5.000	<5.000	<10.000
Methylphenol, 3 4	ug/L								
Naphthalene	ug/L	<5		<5					
Nickel	ug/L	84.2	164.0	110.0	51.3	131.0	107.0	152.0	202.0
Nitrobenzene	ug/L	<10.000		<11.200					
N-Nitrosodiethylamine	ug/L	<10.000		<11.200					
N-Nitrosodimethylamine	ug/L	<10.0		<11.2					
N-Nitrosodi-n-butylamine	ug/L	<10.000		<11.200					
N-Nitrosodi-n-propylamine	ug/L	<10.000		<11.200					
N-Nitrosodiphenylamine	ug/L	<10.000		<11.200					
N-Nitrosomethylethylamine	ug/L	<10.000		<11.200					
N-Nitrosopiperidine	ug/L	<10.000		<11.200					
N-Nitrosopyrrolidine	ug/L	<10.000		<11.200					
o,o,o-Triethylphosphorothioate	ug/L	<10.000		<11.200					
o-Toluidine	ug/L	<10.000		<11.200					
o-Xylene	ug/L								
p-[Dimethylamino]azobenzene	ug/L	<10.0		<11.2					
Parathion	ug/L	<10.0		<11.2					
PCB-1016	ug/L	<.8000		<.8890					
PCB-1221	ug/L	<.800		<.889					
PCB-1232	ug/L	<.800		<.889					
PCB-1242	ug/L	<.800		<.889					
PCB-1248	ug/L	<.800		<.889					
PCB-1254	ug/L	<.8000		<.8890					
PCB-1260	ug/L	<.8000		<.8890					
p-Dimethylamino azobenzene	ug/L								
Pentachlorobenzene	ug/L	<10.000		<11.200					
Pentachloronitrobenzene	ug/L	<10.000		<11.200					
Pentachlorophenol	ug/L	<10.00		<11.20					
pH	SU					5.75	5.76	5.80	5.77
Phenacetin	ug/L	<10.000		<11.200					
Phenanthrene	ug/L	<10.000		<11.200					
Phenol	ug/L	<10.00		<11.20					
Phorate	ug/L	<10.000		<11.200					
p-Phenylenediamine	ug/L	<10.0		<11.2					
Pronamide	ug/L	<10.000		<11.200					
Propionitrile	ug/L	<10.0		<10.0					
Pyrene	ug/L	<10.000		<11.200					
Safrole	ug/L	<10.000		<11.200					
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<3.340	<5.000	<5.000	.801
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<.042	<1.000	<1.000	<.153
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
Sulfate	mg/L					2570	2790	2540	3120
Sulfide	mg/L	<1.000		<1.000					
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<.0325	<1.0000	<1.0000	<.0255
Thionazin	ug/L	<10.000		<11.200					
Tin	ug/L	<100.000		605.000	<100.000	93.500	81.500	<200.000	<.255
Toluene	ug/L								
Total Suspended Solids	mg/L					2.430	<5.000	3.670	17.000
Toxaphene	ug/L	<2.000		<2.200					
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<5.00
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	<5.00

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

Table 9

Analytical Data Summary for MW-344

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/15/2020
Heptachlor					<.00283				
Heptachlor Epoxide					<.00663				
Hexachlorobenzene					<.284				
Hexachlorobutadiene					<.179				
Hexachlorocyclopentadiene					<1.99				
Hexachloroethane					<.147				
Hexachloropropene					<1.73				
Indeno[1,2,3-cd]pyrene					<1.55				
Iodomethane	<.8	<.8	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0
Iron	6280.0	8830.0	3200.0	7750.0	14600.0	74.7	8830.0	659.0	20100.0
Isobutanol					<177				
Isodrin					<.4				
Isophorone					<.232				
Isosafrole					<.189				
Kepone					<.253				
Lead	<.2110	<.3240	<.3240	<1.3000	.3370	<.2700	<.2700	<.2700	<.1100
m,p-Xylene					<.38				
Mercury					<.0984				
Methacrylonitrile					<3.3				
Methapyrilene					<1.43				
Methoxychlor					<.00228				
Methyl Methacrylate					<.76				
Methyl Methanesulfonate					<.147				
Methyl Parathion					<.158				
Methylene Chloride	.251	<.170	<.170	<.170	<1.700	<1.700	<1.700	<1.700	<1.700
Methylphenol, 3 4					<.189				
Naphthalene					<3				
Nickel	44.2	89.1	21.5	82.9	133.0	91.0	278.0	156.0	205.0
Nitrobenzene					<.316				
N-Nitrosodiethylamine					<.316				
N-Nitrosodimethylamine					<.2				
N-Nitrosodi-n-butylamine					<.305				
N-Nitrosodi-n-propylamine					<.274				
N-Nitrosodiphenylamine					<.695				
N-Nitrosomethylethylamine					<.211				
N-Nitrosopiperidine					<.158				
N-Nitrosopyrrolidine					<.242				
o,o,o-Triethylphosphorothioate					<.253				
o-Toluidine					<.189				
o-Xylene					<.4				
p-[Dimethylamino]azobenzene									
Parathion									
PCB-1016					<.0467				
PCB-1221					<.172				
PCB-1232					<.118				
PCB-1242					<.140				
PCB-1248					<.118				
PCB-1254					<.0989				
PCB-1260					<.0473				
p-Dimethylamino azobenzene					<.253				
Pentachlorobenzene					<.232				
Pentachloronitrobenzene					<.347				
Pentachlorophenol					<2.44				
pH	5.82	5.84	5.90	5.89	5.98	6.08	5.77	5.91	5.90
Phenacetin					<.589				
Phenanthrene					<.632				
Phenol					<2.53				
Phorate					<.179				
p-Phenylenediamine									
Pronamide					<.274				
Propionitrile					<3.4				
Pyrene					<.274				
Safrole					<.211				
Selenium	<.630	<.928	<.928	<3.710	1.060	<1.000	<1.000	<1.000	<1.000
Silver	<.153	<.140	<.140	<.560	<.115	<.370	<.370	<.370	<.370
Styrene	<.10	<.10	<.10	<.10	<.37	<.37	<.37	<.37	<.37
Sulfate	2730	1950	1800	2060	2030	2040	2650	2490	2370
Sulfide					<.231				
Tetrachloroethene	<.18	<.18	<.18	<.18	<.48	<.48	<.48	<.48	<.48
Thallium	.0410	<.0644	<.0644	<.2580	<.5700	<.2700	<.2700	<.2600	<.2600
Thionazin					<.326				
Tin	<.832		<1.620	<6.480	<1.300	<1.800			
Toluene					<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	3.500	2.750	4.880	2.000	3.130	.875	3.000	4.880	6.380
Toxaphene					<.063				
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.22	<.56	<.56	<.56	<.56	<.56

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

Table 9

Analytical Data Summary for MW-344

Constituents	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Heptachlor						<.05000		
Heptachlor Epoxide						<.05000		
Hexachlorobenzene						<.050		
Hexachlorobutadiene						<8.000		
Hexachlorocyclopentadiene						<8.00		
Hexachloroethane						<8.000		
Hexachloropropene						<8.00		
Indeno[1,2,3-cd]pyrene						<8.00		
Iodomethane	<7.0	<7.0	<7.0	<1.0	<1.0	<2.0	<1.0	<1.0
Iron	20500.0	20500.0	23600.0	4530.0	11600.0	8330.0	6170.0	1840.0
Isobutanol						<1000		
Isodrin						<8.0		
Isophorone						<8.000		
Isosafrole						<8.000		
Kepone						<8.000		
Lead	.2960	.7260	<.9600	<4.0000	<4.0000	<4.0000	<4.0000	<4.0000
m,p-Xylene								
Mercury						<.5000		
Methacrylonitrile						<1.0		
Methapyrilene						<8.00		
Methoxychlor						<.05000		
Methyl Methacrylate						<1.00		
Methyl Methanesulfonate						<8.000		
Methyl Parathion						<.400		
Methylene Chloride	<1.700	<1.700	<1.700	<5.000	<5.000	<5.000	<5.000	<5.000
Methylphenol, 3 4								
Naphthalene						<8		
Nickel	214.0	189.0	267.0	178.0	165.0	124.0	108.0	147.0
Nitrobenzene						<8.000		
N-Nitrosodiethylamine						<8.000		
N-Nitrosodimethylamine						<8.0		
N-Nitrosodi-n-butylamine						<8.000		
N-Nitrosodi-n-propylamine						<8.000		
N-Nitrosodiphenylamine						<8.000		
N-Nitrosomethylethylamine						<8.000		
N-Nitrosopiperidine						<8.000		
N-Nitrosopyrrolidine						<8.000		
o,o,o-Triethylphosphorothioate						<.400		
o-Toluidine						<8.000		
o-Xylene								
p-[Dimethylamino]azobenzene						<8.0		
Parathion						<.4		
PCB-1016						<.2000		
PCB-1221						<.200		
PCB-1232						<.200		
PCB-1242						<.200		
PCB-1248						<.200		
PCB-1254						<.2000		
PCB-1260						<.2000		
p-Dimethylamino azobenzene								
Pentachlorobenzene						<8.000		
Pentachloronitrobenzene						<8.000		
Pentachlorophenol						<8.00		
pH	5.83	5.89	5.93	5.80	6.00	5.80	6.10	5.70
Phenacetin						<8.000		
Phenanthrene						<8.000		
Phenol						<8.00		
Phorate						<.400		
p-Phenylenediamine								
Pronamide						<8.000		
Propionitrile						<10.0		
Pyrene						<8.000		
Safrole						<8.000		
Selenium	<.960	<.960	<3.840	<4.000	<4.000	<4.000	<4.000	<4.000
Silver	<.420	<.420	<1.960	<4.000	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
Sulfate	2410	2220	2620	2190	2150	2160	1750	2410
Sulfide								
Tetrachloroethene	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00	<1.00
Thallium	<.2600	<.2600	<1.0400	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000
Thionazin						<.400		
Tin						<20.000		
Toluene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	13.000	9.500	21.000					
Toxaphene						<.200		
trans-1,2-Dichloroethene	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00

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

Table 9

Analytical Data Summary for MW-344

Constituents	Units	9/20/2012	3/27/2013	9/25/2013	4/15/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<1.00
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<4.00
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	<1.00
Vanadium	ug/L	<50.000	<50.000	<50.000	<50.000	<.449	<5.000	<5.000	.277
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	<1.00
Vinyl Chloride	ug/L	1.500	1.320	.858	.884	.484	.428	<1.000	<3.000
Xylenes, Total	ug/L	<3.00	<3.00	<3.00	<3.00	<.13	<3.00	<3.00	<3.00
Zinc	ug/L	<20.0	68.8	176.0	<60.0	23.2	16.3	22.0	24.1

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

Table 9

Analytical Data Summary for MW-344

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/15/2020
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.19	<.19	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.17	<.17	<.38	<.38	<.38	<.38	<.38
Vanadium	<.255	<.840	<.840	<3.360	<2.150	<.820	<.820	<.820	<.850
Vinyl Acetate	<.74	<.74	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	.587	1.050	.705	.569	<.600	<.600	.513	<.180	.903
Xylenes, Total	<.13	<.13	<.13	<.13	<.40	<.40	<.40	<.40	<.40
Zinc	7.3	14.0	<11.5	<46.0	22.9	12.9	146.0	16.7	22.1

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

Table 9

Analytical Data Summary for MW-344

Constituents	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
Vanadium	<1.100	<1.100	<4.400	<20.000	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	.840	.986	.383	<1.000	<1.000	<1.000	<1.000	<1.000
Xylenes, Total	<.40	<.40	<.40	<2.00	<2.00	<2.00	<2.00	<2.00
Zinc	19.3	20.7	<40.0	<20.0	<20.0	<20.0	<20.0	<20.0

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

Table

Analytical Data Summary for MW-345

Constituents	Units	9/19/2012	3/27/2013	9/25/2013	4/15/2014	9/25/2014	3/12/2015	9/2/2015
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<1.0	<1.0	<1.0	<1.0	<.1	<1.0	<1.0
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00
1,1-Dichloropropene	ug/L	<1		<1				
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene	ug/L	<10.0		<10.5				
1,2,4-Trichlorobenzene	ug/L	<5		<5				
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00
1,3,5-Trinitrobenzene	ug/L	<10.0		<10.5				
1,3-Dichlorobenzene	ug/L	<1		<1				
1,3-Dichloropropane	ug/L	<1		<1				
1,3-Dinitrobenzene	ug/L	<10.0		<10.5				
1,4-Dichlorobenzene	ug/L	<1.0	<1.0	<1.0	<1.0	<.2	<1.0	<1.0
1,4-Naphthoquinone	ug/L	<10.0		<10.5				
1-Naphthylamine	ug/L	<10.0		<10.5				
2,2`-oxybis[1-Chloropropane]	ug/L	<10.0		<10.5				
2,2-Dichloropropane	ug/L	<4		<4				
2,3,4,6-Tetrachlorophenol	ug/L	<10.0		<10.5				
2,4,5-T	ug/L	<1.00		<1.02				
2,4,5-TP [Silvex]	ug/L	<1.00		<1.02				
2,4,5-Trichlorophenol	ug/L	<10.0		<10.5				
2,4,6-Trichlorophenol	ug/L	<10.0		<10.5				
2,4-D	ug/L	<1.00		<1.02				
2,4-Dichlorophenol	ug/L	<10.0		<10.5				
2,4-Dimethylphenol	ug/L	<10.0		<10.5				
2,4-Dinitrophenol	ug/L	<20.0		<21.1				
2,4-Dinitrotoluene	ug/L	<10.0		<10.5				
2,6-Dichlorophenol	ug/L	<10.0		<10.5				
2,6-Dinitrotoluene	ug/L	<10.0		<10.5				
2-Acetylaminofluorene	ug/L	<10.0		<10.5				
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00
2-Chloronaphthalene	ug/L	<10.0		<10.5				
2-Chlorophenol	ug/L	<10.0		<10.5				
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0
2-Methylnaphthalene	ug/L	<10.0		<10.5				
2-Methylphenol [o-Cresol]	ug/L	<10.0		<10.5				
2-Naphthylamine	ug/L	<10.0		<10.5				
2-Nitroaniline	ug/L	<10.0		<10.5				
2-Nitrophenol	ug/L	<10.0		<10.5				
3,3-Dichlorobenzidine	ug/L	<10.0		<52.6				
3,3-Dimethylbenzidine	ug/L	<10.0		<10.5				
3-Methylcholanthrene	ug/L	<10.0		<10.5				
3-Nitroaniline	ug/L	<10.0		<10.5				
4,4`-DDD	ug/L	<.0404		<.0360				
4,4`-DDE	ug/L	<.0404		<.0360				
4,4`-DDT	ug/L	<.0404		<.0360				
4,6-Dinitro-2-methylphenol	ug/L	<10.0		<10.5				
4-Aminobiphenyl	ug/L	<10.0		<10.5				
4-Bromophenyl phenyl ether	ug/L	<10.0		<10.5				
4-Chloro-3-methylphenol	ug/L	<10.0		<10.5				
4-Chloroaniline	ug/L	<10.0		<10.5				
4-Chlorophenyl phenyl ether	ug/L	<10.0		<10.5				
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00
4-Nitroaniline	ug/L	<10.0		<10.5				
4-Nitrophenol	ug/L	<10.0		<10.5				
5-Nitro-o-toluidine	ug/L	<10.0		<10.5				
7,12-Dimethylbenz[a]anthracene	ug/L	<10.0		<10.5				
Acenaphthene	ug/L	<10.0		<10.5				
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00
Acetonitrile	ug/L	<10000		<10000				
Acetophenone	ug/L	<10.0		<10.5				
Acrolein	ug/L	<10		<10				
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00
Aldrin	ug/L	<.0404		<.0360				
Alkalinity as CaCO3	mg/L					330	329	346
Allyl Chloride	ug/L	<20		<2				
alpha-BHC	ug/L	<.0404		<.0360				
Aluminum	ug/L					<8.46	<50.00	<50.00
Anthracene	ug/L	<10.0		<10.5				
Antimony	ug/L	<12.000	<6.000	<6.000	<6.000	<.161	<1.000	<1.000

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

Table 9

Analytical Data Summary for MW-345

Constituents	Units	9/19/2012	3/27/2013	9/25/2013	4/15/2014	9/25/2014	3/12/2015	9/2/2015
Arsenic	ug/L	<1.000	<1.000	<1.000	<1.000	<.945	<2.000	<2.000
Barium	ug/L	205	226	216	189	230	219	239
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50
Benzo[a]anthracene	ug/L	<10.0		<10.5				
Benzo[a]pyrene	ug/L	<10.0		<10.5				
Benzo[b]fluoranthene	ug/L	<10.0		<10.5				
Benzo[ghi]perylene	ug/L	<10.0		<10.5				
Benzo[k]fluoranthene	ug/L	<10.0		<10.5				
Benzyl alcohol	ug/L	<10.0		<10.5				
Beryllium	ug/L	<1.000	<1.000	<1.000	<1.000	<.039	<1.000	<1.000
beta-BHC	ug/L	<.0404		<.0360				
Bis(2-chloroethoxy)methane	ug/L	<10.0		<10.5				
Bis(2-chloroethyl)ether	ug/L	<10.0		<10.5				
Bis(2-ethylhexyl)phthalate	ug/L	<10.0		<10.5				
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00
Bromomethane	ug/L	<20.00	<4.00	<4.00	<4.00	<.22	<4.00	<4.00
Butylbenzylphthalate	ug/L	<10.0		<10.5				
Cadmium	ug/L	<.500	.214	<.500	<.500	<.112	<.500	<.500
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00
Chlordane	ug/L	<2.53		<2.25				
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00
Chlorobenzilate	ug/L	<10.0		<10.5				
Chlorodibromomethane	ug/L	<5.0	<5.0	<5.0	<5.0	<.2	<5.0	<5.0
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00
Chloroprene	ug/L	<1		<1				
Chromium	ug/L	<20.00	<20.00	1.79	<20.00	<1.24	<5.00	<5.00
Chrysene	ug/L	<10.0		<10.5				
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00
Cobalt	ug/L	<20.0000	<20.0000	<7.0000	<7.0000	<.0528	<.5000	<.5000
Copper	ug/L	<20.000	<20.000	<20.000	<20.000	<.485	<2.000	<2.000
Cyanide	mg/L	<.01		<.01				
delta-BHC	ug/L	<.0404		<.0360				
Diallate	ug/L	<10.0		<10.5				
Dibenzo(a,h)anthracene	ug/L	<10.0		<10.5				
Dibenzofuran	ug/L	<10.0		<10.5				
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00
Dichlorodifluoromethane	ug/L	<3.00		1.49				
Dieldrin	ug/L	<.0404		<.0360				
Diethyl phthalate	ug/L	<10.0		<10.5				
Dimethoate	ug/L	<10.0		<10.5				
Dimethyl phthalate	ug/L	<10.0		<10.5				
Di-n-butylphthalate	ug/L	<10.0		<10.5				
Di-n-octylphthalate	ug/L	<10.0		<21.1				
Dinoseb	ug/L	<10.0		<10.5				
Diphenylamine	ug/L	<10.0		<10.5				
Disulfoton	ug/L	<10.0		<10.5				
Endosulfan I	ug/L	<.0404		<.0360				
Endosulfan II	ug/L	<.0404		<.0360				
Endosulfan Sulfate	ug/L	<.0404		<.0360				
Endrin	ug/L	<.0404		<.0360				
Endrin Aldehyde	ug/L	<.0404		<.0360				
Ethyl Methacrylate	ug/L	<2		<2				
Ethyl Methanesulfonate	ug/L	<10.0		<10.5				
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00
Famphur	ug/L	<20.0		<21.1				
Fluoranthene	ug/L	<10.0		<10.5				
Fluorene	ug/L	<10.0		<10.5				
gamma-BHC (Lindane)	ug/L	<.0404		<.0360				
Heptachlor	ug/L	<.0404		<.0360				
Heptachlor Epoxide	ug/L	<.0404		<.0360				
Hexachlorobenzene	ug/L	<10.0		<10.5				
Hexachlorobutadiene	ug/L	<10.0		<10.5				
Hexachlorocyclopentadiene	ug/L	<10.0		<21.1				
Hexachloroethane	ug/L	<10.0		<10.5				
Hexachloropropene	ug/L	<10.0		<10.5				
Indeno[1,2,3-cd]pyrene	ug/L	<10.0		<10.5				
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0
Iron	ug/L					<51.1	<100.0	<100.0
Isobutanol	ug/L	<10000		<10000				
Isodrin	ug/L	<10.0		<10.5				
Isophorone	ug/L	<10.0		<10.5				

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

Table 9

Analytical Data Summary for MW-345

Constituents	Units	9/19/2012	3/27/2013	9/25/2013	4/15/2014	9/25/2014	3/12/2015	9/2/2015
Isosafrole	ug/L	<10.0		<10.5				
Kepone	ug/L	<10.0		<10.5				
Lead	ug/L	<4.0000	<4.0000	<4.0000	<4.0000	<.0967	<.5000	<.5000
Mercury	ug/L	<.267		<.200				
Methacrylonitrile	ug/L	<1		<1				
Methapyrilene	ug/L	<10.0		<10.5				
Methoxychlor	ug/L	<.0404		<.0360				
Methyl Methacrylate	ug/L	<2		<2				
Methyl Methanesulfonate	ug/L	<10.0		<10.5				
Methyl Parathion	ug/L	<10.0		<10.5				
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	.596	<5.000	<5.000
Naphthalene	ug/L	<5		<5				
Nickel	ug/L	<50.000	<50.000	<50.000	<50.000	<.581	.691	<5.000
Nitrobenzene	ug/L	<10.0		<10.5				
N-Nitrosodiethylamine	ug/L	<10.0		<10.5				
N-Nitrosodimethylamine	ug/L	<10.0		<10.5				
N-Nitrosodi-n-butylamine	ug/L	<10.0		<10.5				
N-Nitrosodi-n-propylamine	ug/L	<10.0		<10.5				
N-Nitrosodiphenylamine	ug/L	<10.0		<10.5				
N-Nitrosomethylethylamine	ug/L	<10.0		<10.5				
N-Nitrosopiperidine	ug/L	<10.0		<10.5				
N-Nitrosopyrrolidine	ug/L	<10.0		<10.5				
o,o,o-Triethylphosphorothioate	ug/L	<10.0		<10.5				
o-Toluidine	ug/L	<10.0		<10.5				
p-[Dimethylamino]azobenzene	ug/L	<10.0		<10.5				
Parathion	ug/L	<10.0		<10.5				
PCB-1016	ug/L	<.800		<.879				
PCB-1221	ug/L	<.800		<.879				
PCB-1232	ug/L	<.800		<.879				
PCB-1242	ug/L	<.800		<.879				
PCB-1248	ug/L	<.800		<.879				
PCB-1254	ug/L	<.800		<.879				
PCB-1260	ug/L	<.800		<.879				
Pentachlorobenzene	ug/L	<10.0		<10.5				
Pentachloronitrobenzene	ug/L	<10.0		<10.5				
Pentachlorophenol	ug/L	<10.0		<10.5				
pH	SU					7.08	7.05	7.13
Phenacetin	ug/L	<10.0		<10.5				
Phenanthrene	ug/L	<10.0		<10.5				
Phenol	ug/L	<10.0		<10.5				
Phorate	ug/L	<10.0		<10.5				
p-Phenylenediamine	ug/L	<10.0		<10.5				
Pronamide	ug/L	<10.0		<10.5				
Propionitrile	ug/L	<10		<10				
Pyrene	ug/L	<10.0		<10.5				
Safrole	ug/L	<10.0		<10.5				
Selenium	ug/L	<5.00	<5.00	<5.00	<5.00	<3.34	<5.00	<5.00
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<.042	<1.000	<1.000
Styrene	ug/L	<1.0	<1.0	<1.0	<1.0	<.1	<1.0	<1.0
Sulfate	mg/L					50.3	35.0	35.2
Sulfide	mg/L	<1		<1				
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00
Thallium	ug/L	<4.0000	<2.0000	<2.0000	<2.0000	<.0325	<1.0000	<1.0000
Thionazin	ug/L	<10.0		<10.5				
Tin	ug/L	<100		270	<100			
Total Suspended Solids	mg/L					<1.41	<5.00	<5.00
Toxaphene	ug/L	<2.53		<2.25				
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00
Vanadium	ug/L	<50.000	<50.000	<50.000	<50.000	<.449	<5.000	<5.000
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00
Vinyl Chloride	ug/L	<1.0	<1.0	<1.0	<1.0	<.1	<1.0	<1.0
Xylenes, Total	ug/L	<3.00	<3.00	<3.00	<3.00	<.13	<3.00	<3.00
Zinc	ug/L	<20.00	22.90	83.60	<60.00	<6.95	<10.00	13.60

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

Table 9

Analytical Data Summary for MW-380

Constituents	Units	9/19/2012	3/27/2013	9/25/2013	11/15/2013	4/16/2014	9/26/2014	3/11/2015	9/2/2015
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00		<1.00	<.21	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00		<1.00	<.12	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00		<1.00	<.10	<1.00	<1.00
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00		<1.00	<.12	<1.00	<1.00
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00		<1.00	<.21	<1.00	<1.00
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00		<2.00	<.15	<2.00	<2.00
1,1-Dichloropropene	ug/L	<1		<1					
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00		<1.00	<.19	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene	ug/L	<10.0		<10.8					
1,2,4-Trichlorobenzene	ug/L	<5		<5					
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00		<10.00	<.12	<10.00	<10.00
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00		<10.00	<.13	<10.00	<10.00
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00		<1.00	<.14	<1.00	<1.00
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00		<1.00	<.18	<1.00	<1.00
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00		<1.00	<.87	<1.00	<1.00
1,3,5-Trinitrobenzene	ug/L	<10.0		<10.8					
1,3-Dichlorobenzene	ug/L	<1		<1					
1,3-Dichloropropane	ug/L	<1		<1					
1,3-Dinitrobenzene	ug/L	<10.0		<10.8					
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00		<1.00	<.20	<1.00	<1.00
1,4-Naphthoquinone	ug/L	<10.0		<10.8					
1-Naphthylamine	ug/L	<10.0		<10.8					
2,2`-oxybis[1-Chloropropane]	ug/L	<10.0		<10.8					
2,2-Dichloropropane	ug/L	<4		<4					
2,3,4,6-Tetrachlorophenol	ug/L	<10.0		<10.8					
2,4,5-T	ug/L	<1.00		<1.08					
2,4,5-TP [Silvex]	ug/L	<1.00		<1.08					
2,4,5-Trichlorophenol	ug/L	<10.0		<10.8					
2,4,6-Trichlorophenol	ug/L	<10.0		<10.8					
2,4-D	ug/L	<1.00		<1.08					
2,4-Dichlorophenol	ug/L	<10.0		<10.8					
2,4-Dimethylphenol	ug/L	<10.0		<10.8					
2,4-Dinitrophenol	ug/L	<20.0		<21.5					
2,4-Dinitrotoluene	ug/L	<10.0		<10.8					
2,6-Dichlorophenol	ug/L	<10.0		<10.8					
2,6-Dinitrotoluene	ug/L	<10.0		<10.8					
2-Acetylaminofluorene	ug/L	<10.0		<10.8					
2-Butanone	ug/L	<10.00	<10.00	<10.00		<10.00	<.47	<10.00	<10.00
2-Chloronaphthalene	ug/L	<10.0		<10.8					
2-Chlorophenol	ug/L	<10.0		<10.8					
2-Hexanone	ug/L	<10.0	<10.0	<10.0		<10.0	<.2	<10.0	<10.0
2-Methylnaphthalene	ug/L	<10.0		<10.8					
2-Methylphenol [o-Cresol]	ug/L	<10.0		<10.8					
2-Naphthylamine	ug/L	<10.0		<10.8					
2-Nitroaniline	ug/L	<10.0		<10.8					
2-Nitrophenol	ug/L	<10.0		<10.8					
3,3-Dichlorobenzidine	ug/L	<10.0		<53.8					
3,3-Dimethylbenzidine	ug/L	<10.0		<10.8					
3-Methylcholanthrene	ug/L	<10.0		<10.8					
3-Nitroaniline	ug/L	<10.0		<10.8					
4,4`-DDD	ug/L	<.0320		<.0356					
4,4`-DDE	ug/L	<.0320		<.0356					
4,4`-DDT	ug/L	<.0320		<.0356					
4,6-Dinitro-2-methylphenol	ug/L	<10.0		<10.8					
4-Aminobiphenyl	ug/L	<10.0		<10.8					
4-Bromophenyl phenyl ether	ug/L	<10.0		<10.8					
4-Chloro-3-methylphenol	ug/L	<10.0		<10.8					
4-Chloroaniline	ug/L	<10.0		<10.8					
4-Chlorophenyl phenyl ether	ug/L	<10.0		<10.8					
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00		<10.00	<.22	<10.00	<10.00
4-Nitroaniline	ug/L	<10.0		<10.8					
4-Nitrophenol	ug/L	<10.0		<10.8					
5-Nitro-o-toluidine	ug/L	<10.0		<10.8					
7,12-Dimethylbenz[a]anthracene	ug/L	<10.0		<10.8					
Acenaphthene	ug/L	<10.0		<10.8					
Acetone	ug/L	<10.00	<10.00	<10.00		<10.00	<1.79	<10.00	<10.00
Acetonitrile	ug/L	<10000		<10000					
Acetophenone	ug/L	<10.0		<10.8					
Acrolein	ug/L	<10		<10					
Acrylonitrile	ug/L	<10.00	<10.00	<10.00		<10.00	<.53	<10.00	<10.00
Aldrin	ug/L	<.0320		<.0356					
Alkalinity as CaCO3	mg/L						<1.27	<5.00	<5.00
Allyl Chloride	ug/L	<20		<2					
alpha-BHC	ug/L	<.0320		<.0356					
Aluminum	ug/L						45700	17300	34200
Anthracene	ug/L	<10.0		<10.8					
Antimony	ug/L	<6.000	<6.000	<6.000		<6.000	<.161	.180	<1.000

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

Table 9

Analytical Data Summary for MW-380

Constituents	3/23/2016	10/20/2016	3/9/2017	6/28/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019
1,1,1,2-Tetrachloroethane	<1.00	<.21	<.21		<.21	<.21	<.38	<.38	<.38
1,1,1-Trichloroethane	<1.00	<.12	<.12		<.12	<.12	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<1.00	<.10	<.10		<.10	<.10	<.47	<.47	<.47
1,1,2-Trichloroethane	<1.00	<.12	<.12		<.12	<.12	<.45	<.45	<.45
1,1-Dichloroethane	<1.00	<.21	<.21		<.21	<.21	<.22	<.22	<.22
1,1-Dichloroethene	<2.00	<.15	<.15		<.15	<.15	<.56	<.56	<.56
1,1-Dichloropropene									
1,2,3-Trichloropropane	<1.00	<.19	<.19		<.19	<.19	<.59	<.59	<.59
1,2,4,5-Tetrachlorobenzene									
1,2,4-Trichlorobenzene									
1,2-Dibromo-3-chloropropane	<10.00	<.50	<.50		<.50	<.50	<1.20	<1.20	<1.20
1,2-Dibromoethane	<10.00	<.13	<.13		<.13	<.13	<.34	<.34	<.34
1,2-Dichlorobenzene	<1.00	<.14	<.14		<.14	<.14	<.37	<.37	<.37
1,2-Dichloroethane	<1.00	<.18	<.18		<.18	<.18	<.39	<.39	<.39
1,2-Dichloropropane	<1.00	<.87	<.87		<.87	<.87	<.27	<.27	<.27
1,3,5-Trinitrobenzene									
1,3-Dichlorobenzene									
1,3-Dichloropropane									
1,3-Dinitrobenzene									
1,4-Dichlorobenzene	<1.00	<.20	<.20		<.20	<.20	<.23	<.23	<.23
1,4-Naphthoquinone									
1-Naphthylamine									
2,2`-oxybis[1-Chloropropane]									
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	<10.00	<1.04	<1.04		<1.04	<1.04	<2.10	<2.10	<2.10
2-Chloronaphthalene									
2-Chlorophenol									
2-Hexanone	<10.0	<.2	<.2		<.2	<.2	<2.0	<2.0	<2.0
2-Methylnaphthalene									
2-Methylphenol [o-Cresol]									
2-Naphthylamine									
2-Nitroaniline									
2-Nitrophenol									
3,3-Dichlorobenzidine									
3,3-Dimethylbenzidine									
3-Methylcholanthrene									
3-Nitroaniline									
4,4`-DDD									
4,4`-DDE									
4,4`-DDT									
4,6-Dinitro-2-methylphenol									
4-Aminobiphenyl									
4-Bromophenyl phenyl ether									
4-Chloro-3-methylphenol									
4-Chloroaniline									
4-Chlorophenyl phenyl ether									
4-Methyl-2-pentanone	<10.00	<.22	<.22		<.22	<.22	<2.10	<2.10	<2.10
4-Nitroaniline									
4-Nitrophenol									
5-Nitro-o-toluidine									
7,12-Dimethylbenz[a]anthracene									
Acenaphthene									
Acetone	<10.00	<1.79	12.20	4.52	<1.79	2.46	<3.10	<3.10	<3.10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<10.00	<.53	<.53		<.53	<.53	<2.20	<2.20	<2.20
Aldrin									
Alkalinity as CaCO3	<5.00	<2.41	<1.60		<1.60	<1.60	<1.90	<1.90	24.80
Allyl Chloride									
alpha-BHC									
Aluminum	31600	19400	50400		15900	31200	21100	17900	12400
Anthracene									
Antimony	<.237	<3.560	<.185		<1.850	12.200	<1.320	<3.710	<.530

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

Table 9

Analytical Data Summary for MW-380

Constituents	3/10/2020	9/15/2020	4/15/2021	10/27/2021	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/18/2024
1,1,1,2-Tetrachloroethane	<.38	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00
1,1-Dichloropropene									
1,2,3-Trichloropropane	<.59	<.59	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene									
1,2,4-Trichlorobenzene									
1,2-Dibromo-3-chloropropane	<1.20	<1.20	<1.20	<1.20	<1.20	<5.00	<5.00	<5.00	<5.00
1,2-Dibromoethane	<.34	<.34	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00
1,3,5-Trinitrobenzene									
1,3-Dichlorobenzene									
1,3-Dichloropropane									
1,3-Dinitrobenzene									
1,4-Dichlorobenzene	<.23	<.23	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00
1,4-Naphthoquinone									
1-Naphthylamine									
2,2`-oxybis[1-Chloropropane]									
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	<2.10	<2.10	<2.10	<2.10	<2.10	<10.00	<10.00	<10.00	<10.00
2-Chloronaphthalene									
2-Chlorophenol									
2-Hexanone	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene									
2-Methylphenol [o-Cresol]									
2-Naphthylamine									
2-Nitroaniline									
2-Nitrophenol									
3,3-Dichlorobenzidine									
3,3-Dimethylbenzidine									
3-Methylcholanthrene									
3-Nitroaniline									
4,4`-DDD									
4,4`-DDE									
4,4`-DDT									
4,6-Dinitro-2-methylphenol									
4-Aminobiphenyl									
4-Bromophenyl phenyl ether									
4-Chloro-3-methylphenol									
4-Chloroaniline									
4-Chlorophenyl phenyl ether									
4-Methyl-2-pentanone	<2.10	<2.10	<2.10	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00
4-Nitroaniline									
4-Nitrophenol									
5-Nitro-o-toluidine									
7,12-Dimethylbenz[a]anthracene									
Acenaphthene									
Acetone	<3.10	<3.10	<3.10	<3.10	<3.10	<10.00	<10.00	<10.00	<10.00
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<2.20	<2.20	<2.20	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00
Aldrin									
Alkalinity as CaCO3	<1.90	<1.90	<2.30	54.50	19.60	<20.00	43.00	<10.00	<50.00
Allyl Chloride									
alpha-BHC									
Aluminum	18500	32300	39100	20400	10200	4740	19200	14500	16000
Anthracene									
Antimony	<.580	<.510	<1.100	<1.100	<6.900	<2.000	<2.000	<2.000	<2.000

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

Table 9

Analytical Data Summary for MW-380

Constituents	10/3/2024
1,1,1,2-Tetrachloroethane	<1.00
1,1,1-Trichloroethane	<1.00
1,1,2,2-Tetrachloroethane	<1.00
1,1,2-Trichloroethane	<1.00
1,1-Dichloroethane	<1.00
1,1-Dichloroethene	<1.00
1,1-Dichloropropene	
1,2,3-Trichloropropane	<1.00
1,2,4,5-Tetrachlorobenzene	
1,2,4-Trichlorobenzene	
1,2-Dibromo-3-chloropropane	<5.00
1,2-Dibromoethane	<1.00
1,2-Dichlorobenzene	<1.00
1,2-Dichloroethane	<1.00
1,2-Dichloropropane	<1.00
1,3,5-Trinitrobenzene	
1,3-Dichlorobenzene	
1,3-Dichloropropane	
1,3-Dinitrobenzene	
1,4-Dichlorobenzene	<1.00
1,4-Naphthoquinone	
1-Naphthylamine	
2,2`-oxybis[1-Chloropropane]	
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	<10.00
2-Chloronaphthalene	
2-Chlorophenol	
2-Hexanone	<5.0
2-Methylnaphthalene	
2-Methylphenol [o-Cresol]	
2-Naphthylamine	
2-Nitroaniline	
2-Nitrophenol	
3,3-Dichlorobenzidine	
3,3-Dimethylbenzidine	
3-Methylcholanthrene	
3-Nitroaniline	
4,4`-DDD	
4,4`-DDE	
4,4`-DDT	
4,6-Dinitro-2-methylphenol	
4-Aminobiphenyl	
4-Bromophenyl phenyl ether	
4-Chloro-3-methylphenol	
4-Chloroaniline	
4-Chlorophenyl phenyl ether	
4-Methyl-2-pentanone	<5.00
4-Nitroaniline	
4-Nitrophenol	
5-Nitro-o-toluidine	
7,12-Dimethylbenz[a]anthracene	
Acenaphthene	
Acetone	<10.00
Acetonitrile	
Acetophenone	
Acrolein	
Acrylonitrile	<5.00
Aldrin	
Alkalinity as CaCO3	32.00
Allyl Chloride	
alpha-BHC	
Aluminum	1420
Anthracene	
Antimony	<2.000

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

Table 9

Analytical Data Summary for MW-380

Constituents	Units	9/19/2012	3/27/2013	9/25/2013	11/15/2013	4/16/2014	9/26/2014	3/11/2015	9/2/2015
Arsenic	ug/L	<8.00	<5.00	2.05		<5.00	<9.45	<20.00	<60.00
Barium	ug/L	<10.00	10.70	4.91		<10.00	7.97	8.05	9.31
Benzene	ug/L	<.50	<.50	<.50		<.50	<.11	<.50	<.50
Benzo[a]anthracene	ug/L	<10.0		<10.8					
Benzo[a]pyrene	ug/L	<10.0		<10.8					
Benzo[b]fluoranthene	ug/L	<10.0		<10.8					
Benzo[ghi]perylene	ug/L	<10.0		<10.8					
Benzo[k]fluoranthene	ug/L	<10.0		<10.8					
Benzyl alcohol	ug/L	<10.0		<10.8					
Beryllium	ug/L	9.72	6.40	17.60		5.13	8.07	<10.00	<30.00
beta-BHC	ug/L	<.0320		<.0356					
Bis(2-chloroethoxy)methane	ug/L	<10.0		<10.8					
Bis(2-chloroethyl)ether	ug/L	<10.0		<10.8					
Bis(2-ethylhexyl)phthalate	ug/L	<10.0		<10.8					
Bromochloromethane	ug/L	<5.00	<5.00	<5.00		<5.00	<.12	<5.00	<5.00
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00		<1.00	<.12	<1.00	<1.00
Bromoform	ug/L	<5.00	<5.00	<5.00		<5.00	<.14	<5.00	<5.00
Bromomethane	ug/L	<20.00	<4.00	<4.00		<4.00	<.22	<4.00	<4.00
Butylbenzylphthalate	ug/L	<10.0		<10.8					
Cadmium	ug/L	14.700000	5.390000	21.200001		7.180000	12.700000	15.900000	10.500000
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00		<1.00	<.15	<1.00	<1.00
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00		<2.00	<.24	<2.00	<2.00
Chlordane	ug/L	<2.00		<2.22					
Chlorobenzene	ug/L	<1.00	<1.00	<1.00		<1.00	<.19	<1.00	<1.00
Chlorobenzilate	ug/L	<10.0		<10.8					
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00		<5.00	<.20	<5.00	<5.00
Chloroethane	ug/L	<4.00	<4.00	<4.00		<4.00	<.15	<4.00	<4.00
Chloroform	ug/L	<1.00	<1.00	<1.00		<1.00	<.28	<1.00	<1.00
Chloromethane	ug/L	<3.00	<3.00	<3.00		<3.00	<.31	<3.00	<3.00
Chloroprene	ug/L	<1		<1					
Chromium	ug/L	<20.00000	<20.00000	5.72000		<20.00000	23.80000	<50.00000	<150.00000
Chrysene	ug/L	<10.0		<10.8					
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00		<1.00	<.13	<1.00	<1.00
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00		<5.00	<.15	<5.00	<5.00
Cobalt	ug/L	1420	1120	1450		563	1140	1490	<15
Copper	ug/L	<20.00	<20.00	<20.00		<20.00	<4.85	<20.00	<2.00
Cyanide	mg/L	<.01		<.01					
delta-BHC	ug/L	<.0320		<.0356					
Diallate	ug/L	<10.0		<10.8					
Dibenzo(a,h)anthracene	ug/L	<10.0		<10.8					
Dibenzofuran	ug/L	<10.0		<10.8					
Dibromomethane	ug/L	<1.00	<1.00	<1.00		<1.00	<.18	<1.00	<1.00
Dichlorodifluoromethane	ug/L	<3		<3					
Dieldrin	ug/L	<.0320		<.0356					
Diethyl phthalate	ug/L	<10.0		<10.8					
Dimethoate	ug/L	<10.0		<10.8					
Dimethyl phthalate	ug/L	<10.0		<10.8					
Di-n-butylphthalate	ug/L	<10.0		<10.8					
Di-n-octylphthalate	ug/L	<10.0		<21.5					
Dinoseb	ug/L	<10.0		<10.8					
Diphenylamine	ug/L	<10.0		<10.8					
Disulfoton	ug/L	<10.0		<10.8					
Endosulfan I	ug/L	<.0320		<.0356					
Endosulfan II	ug/L	<.0320		<.0356					
Endosulfan Sulfate	ug/L	<.0320		<.0356					
Endrin	ug/L	<.0320		<.0356					
Endrin Aldehyde	ug/L	<.0320		<.0356					
Ethyl Methacrylate	ug/L	<2		<2					
Ethyl Methanesulfonate	ug/L	<10.0		<10.8					
Ethylbenzene	ug/L	<1.00	<1.00	<1.00		<1.00	<.21	<1.00	<1.00
Famphur	ug/L	<20.0		<21.5					
Fluoranthene	ug/L	<10.0		<10.8					
Fluorene	ug/L	<10.0		<10.8					
gamma-BHC (Lindane)	ug/L	<.0320		<.0356					
Heptachlor	ug/L	<.0320		<.0356					
Heptachlor Epoxide	ug/L	<.0320		<.0356					
Hexachlorobenzene	ug/L	<10.0		<10.8					
Hexachlorobutadiene	ug/L	<10.0		<10.8					
Hexachlorocyclopentadiene	ug/L	<10.0		<21.5					
Hexachloroethane	ug/L	<10.0		<10.8					
Hexachloropropene	ug/L	<10.0		<10.8					
Indeno[1,2,3-cd]pyrene	ug/L	<10.0		<10.8					
Iodomethane	ug/L	<10.0	<10.0	<10.0		<10.0	<.8	<10.0	<10.0
Iron	ug/L						255000	290000	367000
Isobutanol	ug/L	<10000		<10000					
Isodrin	ug/L	<10.0		<10.8					
Isophorone	ug/L	<10.0		<10.8					

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

Table 9

Analytical Data Summary for MW-380

Constituents	3/23/2016	10/20/2016	3/9/2017	6/28/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019
Arsenic	4.94	<6.72	<50.50		<5.05	<25.30	5.63	<5.25	<5.25
Barium	6.95	8.93	<104.00		9.17	<52.00	7.98	6.56	11.10
Benzene	<.50	<.11	<.11		<.11	<.11	<.22	<.22	<.22
Benzo[a]anthracene									
Benzo[a]pyrene									
Benzo[b]fluoranthene									
Benzo[ghi]perylene									
Benzo[k]fluoranthene									
Benzyl alcohol									
Beryllium	7.23	6.11	11.60		4.72	6.90	6.99	5.15	2.86
beta-BHC									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-ethylhexyl)phthalate									
Bromochloromethane	<5.00	<.12	<.12		<.12	<.12	<.54	<.54	<.54
Bromodichloromethane	<1.00	<.12	<.12		<.12	<.12	<.39	<.39	<.39
Bromoform	<5.00	<.14	<.14		<.14	<.14	<.78	<.78	<.78
Bromomethane	<4.00	<.22	<.22		<.22	.31	<1.10	<1.10	<1.10
Butylbenzylphthalate									
Cadmium	6.330000	9.980000	57.400002	5.210000	9.290000	10.600000	12.500000	4.400000	6.880000
Carbon Disulfide	<1.00	<.15	<.15		<.15	<.15	<.45	<.45	<.45
Carbon Tetrachloride	<2.00	<.24	<.24		<.24	<.24	<.65	<.65	<.65
Chlordane									
Chlorobenzene	<1.00	<.19	<.19		<.19	<.19	<.40	<.40	<.40
Chlorobenzilate									
Chlorodibromomethane	<5.00	<.20	<.20		<.20	<.20	<.75	<.75	<.75
Chloroethane	<4.00	<.15	<.15		<.15	<.15	<.79	<.79	<.79
Chloroform	<1.00	<.28	<.28		<.28	<.28	<1.30	<1.30	<1.30
Chloromethane	<3.00	<.31	<.31		<.31	<.31	<.61	<.61	<.61
Chloroprene									
Chromium	<.35500	1.28000	<72.89999		<7.29000	<36.50000	2.35000	<6.86000	<6.86000
Chrysene									
cis-1,2-Dichloroethene	<1.00	<.13	<.13		<.13	<.13	<.21	<.21	<.21
cis-1,3-Dichloropropene	<5.00	<.15	<.15		<.15	<.15	<.25	<.25	<.25
Cobalt	1120	1150	1840		1290	1430	1040	607	867
Copper	2.04	4.42	3.43		<21.90	<110.00	1.68	<14.00	<14.00
Cyanide									
delta-BHC									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromomethane	<1.00	<.18	<.18		<.18	<.18	<.33	<.33	<.33
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butylphthalate									
Di-n-octylphthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan I									
Endosulfan II									
Endosulfan Sulfate									
Endrin									
Endrin Aldehyde									
Ethyl Methacrylate									
Ethyl Methanesulfonate									
Ethylbenzene	<1.00	<.21	<.21		<.21	<.21	<.31	<.31	<.31
Famphur									
Fluoranthene									
Fluorene									
gamma-BHC (Lindane)									
Heptachlor									
Heptachlor Epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno[1,2,3-cd]pyrene									
Iodomethane	<10.0	<.8	<.8		<.8	<.8	<7.0	<7.0	<7.0
Iron	394000	374000	422000		305000	410000	342000	321000	336000
Isobutanol									
Isodrin									
Isophorone									

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

Table 9

Analytical Data Summary for MW-380

Constituents	3/10/2020	9/15/2020	4/15/2021	10/27/2021	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/18/2024
Arsenic	2.35	4.62	3.56	3.45	<7.50	<4.00	4.30	4.60	5.40
Barium	6.49	8.70	7.31	9.42	<8.80	10.40	7.70	9.70	9.30
Benzene	<.22	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00
Benzo[a]anthracene									
Benzo[a]pyrene									
Benzo[b]fluoranthene									
Benzo[ghi]perylene									
Benzo[k]fluoranthene									
Benzyl alcohol									
Beryllium	2.85	7.51	7.42	6.22	<2.70	<4.00	4.70	5.00	4.90
beta-BHC									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-ethylhexyl)phthalate									
Bromochloromethane	<.54	<.54	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.10	<1.10	<1.10	<1.10	<1.10	<1.00	<1.00	<1.00	<1.00
Butylbenzylphthalate									
Cadmium	5.900000	8.940001	10.500000	7.250000	1.360000	<.800000	3.100000	9.200000	36.500000
Carbon Disulfide	<.45	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00
Chlordane									
Chlorobenzene	<.40	<.40	<.40	<.40	<.40	<1.00	<1.00	<1.00	<1.00
Chlorobenzilate									
Chlorodibromomethane	<.75	<.75	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<.79	<.79	<.79	<.79	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.30	<1.30	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<.61	<.61	<.61	<.61	<1.00	<1.00	<1.00	<1.00
Chloroprene									
Chromium	<1.10000	1.69000	2.34000	1.57000	<11.00000	<8.00000	<8.00000	<8.00000	<8.00000
Chrysene									
cis-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<.21	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<.25	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00
Cobalt	856	1180	1150	795	701	407	758	1130	936
Copper	<3.20	3.53	1.99	1.62	<18.00	<4.00	<4.00	<4.00	71.80
Cyanide									
delta-BHC									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromomethane	<.33	<.33	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00
Dichlorodifluoromethane									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butylphthalate									
Di-n-octylphthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan I									
Endosulfan II									
Endosulfan Sulfate									
Endrin									
Endrin Aldehyde									
Ethyl Methacrylate									
Ethyl Methanesulfonate									
Ethylbenzene	<.31	<.31	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00
Famphur									
Fluoranthene									
Fluorene									
gamma-BHC (Lindane)									
Heptachlor									
Heptachlor Epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno[1,2,3-cd]pyrene									
Iodomethane	<7.0	<7.0	<7.0	<7.0	<7.0	<1.0	<1.0	<1.0	<1.0
Iron	307000	419000	495000	436000	501000	462000	453000	435000	217000
Isobutanol									
Isodrin									
Isophorone									

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

Table 9

Analytical Data Summary for MW-380

Constituents	10/3/2024
Arsenic	11.20
Barium	12.70
Benzene	<1.00
Benzo[a]anthracene	
Benzo[a]pyrene	
Benzo[b]fluoranthene	
Benzo[ghi]perylene	
Benzo[k]fluoranthene	
Benzyl alcohol	
Beryllium	<4.00
beta-BHC	
Bis(2-chloroethoxy)methane	
Bis(2-chloroethyl)ether	
Bis(2-ethylhexyl)phthalate	
Bromochloromethane	<1.00
Bromodichloromethane	<1.00
Bromoform	<1.00
Bromomethane	<1.00
Butylbenzylphthalate	
Cadmium	<.800000
Carbon Disulfide	<1.00
Carbon Tetrachloride	<1.00
Chlordane	
Chlorobenzene	<1.00
Chlorobenzilate	
Chlorodibromomethane	<1.00
Chloroethane	<1.00
Chloroform	<1.00
Chloromethane	<1.00
Chloroprene	
Chromium	<8.00000
Chrysene	
cis-1,2-Dichloroethene	<1.00
cis-1,3-Dichloropropene	<1.00
Cobalt	263
Copper	<4.00
Cyanide	
delta-BHC	
Diallate	
Dibenzo(a,h)anthracene	
Dibenzofuran	
Dibromomethane	<1.00
Dichlorodifluoromethane	
Dieldrin	
Diethyl phthalate	
Dimethoate	
Dimethyl phthalate	
Di-n-butylphthalate	
Di-n-octylphthalate	
Dinoseb	
Diphenylamine	
Disulfoton	
Endosulfan I	
Endosulfan II	
Endosulfan Sulfate	
Endrin	
Endrin Aldehyde	
Ethyl Methacrylate	
Ethyl Methanesulfonate	
Ethylbenzene	<1.00
Famphur	
Fluoranthene	
Fluorene	
gamma-BHC (Lindane)	
Heptachlor	
Heptachlor Epoxide	
Hexachlorobenzene	
Hexachlorobutadiene	
Hexachlorocyclopentadiene	
Hexachloroethane	
Hexachloropropene	
Indeno[1,2,3-cd]pyrene	
Iodomethane	<1.0
Iron	184000
Isobutanol	
Isodrin	
Isophorone	

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

Table 9

Analytical Data Summary for MW-380

Constituents	Units	9/19/2012	3/27/2013	9/25/2013	11/15/2013	4/16/2014	9/26/2014	3/11/2015	9/2/2015
Isosafrole	ug/L	<10.0		<10.8					
Kepone	ug/L	<10.0		<10.8					
Lead	ug/L	<4.000	<4.000	<4.000		<4.000	.816	.928	.757
Mercury	ug/L	<.267		<.200					
Methacrylonitrile	ug/L	<1		<1					
Methapyrilene	ug/L	<10.0		<10.8					
Methoxychlor	ug/L	<.0320		<.0356					
Methyl Methacrylate	ug/L	<2		<2					
Methyl Methanesulfonate	ug/L	<10.0		<10.8					
Methyl Parathion	ug/L	<10.0		<10.8					
Methylene Chloride	ug/L	<5.00	<5.00	<5.00		<5.00	<.17	<5.00	<5.00
Naphthalene	ug/L	<5		<5					
Nickel	ug/L	2120	1600	2140		818	1650	1290	1970
Nitrobenzene	ug/L	<10.0		<10.8					
N-Nitrosodiethylamine	ug/L	<10.0		<10.8					
N-Nitrosodimethylamine	ug/L	<10.0		<10.8					
N-Nitrosodi-n-butylamine	ug/L	<10.0		<10.8					
N-Nitrosodi-n-propylamine	ug/L	<10.0		<10.8					
N-Nitrosodiphenylamine	ug/L	<10.0		<10.8					
N-Nitrosomethylethylamine	ug/L	<10.0		<10.8					
N-Nitrosopiperidine	ug/L	<10.0		<10.8					
N-Nitrosopyrrolidine	ug/L	<10.0		<10.8					
o,o,o-Triethylphosphorothioate	ug/L	<10.0		<10.8					
o-Toluidine	ug/L	<10.0		<10.8					
p-[Dimethylamino]azobenzene	ug/L	<10.0		<10.8					
Parathion	ug/L	<10.0		<10.8					
PCB-1016	ug/L	<.800		<.899					
PCB-1221	ug/L	<.800		<.899					
PCB-1232	ug/L	<.800		<.899					
PCB-1242	ug/L	<.800		<.899					
PCB-1248	ug/L	<.800		<.899					
PCB-1254	ug/L	<.800		<.899					
PCB-1260	ug/L	<.800		<.899					
Pentachlorobenzene	ug/L	<10.0		<10.8					
Pentachloronitrobenzene	ug/L	<10.0		<10.8					
Pentachlorophenol	ug/L	<10.0		<10.8					
pH	SU						4.02	4.37	4.50
Phenacetin	ug/L	<10.0		<10.8					
Phenanthrene	ug/L	<10.0		<10.8					
Phenol	ug/L	<10.0		<10.8					
Phorate	ug/L	<10.0		<10.8					
p-Phenylenediamine	ug/L	<10.0		<10.8					
Pronamide	ug/L	<10.0		<10.8					
Propionitrile	ug/L	<10		<10					
Pyrene	ug/L	<10.0		<10.8					
Safrole	ug/L	<10.0		<10.8					
Selenium	ug/L	<5.00	<5.00	<5.00		<5.00	<33.40	<50.00	<150.00
Silver	ug/L	31.600	<20.000	<20.000		<20.000	<.420	<1.000	<1.000
Styrene	ug/L	<1.00	<1.00	<1.00		<1.00	<.10	<1.00	<1.00
Sulfate	mg/L						4760	7010	4480
Sulfide	mg/L	<1.0		7.8	<1.0	<1.0			
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00		<1.00	<.18	<1.00	<1.00
Thallium	ug/L	<2.000	<2.000	<2.000		<2.000	.268	.181	<1.000
Thionazin	ug/L	<10.0		<10.8					
Tin	ug/L	<100		490		<100			
Toluene	ug/L								
Total Suspended Solids	mg/L						40.00	11.30	11.00
Toxaphene	ug/L	<2.00		<2.22					
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00		<1.00	<.21	<1.00	<1.00
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00		<5.00	<.22	<5.00	<5.00
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00		<10.00	<.13	<10.00	<10.00
Trichloroethene	ug/L	<1.00	<1.00	<1.00		<1.00	<.19	<1.00	<1.00
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00		<4.00	<.17	<4.00	<4.00
Vanadium	ug/L	<50.00	19.40	6.71		<50.00	<4.49	5.35	<150.00
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00		<2.00	<.74	<10.00	<10.00
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00		<1.00	<.10	<1.00	<1.00
Xylenes, Total	ug/L	<3.000	<3.000	<3.000		<3.000	<.130	<3.000	<3.000
Zinc	ug/L	5060	4530	6480		2370	4830	4540	5390

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

Table 9

Analytical Data Summary for MW-380

Constituents	3/23/2016	10/20/2016	3/9/2017	6/28/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019
Isosafrole									
Kepone									
Lead	.306	.474	1.740		<3.240	<16.200	.637	<1.890	.332
Mercury									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl Methacrylate									
Methyl Methanesulfonate									
Methyl Parathion									
Methylene Chloride	<5.00	.30	<.17		<.17	<.17	<1.70	<1.70	<1.70
Naphthalene									
Nickel	1450	1430	2660		1270	2070	1440	807	1270
Nitrobenzene									
N-Nitrosodiethylamine									
N-Nitrosodimethylamine									
N-Nitrosodi-n-butylamine									
N-Nitrosodi-n-propylamine									
N-Nitrosodiphenylamine									
N-Nitrosomethylethylamine									
N-Nitrosopiperidine									
N-Nitrosopyrrolidine									
o,o,o-Triethylphosphorothioate									
o-Toluidine									
p-[Dimethylamino]azobenzene									
Parathion									
PCB-1016									
PCB-1221									
PCB-1232									
PCB-1242									
PCB-1248									
PCB-1254									
PCB-1260									
Pentachlorobenzene									
Pentachloronitrobenzene									
Pentachlorophenol									
pH	4.70	4.61	4.42		4.77	4.48	4.69	4.79	4.92
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
p-Phenylenediamine									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium	11.90	13.70	32.20		<9.28	<46.40	23.30	<7.00	10.60
Silver	<.153	<2.300	<14.000		<1.400	<7.000	<.115	<2.590	<.370
Styrene	<1.00	<.10	<.10		<.10	<.10	<.37	<.37	<.37
Sulfate	8560	7320	6160		3920	7210	3150	3650	2850
Sulfide									
Tetrachloroethene	<1.00	<.18	<.18		<.18	<.18	<.48	<.48	<.48
Thallium	.103	.293	.357		.239	<3.220	<.570	<1.890	<.270
Thionazin									
Tin									
Toluene							<.43	<.43	<.43
Total Suspended Solids	39.30	37.00	12.50	6.25	6.38	18.50	48.30	18.50	14.00
Toxaphene									
trans-1,2-Dichloroethene	<1.00	<.21	<.21		<.21	<.21	<.27	<.27	<.27
trans-1,3-Dichloropropene	<5.00	<.22	<.22		<.22	<.22	<.56	<.56	<.56
trans-1,4-Dichloro-2-butene	<10.00	<.13	<.13		<.13	<.13	<1.10	<1.10	<1.10
Trichloroethene	<1.00	<.19	<.19		<.19	<.19	<.43	<.43	<.43
Trichlorofluoromethane	<4.00	<.17	<.17		<.17	<.17	<.38	<.38	<.38
Vanadium	4.65	<3.83	6.02		<8.40	<42.00	4.78	<5.74	1.59
Vinyl Acetate	<10.00	<.74	<.74		<.74	<.74	<2.50	<2.50	<2.50
Vinyl Chloride	<1.00	<.10	<.10		<.10	<.10	<.60	<.60	<.18
Xylenes, Total	<3.000	<.130	.672		<.130	<.130	<.400	<.400	<.400
Zinc	3870	3890	8780	4580	3580	4970	4170	3250	2730

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

Table 9

Analytical Data Summary for MW-380

Constituents	3/10/2020	9/15/2020	4/15/2021	10/27/2021	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/18/2024
Isosafrole									
Kepone									
Lead	<.270	.463	.408	1.100	<2.400	<4.000	<4.000	<4.000	<4.000
Mercury									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl Methacrylate									
Methyl Methanesulfonate									
Methyl Parathion									
Methylene Chloride	<1.70	<1.70	<1.70	<1.70	<1.70	<5.00	<5.00	<5.00	<5.00
Naphthalene									
Nickel	1130	1670	1450	1100	1020	531	965	1410	1290
Nitrobenzene									
N-Nitrosodiethylamine									
N-Nitrosodimethylamine									
N-Nitrosodi-n-butylamine									
N-Nitrosodi-n-propylamine									
N-Nitrosodiphenylamine									
N-Nitrosomethylethylamine									
N-Nitrosopiperidine									
N-Nitrosopyrrolidine									
o,o,o-Triethylphosphorothioate									
o-Toluidine									
p-[Dimethylamino]azobenzene									
Parathion									
PCB-1016									
PCB-1221									
PCB-1232									
PCB-1242									
PCB-1248									
PCB-1254									
PCB-1260									
Pentachlorobenzene									
Pentachloronitrobenzene									
Pentachlorophenol									
pH	4.89	4.67	4.79	4.93	5.35	5.40	3.70	4.80	4.00
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
p-Phenylenediamine									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium	7.70	15.60	13.30	5.48	<9.60	<4.00	9.60	9.60	8.50
Silver	<.370	<.370	<.420	<.420	<4.900	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00
Sulfate	3000	3450	3760	3100	3430	3210	3410	3450	3590
Sulfide									
Tetrachloroethene	<.48	<.48	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00
Thallium	<.260	.292	<.260	<.260	<2.600	<2.000	<2.000	<2.000	<2.000
Thionazin									
Tin									
Toluene	<.43	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	17.00	26.10	29.40	62.20	62.00				
Toxaphene									
trans-1,2-Dichloroethene	<.27	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<1.10	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00
Vanadium	2.03	5.37	5.86	4.68	<11.00	<20.00	<20.00	<20.00	<20.00
Vinyl Acetate	<2.50	<2.50	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<.18	<.18	<.18	<.18	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.400	<.400	<.400	<.400	<.400	<2.000	<2.000	<2.000	<2.000
Zinc	2960	4610	4780	2980	2610	669	2290	4800	7070

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

Table 9

Analytical Data Summary for MW-380

Constituents	10/3/2024
Isosafrole	
Kepone	
Lead	<4.000
Mercury	
Methacrylonitrile	
Methapyrilene	
Methoxychlor	
Methyl Methacrylate	
Methyl Methanesulfonate	
Methyl Parathion	
Methylene Chloride	<5.00
Naphthalene	
Nickel	440
Nitrobenzene	
N-Nitrosodiethylamine	
N-Nitrosodimethylamine	
N-Nitrosodi-n-butylamine	
N-Nitrosodi-n-propylamine	
N-Nitrosodiphenylamine	
N-Nitrosomethylethylamine	
N-Nitrosopiperidine	
N-Nitrosopyrrolidine	
o,o,o-Triethylphosphorothioate	
o-Toluidine	
p-[Dimethylamino]azobenzene	
Parathion	
PCB-1016	
PCB-1221	
PCB-1232	
PCB-1242	
PCB-1248	
PCB-1254	
PCB-1260	
Pentachlorobenzene	
Pentachloronitrobenzene	
Pentachlorophenol	
pH	5.00
Phenacetin	
Phenanthrene	
Phenol	
Phorate	
p-Phenylenediamine	
Pronamide	
Propionitrile	
Pyrene	
Safrole	
Selenium	<4.00
Silver	<4.000
Styrene	<1.00
Sulfate	2020
Sulfide	
Tetrachloroethene	<1.00
Thallium	<2.000
Thionazin	
Tin	
Toluene	<1.00
Total Suspended Solids	
Toxaphene	
trans-1,2-Dichloroethene	<1.00
trans-1,3-Dichloropropene	<1.00
trans-1,4-Dichloro-2-butene	<5.00
Trichloroethene	<1.00
Trichlorofluoromethane	<1.00
Vanadium	<20.00
Vinyl Acetate	<5.00
Vinyl Chloride	<1.00
Xylenes, Total	<2.000
Zinc	1150

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

Table 9

Analytical Data Summary for MW-381

Constituents	Units	9/20/2012	3/27/2013	9/26/2013	4/16/2014	9/26/2014	3/12/2015	9/2/2015	11/10/2015	3/23/2016
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00		<1.00
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00		<1.00
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00		<1.00
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00		<1.00
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00		<1.00
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00		<2.00
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00		<1.00
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00		<10.00
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00		<10.00
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00		<1.00
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00		<1.00
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00		<1.00
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.20	<1.00	<1.00		<1.00
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00		<10.00
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0		<10.0
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00		<10.00
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00		<10.00
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00		<10.00
Alkalinity as CaCO3	mg/L					294	259	310		263
Aluminum	ug/L					333.0	16.7	<50.0		23.6
Antimony	ug/L	<6.000	<6.000	<6.000	<6.000	<.161	<1.000	<1.000		<.237
Arsenic	ug/L	<1.000	<1.000	.518	<1.000	<.945	<2.000	7.140		<.672
Barium	ug/L	19.20	15.30	8.58	4.11	15.20	9.02	83.30	10.80	8.22
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50		<.50
Beryllium	ug/L	<1.000	<1.000	<1.000	<1.000	<.039	<1.000	<1.000		<.221
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00		<5.00
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00		<1.00
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00		<5.00
Bromomethane	ug/L	<20.000	<4.000	<4.000	<4.000	<.220	<4.000	<4.000		<4.000
Cadmium	ug/L	<.500	<.500	.560	<.500	.813	.160	<.500		1.080
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00		<1.00
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00		<2.00
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00		<1.00
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.20	<5.00	<5.00		<5.00
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00		<4.00
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00		<1.00
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00		<3.00
Chromium	ug/L	<20.000	<20.000	3.900	<20.000	<1.240	<5.000	<5.000		<.355
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00		<1.00
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00		<5.00
Cobalt	ug/L	10.100	<20.000	4.480	<7.000	1.030	.226	49.000		.438
Copper	ug/L	<20.00	<20.00	<20.00	<20.00	3.36	1.48	<2.00		1.62
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00		<1.00
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00		<1.00
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0		<10.0
Iron	ug/L					407.0	87.6	77300.0		111.0
Lead	ug/L	<4.000	<4.000	<4.000	<4.000	1.000	.165	<.500		<.211
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	<.170	<5.000	<5.000		<5.000
Nickel	ug/L	<50.00	<50.00	27.00	<50.00	29.80	7.88	21.50		43.10
pH	SU					6.28	6.27	6.40		6.46
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<3.340	<5.000	<5.000		<.630
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<.042	<1.000	<1.000		<.153
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00		<1.00
Sulfate	mg/L					1420	1730	1300		1390
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00		<1.00
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<.0325	<1.0000	<1.0000		<.0255
Toluene	ug/L									
Total Suspended Solids	mg/L					114.00	6.00	23.00		6.00
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00		<1.00
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00		<5.00
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00		<10.00
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00		<1.00
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00		<4.00
Vanadium	ug/L	<50.000	<50.000	<50.000	<50.000	1.030	<5.000	<5.000		<.255
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00		<10.00
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00		<1.00
Xylenes, Total	ug/L	<3.000	<3.000	<3.000	<3.000	<.130	<3.000	<3.000		<3.000
Zinc	ug/L	<20.0	67.2	195.0	<60.0	27.6	14.4	10.4		60.8

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

Table 9

Analytical Data Summary for MW-381

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/15/2020
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.21	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.12	<.12	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.10	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.12	<.12	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	<.21	<.21	<.21	<.21	<.22	<.22	<.22	<.22	<.22
1,1-Dichloroethene	<.15	<.15	<.15	<.15	<.56	<.56	<.56	<.56	<.56
1,2,3-Trichloropropane	<.19	<.19	<.19	<.19	<.59	<.59	<.59	<.59	<.59
1,2-Dibromo-3-chloropropane	<.50	<.50	<.50	<.50	<1.20	<1.20	<1.20	<1.20	<1.20
1,2-Dibromoethane	<.13	<.13	<.13	<.13	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.14	<.14	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.18	<.18	<.18	<.18	<.39	<.39	<.39	<.39	<.39
1,2-Dichloropropane	<.87	<.87	<.87	<.87	<.27	<.27	<.27	<.27	<.27
1,4-Dichlorobenzene	<.20	<.20	<.20	<.20	<.23	<.23	<.23	<.23	<.23
2-Butanone	<1.04	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10
2-Hexanone	<.2	<.2	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0
4-Methyl-2-pentanone	<.22	<.22	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10
Acetone	<1.79	<1.79	2.94	2.87	<3.10	<3.10	<3.10	<3.10	<3.10
Acrylonitrile	<.53	<.53	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20
Alkalinity as CaCO3	294	180	304	135	196	191	223	475	308
Aluminum	92.3	66.2	<41.3	<165.0	981.0	<27.0	37.1	<30.0	228.0
Antimony	<.237	<.185	<.185	<.740	<1.320	<.530	<.530	<.580	<.510
Arsenic	<.672	<.505	<.505	<2.020	.811	<.750	<.750	<.880	<.880
Barium	11.50	9.80	9.70	8.29	16.90	6.71	13.40	8.15	14.10
Benzene	<.11	<.11	<.11	<.11	<.22	<.22	<.22	<.22	<.22
Beryllium	<.221	<.125	<.125	<.500	<.530	<.270	<.270	<.270	<.270
Bromochloromethane	<.12	<.12	<.12	<.12	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.12	<.12	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.14	<.14	<.78	<.78	<.78	<.78	<.78
Bromomethane	<.220	<.220	.322	.240	<1.100	<1.100	<1.100	<1.100	<1.100
Cadmium	.473	.054	.126	<.176	<.167	<.077	.046	.043	.169
Carbon Disulfide	<.15	<.15	<.15	<.15	<.45	<.45	<.45	<.45	<.45
Carbon Tetrachloride	<.24	<.24	<.24	<.24	<.65	<.65	<.65	<.65	<.65
Chlorobenzene	<.19	<.19	<.19	<.19	<.40	<.40	<.40	<.40	<.40
Chlorodibromomethane	<.20	<.20	<.20	<.20	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.15	<.15	<.15	<.15	<.79	<.79	<.79	<.79	<.79
Chloroform	<.28	<.28	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	<.31	<.31	<.31	<.31	<.61	<.61	<.61	<.61	<.61
Chromium	<.355	<.729	<.729	<2.920	2.470	<.980	<.980	<1.100	<1.100
cis-1,2-Dichloroethene	<.13	<.13	<.13	<.13	<.21	<.21	<.21	<.21	<.21
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.15	<.25	<.25	<.25	<.25	<.25
Cobalt	.315	.080	.071	<.181	.704	<.091	.101	.092	.673
Copper	1.80	<2.19	<2.19	<8.76	3.46	<2.00	2.50	<3.20	2.36
Dibromomethane	<.18	<.18	<.18	<.18	<.33	<.33	<.33	<.33	<.33
Ethylbenzene	<.21	<.21	<.21	<.21	<.31	<.31	<.31	<.31	<.31
Iodomethane	<.8	<.8	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0
Iron	129.0	<47.8	<47.8	<191.0	849.0	138.0	<66.0	56.4	243.0
Lead	.917	<.324	<.324	<1.300	.722	<.270	.297	<.270	.561
Methylene Chloride	.283	<.170	<.170	<.170	<1.700	<1.700	<1.700	<1.700	<1.700
Nickel	16.30	2.60	4.49	<3.72	3.38	2.21	3.47	3.11	10.20
pH	6.41	6.43	6.48	6.66	6.52	6.69	6.48	6.60	6.57
Selenium	<.630	<.928	<.928	<3.710	<.982	<1.000	<1.000	<1.000	<1.000
Silver	<.153	<.140	<.140	<.560	<.115	<.370	<.370	<.370	<.370
Styrene	<.10	<.10	<.10	<.10	<.37	<.37	<.37	<.37	<.37
Sulfate	1250	1580	1240	1490	1070	721	1070	740	890
Tetrachloroethene	<.18	<.18	<.18	<.18	<.48	<.48	<.48	<.48	<.48
Thallium	<.0255	<.0644	<.0644	<.2580	<.5700	<.2700	<.2700	<.2600	<.2600
Toluene					<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	7.50	2.63	12.30	1.38	17.50	1.00	41.30	2.50	18.80
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.22	<.56	<.56	<.56	<.56	<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.19	<.19	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.17	<.17	<.38	<.38	<.38	<.38	<.38
Vanadium	.349	<.840	<.840	<3.360	2.980	<.820	<.820	<.820	<.850
Vinyl Acetate	<.74	<.74	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	<.10	<.10	<.10	<.10	<.60	<.60	<.18	<.18	<.18
Xylenes, Total	.242	.435	<.130	<.130	<.400	<.400	<.400	<.400	<.400
Zinc	11.9	<11.5	<11.5	<46.0	9.1	<10.0	<10.0	<10.0	<10.0

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

Table 9

Analytical Data Summary for MW-381

Constituents	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
1,1,1,2-Tetrachloroethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
1,2,3-Trichloropropane	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dibromo-3-chloropropane	<1.20	<1.20	<1.20	<5.00	<5.00	<5.00	<5.00	<5.00
1,2-Dibromoethane	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
1,4-Dichlorobenzene	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00	<1.00
2-Butanone	<2.10	<2.10	<2.10	<10.00	<10.00	<10.00	<10.00	<10.00
2-Hexanone	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0
4-Methyl-2-pentanone	<2.10	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00	<5.00
Acetone	<3.10	<3.10	<3.10	<10.00	<10.00	<10.00	<10.00	<10.00
Acrylonitrile	<2.20	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00	<5.00
Alkalinity as CaCO3	208	263	206	239	170	263	157	250
Aluminum	22.9	59.6	479.0	212.0	102.0	351.0	78.0	96.0
Antimony	<1.100	<1.100	.839	<2.000	<2.000	<2.000	<2.000	<2.000
Arsenic	<.750	<.750	<.750	<4.000	<4.000	<4.000	<4.000	<4.000
Barium	8.92	12.70	15.50	12.80	8.50	16.80	12.30	12.10
Benzene	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
Beryllium	<.270	<.270	<.270	<4.000	<4.000	<4.000	<4.000	<4.000
Bromochloromethane	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.100	<1.100	<1.100	<1.000	<1.000	<1.000	<1.000	<1.000
Cadmium	<.051	<.051	<.055	<.800	<.800	<.800	<.800	<.800
Carbon Disulfide	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorobenzene	<.40	<.40	<.40	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorodibromomethane	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<.79	<.79	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<.61	<.61	<1.00	<1.00	<1.00	<1.00	<1.00
Chromium	<1.100	1.230	<1.100	<8.000	<8.000	<8.000	<8.000	<8.000
cis-1,2-Dichloroethene	<.21	<.21	<.21	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00	<1.00
Cobalt	.091	.369	.978	.400	1.200	2.100	<.400	.800
Copper	2.24	1.96	2.73	<4.00	4.00	<4.00	<4.00	<4.00
Dibromomethane	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00	<1.00
Ethylbenzene	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00	<1.00
Iodomethane	<7.0	<7.0	<7.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	62.8	93.5	584.0	150.0	126.0	287.0	138.0	<100.0
Lead	.221	.623	1.310	<4.000	<4.000	<4.000	<4.000	<4.000
Methylene Chloride	<1.700	<1.700	<1.700	<5.000	<5.000	<5.000	<5.000	<5.000
Nickel	<1.90	2.35	4.47	<4.00	13.00	5.30	<4.00	<4.00
pH	6.84	6.43	6.78	6.40	6.80	6.60	6.60	6.30
Selenium	<.960	<.960	<.960	<4.000	<4.000	<4.000	<4.000	<4.000
Silver	<.420	<.420	<.490	<4.000	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
Sulfate	730	887	655	789	711	777	1150	792
Tetrachloroethene	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00	<1.00
Thallium	<.2600	<.2600	<.2600	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000
Toluene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	4.75	3.63	73.30					
trans-1,2-Dichloroethene	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
Vanadium	<1.100	<1.100	1.500	<20.000	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<.18	<.18	<1.00	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.400	<.400	<.400	<2.000	<2.000	<2.000	<2.000	<2.000
Zinc	<10.0	<10.0	<10.0	<20.0	<20.0	32.4	<20.0	<20.0

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

Table 9

Analytical Data Summary for MW-382R

Constituents	Units	9/20/2012	3/27/2013	9/25/2013	4/15/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
(3 4)-Methylphenol	ug/L								
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00
1,1-Dichloroethane	ug/L	2.10	2.43	2.00	3.54	2.00	2.23	1.62	1.65
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	<1.00
1,1-Dichloropropene	ug/L	<1.00		<1.00					
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene	ug/L	<10.000		<10.000					
1,2,4-Trichlorobenzene	ug/L	<5.00		<5.00					
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	<10.00
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<1.00
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	<1.00
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	<1.00
1,2-Dinitrobenzene	ug/L								
1,3,5-Trinitrobenzene	ug/L	<10.00		<10.00					
1,3-Dichlorobenzene	ug/L	<1.0		<1.0					
1,3-Dichloropropane	ug/L	<1.0		<1.0					
1,3-Dinitrobenzene	ug/L	<10.00		<10.00					
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.20	<1.00	<1.00	<10.00
1,4-Naphthoquinone	ug/L	<10.000		<10.000					
1,4-phenylenediamine	ug/L								
1-Naphthylamine	ug/L	<10.000		<10.000					
2,2`-oxybis[1-Chloropropane]	ug/L	<10		<10					
2,2-Dichloropropane	ug/L	<4.00		<4.00					
2,3,4,6-Tetrachlorophenol	ug/L	<10.000		<10.000					
2,4,5-T	ug/L	<1.000		<1.080					
2,4,5-TP [Silvex]	ug/L	<1.000		<1.080					
2,4,5-Trichlorophenol	ug/L	<10.000		<10.000					
2,4,6-Trichlorophenol	ug/L	<10.000		<10.000					
2,4-D	ug/L	<1.000		<1.080					
2,4-Dichlorophenol	ug/L	<10.00		<10.00					
2,4-Dimethylphenol	ug/L	<10.000		<10.000					
2,4-Dinitrophenol	ug/L	<20.00		<20.00					
2,4-Dinitrotoluene	ug/L	<10.000		<10.000					
2,6-Dichlorophenol	ug/L	<10.000		<10.000					
2,6-Dinitrotoluene	ug/L	<10.000		<10.000					
2-Acetylaminofluorene	ug/L	<10.00		<10.00					
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	<10.00
2-Chloronaphthalene	ug/L	<10.000		<10.000					
2-Chlorophenol	ug/L	<10.00		<10.00					
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	<3.0
2-Methylnaphthalene	ug/L	<10.000		<10.000					
2-Methylphenol	ug/L								
2-Methylphenol [o-Cresol]	ug/L	<10.000		<10.000					
2-Naphthylamine	ug/L	<10.000		<10.000					
2-Nitroaniline	ug/L	<10.00		<10.00					
2-Nitrophenol	ug/L	<10.00		<10.00					
3,3'-Dichlorobenzidine	ug/L								
3,3-Dichlorobenzidine	ug/L	<10.000		<50.000					
3,3-Dimethylbenzidine	ug/L	<10.000		<10.000					
3-Methylcholanthrene	ug/L	<10.000		<10.000					
3-Nitroaniline	ug/L	<10.000		<10.000					
4,4`-DDD	ug/L	<.03200		<.03230					
4,4`-DDE	ug/L	<.03200		<.03230					
4,4`-DDT	ug/L	<.03200		<.03230					
4,6-Dinitro-2-methylphenol	ug/L	<10.00		<10.00					
4-Aminobiphenyl	ug/L	<10.000		<10.000					
4-Bromophenyl phenyl ether	ug/L	<10.000		<10.000					
4-Chloro-3-methylphenol	ug/L	<10.000		<10.000					
4-Chloroaniline	ug/L	<10.00		<10.00					
4-Chlorophenyl phenyl ether	ug/L	<10.000		<10.000					
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	<1.00
4-Nitroaniline	ug/L	<10.00		<10.00					
4-Nitrophenol	ug/L	<10.00		<10.00					
5-Nitro-o-toluidine	ug/L	<10.000		<10.000					
7,12-Dimethylbenz(a)anthracene	ug/L								
7,12-Dimethylbenz[a]anthracene	ug/L	<10.000		<10.000					
Acenaphthene	ug/L	<10.000		<10.000					
Acenaphthylene	ug/L								
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00	<10.00
Acetonitrile	ug/L	<10000		<10000					
Acetophenone	ug/L	<10.000		<10.000					
Acrolein	ug/L	<10.0		<10.0					
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	<.50

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

Table 9

Analytical Data Summary for MW-382R

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/16/2020
(3 4)-Methylphenol									
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.21	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.12	<.12	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.10	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.12	<.12	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	2.31	1.81	1.93	2.60	1.51	1.60	1.71	1.74	2.00
1,1-Dichloroethene	<.15	<.15	<.15	<.15	<.56	<.56	<.56	<.56	<.56
1,1-Dichloropropene					<.43				
1,2,3-Trichloropropane	<.19	<.19	<.19	<.19	<.59	<.59	<.59	<.59	<.59
1,2,4,5-Tetrachlorobenzene					<.149				
1,2,4-Trichlorobenzene					<.75				
1,2-Dibromo-3-chloropropane	<.50	<.50	<.50	<.50	<1.20	<1.20	<1.20	<1.20	<1.20
1,2-Dibromoethane	<.13	<.13	<.13	<.13	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.14	<.14	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.18	<.18	<.18	<.18	<.39	<.39	<.39	<.39	<.39
1,2-Dichloropropane	<.87	<.87	<.87	<.87	<.27	<.27	<.27	<.27	<.27
1,2-Dinitrobenzene									
1,3,5-Trinitrobenzene					<1.36				
1,3-Dichlorobenzene					<.3				
1,3-Dichloropropane					<.4				
1,3-Dinitrobenzene					<1.07				
1,4-Dichlorobenzene	<.20	<.20	<.20	<.20	<.23	<.23	<.23	<.23	<.23
1,4-Naphthoquinone					<.383				
1,4-phenylenediamine					<8.94				
1-Naphthylamine					<.255				
2,2`-oxybis[1-Chloropropane]									
2,2-Dichloropropane					<.69				
2,3,4,6-Tetrachlorophenol					<.532				
2,4,5-T					<.477				
2,4,5-TP [Silvex]					<.319				
2,4,5-Trichlorophenol					<.745				
2,4,6-Trichlorophenol					<.745				
2,4-D					<.513				
2,4-Dichlorophenol					<.33				
2,4-Dimethylphenol					<.223				
2,4-Dinitrophenol					<2.74				
2,4-Dinitrotoluene					<.489				
2,6-Dichlorophenol					<.234				
2,6-Dinitrotoluene					<.255				
2-Acetylaminofluorene					<1.32				
2-Butanone	<1.04	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10
2-Chloronaphthalene					<.245				
2-Chlorophenol					<.16				
2-Hexanone	<.2	<.2	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0
2-Methylnaphthalene					<.202				
2-Methylphenol									
2-Methylphenol [o-Cresol]					<.191				
2-Naphthylamine					<.234				
2-Nitroaniline					<1.32				
2-Nitrophenol					<1.02				
3,3'-Dichlorobenzidine									
3,3-Dichlorobenzidine					<.862				
3,3-Dimethylbenzidine					<.223				
3-Methylcholanthrene					<.947				
3-Nitroaniline					<.617				
4,4`-DDD					<.00194				
4,4`-DDE					<.00226				
4,4`-DDT					<.00409				
4,6-Dinitro-2-methylphenol					<2.36				
4-Aminobiphenyl					<.319				
4-Bromophenyl phenyl ether					<.309				
4-Chloro-3-methylphenol					<.277				
4-Chloroaniline					<.16				
4-Chlorophenyl phenyl ether					<.266				
4-Methyl-2-pentanone	<.22	<.22	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10
4-Nitroaniline					<.34				
4-Nitrophenol					<1.47				
5-Nitro-o-toluidine					<.181				
7,12-Dimethylbenz(a)anthracene									
7,12-Dimethylbenz[a]anthracene					<.266				
Acenaphthene					<.319				
Acenaphthylene					<.617				
Acetone	<1.79	<1.79	<1.79	2.06	<3.10	<3.10	<3.10	<3.10	<3.10
Acetonitrile					<126				
Acetophenone					<.372				
Acrolein					<3.6				
Acrylonitrile	<.53	<.53	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20

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

Table 9

Analytical Data Summary for MW-382R

Constituents	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
(3 4)-Methylphenol						<8		
1,1,1,2-Tetrachloroethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	1.41	1.69	1.09	<1.00	1.40	<1.00	<1.00	1.40
1,1-Dichloroethene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloropropene						<1.00		
1,2,3-Trichloropropane	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene						<8.000		
1,2,4-Trichlorobenzene						<1.00		
1,2-Dibromo-3-chloropropane	<1.20	<1.20	<1.20	<5.00	<5.00	<1.00	<5.00	<5.00
1,2-Dibromoethane	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dinitrobenzene						<8		
1,3,5-Trinitrobenzene						<8.00		
1,3-Dichlorobenzene						<1.0		
1,3-Dichloropropane						<1.0		
1,3-Dinitrobenzene						<8.00		
1,4-Dichlorobenzene	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00	<1.00
1,4-Naphthoquinone						<8.000		
1,4-phenylenediamine						<8.00		
1-Naphthylamine						<8.000		
2,2`-oxybis[1-Chloropropane]								
2,2-Dichloropropane						<1.00		
2,3,4,6-Tetrachlorophenol						<8.000		
2,4,5-T						<.500		
2,4,5-TP [Silvex]						<.500		
2,4,5-Trichlorophenol						<8.000		
2,4,6-Trichlorophenol						<8.000		
2,4-D						<2.000		
2,4-Dichlorophenol						<8.00		
2,4-Dimethylphenol						<8.000		
2,4-Dinitrophenol						<8.00		
2,4-Dinitrotoluene						<8.000		
2,6-Dichlorophenol						<8.000		
2,6-Dinitrotoluene						<8.000		
2-Acetylaminofluorene						<8.00		
2-Butanone	<2.10	<2.10	<2.10	<10.00	<10.00	<5.00	<10.00	<10.00
2-Chloronaphthalene						<8.000		
2-Chlorophenol						<8.00		
2-Hexanone	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene						<8.000		
2-Methylphenol						<8		
2-Methylphenol [o-Cresol]								
2-Naphthylamine						<8.000		
2-Nitroaniline						<8.00		
2-Nitrophenol						<8.00		
3,3'-Dichlorobenzidine						<8		
3,3-Dichlorobenzidine								
3,3-Dimethylbenzidine						<8.000		
3-Methylcholanthrene						<8.000		
3-Nitroaniline						<8.000		
4,4`-DDD						<.05000		
4,4`-DDE						<.05000		
4,4`-DDT						<.05000		
4,6-Dinitro-2-methylphenol						<8.00		
4-Aminobiphenyl						<8.000		
4-Bromophenyl phenyl ether						<8.000		
4-Chloro-3-methylphenol						<8.000		
4-Chloroaniline						<8.00		
4-Chlorophenyl phenyl ether						<8.000		
4-Methyl-2-pentanone	<2.10	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00	<5.00
4-Nitroaniline						<8.00		
4-Nitrophenol						<8.00		
5-Nitro-o-toluidine						<8.000		
7,12-Dimethylbenz(a)anthracene						<8		
7,12-Dimethylbenz[a]anthracene								
Acenaphthene						<8.000		
Acenaphthylene						<8.000		
Acetone	<3.10	<3.10	<3.10	<10.00	<10.00	<10.00	<10.00	<10.00
Acetonitrile						<10		
Acetophenone						<8.000		
Acrolein						<10.0		
Acrylonitrile	<2.20	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00	<5.00

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

Table 9

Analytical Data Summary for MW-382R

Constituents	Units	9/20/2012	3/27/2013	9/25/2013	4/15/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
Aldrin	ug/L	<.03200		<.03230					
Alkalinity as CaCO3	mg/L					330	340	320	361
Allyl Chloride	ug/L	<20.0		<2.0					
alpha-BHC	ug/L	<.03200		<.03230					
Aluminum	ug/L					24.3	<50.0	<50.0	<20.8
Anthracene	ug/L	<10.000		<10.000					
Antimony	ug/L	<12.000	<6.000	2.900	<6.000	<.161	<1.000	<1.000	<.237
Arsenic	ug/L	<2.000	<1.000	<2.000	<1.000	<.945	<2.000	<2.000	<.672
Azobenzene	ug/L								
Barium	ug/L	27.9	26.0	25.3	16.7	25.4	25.5	28.4	24.2
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50	<5.00
Benzo[a]anthracene	ug/L	<10.000		<10.000					
Benzo[a]pyrene	ug/L	<10.00		<10.00					
Benzo[b]fluoranthene	ug/L	<10.00		<10.00					
Benzo[ghi]perylene	ug/L	<10.0		<10.0					
Benzo[k]fluoranthene	ug/L	<10.000		<10.000					
Benzyl alcohol	ug/L	<10.000		<10.000					
Beryllium	ug/L	<1.000	<1.000	<1.000	<1.000	<.039	<1.000	<1.000	<.221
beta-BHC	ug/L	<.03200		<.03230					
bis (2-chloroisopropyl) ether	ug/L								
Bis(2-chloroethoxy)methane	ug/L	<10.000		<10.000					
Bis(2-chloroethyl)ether	ug/L	<10.000		<10.000					
Bis(2-ethylhexyl)phthalate	ug/L	<10.00		<10.00					
Bis[2-Chloroisopropyl]ether	ug/L								
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	<1.00
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<5.00
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	<1.00
Bromomethane	ug/L	<20.000	<4.000	<4.000	<4.000	<.220	<4.000	<4.000	<10.000
Butylbenzylphthalate	ug/L	<10.00		<10.00					
Cadmium	ug/L	<.5000	<.5000	<.5000	<.5000	<.1120	<.5000	<.5000	<.0351
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00	<2.00
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	<1.00
Chlordane	ug/L	<2.0000		<2.0200					
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<4.00
Chlorobenzilate	ug/L	<10.000		<10.000					
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.20	<5.00	<5.00	<10.00
Chloroethane	ug/L	<4.000	<4.000	.433	<4.000	<.150	<4.000	<4.000	<1.000
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	<5.00
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00	<1.00
Chloroprene	ug/L	<1.00		<1.00					
Chromium	ug/L	<20.000	<20.000	5.910	<20.000	<1.240	<5.000	<5.000	<.355
Chrysene	ug/L	<10.00		<10.00					
cis-1,2-Dichloroethene	ug/L	<1.000	.383	.320	.267	.270	<1.000	<1.000	<5.000
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	<10.00
Cobalt	ug/L	1.760	<20.000	2.920	<7.000	1.400	1.440	1.170	.734
Copper	ug/L	<20.000	<20.000	<20.000	<20.000	<.485	<2.000	<2.000	<1.220
Cyanide	mg/L	<.0100		<.0100					
delta-BHC	ug/L	<.03200		<.03230					
Diallate	ug/L	<10.000		<10.000					
Dibenzo(a,h)anthracene	ug/L	<10.00		<10.00					
Dibenzofuran	ug/L	<10.000		<10.000					
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<5.00
Dichlorodifluoromethane	ug/L	<5.000	2.400	2.730	2.140	2.700	1.590	<3.000	<1.000
Dieldrin	ug/L	<.03200		<.03230					
Diethyl phthalate	ug/L	<10.000		<10.000					
Dimethoate	ug/L	<10.000		<10.000					
Dimethyl phthalate	ug/L	<10.00		<10.00					
Di-n-butyl phthalate	ug/L								
Di-n-butylphthalate	ug/L	<10.00		<10.00					
Di-n-octyl phthalate	ug/L								
Di-n-octylphthalate	ug/L	<10.00		<20.00					
Dinoseb	ug/L	<10.000		<10.000					
Diphenylamine	ug/L	<10.000		<10.000					
Disulfoton	ug/L	<10.000		<10.000					
Endosulfan I	ug/L	<.03200		<.03230					
Endosulfan II	ug/L	<.03200		<.03230					
Endosulfan Sulfate	ug/L	<.03200		<.03230					
Endrin	ug/L	<.03200		<.03230					
Endrin Aldehyde	ug/L	<.03200		<.03230					
Ethyl Methacrylate	ug/L	<2.00		<2.00					
Ethyl Methanesulfonate	ug/L	<10.00		<10.00					
Ethyl Parathion	ug/L								
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<4.00
Famphur	ug/L	<20.0		<20.0					
Fluoranthene	ug/L	<10.000		<10.000					
Fluorene	ug/L	<10.000		<10.000					
gamma-BHC (Lindane)	ug/L	<.03200		<.03230					

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

Table 9

Analytical Data Summary for MW-382R

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/16/2020
Aldrin					<.00484				
Alkalinity as CaCO3	355	330	345	337	350	330	332	325	356
Allyl Chloride					<.7				
alpha-BHC					<.00183				
Aluminum	<20.8	<41.3	<207.0	<165.0	<24.6	<27.0	<27.0	<30.0	<12.0
Anthracene					<.181				
Antimony	<.237	<.185	<.925	<.740	<1.320	<.530	<.530	<.580	<.510
Arsenic	<.672	<.505	<2.530	<2.020	.751	<.750	<.750	<.880	<.880
Azobenzene									
Barium	23.6	26.0	24.8	23.8	23.0	20.4	28.6	21.3	20.7
Benzene	<.11	<.11	<.11	<.11	<.22	<.22	<.22	<.22	<.22
Benzo[a]anthracene					<.362				
Benzo[a]pyrene					<1.35				
Benzo[b]fluoranthene					<1.06				
Benzo[ghi]perylene					<1.4				
Benzo[k]fluoranthene					<.606				
Benzyl alcohol					<.638				
Beryllium	<.221	<.125	<.625	<.500	<.530	<.270	<.270	<.270	<.270
beta-BHC					<.00516				
bis (2-chloroisopropyl) ether					<.191				
Bis(2-chloroethoxy)methane					<.277				
Bis(2-chloroethyl)ether					<.202				
Bis(2-ethylhexyl)phthalate					<2.47				
Bis[2-Chloroisopropyl]ether									
Bromochloromethane	<.12	<.12	<.12	<.12	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.12	<.12	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.14	<.14	<.78	<.78	<.78	<.78	<.78
Bromomethane	<.220	<.220	<.220	.253	<1.100	<1.100	<1.100	<1.100	<1.100
Butylbenzylphthalate					<1.63				
Cadmium	<.0351	<.0441	<.2210	<.1760	<.1670	<.0770	<.0390	<.0390	<.0490
Carbon Disulfide	<.15	<.15	<.15	<.15	<.45	<.45	<.45	<.45	<.45
Carbon Tetrachloride	<.24	<.24	<.24	<.24	<.65	<.65	<.65	<.65	<.65
Chlordane					<.0688				
Chlorobenzene	<.19	<.19	<.19	<.19	<.40	<.40	<.40	<.40	<.40
Chlorobenzilate					<.223				
Chlorodibromomethane	<.20	<.20	<.20	<.20	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.150	<.150	<.150	<.150	<.790	<.790	<.790	<.790	<.790
Chloroform	<.28	<.28	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	<.31	<.31	<.31	<.31	<.61	<.61	<.61	<.61	<.61
Chloroprene					<.23				
Chromium	<.355	<.729	<3.650	<2.920	1.320	<.980	<.980	<1.100	<1.100
Chrysene					<.33				
cis-1,2-Dichloroethene	.414	.385	.484	.449	.401	.439	.345	<.210	.487
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.15	<.25	<.25	<.25	<.25	<.25
Cobalt	1.160	1.870	1.530	1.790	2.840	.851	9.880	.703	2.330
Copper	<1.220	<2.190	<11.000	<8.760	.859	<2.000	<2.000	<3.200	<1.500
Cyanide					<.0042				
delta-BHC					<.00247				
Diallate					<.245				
Dibenzo(a,h)anthracene					<1.95				
Dibenzofuran					<.255				
Dibromomethane	<.18	<.18	<.18	<.18	<.33	<.33	<.33	<.33	<.33
Dichlorodifluoromethane	1.770	1.860	.898	1.110	.962				
Dieldrin					<.00215				
Diethyl phthalate					<.287				
Dimethoate					<.287				
Dimethyl phthalate					<2.33				
Di-n-butyl phthalate									
Di-n-butylphthalate					<1.22				
Di-n-octyl phthalate									
Di-n-octylphthalate					<2.82				
Dinoseb					<.457				
Diphenylamine					<.702				
Disulfoton					<.309				
Endosulfan I					<.00215				
Endosulfan II					<.00204				
Endosulfan Sulfate					<.00269				
Endrin					<.00204				
Endrin Aldehyde					<.00785				
Ethyl Methacrylate					<.68				
Ethyl Methanesulfonate					<.16				
Ethyl Parathion					<.191				
Ethylbenzene	<.21	<.21	<.21	<.21	<.31	<.31	<.31	<.31	<.31
Famphur					<.5				
Fluoranthene					<.723				
Fluorene					<.309				
gamma-BHC (Lindane)					<.00204				

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

Table 9

Analytical Data Summary for MW-382R

Constituents	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Aldrin						<.05000		
Alkalinity as CaCO3	386	445	372	347	376	379	372	399
Allyl Chloride						<1.0		
alpha-BHC						<.05000		
Aluminum	18.0	21.3	<68.0	135.0	241.0	135.0	130.0	169.0
Anthracene						<8.000		
Antimony	<1.100	<1.100	<2.760	<2.000	<2.000	<2.000	<2.000	<2.000
Arsenic	<.750	<.750	<3.000	<4.000	<4.000	<4.000	<4.000	<4.000
Azobenzene						<8		
Barium	23.7	22.2	21.7	20.9	29.7	28.0	23.8	25.1
Benzene	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
Benzo[a]anthracene						<8.000		
Benzo[a]pyrene						<8.00		
Benzo[b]fluoranthene						<8.00		
Benzo[ghi]perylene						<8.0		
Benzo[k]fluoranthene						<8.000		
Benzyl alcohol						<8.000		
Beryllium	<.270	<.270	<1.080	<4.000	<4.000	<4.000	<4.000	<4.000
beta-BHC						<.05000		
bis (2-chloroisopropyl) ether								
Bis(2-chloroethoxy)methane						<8.000		
Bis(2-chloroethyl)ether						<8.000		
Bis(2-ethylhexyl)phthalate						16.00	<6.00	<6.00
Bis[2-Chloroisopropyl]ether						<8		
Bromochloromethane	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.100	<1.100	<1.100	<1.000	<1.000	<1.000	<1.000	<1.000
Butylbenzylphthalate						<8.00		
Cadmium	<.0510	<.0510	<.2200	<.8000	<.8000	<.8000	<.8000	<.8000
Carbon Disulfide	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00	<1.00
Chlordane						<.1000		
Chlorobenzene	<.40	<.40	<.40	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorobenzilate						<8.000		
Chlorodibromomethane	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.790	<.790	<.790	<1.000	<1.000	<1.000	<1.000	<1.000
Chloroform	<1.30	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<.61	<.61	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroprene						<1.00		
Chromium	<1.100	<1.100	<4.400	<8.000	<8.000	<8.000	<8.000	<8.000
Chrysene						<8.00		
cis-1,2-Dichloroethene	.289	.406	.307	<1.000	<1.000	<1.000	<1.000	<1.000
cis-1,3-Dichloropropene	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00	<1.00
Cobalt	2.990	3.650	2.530	4.200	1.200	1.500	.800	6.900
Copper	<1.400	<1.400	<7.200	<4.000	<4.000	<4.000	<4.000	<4.000
Cyanide						<.0050		
delta-BHC						<.05000		
Diallate						<8.000		
Dibenzo(a,h)anthracene						<8.00		
Dibenzofuran						<8.000		
Dibromomethane	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00	<1.00
Dichlorodifluoromethane						<1.000		
Dieldrin						<.05000		
Diethyl phthalate						<8.000		
Dimethoate						<.400		
Dimethyl phthalate						<8.00		
Di-n-butyl phthalate						<8		
Di-n-butylphthalate								
Di-n-octyl phthalate						<8		
Di-n-octylphthalate								
Dinoseb						<.500		
Diphenylamine						<8.000		
Disulfoton						<.400		
Endosulfan I						<.05000		
Endosulfan II						<.05000		
Endosulfan Sulfate						<.05000		
Endrin						<.05000		
Endrin Aldehyde						<.05000		
Ethyl Methacrylate						<10.00		
Ethyl Methanesulfonate						<8.00		
Ethyl Parathion								
Ethylbenzene	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00	<1.00
Famphur						<.4		
Fluoranthene						<8.000		
Fluorene						<8.000		
gamma-BHC (Lindane)						<.05000		

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

Table 9

Analytical Data Summary for MW-382R

Constituents	Units	9/20/2012	3/27/2013	9/25/2013	4/15/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
Heptachlor	ug/L	<.0320		<.0323					
Heptachlor Epoxide	ug/L	<.03200		<.03230					
Hexachlorobenzene	ug/L	<10.000		<10.000					
Hexachlorobutadiene	ug/L	<10.000		<10.000					
Hexachlorocyclopentadiene	ug/L	<10.00		<20.00					
Hexachloroethane	ug/L	<10.000		<10.000					
Hexachloropropene	ug/L	<10.00		<10.00					
Indeno[1,2,3-cd]pyrene	ug/L	<10.00		<10.00					
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0	<1.0
Iron	ug/L					116.0	52.1	<100.0	305.0
Isobutanol	ug/L	<10000		<10000					
Isodrin	ug/L	<10.000		<10.000					
Isophorone	ug/L	<10.000		<10.000					
Isosafrole	ug/L	<10.000		<10.000					
Kepone	ug/L	<10.000		<10.000					
Lead	ug/L	<4.0000	<4.0000	<4.0000	<4.0000	<.0967	<.5000	<.5000	<.2110
m,p-Xylene	ug/L								
Mercury	ug/L	<.2670		<.2000					
Methacrylonitrile	ug/L	<1.0		<1.0					
Methapyrilene	ug/L	<10.00		<10.00					
Methoxychlor	ug/L	<.03200		<.03230					
Methyl Methacrylate	ug/L	<2.00		<2.00					
Methyl Methanesulfonate	ug/L	<10.000		<10.000					
Methyl Parathion	ug/L	<10.00		<10.00					
Methylene Chloride	ug/L	<5.000	.193	<5.000	<5.000	<.170	<5.000	<5.000	<10.000
Methylphenol, 3 4	ug/L								
Naphthalene	ug/L	<5		<5					
Nickel	ug/L	<50.00	<50.00	6.59	<50.00	3.58	3.44	<5.00	3.38
Nitrobenzene	ug/L	<10.000		<10.000					
N-Nitrosodiethylamine	ug/L	<10.000		<10.000					
N-Nitrosodimethylamine	ug/L	<10.000		<10.000					
N-Nitrosodi-n-butylamine	ug/L	<10.000		<10.000					
N-Nitrosodi-n-propylamine	ug/L	<10.000		<10.000					
N-Nitrosodiphenylamine	ug/L	<10.000		<10.000					
N-Nitrosomethylethylamine	ug/L	<10.000		<10.000					
N-Nitrosopiperidine	ug/L	<10.00		<10.00					
N-Nitrosopyrrolidine	ug/L	<10.000		<10.000					
o,o,o-Triethylphosphorothioate	ug/L	<10.000		<10.000					
o-Toluidine	ug/L	<10.000		<10.000					
o-Xylene	ug/L								
p-[Dimethylamino]azobenzene	ug/L	<10		<10					
Parathion	ug/L	<10.0		<10.0					
PCB-1016	ug/L	<.8000		<.8990					
PCB-1221	ug/L	<.800		<.899					
PCB-1232	ug/L	<.800		<.899					
PCB-1242	ug/L	<.800		<.899					
PCB-1248	ug/L	<.800		<.899					
PCB-1254	ug/L	<.8000		<.8990					
PCB-1260	ug/L	<.8000		<.8990					
p-Dimethylamino azobenzene	ug/L								
Pentachlorobenzene	ug/L	<10.000		<10.000					
Pentachloronitrobenzene	ug/L	<10.000		<10.000					
Pentachlorophenol	ug/L	<10.00		<10.00					
pH	SU					6.34	6.42	6.43	6.50
Phenacetin	ug/L	<10.000		<10.000					
Phenanthrene	ug/L	<10.000		<10.000					
Phenol	ug/L	<10.00		<10.00					
Phorate	ug/L	<10.000		<10.000					
p-Phenylenediamine	ug/L	<10		<10					
Pronamide	ug/L	<10.000		<10.000					
Propionitrile	ug/L	<10.0		<10.0					
Pyrene	ug/L	<10.000		<10.000					
Safrole	ug/L	<10.000		<10.000					
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<3.340	<5.000	<5.000	<.630
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<.042	<1.000	<1.000	<.153
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00
Sulfate	mg/L					1190	1230	1110	1270
Sulfide	mg/L	<1.000	<1.000	4.810	<1.000	<.219	<1.000	<1.000	<1.000
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<.0325	<1.0000	<1.0000	<.0255
Thionazin	ug/L	<10.00		<10.00					
Tin	ug/L	<100.000		606.000	<100.000	153.000	37.700	<100.000	<.255
Toluene	ug/L								
Total Suspended Solids	mg/L					3.140	4.140	3.670	4.330
Toxaphene	ug/L	<2.0000		<2.0200					
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<5.00
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	<1.00

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

Table 9

Analytical Data Summary for MW-382R

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/16/2020
Heptachlor					<.0028				
Heptachlor Epoxide					<.00656				
Hexachlorobenzene					<.287				
Hexachlorobutadiene					<.181				
Hexachlorocyclopentadiene					<2.01				
Hexachloroethane					<.149				
Hexachloropropene					<1.74				
Indeno[1,2,3-cd]pyrene					<1.56				
Iodomethane	<.8	<.8	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0
Iron	70.4	59.4	<239.0	<191.0	112.0	<66.0	1010.0	218.0	106.0
Isobutanol					<177				
Isodrin					<.404				
Isophorone					<.234				
Isosafrole					<.191				
Kepone					<.255				
Lead	<.2110	<.3240	<1.6200	<1.3000	<.1860	<.2700	<.2700	<.2700	<.1100
m,p-Xylene					<.38				
Mercury					<.0984				
Methacrylonitrile					<3.3				
Methapyrilene					<1.45				
Methoxychlor					<.00226				
Methyl Methacrylate					<.76				
Methyl Methanesulfonate					<.149				
Methyl Parathion					<.16				
Methylene Chloride	.394	.312	<.170	<.170	<1.700	<1.700	<1.700	<1.700	<1.700
Methylphenol, 3 4					<.191				
Naphthalene					<3				
Nickel	3.20	4.23	<4.65	3.83	3.67	3.30	6.26	4.26	4.36
Nitrobenzene					<.319				
N-Nitrosodiethylamine					<.319				
N-Nitrosodimethylamine					<.202				
N-Nitrosodi-n-butylamine					<.309				
N-Nitrosodi-n-propylamine					<.277				
N-Nitrosodiphenylamine					<.702				
N-Nitrosomethylethylamine					<.213				
N-Nitrosopiperidine					<.16				
N-Nitrosopyrrolidine					<.245				
o,o,o-Triethylphosphorothioate					<.255				
o-Toluidine					<.191				
o-Xylene					<.4				
p-[Dimethylamino]azobenzene									
Parathion									
PCB-1016					<.0462				
PCB-1221					<.170				
PCB-1232					<.117				
PCB-1242					<.138				
PCB-1248					<.117				
PCB-1254					<.0979				
PCB-1260					<.0468				
p-Dimethylamino azobenzene					<.255				
Pentachlorobenzene					<.234				
Pentachloronitrobenzene					<.351				
Pentachlorophenol					<2.47				
pH	6.37	6.40	6.46	6.46	6.65	6.42	6.48	6.50	6.53
Phenacetin					<.596				
Phenanthrene					<.638				
Phenol					<2.55				
Phorate					<.181				
p-Phenylenediamine									
Pronamide					<.277				
Propionitrile					<3.4				
Pyrene					<.277				
Safrole					<.213				
Selenium	<.630	<.928	<4.640	<3.710	<.982	<1.000	<1.000	<1.000	<1.000
Silver	<.153	<.140	<.700	<.560	<.115	<.370	<.370	<.370	<.370
Styrene	<.10	<.10	<.10	<.10	<.37	<.37	<.37	<.37	<.37
Sulfate	1240	1330	1300	1260	1150	1280	1230	1250	1340
Sulfide	<.180	<.180	<.231	4.640	<.231	<.231			
Tetrachloroethene	<.18	<.18	<.18	<.18	<.48	<.48	<.48	<.48	<.48
Thallium	<.0255	<.0644	<.0644	<.2580	<.5700	<.2700	<.2700	<.2600	<.2600
Thionazin					<.33				
Tin	<.832	<1.620	<1.620	15.000	<1.300				
Toluene					<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	.625	1.000	1.130	.875	<.638	1.500	.875	2.630	1.250
Toxaphene					<.0624				
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.21	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.22	<.56	<.56	<.56	<.56	<.56

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

Table 9

Analytical Data Summary for MW-382R

Constituents	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
Heptachlor						<.0500		
Heptachlor Epoxide						<.05000		
Hexachlorobenzene						<.050		
Hexachlorobutadiene						<8.000		
Hexachlorocyclopentadiene						<8.00		
Hexachloroethane						<8.000		
Hexachloropropene						<8.00		
Indeno[1,2,3-cd]pyrene						<8.00		
Iodomethane	<7.0	<7.0	<7.0	<1.0	<1.0	<2.0	<1.0	<1.0
Iron	222.0	386.0	262.0	423.0	685.0	<100.0	167.0	1020.0
Isobutanol						<1000		
Isodrin						<8.000		
Isophorone						<8.000		
Isosafrole						<8.000		
Kepone						<8.000		
Lead	<.2100	.5860	<.9600	<4.0000	<4.0000	<4.0000	<4.0000	<4.0000
m,p-Xylene								
Mercury						<.5000		
Methacrylonitrile						<1.0		
Methapyrilene						<8.00		
Methoxychlor						<.05000		
Methyl Methacrylate						<1.00		
Methyl Methanesulfonate						<8.000		
Methyl Parathion						<.40		
Methylene Chloride	<1.700	<1.700	<1.700	<5.000	<5.000	<5.000	<5.000	<5.000
Methylphenol, 3 4								
Naphthalene						<8		
Nickel	4.94	6.01	<7.60	6.70	4.50	6.10	<4.00	12.30
Nitrobenzene						<8.000		
N-Nitrosodiethylamine						<8.000		
N-Nitrosodimethylamine						<8.000		
N-Nitrosodi-n-butylamine						<8.000		
N-Nitrosodi-n-propylamine						<8.000		
N-Nitrosodiphenylamine						<8.000		
N-Nitrosomethylethylamine						<8.000		
N-Nitrosopiperidine						<8.00		
N-Nitrosopyrrolidine						<8.000		
o,o,o-Triethylphosphorothioate						<.400		
o-Toluidine						<8.000		
o-Xylene								
p-[Dimethylamino]azobenzene						<8		
Parathion						<.4		
PCB-1016						<.2000		
PCB-1221						<.200		
PCB-1232						<.200		
PCB-1242						<.200		
PCB-1248						<.200		
PCB-1254						<.2000		
PCB-1260						<.2000		
p-Dimethylamino azobenzene								
Pentachlorobenzene						<8.000		
Pentachloronitrobenzene						<8.000		
Pentachlorophenol						<8.00		
pH	6.48	6.43	6.62	6.30	7.10	6.50	7.00	6.40
Phenacetin						<8.000		
Phenanthrene						<8.000		
Phenol						<8.00		
Phorate						<.400		
p-Phenylenediamine								
Pronamide						<8.000		
Propionitrile						<10.0		
Pyrene						<8.000		
Safrole						<8.000		
Selenium	<.960	<.960	<3.840	<4.000	<4.000	<4.000	<4.000	<4.000
Silver	<.420	<.420	<1.960	<4.000	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
Sulfate	1480	1330	1320	1250	1060	1090	1030	1130
Sulfide								
Tetrachloroethene	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00	<1.00
Thallium	<.2600	<.2600	<1.0400	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000
Thionazin						<.40		
Tin						<20.000		
Toluene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	3.130	5.500	40.200					
Toxaphene						<.2000		
trans-1,2-Dichloroethene	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00	<1.00

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

Table 9

Analytical Data Summary for MW-382R

Constituents	Units	9/20/2012	3/27/2013	9/25/2013	4/15/2014	9/26/2014	3/12/2015	9/2/2015	3/23/2016
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<1.00
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	<10.00
Vanadium	ug/L	<50.000	<50.000	<50.000	<50.000	1.410	<5.000	<5.000	<5.210
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	<3.00
Vinyl Chloride	ug/L	<1.000	<1.000	.345	<1.000	<.100	<1.000	<1.000	<1.000
Xylenes, Total	ug/L	<3.000	<3.000	.134	<3.000	<.130	<3.000	<3.000	<3.000
Zinc	ug/L	<20.00	58.40	175.00	<60.00	<6.95	<10.00	<10.00	<10000.00

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

Table 9

Analytical Data Summary for MW-382R

Constituents	10/19/2016	3/7/2017	9/26/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/16/2020
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.19	<.19	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.17	<.17	<.38	<.38	<.38	<.38	<.38
Vanadium	<.255	<.840	<4.200	<3.360	<2.150	<.820	<.820	<.820	<.850
Vinyl Acetate	<.74	<.74	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	<.100	<.100	<.100	.296	<.600	<.600	<.180	<.180	<.180
Xylenes, Total	<.130	<.130	<.130	<.130	<.400	<.400	<.400	<.400	<.400
Zinc	<5.21	<11.50	<57.50	<46.00	<6.92	<10.00	<10.00	<10.00	<10.00

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

Table 9

Analytical Data Summary for MW-382R

Constituents	4/15/2021	10/27/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024	10/3/2024
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
Vanadium	<1.100	<1.100	<4.400	<20.000	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	.206	.241	<.180	<1.000	<1.000	<1.000	<1.000	<1.000
Xylenes, Total	<.400	<.400	<.400	<2.000	<2.000	<2.000	<2.000	<2.000
Zinc	<10.00	<10.00	<40.00	<20.00	<20.00	<20.00	<20.00	<20.00

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

Table 9

Analytical Data Summary for MW-383

Constituents	Units	9/19/2012	3/27/2013	9/26/2013	4/15/2014	9/25/2014	3/11/2015	9/2/2015	11/10/2015
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	<1.0	<1.0	<1.0	<.1	<1.0	<1.0	
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	
1,1-Dichloropropene	ug/L	<1		<1					
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	
1,2,4,5-Tetrachlorobenzene	ug/L	<10.0		<11.1					
1,2,4-Trichlorobenzene	ug/L	<5		<5					
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	
1,3,5-Trinitrobenzene	ug/L	<10.0		<11.1					
1,3-Dichlorobenzene	ug/L	<1		<1					
1,3-Dichloropropane	ug/L	<1		<1					
1,3-Dinitrobenzene	ug/L	<10.0		<11.1					
1,4-Dichlorobenzene	ug/L	<1.0	<1.0	<1.0	<1.0	<.2	<1.0	<1.0	
1,4-Naphthoquinone	ug/L	<10.0		<11.1					
1-Naphthylamine	ug/L	<10.0		<11.1					
2,2`-oxybis[1-Chloropropane]	ug/L	<10.0		<11.1					
2,2-Dichloropropane	ug/L	<4		<4					
2,3,4,6-Tetrachlorophenol	ug/L	<10.0		<11.1					
2,4,5-T	ug/L	<1.10		<1.07					
2,4,5-TP [Silvex]	ug/L	<1.10		<1.07					
2,4,5-Trichlorophenol	ug/L	<10.0		<11.1					
2,4,6-Trichlorophenol	ug/L	<10.0		<11.1					
2,4-D	ug/L	<1.10		<1.07					
2,4-Dichlorophenol	ug/L	<10.0		<11.1					
2,4-Dimethylphenol	ug/L	<10.0		<11.1					
2,4-Dinitrophenol	ug/L	<20.0		<22.2					
2,4-Dinitrotoluene	ug/L	<10.0		<11.1					
2,6-Dichlorophenol	ug/L	<10.0		<11.1					
2,6-Dinitrotoluene	ug/L	<10.0		<11.1					
2-Acetylaminofluorene	ug/L	<10.0		<11.1					
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	
2-Chloronaphthalene	ug/L	<10.0		<11.1					
2-Chlorophenol	ug/L	<10.0		<11.1					
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	
2-Methylnaphthalene	ug/L	<10.0		<11.1					
2-Methylphenol [o-Cresol]	ug/L	<10.0		<11.1					
2-Naphthylamine	ug/L	<10.0		<11.1					
2-Nitroaniline	ug/L	<10.0		<11.1					
2-Nitrophenol	ug/L	<10.0		<11.1					
3,3-Dichlorobenzidine	ug/L	<10.0		<55.6					
3,3-Dimethylbenzidine	ug/L	<10.0		<11.1					
3-Methylcholanthrene	ug/L	<10.0		<11.1					
3-Nitroaniline	ug/L	<10.0		<11.1					
4,4`-DDD	ug/L	<.032		<.036					
4,4`-DDE	ug/L	<.032		<.036					
4,4`-DDT	ug/L	<.032		<.036					
4,6-Dinitro-2-methylphenol	ug/L	<10.0		<11.1					
4-Aminobiphenyl	ug/L	<10.0		<11.1					
4-Bromophenyl phenyl ether	ug/L	<10.0		<11.1					
4-Chloro-3-methylphenol	ug/L	<10.0		<11.1					
4-Chloroaniline	ug/L	<10.0		<11.1					
4-Chlorophenyl phenyl ether	ug/L	<10.0		<11.1					
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	
4-Nitroaniline	ug/L	<10.0		<11.1					
4-Nitrophenol	ug/L	<10.0		<11.1					
5-Nitro-o-toluidine	ug/L	<10.0		<11.1					
7,12-Dimethylbenz[a]anthracene	ug/L	<10.0		<11.1					
Acenaphthene	ug/L	<10.0		<11.1					
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00	
Acetonitrile	ug/L	<10000		1170					
Acetophenone	ug/L	<10.0		<11.1					
Acrolein	ug/L	<10		<10					
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	
Aldrin	ug/L	<.032		<.036					
Alkalinity as CaCO3	mg/L					464	410	397	
Allyl Chloride	ug/L	<20		<2					
alpha-BHC	ug/L	<.032		<.036					
Aluminum	ug/L					9.65	<50.00	<50.00	
Anthracene	ug/L	<10.0		<11.1					
Antimony	ug/L	<6.000	<6.000	<6.000	<6.000	<.161	<1.000	<1.000	

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

Table 9

Analytical Data Summary for MW-383

Constituents	Units	9/19/2012	3/27/2013	9/26/2013	4/15/2014	9/25/2014	3/11/2015	9/2/2015	11/10/2015
Arsenic	ug/L	6.410	.264	13.100	2.740	11.400	3.180	42.500	8.190
Barium	ug/L	183	129	187	131	263	163	301	
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50	
Benzo[a]anthracene	ug/L	<10.0		<11.1					
Benzo[a]pyrene	ug/L	<10.0		<11.1					
Benzo[b]fluoranthene	ug/L	<10.0		<11.1					
Benzo[ghi]perylene	ug/L	<10.0		<11.1					
Benzo[k]fluoranthene	ug/L	<10.0		<11.1					
Benzyl alcohol	ug/L	<10.0		<11.1					
Beryllium	ug/L	<1.000	<1.000	<1.000	<1.000	<.039	<1.000	<1.000	
beta-BHC	ug/L	<.032		<.036					
Bis(2-chloroethoxy)methane	ug/L	<10.0		<11.1					
Bis(2-chloroethyl)ether	ug/L	<10.0		<11.1					
Bis(2-ethylhexyl)phthalate	ug/L	<10.0		<11.1					
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	
Bromomethane	ug/L	<20.00	<4.00	<4.00	<4.00	<.22	<4.00	<4.00	
Butylbenzylphthalate	ug/L	<10.0		<11.1					
Cadmium	ug/L	<.500	<.500	<.500	<.500	<.112	<.500	<.500	
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00	
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	
Chlordane	ug/L	<2.00		<2.25					
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	
Chlorobenzilate	ug/L	<10.0		<11.1					
Chlorodibromomethane	ug/L	<5.0	<5.0	<5.0	<5.0	<.2	<5.0	<5.0	
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00	
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00	
Chloroprene	ug/L	<1		<1					
Chromium	ug/L	<20.00	<20.00	1.57	<20.00	<1.24	<5.00	<5.00	
Chrysene	ug/L	<10.0		<11.1					
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00	
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	
Cobalt	ug/L	<20.00	<20.00	<7.00	<7.00	7.93	1.62	8.12	
Copper	ug/L	<20.00	<20.00	<20.00	<20.00	1.14	<2.00	<2.00	
Cyanide	mg/L	<.01		<.01					
delta-BHC	ug/L	<.032		<.036					
Diallate	ug/L	<10.0		<11.1					
Dibenzo(a,h)anthracene	ug/L	<10.0		<11.1					
Dibenzofuran	ug/L	<10.0		<11.1					
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	
Dichlorodifluoromethane	ug/L	<3		<3					
Dieldrin	ug/L	<.032		<.036					
Diethyl phthalate	ug/L	<10.0		<11.1					
Dimethoate	ug/L	<10.0		<11.1					
Dimethyl phthalate	ug/L	<10.0		<11.1					
Di-n-butylphthalate	ug/L	<10.0		<11.1					
Di-n-octylphthalate	ug/L	<10.0		<22.2					
Dinoseb	ug/L	<10.0		<11.1					
Diphenylamine	ug/L	<10.0		<11.1					
Disulfoton	ug/L	<10.0		<11.1					
Endosulfan I	ug/L	<.032		<.036					
Endosulfan II	ug/L	<.032		<.036					
Endosulfan Sulfate	ug/L	<.032		<.036					
Endrin	ug/L	<.032		<.036					
Endrin Aldehyde	ug/L	<.032		<.036					
Ethyl Methacrylate	ug/L	<2		<2					
Ethyl Methanesulfonate	ug/L	<10.0		<11.1					
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	
Famphur	ug/L	<20.0		<22.2					
Fluoranthene	ug/L	<10.0		<11.1					
Fluorene	ug/L	<10.0		<11.1					
gamma-BHC (Lindane)	ug/L	<.032		<.036					
Heptachlor	ug/L	<.032		<.036					
Heptachlor Epoxide	ug/L	<.032		<.036					
Hexachlorobenzene	ug/L	<10.0		<11.1					
Hexachlorobutadiene	ug/L	<10.0		<11.1					
Hexachlorocyclopentadiene	ug/L	<10.0		<22.2					
Hexachloroethane	ug/L	<10.0		<11.1					
Hexachloropropene	ug/L	<10.0		<11.1					
Indeno[1,2,3-cd]pyrene	ug/L	<10.0		<11.1					
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0	
Iron	ug/L					35400	1010	50000	
Isobutanol	ug/L	<10000		<10000					
Isodrin	ug/L	<10.0		<11.1					
Isophorone	ug/L	<10.0		<11.1					

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

Table 9

Analytical Data Summary for MW-383

Constituents	Units	9/19/2012	3/27/2013	9/26/2013	4/15/2014	9/25/2014	3/11/2015	9/2/2015	11/10/2015
Isosafrole	ug/L	<10.0		<11.1					
Kepone	ug/L	<10.0		<11.1					
Lead	ug/L	<4.0000	<4.0000	<4.0000	<4.0000	<.0967	<.5000	<.5000	
Mercury	ug/L	<.267		<.200					
Methacrylonitrile	ug/L	<1		<1					
Methapyrilene	ug/L	<10.0		<11.1					
Methoxychlor	ug/L	<.032		<.036					
Methyl Methacrylate	ug/L	<2		<2					
Methyl Methanesulfonate	ug/L	<10.0		<11.1					
Methyl Parathion	ug/L	<10.0		<11.1					
Methylene Chloride	ug/L	<5.000	.238	<5.000	<5.000	.424	<5.000	<5.000	
Naphthalene	ug/L	<5		<5					
Nickel	ug/L	<50.00	<50.00	<50.00	<50.00	6.14	1.59	5.56	
Nitrobenzene	ug/L	<10.0		<11.1					
N-Nitrosodiethylamine	ug/L	<10.0		<11.1					
N-Nitrosodimethylamine	ug/L	<10.0		<11.1					
N-Nitrosodi-n-butylamine	ug/L	<10.0		<11.1					
N-Nitrosodi-n-propylamine	ug/L	<10.0		<11.1					
N-Nitrosodiphenylamine	ug/L	<10.0		<11.1					
N-Nitrosomethylethylamine	ug/L	<10.0		<11.1					
N-Nitrosopiperidine	ug/L	<10.0		<11.1					
N-Nitrosopyrrolidine	ug/L	<10.0		<11.1					
o,o,o-Triethylphosphorothioate	ug/L	<10.0		<11.1					
o-Toluidine	ug/L	<10.0		<11.1					
p-[Dimethylamino]azobenzene	ug/L	<10.0		<11.1					
Parathion	ug/L	<10.0		<11.1					
PCB-1016	ug/L	<.800		<.825					
PCB-1221	ug/L	<.800		<.825					
PCB-1232	ug/L	<.800		<.825					
PCB-1242	ug/L	<.800		<.825					
PCB-1248	ug/L	<.800		<.825					
PCB-1254	ug/L	<.800		<.825					
PCB-1260	ug/L	<.800		<.825					
Pentachlorobenzene	ug/L	<10.0		<11.1					
Pentachloronitrobenzene	ug/L	<10.0		<11.1					
Pentachlorophenol	ug/L	<10.0		<11.1					
pH	SU					6.48	6.61	6.64	
Phenacetin	ug/L	<10.0		<11.1					
Phenanthrene	ug/L	<10.0		<11.1					
Phenol	ug/L	<10.0		<11.1					
Phorate	ug/L	<10.0		<11.1					
p-Phenylenediamine	ug/L	<10.0		<11.1					
Pronamide	ug/L	<10.0		<11.1					
Propionitrile	ug/L	<10		<10					
Pyrene	ug/L	<10.0		<11.1					
Safrole	ug/L	<10.0		<11.1					
Selenium	ug/L	<5.00	<5.00	<5.00	<5.00	<3.34	<5.00	<5.00	
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<.042	<1.000	<1.000	
Styrene	ug/L	<1.0	<1.0	<1.0	<1.0	<.1	<1.0	<1.0	
Sulfate	mg/L					322.0	126.0	61.7	
Sulfide	mg/L	<1		<1					
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	
Thallium	ug/L	<4.0000	<2.0000	<2.0000	<2.0000	<.0325	<1.0000	<1.0000	
Thionazin	ug/L	<10.0		<11.1					
Tin	ug/L	<100		348	<100				
Total Suspended Solids	mg/L					46.0	2.5	40.0	
Toxaphene	ug/L	<2.00		<2.25					
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	
Vanadium	ug/L	<50.000	<50.000	<50.000	<50.000	.877	<5.000	<5.000	
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	
Vinyl Chloride	ug/L	<1.0	<1.0	<1.0	<1.0	<.1	<1.0	<1.0	
Xylenes, Total	ug/L	<3.00	<3.00	<3.00	<3.00	<.13	<3.00	<3.00	
Zinc	ug/L	<20.0	34.0	77.6	<60.0	8.2	<10.0	<10.0	

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

Table 9

Analytical Data Summary for MW-384

Constituents	Units	9/20/2012	3/28/2013	9/25/2013	4/15/2014	9/25/2014	3/11/2015	9/1/2015	3/22/2016	10/20/2016
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	<2.00	<.15
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	<10.00	<.50
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00	<.13
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	<1.00	<.14
1,2-Dichloroethane	ug/L	<1.000	<1.000	<1.000	<1.000	<.180	<1.000	<1.000	<1.000	<.180
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	<1.00	<.87
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.20	<1.00	<1.00	<1.00	<.20
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	<10.00	<1.04
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	<10.0	<.2
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	<10.00	<.22
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00	<10.00	<1.79
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	<10.00	<.53
Alkalinity as CaCO3	mg/L					227.0	43.2	165.0	30.9	97.9
Aluminum	ug/L					53.8	53.0	<50.0	85.3	37.1
Antimony	ug/L	<6.000	<6.000	<6.000	3.670	<.161	<1.000	<1.000	<.237	<.237
Arsenic	ug/L	<2.00	<1.00	2.14	<1.00	1.77	1.99	<2.00	1.89	1.90
Barium	ug/L	12.20	12.40	5.03	<20.00	10.20	10.90	10.30	9.61	9.63
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50	<.50	<.11
Beryllium	ug/L	<1.000	<1.000	.480	<1.000	.438	<1.000	<1.000	.274	1.440
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	<5.00	<.12
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	<5.00	<.14
Bromomethane	ug/L	<20.000	<4.000	<4.000	<4.000	<.220	<4.000	<4.000	<4.000	.313
Cadmium	ug/L	<.5000	<.5000	<.5000	<.5000	<.1120	<.5000	<.5000	.0700	.0620
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00	<1.00	<.15
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	<2.00	<.24
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.20	<5.00	<5.00	<5.00	<.20
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00	<4.00	<.15
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	<1.00	<.28
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00	<3.00	<.31
Chromium	ug/L	<20.000	<20.000	3.350	<40.000	10.000	<5.000	<5.000	<.355	<.355
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00	<1.00	<.13
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	<5.00	<.15
Cobalt	ug/L	80.3	32.5	54.2	30.0	47.3	85.1	40.7	45.3	68.7
Copper	ug/L	<20.000	<20.000	<20.000	<40.000	<.485	<2.000	<2.000	<1.220	<1.220
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0	<10.0	<.8
Iron	ug/L					95000	320000	73300	128000	284000
Lead	ug/L	<4.0000	<4.0000	<4.0000	<4.0000	<.0967	1.2400	<.5000	<.2110	<.2110
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	.520	<5.000	<5.000	<5.000	<.170
Nickel	ug/L	222.0	90.9	168.0	117.0	106.0	142.0	104.0	129.0	125.0
pH	SU					6.04	5.76	6.39	6.11	5.84
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<3.340	<5.000	<5.000	<.630	<.630
Silver	ug/L	<20.000	<20.000	5.750	<40.000	<.042	<1.000	<1.000	<.153	<.153
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10
Sulfate	mg/L					3250	3710	2920	3740	3970
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<.0325	<1.0000	<1.0000	<.0255	<.0255
Toluene	ug/L									
Total Suspended Solids	mg/L					42.00	26.00	9.33	56.70	9.13
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	<5.00	<.22
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00	<.13
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	<4.00	<.17
Vanadium	ug/L	<50.000	<50.000	<50.000	<100.000	.640	<5.000	<5.000	.263	<.255
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	<10.00	<.74
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10
Xylenes, Total	ug/L	<3.000	<3.000	<3.000	<3.000	<.130	<3.000	3.000	<3.000	.707
Zinc	ug/L	126.0	117.0	320.0	<40.0	58.3	296.0	50.6	84.9	238.0

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

Table 9

Analytical Data Summary for MW-384

Constituents	3/9/2017	9/27/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/15/2020	4/16/2021
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.38	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.12	<.19	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.47	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.12	<.45	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	<.21	<.21	<.21	<.22	<.22	<.22	<.22	<.22	<.22
1,1-Dichloroethene	<.15	<.15	<.15	<.56	<.56	<.56	<.56	<.56	<.56
1,2,3-Trichloropropane	<.19	<.19	<.19	<.59	<.59	<.59	<.59	<.59	<.59
1,2-Dibromo-3-chloropropane	<.50	<.50	<.50	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20
1,2-Dibromoethane	<.13	<.13	<.13	<.34	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.14	<.37	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.180	<.180	.195	<.390	<.390	<.390	<.390	<.390	<.390
1,2-Dichloropropane	<.87	<.87	<.87	<.27	<.27	<.27	<.27	<.27	<.27
1,4-Dichlorobenzene	<.20	<.20	<.20	<.23	<.23	<.23	<.23	<.23	<.23
2-Butanone	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10
2-Hexanone	<.2	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Methyl-2-pentanone	<.22	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10
Acetone	2.77	2.49	<1.79	<3.10	<3.10	<3.10	<3.10	<3.10	<3.10
Acrylonitrile	<.53	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20	<2.20
Alkalinity as CaCO3	196.0	165.0	64.9	144.0	227.0	272.0	88.7	130.0	129.0
Aluminum	<41.3	<41.3	<165.0	46.4	<27.0	82.6	461.0	49.4	54.7
Antimony	<.185	<.185	<.740	<1.320	<.530	<.530	<.580	<.510	<1.100
Arsenic	1.33	1.55	2.83	3.06	1.68	2.28	4.09	3.15	2.79
Barium	10.50	11.40	10.00	9.11	9.49	11.70	10.90	9.95	10.50
Benzene	<.11	<.11	<.11	<.22	<.22	<.22	<.22	<.22	<.22
Beryllium	.166	.280	1.240	<.530	<.270	.350	1.080	.993	.955
Bromochloromethane	<.12	<.12	<.12	<.54	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.12	<.39	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.14	<.78	<.78	<.78	<.78	<.78	<.78
Bromomethane	<.220	<.220	<.220	<1.100	<1.100	<1.100	<1.100	<1.100	<1.100
Cadmium	<.0441	<.0441	<.1760	.2420	<.0770	<.0390	.0430	<.0490	<.0510
Carbon Disulfide	<.15	<.15	<.15	<.45	<.45	<.45	<.45	<.45	<.45
Carbon Tetrachloride	<.24	<.24	<.24	<.65	<.65	<.65	<.65	<.65	<.65
Chlorobenzene	<.19	<.19	<.19	<.40	<.40	<.40	<.40	<.40	<.40
Chlorodibromomethane	<.20	<.20	<.20	<.75	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.15	<.15	<.15	<.79	<.79	<.79	<.79	<.79	<.79
Chloroform	<.28	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	<.31	<.31	<.31	<.61	<.61	<.61	<.61	<.61	<.61
Chromium	<.729	<.729	<2.920	<1.140	<.980	<.980	3.540	<1.100	<1.100
cis-1,2-Dichloroethene	<.13	<.13	<.13	<.21	<.21	<.21	<.21	<.21	<.21
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.25	<.25	<.25	<.25	<.25	<.25
Cobalt	61.0	41.7	54.0	41.9	26.3	33.6	33.8	42.2	38.2
Copper	<2.190	<2.190	<8.760	<.497	<2.000	<2.000	<3.200	<1.500	<1.400
Dibromomethane	<.18	<.18	<.18	<.33	<.33	<.33	<.33	<.33	<.33
Ethylbenzene	<.21	<.21	<.21	<.31	<.31	<.31	<.31	<.31	<.31
Iodomethane	<.8	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0
Iron	71000	101000	279000	168000	60300	77500	246000	253000	245000
Lead	<.3240	<.3240	<1.3000	<.1860	<.2700	<.2700	.8490	<.1100	<.2100
Methylene Chloride	<.170	.292	<.170	<1.700	<1.700	<1.700	<1.700	<1.700	<1.700
Nickel	99.7	108.0	129.0	118.0	72.8	92.6	99.3	123.0	115.0
pH	6.46	6.13	5.90	5.97	6.42	6.43	5.74	5.93	6.04
Selenium	<.928	<.928	<3.710	<.982	<1.000	<1.000	1.060	<1.000	<.960
Silver	<.140	<.140	<.560	<.115	<.370	<.370	<.370	<.370	<.420
Styrene	<.10	<.10	<.10	<.37	<.37	<.37	<.37	<.37	<.37
Sulfate	3030	2950	2790	2630	3380	2920	2730	2830	2790
Tetrachloroethene	<.18	<.18	<.18	<.48	<.48	<.48	<.48	<.48	<.48
Thallium	<.0644	<.0644	<.2580	<.5700	<.2700	<.2700	<.2600	<.2600	<.2600
Toluene				<.43	<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	7.88	7.75	22.50	15.30	10.30	9.63	187.00	13.60	11.80
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.27	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.56	<.56	<.56	<.56	<.56	<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.19	<.43	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.17	<.38	<.38	<.38	<.38	<.38	<.38
Vanadium	<.840	<.840	<3.360	<2.150	<.820	<.820	1.570	<.850	<1.100
Vinyl Acetate	<.74	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	<.10	<.10	<.10	<.60	<.60	<.18	<.18	<.18	<.18
Xylenes, Total	.949	<.130	<.130	<.400	<.400	<.400	<.400	<.400	<.400
Zinc	57.9	54.0	144.0	111.0	30.2	48.7	78.3	96.7	72.7

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

Table 9

Analytical Data Summary for MW-384

Constituents	10/28/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024
1,1,1,2-Tetrachloroethane	<.38	<.38	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<.22	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<.56	<1.00	<1.00	<1.00	<1.00
1,2,3-Trichloropropane	<.59	<.59	<1.00	<1.00	<1.00	<1.00
1,2-Dibromo-3-chloropropane	<1.20	<1.20	<5.00	<5.00	<5.00	<5.00
1,2-Dibromoethane	<.34	<.34	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.390	<.390	<1.000	<1.000	<1.000	<1.000
1,2-Dichloropropane	<.27	<.27	<1.00	<1.00	<1.00	<1.00
1,4-Dichlorobenzene	<.23	<.23	<1.00	<1.00	<1.00	<1.00
2-Butanone	<2.10	<2.10	<10.00	<10.00	<10.00	<10.00
2-Hexanone	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0
4-Methyl-2-pentanone	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00
Acetone	<3.10	<3.10	<10.00	<10.00	<10.00	<10.00
Acrylonitrile	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00
Alkalinity as CaCO3	272.0	225.0	82.0	106.0	125.0	164.0
Aluminum	<68.0	<68.0	<100.0	<50.0	117.0	87.0
Antimony	<4.400	<2.760	<2.000	<2.000	<2.000	<2.000
Arsenic	<3.00	<3.00	<4.00	<4.00	<4.00	<4.00
Barium	9.71	8.26	11.20	10.70	10.00	10.10
Benzene	<.22	<.22	<1.00	<1.00	<1.00	<1.00
Beryllium	<1.080	<1.080	<4.000	<4.000	<4.000	<4.000
Bromochloromethane	<.54	<.54	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.100	<1.100	<1.000	<1.000	<1.000	<1.000
Cadmium	<.2040	<.2200	<.8000	<.8000	<.8000	<.8000
Carbon Disulfide	<.45	<.45	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<1.00	<1.00	<1.00	<1.00
Chlorobenzene	<.40	<.40	<1.00	<1.00	<1.00	<1.00
Chlorodibromomethane	<.75	<.75	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<.79	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<.61	<1.00	<1.00	<1.00	<1.00
Chromium	<4.400	<4.400	<8.000	<8.000	<8.000	<8.000
cis-1,2-Dichloroethene	<.21	<.21	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<.25	<1.00	<1.00	<1.00	<1.00
Cobalt	30.4	17.3	16.8	8.4	14.6	15.8
Copper	<5.600	<7.200	<4.000	<4.000	<4.000	<4.000
Dibromomethane	<.33	<.33	<1.00	<1.00	<1.00	<1.00
Ethylbenzene	<.31	<.31	<1.00	<1.00	<1.00	<1.00
Iodomethane	<7.0	<7.0	<1.0	<1.0	<1.0	<1.0
Iron	127000	99800	65200	5520	103000	91300
Lead	1.0200	<.9600	<4.0000	<4.0000	<4.0000	<4.0000
Methylene Chloride	<1.700	<1.700	<5.000	<5.000	<5.000	<5.000
Nickel	88.4	68.0	74.8	43.2	54.4	57.7
pH	6.08	6.23	5.60	6.00	5.80	5.90
Selenium	<3.840	<3.840	<4.000	<4.000	<4.000	<4.000
Silver	<1.680	<1.960	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<1.00	<1.00	<1.00	<1.00
Sulfate	2560	2760	2550	2430	2450	2590
Tetrachloroethene	<.48	<.48	<1.00	<1.00	<1.00	<1.00
Thallium	<1.0400	<1.0400	<2.0000	<2.0000	<2.0000	<2.0000
Toluene	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	15.30	48.00				
trans-1,2-Dichloroethene	<.27	<.27	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<1.00	<1.00	<1.00	<1.00
Vanadium	<4.400	<4.400	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<.18	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.400	<.400	<2.000	<2.000	<2.000	<2.000
Zinc	<40.0	<40.0	<20.0	<20.0	20.3	<20.0

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

Table 9

Analytical Data Summary for MW-385

Constituents	Units	9/20/2012	3/28/2013	9/25/2013	4/15/2014	9/25/2014	3/11/2015	9/2/2015	3/22/2016	10/20/2016
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<.15	<2.00	<2.00	<2.00	<.15
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19
1,2-Dibromo-3-chloropropane	ug/L	<10.00	<10.00	<10.00	<10.00	<.12	<10.00	<10.00	<10.00	<.50
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00	<.13
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.14	<1.00	<1.00	<1.00	<.14
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<.87	<1.00	<1.00	<1.00	<.87
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.20	<1.00	<1.00	<1.00	<.20
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.47	<10.00	<10.00	<10.00	<1.04
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<.2	<10.0	<10.0	<10.0	<.2
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<.22	<10.00	<10.00	<10.00	<.22
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<1.79	<10.00	<10.00	<10.00	<1.79
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<.53	<10.00	<10.00	<10.00	<.53
Alkalinity as CaCO3	mg/L					418	389	356	412	422
Aluminum	ug/L					114.0	69.3	<50.0	<20.8	21.8
Antimony	ug/L	<6.000	<6.000	<6.000	<6.000	<.161	<1.000	<1.000	<.237	<.237
Arsenic	ug/L	<2.000	<1.000	2.150	<1.000	1.440	<2.000	<2.000	.738	.673
Barium	ug/L	16.40	12.70	9.06	3.47	14.60	13.10	16.00	11.80	13.60
Benzene	ug/L	<.50	<.50	<.50	<.50	<.11	<.50	<.50	<.50	<.11
Beryllium	ug/L	<1.000	<1.000	<1.000	<1.000	.112	<1.000	<1.000	<.221	<.221
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.12	<5.00	<5.00	<5.00	<.12
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.12	<1.00	<1.00	<1.00	<.12
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<.14	<5.00	<5.00	<5.00	<.14
Bromomethane	ug/L	<20.000	<4.000	<4.000	<4.000	<.220	<4.000	<4.000	<4.000	.599
Cadmium	ug/L	<.500	<.500	<.500	<.500	.127	<.500	<.500	.169	.109
Carbon Disulfide	ug/L	<1.00	<1.00	<1.00	<1.00	<.15	<1.00	<1.00	<1.00	<.15
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<.24	<2.00	<2.00	<2.00	<.24
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<.20	<5.00	<5.00	<5.00	<.20
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.15	<4.00	<4.00	<4.00	<.15
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<.28	<1.00	<1.00	<1.00	<.28
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<.31	<3.00	<3.00	<3.00	<.31
Chromium	ug/L	<20.000	<20.000	4.310	<20.000	1.720	<5.000	<5.000	<.355	<.355
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.13	<1.00	<1.00	<1.00	<.13
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.15	<5.00	<5.00	<5.00	<.15
Cobalt	ug/L	17.00	13.20	12.10	7.12	8.88	6.50	8.37	3.17	3.00
Copper	ug/L	<20.000	<20.000	<20.000	<20.000	<.485	<2.000	<2.000	<1.220	<1.220
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<.8	<10.0	<10.0	<10.0	<.8
Iron	ug/L					34500	41000	39100	38900	33400
Lead	ug/L	<4.000	<4.000	<4.000	<4.000	.247	.872	<.500	<.211	<.211
Methylene Chloride	ug/L	<5.000	.343	<5.000	<5.000	.448	<5.000	<5.000	<5.000	.224
Nickel	ug/L	53.1	47.4	54.9	40.2	42.4	37.1	41.9	31.7	29.8
pH	SU					6.42	6.53	6.78	6.55	6.61
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<3.340	<5.000	<5.000	<.630	<.630
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<.042	<1.000	<1.000	<.153	<.153
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10
Sulfate	mg/L					2220	2320	2210	2380	2160
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.18	<1.00	<1.00	<1.00	<.18
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<.0325	<1.0000	<1.0000	<.0255	<.0255
Toluene	ug/L									
Total Suspended Solids	mg/L					37.50	43.70	26.00	65.00	8.00
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.21	<1.00	<1.00	<1.00	<.21
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<.22	<5.00	<5.00	<5.00	<.22
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<.13	<10.00	<10.00	<10.00	<.13
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<.19	<1.00	<1.00	<1.00	<.19
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<.17	<4.00	<4.00	<4.00	<.17
Vanadium	ug/L	<50.000	<50.000	<50.000	<50.000	.939	<5.000	<5.000	<.255	<.255
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<.74	<10.00	<10.00	<10.00	<.74
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00	<1.00	<.10	<1.00	<1.00	<1.00	<.10
Xylenes, Total	ug/L	<3.000	<3.000	<3.000	<3.000	<.130	<3.000	<3.000	<3.000	.387
Zinc	ug/L	43.5	120.0	233.0	<60.0	60.2	51.5	60.9	40.5	37.7

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

Table 9

Analytical Data Summary for MW-385

Constituents	3/8/2017	9/27/2017	3/14/2018	10/2/2018	3/28/2019	9/24/2019	3/10/2020	9/16/2020	4/16/2021
1,1,1,2-Tetrachloroethane	<.21	<.21	<.21	<.38	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.12	<.19	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.10	<.47	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.12	<.45	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	<.21	<.21	<.21	<.22	<.22	<.22	<.22	<.22	<.22
1,1-Dichloroethene	<.15	<.15	<.15	<.56	<.56	<.56	<.56	<.56	<.56
1,2,3-Trichloropropane	<.19	<.19	<.19	<.59	<.59	<.59	<.59	<.59	<.59
1,2-Dibromo-3-chloropropane	<.50	<.50	<.50	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20
1,2-Dibromoethane	<.13	<.13	<.13	<.34	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.14	<.37	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.18	<.18	<.18	<.39	<.39	<.39	<.39	<.39	<.39
1,2-Dichloropropane	<.87	<.87	<.87	<.27	<.27	<.27	<.27	<.27	<.27
1,4-Dichlorobenzene	<.20	<.20	<.20	<.23	<.23	<.23	<.23	<.23	<.23
2-Butanone	<1.04	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10
2-Hexanone	<.2	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Methyl-2-pentanone	<.22	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10
Acetone	3.51	3.14	<1.79	<3.10	<3.10	<3.10	<3.10	<3.10	<3.10
Acrylonitrile	<.53	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20	<2.20
Alkalinity as CaCO3	376	402	368	376	350	396	399	518	485
Aluminum	<41.3	<41.3	<165.0	<24.6	<27.0	<27.0	<30.0	<12.0	<15.0
Antimony	<.185	<.185	<.740	<1.320	<.530	<.530	<.580	<.510	<1.100
Arsenic	<.505	.850	<2.020	1.050	<.750	<.750	<.880	<.880	<.750
Barium	10.90	14.00	11.00	14.20	10.50	13.20	11.60	13.00	12.40
Benzene	<.11	<.11	<.11	<.22	<.22	<.22	<.22	<.22	<.22
Beryllium	<.125	<.125	<.500	<.530	<.270	<.270	<.270	<.270	<.270
Bromochloromethane	<.12	<.12	<.12	<.54	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.12	<.39	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.14	<.78	<.78	<.78	<.78	<.78	<.78
Bromomethane	<.220	<.220	<.220	<1.100	<1.100	<1.100	<1.100	<1.100	<1.100
Cadmium	.116	.074	<.176	<.167	<.077	.059	.059	<.049	<.051
Carbon Disulfide	<.15	<.15	<.15	<.45	<.45	<.45	<.45	<.45	<.45
Carbon Tetrachloride	<.24	<.24	<.24	<.65	<.65	<.65	<.65	<.65	<.65
Chlorobenzene	<.19	<.19	<.19	<.40	<.40	<.40	<.40	<.40	<.40
Chlorodibromomethane	<.20	<.20	<.20	<.75	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.15	<.15	<.15	<.79	<.79	<.79	<.79	<.79	<.79
Chloroform	<.28	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	<.31	<.31	<.31	<.61	<.61	<.61	<.61	<.61	<.61
Chromium	<.729	<.729	<2.920	<1.140	<.980	<.980	<1.100	<1.100	<1.100
cis-1,2-Dichloroethene	<.13	<.13	<.13	<.21	<.21	<.21	<.21	<.21	<.21
cis-1,3-Dichloropropene	<.15	<.15	<.15	<.25	<.25	<.25	<.25	<.25	<.25
Cobalt	5.66	4.14	4.35	7.00	4.42	8.28	7.52	6.76	7.18
Copper	<2.190	<2.190	<8.760	.514	<2.000	<2.000	<3.200	<1.500	<1.400
Dibromomethane	<.18	<.18	<.18	<.33	<.33	<.33	<.33	<.33	<.33
Ethylbenzene	<.21	<.21	<.21	<.31	<.31	<.31	<.31	<.31	<.31
Iodomethane	<.8	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0
Iron	28300	38700	29500	36300	21500	37400	40100	40500	49400
Lead	<.324	<.324	<1.300	<.186	<.270	<.270	<.270	<.110	<.210
Methylene Chloride	.501	.380	<.170	<1.700	<1.700	<1.700	<1.700	<1.700	<1.700
Nickel	34.6	41.8	29.4	37.3	26.4	40.9	39.7	37.3	39.3
pH	6.55	6.48	6.56	6.68	6.82	6.53	6.49	6.76	6.67
Selenium	<.928	<.928	<3.710	<.982	<1.000	<1.000	<1.000	<1.000	<.960
Silver	<.140	<.140	<.560	<.115	<.370	<.370	<.370	<.370	<.420
Styrene	<.10	<.10	<.10	<.37	<.37	<.37	<.37	<.37	<.37
Sulfate	2300	2300	2240	2180	2290	2240	2220	2190	2320
Tetrachloroethene	<.18	<.18	<.18	<.48	<.48	<.48	<.48	<.48	<.48
Thallium	<.0644	<.0644	<.2580	<.5700	<.2700	<.2700	<.2600	<.2600	<.2600
Toluene				<.43	<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	7.88	18.50	21.60	22.70	18.00	14.00	16.10	37.60	46.10
trans-1,2-Dichloroethene	<.21	<.21	<.21	<.27	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.22	<.56	<.56	<.56	<.56	<.56	<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.19	<.43	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.17	<.38	<.38	<.38	<.38	<.38	<.38
Vanadium	<.840	<.840	<3.360	<2.150	<.820	<.820	<.820	<.850	<1.100
Vinyl Acetate	<.74	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	<.10	<.10	<.10	<.60	<.60	<.18	<.18	<.18	<.18
Xylenes, Total	.898	.164	<.130	<.400	<.400	<.400	<.400	<.400	<.400
Zinc	39.9	41.5	<46.0	56.9	28.4	51.4	53.4	46.3	48.5

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

Table 9

Analytical Data Summary for MW-385

Constituents	10/28/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024
1,1,1,2-Tetrachloroethane	<.38	<.38	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<.19	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<.47	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<.45	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<.22	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<.56	<1.00	<1.00	<1.00	<1.00
1,2,3-Trichloropropane	<.59	<.59	<1.00	<1.00	<1.00	<1.00
1,2-Dibromo-3-chloropropane	<1.20	<1.20	<5.00	<5.00	<5.00	<5.00
1,2-Dibromoethane	<.34	<.34	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<.37	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<.39	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<.27	<1.00	<1.00	<1.00	<1.00
1,4-Dichlorobenzene	<.23	<.23	<1.00	<1.00	<1.00	<1.00
2-Butanone	<2.10	<2.10	<10.00	<10.00	<10.00	<10.00
2-Hexanone	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0
4-Methyl-2-pentanone	<2.10	<2.10	<5.00	<5.00	<5.00	<5.00
Acetone	<3.10	<3.10	<10.00	<10.00	<10.00	<10.00
Acrylonitrile	<2.20	<2.20	<5.00	<5.00	<5.00	<5.00
Alkalinity as CaCO3	672	598	533	410	515	494
Aluminum	<17.0	75.7	2000.0	<50.0	269.0	65.0
Antimony	<1.100	<2.760	<2.000	<2.000	<2.000	<2.000
Arsenic	.965	<3.000	<4.000	<4.000	<4.000	<4.000
Barium	15.30	11.60	18.20	11.00	15.10	12.40
Benzene	<.22	<.22	<1.00	<1.00	<1.00	<1.00
Beryllium	<.270	<1.080	<4.000	<4.000	<4.000	<4.000
Bromochloromethane	<.54	<.54	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<.39	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<.78	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.100	<1.100	<1.000	<1.000	<1.000	<1.000
Cadmium	.065	<.220	<.800	<.800	<.800	<.800
Carbon Disulfide	<.45	<.45	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	<.65	<.65	<1.00	<1.00	<1.00	<1.00
Chlorobenzene	<.40	<.40	<1.00	<1.00	<1.00	<1.00
Chlorodibromomethane	<.75	<.75	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<.79	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.30	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<.61	<1.00	<1.00	<1.00	<1.00
Chromium	<1.100	<4.400	<8.000	<8.000	<8.000	<8.000
cis-1,2-Dichloroethene	<.21	<.21	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<.25	<1.00	<1.00	<1.00	<1.00
Cobalt	7.50	6.70	8.80	2.40	6.70	4.70
Copper	<1.400	<7.200	<4.000	<4.000	<4.000	<4.000
Dibromomethane	<.33	<.33	<1.00	<1.00	<1.00	<1.00
Ethylbenzene	<.31	<.31	<1.00	<1.00	<1.00	<1.00
Iodomethane	<7.0	<7.0	<1.0	<1.0	<1.0	<1.0
Iron	57400	70600	97700	22600	67600	52200
Lead	.602	<.960	<4.000	<4.000	<4.000	<4.000
Methylene Chloride	<1.700	<1.700	<5.000	<5.000	<5.000	<5.000
Nickel	41.8	40.9	48.5	16.8	43.6	32.6
pH	6.54	6.72	6.40	6.70	6.60	6.50
Selenium	<.960	<3.840	<4.000	<4.000	<4.000	<4.000
Silver	<.420	<1.960	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<.37	<1.00	<1.00	<1.00	<1.00
Sulfate	2050	2160	2040	1960	2140	2100
Tetrachloroethene	<.48	<.48	<1.00	<1.00	<1.00	<1.00
Thallium	<.2600	<1.0400	<2.0000	<2.0000	<2.0000	<2.0000
Toluene	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	62.00	138.00				
trans-1,2-Dichloroethene	<.27	<.27	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<.56	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<1.10	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<.38	<1.00	<1.00	<1.00	<1.00
Vanadium	<1.100	<4.400	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<.18	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.400	<.400	<2.000	<2.000	<2.000	<2.000
Zinc	47.4	50.9	77.4	<20.0	44.2	33.4

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

Table 9

Analytical Data Summary for MW-390

Constituents	Units	9/18/2012	3/27/2013	9/25/2013	4/15/2014	9/1/2015	3/22/2016	10/21/2016	3/8/2017
1,1,1,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.21	<.21
1,1,1-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.12	<.12
1,1,2,2-Tetrachloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.10	<.10
1,1,2-Trichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.12	<.12
1,1-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.21	<.21
1,1-Dichloroethene	ug/L	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<.15	<.15
1,1-Dichloropropene	ug/L	<1		<1					
1,2,3-Trichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.19	<.19
1,2,4,5-Tetrachlorobenzene	ug/L	<10.0		<10.1					
1,2,4-Trichlorobenzene	ug/L	<5		<5					
1,2-Dibromo-3-chloropropane	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<.5	<.5
1,2-Dibromoethane	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<.13	<.13
1,2-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.14	<.14
1,2-Dichloroethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.18	<.18
1,2-Dichloropropane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.87	<.87
1,3,5-Trinitrobenzene	ug/L	<10.0		<10.1					
1,3-Dichlorobenzene	ug/L	<1		<1					
1,3-Dichloropropane	ug/L	<1		<1					
1,3-Dinitrobenzene	ug/L	<10.0		<10.1					
1,4-Dichlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.20	<.20
1,4-Naphthoquinone	ug/L	<10.0		<10.1					
1-Naphthylamine	ug/L	<10.0		<10.1					
2,2`-oxybis[1-Chloropropane]	ug/L	<10.0		<10.1					
2,2-Dichloropropane	ug/L	<4		<4					
2,3,4,6-Tetrachlorophenol	ug/L	<10.0		<10.1					
2,4,5-T	ug/L	<1.10		<1.02					
2,4,5-TP [Silvex]	ug/L	<1.10		<1.02					
2,4,5-Trichlorophenol	ug/L	<10.0		<10.1					
2,4,6-Trichlorophenol	ug/L	<10.0		<10.1					
2,4-D	ug/L	<1.10		<1.02					
2,4-Dichlorophenol	ug/L	<10.0		<10.1					
2,4-Dimethylphenol	ug/L	<10.0		<10.1					
2,4-Dinitrophenol	ug/L	<20.0		<20.2					
2,4-Dinitrotoluene	ug/L	<10.0		<10.1					
2,6-Dichlorophenol	ug/L	<10.0		<10.1					
2,6-Dinitrotoluene	ug/L	<10.0		<10.1					
2-Acetylaminofluorene	ug/L	<10.0		<10.1					
2-Butanone	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<1.04	<1.04
2-Chloronaphthalene	ug/L	<10.0		<10.1					
2-Chlorophenol	ug/L	<10.0		<10.1					
2-Hexanone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<.2	<.2
2-Methylnaphthalene	ug/L	<10.0		<10.1					
2-Methylphenol [o-Cresol]	ug/L	<10.0		<10.1					
2-Naphthylamine	ug/L	<10.0		<10.1					
2-Nitroaniline	ug/L	<10.0		<10.1					
2-Nitrophenol	ug/L	<10.0		<10.1					
3,3-Dichlorobenzidine	ug/L	<10.0		<50.5					
3,3-Dimethylbenzidine	ug/L	<10.0		<10.1					
3-Methylcholanthrene	ug/L	<10.0		<10.1					
3-Nitroaniline	ug/L	<10.0		<10.1					
4,4`-DDD	ug/L	<.0320		<.0327					
4,4`-DDE	ug/L	<.0320		<.0327					
4,4`-DDT	ug/L	<.0320		<.0327					
4,6-Dinitro-2-methylphenol	ug/L	<10.0		<10.1					
4-Aminobiphenyl	ug/L	<10.0		<10.1					
4-Bromophenyl phenyl ether	ug/L	<10.0		<10.1					
4-Chloro-3-methylphenol	ug/L	<10.0		<10.1					
4-Chloroaniline	ug/L	<10.0		<10.1					
4-Chlorophenyl phenyl ether	ug/L	<10.0		<10.1					
4-Methyl-2-pentanone	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<.22	<.22
4-Nitroaniline	ug/L	<10.0		<10.1					
4-Nitrophenol	ug/L	<10.0		<10.1					
5-Nitro-o-toluidine	ug/L	<10.0		<10.1					
7,12-Dimethylbenz[a]anthracene	ug/L	<10.0		<10.1					
Acenaphthene	ug/L	<10.0		<10.1					
Acetone	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<1.79	7.42
Acetonitrile	ug/L	<10000		<10000					
Acetophenone	ug/L	<10.0		<10.1					
Acrolein	ug/L	<10		<10					
Acrylonitrile	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<.53	<.53
Aldrin	ug/L	<.0320		<.0327					
Alkalinity as CaCO3	mg/L					217	170	170	201
Allyl Chloride	ug/L	<20		<2					
alpha-BHC	ug/L	<.0320		<.0327					
Aluminum	ug/L					67.4	31.4	201.0	<41.3
Anthracene	ug/L	<10.0		<10.1					
Antimony	ug/L	<6.000	<6.000	<6.000	<6.000	<1.000	<.237	<.237	<.185

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

Table 9

Analytical Data Summary for MW-390

Constituents	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/9/2020	9/17/2020	4/14/2021	10/26/2021
1,1,1,2-Tetrachloroethane	<.21	<.21	<.38	<.38	<.38	<.38	<.38	<.38	<.38
1,1,1-Trichloroethane	<.12	<.12	<.19	<.19	<.19	<.19	<.19	<.19	<.19
1,1,2,2-Tetrachloroethane	<.10	<.10	<.47	<.47	<.47	<.47	<.47	<.47	<.47
1,1,2-Trichloroethane	<.12	<.12	<.45	<.45	<.45	<.45	<.45	<.45	<.45
1,1-Dichloroethane	<.21	<.21	<.22	<.22	<.22	<.22	<.22	<.22	<.22
1,1-Dichloroethene	<.15	<.15	<.56	<.56	<.56	<.56	<.56	<.56	<.56
1,1-Dichloropropene									
1,2,3-Trichloropropane	<.19	<.19	<.59	<.59	<.59	<.59	<.59	<.59	<.59
1,2,4,5-Tetrachlorobenzene									
1,2,4-Trichlorobenzene									
1,2-Dibromo-3-chloropropane	<.5	<.5	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
1,2-Dibromoethane	<.13	<.13	<.34	<.34	<.34	<.34	<.34	<.34	<.34
1,2-Dichlorobenzene	<.14	<.14	<.37	<.37	<.37	<.37	<.37	<.37	<.37
1,2-Dichloroethane	<.18	<.18	<.39	<.39	<.39	<.39	<.39	<.39	<.39
1,2-Dichloropropane	<.87	<.87	<.27	<.27	<.27	<.27	<.27	<.27	<.27
1,3,5-Trinitrobenzene									
1,3-Dichlorobenzene									
1,3-Dichloropropane									
1,3-Dinitrobenzene									
1,4-Dichlorobenzene	<.20	<.20	<.23	<.23	<.23	<.23	<.23	<.23	<.23
1,4-Naphthoquinone									
1-Naphthylamine									
2,2`-oxybis[1-Chloropropane]									
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	<1.04	<1.04	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10
2-Chloronaphthalene									
2-Chlorophenol									
2-Hexanone	<.2	<.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Methylnaphthalene									
2-Methylphenol [o-Cresol]									
2-Naphthylamine									
2-Nitroaniline									
2-Nitrophenol									
3,3-Dichlorobenzidine									
3,3-Dimethylbenzidine									
3-Methylcholanthrene									
3-Nitroaniline									
4,4`-DDD									
4,4`-DDE									
4,4`-DDT									
4,6-Dinitro-2-methylphenol									
4-Aminobiphenyl									
4-Bromophenyl phenyl ether									
4-Chloro-3-methylphenol									
4-Chloroaniline									
4-Chlorophenyl phenyl ether									
4-Methyl-2-pentanone	<.22	<.22	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10	<2.10
4-Nitroaniline									
4-Nitrophenol									
5-Nitro-o-toluidine									
7,12-Dimethylbenz[a]anthracene									
Acenaphthene									
Acetone	2.90	<1.79	<3.10	3.35	<3.10	5.37	<3.10	<3.10	<3.10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<.53	<.53	<2.20	<2.20	<2.20	<2.20	<2.20	<2.20	<2.20
Aldrin									
Alkalinity as CaCO3	273	254	350	252	213	209	248	287	299
Allyl Chloride									
alpha-BHC									
Aluminum	<41.3	<165.0	246.0	<27.0	188.0	112.0	24.8	92.9	131.0
Anthracene									
Antimony	<.185	<.740	<1.320	<.530	<2.120	<.580	<.510	<1.100	<1.100

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

Table 9

Analytical Data Summary for MW-390

Constituents	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/18/2024	10/3/2024
1,1,1,2-Tetrachloroethane	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	<.19	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	<.47	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	<.45	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloropropene						
1,2,3-Trichloropropane	<.59	<1.00	<1.00	<1.00	<1.00	<1.00
1,2,4,5-Tetrachlorobenzene						
1,2,4-Trichlorobenzene						
1,2-Dibromo-3-chloropropane	<1.2	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dibromoethane	<.34	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
1,3,5-Trinitrobenzene						
1,3-Dichlorobenzene						
1,3-Dichloropropane						
1,3-Dinitrobenzene						
1,4-Dichlorobenzene	<.23	<1.00	<1.00	<1.00	<1.00	<1.00
1,4-Naphthoquinone						
1-Naphthylamine						
2,2`-oxybis[1-Chloropropane]						
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	<2.10	<10.00	<10.00	<10.00	<10.00	<10.00
2-Chloronaphthalene						
2-Chlorophenol						
2-Hexanone	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene						
2-Methylphenol [o-Cresol]						
2-Naphthylamine						
2-Nitroaniline						
2-Nitrophenol						
3,3-Dichlorobenzidine						
3,3-Dimethylbenzidine						
3-Methylcholanthrene						
3-Nitroaniline						
4,4`-DDD						
4,4`-DDE						
4,4`-DDT						
4,6-Dinitro-2-methylphenol						
4-Aminobiphenyl						
4-Bromophenyl phenyl ether						
4-Chloro-3-methylphenol						
4-Chloroaniline						
4-Chlorophenyl phenyl ether						
4-Methyl-2-pentanone	<2.10	<5.00	<5.00	<5.00	<5.00	<5.00
4-Nitroaniline						
4-Nitrophenol						
5-Nitro-o-toluidine						
7,12-Dimethylbenz[a]anthracene						
Acenaphthene						
Acetone	<3.10	<10.00	<10.00	<10.00	<10.00	<10.00
Acetonitrile						
Acetophenone						
Acrolein						
Acrylonitrile	<2.20	<5.00	<5.00	<5.00	<5.00	<5.00
Aldrin						
Alkalinity as CaCO3	216	218	203	250	244	231
Allyl Chloride						
alpha-BHC						
Aluminum	281.0	100.0	<50.0	232.0	129.0	162.0
Anthracene						
Antimony	<2.760	<2.000	<2.000	<2.000	<2.000	<2.000

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

Table 9

Analytical Data Summary for MW-390

Constituents	Units	9/18/2012	3/27/2013	9/25/2013	4/15/2014	9/1/2015	3/22/2016	10/21/2016	3/8/2017
Arsenic	ug/L	13.90	14.00	14.70	17.60	22.30	16.70	13.70	7.25
Barium	ug/L	30.6	23.5	29.7	13.0	49.9	36.1	28.8	17.8
Benzene	ug/L	<.50	<.50	<.50	<.50	<.50	<.50	<.11	<.11
Benzo[a]anthracene	ug/L	<10.0		<10.1					
Benzo[a]pyrene	ug/L	<10.0		<10.1					
Benzo[b]fluoranthene	ug/L	<10.0		<10.1					
Benzo[ghi]perylene	ug/L	<10.0		<10.1					
Benzo[k]fluoranthene	ug/L	<10.0		<10.1					
Benzyl alcohol	ug/L	<10.0		<10.1					
Beryllium	ug/L	<1.000	<1.000	.200	<1.000	<1.000	<.221	<.221	<.125
beta-BHC	ug/L	<.0320		<.0327					
Bis(2-chloroethoxy)methane	ug/L	<10.0		<10.1					
Bis(2-chloroethyl)ether	ug/L	<10.0		<10.1					
Bis(2-ethylhexyl)phthalate	ug/L	<10.0		<10.1					
Bromochloromethane	ug/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<.12	<.12
Bromodichloromethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.12	<.12
Bromoform	ug/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<.14	<.14
Bromomethane	ug/L	<20.00	<4.00	<4.00	<4.00	<4.00	<4.00	<.22	<.22
Butylbenzylphthalate	ug/L	<10.0		<10.1					
Cadmium	ug/L	.6620	.2810	<.5000	.3260	<.5000	<.0351	.3020	.0770
Carbon Disulfide	ug/L	<1.000	<1.000	<1.000	<1.000	<1.000	<1.000	<.150	<.150
Carbon Tetrachloride	ug/L	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<.24	<.24
Chlordane	ug/L	<2.00		<2.04					
Chlorobenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.19	<.19
Chlorobenzilate	ug/L	<10.0		<10.1					
Chlorodibromomethane	ug/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<.20	<.20
Chloroethane	ug/L	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<.15	<.15
Chloroform	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.28	<.28
Chloromethane	ug/L	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<.31	<.31
Chloroprene	ug/L	<1		<1					
Chromium	ug/L	<20.000	<20.000	5.510	<20.000	<5.000	.542	1.020	<.729
Chrysene	ug/L	<10.0		<10.1					
cis-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.13	<.13
cis-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<.15	<.15
Cobalt	ug/L	108.0	123.0	97.7	103.0	108.0	92.9	90.4	120.0
Copper	ug/L	<20.00	<20.00	<20.00	<20.00	<2.00	<1.22	<1.22	<2.19
Cyanide	mg/L	<.01		<.01					
delta-BHC	ug/L	<.0320		<.0327					
Diallate	ug/L	<10.0		<10.1					
Dibenzo(a,h)anthracene	ug/L	<10.0		<10.1					
Dibenzofuran	ug/L	<10.0		<10.1					
Dibromomethane	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.18	<.18
Dichlorodifluoromethane	ug/L	<3.00	<3.00	<3.00	<3.00			<.20	<.20
Dieldrin	ug/L	<.0320		<.0327					
Diethyl phthalate	ug/L	<10.0		<10.1					
Dimethoate	ug/L	<10.0		<10.1					
Dimethyl phthalate	ug/L	<10.0		<10.1					
Di-n-butylphthalate	ug/L	<10.0		<10.1					
Di-n-octylphthalate	ug/L	<10.0		<20.2					
Dinoseb	ug/L	<10.0		<10.1					
Diphenylamine	ug/L	<10.0		<10.1					
Disulfoton	ug/L	<10.0		<10.1					
Endosulfan I	ug/L	<.0320		<.0327					
Endosulfan II	ug/L	<.0320		<.0327					
Endosulfan Sulfate	ug/L	<.0320		<.0327					
Endrin	ug/L	<.0320		<.0327					
Endrin Aldehyde	ug/L	<.0320		<.0327					
Ethyl Methacrylate	ug/L	<2		<2					
Ethyl Methanesulfonate	ug/L	<10.0		<10.1					
Ethylbenzene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.21	<.21
Famphur	ug/L	<20.0		<20.2					
Fluoranthene	ug/L	<10.0		<10.1					
Fluorene	ug/L	<10.0		<10.1					
gamma-BHC (Lindane)	ug/L	<.0320		<.0327					
Heptachlor	ug/L	<.0320		<.0327					
Heptachlor Epoxide	ug/L	<.0320		<.0327					
Hexachlorobenzene	ug/L	<10.0		<10.1					
Hexachlorobutadiene	ug/L	<10.0		<10.1					
Hexachlorocyclopentadiene	ug/L	<10.0		<20.2					
Hexachloroethane	ug/L	<10.0		<10.1					
Hexachloropropene	ug/L	<10.0		<10.1					
Indeno[1,2,3-cd]pyrene	ug/L	<10.0		<10.1					
Iodomethane	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<.8	<.8
Iron	ug/L					139000	111000	100000	92700
Isobutanol	ug/L	<10000		<10000					
Isodrin	ug/L	<10.0		<10.1					
Isophorone	ug/L	<10.0		<10.1					

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

Table 9

Analytical Data Summary for MW-390

Constituents	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/9/2020	9/17/2020	4/14/2021	10/26/2021
Arsenic	13.60	14.70	13.90	15.00	19.70	19.00	14.80	15.70	11.30
Barium	28.2	21.5	26.6	30.0	29.3	26.9	26.0	26.1	25.4
Benzene	<.11	<.11	<.22	<.22	<.22	<.22	<.22	<.22	<.22
Benzo[a]anthracene									
Benzo[a]pyrene									
Benzo[b]fluoranthene									
Benzo[ghi]perylene									
Benzo[k]fluoranthene									
Benzyl alcohol									
Beryllium	<.125	<.500	<.530	<.270	<1.080	<.270	<.540	<.270	<.270
beta-BHC									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-ethylhexyl)phthalate									
Bromochloromethane	<.12	<.12	<.54	<.54	<.54	<.54	<.54	<.54	<.54
Bromodichloromethane	<.12	<.12	<.39	<.39	<.39	<.39	<.39	<.39	<.39
Bromoform	<.14	<.14	<.78	<.78	<.78	<.78	<.78	<.78	<.78
Bromomethane	<.22	<.22	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10
Butylbenzylphthalate									
Cadmium	<.0441	<.1760	<.1670	<.0770	1.1200	.4670	.1080	.5250	.3080
Carbon Disulfide	.177	<.150	<.450	<.450	<.450	<.450	<.450	<.450	<.450
Carbon Tetrachloride	<.24	<.24	<.65	<.65	<.65	<.65	<.65	<.65	<.65
Chlordane									
Chlorobenzene	<.19	<.19	<.40	<.40	<.40	<.40	<.40	<.40	<.40
Chlorobenzilate									
Chlorodibromomethane	<.20	<.20	<.75	<.75	<.75	<.75	<.75	<.75	<.75
Chloroethane	<.15	<.15	<.79	<.79	<.79	<.79	<.79	<.79	<.79
Chloroform	<.28	<.28	<1.30	<1.30	<1.30	<1.30	<1.30	<1.30	<1.30
Chloromethane	<.31	<.31	<.61	<.61	<.61	<.61	<.61	<.61	<.61
Chloroprene									
Chromium	<.729	<2.920	2.060	<.980	<3.920	<1.100	<1.100	<1.100	<1.100
Chrysene									
cis-1,2-Dichloroethene	<.13	<.13	<.21	<.21	<.21	<.21	<.21	<.21	<.21
cis-1,3-Dichloropropene	<.15	<.15	<.25	<.25	<.25	<.25	<.25	<.25	<.25
Cobalt	107.0	98.2	98.9	114.0	112.0	102.0	108.0	110.0	113.0
Copper	<2.19	<8.76	1.55	<2.00	<8.00	<3.20	<1.50	<1.40	<1.40
Cyanide									
delta-BHC									
Diallate									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromomethane	<.18	<.18	<.33	<.33	<.33	<.33	<.33	<.33	<.33
Dichlorodifluoromethane	<.20	<.20	<.25		<.25				
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butylphthalate									
Di-n-octylphthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan I									
Endosulfan II									
Endosulfan Sulfate									
Endrin									
Endrin Aldehyde									
Ethyl Methacrylate									
Ethyl Methanesulfonate									
Ethylbenzene	<.21	<.21	<.31	<.31	<.31	<.31	<.31	<.31	<.31
Famphur									
Fluoranthene									
Fluorene									
gamma-BHC (Lindane)									
Heptachlor									
Heptachlor Epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno[1,2,3-cd]pyrene									
Iodomethane	<.8	<.8	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0
Iron	98900	91100	115000	138000	148000	119000	117000	123000	115000
Isobutanol									
Isodrin									
Isophorone									

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

Table 9

Analytical Data Summary for MW-390

Constituents	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/18/2024	10/3/2024
Arsenic	22.50	19.40	16.30	16.00	17.30	18.30
Barium	19.0	14.9	17.3	12.9	17.0	16.3
Benzene	<.22	<1.00	<1.00	<1.00	<1.00	<1.00
Benzo[a]anthracene						
Benzo[a]pyrene						
Benzo[b]fluoranthene						
Benzo[ghi]perylene						
Benzo[k]fluoranthene						
Benzyl alcohol						
Beryllium	<1.080	<4.000	<4.000	<4.000	<4.000	<4.000
beta-BHC						
Bis(2-chloroethoxy)methane						
Bis(2-chloroethyl)ether						
Bis(2-ethylhexyl)phthalate						
Bromochloromethane	<.54	<1.00	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	<.39	<1.00	<1.00	<1.00	<1.00	<1.00
Bromoform	<.78	<1.00	<1.00	<1.00	<1.00	<1.00
Bromomethane	<1.10	<1.00	<1.00	<1.00	<1.00	<1.00
Butylbenzylphthalate						
Cadmium	1.1900	<.8000	<.8000	<.8000	<.8000	<.8000
Carbon Disulfide	<.450	<1.000	<1.000	<1.000	<1.000	<1.000
Carbon Tetrachloride	<.65	<1.00	<1.00	<1.00	<1.00	<1.00
Chlordane						
Chlorobenzene	<.40	<1.00	<1.00	<1.00	<1.00	<1.00
Chlorobenzilate						
Chlorodibromomethane	<.75	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroethane	<.79	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroform	<1.30	<1.00	<1.00	<1.00	<1.00	<1.00
Chloromethane	<.61	<1.00	<1.00	<1.00	<1.00	<1.00
Chloroprene						
Chromium	<4.400	<8.000	<8.000	<8.000	<8.000	<8.000
Chrysene						
cis-1,2-Dichloroethene	<.21	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	<.25	<1.00	<1.00	<1.00	<1.00	<1.00
Cobalt	106.0	103.0	113.0	96.9	107.0	111.0
Copper	<7.20	<4.00	<4.00	<4.00	<4.00	<4.00
Cyanide						
delta-BHC						
Diallate						
Dibenzo(a,h)anthracene						
Dibenzofuran						
Dibromomethane	<.33	<1.00	<1.00	<1.00	<1.00	<1.00
Dichlorodifluoromethane						
Dieldrin						
Diethyl phthalate						
Dimethoate						
Dimethyl phthalate						
Di-n-butylphthalate						
Di-n-octylphthalate						
Dinoseb						
Diphenylamine						
Disulfoton						
Endosulfan I						
Endosulfan II						
Endosulfan Sulfate						
Endrin						
Endrin Aldehyde						
Ethyl Methacrylate						
Ethyl Methanesulfonate						
Ethylbenzene	<.31	<1.00	<1.00	<1.00	<1.00	<1.00
Famphur						
Fluoranthene						
Fluorene						
gamma-BHC (Lindane)						
Heptachlor						
Heptachlor Epoxide						
Hexachlorobenzene						
Hexachlorobutadiene						
Hexachlorocyclopentadiene						
Hexachloroethane						
Hexachloropropene						
Indeno[1,2,3-cd]pyrene						
Iodomethane	<7.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	137000	131000	144000	132000	130000	134000
Isobutanol						
Isodrin						
Isophorone						

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

Table 9

Analytical Data Summary for MW-390

Constituents	Units	9/18/2012	3/27/2013	9/25/2013	4/15/2014	9/1/2015	3/22/2016	10/21/2016	3/8/2017
Isosafrole	ug/L	<10.0		<10.1					
Kepone	ug/L	<10.0		<10.1					
Lead	ug/L	<4.000	<4.000	<4.000	<4.000	.720	<.211	2.860	<.324
Mercury	ug/L	<.267		<.200					
Methacrylonitrile	ug/L	<1		<1					
Methapyrilene	ug/L	<10.0		<10.1					
Methoxychlor	ug/L	<.0320		<.0327					
Methyl Methacrylate	ug/L	<2		<2					
Methyl Methanesulfonate	ug/L	<10.0		<10.1					
Methyl Parathion	ug/L	<10.0		<10.1					
Methylene Chloride	ug/L	<5.000	<5.000	<5.000	<5.000	<5.000	<5.000	.397	<.170
Naphthalene	ug/L	<5		<5					
Nickel	ug/L	<50.0	63.8	60.3	51.0	54.5	45.4	49.7	61.3
Nitrobenzene	ug/L	<10.0		<10.1					
N-Nitrosodiethylamine	ug/L	<10.0		<10.1					
N-Nitrosodimethylamine	ug/L	<10.0		<10.1					
N-Nitrosodi-n-butylamine	ug/L	<10.0		<10.1					
N-Nitrosodi-n-propylamine	ug/L	<10.0		<10.1					
N-Nitrosodiphenylamine	ug/L	<10.0		<10.1					
N-Nitrosomethylethylamine	ug/L	<10.0		<10.1					
N-Nitrosopiperidine	ug/L	<10.0		<10.1					
N-Nitrosopyrrolidine	ug/L	<10.0		<10.1					
o,o,o-Triethylphosphorothioate	ug/L	<10.0		<10.1					
o-Toluidine	ug/L	<10.0		<10.1					
p-[Dimethylamino]azobenzene	ug/L	<10.0		<10.1					
Parathion	ug/L	<10.0		<10.1					
PCB-1016	ug/L	<.8		<.8					
PCB-1221	ug/L	<.8		<.8					
PCB-1232	ug/L	<.8		<.8					
PCB-1242	ug/L	<.8		<.8					
PCB-1248	ug/L	<.8		<.8					
PCB-1254	ug/L	<.8		<.8					
PCB-1260	ug/L	<.8		<.8					
Pentachlorobenzene	ug/L	<10.0		<10.1					
Pentachloronitrobenzene	ug/L	<10.0		<10.1					
Pentachlorophenol	ug/L	<10.0		<10.1					
pH	SU					6.20	6.03	5.88	5.81
Phenacetin	ug/L	<10.0		<10.1					
Phenanthrene	ug/L	<10.0		<10.1					
Phenol	ug/L	<10.0		<10.1					
Phorate	ug/L	<10.0		<10.1					
p-Phenylenediamine	ug/L	<10.0		<10.1					
Pronamide	ug/L	<10.0		<10.1					
Propionitrile	ug/L	<10		<10					
Pyrene	ug/L	<10.0		<10.1					
Safrole	ug/L	<10.0		<10.1					
Selenium	ug/L	<5.000	<5.000	<5.000	<5.000	<5.000	<.630	<.630	<.928
Silver	ug/L	<20.000	<20.000	<20.000	<20.000	<1.000	<.153	<.153	<.140
Styrene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.10	<.10
Sulfate	mg/L					1530	1630	1710	2710
Sulfide	mg/L	<1.000	<1.000	<1.000	<1.000			<.180	<.180
Tetrachloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.18	<.18
Thallium	ug/L	<2.0000	<2.0000	<2.0000	<2.0000	<1.0000	<.0255	.0450	<.0644
Thionazin	ug/L	<10.0		<10.1					
Tin	ug/L	<100.000	<100.000	632.000	<100.000			<.832	<1.620
Toluene	ug/L								
Total Suspended Solids	mg/L					53.30	84.00	99.10	23.00
Toxaphene	ug/L	<2.00		<2.04					
trans-1,2-Dichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.21	<.21
trans-1,3-Dichloropropene	ug/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<.22	<.22
trans-1,4-Dichloro-2-butene	ug/L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<.13	<.13
Trichloroethene	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.19	<.19
Trichlorofluoromethane	ug/L	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<.17	<.17
Vanadium	ug/L	<50.000	8.910	<50.000	<50.000	<5.000	.378	.669	<.840
Vinyl Acetate	ug/L	<2.00	<2.00	<2.00	<2.00	<10.00	<10.00	<.74	<.74
Vinyl Chloride	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<.10	<.10
Xylenes, Total	ug/L	<3.000	<3.000	<3.000	<3.000	<3.000	<3.000	.464	.566
Zinc	ug/L	94.00	207.00	200.00	27.30	48.80	<5.21	101.00	308.00

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

Table 9

Analytical Data Summary for MW-390

Constituents	9/25/2017	3/13/2018	10/1/2018	3/27/2019	9/23/2019	3/9/2020	9/17/2020	4/14/2021	10/26/2021
Isosafrole									
Kepone									
Lead	<.324	<1.300	.871	<.270	2.940	2.270	.410	1.730	2.380
Mercury									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl Methacrylate									
Methyl Methanesulfonate									
Methyl Parathion									
Methylene Chloride	<.170	.209	<1.700	<1.700	<1.700	<1.700	<1.700	<1.700	<1.700
Naphthalene									
Nickel	45.4	48.3	47.7	54.6	60.7	54.0	58.4	55.1	53.8
Nitrobenzene									
N-Nitrosodiethylamine									
N-Nitrosodimethylamine									
N-Nitrosodi-n-butylamine									
N-Nitrosodi-n-propylamine									
N-Nitrosodiphenylamine									
N-Nitrosomethylethylamine									
N-Nitrosopiperidine									
N-Nitrosopyrrolidine									
o,o,o-Triethylphosphorothioate									
o-Toluidine									
p-[Dimethylamino]azobenzene									
Parathion									
PCB-1016									
PCB-1221									
PCB-1232									
PCB-1242									
PCB-1248									
PCB-1254									
PCB-1260									
Pentachlorobenzene									
Pentachloronitrobenzene									
Pentachlorophenol									
pH	6.14	6.24	6.15	6.07	5.98	5.96	6.30	6.14	6.02
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
p-Phenylenediamine									
Pronamide									
Propionitrile									
Pyrene									
Safrole									
Selenium	<.928	<3.710	<.982	<1.000	<4.000	<1.000	<1.000	<.960	<.960
Silver	.173	<.560	<.115	<.370	<1.480	<.370	<.370	<.420	<.420
Styrene	<.10	<.10	<.37	<.37	<.37	<.37	<.37	<.37	<.37
Sulfate	1710	1900	1790	2290	1770	1810	2010	1910	1740
Sulfide	1.940	<.231	<.231	<.231	.383	<.231	<10.000	16.200	<.231
Tetrachloroethene	<.18	<.18	<.48	<.48	<.48	<.48	<.48	<.48	<.48
Thallium	<.0644	<.2580	<.5700	<.2700	<1.0800	<.2600	<.2600	1.1700	<.2600
Thionazin									
Tin	<1.620	<6.480	<1.300	<1.800	<1.800				
Toluene			<.43	<.43	<.43	<.43	<.43	<.43	<.43
Total Suspended Solids	23.30	34.30	34.10	24.20	76.00	66.80	68.50	8.67	84.00
Toxaphene									
trans-1,2-Dichloroethene	<.21	<.21	<.27	<.27	<.27	<.27	<.27	<.27	<.27
trans-1,3-Dichloropropene	<.22	<.22	<.56	<.56	<.56	<.56	<.56	<.56	<.56
trans-1,4-Dichloro-2-butene	<.13	<.13	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10
Trichloroethene	<.19	<.19	<.43	<.43	<.43	<.43	<.43	<.43	<.43
Trichlorofluoromethane	<.17	<.17	<.38	<.38	<.38	<.38	<.38	<.38	<.38
Vanadium	<.840	<3.360	<2.150	<.820	<3.280	<.820	<.850	<1.100	<1.100
Vinyl Acetate	<.74	<.74	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50
Vinyl Chloride	<.10	<.10	<.60	<.60	<.18	<.18	<.18	<.18	<.18
Xylenes, Total	<.130	<.130	<.400	1.050	<.400	<.400	<.400	<.400	<.400
Zinc	65.00	100.00	85.60	75.70	293.00	118.00	94.30	192.00	56.20

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

Table 9

Analytical Data Summary for MW-390

Constituents	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/18/2024	10/3/2024
Isosafrole						
Kepone						
Lead	4.780	<4.000	<4.000	<4.000	<4.000	<4.000
Mercury						
Methacrylonitrile						
Methapyrilene						
Methoxychlor						
Methyl Methacrylate						
Methyl Methanesulfonate						
Methyl Parathion						
Methylene Chloride	<1.700	<5.000	<5.000	<5.000	<5.000	<5.000
Naphthalene						
Nickel	56.0	53.5	62.0	50.0	54.1	56.7
Nitrobenzene						
N-Nitrosodiethylamine						
N-Nitrosodimethylamine						
N-Nitrosodi-n-butylamine						
N-Nitrosodi-n-propylamine						
N-Nitrosodiphenylamine						
N-Nitrosomethylethylamine						
N-Nitrosopiperidine						
N-Nitrosopyrrolidine						
o,o,o-Triethylphosphorothioate						
o-Toluidine						
p-[Dimethylamino]azobenzene						
Parathion						
PCB-1016						
PCB-1221						
PCB-1232						
PCB-1242						
PCB-1248						
PCB-1254						
PCB-1260						
Pentachlorobenzene						
Pentachloronitrobenzene						
Pentachlorophenol						
pH	6.17	6.00	6.00	5.90	6.00	6.00
Phenacetin						
Phenanthrene						
Phenol						
Phorate						
p-Phenylenediamine						
Pronamide						
Propionitrile						
Pyrene						
Safrole						
Selenium	<3.840	<4.000	<4.000	<4.000	<4.000	<4.000
Silver	<1.960	<4.000	<4.000	<4.000	<4.000	<4.000
Styrene	<.37	<1.00	<1.00	<1.00	<1.00	<1.00
Sulfate	2270	2010	1910	1940	2000	2160
Sulfide	<.231	<.300				
Tetrachloroethene	<.48	<1.00	<1.00	<1.00	<1.00	<1.00
Thallium	<1.0400	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000
Thionazin						
Tin						
Toluene	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	154.00					
Toxaphene						
trans-1,2-Dichloroethene	<.27	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	<.56	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	<1.10	<5.00	<5.00	<5.00	<5.00	<5.00
Trichloroethene	<.43	<1.00	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	<.38	<1.00	<1.00	<1.00	<1.00	<1.00
Vanadium	<4.400	<20.000	<20.000	<20.000	<20.000	<20.000
Vinyl Acetate	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00
Vinyl Chloride	<.18	<1.00	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	<.400	<2.000	<2.000	<2.000	<2.000	<2.000
Zinc	487.00	107.00	115.00	122.00	184.00	170.00

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

Table 9

Analytical Data Summary for MW-601

Constituents	Units	3/9/2020	9/15/2020	4/16/2021	10/28/2021	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024
1,1,1,2-Tetrachloroethane	ug/L	<.38	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<.19	<.19	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<.47	<.47	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	ug/L	<.45	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	ug/L	<.22	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/L	<.56	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00
1,2,3-Trichloropropane	ug/L	<.59	<.59	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00
1,2-Dibromo-3-chloropropane	ug/L	<1.2	<1.2	<1.2	<1.2	<1.2	<5.0	<5.0	<5.0	<5.0
1,2-Dibromoethane	ug/L	<.34	<.34	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	ug/L	<.37	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	ug/L	<.39	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/L	<.27	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00
1,4-Dichlorobenzene	ug/L	<.23	<.23	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00
2-Butanone	ug/L	<2.1	<2.1	<2.1	<2.1	<2.1	<10.0	<10.0	<10.0	<10.0
2-Hexanone	ug/L	<2	<2	<2	<2	<2	<5	<5	<5	<5
4-Methyl-2-pentanone	ug/L	<2.1	<2.1	<2.1	<2.1	<2.1	<5.0	<5.0	<5.0	<5.0
Acetone	ug/L	<3.1	<3.1	<3.1	<3.1	<3.1	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	ug/L	<2.2	<2.2	<2.2	<2.2	<2.2	<5.0	<5.0	<5.0	<5.0
Alkalinity as CaCO3	mg/L	114.0	108.0	69.3	163.0	155.0		99.0	155.0	160.0
Aluminum	ug/L	<30.0	40.9	253.0	191.0	141.0		<50.0	116.0	<50.0
Antimony	ug/L	<.58	<.51	<1.10	<4.40	<2.76	<2.00	<2.00	<2.00	<2.00
Arsenic	ug/L	<.88	<.88	<.75	3.82	<3.00	<4.00	<4.00	<4.00	<4.00
Barium	ug/L	10.90	30.90	13.50	8.82	14.00	17.00	12.60	18.10	21.20
Benzene	ug/L	<.22	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00
Beryllium	ug/L	<.27	<.27	<.27	<1.08	<1.08	<4.00	<4.00	<4.00	<4.00
Bromochloromethane	ug/L	<.54	<.54	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	ug/L	<.39	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00
Bromoform	ug/L	<.78	<.78	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00
Bromomethane	ug/L	<1.1	<1.1	<1.1	<1.1	<1.1	<1.0	<1.0	<1.0	<1.0
Cadmium	ug/L	.089	.213	.098	<.204	<.220	<.800	<.800	<.800	<.800
Carbon Disulfide	ug/L	<.45	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	ug/L	<.65	<.65	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00
Chlorobenzene	ug/L	<.4	<.4	<.4	<.4	<.4	<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane	ug/L	<.75	<.75	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00
Chloroethane	ug/L	<.79	<.79	<.79	<.79	<.79	<1.00	<1.00	<1.00	<1.00
Chloroform	ug/L	<1.3	<1.3	<1.3	<1.3	<1.3	<1.0	<1.0	<1.0	<1.0
Chloromethane	ug/L	<.61	<.61	<.61	<.61	<.61	<1.00	<1.00	<1.00	<1.00
Chromium	ug/L	<1.1	<1.1	<1.1	<4.4	<4.4	<8.0	<8.0	<8.0	<8.0
cis-1,2-Dichloroethene	ug/L	<.21	<.21	<.21	<.21	<.21	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	ug/L	<.25	<.25	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00
Cobalt	ug/L	252.0	238.0	310.0	48.8	113.0	83.8	.8	183.0	26.5
Copper	ug/L	<3.2	<1.5	<1.4	<5.6	<7.2	<4.0	<4.0	<4.0	<4.0
Dibromomethane	ug/L	<.33	<.33	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00
Ethylbenzene	ug/L	<.31	<.31	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00
Iodomethane	ug/L	<7	<7	<7	<7	<7	<1	<1	<1	<1
Iron	ug/L	65400	57300	87300	309000	23200		380	60000	3840
Lead	ug/L	<.270	.179	.357	<.840	<.960	<4.000	<4.000	<4.000	<4.000
Methylene Chloride	ug/L	<1.7	<1.7	<1.7	<1.7	<1.7	<5.0	<5.0	<5.0	<5.0
Nickel	ug/L	387.0	359.0	464.0	84.6	160.0	116.0	<4.0	243.0	46.8
pH	SU	5.88	5.96	6.06	5.72	6.24		6.90	6.20	6.40
Selenium	ug/L	<1.00	<1.00	<.96	<3.84	<3.84	<4.00	<4.00	<4.00	<4.00
Silver	ug/L	<.37	<.37	<.42	<1.68	<1.96	<4.00	<4.00	<4.00	<4.00
Styrene	ug/L	<.37	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00
Sulfate	mg/L	2570	2230	2540	2120	2270		672	2260	1090
Tetrachloroethene	ug/L	<.48	<.48	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00
Thallium	ug/L	<.26	<.26	<.26	<1.04	<1.04	<2.00	<2.00	<2.00	<2.00
Toluene	ug/L	<.43	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	mg/L	3.63	17.10	19.10	23.30	32.80				
trans-1,2-Dichloroethene	ug/L	<.27	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	ug/L	<.56	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	ug/L	<1.1	<1.1	<1.1	<1.1	<1.1	<5.0	<5.0	<5.0	<5.0
Trichloroethene	ug/L	<.43	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	ug/L	<.38	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00
Vanadium	ug/L	<.82	<.85	<1.10	<4.40	<4.40	<20.00	<20.00	<20.00	<20.00
Vinyl Acetate	ug/L	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	ug/L	<.18	<.18	<.18	<.18	<.18	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	ug/L	<.4	<.4	<.4	<.4	<.4	<2.0	<2.0	<2.0	<2.0
Zinc	ug/L	129.0	122.0	164.0	381.0	67.9	39.7	<20.0	70.4	<20.0

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

Table 9

Analytical Data Summary for MW-601

Constituents	10/3/2024
1,1,1,2-Tetrachloroethane	<1.00
1,1,1-Trichloroethane	<1.00
1,1,2,2-Tetrachloroethane	<1.00
1,1,2-Trichloroethane	<1.00
1,1-Dichloroethane	<1.00
1,1-Dichloroethene	<1.00
1,2,3-Trichloropropane	<1.00
1,2-Dibromo-3-chloropropane	<5.0
1,2-Dibromoethane	<1.00
1,2-Dichlorobenzene	<1.00
1,2-Dichloroethane	<1.00
1,2-Dichloropropane	<1.00
1,4-Dichlorobenzene	<1.00
2-Butanone	<10.0
2-Hexanone	<5
4-Methyl-2-pentanone	<5.0
Acetone	<10.0
Acrylonitrile	<5.0
Alkalinity as CaCO3	200.0
Aluminum	105.0
Antimony	<2.00
Arsenic	<4.00
Barium	39.20
Benzene	<1.00
Beryllium	<4.00
Bromochloromethane	<1.00
Bromodichloromethane	<1.00
Bromoform	<1.00
Bromomethane	<1.0
Cadmium	<.800
Carbon Disulfide	<1.00
Carbon Tetrachloride	<1.00
Chlorobenzene	<1.0
Chlorodibromomethane	<1.00
Chloroethane	<1.00
Chloroform	<1.0
Chloromethane	<1.00
Chromium	<8.0
cis-1,2-Dichloroethene	<1.00
cis-1,3-Dichloropropene	<1.00
Cobalt	19.3
Copper	<4.0
Dibromomethane	<1.00
Ethylbenzene	<1.00
Iodomethane	<1
Iron	19100
Lead	<4.000
Methylene Chloride	<5.0
Nickel	25.8
pH	6.30
Selenium	<4.00
Silver	<4.00
Styrene	<1.00
Sulfate	829
Tetrachloroethene	<1.00
Thallium	<2.00
Toluene	<1.00
Total Suspended Solids	
trans-1,2-Dichloroethene	<1.00
trans-1,3-Dichloropropene	<1.00
trans-1,4-Dichloro-2-butene	<5.0
Trichloroethene	<1.00
Trichlorofluoromethane	<1.00
Vanadium	<20.00
Vinyl Acetate	<5.0
Vinyl Chloride	<1.00
Xylenes, Total	<2.0
Zinc	<20.0

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

Table 9

Analytical Data Summary for MW-602

Constituents	Units	3/9/2020	9/17/2020	4/15/2021	10/28/2021	4/13/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024
1,1,1,2-Tetrachloroethane	ug/L	<.38	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<.19	<.19	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<.47	<.47	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	ug/L	<.45	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	ug/L	<.22	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/L	<.56	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00
1,2,3-Trichloropropane	ug/L	<.59	<.59	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00
1,2-Dibromo-3-chloropropane	ug/L	<1.2	<1.2	<1.2	<1.2	<1.2	<5.0	<5.0	<5.0	<5.0
1,2-Dibromoethane	ug/L	<.34	<.34	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	ug/L	<.37	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	ug/L	<.39	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/L	<.27	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00
1,4-Dichlorobenzene	ug/L	<.23	<.23	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00
2-Butanone	ug/L	<2.1	<2.1	<2.1	<2.1	<2.1	<10.0	<10.0	<10.0	<10.0
2-Hexanone	ug/L	<2	<2	<2	<2	<2	<5	<5	<5	<5
4-Methyl-2-pentanone	ug/L	<2.1	<2.1	<2.1	<2.1	<2.1	<5.0	<5.0	<5.0	<5.0
Acetone	ug/L	<3.1	<3.1	<3.1	<3.1	<3.1	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	ug/L	<2.2	<2.2	<2.2	<2.2	<2.2	<5.0	<5.0	<5.0	<5.0
Alkalinity as CaCO3	mg/L	85.5	108.0	24.8	<4.6	155.0		85.0	94.0	<50.0
Aluminum	ug/L	34.9	22.6	28.2	31.7	77.9		<50.0	182.0	245.0
Antimony	ug/L	<.58	<.51	<1.10	<1.10	<2.76	<2.00	<2.00	<2.00	<2.00
Arsenic	ug/L	1.73	1.63	2.16	1.69	<3.00	<4.00	<4.00	<4.00	<4.00
Barium	ug/L	12.7	10.4	11.4	11.4	12.0	12.6	10.5	12.4	10.8
Benzene	ug/L	<.22	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00
Beryllium	ug/L	<.27	<.54	<.27	<.27	<1.08	<4.00	<4.00	<4.00	<4.00
Bromochloromethane	ug/L	<.54	<.54	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	ug/L	<.39	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00
Bromoform	ug/L	<.78	<.78	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00
Bromomethane	ug/L	<1.1	<1.1	<1.1	<1.1	<1.1	<1.0	<1.0	<1.0	<1.0
Cadmium	ug/L	.089	.112	.109	.190	<.220	<.800	<.800	<.800	<.800
Carbon Disulfide	ug/L	<.45	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	ug/L	<.65	<.65	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00
Chlorobenzene	ug/L	<.4	<.4	<.4	<.4	<.4	<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane	ug/L	<.75	<.75	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00
Chloroethane	ug/L	<.79	<.79	<.79	<.79	<.79	<1.00	<1.00	<1.00	<1.00
Chloroform	ug/L	<1.3	<1.3	<1.3	<1.3	<1.3	<1.0	<1.0	<1.0	<1.0
Chloromethane	ug/L	<.61	<.61	<.61	<.61	<.61	<1.00	<1.00	<1.00	<1.00
Chromium	ug/L	<1.1	<1.1	<1.1	<1.1	<4.4	<8.0	<8.0	<8.0	<8.0
cis-1,2-Dichloroethene	ug/L	<.21	<.21	<.21	<.21	<.21	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	ug/L	<.25	<.25	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00
Cobalt	ug/L	168	216	236	205	198	247	194	203	198
Copper	ug/L	<3.20	<1.50	2.41	<1.40	<7.20	<4.00	<4.00	<4.00	<4.00
Dibromomethane	ug/L	<.33	<.33	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00
Ethylbenzene	ug/L	<.31	<.31	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00
Iodomethane	ug/L	<7	<7	<7	<7	<7	<1	<1	<1	<1
Iron	ug/L	88900	101000	110000	70800	88600		100000	51800	29200
Lead	ug/L	<.270	<.110	<.210	.676	<.960	<4.000	<4.000	<4.000	<4.000
Methylene Chloride	ug/L	<1.7	<1.7	<1.7	<1.7	<1.7	<5.0	<5.0	<5.0	<5.0
Nickel	ug/L	242	324	345	296	253	356	270	289	299
pH	SU	5.94	5.89	5.93	5.62	5.92		5.60	5.60	5.40
Selenium	ug/L	<1.00	<1.00	<.96	<.96	<3.84	<4.00	<4.00	<4.00	<4.00
Silver	ug/L	<.37	<.37	<.42	<.42	<1.96	<4.00	<4.00	<4.00	<4.00
Styrene	ug/L	<.37	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00
Sulfate	mg/L	1490	1730	1720	1690	2050		1900	1870	2020
Tetrachloroethene	ug/L	<.48	<.48	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00
Thallium	ug/L	<.26	<.26	<.26	<.26	<1.04	<2.00	<2.00	<2.00	<2.00
Toluene	ug/L	<.43	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	mg/L	17.50	5.88	37.60	32.30	58.00				
trans-1,2-Dichloroethene	ug/L	<.27	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	ug/L	<.56	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	ug/L	<1.1	<1.1	<1.1	<1.1	<1.1	<5.0	<5.0	<5.0	<5.0
Trichloroethene	ug/L	<.43	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	ug/L	<.38	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00
Vanadium	ug/L	<.82	<.85	<1.10	<1.10	<4.40	<20.00	<20.00	<20.00	<20.00
Vinyl Acetate	ug/L	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	ug/L	<.18	<.18	<.18	<.18	<.18	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	ug/L	<.4	<.4	<.4	<.4	<.4	<2.0	<2.0	<2.0	<2.0
Zinc	ug/L	104	157	166	136	107	158	102	120	142

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

Table 9

Analytical Data Summary for MW-602

Constituents	10/3/2024
1,1,1,2-Tetrachloroethane	<1.00
1,1,1-Trichloroethane	<1.00
1,1,2,2-Tetrachloroethane	<1.00
1,1,2-Trichloroethane	<1.00
1,1-Dichloroethane	<1.00
1,1-Dichloroethene	<1.00
1,2,3-Trichloropropane	<1.00
1,2-Dibromo-3-chloropropane	<5.0
1,2-Dibromoethane	<1.00
1,2-Dichlorobenzene	<1.00
1,2-Dichloroethane	<1.00
1,2-Dichloropropane	<1.00
1,4-Dichlorobenzene	<1.00
2-Butanone	<10.0
2-Hexanone	<5
4-Methyl-2-pentanone	<5.0
Acetone	<10.0
Acrylonitrile	<5.0
Alkalinity as CaCO3	47.0
Aluminum	248.0
Antimony	<2.00
Arsenic	<4.00
Barium	17.7
Benzene	<1.00
Beryllium	<4.00
Bromochloromethane	<1.00
Bromodichloromethane	<1.00
Bromoform	<1.00
Bromomethane	<1.0
Cadmium	<.800
Carbon Disulfide	<1.00
Carbon Tetrachloride	<1.00
Chlorobenzene	<1.0
Chlorodibromomethane	<1.00
Chloroethane	<1.00
Chloroform	<1.0
Chloromethane	<1.00
Chromium	<8.0
cis-1,2-Dichloroethene	<1.00
cis-1,3-Dichloropropene	<1.00
Cobalt	236
Copper	<4.00
Dibromomethane	<1.00
Ethylbenzene	<1.00
Iodomethane	<1
Iron	10100
Lead	<4.000
Methylene Chloride	<5.0
Nickel	361
pH	5.30
Selenium	<4.00
Silver	<4.00
Styrene	<1.00
Sulfate	1900
Tetrachloroethene	<1.00
Thallium	<2.00
Toluene	<1.00
Total Suspended Solids	
trans-1,2-Dichloroethene	<1.00
trans-1,3-Dichloropropene	<1.00
trans-1,4-Dichloro-2-butene	<5.0
Trichloroethene	<1.00
Trichlorofluoromethane	<1.00
Vanadium	<20.00
Vinyl Acetate	<5.0
Vinyl Chloride	<1.00
Xylenes, Total	<2.0
Zinc	166

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

Table 9

Analytical Data Summary for MW-603

Constituents	Units	3/10/2020	9/17/2020	4/14/2021	10/26/2021	4/14/2022	9/1/2022	3/6/2023	9/29/2023	3/19/2024
1,1,1,2-Tetrachloroethane	ug/L	<.38	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/L	<.19	<.19	<.19	<.19	<.19	<1.00	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	ug/L	<.47	<.47	<.47	<.47	<.47	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	ug/L	<.45	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethane	ug/L	<.22	<.22	<.22	<.22	<.22	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/L	<.56	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00
1,2,3-Trichloropropane	ug/L	<.59	<.59	<.59	<.59	<.59	<1.00	<1.00	<1.00	<1.00
1,2-Dibromo-3-chloropropane	ug/L	<1.2	<1.2	<1.2	<1.2	<1.2	<5.0	<5.0	<5.0	<5.0
1,2-Dibromoethane	ug/L	<.34	<.34	<.34	<.34	<.34	<1.00	<1.00	<1.00	<1.00
1,2-Dichlorobenzene	ug/L	<.37	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00
1,2-Dichloroethane	ug/L	<.39	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/L	<.27	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00
1,4-Dichlorobenzene	ug/L	<.23	<.23	<.23	<.23	<.23	<1.00	<1.00	<1.00	<1.00
2-Butanone	ug/L	<2.1	<2.1	<2.1	<2.1	<2.1	<10.0	<10.0	<10.0	<10.0
2-Hexanone	ug/L	<2	<2	<2	<2	<2	<5	<5	<5	<5
4-Methyl-2-pentanone	ug/L	<2.1	<2.1	<2.1	<2.1	<2.1	<5.0	<5.0	<5.0	<5.0
Acetone	ug/L	<3.1	<3.1	<3.1	<3.1	<3.1	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	ug/L	<2.2	<2.2	<2.2	<2.2	<2.2	<5.0	<5.0	<5.0	<5.0
Alkalinity as CaCO3	mg/L	475	497	455	464	451		361	410	381
Aluminum	ug/L	630.0	29.1	15.1	71.0	94.4		128.0	128.0	104.0
Antimony	ug/L	<.58	<.51	<1.10	<1.10	<2.76	<2.00	<2.00	<2.00	<2.00
Arsenic	ug/L	4.24	6.53	6.47	5.35	4.55	<4.00	5.20	4.90	5.10
Barium	ug/L	42.8	26.8	41.3	31.4	23.8	20.8	34.6	22.5	21.3
Benzene	ug/L	.312	<.220	<.220	<.220	<.220	<1.000	<1.000	<1.000	<1.000
Beryllium	ug/L	<.27	<.27	<.27	<.27	<1.08	<4.00	<4.00	<4.00	<4.00
Bromochloromethane	ug/L	<.54	<.54	<.54	<.54	<.54	<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	ug/L	<.39	<.39	<.39	<.39	<.39	<1.00	<1.00	<1.00	<1.00
Bromoform	ug/L	<.78	<.78	<.78	<.78	<.78	<1.00	<1.00	<1.00	<1.00
Bromomethane	ug/L	<1.1	<1.1	<1.1	<1.1	<1.1	<1.0	<1.0	<1.0	<1.0
Cadmium	ug/L	.070	<.049	<.051	.112	<.220	<.800	<.800	<.800	<.800
Carbon Disulfide	ug/L	<.45	<.45	<.45	<.45	<.45	<1.00	<1.00	<1.00	<1.00
Carbon Tetrachloride	ug/L	<.65	<.65	<.65	<.65	<.65	<1.00	<1.00	<1.00	<1.00
Chlorobenzene	ug/L	<.4	<.4	<.4	<.4	<.4	<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane	ug/L	<.75	<.75	<.75	<.75	<.75	<1.00	<1.00	<1.00	<1.00
Chloroethane	ug/L	<.79	<.79	<.79	<.79	<.79	<1.00	<1.00	<1.00	<1.00
Chloroform	ug/L	<1.3	<1.3	<1.3	<1.3	<1.3	<1.0	<1.0	<1.0	<1.0
Chloromethane	ug/L	<.61	<.61	<.61	<.61	<.61	<1.00	<1.00	<1.00	<1.00
Chromium	ug/L	1.35	<1.10	<1.10	<1.10	<4.40	<8.00	<8.00	<8.00	<8.00
cis-1,2-Dichloroethene	ug/L	<.21	<.21	<.21	<.21	<.21	<1.00	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	ug/L	<.25	<.25	<.25	<.25	<.25	<1.00	<1.00	<1.00	<1.00
Cobalt	ug/L	24.6	50.4	33.6	26.1	34.9	55.9	19.7	12.5	22.1
Copper	ug/L	<3.2	<1.5	<1.4	<1.4	<7.2	<4.0	<4.0	<4.0	<4.0
Dibromomethane	ug/L	<.33	<.33	<.33	<.33	<.33	<1.00	<1.00	<1.00	<1.00
Ethylbenzene	ug/L	<.31	<.31	<.31	<.31	<.31	<1.00	<1.00	<1.00	<1.00
Iodomethane	ug/L	<7	<7	<7	<7	<7	<1	<1	<1	<1
Iron	ug/L	34000	41000	62500	53300	48200		43700	49800	43200
Lead	ug/L	2.360	<.110	<.210	.704	<.960	<4.000	<4.000	<4.000	<4.000
Methylene Chloride	ug/L	<1.7	<1.7	<1.7	<1.7	<1.7	<5.0	<5.0	<5.0	<5.0
Nickel	ug/L	11.00	16.90	8.45	18.50	21.10	34.80	9.50	5.20	11.80
pH	SU	6.42	6.41	6.55	6.46	6.61		6.50	6.40	6.40
Selenium	ug/L	<1.00	<1.00	<.96	<.96	<3.84	<4.00	<4.00	<4.00	<4.00
Silver	ug/L	<.37	<.37	<.42	<.42	<1.96	<4.00	<4.00	<4.00	<4.00
Styrene	ug/L	<.37	<.37	<.37	<.37	<.37	<1.00	<1.00	<1.00	<1.00
Sulfate	mg/L	1160	1330	1530	1680	1680		2170	2300	2410
Tetrachloroethene	ug/L	<.48	<.48	<.48	<.48	<.48	<1.00	<1.00	<1.00	<1.00
Thallium	ug/L	<.26	<.26	<.26	<.26	<1.04	<2.00	<2.00	<2.00	<2.00
Toluene	ug/L	<.43	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Total Suspended Solids	mg/L	118.0	25.1	39.8	56.0	62.0				
trans-1,2-Dichloroethene	ug/L	<.27	<.27	<.27	<.27	<.27	<1.00	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	ug/L	<.56	<.56	<.56	<.56	<.56	<1.00	<1.00	<1.00	<1.00
trans-1,4-Dichloro-2-butene	ug/L	<1.1	<1.1	<1.1	<1.1	<1.1	<5.0	<5.0	<5.0	<5.0
Trichloroethene	ug/L	<.43	<.43	<.43	<.43	<.43	<1.00	<1.00	<1.00	<1.00
Trichlorofluoromethane	ug/L	<.38	<.38	<.38	<.38	<.38	<1.00	<1.00	<1.00	<1.00
Vanadium	ug/L	2.18	<.85	<1.10	<1.10	<4.40	<20.00	<20.00	<20.00	<20.00
Vinyl Acetate	ug/L	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	ug/L	<.18	<.18	<.18	<.18	<.18	<1.00	<1.00	<1.00	<1.00
Xylenes, Total	ug/L	<.4	<.4	<.4	<.4	<.4	<2.0	<2.0	<2.0	<2.0
Zinc	ug/L	12.3	<10.0	<10.0	10.4	<40.0	<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-603

Constituents	10/3/2024
1,1,1,2-Tetrachloroethane	<1.00
1,1,1-Trichloroethane	<1.00
1,1,2,2-Tetrachloroethane	<1.00
1,1,2-Trichloroethane	<1.00
1,1-Dichloroethane	<1.00
1,1-Dichloroethene	<1.00
1,2,3-Trichloropropane	<1.00
1,2-Dibromo-3-chloropropane	<5.0
1,2-Dibromoethane	<1.00
1,2-Dichlorobenzene	<1.00
1,2-Dichloroethane	<1.00
1,2-Dichloropropane	<1.00
1,4-Dichlorobenzene	<1.00
2-Butanone	<10.0
2-Hexanone	<5
4-Methyl-2-pentanone	<5.0
Acetone	<10.0
Acrylonitrile	<5.0
Alkalinity as CaCO3	434
Aluminum	<50.0
Antimony	<2.00
Arsenic	<4.00
Barium	19.2
Benzene	<1.000
Beryllium	<4.00
Bromochloromethane	<1.00
Bromodichloromethane	<1.00
Bromoform	<1.00
Bromomethane	<1.0
Cadmium	<.800
Carbon Disulfide	<1.00
Carbon Tetrachloride	<1.00
Chlorobenzene	<1.0
Chlorodibromomethane	<1.00
Chloroethane	<1.00
Chloroform	<1.0
Chloromethane	<1.00
Chromium	<8.00
cis-1,2-Dichloroethene	<1.00
cis-1,3-Dichloropropene	<1.00
Cobalt	15.6
Copper	<4.0
Dibromomethane	<1.00
Ethylbenzene	<1.00
Iodomethane	<1
Iron	47700
Lead	<4.000
Methylene Chloride	<5.0
Nickel	6.60
pH	6.30
Selenium	<4.00
Silver	<4.00
Styrene	<1.00
Sulfate	2970
Tetrachloroethene	<1.00
Thallium	<2.00
Toluene	<1.00
Total Suspended Solids	
trans-1,2-Dichloroethene	<1.00
trans-1,3-Dichloropropene	<1.00
trans-1,4-Dichloro-2-butene	<5.0
Trichloroethene	<1.00
Trichlorofluoromethane	<1.00
Vanadium	<20.00
Vinyl Acetate	<5.0
Vinyl Chloride	<1.00
Xylenes, Total	<2.0
Zinc	<20.0

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

Table 9

Analytical Data Summary for MW-604

Constituents	Units	9/26/2024	10/3/2024
1,1,1,2-Tetrachloroethane	ug/L	<1	<1
1,1,1-Trichloroethane	ug/L	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<1	<1
1,1,2-Trichloroethane	ug/L	<1	<1
1,1-Dichloroethane	ug/L	<1	<1
1,1-Dichloroethene	ug/L	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<5	<5
1,2-Dibromoethane	ug/L	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1
1,2-Dichloroethane	ug/L	<1	<1
1,2-Dichloropropane	ug/L	<1	<1
1,4-Dichlorobenzene	ug/L	<1	<1
2-Butanone	ug/L	<10	<10
2-Hexanone	ug/L	<5	<5
4-Methyl-2-pentanone	ug/L	<5	<5
Acetone	ug/L	<10	<10
Acrylonitrile	ug/L	<5	<5
Alkalinity as CaCO3	mg/L		164
Aluminum	ug/L		111
Antimony	ug/L	<2	<2
Arsenic	ug/L	<4	<4
Barium	ug/L	40.6	24.2
Benzene	ug/L	<1	<1
Beryllium	ug/L	<4	<4
Bromochloromethane	ug/L	<1	<1
Bromodichloromethane	ug/L	<1	<1
Bromoform	ug/L	<1	<1
Bromomethane	ug/L	<1	<1
Cadmium	ug/L	<.8	<.8
Carbon Disulfide	ug/L	<1	<1
Carbon Tetrachloride	ug/L	<1	<1
Chlorobenzene	ug/L	<1	<1
Chlorodibromomethane	ug/L	<1	<1
Chloroethane	ug/L	<1	<1
Chloroform	ug/L	<1	<1
Chloromethane	ug/L	<1	<1
Chromium	ug/L	<8	<8
cis-1,2-Dichloroethene	ug/L	<1	<1
cis-1,3-Dichloropropene	ug/L	<1	<1
Cobalt	ug/L	101	95
Copper	ug/L	<4	<4
Dibromomethane	ug/L	<1	<1
Ethylbenzene	ug/L	<1	<1
Iodomethane	ug/L	<1	<1
Iron	ug/L		61700
Lead	ug/L	<4	<4
Methylene Chloride	ug/L	<5	<5
Nickel	ug/L	128	119
pH	SU		5.8
Selenium	ug/L	<4	<4
Silver	ug/L	<4	<4
Styrene	ug/L	<1	<1
Sulfate	mg/L		2170
Tetrachloroethene	ug/L	<1	<1
Thallium	ug/L	<2	<2
Toluene	ug/L	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1
trans-1,4-Dichloro-2-butene	ug/L	<5	<5
Trichloroethene	ug/L	<1	<1
Trichlorofluoromethane	ug/L	<1	<1
Vanadium	ug/L	<20	<20
Vinyl Acetate	ug/L	<5	<5
Vinyl Chloride	ug/L	<1	<1
Xylenes, Total	ug/L	<2	<2
Zinc	ug/L	45.7	41.2

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

Table 9

Analytical Data Summary for SW-1

Constituents	Units	9/25/2014	3/11/2015	9/2/2015	3/23/2016	10/20/2016	3/9/2017	9/27/2017	3/14/2018	10/1/2018
Alkalinity as CaCO3	mg/L	124.00	103.00	98.00	165.00	4.44	20.60	<1.60	119.00	124.00
Aluminum	ug/L	447.0	1060.0	9510.0	496.0	<20.8	127.0	260.0	<207.0	145.0
Antimony	ug/L									
Arsenic	ug/L									
Barium	ug/L									
Beryllium	ug/L									
Cadmium	ug/L									
Chromium	ug/L									
Cobalt	ug/L									
Copper	ug/L									
Iron	ug/L	5850.0	2530.0	15500.0	1410.0	68.5	275.0	534.0	632.0	5030.0
Lead	ug/L									
Nickel	ug/L									
pH	SU	6.83	6.58	7.22	7.71	6.42	6.78	5.57	7.23	7.29
Selenium	ug/L									
Silver	ug/L									
Sulfate	mg/L	2940	1810	2910	3010	2470	536	416	2470	3020
Thallium	ug/L									
Total Suspended Solids	mg/L	46.5	23.3	314.0	8.8					
Vanadium	ug/L									
Zinc	ug/L									

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

Table 9

Analytical Data Summary for SW-1

Constituents	3/28/2019	9/23/2019	3/9/2020	9/16/2020	4/15/2021	10/27/2021	4/13/2022	3/6/2023
Alkalinity as CaCO3	191.00	34.70	57.00	64.80	198.00	136.00	144.00	85.00
Aluminum	813.0	185.0	268.0	77.6	67.0	224.0	<68.0	57.0
Antimony							<2.76	
Arsenic							<3	
Barium							12.3	
Beryllium							<1.08	
Cadmium							<.22	
Chromium							<4.4	
Cobalt							8.59	
Copper							<7.2	
Iron	14800.0	909.0	1790.0	739.0	1140.0	407.0	<144.0	208.0
Lead							<.96	
Nickel							17.3	
pH	7.21	7.12	6.63	7.59	8.14	7.47	8.04	7.10
Selenium							<3.84	
Silver							<1.96	
Sulfate	2970	823	1390	876	2090	221	1190	652
Thallium							<1.04	
Total Suspended Solids								
Vanadium							<4.4	
Zinc							<40	

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

Table 9

Analytical Data Summary for SW-2 [East Pond]

Constituents	Units	3/11/2015	3/23/2016	3/9/2017
Alkalinity as CaCO3	mg/L	<5	237	211
Aluminum	ug/L	9210.0	<67.6	128.0
Iron	ug/L	17100	3020	699
pH	SU	4.08	7.25	7.76
Sulfate	mg/L	1810	1490	1590
Total Suspended Solids	mg/L	153	8	

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

Table 10 – Historic SSI and SSL **- NOT REQUIRED**

Table 10
Historic SSI & SSL
Annual Water Quality Report
SCISWA Sanitary Landfill
Permit No. 63-SDP-02-77P

NOT REQUIRED

Table 11 – Corrective Action Trend Analysis **- NOT REQUIRED**

Table 11
Corrective Action Trend Analysis
Annual Water Quality Report
SCISWA Sanitary Landfill
Permit No. 63-SDP-02-77P

NOT REQUIRED

Table 12 – Leachate Levels

Table 12
Leachate Level Monitoring
Annual Water Quality Report
SCISWA Sanitary Landfill
Permit No. 63-SDP-02-77P

2024 Monthly Leachate Monitoring

		January			February			March			April			May			June		
		Test Date	1/31/2024		Test Date	2/7/2024		Test Date	3/12/2024		Test Date	4/25/2024		Test Date	5/16/2024		Test Date	6/4/2024	
Location	Units	TD	DTW	Thickness	TD	DTW	Thickness	TD	DTW	Thickness	TD	DTW	Thickness	TD	DTW	Thickness	TD	DTW	Thickness
LW-477	feet	40.5	28.4	12.1	40.5	28.8	11.7	40.5	28.3	12.2	40.5	28.4	12.1	40.5	28.5	12.0	40.5	27.9	12.6
LW-478R	feet	86.9	86.9	0.0	86.9	86.9	0.0	86.9	86.9	0.0	86.9	86.1	0.8	86.9	86.9	0.0	86.9	86.9	0.0
LW-479	feet	36.9	25.5	11.4	35.9	25.5	10.4	36.9	25.1	11.8	36.9	25.3	11.6	36.9	25.3	11.6	36.9	25.5	11.4
LW-471R	feet	20.1	20.1	0.0	20.1	20.1	0.0	20.1	20.1	0.0	20.1	20.1	0.0	20.1	20.1	0.0	20.1	20.1	0.0
Location	Units	TD	DTW	Inches in Bottom	TD	DTW	Inches in Bottom	TD	DTW	Inches in Bottom	TD	DTW	Inches in Bottom	TD	DTW	Inches in Bottom	TD	DTW	Inches in Bottom
LHPZ-N3	Inches	---	---	9.9	---	---	9.9	---	---	9.9	---	---	9.9	---	---	9.9	---	---	9.9
LHPZ-NW1	Inches	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
LHPZ-4A	Inches	---	---	1.4	---	---	1.4	---	---	1.4	---	---	1.4	---	---	1.4	---	---	1.4
4A-GW	inches	---	---	0.0	---	---	0.0	---	---	0.0	---	---	0.0	---	---	0.0	---	---	0.0

		July			August			September			October			November			December		
		Test Date	7/18/2024		Test Date	8/27/2024		Test Date	9/13/2024		Test Date	10/2/2024		Test Date	11/12/2024		Test Date	12/10/2024	
Location	Units	TD	DTW	Thickness	TD	DTW	Thickness	TD	DTW	Thickness	TD	DTW	Thickness	TD	DTW	Thickness	TD	DTW	Thickness
LW-477	feet	40.5	27.5	13.0	40.5	27.4	13.1	40.5	27.5	13.0	40.5	27.7	12.8	40.5	28.1	12.4	40.5	28.0	12.5
LW-478R	feet	86.9	86.9	0.0	86.9	86.9	0.0	86.9	86.9	0.0	86.9	86.9	0.0	86.9	86.9	0.0	86.9	86.9	0.0
LW-479	feet	36.9	25.4	11.5	36.9	25.1	11.8	36.9	25.1	11.8	36.9	25.1	11.8	36.9	25.4	11.5	36.9	25.3	11.6
LW-471R	feet	20.1	20.1	0.0	20.1	20.1	0.0	20.1	20.1	0.0	20.1	20.1	0.0	20.1	20.1	0.0	20.1	20.1	0.0
Location	Units	TD	DTW	Inches in Bottom	TD	DTW	Inches in Bottom	TD	DTW	Inches in Bottom	TD	DTW	Inches in Bottom	TD	DTW	Inches in Bottom	TD	DTW	Inches in Bottom
LHPZ-N3	Inches	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
LHPZ-NW1	Inches	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.9	---	---	9.9
LHPZ-4A	Inches	---	---	1.4	---	---	1.4	---	---	1.4	---	---	1.4	---	---	1.4	---	---	1.4
4A-GW	inches	---	---	0.0	---	---	0.0	---	---	0.0	---	---	0.0	---	---	0.0	---	---	0.0

TD = Total Depth
DTW = Depth to water
Thickness = Liquid Head at Point
Inches in Bottom = Inches of liquid above the transducer set at the bottom of the LHPZ

LHPZ-N3 was abandoned during June, 2024.

Table 13 – Gas Monitoring Summary

Table 13
Landfill Gas Monitoring
Annual Water Quality Report
SCISWA Sanitary Landfill
Permit No. 63-SDP-02-77P

2024 ANNUAL GAS SAMPLING

Date sampled:	Tuesday, March 19, 2024				
	From		To		
Time sampled:	11:00 AM		1:50 PM		
Weather:	Start		Finish		
Temperature:	44°		61°		
Winds:	17mph W		15mph NW		
Precipitation:	N/A		N/A		
Monitoring Point	CH4 - NOTE: (LEL OR VOL) SPECIFY UNLESS		O2 (VOL)	H2S (PPM)	CO (PPM)
Scale House	0.0%		20.9%	0.0	0.0
Monitoring well 368	0.0%		20.9%	0.0	0.0
Maintance Shop	0.0%		20.9%	0.0	0.0
Monitoring well 305	0.0%		20.9%	0.0	0.0
Monitoring well 304	0.0%		20.9%	0.0	0.0
Gas Probe 1	0.0%		20.9%	0.0	0.0
Gas Vent GP1-1 (farthest e	0.0%		20.9%	0.0	0.0
Gas Vent GP1-2	2.0%	LEL	20.9%	0.0	0.0
Gas Vent GP1-3 (farthest w	0.0%		20.9%	0.0	0.0
Gas Probe 2	0.0%		14.0%	0.0	0.0
Gas Probe 3	0.0%		20.9%	0.0	0.0
Gas Probe 4 (G/L)	0.0%		20.9%	0.0	0.0
Monitoring well 381	0.0%		20.9%	0.0	0.0
Gas Probe 10	0.0%		16.6%	0.0	0.0
Gas Probe 5	0.0%		20.9%	0.0	0.0
Gas Probe 6	0.0%		18.9%	0.0	0.0
Gas Probe 7	0.0%		18.9%	0.0	0.0
Monitoring well 332	0.0%		20.9%	0.0	0.0
Gas Probe 8	0.0%		10.8%	0.0	0.0
Gas Probe 9	0.0%		14.9%	0.0	0.0
Leachate pond pump hous	0.0%		20.9%	0.0	0.0
CALIBRATE LEACHATE POND PUMP HOUSE METHANE MONITOR TIME				11:33:00 AM	
Gas Vent N-1 thru N-5 Flar	78.5%	VOL	0.9%	100.0	17.0
GV N-1 thru N-5 Flow Rate	125.5	FPM	Temp=	68.9°	
10K Leachate tank pump h	0.0%		20.9%	0.0	0.0
CALIBRATE 10K TANK PUMP HOUSE METHANE MONITOR TIME				INOPERABLE	
Cell 4A pump house	0.0%		20.9%	0.0	0.0
CALIBRATE 4A PUMP HOUSE METHANE MONITOR TIME				1:40 PM	
4F Clean out Flare	84.5%	VOL	0.0%	9.0	0.0
4F Clean out Flow Rate	18.0	FPM	Temp=	58.6°	
Monitoring well 331	0.0%		20.9%	0.0	0.0
RICK HURT					

Date sampled:	Monday, June 3, 2024				
	From		To		
Time sampled:	11:00 AM		3:20 PM		
Weather:	Start		Finish		
Temperature:	75°		83°		
Winds:	11 SSW		12 SW		
Precipitation:	N/A		N/A		
Monitoring Point	CH4 - NOTE: (LEL OR VOL) SPECIFY UNLESS		O2 (VOL)	H2S (PPM)	CO (PPM)
Scale House	0.0%		20.9%	0.0	0.0
Monitoring well 368	0.0%		20.0%	0.0	0.0
Maintance Shop	0.0%		20.9%	0.0	0.0
Monitoring well 305	0.0%		20.9%	0.0	0.0
Monitoring well 304	0.0%		20.9%	0.0	0.0
Gas Probe 1	0.0%		20.3%	0.0	0.0
Gas Vent GP1-1 (farthest e	0.0%		20.9%	0.0	0.0
Gas Vent GP1-2	0.0%		20.9%	0.0	0.0
Gas Vent GP1-3 (farthest w	0.0%		20.9%	0.0	0.0
Gas Probe 2	0.0%		18.6%	0.0	0.0
Gas Probe 3	0.0%		20.9%	0.0	0.0
Gas Probe 4 (G/L)	0.0%		20.9%	0.0	0.0
Monitoring well 381	0.0%		20.9%	0.0	0.0
Gas Probe 10	0.0%		7.1%	0.0	0.0
Gas Probe 5	0.0%		20.9%	0.0	0.0
Gas Probe 6	0.0%		18.9%	0.0	0.0
Gas Probe 7	0.0%		20.7%	0.0	0.0
Monitoring well 332	0.0%		20.9%	0.0	0.0
Gas Probe 8	0.0%		10.8%	0.0	0.0
Gas Probe 9	0.0%		14.0%	0.0	0.0
Leachate pond pump hous	0.0%		20.9%	0.0	0.0
CALIBRATE LEACHATE POND PUMP HOUSE METHANE MONITOR TIME				3:00:00 PM	
Gas Vent N-1 thru N-5 Flar	74.5%	VOL	2.2%	100.0	25.0
GV N-1 thru N-5 Flow Rate	121.3	FPM	Temp=	85.2°	
10K Leachate tank pump h	0.0%		20.9%	0.0	0.0
CALIBRATE 10K TANK PUMP HOUSE METHANE MONITOR TIME				INOPERABLE	
Cell 4A pump house	0.0%		20.9%	0.0	0.0
CALIBRATE 4A PUMP HOUSE METHANE MONITOR TIME				2:30 PM	
4F Clean out Flare	84.5%	VOL	1.4%	45.0	16.0
4F Clean out Flow Rate	36.2	FPM	Temp=	80.7°	
Monitoring well 331	0.0%		20.9%	0.0	0.0
RICK HURT					

Date sampled:	Monday, September 16, 2024				
	From		To		
Time sampled:	8:00 AM		11:00 AM		
Weather:	Start		Finish		
Temperature:	66° F		76° F		
Winds:	6 SE		5 SSE		
Precipitation:	None		None		
Monitoring Point	CH4 - NOTE: (LEL OR VOL) SPECIFY UNLESS ZERO		O2 (VOL)	H2S (PPM)	CO (PPM)
Scale House	0.0%		20.9%	0.0	0.0
Monitoring well 368	0.0%		19.8%	0.0	0.0
Maintance Shop	0.0%		20.9%	0.0	0.0
Monitoring well 305	0.0%		20.9%	0.0	0.0
Monitoring well 304	0.0%		20.9%	0.0	0.0
Gas Probe 1	0.0%		20.4%	0.0	0.0
Gas Vent GP1-1 (farthest e	0.0%		20.9%	0.0	0.0
Gas Vent GP1-2	0.0%		18.6%	0.0	0.0
Gas Vent GP1-3 (farthest w	0.0%		20.9%	0.0	0.0
Gas Probe 2	0.0%		19.3%	0.0	0.0
Gas Probe 3	0.0%		20.9%	0.0	0.0
Gas Probe 4 (G/L)	0.0%		20.9%	0.0	0.0
Monitoring well 381	0.0%		19.8%	0.0	0.0
Gas Probe 10	0.0%		11.6%	0.0	0.0
Gas Probe 5	0.0%		19.0%	0.0	0.0
Gas Probe 6	0.0%		19.1%	0.0	0.0
Gas Probe 7	0.0%		20.6%	0.0	0.0
Monitoring well 332	0.0%		20.9%	0.0	0.0
Gas Probe 8	0.0%		14.3%	0.0	0.0
Gas Probe 9	0.0%		20.4%	0.0	0.0
Monitoring well 331	0.0%		20.9%	0.0	0.0
Leachate pond pump hous	0.0%		20.9%	0.0	0.0
CALIBRATE LEACHATE POND PUMP HOUSE METHANE MONITOR TIME				10:05:00 AM	
Cell NW1 pump house	0.0%		20.9%	0.0	0.0
CALIBRATE NW1 PUMP HOUSE METHANE MONITOR TIME				UNDER CONST	
Cell 4A pump house	0.0%		20.9%	0.0	0.0
CALIBRATE 4A PUMP HOUSE METHANE MONITOR TIME				9:50:00 AM	
Gas Vent N-1 thru N-5 Flar	75.5%	VOL	2.2%	100..0	25.0
GV N-1 thru N-5 Flow Rate	83.4	FPM	Temp=	78.4° F	
4F Clean out Flare	72.0%	VOL	0.0%	22.0	0.0
4F Clean out Flow Rate	495.4	FPM	Temp=	7.80176	
RICK HURT					

Date sampled:	Monday, December 9, 2024				
	From		To		
Time sampled:	9:50 AM		1:50 PM		
Weather:	Start		Finish		
Temperature:	41°		54°		
Winds:	9 W		13 W		
Precipitation:	None		None		
Monitoring Point	CH4 - NOTE: (LEL OR VOL) SPECIFY UNLESS		O2 (VOL)	H2S (PPM)	CO (PPM)
Scale House	0.0%		20.9%	0.0	0.0
Monitoring well 368	0.0%		19.7%	0.0	0.0
Maintance Shop	0.0%		20.9%	0.0	0.0
Monitoring well 305	0.0%		20.9%	0.0	0.0
Monitoring well 304	0.0%		20.9%	0.0	0.0
Gas Probe 1	0.0%		16.8%	0.0	0.0
Gas Vent GP1-1 (farthest e	0.0%		20.9%	0.0	0.0
Gas Vent GP1-2	0.0%		20.9%	0.0	0.0
Gas Vent GP1-3 (farthest w	0.0%		20.9%	0.0	0.0
Gas Probe 2	0.0%		15.3%	0.0	0.0
Gas Probe 3	0.0%		20.9%	0.0	0.0
Gas Probe 4 (G/L)	0.0%		20.9%	0.0	0.0
Monitoring well 381	0.0%		20.9%	0.0	0.0
Gas Probe 10	0.0%		12.0%	0.0	0.0
Gas Probe 5	0.0%		19.0%	0.0	0.0
Gas Probe 6	0.0%		20.0%	0.0	0.0
Gas Probe 7	0.0%		19.7%	0.0	0.0
Monitoring well 332	0.0%		20.9%	0.0	0.0
Gas Probe 8	0.0%		10.4%	0.0	0.0
Gas Probe 9	0.0%		9.0%	0.0	0.0
Monitoring well 331	0.0%		20.9%	0.0	0.0
Leachate pond pump hous	0.0%		20.9%	0.0	0.0
CALIBRATE LEACHATE POND PUMP HOUSE METHANE MONITOR TIME				1:50 PM	
Cell NW1 pump house	0.0%		20.9%	0.0	0.0
CALIBRATE NW1 PUMP HOUSE METHANE MONITOR				1:35 PM	
Cell 4A pump house	0.0%		20.9%	0.0	0.0
CALIBRATE 4A PUMP HOUSE METHANE MONITOR TI				5:20 PM	
Gas Vent N-1 thru N-5 Flar	77.5%	VOL	0.2%	100..0	17.0
GV N-1 thru N-5 Flow Rate	136.9	FPM	Temp=	52.4°	
4F Clean out Flare	83.5%	VOL	0.0%	22.5	0.0
4F Clean out Flow Rate	472.2	FPM	Temp=	62.8°	
RICK HURT					

Notes:	CH4 measured in %LEL or %VOL NOTED	02 measured in %VOL	H2S measured in PPM	CO measured in PPM

Appendix A

Listing of Existing Site Monitoring Wells

Well Number	Year drilled	Drilling Company	Screened Interval (Elevation)	Bottom Boring (Elevation)	Status
MW-101	1991	LW	696.6-681.6	678	Standby
MW-103	1991	LW	707.8-692.8	686	Standby
MW-105	1994	Tuthill	710.3-690.3	643	Standby
MW-106	1994	Tuthill	707-687	673	Standby
MW-107	1994	Tuthill	713-693	686	Standby
MW-300	1994	Tuthill	783-773	761	HMSP Program
MW-303	1994	Tuthill	761-751	750	HMSP Program
MW-304	1994	Tuthill	785.5-775.5	774	HMSP Program
MW-305	1994	Tuthill	785-775	769	Water Level
MW-306	1994	Tuthill	777-767	761	Standby
MW-307	1994	Tuthill	794.2-784.2	766	HMSP Program
MW-308	1994	Tuthill	783.3-773.3	754	Standby
~~MW-309~~	~~1994~~	~~Tuthill~~	~~775.9-765.9~~	~~738~~	~~Water Level~~
MW-311	1994	Tuthill	787.2-777.2	757	Water Level
MW-312	1994	Tuthill	785.8-775.8	756	HMSP Program
MW-313	1994	Tuthill	772.5-762.5	759	HMSP Program
MW-331	1990	Patzig	762.8-752.8	742	Standby
MW-332	1990	Patzig	789.3-779.3	775	Standby
MW-333	1990	Patzig	777.4-767.4	761	Water Level
MW-335	1990	Patzig	761.8-751.8	745	HMSP Program
MW-344	1991	LW	765.4-755.4	755	HMSP Program
MW-345	1991	LW	769.1-759.1	758	Water Level
MW-368	1991	LW	839.2-829.2	828.5	Water Level
MW-376	1991	LW	758.9-753.9	701	Standby
MW-380	2008	Terracon	782.3-772.3	772.3	HMSP Program
MW-381	2008	Terracon	787.3-777.3	777.3	HMSP Program
MW-382R	2011	Terracon	766.5-756.5	754.5	HMSP Program
MW-383	2008	Terracon	777.6-767.6	765.1	Water Level
~~MW-384~~	~~2009~~	~~GSI~~	~~774.7-764.7~~	~~764~~	~~HMSP Program~~
~~MW-385~~	~~2009~~	~~GSI~~	~~778.9-768.9~~	~~769~~	~~HMSP Program~~
MW-390	2010	Terracon	799-784	781	HMSP Program
MW-601	2019	SGS	773.4-763.4	763	Preliminary HMSP
MW-602	2019	SGS	763.9-753.9	753	Preliminary HMSP
MW-603	2019	SGS	776.5-766.5	764	Preliminary HMSP
MW-604	2024	Terracon	763.4 – 753.4	753	Preliminary HMSP
MW-605	2024	Terracon	775.4 – 765.4	765	Preliminary HMSP

TPZ = Temporary Piezometer
ACC = American Coals Corporation, Bussey, Iowa
Patzig = Patzig Testing, Des Moines, Iowa
Terracon = Terracon, Des Moines, Iowa
LW = Layne-Western, Ames, Iowa
Tuthill = Tuthill, Inc., Marengo, Iowa
GSI = Geotechnical Services, Inc., Des Moines, Iowa
SGS = SGS Testing, Blair, Nebraska
~~Strike-through text~~ indicates that the well has been properly plugged and abandoned

Appendix B

Field Sampling Forms

SCISWA SANITARY LANDFILL
PERMIT # 63-SDP-02-77P

3/19/2024 Sampled by: Todd Whipple Weather Conditions: Clear sunny 36-55 degrees, breezy

IDNR Form 542-1322

Monitoring Well: MW-300

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

GENERAL INFORMATION

TOC	793.22
Well Depth	19.98
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	793.22
Well Depth	19.98
Top Screen	783.24
Bottom Screen	773.24
Bottom Well	773.24
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.60
Top sample	778.62
Bottom sample	774.62
Turbidity(NTU)	3.67

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	10:33	14.44	778.78	

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		3.67
Appendix I	Metals	250	250		3.67
Appendix I	VOC	120	120		3.67
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	793.22	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	19.98	Before purging	3/19/2024	10:33	14.44	778.78	2.5	2.8	no
		After purging				793.22			
		Top of Screen January 1990				783.24			
						-4.46	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				773.24			
		Bottom of Well	3/19/2024		19.98	773.24			
						0.00	feet sedimentation		
		Before Sampling				793.22			
		Recovery	3/19/2024	10:53	16.60	776.62			
		Recovery	3/19/2024	15:11	14.50	778.72			
		Recovery				793.22			
		Recovery				793.22			

IDNR Form 542-1322

Monitoring Well: MW-303

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

GENERAL INFORMATION

TOC	810.22
Well Depth	57.62
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	810.22
Well Depth	57.62
Top Screen	762.60
Bottom Screen	752.60
Bottom Well	752.25
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	51.00
Top sample	759.22
Bottom sample	755.22
Turbidity(NTU)	41.19

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	11:57	34.06	776.16	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		41.19
Appendix I	Metals	250	250		41.19
Appendix I	VOC	120	120		41.19
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	810.22
Well Depth	57.62

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	11:57	34.06	776.16	5	1.3	no
After purging				810.22			
Top of Screen January 1990				762.60			
				13.56	feet above (+) or below (-) top screen		
Bottom of Well January 1990				752.60			
Bottom of Well	3/19/2024		57.62	752.60			
				0.00	feet sedimentation		
Before Sampling				810.22			
Recovery	3/19/2024	12:11	34.25	775.97			
Recovery		no drawdown		810.22			
Recovery				810.22			
Recovery				810.22			

IDNR Form 542-1322

Monitoring Well: MW-304

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

GENERAL INFORMATION

TOC	818.51
Well Depth	42.26
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	818.51
Well Depth	42.26
Top Screen	786.25
Bottom Screen	776.25
Bottom Well	776.25
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	36.00
Top sample	782.51
Bottom sample	778.51
Turbidity(NTU)	2.60

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	12:18	22.20	796.31	

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		2.60
Appendix I	Metals	250	250		2.60
Appendix I	VOC	120	120		2.60
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	818.51
Well Depth	42.26

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	12:18	22.20	796.31	5	1.5	no
After purging				818.51			
Top of Screen January 1990				786.25			
				10.06	feet above (+) or below (-) top screen		
Bottom of Well January 1990				776.25			
Bottom of Well	3/19/2024		42.26	776.25			
				0.00	feet sedimentation		
Before Sampling				818.51			
Recovery	3/19/2024	12:32	33.15	785.36			
Recovery	3/19/2024	15:25	22.88	795.63			
Recovery				818.51			
Recovery				818.51			

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-307
Background Well

GENERAL INFORMATION

TOC	822.23
Well Depth	37.52
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	822.23
Well Depth	37.52
Top Screen	794.71
Bottom Screen	784.71
Bottom Well	784.71
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	34.00
Top sample	788.23
Bottom sample	784.23
Turbidity(NTU)	2.50

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	12:47	34.10	788.13	

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		2.50
Appendix I	Metals	250	250		2.50
Appendix I	VOC	120	120		2.50
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250	250		
Supplemental	Minerals	750	0		
Total			880	0	

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

TOC	822.23
Well Depth	37.52

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	12:47	34.10	788.13	2	3.6	no
After purging				822.23			
Top of Screen January 1990				794.71			
				-6.58	feet above (+) or below (-) top screen		
Bottom of Well January 1990				784.71			
Bottom of Well	3/19/2024		37.52	784.71			
				0.00	feet sedimentation		
Before Sampling				822.23			
Recovery	3/19/2024	13:03	34.15	788.08			
Recovery		no drawdown		822.23			
Recovery				822.23			
Recovery				822.23			

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-312

Background Well

GENERAL INFORMATION

TOC	828.05
Well Depth	40.03
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	828.05
Well Depth	40.03
Top Screen	798.02
Bottom Screen	788.02
Bottom Well	788.02
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	34.00
Top sample	794.05
Bottom sample	790.05
Turbidity(NTU)	2.00

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	10:00	28.21	799.84	

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		2.00
Appendix I	Metals	250	250		2.00
Appendix I	VOC	120	120		2.00
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250	250		
Supplemental	Minerals	750	0		
Total			880	0	

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

TOC	828.05
Well Depth	40.03

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	10:00	28.21	799.84	5	2.6	no
After purging				828.05			
Top of Screen January 1990				798.02			
				1.82	feet above (+) or below (-) top screen		
Bottom of Well January 1990				788.02			
Bottom of Well	3/19/2024		40.03	788.02			
				0.00	feet sedimentation		
Before Sampling				828.05			
Recovery	3/19/2024	10:14	28.35	799.70			
Recovery		no drawdown		828.05			
Recovery				828.05			
Recovery				828.05			

IDNR Form 542-1322

Monitoring Well: MW-313	Primary Sampling Method:	No-Purge for Appendix I
	Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	813.06
Well Depth	49.21
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	813.06
Well Depth	49.21
Top Screen	773.85
Bottom Screen	763.85
Bottom Well	763.85
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	43.00
Top sample	770.06
Bottom sample	766.06
Turbidity(NTU)	21.82

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	11:14	26.81	786.25	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		21.82
Appendix I	Metals	250	250		21.82
Appendix I	VOC	120	120		21.82
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	813.06
Well Depth	49.21

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	11:14	26.81	786.25	5	1.4	no
After purging				813.06			
Top of Screen January 1990				773.85			
				12.40	feet above (+) or below (-) top screen		
Bottom of Well January 1990				763.85			
Bottom of Well	3/19/2024		49.12	763.94			
				0.09	feet sedimentation		
Before Sampling				813.06			
Recovery	3/19/2024	11:27	41.55	771.51			
Recovery	3/19/2024	15:22	36.49	776.57			
Recovery				813.06			
Recovery				813.06			

IDNR Form 542-1322

Monitoring Well: MW-335

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

GENERAL INFORMATION

TOC	791.74
Well Depth	42.09
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	791.74
Well Depth	42.09
Top Screen	759.65
Bottom Screen	749.65
Bottom Well	1006.84
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	36.00
Top sample	755.74
Bottom sample	751.74
Turbidity(NTU)	21.04

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	11:34	16.95	774.79	

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		21.04
Appendix I	Metals	250	250		21.04
Appendix I	VOC	120	120		21.04
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	791.74	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	42.09	Before purging	3/19/2024		16.95	774.79	5	1.2	no
		After purging				791.74			
		Top of Screen January 1990				759.65			
						15.14	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				749.65			
		Bottom of Well	3/19/2024		42.09	749.65			
						0.00	feet sedimentation		
		Before Sampling				791.74			
		Recovery	3/19/2024	11:48	17.05	774.69			
		Recovery		no drawdown		791.74			
		Recovery				791.74			
		Recovery				791.74			

IDNR Form 542-1322

Monitoring Well: MW-344

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

GENERAL INFORMATION

TOC	786.5
Well Depth	30.21
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	786.5
Well Depth	30.21
Top Screen	766.29
Bottom Screen	756.29
Bottom Well	756.29
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	24.50
Top sample	762.00
Bottom sample	758.00
Turbidity(NTU)	5.59

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	9:32	13.85	772.65	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		5.59
Appendix I	Metals	250	250		5.59
Appendix I	VOC	120	120		5.59
Full Appendix II	10 more containers	5620	5620		
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			6250	0	

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

TOC	786.5
Well Depth	30.21

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	9:32	13.85	772.65	4	1.5	no
After purging				786.50			
Top of Screen January 1990				766.29			
				6.36	feet above (+) or below (-) top screen		
Bottom of Well January 1990				756.29			
Bottom of Well	3/19/2024		30.50	756.00			
				-0.29	feet sedimentation		
Before Sampling				786.50			
Recovery	3/19/2024	9:48	20.40	766.10			
Recovery	3/19/2024	15:15	13.74	772.76			
Recovery				786.50			
Recovery				786.50			

IDNR Form 542-1322

Monitoring Well: MW-380

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

GENERAL INFORMATION

TOC	789.92
Well Depth	17.62
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	789.92
Well Depth	17.62
Top Screen	782.30
Bottom Screen	772.30
Bottom Well	772.30
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	12.00
Top sample	777.92
Bottom sample	773.92
Turbidity(NTU)	22.41

Date	Time	Water Level	Water Elevation	Notes
3/18/2024	8:52	9.09	780.83	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		22.41
Appendix I	Metals	250	250		22.41
Appendix I	VOC	120	120		22.41
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	789.92
Well Depth	17.62

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/18/2024	8:52	9.09	780.83	5	3.6	no
After purging				789.92			
Top of Screen January 1990				782.30			
				-1.47	feet above (+) or below (-) top screen		
Bottom of Well January 1990				772.30			
Bottom of Well	3/18/2024		17.62	772.30			
				0.00	feet sedimentation		
Before Sampling	3/18/2024	9:17	11.95	777.97			
Recovery	3/18/2024	9:18	11.22	778.70			
Recovery	3/18/2024	9:20	10.90	779.02			
Recovery	3/18/2024	9:26	9.84	780.08			
Recovery	3/18/2024	10:17	9.18	780.74			

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-381

GENERAL INFORMATION

TOC	801.43
Well Depth	24.12
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	801.43
Well Depth	24.12
Top Screen	787.31
Bottom Screen	777.31
Bottom Well	777.31
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	18.00
Top sample	783.43
Bottom sample	779.43
Turbidity(NTU)	2.17

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	8:26	7.50	793.93	

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		2.17
Appendix I	Metals	250	250		2.17
Appendix I	VOC	120	120		2.17
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	801.43
Well Depth	24.12

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	8:26	7.50	793.93	5.00	1.8	no
After purging				801.43			
Top of Screen January 1990				787.31			
				6.62	feet above (+) or below (-) top screen		
Bottom of Well January 1990				777.31			
Bottom of Well	3/19/2024		24.12	777.31			
				0.00	feet sedimentation		
Before Sampling	3/19/2024	8:43	19.45	781.98			
Recovery	3/19/2024	9:24	16.45	784.98			
Recovery	3/19/2024	10:22	16.13	785.30			
Recovery	3/19/2024	10:56	16.06	785.37			
Recovery	3/19/2024	15:17	15.55	785.88			

IDNR Form 542-1322

Monitoring Well: MW-382R

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

GENERAL INFORMATION

TOC	789.9
Well Depth	32.82
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	789.9
Well Depth	32.82
Top Screen	767.08
Bottom Screen	757.08
Bottom Well	757.08
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	26.00
Top sample	763.90
Bottom sample	759.90
Turbidity(NTU)	13.86

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	8:55	14.90	775.00	

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		13.86
Appendix I	Metals	250	250		13.86
Appendix I	VOC	120	120		13.86
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	789.9
Well Depth	32.82

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	8:55	14.90	775.00	5	1.7	no
After purging				789.90			
Top of Screen January 1990				767.08			
				7.92	feet above (+) or below (-) top screen		
Bottom of Well January 1990				757.08			
Bottom of Well	3/19/2024		32.82	757.08			
				0.00	feet sedimentation		
Before Sampling	3/19/2024	9:15	25.80	764.10			
Recovery	3/19/2024	9:19	21.20	768.70			
Recovery	3/19/2024	9:21	19.60	770.30			
Recovery	3/19/2024	9:45	15.80	774.10			
Recovery	3/19/2024	10:26	15.27	774.63			

IDNR Form 542-1322

Monitoring Well: MW-384

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

GENERAL INFORMATION

TOC	787
Well Depth	22.32
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	787
Well Depth	22.32
Top Screen	774.68
Bottom Screen	764.68
Bottom Well	764.68
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	17.70
Top sample	769.30
Bottom sample	765.30
Turbidity(NTU)	8.93

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	14:30	17.67	769.33	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		8.93
Appendix I	Metals	250	250		8.93
Appendix I	VOC	120	120		8.93
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	787
Well Depth	22.32

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	14:30	17.67	769.33		0.0	
After purging				787.00			
Top of Screen January 1990				774.68			
				-5.35	feet above (+) or below (-) top screen		
Bottom of Well January 1990				764.68			
Bottom of Well	3/19/2024		22.32	764.68			
				0.00	feet sedimentation		
Before Sampling				787.00			
Recovery				787.00			
Recovery				787.00			
Recovery				787.00			
Recovery				787.00			

IDNR Form 542-1322

Monitoring Well: MW-385

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

GENERAL INFORMATION

TOC	786.34
Well Depth	16.98
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	786.34
Well Depth	16.98
Top Screen	779.36
Bottom Screen	769.36
Bottom Well	769.36
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	13.20
Top sample	773.14
Bottom sample	769.14
Turbidity(NTU)	13.19

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	14:49	13.26	773.08	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		13.19
Appendix I	Metals	250	250		13.19
Appendix I	VOC	120	120		13.19
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	786.34								
Well Depth	16.98								

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	14:49	13.26	773.08		0.0	
After purging				786.34			
Top of Screen January 1990				779.36			
				-6.28	feet above (+) or below (-) top screen		
Bottom of Well January 1990				769.36			
Bottom of Well	3/19/2024		16.98	769.36			
				0.00	feet sedimentation		
Before Sampling				786.34			
Recovery				786.34			
Recovery				786.34			
Recovery				786.34			
Recovery				786.34			

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-390

Background Well

GENERAL INFORMATION

TOC	834.97
Well Depth	51.65
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	834.97
Well Depth	51.65
Top Screen	793.32
Bottom Screen	783.32
Bottom Well	783.32
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	46.00
Top sample	788.97
Bottom sample	784.97
Turbidity(NTU)	4.20

Date	Time	Water Level	Water Elevation	Notes
3/18/2024	8:07	38.18	796.79	

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		4.20
Appendix I	Metals	250	250		4.20
Appendix I	VOC	120	120		4.20
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250	250		
Supplemental	Minerals	750	0		
Total			880	0	

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

TOC	834.97
Well Depth	51.65

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/18/2024	8:07	38.18	796.79	5	2.3	no
After purging				834.97			
Top of Screen January 1990				793.32			
				3.47	feet above (+) or below (-) top screen		
Bottom of Well January 1990				783.32			
Bottom of Well	3/18/2024		51.65	783.32			
				0.00	feet sedimentation		
Before Sampling	3/18/2024	8:28	44.80	790.17			
Recovery	3/18/2024	8:30	44.32	790.65			
Recovery	3/18/2024	8:33	43.88	791.09			
Recovery	3/18/2024	10:11	41.20	793.77			
Recovery	3/19/2024	8:15	38.35	796.62			

IDNR Form 542-1324

	Date	Time	Type	Flowing	Quantity			Discolored	Odor	Litter
SW-1	3/19/2024		Sediment Basin Outlet	dry				No	No	No
										Turbidity (NTU)

	Date	Time	Type	Flowing	Quantity			Discolored	Odor	Litter
GU-4A	3/19/2024		tile outlet	dry				No	No	No
										Turbidity (NTU)

IDNR Form 542-1322

Monitoring Well: MW-601		**Primary Sampling Method:**	No-Purge for Appendix I
		Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	782.44
Well Depth	19.07
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	782.44
Well Depth	19.07
Top Screen	773.37
Bottom Screen	763.37
Bottom Well	763.37
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	768.44
Bottom sample	764.44
Turbidity(NTU)	2.23

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	14:01	12.99	769.45	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.23
Appendix I	Metals	250	250		2.23
Appendix I	VOC	120	120		2.23
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			380	0	

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

TOC	782.44	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	19.07	Before purging	3/19/2024	14:01	12.99	769.45	3	3.0	no
		After purging				782.44			
		Top of Screen January 1990				773.37			
						-3.92	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				763.37			
		Bottom of Well	3/19/2024		19.75	762.69			
						-0.68	feet sedimentation		
		Before Sampling				782.44			
		Recovery	3/19/2024	14:11	16.50	765.94			
		Recovery	3/19/2024	15:37	13.04	769.40			
		Recovery				782.44			
		Recovery				782.44			

IDNR Form 542-1322

Monitoring Well: MW-602

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

GENERAL INFORMATION

TOC	780.46
Well Depth	26.55
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	780.46
Well Depth	26.55
Top Screen	763.91
Bottom Screen	753.91
Bottom Well	753.91
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	21.00
Top sample	759.46
Bottom sample	755.46
Turbidity(NTU)	42.15

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	13:40	18.96	761.50	

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		42.15
Appendix I	Metals	250	250		42.15
Appendix I	VOC	120	120		42.15
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			380	0	

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

TOC	780.46	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	26.55	Before purging	3/19/2024	13:40	18.96	761.50	3	2.4	no
		After purging				780.46			
		Top of Screen January 1990				763.91			
						-2.41	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				753.91			
		Bottom of Well	3/19/2024		27.31	753.15			
						-0.76	feet sedimentation		
		Before Sampling				780.46			
		Recovery	3/19/2024	13:52	22.05	758.41			
		Recovery	3/19/2024	15:35	19.17	761.29			
		Recovery				780.46			
		Recovery				780.46			

IDNR Form 542-1322

Monitoring Well: MW-603

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

GENERAL INFORMATION

TOC	818.55
Well Depth	52.06
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	818.55
Well Depth	52.06
Top Screen	776.49
Bottom Screen	766.49
Bottom Well	766.49
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	46.00
Top sample	772.55
Bottom sample	768.55
Turbidity(NTU)	4.48

Date	Time	Water Level	Water Elevation	Notes
3/19/2024	13:14	39.05	779.50	

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		4.48
Appendix I	Metals	250	250		4.48
Appendix I	VOC	120	120		4.48
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			380	0	

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

TOC	818.55
Well Depth	52.06

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	3/19/2024	13:14	39.05	779.50	3	1.4	no
After purging				818.55			
Top of Screen January 1990				776.49			
				3.01	feet above (+) or below (-) top screen		
Bottom of Well January 1990				766.49			
Bottom of Well	3/19/2024		52.31	766.24			
				-0.25	feet sedimentation		
Before Sampling				818.55			
Recovery	3/19/2024	13:28	43.15	775.40			
Recovery	3/19/2024	15:31	39.05	779.50			
Recovery				818.55			
Recovery				818.55			

SCISWA SANITARY LANDFILL
PERMIT # 63-SDP-02-77P

10/3/2024 Sampled by: Todd Whipple Weather Conditions: Clear 48-78 degrees

IDNR Form 542-1322

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

Monitoring Well: MW-300

GENERAL INFORMATION

TOC	793.22
Well Depth	19.98
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	793.22
Well Depth	19.98
Top Screen	783.24
Bottom Screen	773.24
Bottom Well	773.24
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.50
Top sample	778.72
Bottom sample	774.72
Turbidity(NTU)	3.67

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	11:35	13.99	779.23	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		3.67
Appendix I	Metals	250	250		3.67
Appendix I	VOC	120	120		3.67
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	793.22	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	19.98	Before purging	10/3/2024	11:35	13.99	779.23		0.0	
		After purging				793.22			
		Top of Screen January 1990				783.24			
						-4.01	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				773.24			
		Bottom of Well	10/3/2024		19.98	773.24			
						0.00	feet sedimentation		
		Before Sampling				793.22			
		Recovery				793.22			
		Recovery				793.22			
		Recovery				793.22			
		Recovery				793.22			

IDNR Form 542-1322

Monitoring Well:	MW-303	**Primary Sampling Method:**	No-Purge for Appendix I
		Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	810.22
Well Depth	57.62
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	810.22
Well Depth	57.62
Top Screen	762.60
Bottom Screen	752.60
Bottom Well	752.25
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	50.00
Top sample	760.22
Bottom sample	756.22
Turbidity(NTU)	2.44

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	12:42	33.66	776.56	

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		2.44
Appendix I	Metals	250	250		2.44
Appendix I	VOC	120	120		2.44
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	810.22	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	57.62	Before purging	10/3/2024	12:42	33.66	776.56		0.0	
		After purging				810.22			
		Top of Screen January 1990				762.60			
						13.96	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				752.60			
		Bottom of Well	10/3/2024		57.62	752.60			
						0.00	feet sedimentation		
		Before Sampling				810.22			
		Recovery				810.22			
		Recovery				810.22			
		Recovery				810.22			
		Recovery				810.22			

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-304

GENERAL INFORMATION

TOC	818.51
Well Depth	42.26
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	818.51
Well Depth	42.26
Top Screen	786.25
Bottom Screen	776.25
Bottom Well	776.25
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	36.00
Top sample	782.51
Bottom sample	778.51
Turbidity(NTU)	3.27

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	12:59	21.21	797.3	

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		3.27
Appendix I	Metals	250	250		3.27
Appendix I	VOC	120	120		3.27
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	818.51	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	42.26	Before purging	10/3/2024	12:59	21.21	797.30		0.0	
		After purging				818.51			
		Top of Screen January 1990				786.25			
						11.05	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				776.25			
		Bottom of Well	10/3/2024		42.26	776.25			
						0.00	feet sedimentation		
		Before Sampling				818.51			
		Recovery				818.51			
		Recovery				818.51			
		Recovery				818.51			
		Recovery				818.51			

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-307
Background Well

GENERAL INFORMATION

TOC	822.23
Well Depth	37.52
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	822.23
Well Depth	37.52
Top Screen	794.71
Bottom Screen	784.71
Bottom Well	784.71
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	33.40
Top sample	788.83
Bottom sample	784.83
Turbidity(NTU)	3.59

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	7:35	33.40	788.83	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		3.59
Appendix I	Metals	250	250		3.59
Appendix I	VOC	120	120		3.59
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250	250		
Supplemental	Minerals	750	0		
Total			880	0	

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

TOC	822.23
Well Depth	37.52

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	10/3/2024	7:35	33.40	788.83		0.0	
After purging				822.23			
Top of Screen January 1990				794.71			
				-5.88	feet above (+) or below (-) top screen		
Bottom of Well January 1990				784.71			
Bottom of Well	10/3/2024		37.52	784.71			
				0.00	feet sedimentation		
Before Sampling				822.23			
Recovery				822.23			
Recovery				822.23			
Recovery				822.23			
Recovery				822.23			

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-312
Background Well

GENERAL INFORMATION

TOC	828.05
Well Depth	40.03
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	828.05
Well Depth	40.03
Top Screen	798.02
Bottom Screen	788.02
Bottom Well	788.02
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	34.00
Top sample	794.05
Bottom sample	790.05
Turbidity(NTU)	2.42

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	10:02	27.11	800.94	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.42
Appendix I	Metals	250	250		2.42
Appendix I	VOC	120	120		2.42
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250	250		
Supplemental	Minerals	750	0		
Total			880	0	

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

TOC	828.05
Well Depth	40.03

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	10/3/2024	10:02	27.11	800.94		0.0	
After purging				828.05			
Top of Screen January 1990				798.02			
				2.92	feet above (+) or below (-) top screen		
Bottom of Well January 1990				788.02			
Bottom of Well	10/3/2024		40.03	788.02			
				0.00	feet sedimentation		
Before Sampling				828.05			
Recovery				828.05			
Recovery				828.05			
Recovery				828.05			
Recovery				828.05			

IDNR Form 542-1322

Monitoring Well:	MW-313	**Primary Sampling Method:**	No-Purge for Appendix I
		Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	813.06
Well Depth	49.21
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	813.06
Well Depth	49.21
Top Screen	773.85
Bottom Screen	763.85
Bottom Well	763.85
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	44.00
Top sample	769.06
Bottom sample	765.06
Turbidity(NTU)	28.39

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	12:12	25.49	787.57	

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		28.39
Appendix I	Metals	250	250		28.39
Appendix I	VOC	120	120		28.39
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	813.06	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	49.21	Before purging	10/3/2024	12:12	25.49	787.57		0.0	
		After purging				813.06			
		Top of Screen January 1990				773.85			
						13.72	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				763.85			
		Bottom of Well	10/3/2024		49.12	763.94			
						0.09	feet sedimentation		
		Before Sampling				813.06			
		Recovery				813.06			
		Recovery				813.06			
		Recovery				813.06			
		Recovery				813.06			

IDNR Form 542-1322

Monitoring Well: MW-335

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

GENERAL INFORMATION

TOC	791.74
Well Depth	42.09
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	791.74
Well Depth	42.09
Top Screen	759.65
Bottom Screen	749.65
Bottom Well	1006.84
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	36.00
Top sample	755.74
Bottom sample	751.74
Turbidity(NTU)	6.19

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	12:29	16.65	775.09	

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		6.19
Appendix I	Metals	250	250		6.19
Appendix I	VOC	120	120		6.19
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	791.74
Well Depth	42.09

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	10/3/2024		16.65	775.09		0.0	
After purging				791.74			
Top of Screen January 1990				759.65			
				15.44	feet above (+) or below (-) top screen		
Bottom of Well January 1990				749.65			
Bottom of Well	10/3/2024		42.09	749.65			
				0.00	feet sedimentation		
Before Sampling				791.74			
Recovery				791.74			
Recovery				791.74			
Recovery				791.74			
Recovery				791.74			

IDNR Form 542-1322

Monitoring Well: MW-344

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

GENERAL INFORMATION

TOC	786.5
Well Depth	30.21
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	786.5
Well Depth	30.21
Top Screen	766.29
Bottom Screen	756.29
Bottom Well	756.29
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	24.00
Top sample	762.50
Bottom sample	758.50
Turbidity(NTU)	4.67

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	10:39	13.18	773.32	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		4.67
Appendix I	Metals	250	250		4.67
Appendix I	VOC	120	120		4.67
Full Appendix II	10 more containers	5620	5620		
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			6250	0	

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

TOC	786.5
Well Depth	30.21

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	10/3/2024	10:39	13.18	773.32		0.0	
After purging				786.50			
Top of Screen January 1990				766.29			
				7.03	feet above (+) or below (-) top screen		
Bottom of Well January 1990				756.29			
Bottom of Well	10/3/2024		30.50	756.00			
				-0.29	feet sedimentation		
Before Sampling				786.50			
Recovery				786.50			
Recovery				786.50			
Recovery				786.50			
Recovery				786.50			

IDNR Form 542-1322

Monitoring Well: MW-380

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

GENERAL INFORMATION

TOC	789.92
Well Depth	17.62
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	789.92
Well Depth	17.62
Top Screen	782.30
Bottom Screen	772.30
Bottom Well	772.30
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	12.00
Top sample	777.92
Bottom sample	773.92
Turbidity(NTU)	4.38

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	11:20	7.96	781.96	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		4.38
Appendix I	Metals	250	250		4.38
Appendix I	VOC	120	120		4.38
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	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	789.92								
Well Depth	17.62	Before purging	10/3/2024	11:20	7.96	781.96		0.0	
		After purging				789.92			
		Top of Screen January 1990				782.30			
						-0.34	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				772.30			
		Bottom of Well	10/3/2024		17.62	772.30			
						0.00	feet sedimentation		
		Before Sampling				789.92			
		Recovery				789.92			
		Recovery				789.92			
		Recovery				789.92			
		Recovery				789.92			

IDNR Form 542-1322

Monitoring Well:	MW-381
Primary Sampling Method:	No-Purge for Appendix I
Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	801.43
Well Depth	24.12
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	801.43
Well Depth	24.12
Top Screen	787.31
Bottom Screen	777.31
Bottom Well	777.31
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	19.00
Top sample	782.43
Bottom sample	778.43
Turbidity(NTU)	2.20

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	11:53	18.87	782.56	

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		2.20
Appendix I	Metals	250	250		2.20
Appendix I	VOC	120	120		2.20
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250			
Supplemental	Minerals	750	0		
Total			630	0	

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

TOC	801.43
Well Depth	24.12

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	10/3/2024	11:53	18.87	782.56		0.0	
After purging				801.43			
Top of Screen January 1990				787.31			
				-4.75	feet above (+) or below (-) top screen		
Bottom of Well January 1990				777.31			
Bottom of Well	10/3/2024		24.12	777.31			
				0.00	feet sedimentation		
Before Sampling				801.43			
Recovery				801.43			
Recovery				801.43			
Recovery				801.43			
Recovery				801.43			

IDNR Form 542-1322

Monitoring Well: MW-382R

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

GENERAL INFORMATION

TOC	789.9
Well Depth	32.82
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	789.9
Well Depth	32.82
Top Screen	767.08
Bottom Screen	757.08
Bottom Well	757.08
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	27.00
Top sample	762.90
Bottom sample	758.90
Turbidity(NTU)	8.42

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	10:22	13.58	776.32	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		8.42
Appendix I	Metals	250	250		8.42
Appendix I	VOC	120	120		8.42
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
bis2EHP	bis2EHP	250	490		
Supplemental	Minerals	750	0		
Total			1120	0	

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

TOC	789.9
Well Depth	32.82

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	10/3/2024	10:22	13.58	776.32		0.0	
After purging				789.90			
Top of Screen January 1990				767.08			
				9.24	feet above (+) or below (-) top screen		
Bottom of Well January 1990				757.08			
Bottom of Well	10/3/2024		32.82	757.08			
				0.00	feet sedimentation		
Before Sampling				789.90			
Recovery				789.90			
Recovery				789.90			
Recovery				789.90			
Recovery				789.90			

IDNR Form 542-1322

Monitoring Well:	MW-390	**Primary Sampling Method:**	No-Purge for Appendix I
	Background Well	**Secondary Sampling Method:**	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	834.97
Well Depth	51.65
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	834.97
Well Depth	51.65
Top Screen	793.32
Bottom Screen	783.32
Bottom Well	783.32
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	46.00
Top sample	788.97
Bottom sample	784.97
Turbidity(NTU)	7.14

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	7:55	37.42	797.55	

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		7.14
Appendix I	Metals	250	250		7.14
Appendix I	VOC	120	120		7.14
Full Appendix II	10 more containers	5620			
Acid Mine Drainage	AMD	250	250		
Sulfide	Sulfide	250	250		
Supplemental	Minerals	750	0		
Total			880	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	834.97								
Well Depth	51.65	Before purging	10/3/2024	7:55	37.42	797.55		0.0	
		After purging				834.97			
		Top of Screen January 1990				793.32			
						4.23	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				783.32			
		Bottom of Well	10/3/2024		51.65	783.32			
						0.00	feet sedimentation		
		Before Sampling				834.97			
		Recovery				834.97			
		Recovery				834.97			
		Recovery				834.97			
		Recovery				834.97			

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-601

GENERAL INFORMATION

TOC	782.44
Well Depth	19.07
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	782.44
Well Depth	19.07
Top Screen	773.37
Bottom Screen	763.37
Bottom Well	763.37
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.50
Top sample	767.94
Bottom sample	763.94
Turbidity(NTU)	3.94

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	8:30	13.81	768.63	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		3.94
Appendix I	Metals	250	250		3.94
Appendix I	VOC	120	120		3.94
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			380	0	

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

TOC	782.44
Well Depth	19.07

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	10/3/2024	8:30	13.81	768.63		0.0	
After purging				782.44			
Top of Screen January 1990				773.37			
				-4.74	feet above (+) or below (-) top screen		
Bottom of Well January 1990				763.37			
Bottom of Well	10/3/2024		19.75	762.69			
				-0.68	feet sedimentation		
Before Sampling				782.44			
Recovery				782.44			
Recovery				782.44			
Recovery				782.44			
Recovery				782.44			

IDNR Form 542-1322

Monitoring Well:	MW-602	**Primary Sampling Method:**	No-Purge for Appendix I
		Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	780.46
Well Depth	26.55
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	780.46
Well Depth	26.55
Top Screen	763.91
Bottom Screen	753.91
Bottom Well	753.91
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	21.00
Top sample	759.46
Bottom sample	755.46
Turbidity(NTU)	23.71

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	8:50	19.09	761.37	

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		23.71
Appendix I	Metals	250	250		23.71
Appendix I	VOC	120	120		23.71
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			380	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	780.46								
Well Depth	26.55	Before purging	10/3/2024	8:50	19.09	761.37		0.0	
		After purging				780.46			
		Top of Screen January 1990				763.91			
						-2.54	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				753.91			
		Bottom of Well	10/3/2024		27.31	753.15			
						-0.76	feet sedimentation		
		Before Sampling				780.46			
		Recovery				780.46			
		Recovery				780.46			
		Recovery				780.46			
		Recovery				780.46			

IDNR Form 542-1322

Primary Sampling Method: No-Purge for Appendix I

Monitoring Well: MW-603

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

GENERAL INFORMATION

TOC	818.55
Well Depth	52.06
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	818.55
Well Depth	52.06
Top Screen	776.49
Bottom Screen	766.49
Bottom Well	766.49
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	46.00
Top sample	772.55
Bottom sample	768.55
Turbidity(NTU)	2.13

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	9:08	37.79	780.76	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.13
Appendix I	Metals	250	250		2.13
Appendix I	VOC	120	120		2.13
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			380	0	

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

TOC	818.55	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	52.06	Before purging	10/3/2024	9:08	37.79	780.76		0.0	
		After purging				818.55			
		Top of Screen January 1990				776.49			
						4.27	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				766.49			
		Bottom of Well	10/3/2024		52.31	766.24			
						-0.25	feet sedimentation		
		Before Sampling				818.55			
		Recovery				818.55			
		Recovery				818.55			
		Recovery				818.55			
		Recovery				818.55			

IDNR Form 542-1322

Monitoring Well: MW-604

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

GENERAL INFORMATION

TOC	792.43
Well Depth	39.45
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	792.43
Well Depth	39.45
Top Screen	763.43
Bottom Screen	753.43
Bottom Well	752.98
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	21.00
Top sample	771.43
Bottom sample	767.43
Turbidity(NTU)	42.15

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	9:33	25.50	766.93	

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		42.15
Appendix I	Metals	250	250		42.15
Appendix I	VOC	120	120		42.15
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			380	0	

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

TOC	792.43	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	39.45	Before purging	10/3/2024	9:33	25.50	766.93		0.0	
		After purging				792.43			
		Top of Screen September 2024				763.43			
						3.50	feet above (+) or below (-) top screen		
		Bottom of Well September 2024				752.98			
		Bottom of Well	10/3/2024		39.45	752.98			
						0.00	feet sedimentation		
		Before Sampling	9/20/2024	10:34	30.00	762.43	*58 gallons pumped 9/20/2024*		
		Recovery	9/20/2024	10:35	28.40	764.03	*recovery in <15 minutes*		
		Recovery	9/20/2024	10:37	26.40	766.03			
		Recovery	9/20/2024	10:39	25.75	766.68			
		Recovery	9/20/2024	10:43	25.62	766.81			

IDNR Form 542-1322

Monitoring Well: MW-605

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

GENERAL INFORMATION

TOC	787.21
Well Depth	22.30
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	787.21	
Well Depth	22.30	
Top Screen	775.36	
Bottom Screen	765.36	
Bottom Well	764.91	
Sampler Length (ft)	4.00	
Sampler Volume (mL)	440.00	
Feet cordage		dry
Top sample	787.21	
Bottom sample	783.21	
Turbidity(NTU)		

Date	Time	Water Level	Water Elevation	Notes
10/3/2024	9:35	22.30	764.91	**Dry**

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		0.00
Appendix I	Metals	250	250		0.00
Appendix I	VOC	120	120		0.00
Full Appendix II	10 more containers	5620			
TSS	TSS	1000			
Supplemental	bis 2	946			
Supplemental	Minerals	750	0		
Total			0	0	

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

TOC	787.21
Well Depth	22.30

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	10/3/2024	9:35	22.30	764.91		#DIV/0!	
After purging				787.21			
Top of Screen September 2024				775.36			
				-10.45	feet above (+) or below (-) top screen		
Bottom of Well September 2024				764.91			
Bottom of Well	10/3/2024		22.30	764.91			
				0.00	feet sedimentation		
Before Sampling				787.21			
Recovery				787.21			
Recovery				787.21			
Recovery				787.21			
Recovery				787.21			

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	Date	Time	Type	Flowing	Quantity			Discolored	Odor	Litter
SW-1	10/3/2024		Sediment Basin Outlet	dry				No	No	No
										Turbidity (NTU)

	Date	Time	Type	Flowing	Quantity			Discolored	Odor	Litter
GU-4AR	10/3/2024	8:17	tile outlet	yes	10 gpm			No	No	No
										Turbidity (NTU)
										2.04

Appendix C

Statistical Report

Appendix C.1 - Otter Creek Statistical Report

Results of the Ground Water Statistics

for South Central Iowa Solid Waste Agency Landfill

First Semi-Annual Monitoring Events in 2024

Prepared for:
South Central Iowa Solid Waste Agency Landfill
1736 Highway T17
Tracy, IA 50256

Prepared by:
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April 2024

INTRODUCTION

This report contains the results of the statistical analyses used to evaluate the ground water data obtained during the first semi-annual monitoring event in 2024 at the South Central Iowa Solid Waste Agency (SCISWA) Landfill. The ground water monitoring wells were sampled on March 18-19, 2024 and analyzed for the parameters required by permit. 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. Both intrawell and interwell methodologies are described and then applied to the SCISWA Landfill data. The statistical plan conforms with IAC 567, Chapter 113.10, USEPA Guidance document ("*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance"*, March 2009), and the American Society for Testing and Materials (ASTM) standard D6312-98, *Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*.

Ground Water Monitoring Program

The groundwater monitoring network for SCISWA Landfill includes wells MW-300, MW-303, MW-304, MW-307 (upgradient), MW-312 (upgradient), MW-313, MW-335, MW-344, MW-380, MW-381, MW-382R, MW-384, MW-385, MW-390 (upgradient), MW-601, MW-602, and MW-603. An underdrain (GU-4A) and surface water sample point (SW-1) are also available. Each of the groundwater monitoring wells is to be sampled at least semiannually and analyzed for the detection monitoring parameters listed below.

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 events in 2024 are summarized in Attachment A.

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

IAC 567, Chapter 113.10(4) provides several options for statistically evaluating the ground water data at those wells that monitor the open cells or contiguous MSWLF units. The preferred methods for comparing ground water data are using either prediction limits or using control charts. Both of these methods were applied to the SCISWA Landfill data using the DUMPStat® statistical program. DUMPStat® is a program for the statistical analysis of groundwater monitoring data using methods described in "Statistical Methods for Groundwater Monitoring" by Dr. Robert D. Gibbons. The DUMPStat program is consistent with all USEPA regulations and guidance and the ASTM D6312-98 guidance. Ground water statistics are to be done on the constituents listed.

Intrawell Statistics

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

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

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

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

Many groundwater monitoring parameters are not detected at a frequency great enough to generate the combined Shewhart-CUSUM control charts. For constituents that are detected less than 25% of the time at a particular well, the data should be plotted as a time series until a sufficient number of data points are available to provide a 99% confidence nonparametric prediction limit. Thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit. Eight independent measurements (for pass 1 of 2 resamples) are necessary to achieve a 99% confidence nonparametric prediction limit. The nonparametric prediction limit is the largest determination out of the data set collected for that well and parameter. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

In developing the statistical background, the historical data must be thoroughly screened for anomalous data due to sampling error, analytical error, or simply by chance alone. An erroneous data point, if not removed prior to the mean and variance computations, would yield a larger control limit thus increasing the false negative rate. The DUMPStat® program screens for outliers using the Dixon test. If the Dixon test indicates an outlier, the value is 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 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 detection monitoring constituents were evaluated using the combined Shewhart-CUSUM control chart method. The background used to determine control limits includes the data obtained from September 2012 through 2021. A summary of the intrawell statistics is included in Attachment B, Table 1 “Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts.” The control charts or time series graphs follow the summary table. For the most current data, the control limit exceedances detected are summarized in the table below.

Control Limit Exceedances at SCISWA Landfill during the First Semi-Annual Monitoring Event in 2024

Well	Parameter	Result	CUSUM Value	Control Limit	Prediction Limit Type	Verified/ Awaiting verification
MW-300	Cobalt, µg/L	691	640.9205	653.2496	Normal	Verified
	Nickel, µg/L	719	844.3264	535.6816	Normal	Verified
	Zinc, µg/L	1350	2127.7347	1649.1135	Normal	Awaiting verification
MW-312	Barium, µg/L	24.3	36.8942	33.6507	Normal	Verified
MW-335	Arsenic, µg/L	9.9	16.2817	11.6924	Normal	Awaiting verification
MW-380	Cadmium, µg/L	36.5	33.2969	33.2446	Normal	Awaiting verification
	Copper, µg/L	71.8	65.3418	60.9762	Normal	Awaiting verification

An increasing trend was detected in the background data for nickel at MW-335.

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. The site-wide false positive rate is 18% and the test becomes sensitive to 3 standard deviation units over background.

Interwell Statistics: Upgradient versus Downgradient Comparisons

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

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

The background data used in this statistical analysis includes the ground water data collected from ground water wells MW-307, MW-312, and MW-390 during the period from September 2012 through the current data. A summary of the background data from monitoring wells MW-307, MW-312, and MW-390 is listed in Attachment C, 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-300, MW-303, MW-304, MW-313, MW-335, MW-344, MW-380, MW-381, MW-382R, MW-384, and MW-385, compared to the site prediction limits. Prediction limit exceedances are flagged with asterisks. For the most current data, the site prediction limit exceedances detected are summarized in the table below.

Prediction Limit Exceedances during the First Semi-Annual Monitoring Event in 2024

Well	Parameter	Result	Prediction Limit	Prediction Limit Type	Verified/ Awaiting verification
MW-300	Cobalt, µg/L	691	139.4524	Normal	Verified
	Nickel, µg/L	719	145.6778	Normal	Verified
MW-303	Barium, µg/L	92.9	49.9000	Nonparametric	Awaiting verification
MW-304	Barium, µg/L	78.6	49.9000	Nonparametric	Verified
MW-313	Arsenic, µg/L	29.0	22.5000	Nonparametric	Awaiting verification
MW-344	Cobalt, µg/L	148	139.4524	Normal	Verified
MW-380	Beryllium, µg/L	4.9	1.0000	Nonparametric	Verified
	Cadmium, µg/L	36.5	1.1900	Nonparametric	Verified
	Cobalt, µg/L	936	139.4524	Normal	Verified
	Copper, µg/L	71.8	7.9900	Nonparametric	Awaiting verification
	Nickel, µg/L	1290	145.6778	Normal	Verified
	Selenium, µg/L	8.5	6.4000	Nonparametric	Verified

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

A statistical power curve indicates the expected false assessments for the site as a whole. The false positive rate for interwell analyses is the percentage of failures when the upgradient versus downgradient true mean difference equals zero. False negative rate indicates the chance of missing contamination at a single well for a single constituent. The statistical power is a function of the number of wells included, the number of constituents compared, the detection frequencies, and the data distributions involved. For interwell analysis, the site-wide false positive rate is 2% and the test becomes sensitive to 4 standard deviation unit increases over background.

The trace metals which have exceeded ground water protection standards (GWPS) or verified statistical exceedances were evaluated against the GWPS using confidence limits (Attachment D). 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 GWPS under 40 CFR 264 (e.g. whether the verified constituent is detected at a significant level above the GWPS). An exceedance is verified if the LCL is above the Regulatory GWPS.

The 95% LCL for cobalt at MW-300 (283.363 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for nickel at MW-300 (250.469 μg/L) exceeded the GWPS of 100 μg/L.
The 95% LCL for cobalt at MW-303 (10.498 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for cobalt at MW-304 (3.941 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for cobalt at MW-307 (36.012 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for cobalt at MW-312 (35.539 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for cobalt at MW-335 (31.437 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for cobalt at MW-344 (136.909 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for nickel at MW-344 (104.780 μg/L) exceeded the GWPS of 100 μg/L.
The 95% LCL for cobalt at MW-380 (446.233 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for nickel at MW-380 (586.502 μg/L) exceeded the GWPS of 100 μg/L.
The 95% LCL for cobalt at MW-384 (9.459 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for cobalt at MW-385 (2.429 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for cobalt at MW-390 (97.008 μg/L) exceeded the GWPS of 2.1 μg/L.

The calculated 95% LCL for the remainder of the verified exceedances did not exceed GWPS.

Volatile Organic Compounds

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

Organic compounds detected 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-344	cis-1,2-Dichloroethene	1.1	1	Verified	70

The VOCs detections did not exceed GWPS. The verified VOC detections were evaluated against the GWPS using confidence limits (Attachment F). The analysis was conducted to evaluate whether verified concentrations are significantly above the water quality standard. The calculated LCLs for historically detected VOCs are below the respective GWPS.

Attachment A

Ground Water Data

Table 1

Analytical Data Summary for 3/18/2024 to 3/19/2024

Constituents	Units	MW-300	MW-303	MW-304	MW-307	MW-312	MW-313	MW-335	MW-344	MW-380	MW-381
1,1,1,2-Tetrachloroethane	ug/L	<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
1,1,2,2-Tetrachloroethane	ug/L	<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-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	ug/L	<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
1,2-Dichloroethane	ug/L	<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
1,4-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Alkalinity as CaCO3	mg/L	183	584	359	102	298	488	522	1050	<50	157
Aluminum	ug/L	421	264	51	236	<50	128	239	85	16000	78
Antimony	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic	ug/L	<4.0	<4.0	<4.0	4.0	<4.0	29.0	9.9	<4.0	5.4	<4.0
Barium	ug/L	11.9	92.9	78.6	9.0	24.3	42.0	13.2	10.6	9.3	12.3
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.9	<4.0
Bis(2-ethylhexyl)phthalate	ug/L										
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	36.5	<.8
Carbon Disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon Tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorodibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
cis-1,2-Dichloroethene	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0
cis-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt	ug/L	691.0	23.1	4.6	42.8	44.2	.9	40.3	148.0	936.0	<.4
Copper	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	71.8	<4.0
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iron	ug/L	88600	1420	4970	243000	2480	47200	9460	6170	217000	138
Lead	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methylene Chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel	ug/L	719.0	28.1	4.0	74.2	58.4	<4.0	39.4	108.0	1290.0	<4.0
pH	SU	5.8	6.5	6.8	5.7	6.1	6.9	6.2	6.1	4.0	6.6
Selenium	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	8.5	<4.0
Silver	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfate	mg/L	2870.0	82.7	45.5	2020.0	614.0	359.0	2500.0	1750.0	3590.0	1150.0
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<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
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl Acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl Chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, Total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc	ug/L	1350.0	<20.0	<20.0	304.0	<20.0	<20.0	42.4	<20.0	7070.0	<20.0

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

Table 1

Analytical Data Summary for 3/18/2024 to 3/19/2024

Constituents	MW-382R	MW-384	MW-385	MW-390	MW-601	MW-602	MW-603
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
2-Butanone	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	<5	<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5
Alkalinity as CaCO3	372	164	494	244	160	<50	381
Aluminum	130	87	65	129	<50	245	104
Antimony	<2	<2	<2	<2	<2	<2	<2
Arsenic	<4.0	<4.0	<4.0	17.3	<4.0	<4.0	5.1
Barium	23.8	10.1	12.4	17.0	21.2	10.8	21.3
Benzene	<1	<1	<1	<1	<1	<1	<1
Beryllium	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Bis(2-ethylhexyl)phthalate	<6						
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1
Cadmium	<.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
Chlorodibromomethane	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1
Chromium	<8	<8	<8	<8	<8	<8	<8
cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene	<1	<1	<1	<1	<1	<1	<1
Cobalt	.8	15.8	4.7	107.0	26.5	198.0	22.1
Copper	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Dibromomethane	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1	<1	<1
Iron	167	91300	52200	130000	3840	29200	43200
Lead	<4	<4	<4	<4	<4	<4	<4
Methylene Chloride	<5	<5	<5	<5	<5	<5	<5
Nickel	<4.0	57.7	32.6	54.1	46.8	299.0	11.8
pH	7.0	5.9	6.5	6.0	6.4	5.4	6.4
Selenium	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver	<4	<4	<4	<4	<4	<4	<4
Styrene	<1	<1	<1	<1	<1	<1	<1
Sulfate	1030.0	2590.0	2100.0	2000.0	1090.0	2020.0	2410.0
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1
Thallium	<2	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	<1	<1	<1	<1	<1	<1	<1
trans-1,4-Dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1
Vanadium	<20	<20	<20	<20	<20	<20	<20
Vinyl Acetate	<5	<5	<5	<5	<5	<5	<5
Vinyl Chloride	<1	<1	<1	<1	<1	<1	<1
Xylenes, Total	<2	<2	<2	<2	<2	<2	<2
Zinc	<20.0	<20.0	33.4	184.0	<20.0	142.0	<20.0

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

Attachment B

Summary Tables and Graphs for the Intrawell Comparisons

Table 1

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

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Antimony	ug/L	MW-300	19	5	36			2.0000	2.0000			1.0000	nonpar	.99	**
Arsenic	ug/L	MW-300	19	5	36	2.0375	0.4972	4.0000	4.0000	2.0375	2.0375	4.7721	normal		
Barium	ug/L	MW-300	18	5	36	13.0861	1.9733	11.3000	11.9000	13.0861	13.0861	23.9395	normal		
Beryllium	ug/L	MW-300	19	5	36			4.0000	4.0000			0.5300	nonpar	.99	**
Cadmium	ug/L	MW-300	19	5	36	0.7042	1.8006	0.8000	0.8000	0.7042	0.7042	10.6077	normal		
Chromium	ug/L	MW-300	19	5	36			8.0000	8.0000			3.6900	nonpar	.99	**
Cobalt	ug/L	MW-300	18	5	36	286.0000	66.7727	881.0000	691.0000	830.9205	640.9205	653.2496	normal		
Copper	ug/L	MW-300	19	5	36			4.0000	4.0000			32.0000	nonpar	.99	**
Lead	ug/L	MW-300	19	5	36	0.6372	0.3297	4.0000	4.0000	0.6372	0.6372	2.4507	normal		
Nickel	ug/L	MW-300	19	5	36	228.5053	55.8503	955.0000	719.0000	1080.3264	844.3264	535.6816	normal		
Selenium	ug/L	MW-300	19	5	36			4.5000	4.0000			3.3400	nonpar	.99	**
Silver	ug/L	MW-300	19	5	36			4.0000	4.0000			0.5600	nonpar	.99	**
Thallium	ug/L	MW-300	19	5	36	0.2528	0.0475	2.0000	2.0000	0.2528	0.2528	0.5139	normal		
Vanadium	ug/L	MW-300	19	5	36			20.0000	20.0000			2.1500	nonpar	.99	**
Zinc	ug/L	MW-300	19	5	36	244.3421	255.4130	925.0000	1350.0000	1213.6366	2127.7347	1649.1135	normal		
Antimony	ug/L	MW-303	18	5	36			2.0000	2.0000			0.5300	nonpar	.99	**
Arsenic	ug/L	MW-303	19	5	36	1.0109	0.4638	4.0000	4.0000	1.0109	1.0109	3.5619	normal		
Barium	ug/L	MW-303	19	5	36	48.5000	23.8902	35.5000	92.9000	48.5000	74.9824	179.8960	normal		
Beryllium	ug/L	MW-303	19	5	36			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-303	19	5	36			0.8000	0.8000			0.1000	nonpar	.99	**
Chromium	ug/L	MW-303	18	5	36			8.0000	8.0000			4.7600	nonpar	.99	**
Cobalt	ug/L	MW-303	19	5	36	18.4263	3.4367	17.5000	23.1000	21.8186	23.9148	37.3282	normal		
Copper	ug/L	MW-303	18	5	36			4.0000	4.0000			2.0000	nonpar	.99	**
Lead	ug/L	MW-303	19	5	36	0.4141	0.6266	4.0000	4.0000	0.4141	0.4141	3.8603	normal		
Nickel	ug/L	MW-303	19	5	36	38.9368	11.8360	41.5000	28.1000	38.9368	38.9368	104.0349	normal		
Selenium	ug/L	MW-303	19	5	36			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-303	19	5	36			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-303	19	5	36			2.0000	2.0000			0.9040	nonpar	.99	**
Vanadium	ug/L	MW-303	19	5	36			20.0000	20.0000			8.7300	nonpar	.99	**
Zinc	ug/L	MW-303	19	5	36	24.8742	44.8621	20.0000	20.0000	24.8742	24.8742	271.6156	normal		
Antimony	ug/L	MW-304	14	5	19			2.0000	2.0000			0.8160	nonpar	.99	**
Arsenic	ug/L	MW-304	14	5	19	2.2164	2.2660	4.0000	4.0000	2.2164	2.2164	14.6794	normal		
Barium	ug/L	MW-304	14	5	19	66.5214	19.1409	61.0000	78.6000	66.5214	66.5214	171.7966	normal		
Beryllium	ug/L	MW-304	14	5	19			4.0000	4.0000			0.2210	nonpar	.99	**
Cadmium	ug/L	MW-304	12	5	19								nonpar *		**
Chromium	ug/L	MW-304	14	5	19			8.0000	8.0000			1.2800	nonpar	.99	**
Cobalt	ug/L	MW-304	13	5	19	8.1031	3.3997	7.1000	4.6000	13.6917	8.1031	26.8014	normal		
Copper	ug/L	MW-304	14	5	19			4.0000	4.0000			2.8700	nonpar	.99	**
Lead	ug/L	MW-304	14	5	19			4.0000	4.0000			0.7370	nonpar	.99	**
Nickel	ug/L	MW-304	13	5	19	6.1354	2.3844	5.5000	4.0000	6.1354	6.1354	19.2496	normal		
Selenium	ug/L	MW-304	14	5	19			4.0000	4.0000			1.2400	nonpar	.99	**
Silver	ug/L	MW-304	14	5	19			4.0000	4.0000			0.1800	nonpar	.99	**
Thallium	ug/L	MW-304	14	5	19			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-304	11	5	19								nonpar *		**
Zinc	ug/L	MW-304	12	5	19	9.8533	1.6475	20.0000	20.0000	9.8533	9.8533	18.9147	normal		
Antimony	ug/L	MW-307	17	5	33			4.4000	2.0000			1.0000	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	ug/L	MW-307	17	5	33	3.2082	1.3796	31.9000	4.0000	30.9224	3.2082	10.7959	normal		
Barium	ug/L	MW-307	16	5	33	9.4050	2.3782	21.8000	9.0000	20.0164	17.8278	22.4849	normal		
Beryllium	ug/L	MW-307	17	5	33	0.6852	0.2854	4.0000	4.0000	0.6852	0.6852	2.2551	normal		
Cadmium	ug/L	MW-307	17	5	33	0.2898	0.2332	0.8000	0.8000	0.2898	0.2898	1.5724	normal		
Chromium	ug/L	MW-307	17	5	33			8.0000	8.0000			1.6000	nonpar	.99	**
Cobalt	ug/L	MW-307	16	5	33	54.4500	12.2189	36.6000	42.8000	54.4500	54.4500	121.6539	normal		
Copper	ug/L	MW-307	17	5	33			4.2000	4.0000			2.1900	nonpar	.99	**
Lead	ug/L	MW-307	17	5	33			4.0000	4.0000			0.7700	nonpar	.99	**
Nickel	ug/L	MW-307	17	5	33	85.1118	22.4967	68.1000	74.2000	85.1118	85.1118	208.8434	normal		
Selenium	ug/L	MW-307	17	5	33	2.8825	1.4130	6.4000	4.0000	5.3403	2.8825	10.6538	normal		
Silver	ug/L	MW-307	15	5	33			4.0000	4.0000			0.4200	nonpar	.99	**
Thallium	ug/L	MW-307	17	5	33			2.0000	2.0000			0.2700	nonpar	.99	**
Vanadium	ug/L	MW-307	16	5	33			20.0000	20.0000			1.1000	nonpar	.99	**
Zinc	ug/L	MW-307	16	5	33	421.3125	117.2108	383.0000	304.0000	421.3125	421.3125	1065.9717	normal		
Antimony	ug/L	MW-312	19	5	24			2.0000	2.0000			1.0000	nonpar	.99	**
Arsenic	ug/L	MW-312	19	5	24	1.2584	0.4060	4.0000	4.0000	1.2584	1.2584	3.4916	normal		
Barium	ug/L	MW-312	19	5	24	14.3563	3.5081	22.9000	24.3000	35.4942	36.8942	33.6507	normal		
Beryllium	ug/L	MW-312	19	5	24	0.4429	0.1366	4.0000	4.0000	0.4429	0.4429	1.1944	normal		
Cadmium	ug/L	MW-312	19	5	24			0.8000	0.8000			0.2460	nonpar	.99	**
Chromium	ug/L	MW-312	19	5	24			8.0000	8.0000			3.9000	nonpar	.99	**
Cobalt	ug/L	MW-312	19	5	24	36.5316	8.3421	42.9000	44.2000	38.6553	40.0672	82.4129	normal		
Copper	ug/L	MW-312	19	5	24			4.0000	4.0000			2.1900	nonpar	.99	**
Lead	ug/L	MW-312	19	5	24			4.0000	4.0000			1.6700	nonpar	.99	**
Nickel	ug/L	MW-312	19	5	24	102.1684	22.8484	72.1000	58.4000	102.1684	102.1684	227.8348	normal		
Selenium	ug/L	MW-312	19	5	24			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-312	19	5	24			4.0000	4.0000			0.4200	nonpar	.99	**
Thallium	ug/L	MW-312	19	5	24			2.0000	2.0000			0.2700	nonpar	.99	**
Vanadium	ug/L	MW-312	19	5	24			20.0000	20.0000			1.1000	nonpar	.99	**
Zinc	ug/L	MW-312	19	5	24	32.0316	50.1704	20.0000	20.0000	32.0316	32.0316	307.9690	normal		
Antimony	ug/L	MW-313	18	5	36			2.0000	2.0000			1.0000	nonpar	.99	**
Arsenic	ug/L	MW-313	19	5	36	5.6137	6.0073	12.2000	29.0000	7.6945	26.5754	38.6537	normal		
Barium	ug/L	MW-313	19	5	36	25.9579	12.4960	26.8000	42.0000	25.9579	32.6280	94.6857	normal		
Beryllium	ug/L	MW-313	19	5	36			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-313	19	5	36	0.1401	0.0446	0.8000	0.8000	0.1401	0.1401	0.3855	normal		
Chromium	ug/L	MW-313	19	5	36			8.0000	8.0000			2.9800	nonpar	.99	**
Cobalt	ug/L	MW-313	19	5	36	13.8165	16.6174	0.8000	0.9000	13.8165	13.8165	105.2120	normal		
Copper	ug/L	MW-313	19	5	36			4.0000	4.0000			2.9900	nonpar	.99	**
Lead	ug/L	MW-313	19	5	36	0.4094	0.2358	4.0000	4.0000	0.4094	0.4094	1.7062	normal		
Nickel	ug/L	MW-313	19	5	36	29.2011	22.2832	4.0000	4.0000	29.2011	29.2011	151.7589	normal		
Selenium	ug/L	MW-313	19	5	36			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-313	19	5	36			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-313	19	5	36			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-313	19	5	36	16.3084	20.8998	20.0000	20.0000	16.3084	16.3084	131.2575	normal		
Zinc	ug/L	MW-313	19	5	36	21.4774	25.4503	20.0000	20.0000	21.4774	21.4774	161.4540	normal		
Antimony	ug/L	MW-335	20	5	37			2.0000	2.0000			0.7400	nonpar	.99	**
Arsenic	ug/L	MW-335	20	5	37	2.1758	1.7303	5.1000	9.9000	9.8552	16.2817	11.6924	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	ug/L	MW-335	20	5	37	13.0605	3.6877	11.6000	13.2000	13.0605	13.0605	33.3427	normal		
Beryllium	ug/L	MW-335	20	5	37	0.4493	0.1047	4.0000	4.0000	0.4493	0.4493	1.0249	normal		
Cadmium	ug/L	MW-335	20	5	37	0.2887	0.1722	0.8000	0.8000	0.2887	0.2887	1.2355	normal		
Chromium	ug/L	MW-335	19	5	37			8.0000	8.0000			2.9300	nonpar	.99	**
Cobalt	ug/L	MW-335	17	5	37	62.7588	24.7589	39.7000	40.3000	62.7588	62.7588	198.9330	normal		
Copper	ug/L	MW-335	20	5	37			4.0000	4.0000			2.0000	nonpar	.99	**
Lead	ug/L	MW-335	20	5	37	0.3620	0.2657	4.0000	4.0000	0.3620	0.3620	1.8237	normal		
Nickel	ug/L	MW-335	18	5	37	104.3333	75.5987	38.9000	39.4000	104.3333	104.3333	520.1264	normal		
Selenium	ug/L	MW-335	20	5	37			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-335	20	5	37			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-335	20	5	37			2.0000	2.0000			0.2700	nonpar	.99	**
Vanadium	ug/L	MW-335	20	5	37			20.0000	20.0000			1.1000	nonpar	.99	**
Zinc	ug/L	MW-335	20	5	37	73.6000	54.9016	41.6000	42.4000	73.6000	73.6000	375.5586	normal		
Antimony	ug/L	MW-344	19	5	36			2.0000	2.0000			5.0200	nonpar	.99	**
Arsenic	ug/L	MW-344	19	5	36	1.2918	0.6384	4.0000	4.0000	1.2918	1.2918	4.8027	normal		
Barium	ug/L	MW-344	19	5	36	14.2484	3.6378	12.2000	10.6000	14.2484	14.2484	34.2564	normal		
Beryllium	ug/L	MW-344	19	5	36			4.0000	4.0000			0.4010	nonpar	.99	**
Cadmium	ug/L	MW-344	19	5	36	0.2549	0.1916	0.8000	0.8000	0.2549	0.2549	1.3088	normal		
Chromium	ug/L	MW-344	19	5	36			8.0000	8.0000			5.5200	nonpar	.99	**
Cobalt	ug/L	MW-344	19	5	36	155.4526	73.3058	151.0000	148.0000	207.7247	155.4526	558.6346	normal		
Copper	ug/L	MW-344	19	5	36			4.0000	4.0000			2.0000	nonpar	.99	**
Lead	ug/L	MW-344	19	5	36			4.0000	4.0000			0.7260	nonpar	.99	**
Nickel	ug/L	MW-344	19	5	36	131.8526	66.3648	124.0000	108.0000	139.3476	131.8526	496.8592	normal		
Selenium	ug/L	MW-344	19	5	36			4.0000	4.0000			1.0600	nonpar	.99	**
Silver	ug/L	MW-344	19	5	36			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-344	19	5	36			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-344	19	5	36			20.0000	20.0000			1.1000	nonpar	.99	**
Zinc	ug/L	MW-344	19	5	36	36.4368	45.8120	20.0000	20.0000	36.4368	36.4368	288.4030	normal		
Antimony	ug/L	MW-380	18	5	36			2.0000	2.0000			1.1000	nonpar	.99	**
Arsenic	ug/L	MW-380	19	5	36	5.6442	1.6391	4.6000	5.4000	5.6442	5.6442	14.6594	normal		
Barium	ug/L	MW-380	17	5	36	8.4441	1.6486	9.7000	9.3000	8.4635	8.4441	17.5116	normal		
Beryllium	ug/L	MW-380	19	5	36	7.4989	3.3671	5.0000	4.9000	7.4989	7.4989	26.0180	normal		
Cadmium	ug/L	MW-380	19	5	37	9.7553	4.2708	9.2000	36.5000	9.7553	33.2969	33.2446	normal		
Chromium	ug/L	MW-380	19	5	36	14.6711	8.5880	8.0000	8.0000	14.6711	14.6711	61.9049	normal		
Cobalt	ug/L	MW-380	18	5	36	1139.3333	325.1624	1130.0000	936.0000	1139.3333	1139.3333	2927.7265	normal		
Copper	ug/L	MW-380	19	5	36	13.6163	8.6109	4.0000	71.8000	13.6163	65.3418	60.9762	normal		
Lead	ug/L	MW-380	19	5	36	2.1032	1.6916	4.0000	4.0000	2.1032	2.1032	11.4069	normal		
Nickel	ug/L	MW-380	19	5	36	1543.9474	478.1781	1410.0000	1290.0000	1543.9474	1543.9474	4173.9268	normal		
Selenium	ug/L	MW-380	19	5	36	10.7253	6.8124	9.6000	8.5000	10.7253	10.7253	48.1936	normal		
Silver	ug/L	MW-380	18	5	36			4.0000	4.0000			1.0000	nonpar	.99	**
Thallium	ug/L	MW-380	19	5	36	0.7228	0.3760	2.0000	2.0000	0.7228	0.7228	2.7908	normal		
Vanadium	ug/L	MW-380	19	5	36	7.0337	3.7039	20.0000	20.0000	7.0337	7.0337	27.4053	normal		
Zinc	ug/L	MW-380	20	5	37	4417.5000	1437.7646	4800.0000	7070.0000	4417.5000	5991.6765	12325.2054	normal		
Antimony	ug/L	MW-381	19	5	36			2.0000	2.0000			0.7400	nonpar	.99	**
Arsenic	ug/L	MW-381	19	5	36			4.0000	4.0000			7.1400	nonpar	.99	**
Barium	ug/L	MW-381	19	5	37	11.0842	3.8217	16.8000	12.3000	13.9337	12.2832	32.1037	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	
Beryllium	ug/L	MW-381	19	5	36			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-381	19	5	36	0.2688	0.2736	0.8000	0.8000	0.2688	0.2688	1.7735	normal		
Chromium	ug/L	MW-381	19	5	36			8.0000	8.0000			3.9000	nonpar	.99	**
Cobalt	ug/L	MW-381	19	5	36	3.6049	11.2517	2.1000	0.4000	3.6049	3.6049	65.4894	normal		
Copper	ug/L	MW-381	19	5	36	2.7779	0.6573	4.0000	4.0000	2.7779	2.7779	6.3932	normal		
Lead	ug/L	MW-381	19	5	36	0.5266	0.1986	4.0000	4.0000	0.5266	0.5266	1.6188	normal		
Nickel	ug/L	MW-381	19	5	36	22.4942	20.1734	5.3000	4.0000	22.4942	22.4942	133.4479	normal		
Selenium	ug/L	MW-381	19	5	36			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-381	19	5	36			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-381	19	5	36			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-381	19	5	36			20.0000	20.0000			2.9800	nonpar	.99	**
Zinc	ug/L	MW-381	19	5	36	26.6526	44.1854	32.4000	20.0000	26.6526	26.6526	269.6723	normal		
Antimony	ug/L	MW-382R	18	5	30			2.0000	2.0000			0.7400	nonpar	.99	**
Arsenic	ug/L	MW-382R	19	5	30			4.0000	4.0000			0.8800	nonpar	.99	**
Barium	ug/L	MW-382R	19	5	30	24.0789	2.9735	28.0000	23.8000	29.1608	26.6517	40.4332	normal		
Beryllium	ug/L	MW-382R	19	5	30			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-382R	19	5	30			0.8000	0.8000			0.1120	nonpar	.99	**
Chromium	ug/L	MW-382R	19	5	30			8.0000	8.0000			5.9100	nonpar	.99	**
Cobalt	ug/L	MW-382R	19	5	30	2.7904	2.5011	1.5000	0.8000	2.7904	2.7904	16.5465	normal		
Copper	ug/L	MW-382R	19	5	30			4.0000	4.0000			2.0000	nonpar	.99	**
Lead	ug/L	MW-382R	19	5	30			4.0000	4.0000			0.5860	nonpar	.99	**
Nickel	ug/L	MW-382R	16	5	30	4.3969	1.0788	6.1000	4.0000	6.0790	4.3969	10.3302	normal		
Selenium	ug/L	MW-382R	19	5	30			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-382R	19	5	30			4.0000	4.0000			0.4200	nonpar	.99	**
Thallium	ug/L	MW-382R	19	5	30			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-382R	19	5	30			20.0000	20.0000			2.1500	nonpar	.99	**
Zinc	ug/L	MW-382R	18	5	30			20.0000	20.0000			175.0000	nonpar	.99	**
Antimony	ug/L	MW-384	18	5	32			2.0000	2.0000			0.5800	nonpar	.99	**
Arsenic	ug/L	MW-384	19	5	32	2.2342	0.6672	4.0000	4.0000	2.2342	2.2342	5.9036	normal		
Barium	ug/L	MW-384	19	5	32	10.7121	2.7304	10.0000	10.1000	10.7121	10.7121	25.7294	normal		
Beryllium	ug/L	MW-384	19	5	32	0.8261	0.3678	4.0000	4.0000	0.8261	0.8261	2.8490	normal		
Cadmium	ug/L	MW-384	19	5	32			0.8000	0.8000			0.2420	nonpar	.99	**
Chromium	ug/L	MW-384	19	5	32			8.0000	8.0000			10.0000	nonpar	.99	**
Cobalt	ug/L	MW-384	19	5	32	46.6947	16.8008	14.6000	15.8000	46.6947	46.6947	139.0992	normal		
Copper	ug/L	MW-384	19	5	32			4.0000	4.0000			2.0000	nonpar	.99	**
Lead	ug/L	MW-384	19	5	32			4.0000	4.0000			1.2400	nonpar	.99	**
Nickel	ug/L	MW-384	19	5	32	118.4053	33.0305	54.4000	57.7000	118.4053	118.4053	300.0729	normal		
Selenium	ug/L	MW-384	19	5	32			4.0000	4.0000			1.0600	nonpar	.99	**
Silver	ug/L	MW-384	18	5	32			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-384	19	5	32			2.0000	2.0000			0.2700	nonpar	.99	**
Vanadium	ug/L	MW-384	19	5	32			20.0000	20.0000			2.1500	nonpar	.99	**
Zinc	ug/L	MW-384	19	5	32	108.6474	85.5335	20.3000	20.0000	108.6474	108.6474	579.0818	normal		
Antimony	ug/L	MW-385	19	5	32			2.0000	2.0000			0.7400	nonpar	.99	**
Arsenic	ug/L	MW-385	19	5	32	0.9698	0.3226	4.0000	4.0000	0.9698	0.9698	2.7441	normal		
Barium	ug/L	MW-385	18	5	32	12.9644	1.9595	15.1000	12.4000	13.9623	12.9644	23.7414	normal		
Beryllium	ug/L	MW-385	19	5	32			4.0000	4.0000			0.2700	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	
Cadmium	ug/L	MW-385	19	5	32	0.3304	0.2058	0.8000	0.8000	0.3304	0.3304	1.4623	normal		
Chromium	ug/L	MW-385	19	5	32			8.0000	8.0000			4.3100	nonpar	.99	**
Cobalt	ug/L	MW-385	19	5	32	7.4816	3.5142	6.7000	4.7000	7.4816	7.4816	26.8096	normal		
Copper	ug/L	MW-385	19	5	32			4.0000	4.0000			2.0000	nonpar	.99	**
Lead	ug/L	MW-385	19	5	32			4.0000	4.0000			0.8720	nonpar	.99	**
Nickel	ug/L	MW-385	19	5	32	39.3158	7.3755	43.6000	32.6000	39.3158	39.3158	79.8811	normal		
Selenium	ug/L	MW-385	19	5	32			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-385	19	5	32			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-385	19	5	32			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-385	19	5	32			20.0000	20.0000			1.1000	nonpar	.99	**
Zinc	ug/L	MW-385	18	5	32	51.1111	19.0098	44.2000	33.4000	51.1111	51.1111	155.6649	normal		
Antimony	ug/L	MW-390	17	5	30			2.0000	2.0000			1.0000	nonpar	.99	**
Arsenic	ug/L	MW-390	17	5	30	15.1676	3.3735	16.0000	17.3000	18.5767	18.1789	33.7217	normal		
Barium	ug/L	MW-390	17	5	30	27.6118	7.7772	12.9000	17.0000	27.6118	27.6118	70.3864	normal		
Beryllium	ug/L	MW-390	17	5	30			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-390	17	5	30	0.3144	0.2610	0.8000	0.8000	0.3144	0.3144	1.7499	normal		
Chromium	ug/L	MW-390	17	5	30			8.0000	8.0000			5.5100	nonpar	.99	**
Cobalt	ug/L	MW-390	17	5	30	106.2412	8.9517	96.9000	107.0000	106.2412	106.2412	155.4754	normal		
Copper	ug/L	MW-390	17	5	30			4.0000	4.0000			2.1900	nonpar	.99	**
Lead	ug/L	MW-390	17	5	30	1.5224	0.7021	4.0000	4.0000	1.5224	1.5224	5.3839	normal		
Nickel	ug/L	MW-390	17	5	30	53.7647	5.6887	50.0000	54.1000	53.7647	53.7647	85.0525	normal		
Selenium	ug/L	MW-390	17	5	30			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-390	17	5	30			4.0000	4.0000			0.4200	nonpar	.99	**
Thallium	ug/L	MW-390	17	5	30			2.0000	2.0000			1.1700	nonpar	.99	**
Vanadium	ug/L	MW-390	17	5	30			20.0000	20.0000			8.9100	nonpar	.99	**
Zinc	ug/L	MW-390	16	5	30	129.1187	85.2843	122.0000	184.0000	187.7910	178.7090	598.1822	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.

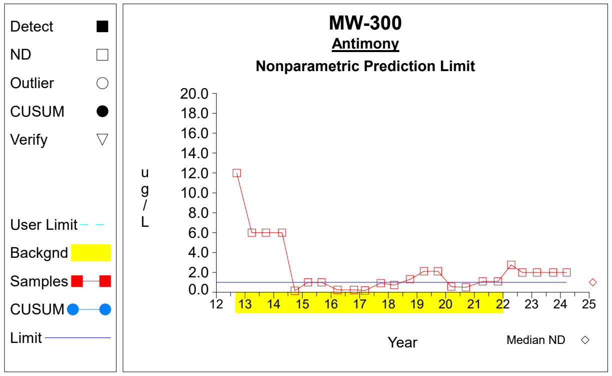
Table 4

Dixon's Test Outliers
1% Significance Level

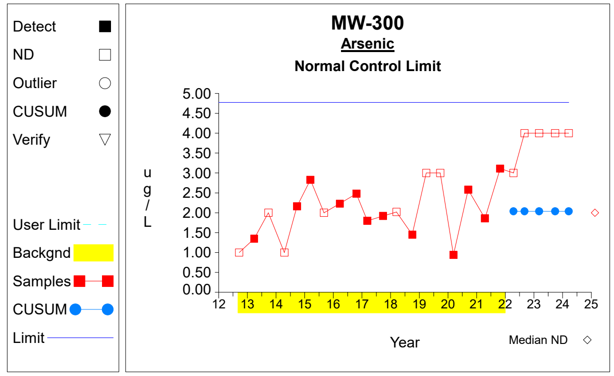
Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Barium	ug/L	MW-300	04/16/2014	3.4400		09/18/2012-10/27/2021	19	0.5503
Cobalt	ug/L	MW-300	04/16/2014	42.3000		09/18/2012-10/27/2021	19	0.5503
Cadmium	ug/L	MW-304	03/22/2016	0.3710		03/22/2016-10/27/2021	14	0.6174
Cadmium	ug/L	MW-304	10/02/2018	0.1670	< 0.1670	03/22/2016-10/27/2021	14	0.6174
Cobalt	ug/L	MW-304	04/16/2021	37.2000		03/22/2016-10/27/2021	14	0.6403
Nickel	ug/L	MW-304	04/16/2021	27.1000		03/22/2016-10/27/2021	14	0.6403
Vanadium	ug/L	MW-304	03/22/2016	0.2550	< 0.2550	03/22/2016-10/27/2021	14	0.6174
Vanadium	ug/L	MW-304	10/20/2016	0.2550	< 0.2550	03/22/2016-10/27/2021	14	0.6174
Vanadium	ug/L	MW-304	01/18/2017	0.2550	< 0.2550	03/22/2016-10/27/2021	14	0.6174
Zinc	ug/L	MW-304	04/16/2021	66.3000		03/22/2016-10/27/2021	14	0.6174
Zinc	ug/L	MW-304	10/27/2021	31.1000		03/22/2016-10/27/2021	14	0.6174
Barium	ug/L	MW-307	09/26/2013	30.0000	< 30.0000	09/18/2012-10/28/2021	17	0.5798
Cobalt	ug/L	MW-307	10/28/2021	14.8000		09/18/2012-10/28/2021	17	0.5798
Zinc	ug/L	MW-307	10/28/2021	10.6000		09/18/2012-10/28/2021	17	0.5798
Cobalt	ug/L	MW-335	09/24/2019	382.0000		09/19/2012-10/27/2021	20	0.5381
Cobalt	ug/L	MW-335	09/16/2020	0.1380		09/19/2012-10/27/2021	20	0.5503
Cobalt	ug/L	MW-335	04/15/2021	0.1770		09/19/2012-10/27/2021	20	0.5503
Nickel	ug/L	MW-335	09/16/2020	1.9000	< 1.9000	09/19/2012-10/27/2021	20	0.5503
Nickel	ug/L	MW-335	04/15/2021	1.9000	< 1.9000	09/19/2012-10/27/2021	20	0.5503
Barium	ug/L	MW-380	03/09/2017	104.0000	< 104.0000	09/19/2012-10/27/2021	19	0.5643
Barium	ug/L	MW-380	03/14/2018	52.0000	< 52.0000	09/19/2012-10/27/2021	19	0.5643
Cadmium	ug/L	MW-380	03/09/2017	57.4000		09/19/2012-10/27/2021	20	0.5381
Cobalt	ug/L	MW-380	09/02/2015	15.0000	< 15.0000	09/19/2012-10/27/2021	19	0.5503
Barium	ug/L	MW-381	09/02/2015	83.3000		09/20/2012-10/27/2021	20	0.5381
Nickel	ug/L	MW-382R	09/20/2012	50.0000	< 50.0000	09/20/2012-10/27/2021	19	0.5643
Nickel	ug/L	MW-382R	03/27/2013	50.0000	< 50.0000	09/20/2012-10/27/2021	19	0.5643
Nickel	ug/L	MW-382R	04/15/2014	50.0000	< 50.0000	09/20/2012-10/27/2021	19	0.5643
Zinc	ug/L	MW-382R	03/23/2016	10000.0000	< 10000.0000	09/20/2012-10/27/2021	19	0.5503
Barium	ug/L	MW-385	04/15/2014	3.4700		09/20/2012-10/28/2021	19	0.5503
Zinc	ug/L	MW-385	09/25/2013	233.0000		09/20/2012-10/28/2021	19	0.5503
Zinc	ug/L	MW-390	03/22/2016	5.2100	< 5.2100	09/18/2012-10/26/2021	17	0.5798

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

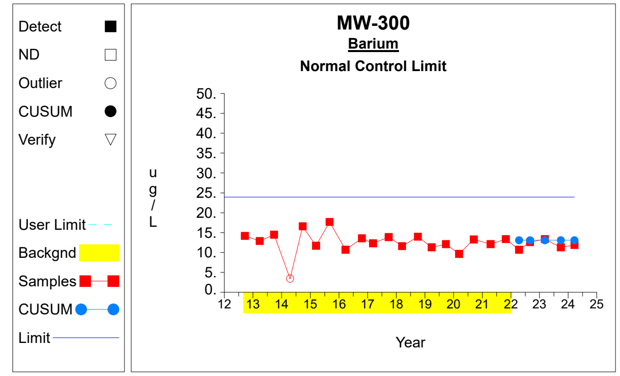
Intra-Well Control Charts / Prediction Limits



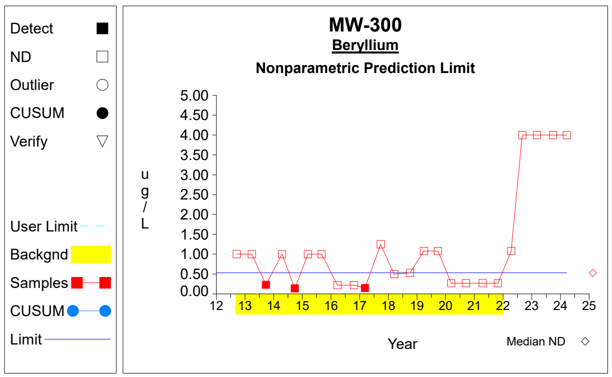
Graph 1



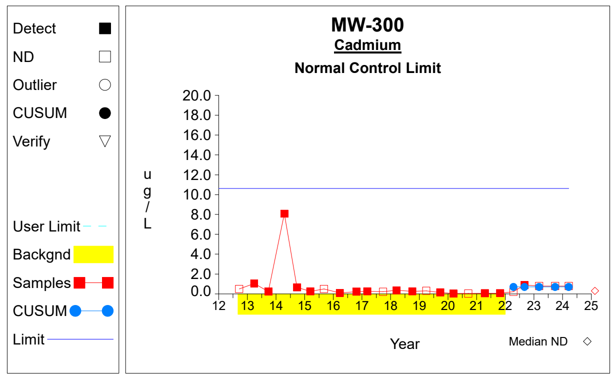
Graph 2



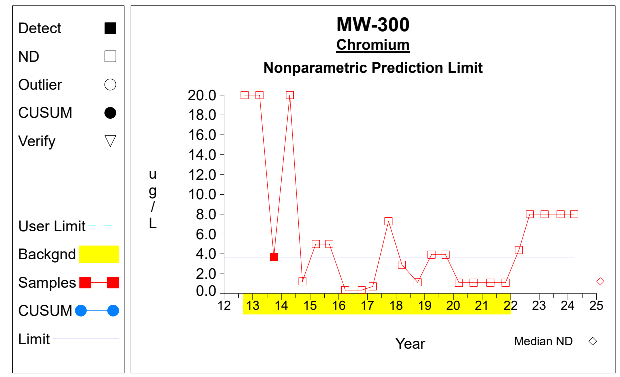
Graph 3



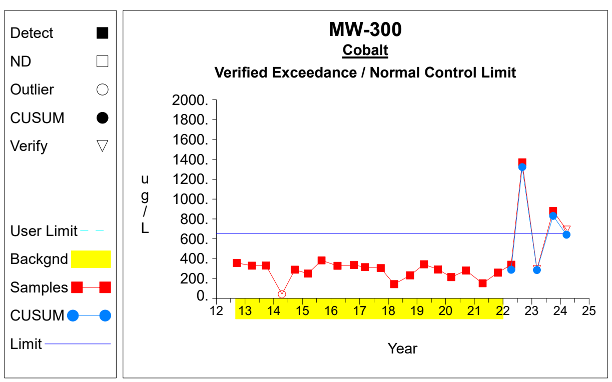
Graph 4



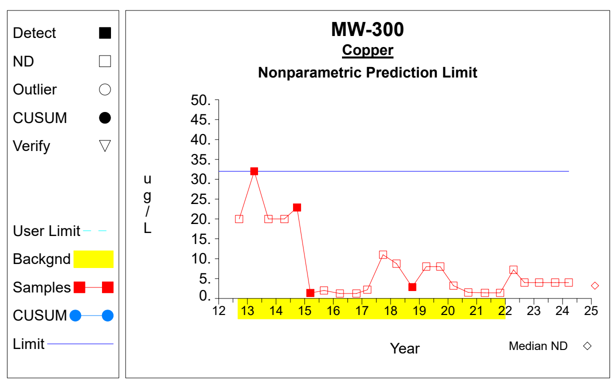
Graph 5



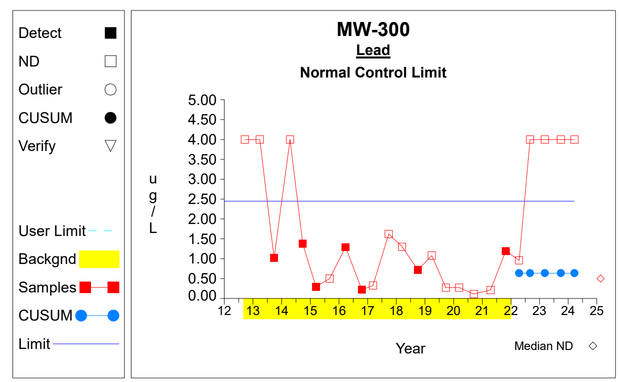
Graph 6



Graph 7



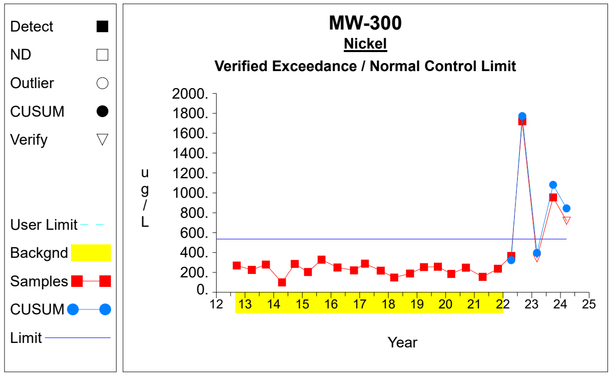
Graph 8



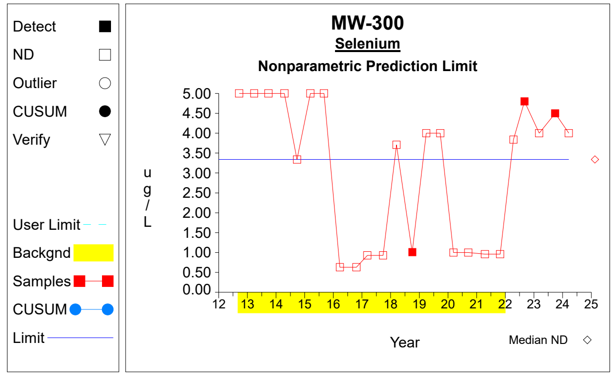
Graph 9

South Central Iowa SWA [GW] April 2024

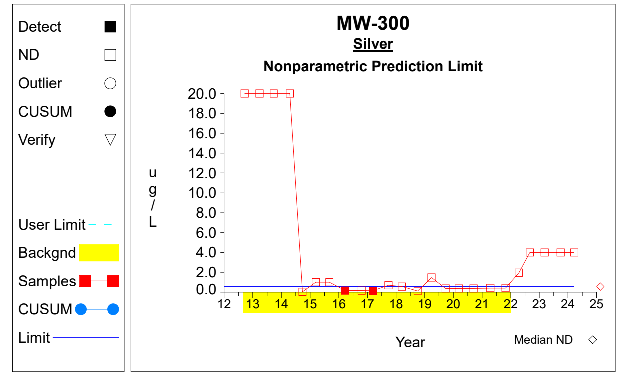
Intra-Well Control Charts / Prediction Limits



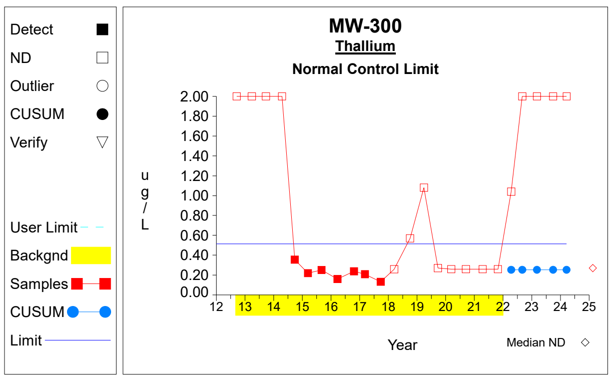
Graph 10



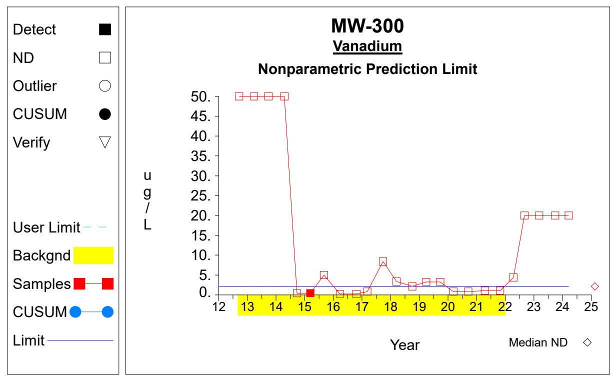
Graph 11



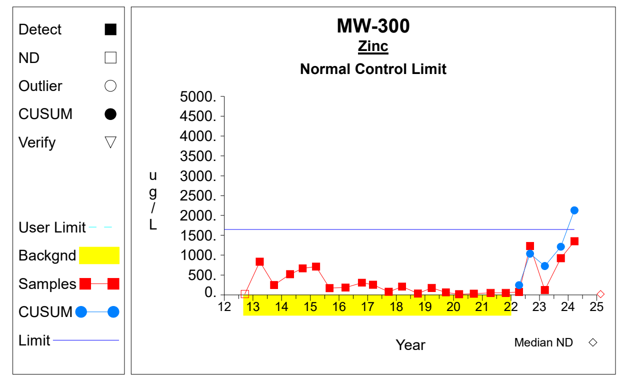
Graph 12



Graph 13



Graph 14

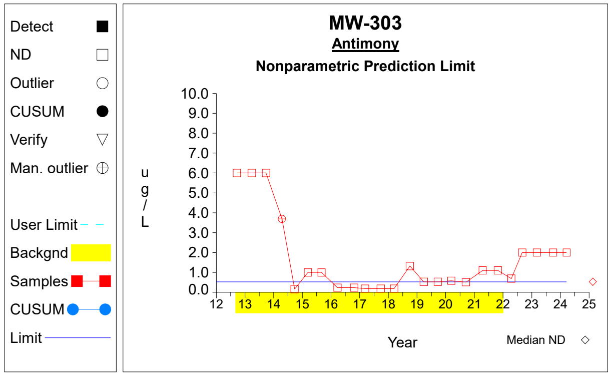


Graph 15

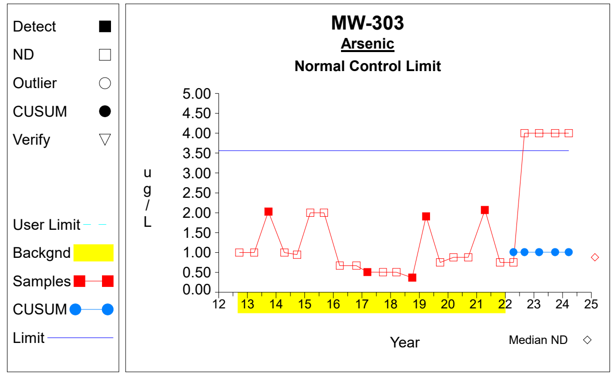
Prepared by: Otter Creek Environmental

South Central Iowa SWA [GW] April 2024

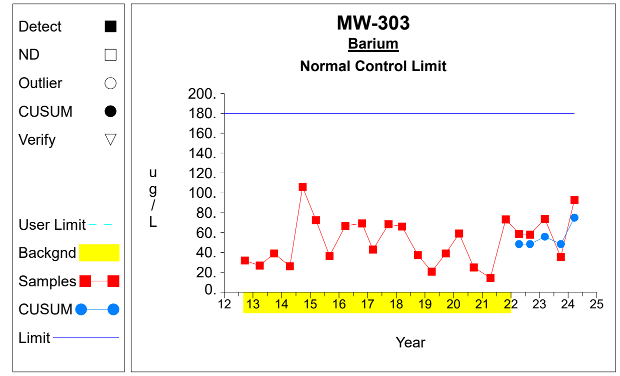
Intra-Well Control Charts / Prediction Limits



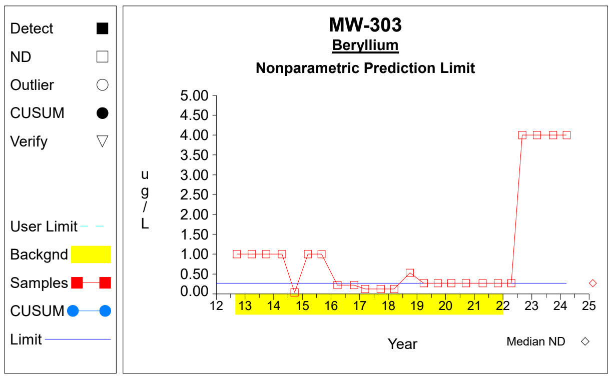
Graph 16



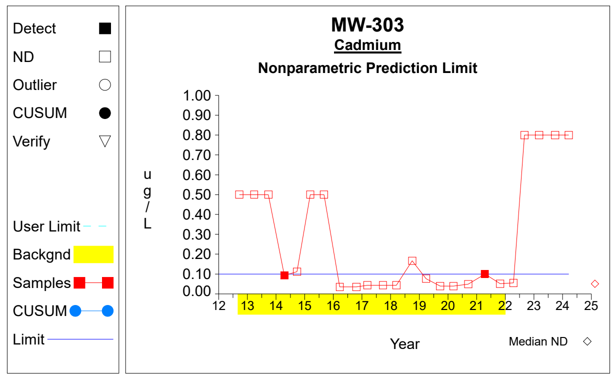
Graph 17



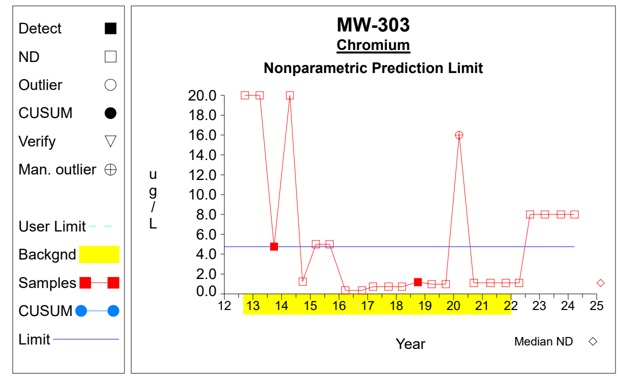
Graph 18



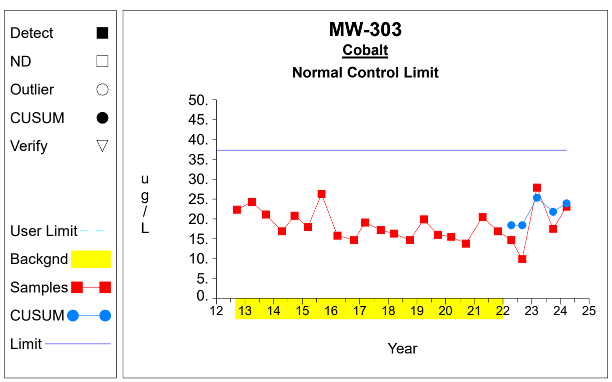
Graph 19



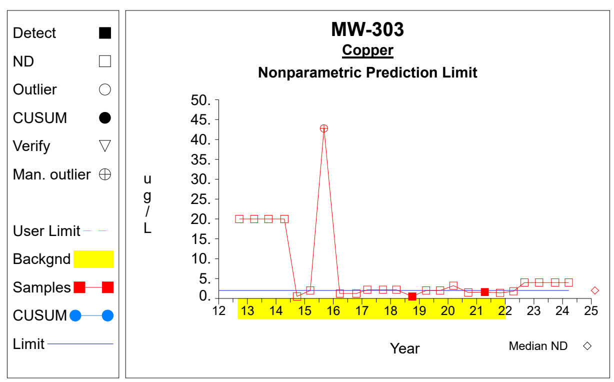
Graph 20



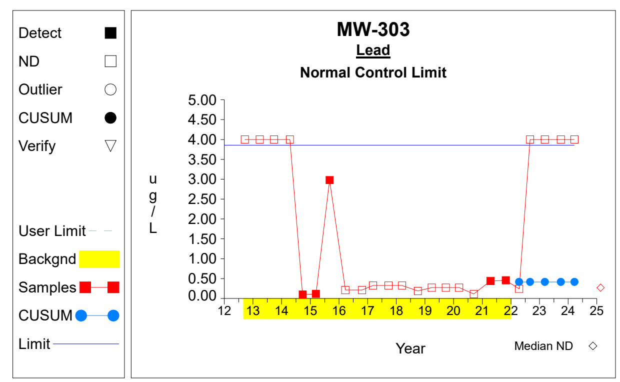
Graph 21



Graph 22



Graph 23



Graph 24

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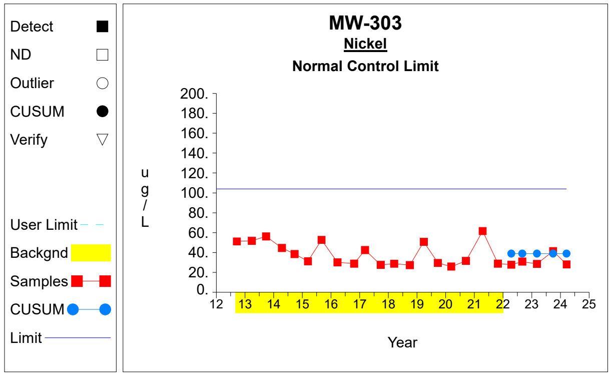
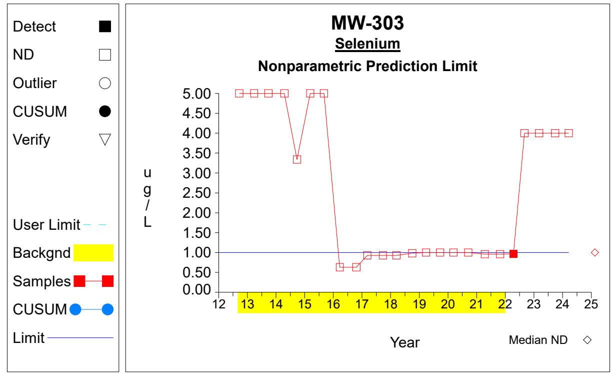
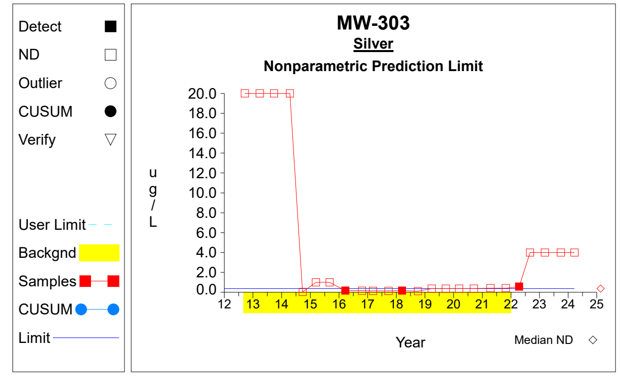
Intra-Well Control Charts / Prediction Limits



Graph 25



Graph 26



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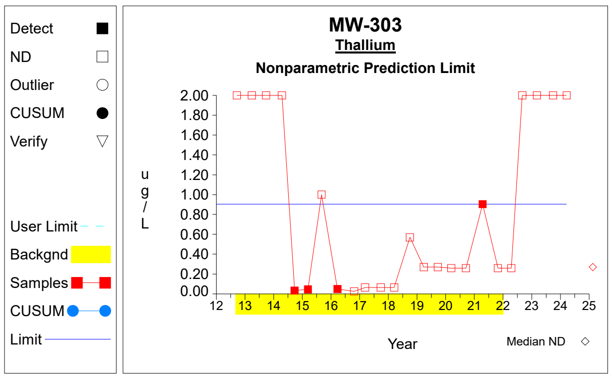

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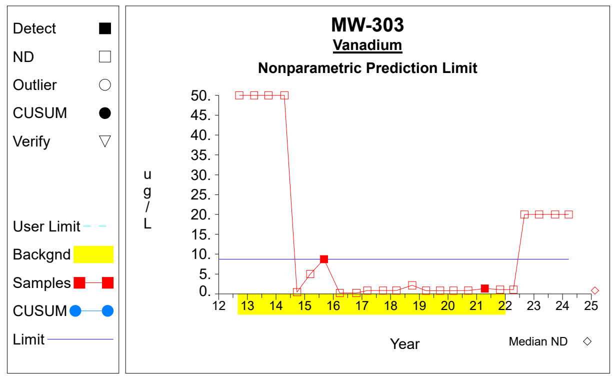

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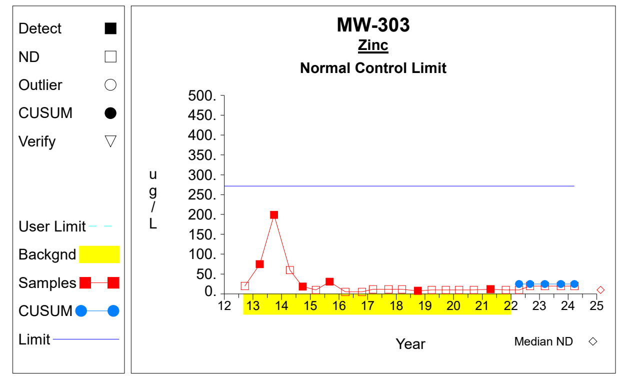

Graph 30

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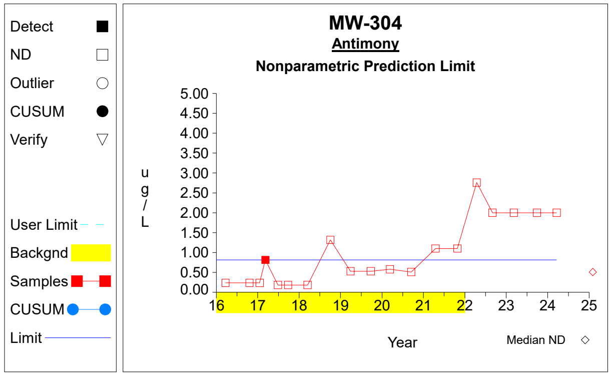
Intra-Well Control Charts / Prediction Limits



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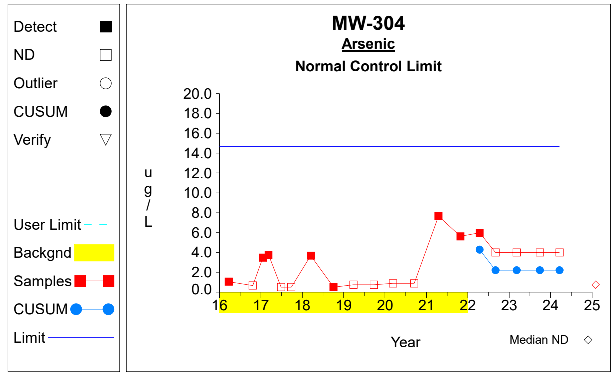

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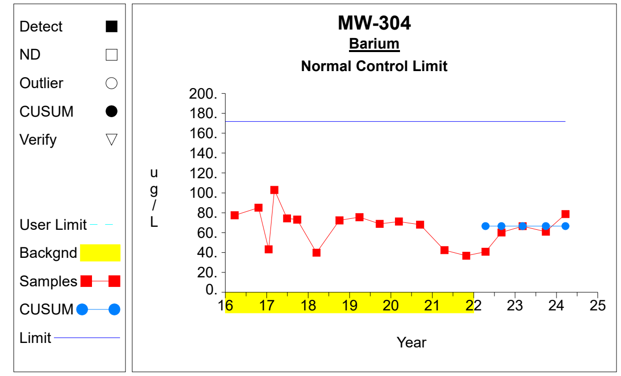

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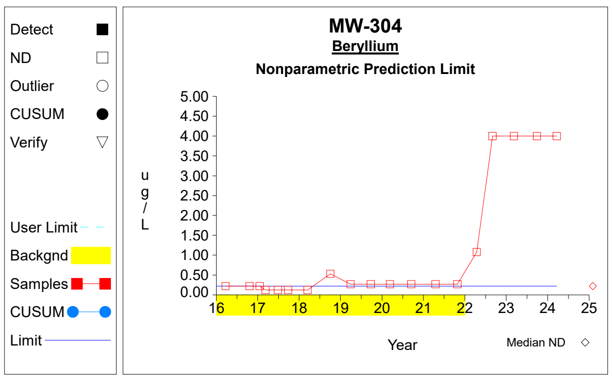

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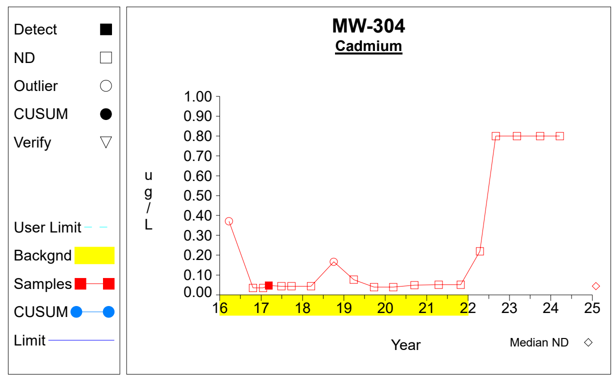

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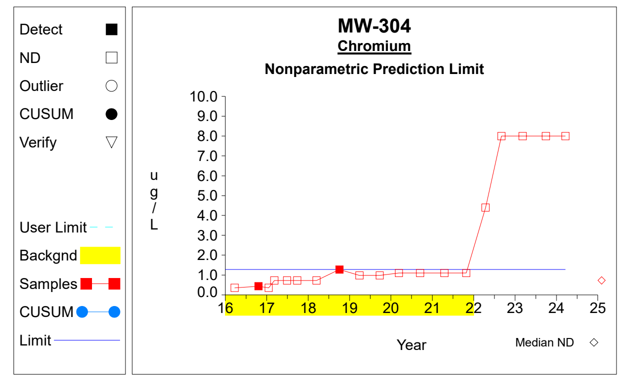

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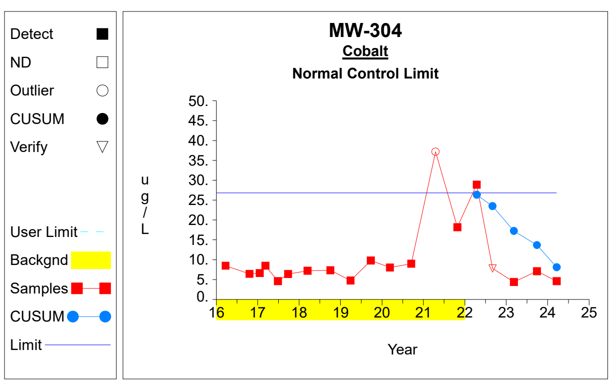

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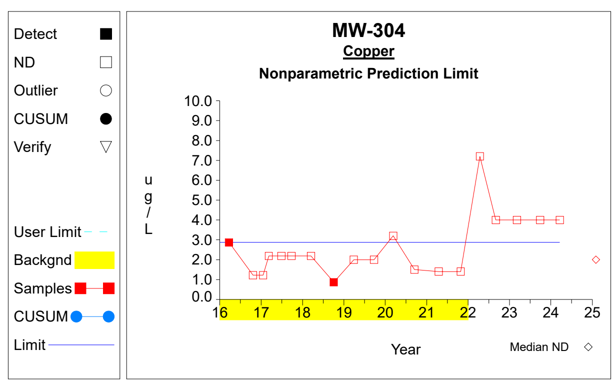

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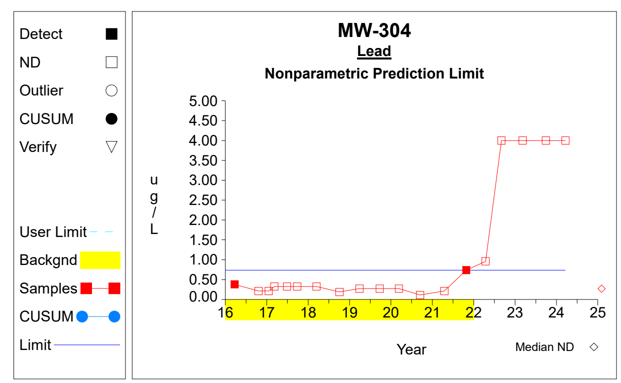

Graph 39

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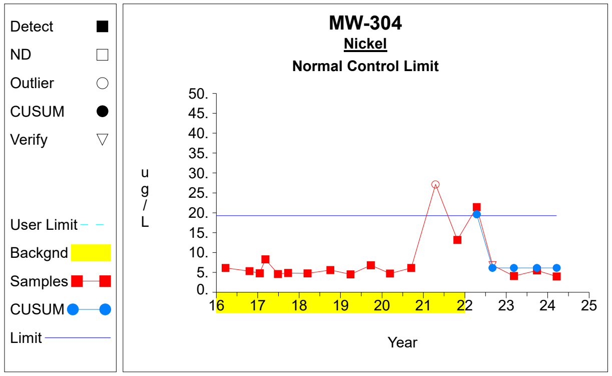
Intra-Well Control Charts / Prediction Limits



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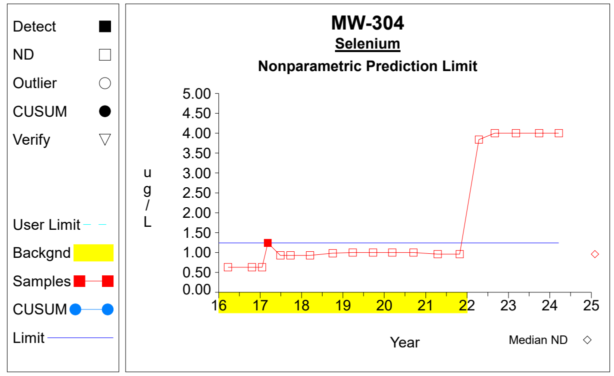
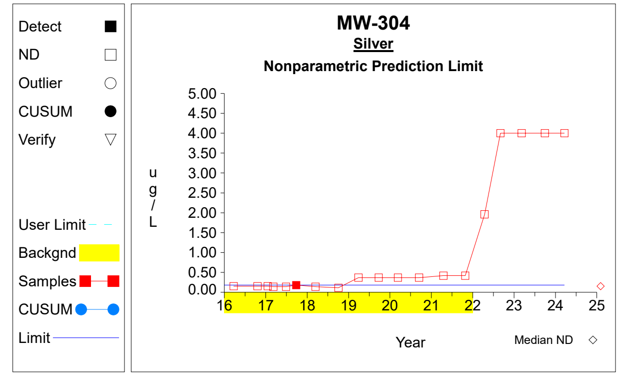
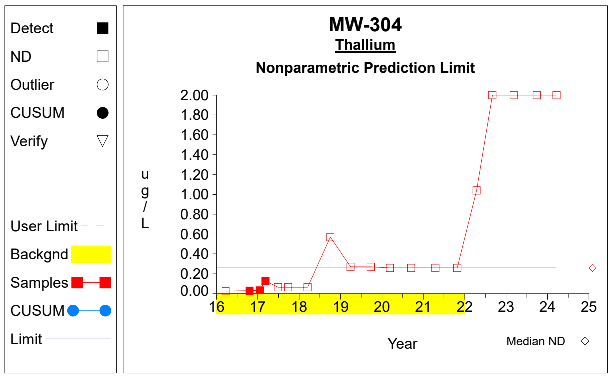


Graph 41



Graph 42



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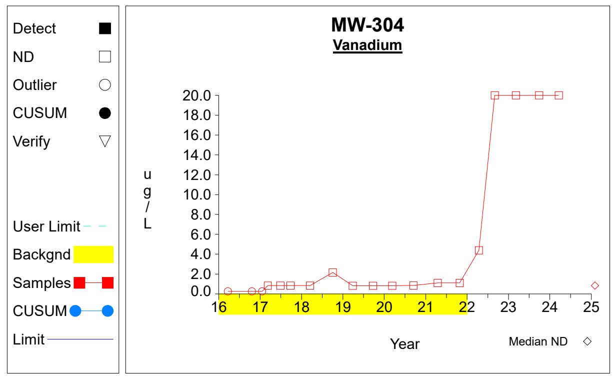

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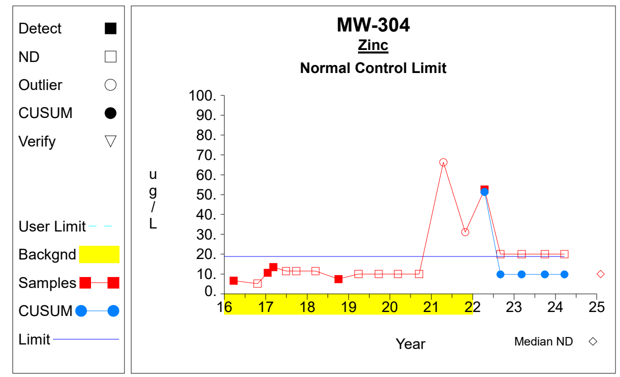

Graph 45

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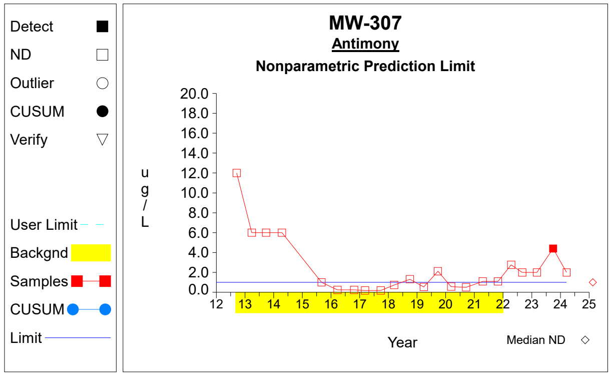

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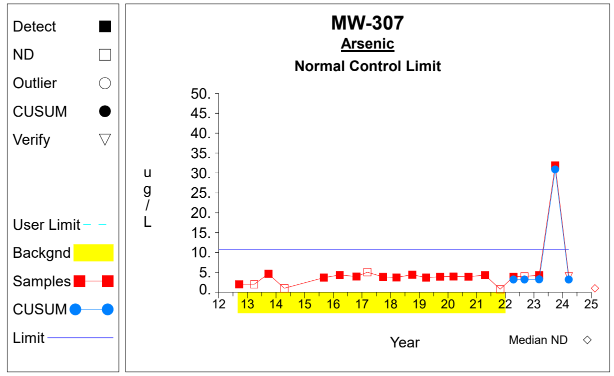
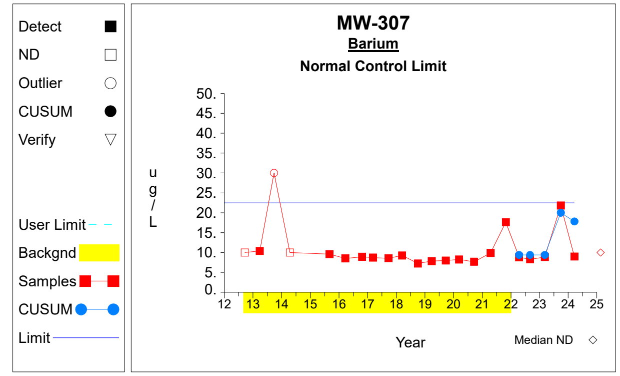
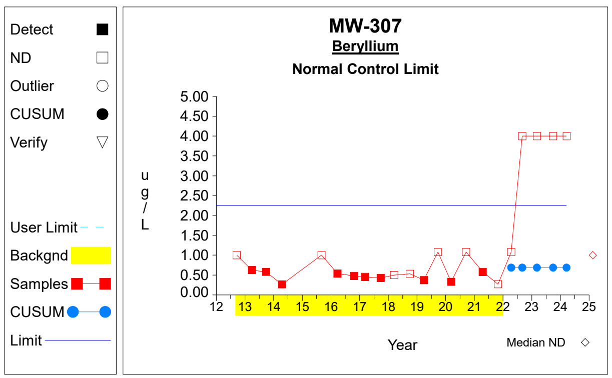


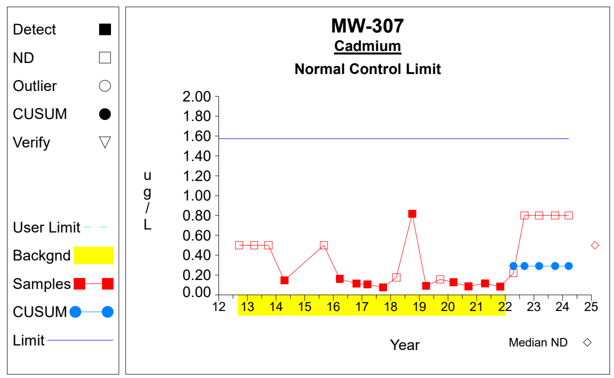
Graph 47



Graph 48



Graph 49



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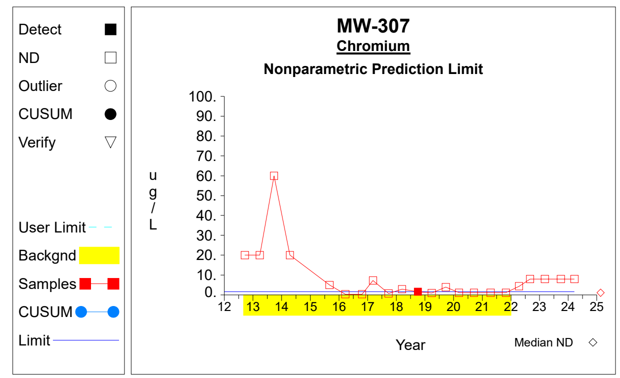

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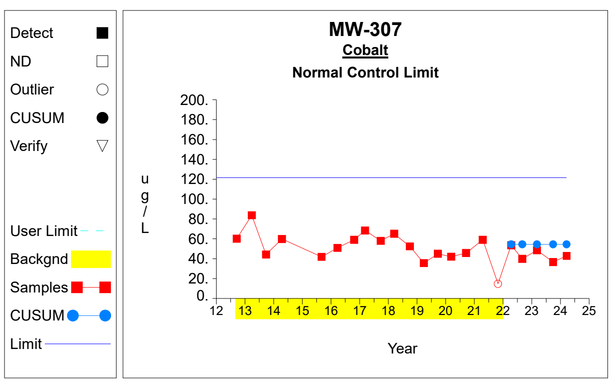

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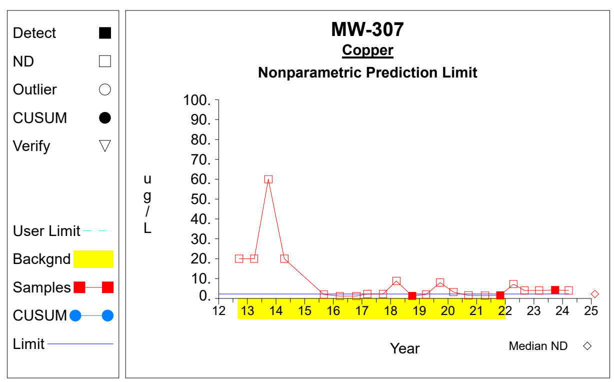

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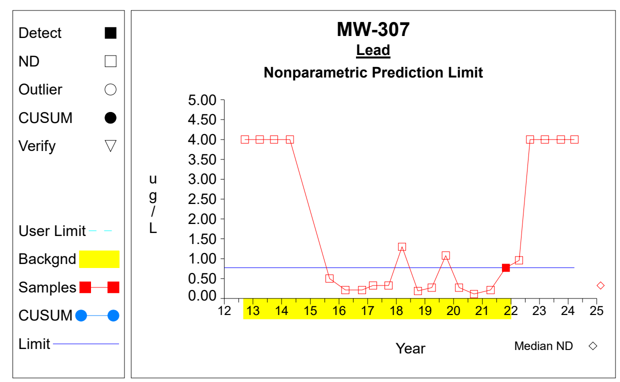

Graph 54

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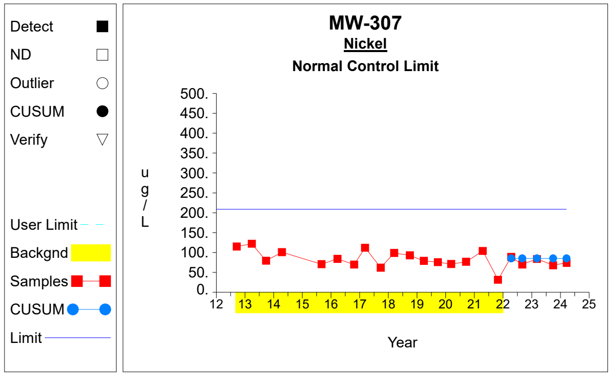
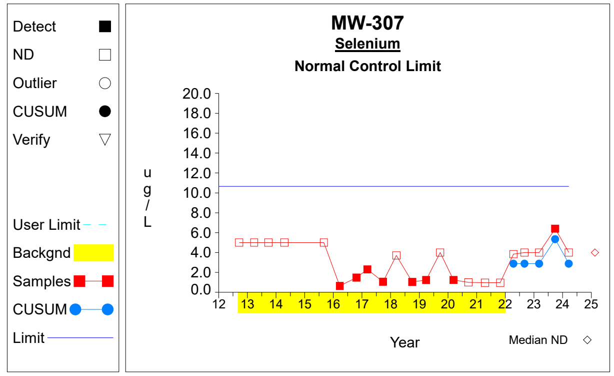
Intra-Well Control Charts / Prediction Limits



Graph 55



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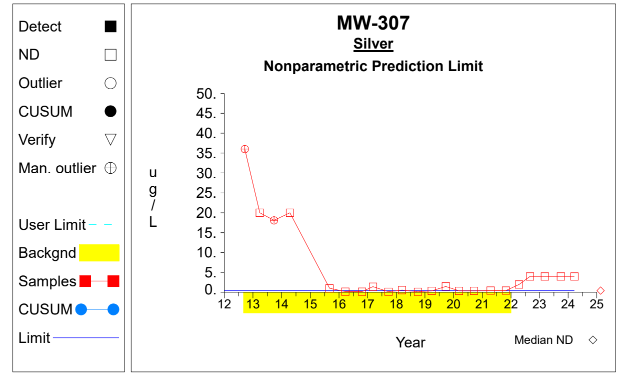
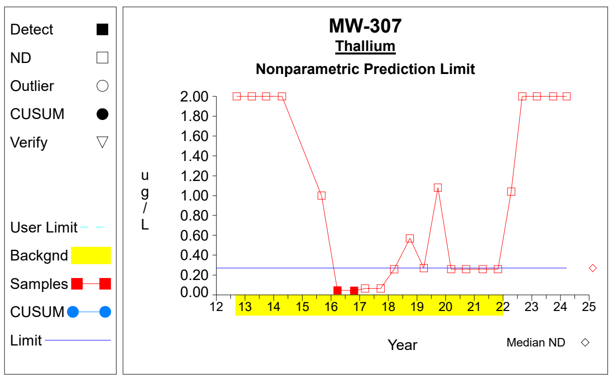
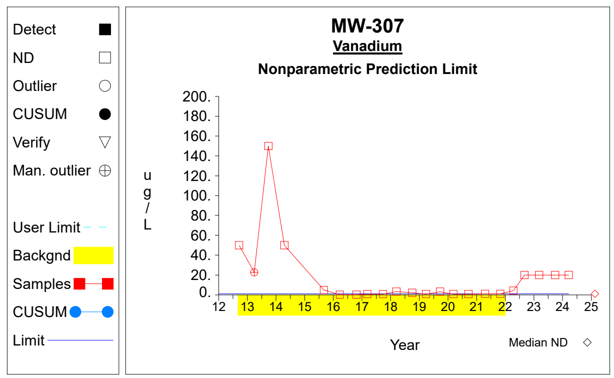


Graph 57



Graph 58



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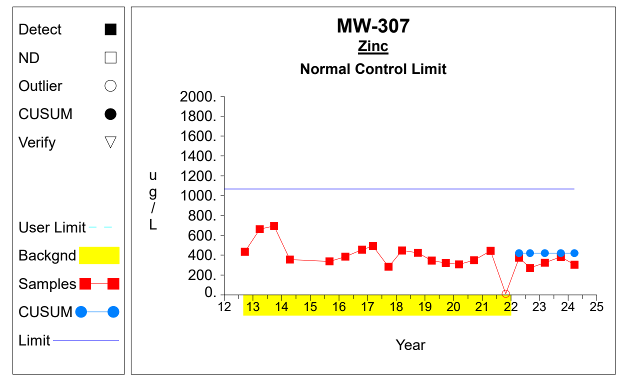

Graph 60

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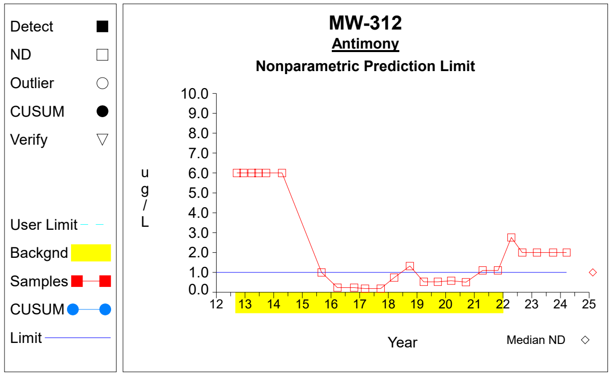
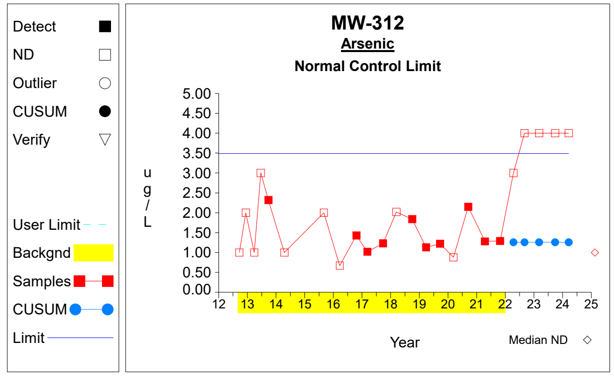
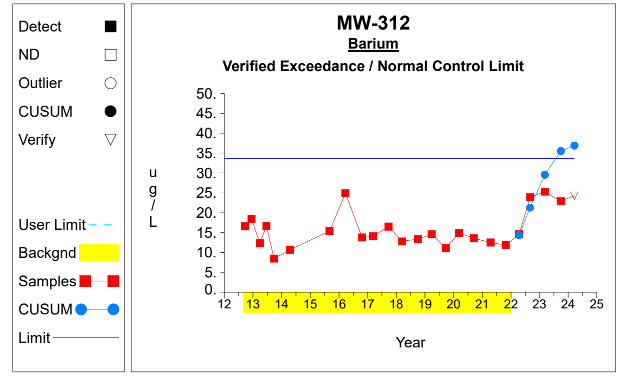
Intra-Well Control Charts / Prediction Limits



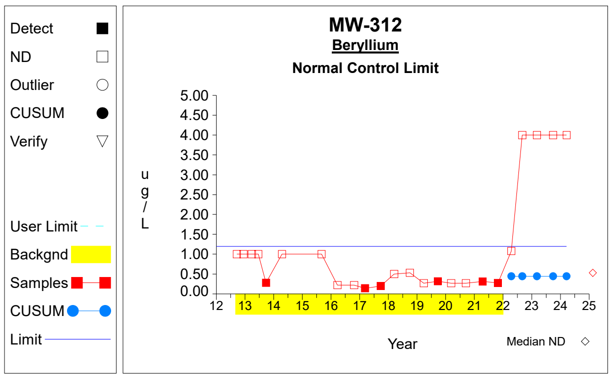
Graph 61



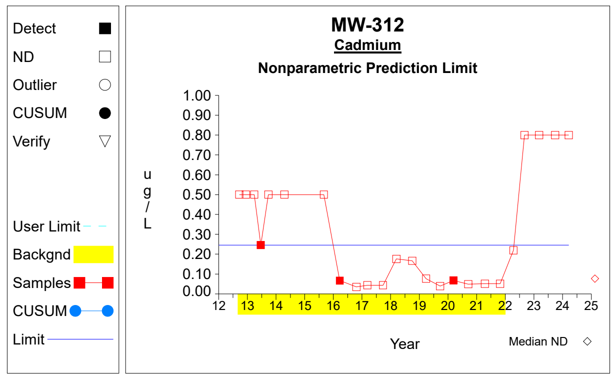
Graph 62



Graph 63



Graph 64



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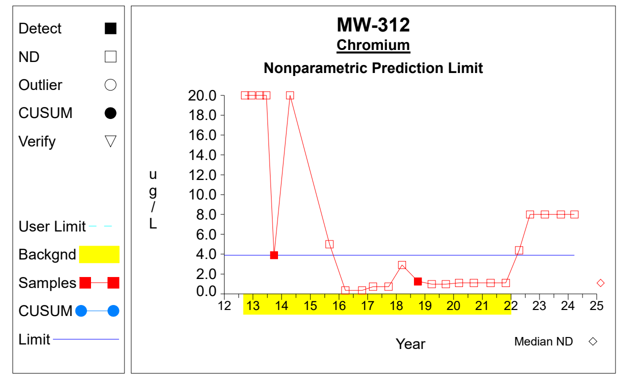
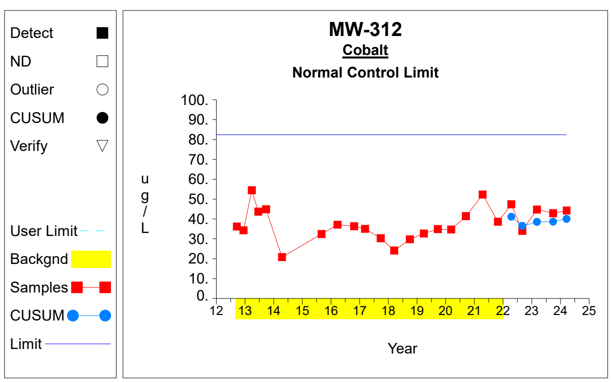


Graph 66



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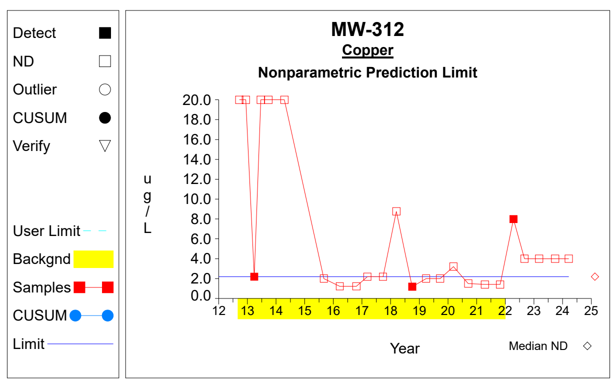
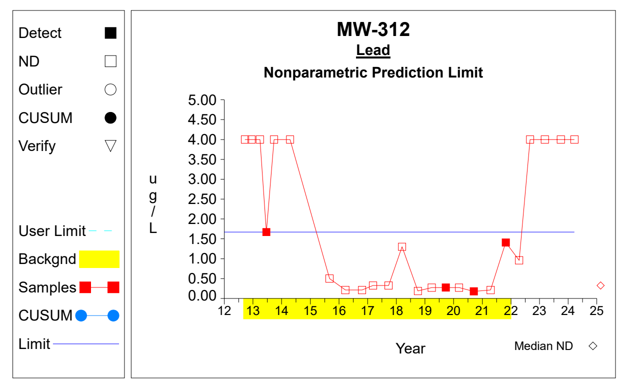


Graph 68



Graph 69

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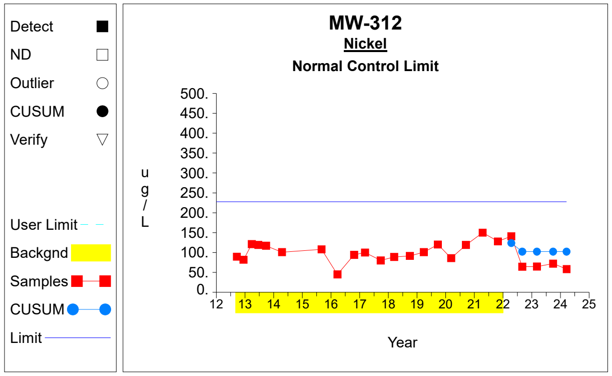
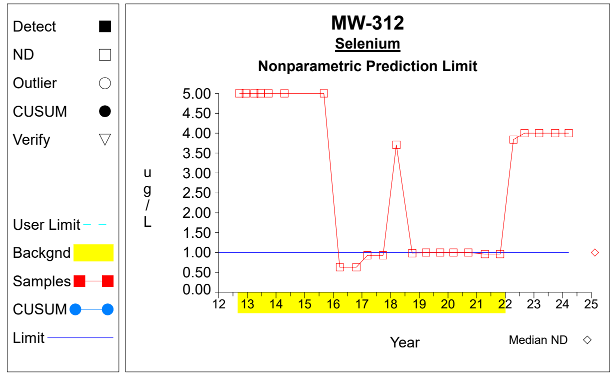
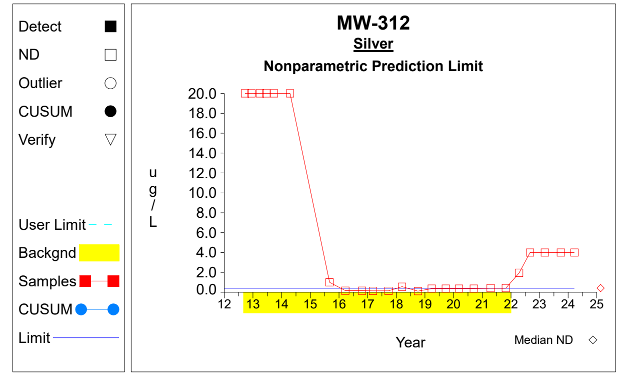
Intra-Well Control Charts / Prediction Limits



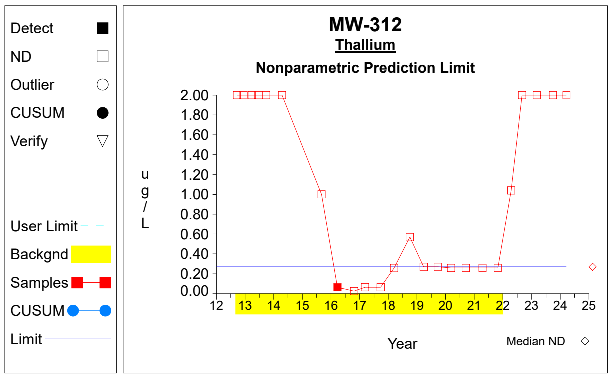
Graph 70



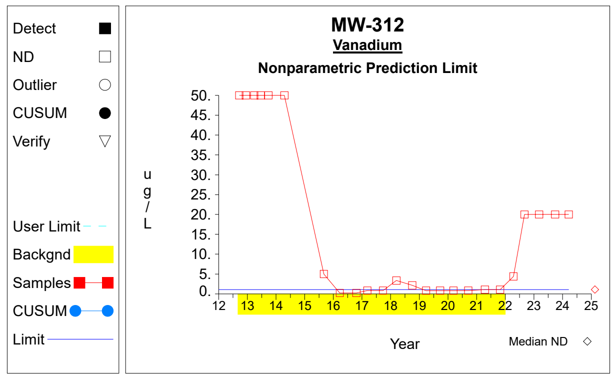
Graph 71



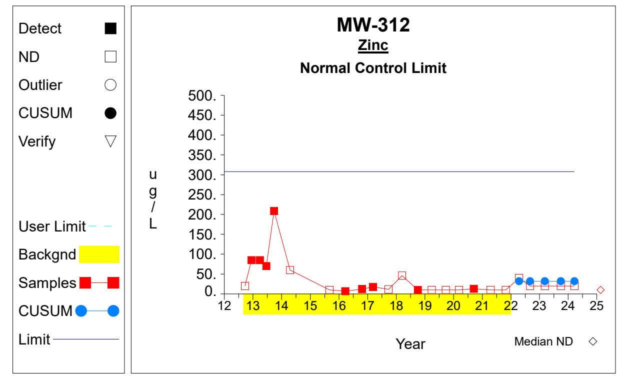
Graph 72



Graph 73



Graph 74



Graph 75

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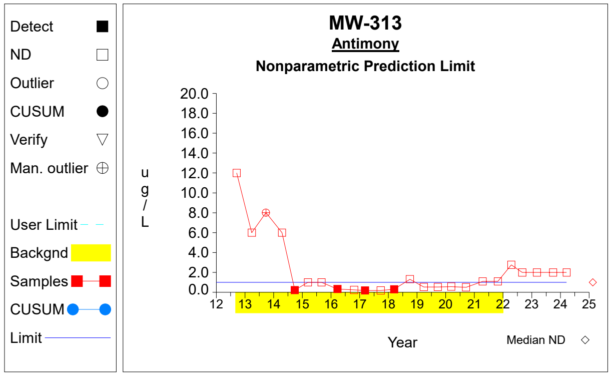
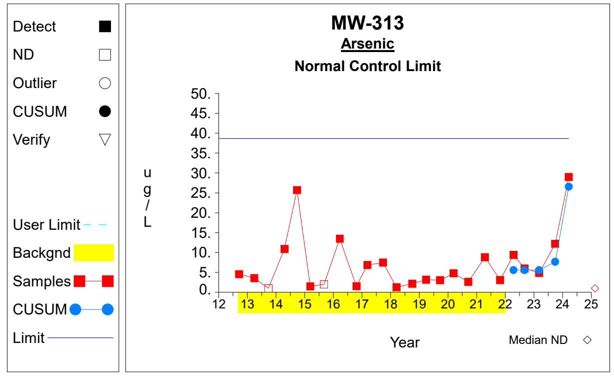
Intra-Well Control Charts / Prediction Limits



Graph 76



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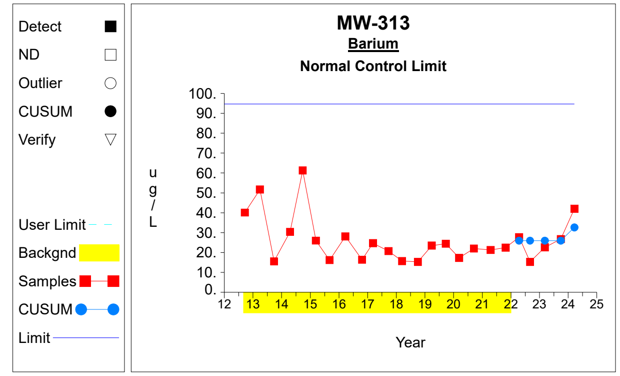

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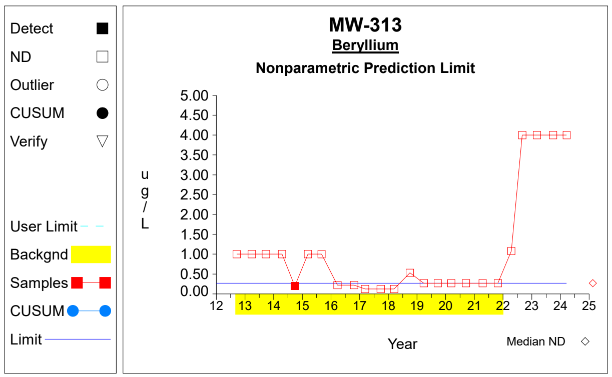

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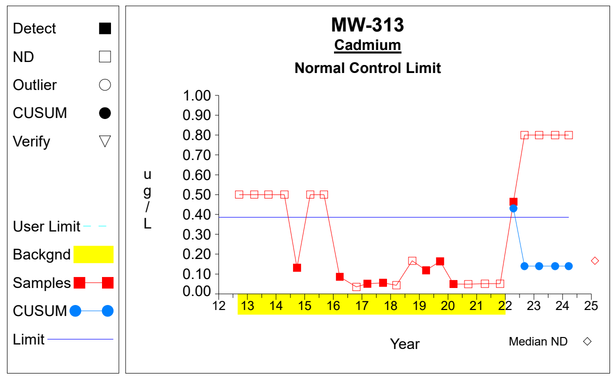
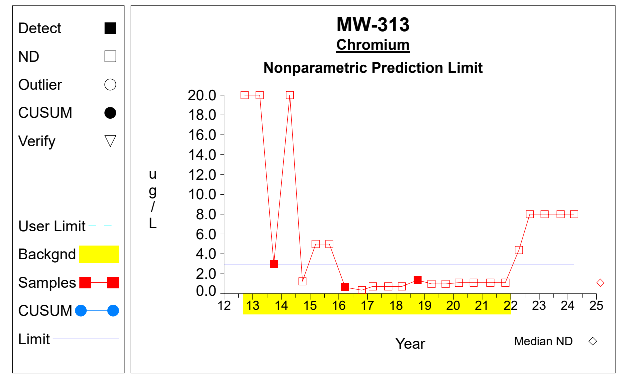
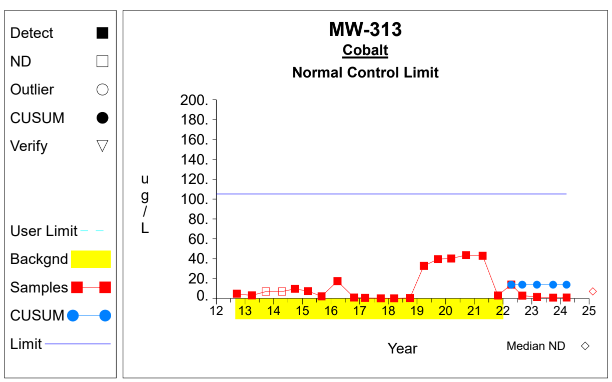


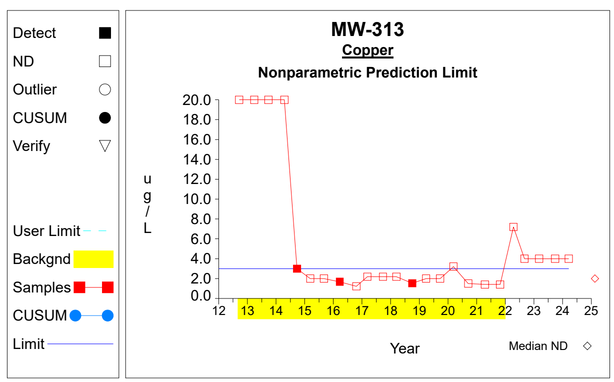
Graph 80



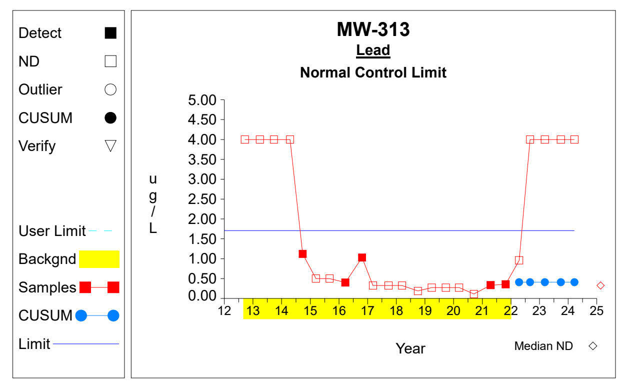
Graph 81



Graph 82



Graph 83



Graph 84

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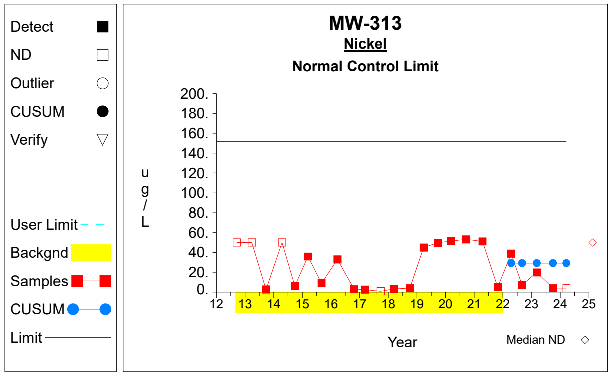
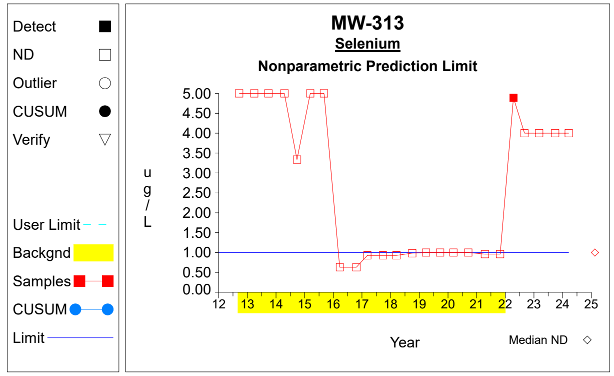
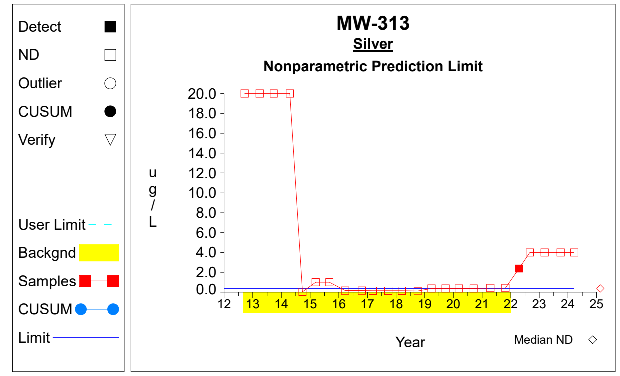
Intra-Well Control Charts / Prediction Limits



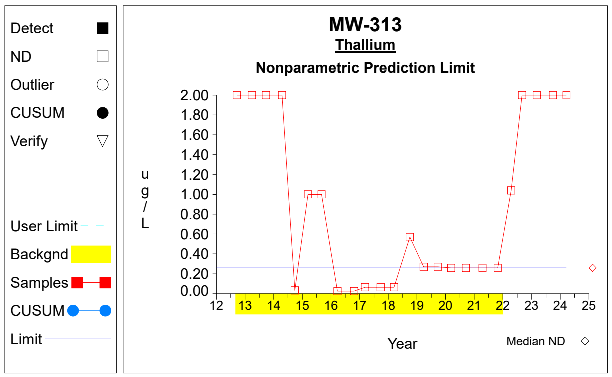
Graph 85



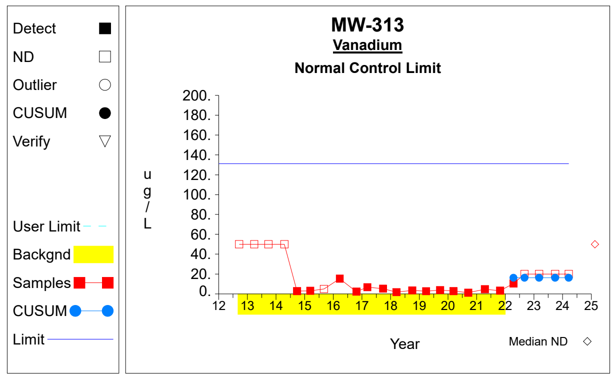
Graph 86



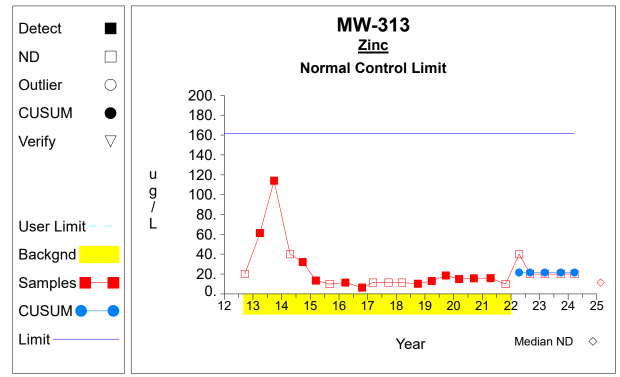
Graph 87



Graph 88



Graph 89



Graph 90

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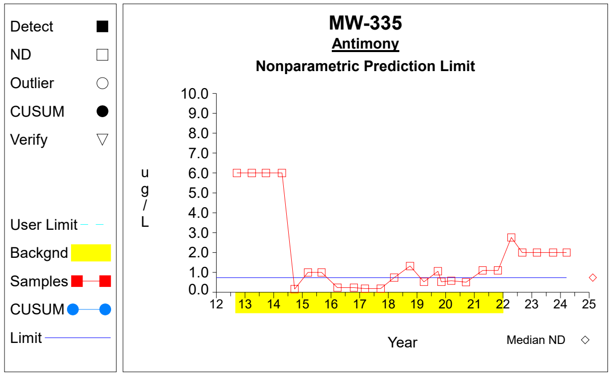
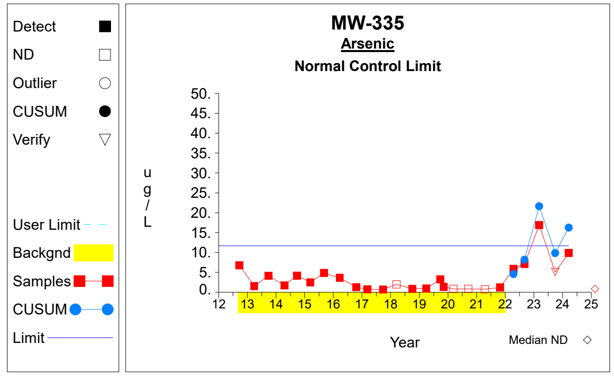
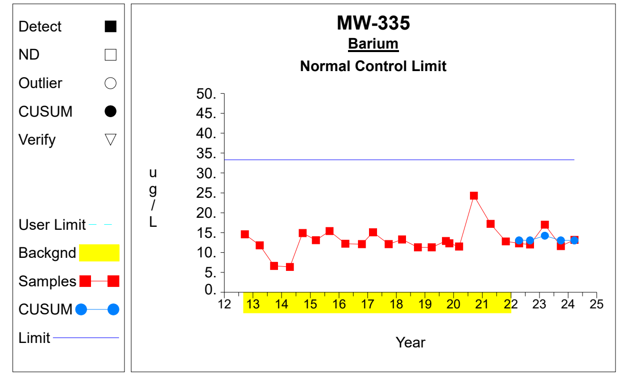
Intra-Well Control Charts / Prediction Limits



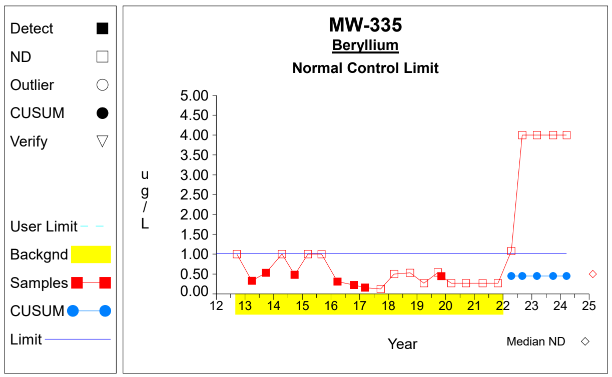
Graph 91



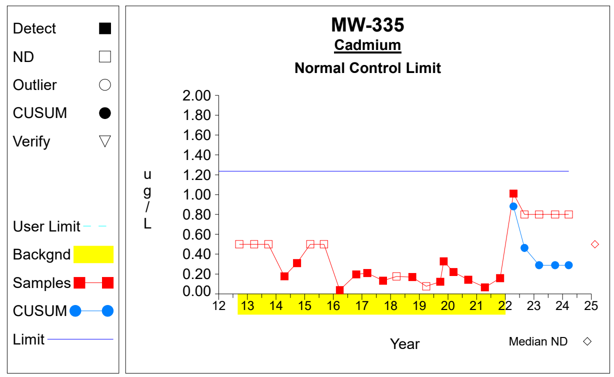
Graph 92



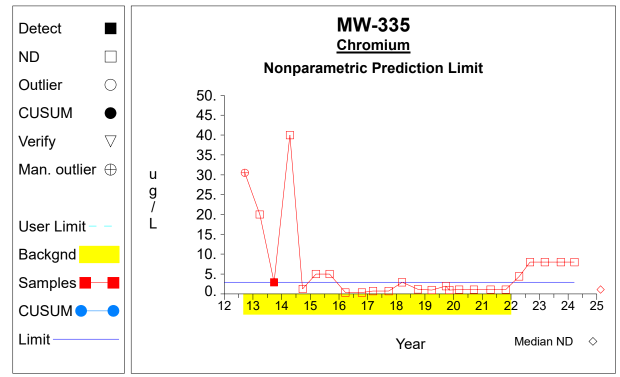
Graph 93



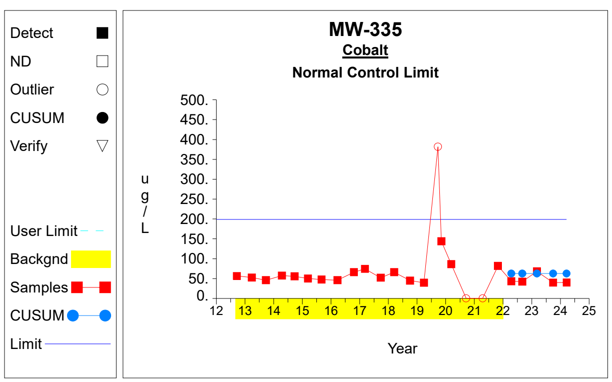
Graph 94



Graph 95



Graph 96



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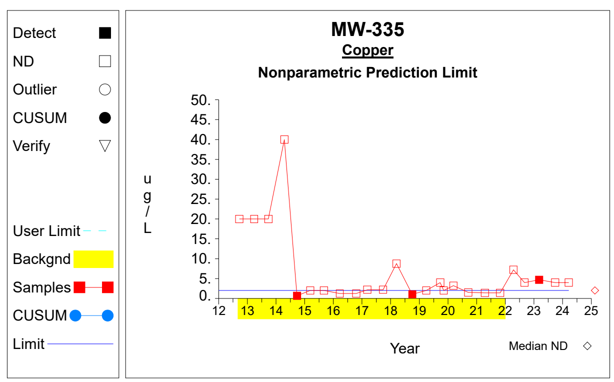
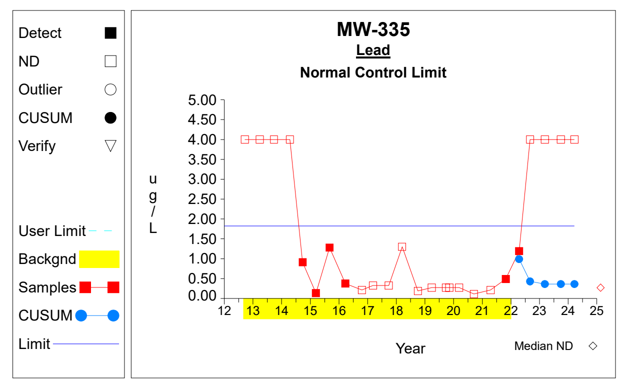


Graph 98



Graph 99

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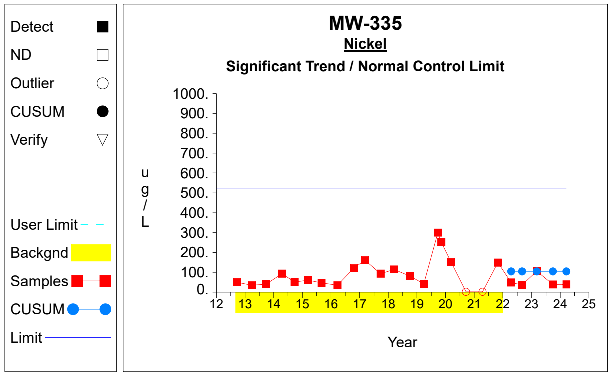
Intra-Well Control Charts / Prediction Limits



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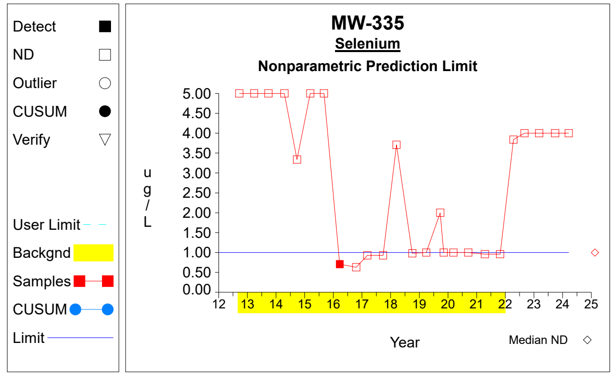

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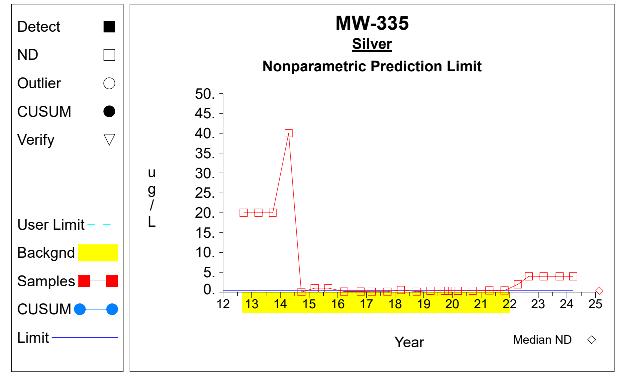

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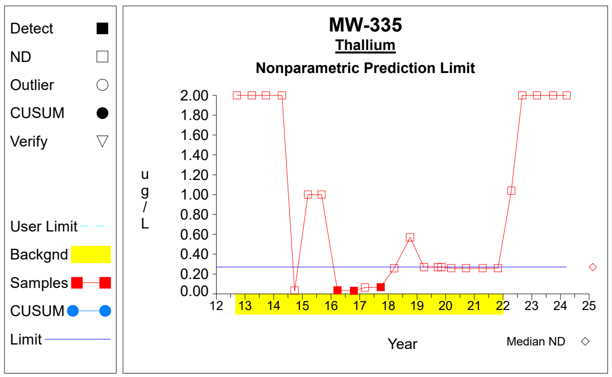

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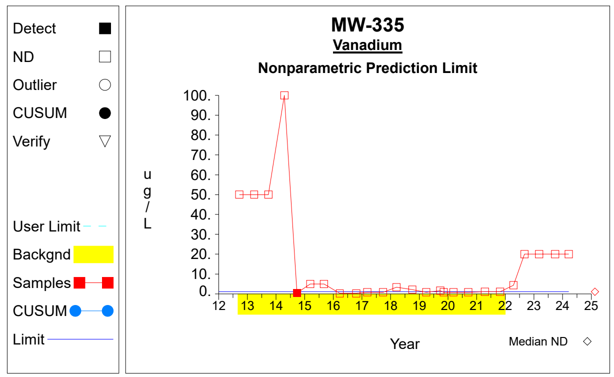

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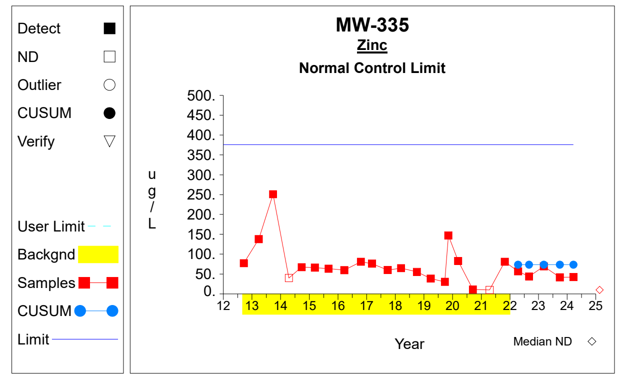

Graph 105

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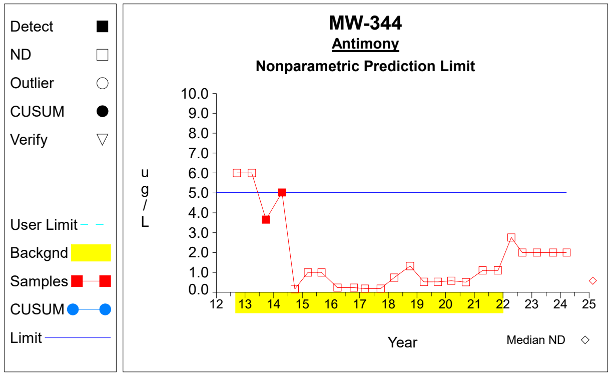

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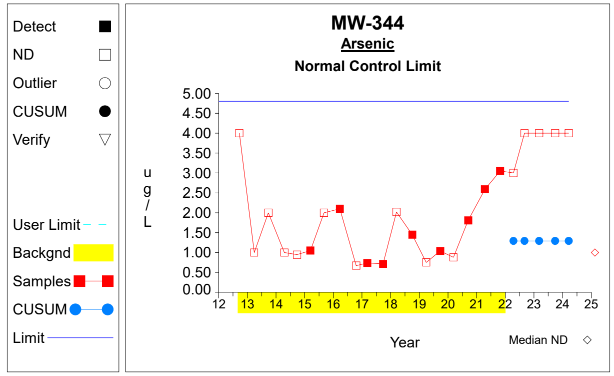

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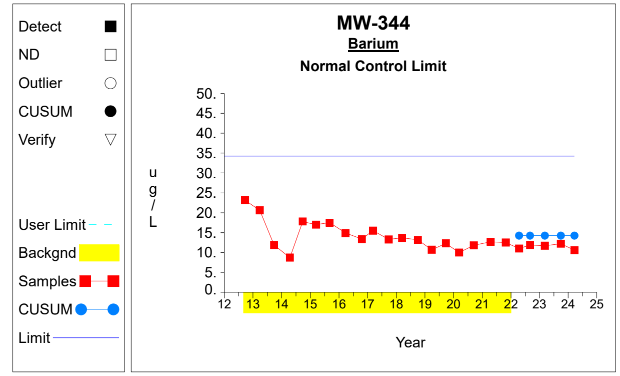

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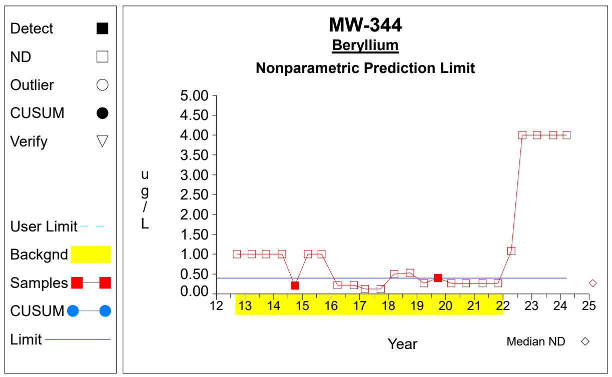

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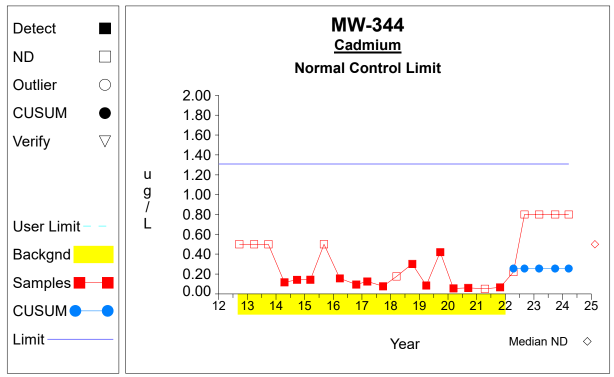

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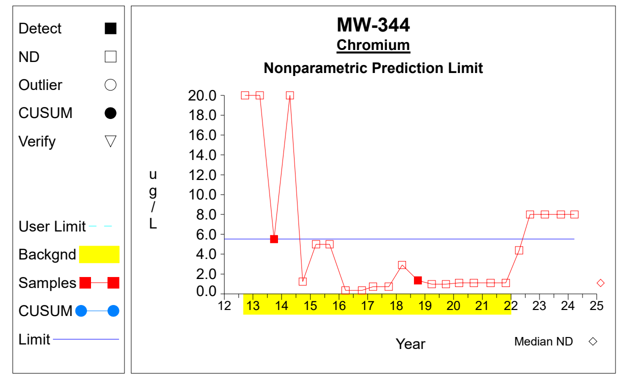

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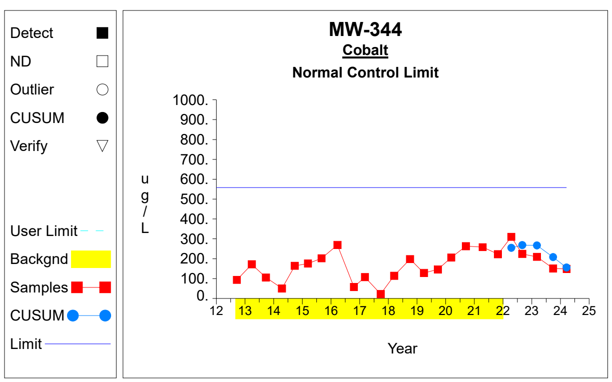

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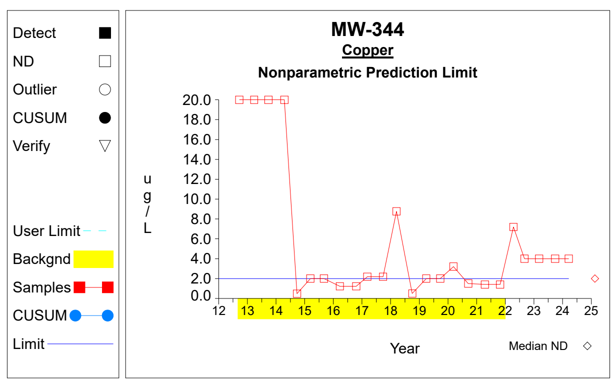

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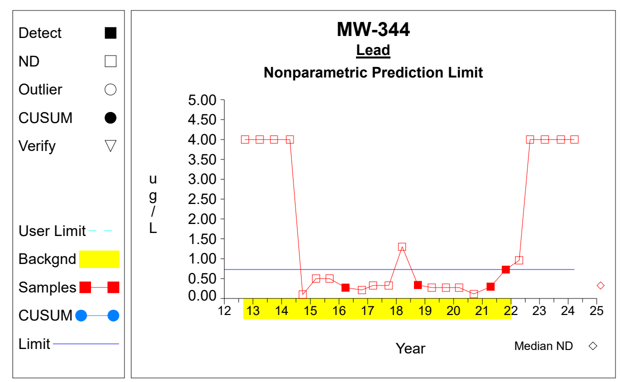

Graph 114

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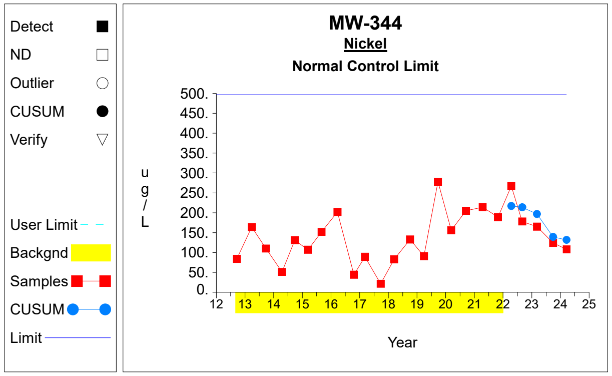
Intra-Well Control Charts / Prediction Limits



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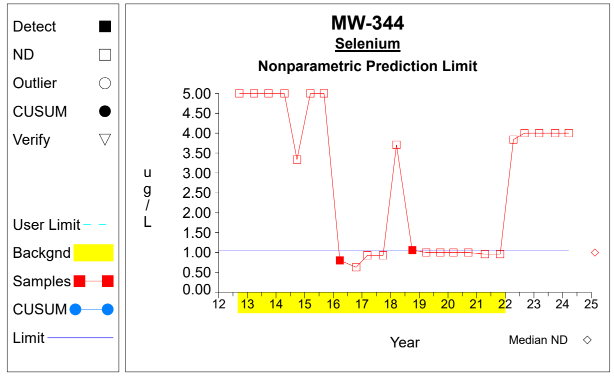

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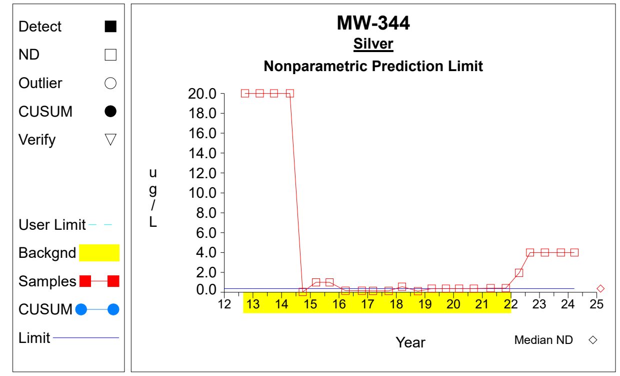
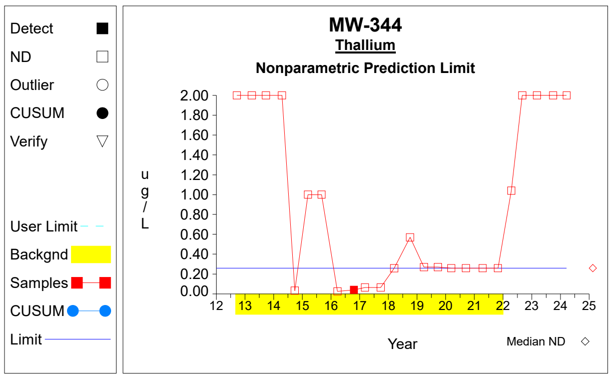


Graph 117



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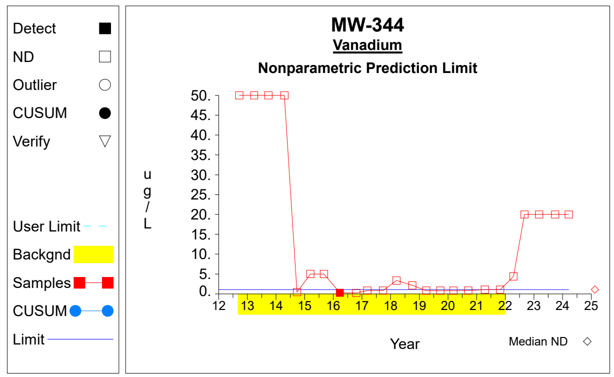

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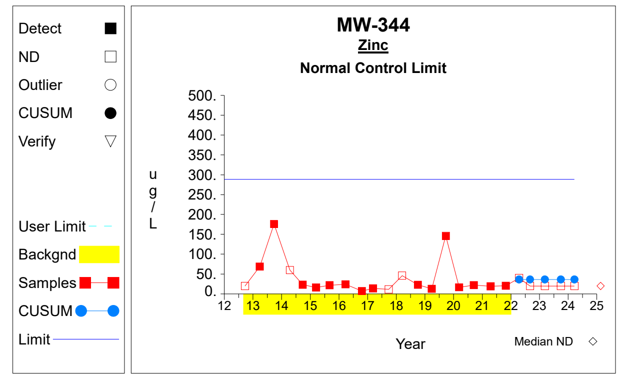

Graph 120

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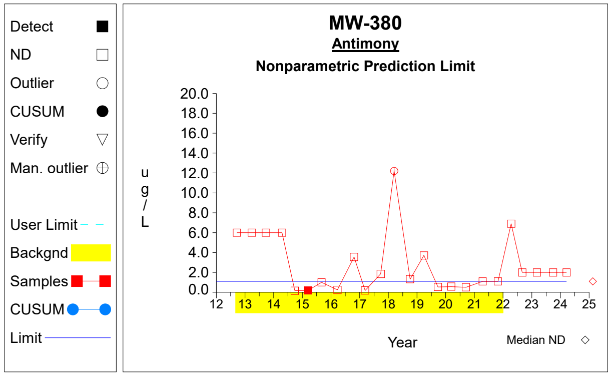

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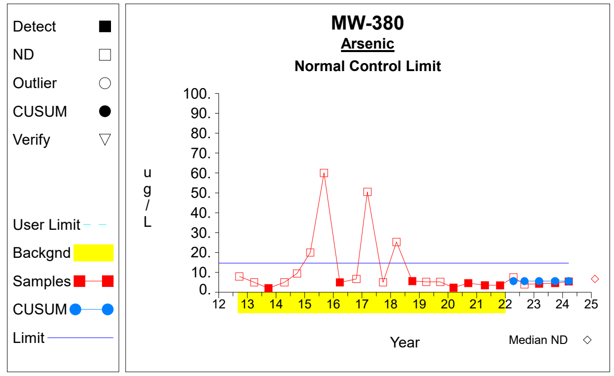

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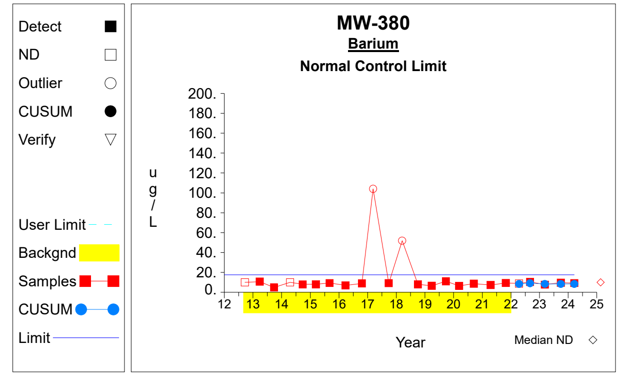

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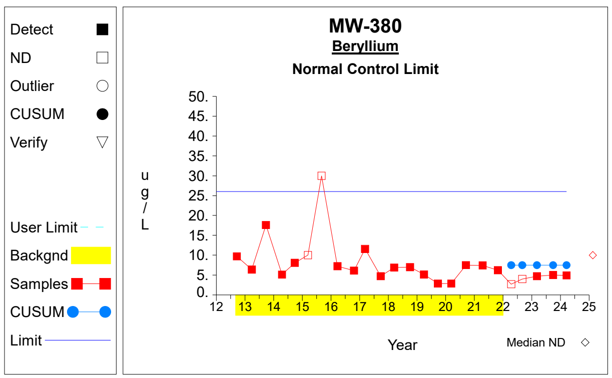

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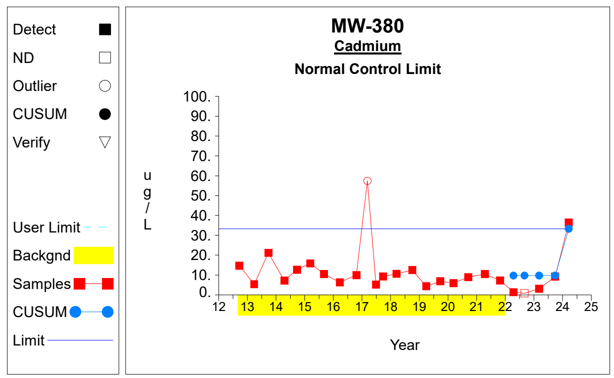

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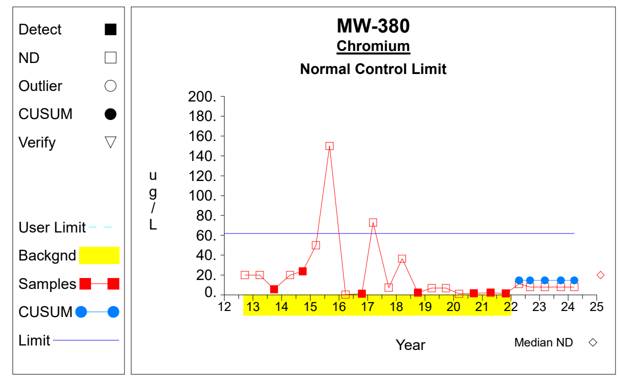

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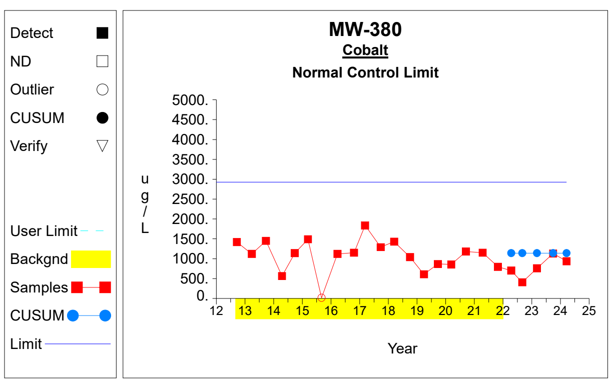

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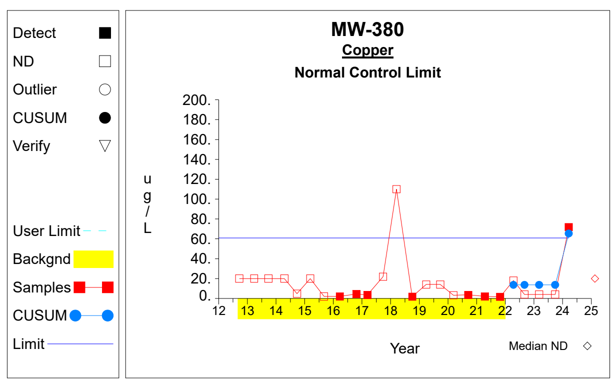

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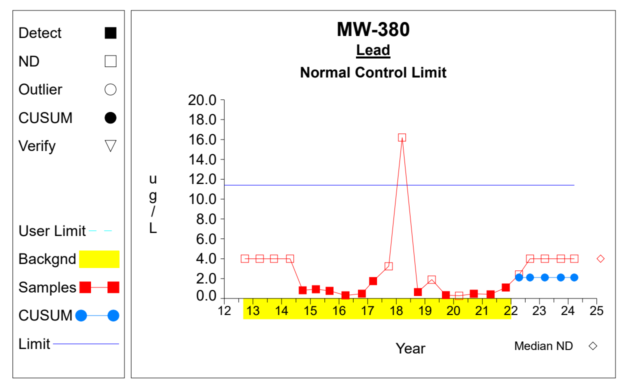

Graph 129

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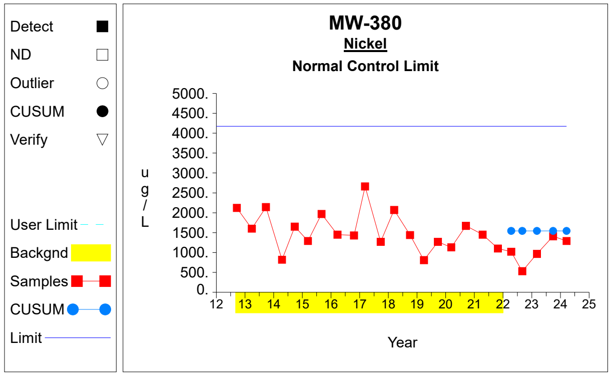
Intra-Well Control Charts / Prediction Limits



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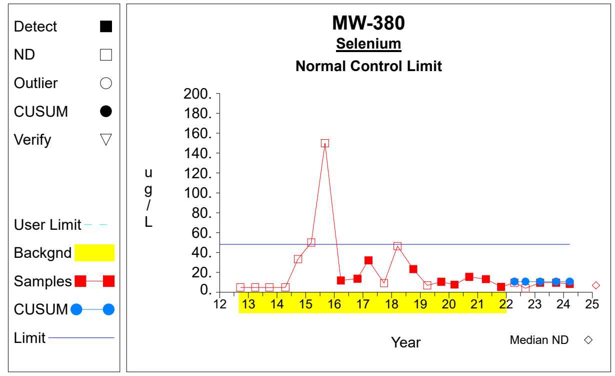

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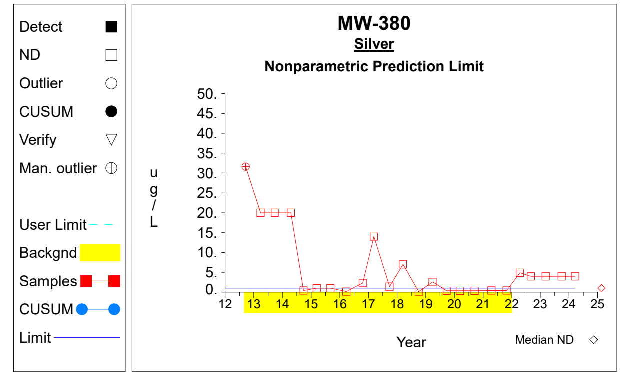
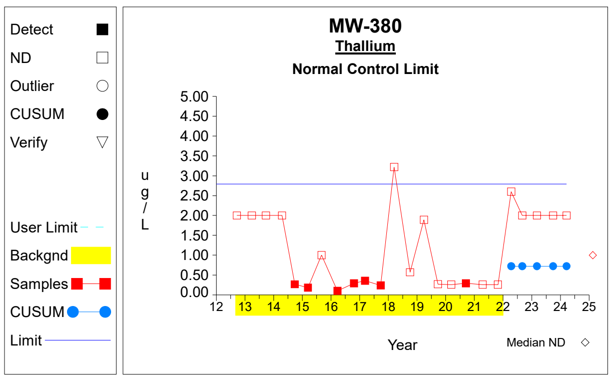
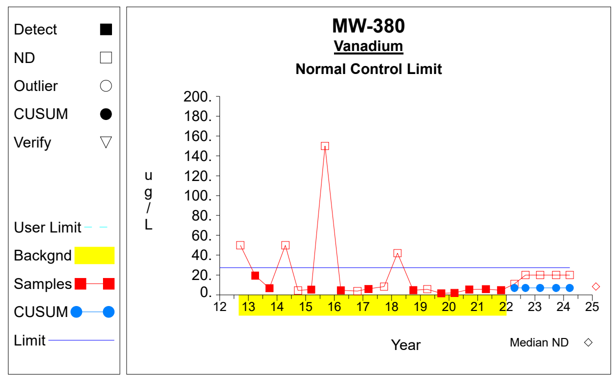


Graph 132



Graph 133



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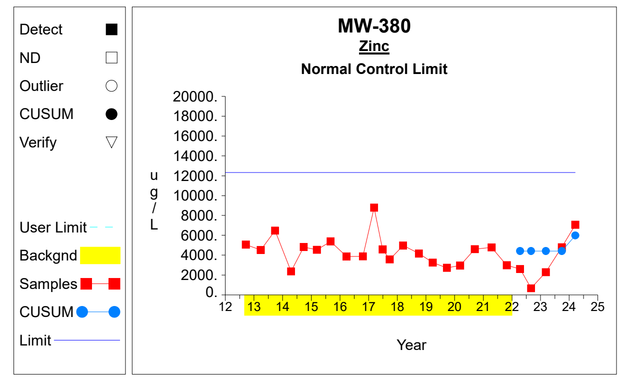

Graph 135

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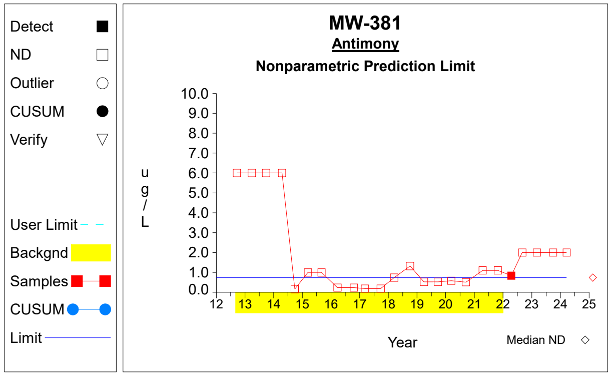
Intra-Well Control Charts / Prediction Limits



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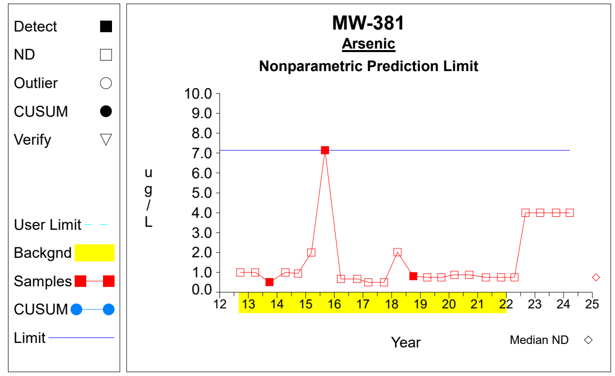

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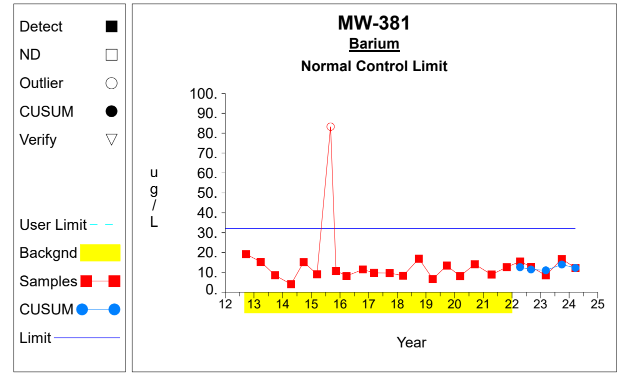

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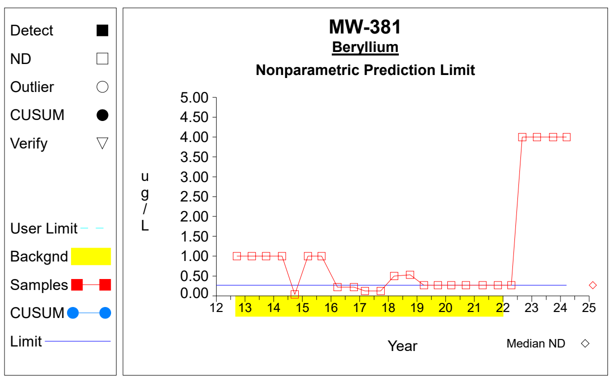

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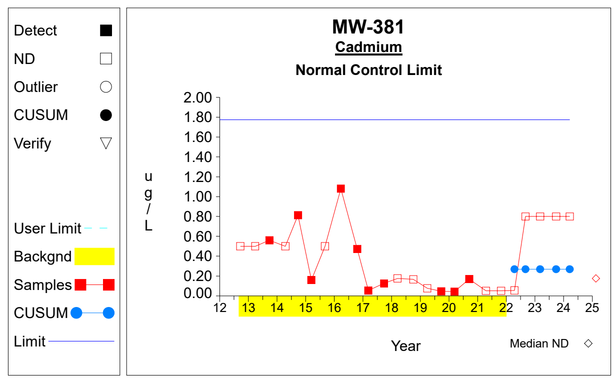

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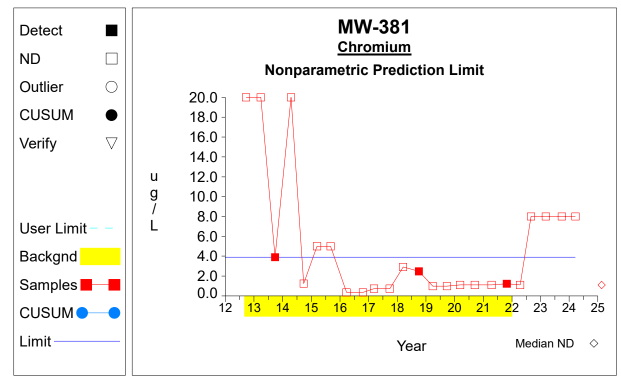

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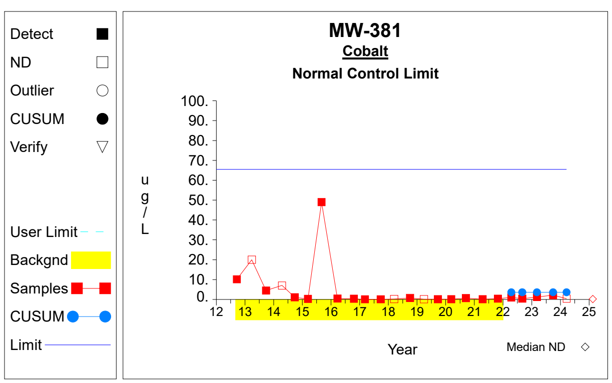

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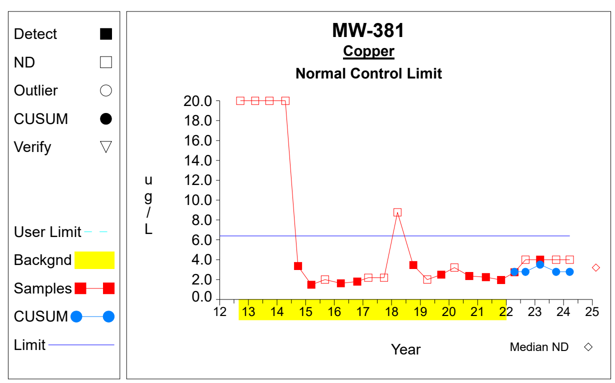

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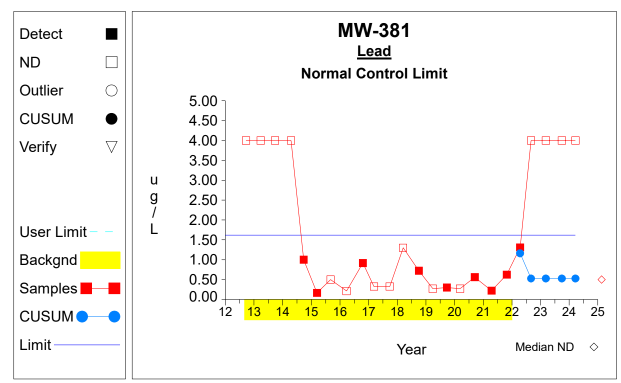

Graph 144

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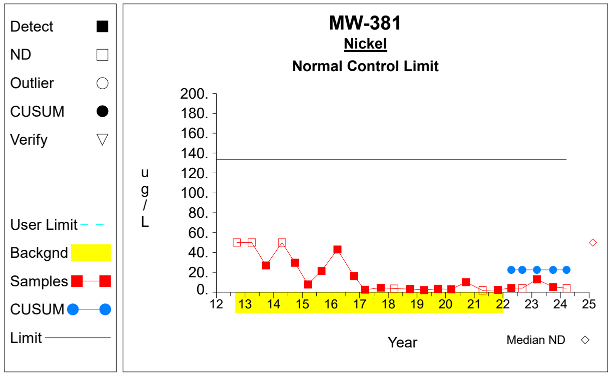
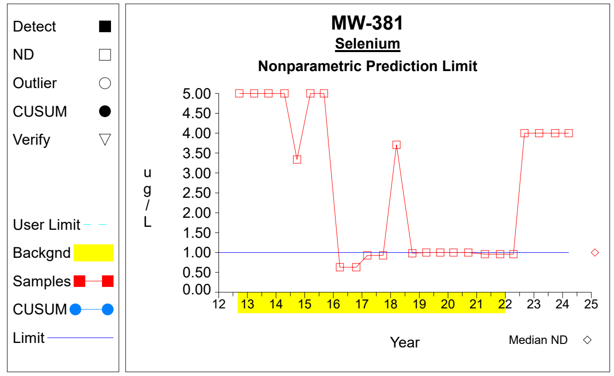
Intra-Well Control Charts / Prediction Limits



Graph 145



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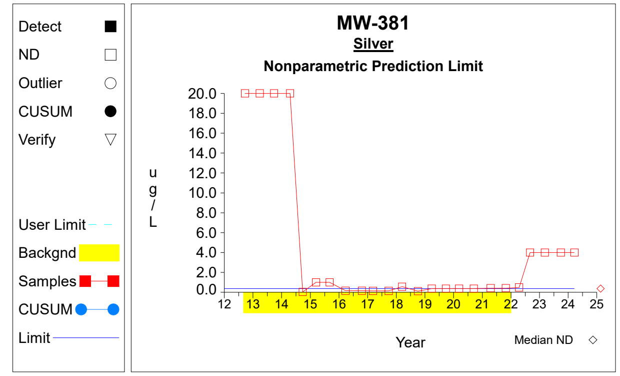

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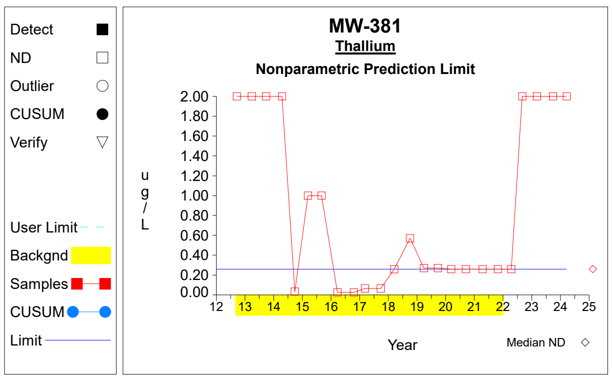

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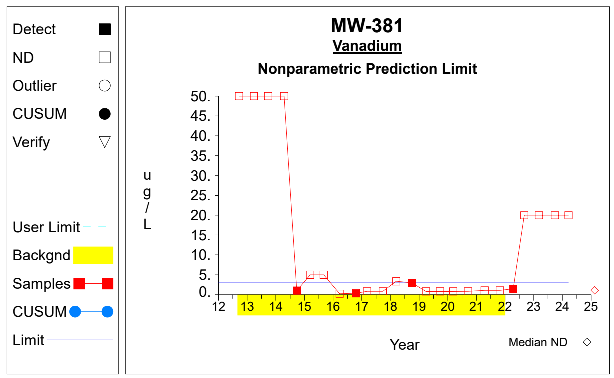

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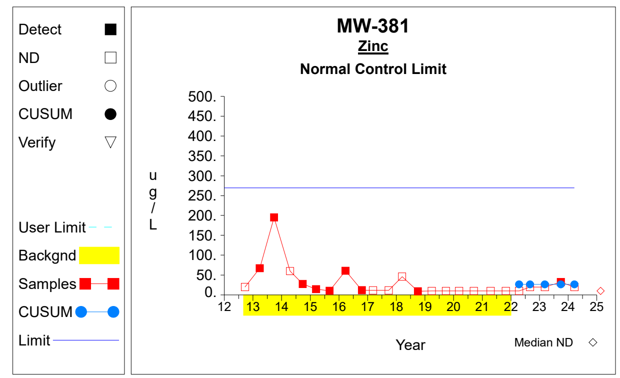

Graph 150

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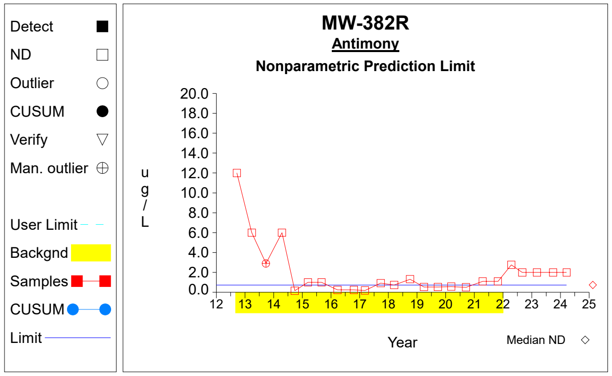
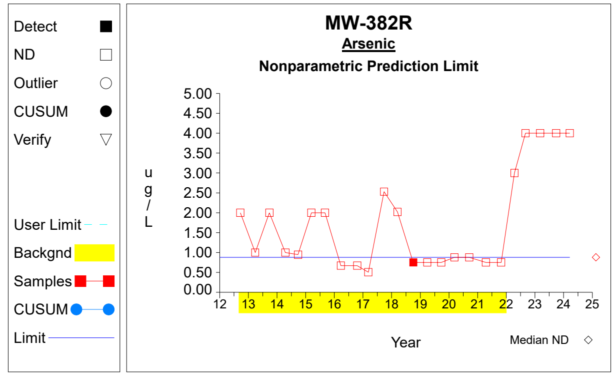
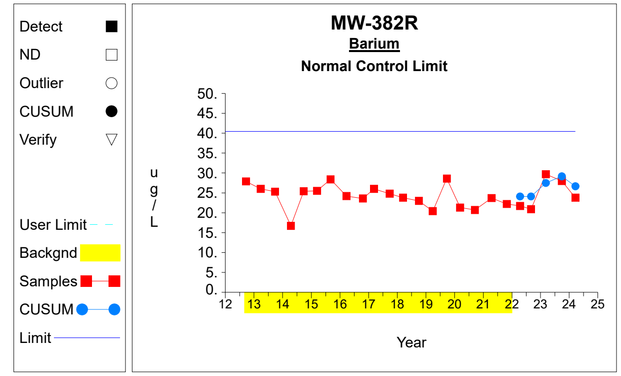


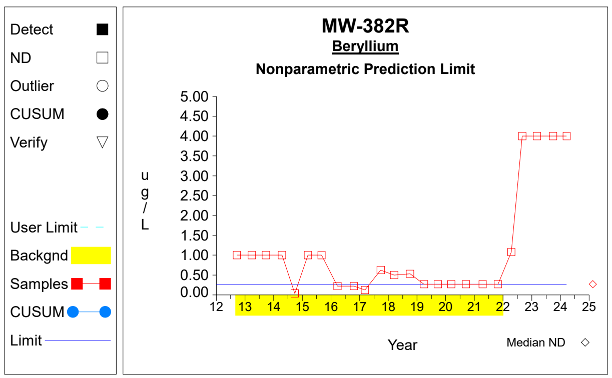
Graph 151



Graph 152



Graph 153



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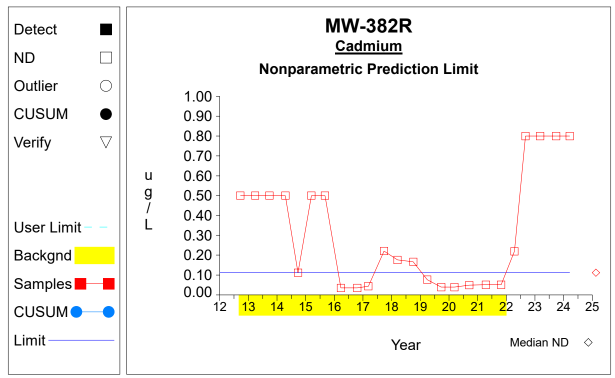

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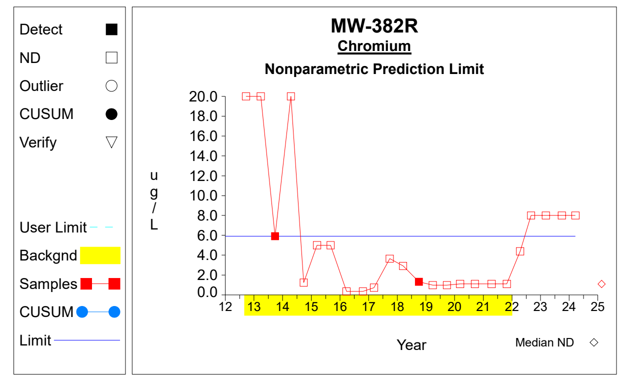
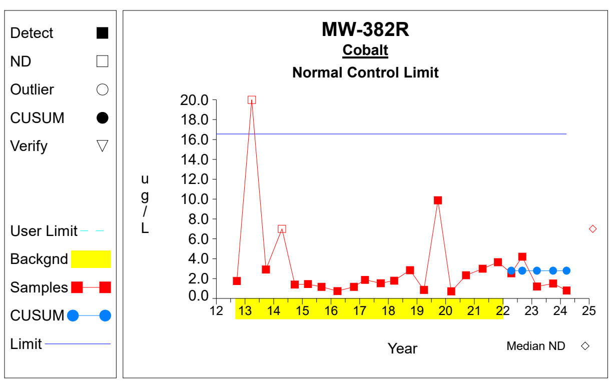


Graph 156



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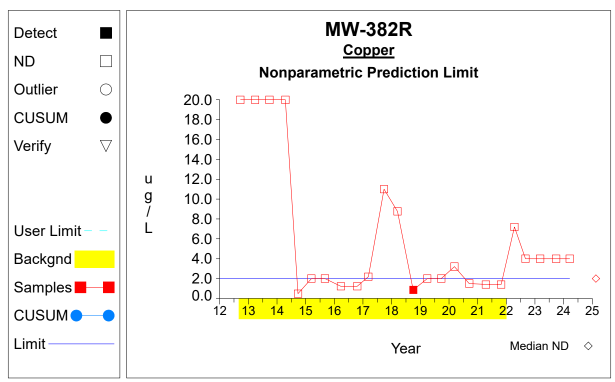
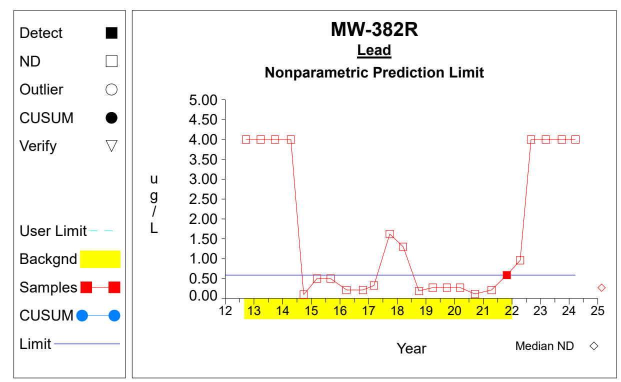


Graph 158



Graph 159

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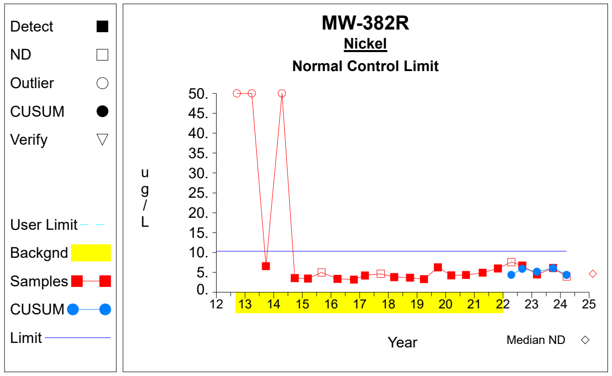
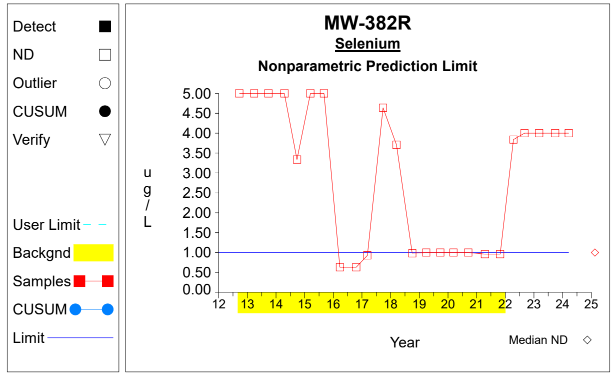


Graph 160



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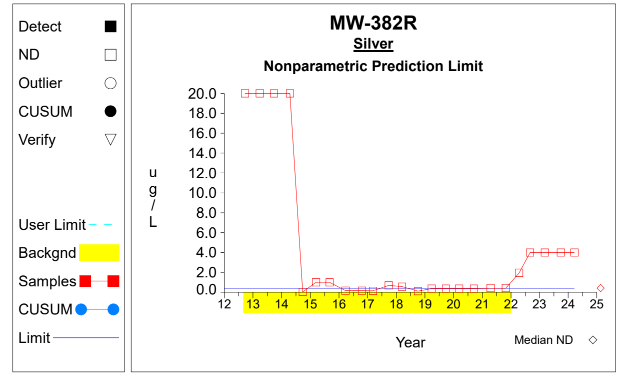
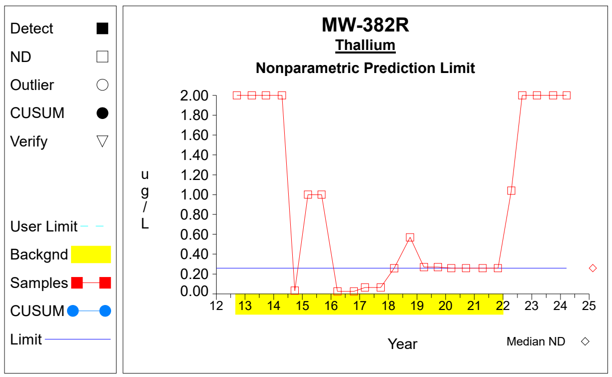
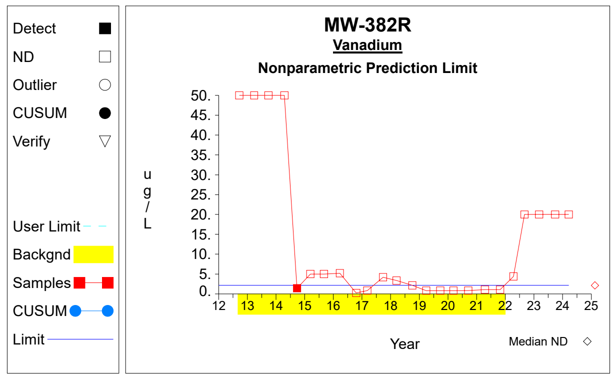


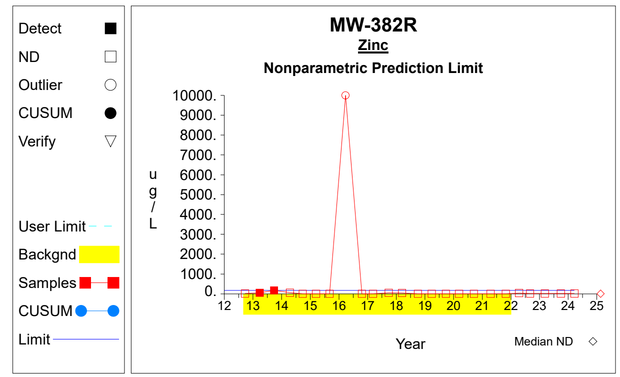
Graph 162



Graph 163



Graph 164

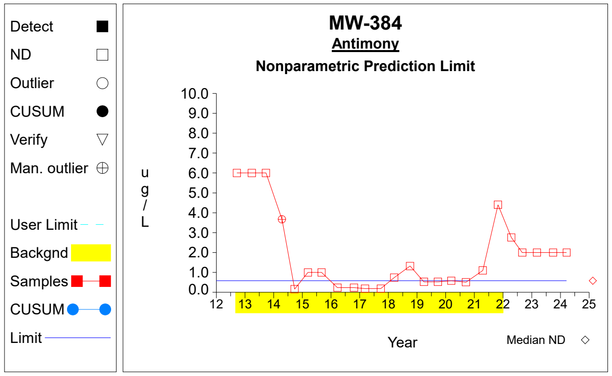


Graph 165

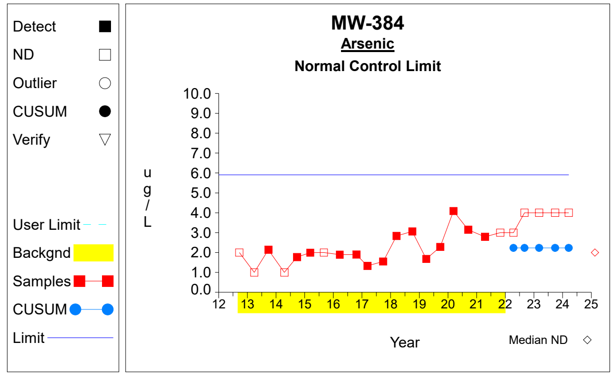
Prepared by: Otter Creek Environmental

South Central Iowa SWA [GW] April 2024

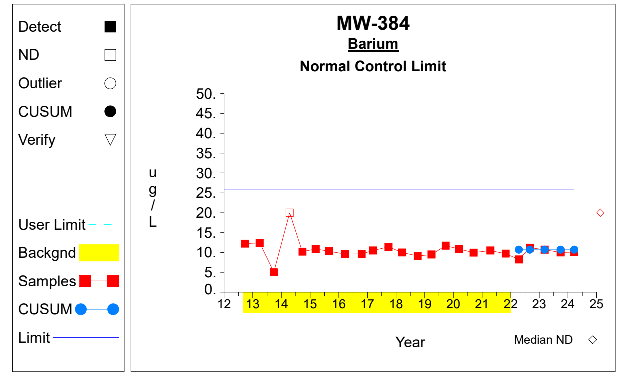
Intra-Well Control Charts / Prediction Limits



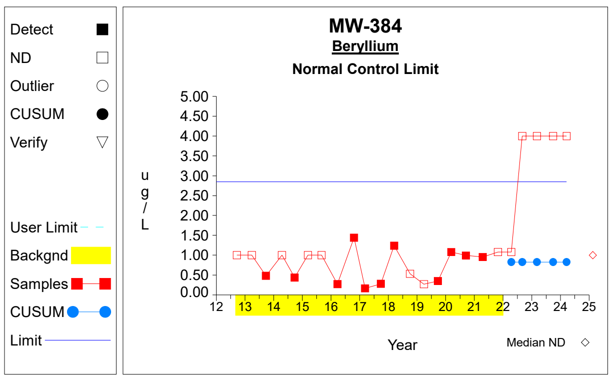
Graph 166



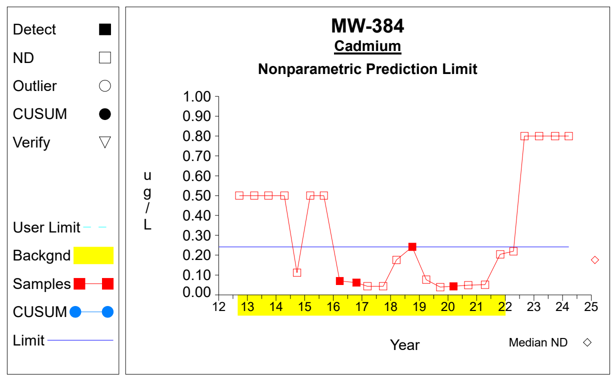
Graph 167



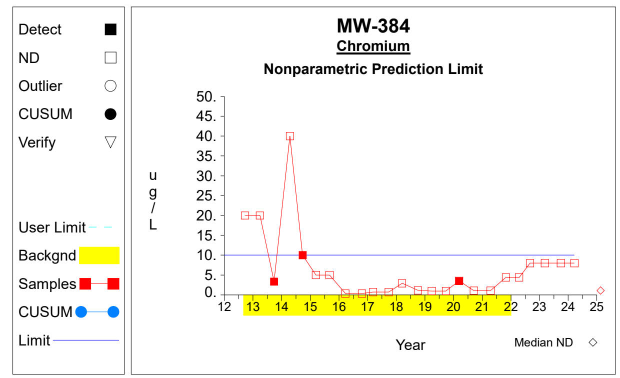
Graph 168



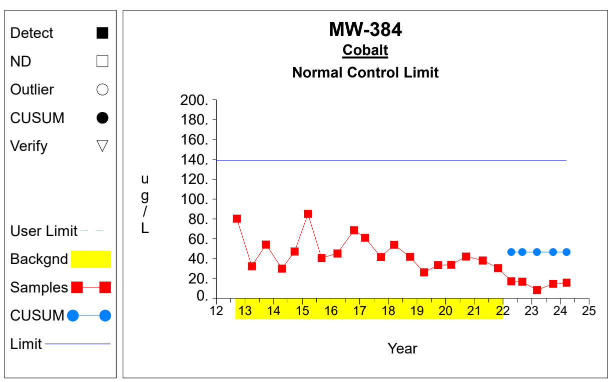
Graph 169



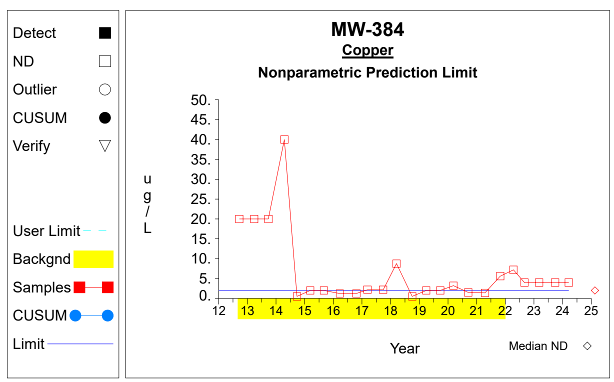
Graph 170



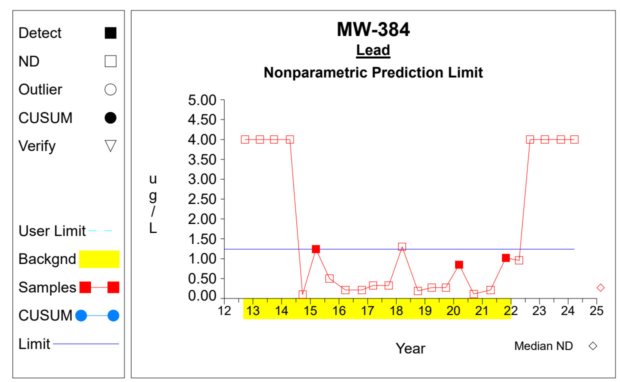
Graph 171



Graph 172



Graph 173

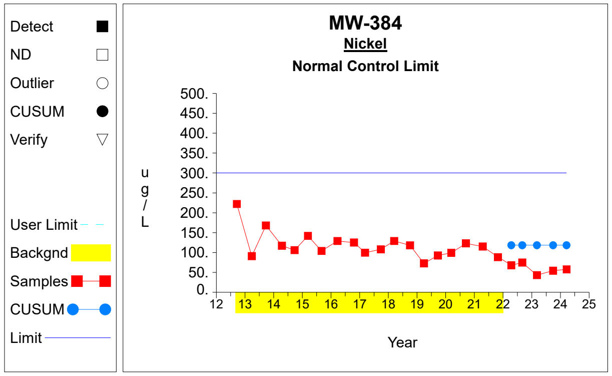


Graph 174

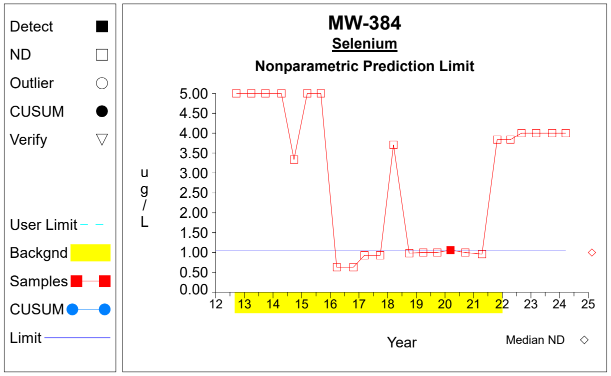
Prepared by: Otter Creek Environmental

South Central Iowa SWA [GW] April 2024

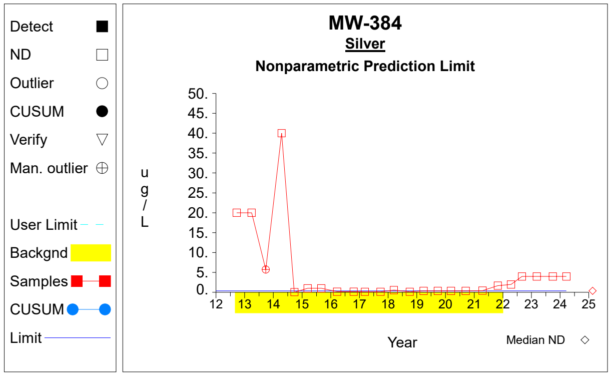
Intra-Well Control Charts / Prediction Limits



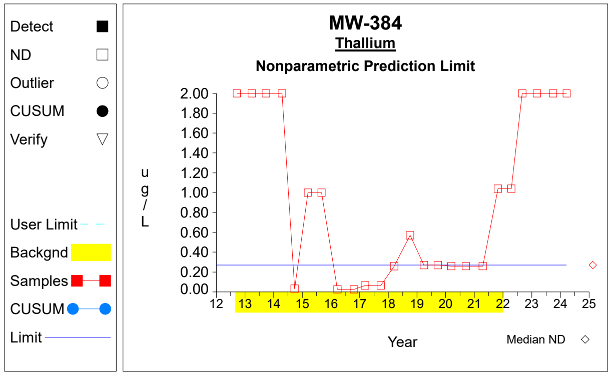
Graph 175



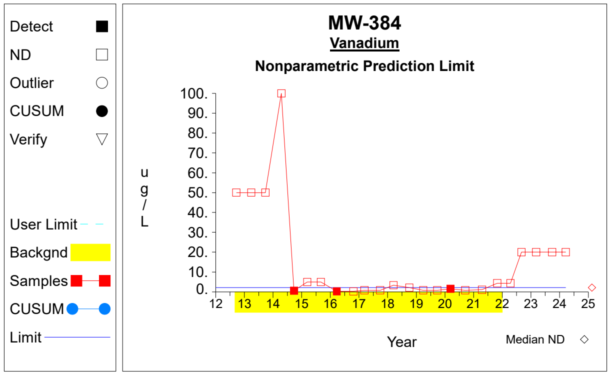
Graph 176



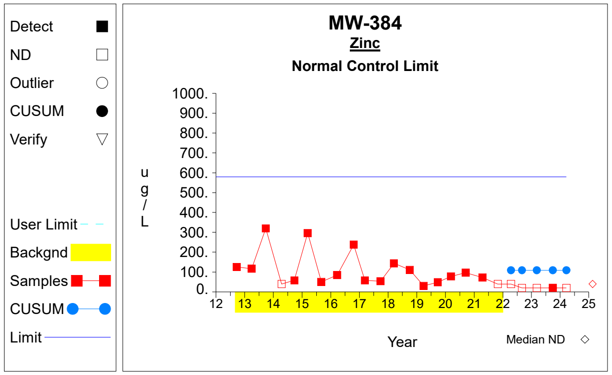
Graph 177



Graph 178



Graph 179

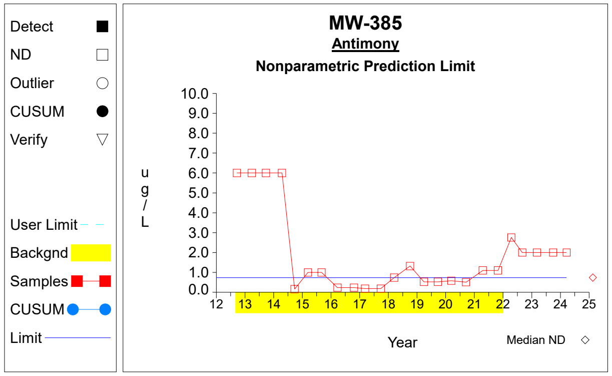


Graph 180

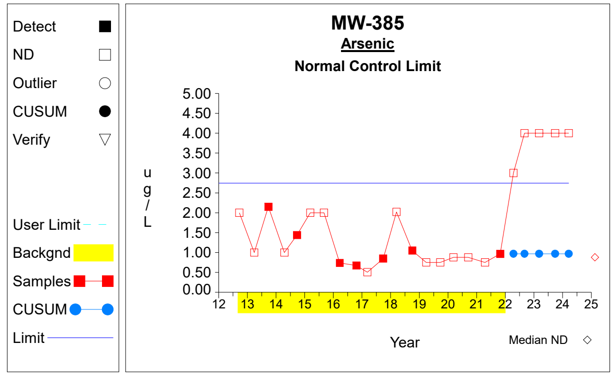
Prepared by: Otter Creek Environmental

South Central Iowa SWA [GW] April 2024

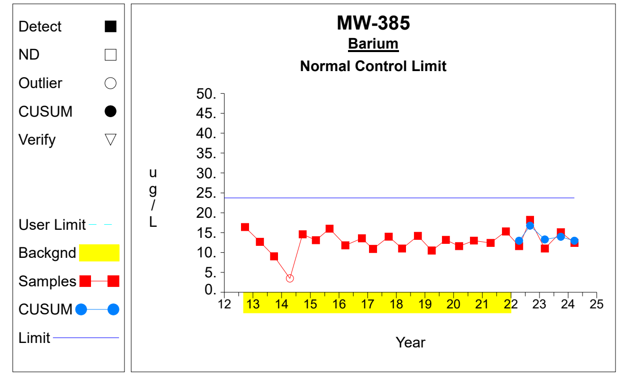
Intra-Well Control Charts / Prediction Limits



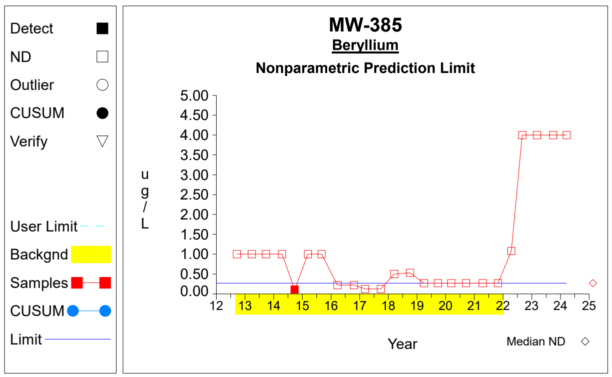
Graph 181



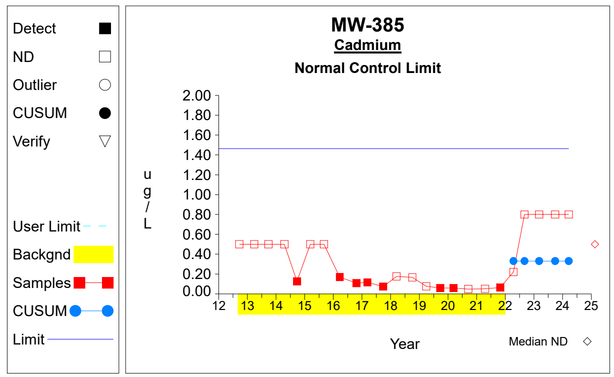
Graph 182



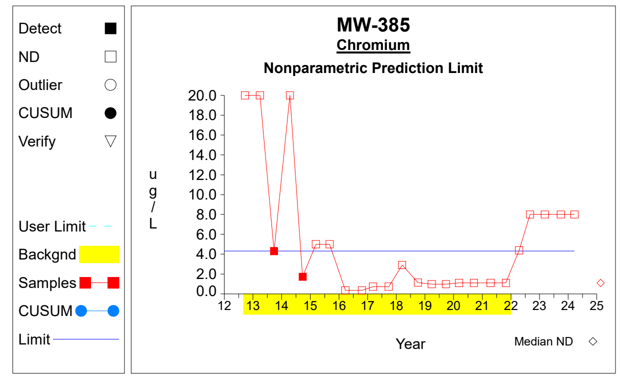
Graph 183



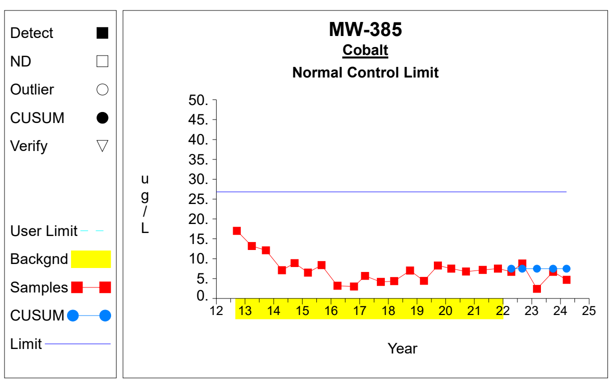
Graph 184



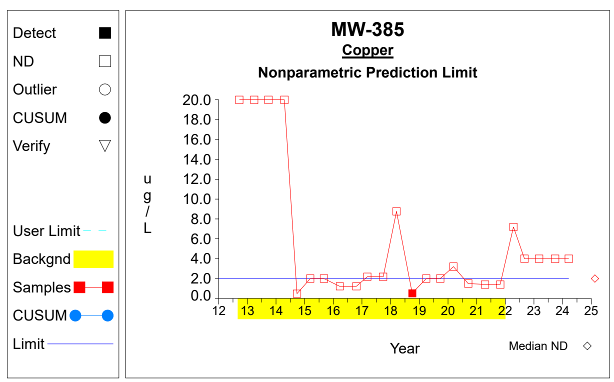
Graph 185



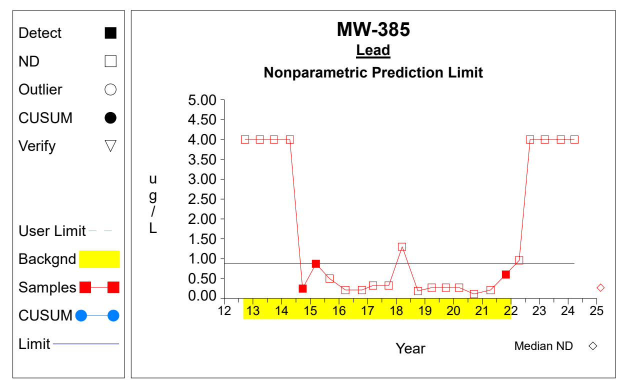
Graph 186



Graph 187



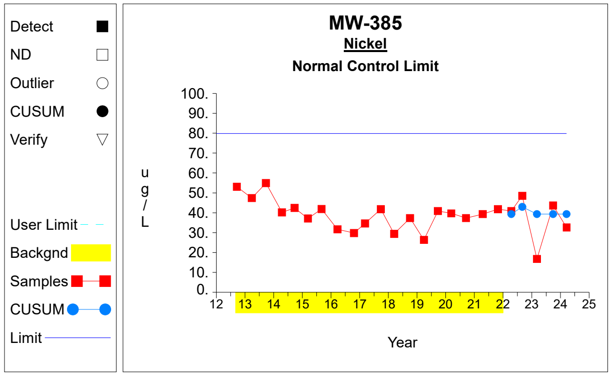
Graph 188



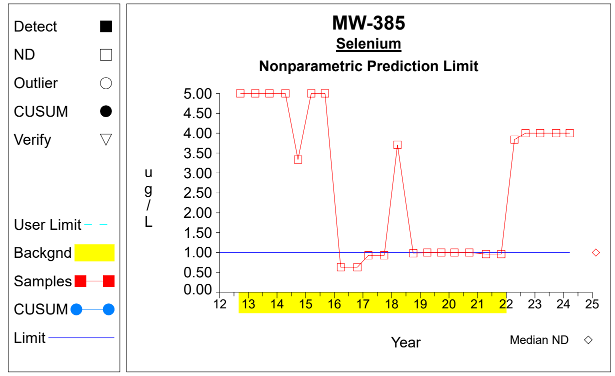
Graph 189

Prepared by: Otter Creek Environmental

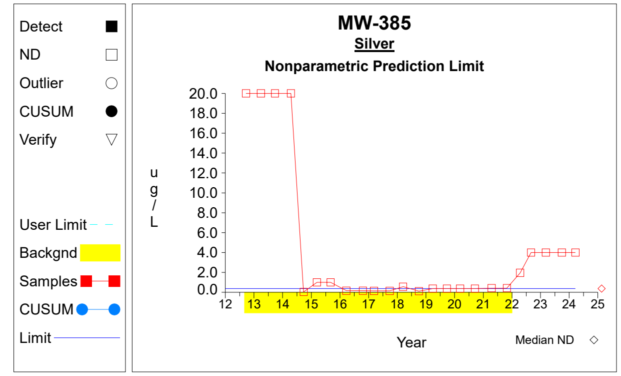
Intra-Well Control Charts / Prediction Limits



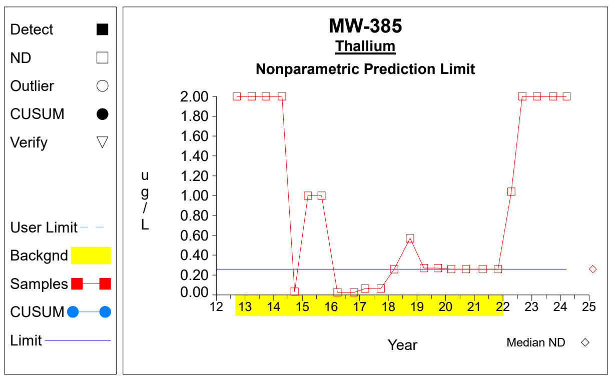
Graph 190



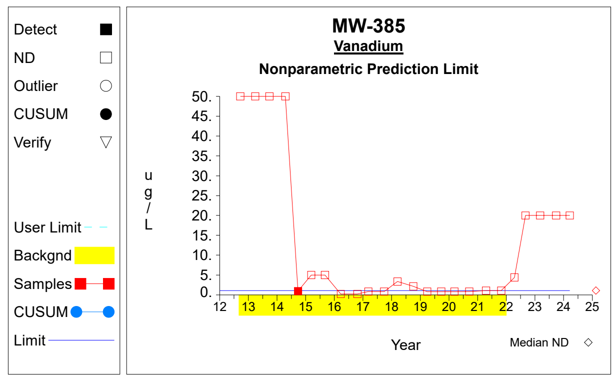
Graph 191



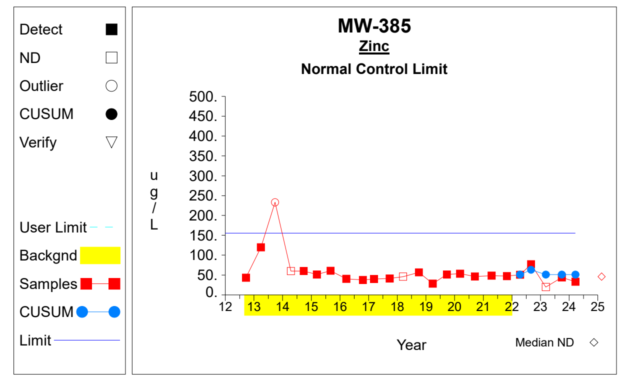
Graph 192



Graph 193



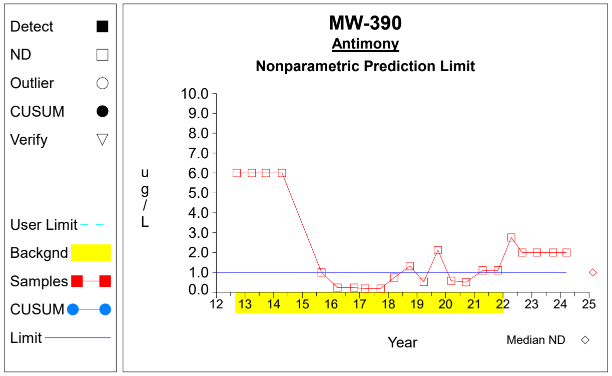
Graph 194



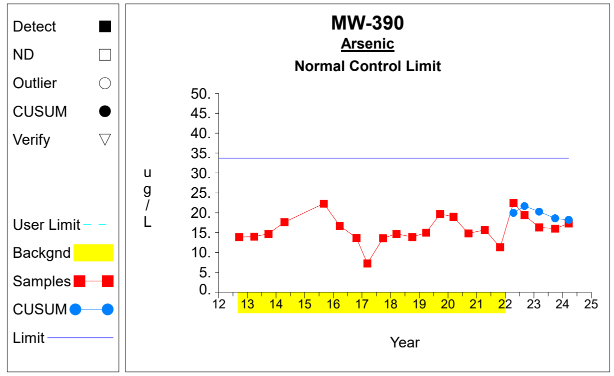
Graph 195

South Central Iowa SWA [GW] April 2024

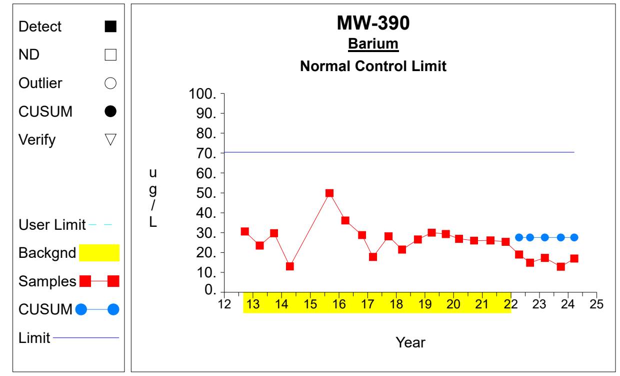
Intra-Well Control Charts / Prediction Limits



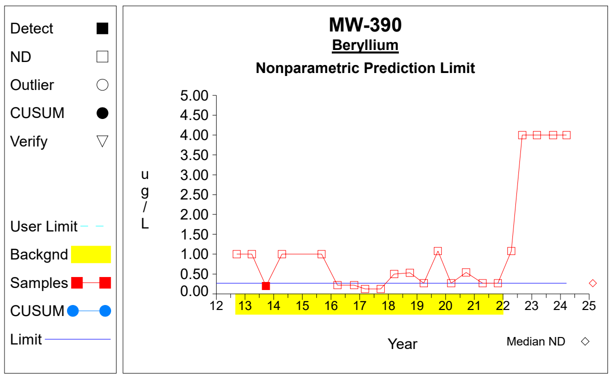
Graph 196



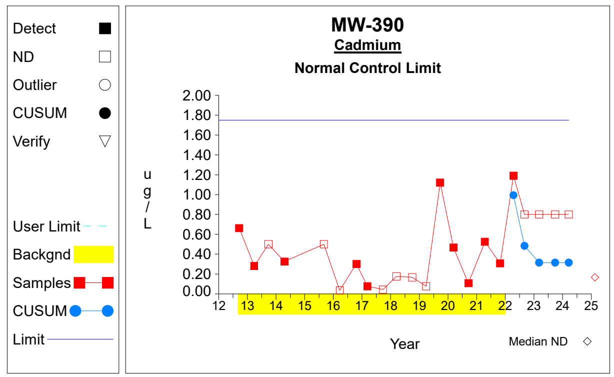
Graph 197



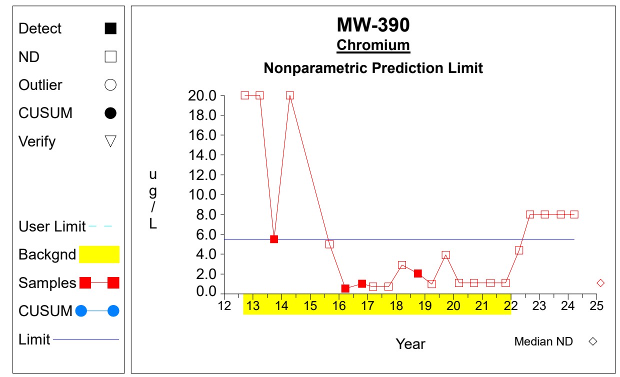
Graph 198



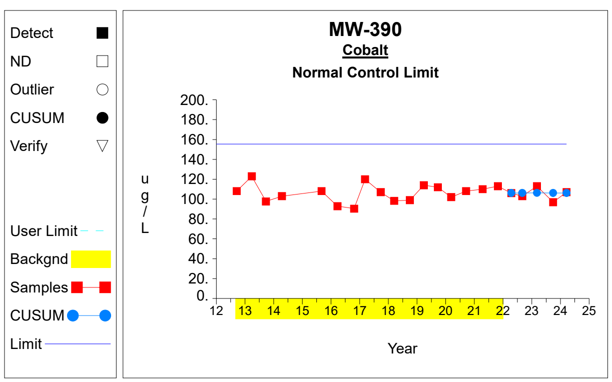
Graph 199



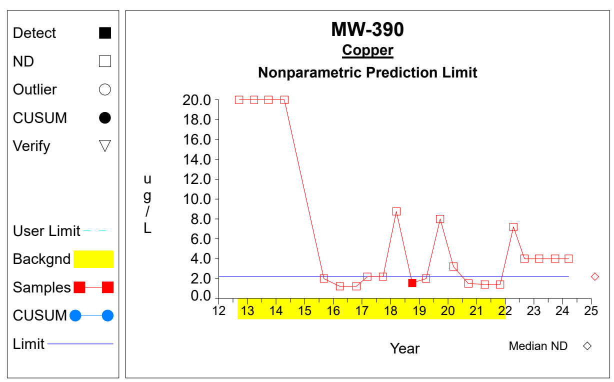
Graph 200



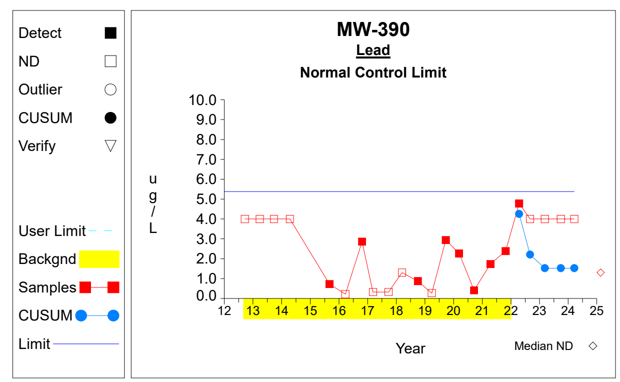
Graph 201



Graph 202



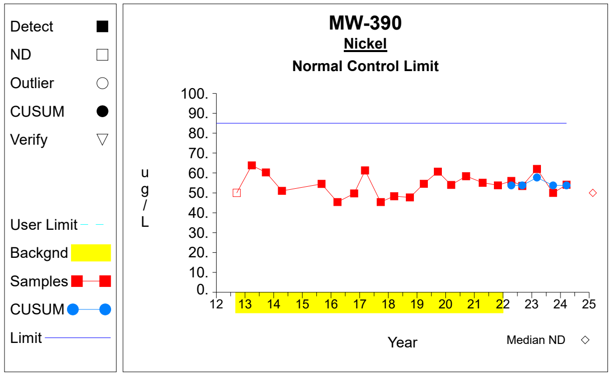
Graph 203



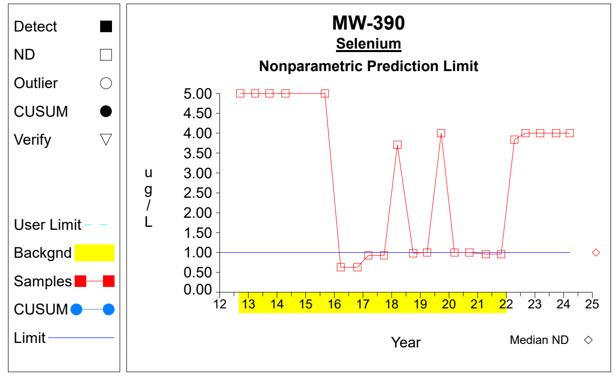
Graph 204

Prepared by: Otter Creek Environmental

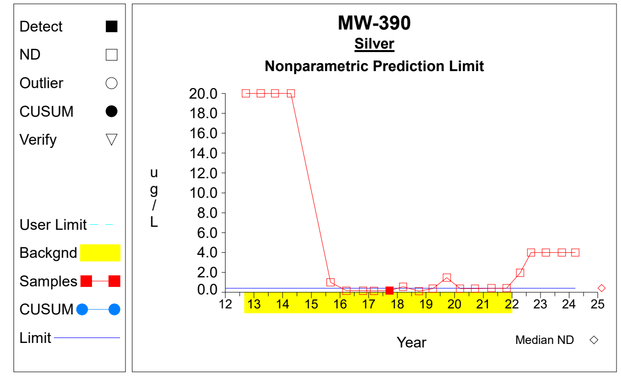
Intra-Well Control Charts / Prediction Limits



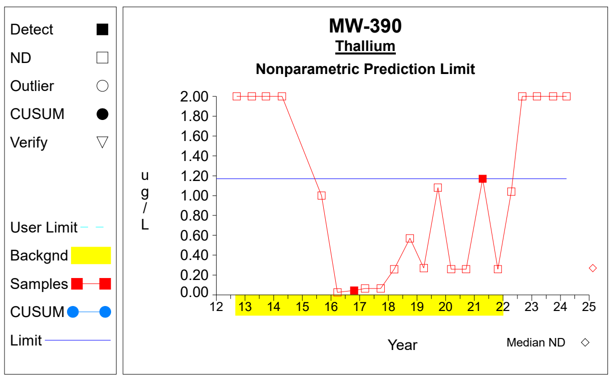
Graph 205



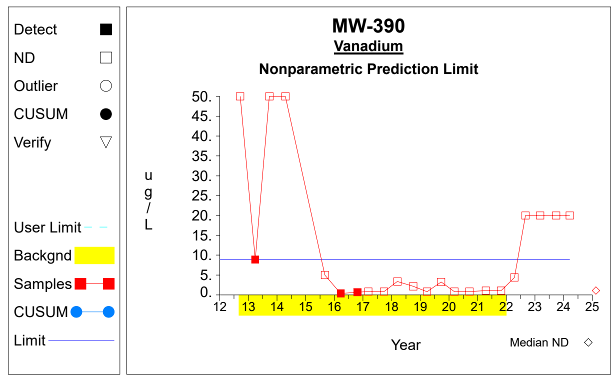
Graph 206



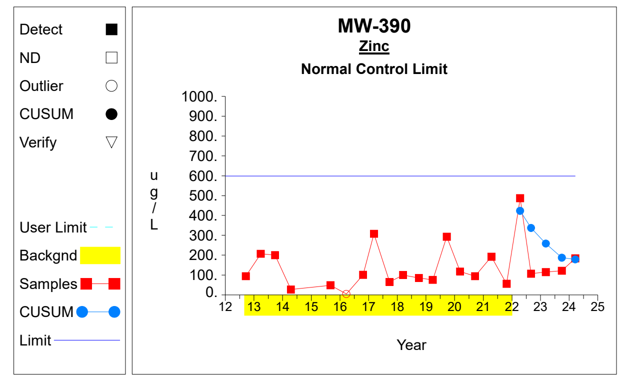
Graph 207



Graph 208

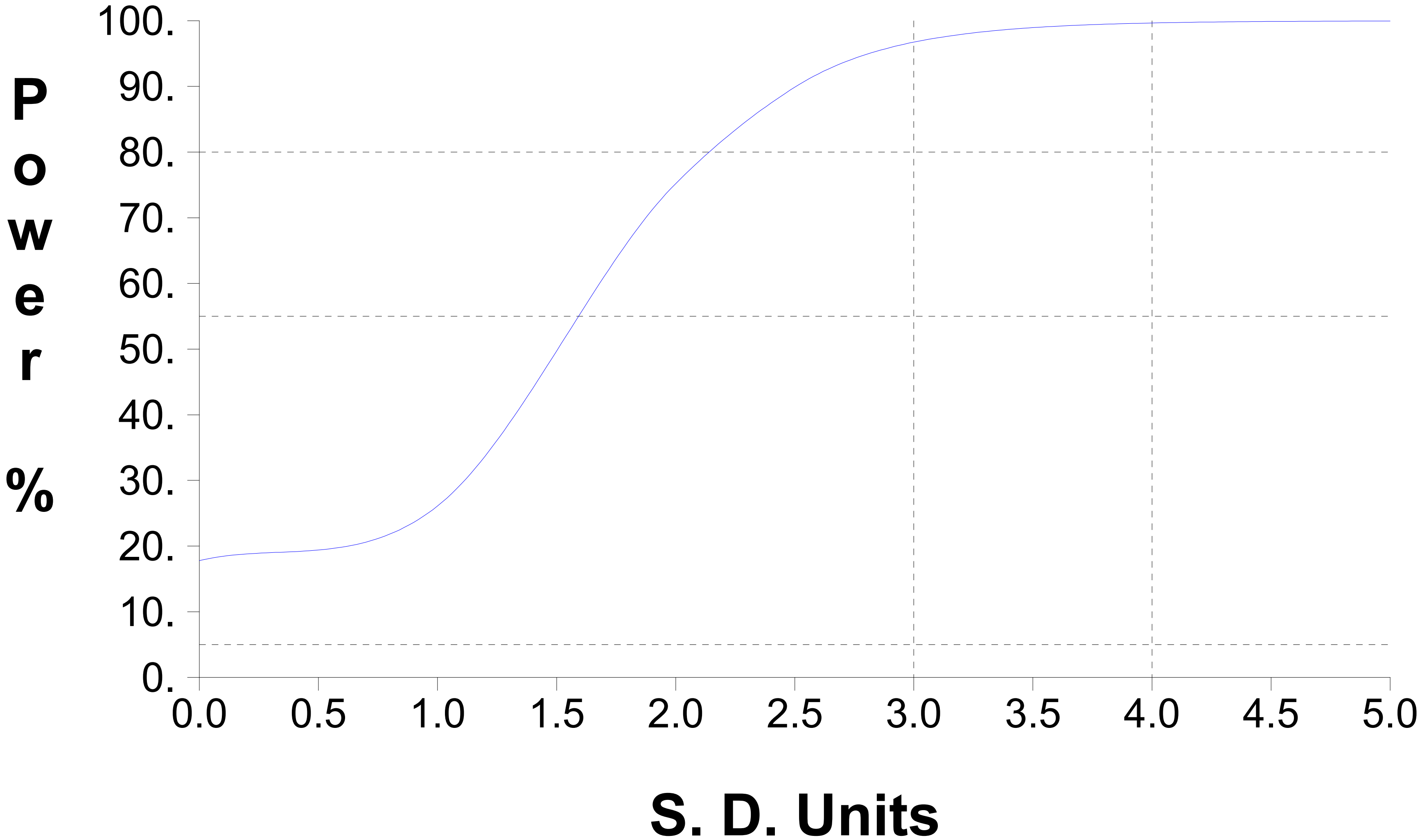


Graph 209



Graph 210

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



Attachment C

Summary Tables and Graphs for the Interwell Comparisons

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Antimony	ug/L	MW-307	09/18/2012	ND	12.0000	1.1000	**
Antimony	ug/L	MW-307	03/27/2013	ND	6.0000	1.1000	**
Antimony	ug/L	MW-307	09/26/2013	ND	6.0000	1.1000	**
Antimony	ug/L	MW-307	04/15/2014	ND	6.0000	1.1000	**
Antimony	ug/L	MW-307	09/01/2015	ND	1.0000	1.1000	**
Antimony	ug/L	MW-307	03/22/2016	ND	0.2370	1.1000	**
Antimony	ug/L	MW-307	10/21/2016	ND	0.2370	1.1000	**
Antimony	ug/L	MW-307	03/08/2017	ND	0.1850	1.1000	**
Antimony	ug/L	MW-307	09/25/2017	ND	0.1850	1.1000	**
Antimony	ug/L	MW-307	03/13/2018	ND	0.7400	1.1000	**
Antimony	ug/L	MW-307	10/01/2018	ND	1.3200	1.1000	**
Antimony	ug/L	MW-307	03/27/2019	ND	0.5300	1.1000	**
Antimony	ug/L	MW-307	09/23/2019	ND	2.1200	1.1000	**
Antimony	ug/L	MW-307	03/09/2020	ND	0.5800	1.1000	**
Antimony	ug/L	MW-307	09/17/2020	ND	0.5100	1.1000	**
Antimony	ug/L	MW-307	04/16/2021	ND	1.1000		
Antimony	ug/L	MW-307	10/28/2021	ND	1.1000		
Antimony	ug/L	MW-307	04/13/2022	ND	2.7600	1.1000	**
Antimony	ug/L	MW-307	09/01/2022	ND	2.0000	1.1000	**
Antimony	ug/L	MW-307	03/06/2023	ND	2.0000	1.1000	**
Antimony	ug/L	MW-307	09/29/2023		4.4000		
Antimony	ug/L	MW-307	03/19/2024	ND	2.0000	1.1000	**
Arsenic	ug/L	MW-307	09/18/2012		2.0100		
Arsenic	ug/L	MW-307	03/27/2013	ND	2.0000		
Arsenic	ug/L	MW-307	09/26/2013		4.6700		
Arsenic	ug/L	MW-307	04/15/2014	ND	1.0000	2.0000	**
Arsenic	ug/L	MW-307	09/01/2015		3.7000		
Arsenic	ug/L	MW-307	03/22/2016		4.3500		
Arsenic	ug/L	MW-307	10/21/2016		3.9600		
Arsenic	ug/L	MW-307	03/08/2017	ND	5.0500	2.0000	**
Arsenic	ug/L	MW-307	09/25/2017		3.8900		
Arsenic	ug/L	MW-307	03/13/2018		3.7200		
Arsenic	ug/L	MW-307	10/01/2018		4.4100		
Arsenic	ug/L	MW-307	03/27/2019		3.6900		
Arsenic	ug/L	MW-307	09/23/2019		3.9100		
Arsenic	ug/L	MW-307	03/09/2020		3.9700		
Arsenic	ug/L	MW-307	09/17/2020		3.9200		
Arsenic	ug/L	MW-307	04/16/2021		4.3400		
Arsenic	ug/L	MW-307	10/28/2021	ND	0.7500		*
Arsenic	ug/L	MW-307	04/13/2022		3.9200		
Arsenic	ug/L	MW-307	09/01/2022	ND	4.0000	2.0000	**
Arsenic	ug/L	MW-307	03/06/2023		4.3000		
Arsenic	ug/L	MW-307	09/29/2023		31.9000		*
Arsenic	ug/L	MW-307	03/19/2024		4.0000		
Barium	ug/L	MW-307	09/18/2012	ND	10.0000		
Barium	ug/L	MW-307	03/27/2013		10.4000		
Barium	ug/L	MW-307	09/26/2013	ND	30.0000	10.0000	**
Barium	ug/L	MW-307	04/15/2014	ND	10.0000		
Barium	ug/L	MW-307	09/01/2015		9.5900		
Barium	ug/L	MW-307	03/22/2016		8.5100		
Barium	ug/L	MW-307	10/21/2016		8.9200		
Barium	ug/L	MW-307	03/08/2017		8.7100		
Barium	ug/L	MW-307	09/25/2017		8.5700		
Barium	ug/L	MW-307	03/13/2018		9.2700		
Barium	ug/L	MW-307	10/01/2018		7.2400		
Barium	ug/L	MW-307	03/27/2019		7.8600		
Barium	ug/L	MW-307	09/23/2019		7.9700		
Barium	ug/L	MW-307	03/09/2020		8.2600		
Barium	ug/L	MW-307	09/17/2020		7.6700		
Barium	ug/L	MW-307	04/16/2021		9.9100		
Barium	ug/L	MW-307	10/28/2021		17.6000		
Barium	ug/L	MW-307	04/13/2022		8.8200		
Barium	ug/L	MW-307	09/01/2022		8.3000		
Barium	ug/L	MW-307	03/06/2023		8.9000		
Barium	ug/L	MW-307	09/29/2023		21.8000		
Barium	ug/L	MW-307	03/19/2024		9.0000		
Beryllium	ug/L	MW-307	09/18/2012	ND	1.0000		
Beryllium	ug/L	MW-307	03/27/2013		0.6240		
Beryllium	ug/L	MW-307	09/26/2013		0.5800		
Beryllium	ug/L	MW-307	04/15/2014		0.2650		
Beryllium	ug/L	MW-307	09/01/2015	ND	1.0000		
Beryllium	ug/L	MW-307	03/22/2016		0.5390		
Beryllium	ug/L	MW-307	10/21/2016		0.4770		
Beryllium	ug/L	MW-307	03/08/2017		0.4550		

* - 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	ug/L	MW-307	09/25/2017		0.4270		
Beryllium	ug/L	MW-307	03/13/2018	ND	0.5000	1.0000	**
Beryllium	ug/L	MW-307	10/01/2018	ND	0.5300	1.0000	**
Beryllium	ug/L	MW-307	03/27/2019		0.3750		
Beryllium	ug/L	MW-307	09/23/2019	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-307	03/09/2020		0.3300		
Beryllium	ug/L	MW-307	09/17/2020	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-307	04/16/2021		0.5770		
Beryllium	ug/L	MW-307	10/28/2021	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-307	04/13/2022	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-307	09/01/2022	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-307	03/06/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-307	09/29/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-307	03/19/2024	ND	4.0000	1.0000	**
Cadmium	ug/L	MW-307	09/18/2012	ND	0.5000		
Cadmium	ug/L	MW-307	03/27/2013	ND	0.5000		
Cadmium	ug/L	MW-307	09/26/2013	ND	0.5000		
Cadmium	ug/L	MW-307	04/15/2014		0.1470		
Cadmium	ug/L	MW-307	09/01/2015	ND	0.5000		
Cadmium	ug/L	MW-307	03/22/2016		0.1620		
Cadmium	ug/L	MW-307	10/21/2016		0.1150		
Cadmium	ug/L	MW-307	03/08/2017		0.1060		
Cadmium	ug/L	MW-307	09/25/2017		0.0750		
Cadmium	ug/L	MW-307	03/13/2018	ND	0.1760	0.5000	**
Cadmium	ug/L	MW-307	10/01/2018		0.8170		
Cadmium	ug/L	MW-307	03/27/2019		0.0910		
Cadmium	ug/L	MW-307	09/23/2019	ND	0.1560	0.5000	**
Cadmium	ug/L	MW-307	03/09/2020		0.1280		
Cadmium	ug/L	MW-307	09/17/2020		0.0860		
Cadmium	ug/L	MW-307	04/16/2021		0.1160		
Cadmium	ug/L	MW-307	10/28/2021		0.0840		
Cadmium	ug/L	MW-307	04/13/2022	ND	0.2200	0.5000	**
Cadmium	ug/L	MW-307	09/01/2022	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-307	03/06/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-307	09/29/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-307	03/19/2024	ND	0.8000	0.5000	**
Chromium	ug/L	MW-307	09/18/2012	ND	20.0000	4.4000	**
Chromium	ug/L	MW-307	03/27/2013	ND	20.0000	4.4000	**
Chromium	ug/L	MW-307	09/26/2013	ND	60.0000	4.4000	**
Chromium	ug/L	MW-307	04/15/2014	ND	20.0000	4.4000	**
Chromium	ug/L	MW-307	09/01/2015	ND	5.0000	4.4000	**
Chromium	ug/L	MW-307	03/22/2016	ND	0.3550	4.4000	**
Chromium	ug/L	MW-307	10/21/2016	ND	0.3550	4.4000	**
Chromium	ug/L	MW-307	03/08/2017	ND	7.2900	4.4000	**
Chromium	ug/L	MW-307	09/25/2017	ND	0.7290	4.4000	**
Chromium	ug/L	MW-307	03/13/2018	ND	2.9200	4.4000	**
Chromium	ug/L	MW-307	10/01/2018		1.6000		
Chromium	ug/L	MW-307	03/27/2019	ND	0.9800	4.4000	**
Chromium	ug/L	MW-307	09/23/2019	ND	3.9200	4.4000	**
Chromium	ug/L	MW-307	03/09/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-307	09/17/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-307	04/16/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-307	10/28/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-307	04/13/2022	ND	4.4000		
Chromium	ug/L	MW-307	09/01/2022	ND	8.0000	4.4000	**
Chromium	ug/L	MW-307	03/06/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-307	09/29/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-307	03/19/2024	ND	8.0000	4.4000	**
Cobalt	ug/L	MW-307	09/18/2012		60.1000		
Cobalt	ug/L	MW-307	03/27/2013		83.8000		
Cobalt	ug/L	MW-307	09/26/2013		44.3000		
Cobalt	ug/L	MW-307	04/15/2014		59.8000		
Cobalt	ug/L	MW-307	09/01/2015		41.9000		
Cobalt	ug/L	MW-307	03/22/2016		50.9000		
Cobalt	ug/L	MW-307	10/21/2016		59.1000		
Cobalt	ug/L	MW-307	03/08/2017		68.4000		
Cobalt	ug/L	MW-307	09/25/2017		58.0000		
Cobalt	ug/L	MW-307	03/13/2018		65.1000		
Cobalt	ug/L	MW-307	10/01/2018		52.4000		
Cobalt	ug/L	MW-307	03/27/2019		35.6000		
Cobalt	ug/L	MW-307	09/23/2019		44.9000		
Cobalt	ug/L	MW-307	03/09/2020		42.0000		
Cobalt	ug/L	MW-307	09/17/2020		45.8000		
Cobalt	ug/L	MW-307	04/16/2021		59.1000		

* - 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	ug/L	MW-307	10/28/2021		14.8000		*
Cobalt	ug/L	MW-307	04/13/2022		53.5000		
Cobalt	ug/L	MW-307	09/01/2022		39.9000		
Cobalt	ug/L	MW-307	03/06/2023		48.5000		
Cobalt	ug/L	MW-307	09/29/2023		36.6000		
Cobalt	ug/L	MW-307	03/19/2024		42.8000		
Copper	ug/L	MW-307	09/18/2012	ND	20.0000	4.0000	**
Copper	ug/L	MW-307	03/27/2013	ND	20.0000	4.0000	**
Copper	ug/L	MW-307	09/26/2013	ND	60.0000	4.0000	**
Copper	ug/L	MW-307	04/15/2014	ND	20.0000	4.0000	**
Copper	ug/L	MW-307	09/01/2015	ND	2.0000	4.0000	**
Copper	ug/L	MW-307	03/22/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-307	10/21/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-307	03/08/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-307	09/25/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-307	03/13/2018	ND	8.7600	4.0000	**
Copper	ug/L	MW-307	10/01/2018		1.2400		
Copper	ug/L	MW-307	03/27/2019	ND	2.0000	4.0000	**
Copper	ug/L	MW-307	09/23/2019	ND	8.0000	4.0000	**
Copper	ug/L	MW-307	03/09/2020	ND	3.2000	4.0000	**
Copper	ug/L	MW-307	09/17/2020	ND	1.5000	4.0000	**
Copper	ug/L	MW-307	04/16/2021	ND	1.4000	4.0000	**
Copper	ug/L	MW-307	10/28/2021		1.5400		
Copper	ug/L	MW-307	04/13/2022	ND	7.2000	4.0000	**
Copper	ug/L	MW-307	09/01/2022	ND	4.0000		
Copper	ug/L	MW-307	03/06/2023	ND	4.0000		
Copper	ug/L	MW-307	09/29/2023		4.2000		
Copper	ug/L	MW-307	03/19/2024	ND	4.0000		
Lead	ug/L	MW-307	09/18/2012	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	03/27/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	09/26/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	04/15/2014	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	09/01/2015	ND	0.5000	1.3000	**
Lead	ug/L	MW-307	03/22/2016	ND	0.2110	1.3000	**
Lead	ug/L	MW-307	10/21/2016	ND	0.2110	1.3000	**
Lead	ug/L	MW-307	03/08/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-307	09/25/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-307	03/13/2018	ND	1.3000		
Lead	ug/L	MW-307	10/01/2018	ND	0.1860	1.3000	**
Lead	ug/L	MW-307	03/27/2019	ND	0.2700	1.3000	**
Lead	ug/L	MW-307	09/23/2019	ND	1.0800	1.3000	**
Lead	ug/L	MW-307	03/09/2020	ND	0.2700	1.3000	**
Lead	ug/L	MW-307	09/17/2020	ND	0.1100	1.3000	**
Lead	ug/L	MW-307	04/16/2021	ND	0.2100	1.3000	**
Lead	ug/L	MW-307	10/28/2021		0.7700		
Lead	ug/L	MW-307	04/13/2022	ND	0.9600	1.3000	**
Lead	ug/L	MW-307	09/01/2022	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	03/06/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	09/29/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	03/19/2024	ND	4.0000	1.3000	**
Nickel	ug/L	MW-307	09/18/2012		115.0000		
Nickel	ug/L	MW-307	03/27/2013		122.0000		
Nickel	ug/L	MW-307	09/26/2013		79.6000		
Nickel	ug/L	MW-307	04/15/2014		101.0000		
Nickel	ug/L	MW-307	09/01/2015		70.9000		
Nickel	ug/L	MW-307	03/22/2016		84.3000		
Nickel	ug/L	MW-307	10/21/2016		69.8000		
Nickel	ug/L	MW-307	03/08/2017		112.0000		
Nickel	ug/L	MW-307	09/25/2017		62.0000		
Nickel	ug/L	MW-307	03/13/2018		98.9000		
Nickel	ug/L	MW-307	10/01/2018		92.9000		
Nickel	ug/L	MW-307	03/27/2019		79.1000		
Nickel	ug/L	MW-307	09/23/2019		75.9000		
Nickel	ug/L	MW-307	03/09/2020		71.1000		
Nickel	ug/L	MW-307	09/17/2020		76.9000		
Nickel	ug/L	MW-307	04/16/2021		104.0000		
Nickel	ug/L	MW-307	10/28/2021		31.5000		
Nickel	ug/L	MW-307	04/13/2022		88.8000		
Nickel	ug/L	MW-307	09/01/2022		70.0000		
Nickel	ug/L	MW-307	03/06/2023		83.7000		
Nickel	ug/L	MW-307	09/29/2023		68.1000		
Nickel	ug/L	MW-307	03/19/2024		74.2000		
Selenium	ug/L	MW-307	09/18/2012	ND	5.0000	3.8400	**
Selenium	ug/L	MW-307	03/27/2013	ND	5.0000	3.8400	**

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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	
Selenium	ug/L	MW-307	09/26/2013	ND	5.0000	3.8400	**
Selenium	ug/L	MW-307	04/15/2014	ND	5.0000	3.8400	**
Selenium	ug/L	MW-307	09/01/2015	ND	5.0000	3.8400	**
Selenium	ug/L	MW-307	03/22/2016		0.6430		
Selenium	ug/L	MW-307	10/21/2016		1.4800		
Selenium	ug/L	MW-307	03/08/2017		2.3100		
Selenium	ug/L	MW-307	09/25/2017		1.0600		
Selenium	ug/L	MW-307	03/13/2018	ND	3.7100	3.8400	**
Selenium	ug/L	MW-307	10/01/2018		1.0400		
Selenium	ug/L	MW-307	03/27/2019		1.2300		
Selenium	ug/L	MW-307	09/23/2019	ND	4.0000	3.8400	**
Selenium	ug/L	MW-307	03/09/2020		1.2400		
Selenium	ug/L	MW-307	09/17/2020	ND	1.0000	3.8400	**
Selenium	ug/L	MW-307	04/16/2021	ND	0.9600	3.8400	**
Selenium	ug/L	MW-307	10/28/2021	ND	0.9600	3.8400	**
Selenium	ug/L	MW-307	04/13/2022	ND	3.8400		
Selenium	ug/L	MW-307	09/01/2022	ND	4.0000	3.8400	**
Selenium	ug/L	MW-307	03/06/2023	ND	4.0000	3.8400	**
Selenium	ug/L	MW-307	09/29/2023		6.4000		
Selenium	ug/L	MW-307	03/19/2024	ND	4.0000	3.8400	**
Silver	ug/L	MW-307	09/18/2012		36.0000		*
Silver	ug/L	MW-307	03/27/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-307	09/26/2013		18.1000		*
Silver	ug/L	MW-307	04/15/2014	ND	20.0000	1.0000	**
Silver	ug/L	MW-307	09/01/2015	ND	1.0000		
Silver	ug/L	MW-307	03/22/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-307	10/21/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-307	03/08/2017	ND	1.4000	1.0000	**
Silver	ug/L	MW-307	09/25/2017	ND	0.1400	1.0000	**
Silver	ug/L	MW-307	03/13/2018	ND	0.5600	1.0000	**
Silver	ug/L	MW-307	10/01/2018	ND	0.1150	1.0000	**
Silver	ug/L	MW-307	03/27/2019	ND	0.3700	1.0000	**
Silver	ug/L	MW-307	09/23/2019	ND	1.4800	1.0000	**
Silver	ug/L	MW-307	03/09/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-307	09/17/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-307	04/16/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-307	10/28/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-307	04/13/2022	ND	1.9600	1.0000	**
Silver	ug/L	MW-307	09/01/2022	ND	4.0000	1.0000	**
Silver	ug/L	MW-307	03/06/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-307	09/29/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-307	03/19/2024	ND	4.0000	1.0000	**
Thallium	ug/L	MW-307	09/18/2012	ND	2.0000	1.0000	**
Thallium	ug/L	MW-307	03/27/2013	ND	2.0000	1.0000	**
Thallium	ug/L	MW-307	09/26/2013	ND	2.0000	1.0000	**
Thallium	ug/L	MW-307	04/15/2014	ND	2.0000	1.0000	**
Thallium	ug/L	MW-307	09/01/2015	ND	1.0000		
Thallium	ug/L	MW-307	03/22/2016		0.0460		
Thallium	ug/L	MW-307	10/21/2016		0.0440		
Thallium	ug/L	MW-307	03/08/2017	ND	0.0644	1.0000	**
Thallium	ug/L	MW-307	09/25/2017	ND	0.0644	1.0000	**
Thallium	ug/L	MW-307	03/13/2018	ND	0.2580	1.0000	**
Thallium	ug/L	MW-307	10/01/2018	ND	0.5700	1.0000	**
Thallium	ug/L	MW-307	03/27/2019	ND	0.2700	1.0000	**
Thallium	ug/L	MW-307	09/23/2019	ND	1.0800	1.0000	**
Thallium	ug/L	MW-307	03/09/2020	ND	0.2600	1.0000	**
Thallium	ug/L	MW-307	09/17/2020	ND	0.2600	1.0000	**
Thallium	ug/L	MW-307	04/16/2021	ND	0.2600	1.0000	**
Thallium	ug/L	MW-307	10/28/2021	ND	0.2600	1.0000	**
Thallium	ug/L	MW-307	04/13/2022	ND	1.0400	1.0000	**
Thallium	ug/L	MW-307	09/01/2022	ND	2.0000	1.0000	**
Thallium	ug/L	MW-307	03/06/2023	ND	2.0000	1.0000	**
Thallium	ug/L	MW-307	09/29/2023	ND	2.0000	1.0000	**
Thallium	ug/L	MW-307	03/19/2024	ND	2.0000	1.0000	**
Vanadium	ug/L	MW-307	09/18/2012	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-307	03/27/2013		22.7000		*
Vanadium	ug/L	MW-307	09/26/2013	ND	150.0000	3.3600	**
Vanadium	ug/L	MW-307	04/15/2014	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-307	09/01/2015	ND	5.0000	3.3600	**
Vanadium	ug/L	MW-307	03/22/2016	ND	0.2550	3.3600	**
Vanadium	ug/L	MW-307	10/21/2016	ND	0.2550	3.3600	**
Vanadium	ug/L	MW-307	03/08/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-307	09/25/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-307	03/13/2018	ND	3.3600		

* - 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	ug/L	MW-307	10/01/2018	ND	2.1500	3.3600	**
Vanadium	ug/L	MW-307	03/27/2019	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-307	09/23/2019	ND	3.2800	3.3600	**
Vanadium	ug/L	MW-307	03/09/2020	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-307	09/17/2020	ND	0.8500	3.3600	**
Vanadium	ug/L	MW-307	04/16/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-307	10/28/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-307	04/13/2022	ND	4.4000	3.3600	**
Vanadium	ug/L	MW-307	09/01/2022	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-307	03/06/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-307	09/29/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-307	03/19/2024	ND	20.0000	3.3600	**
Zinc	ug/L	MW-307	09/18/2012		434.0000		
Zinc	ug/L	MW-307	03/27/2013		663.0000		
Zinc	ug/L	MW-307	09/26/2013		695.0000		
Zinc	ug/L	MW-307	04/15/2014		356.0000		
Zinc	ug/L	MW-307	09/01/2015		338.0000		
Zinc	ug/L	MW-307	03/22/2016		385.0000		
Zinc	ug/L	MW-307	10/21/2016		456.0000		
Zinc	ug/L	MW-307	03/08/2017		492.0000		
Zinc	ug/L	MW-307	09/25/2017		283.0000		
Zinc	ug/L	MW-307	03/13/2018		447.0000		
Zinc	ug/L	MW-307	10/01/2018		424.0000		
Zinc	ug/L	MW-307	03/27/2019		346.0000		
Zinc	ug/L	MW-307	09/23/2019		322.0000		
Zinc	ug/L	MW-307	03/09/2020		308.0000		
Zinc	ug/L	MW-307	09/17/2020		349.0000		
Zinc	ug/L	MW-307	04/16/2021		443.0000		
Zinc	ug/L	MW-307	10/28/2021		10.6000		*
Zinc	ug/L	MW-307	04/13/2022		374.0000		
Zinc	ug/L	MW-307	09/01/2022		271.0000		
Zinc	ug/L	MW-307	03/06/2023		324.0000		
Zinc	ug/L	MW-307	09/29/2023		383.0000		
Zinc	ug/L	MW-307	03/19/2024		304.0000		
Antimony	ug/L	MW-312	09/20/2012	ND	6.0000	1.1000	**
Antimony	ug/L	MW-312	12/12/2012	ND	6.0000	1.1000	**
Antimony	ug/L	MW-312	03/28/2013	ND	6.0000	1.1000	**
Antimony	ug/L	MW-312	06/19/2013	ND	6.0000	1.1000	**
Antimony	ug/L	MW-312	09/26/2013	ND	6.0000	1.1000	**
Antimony	ug/L	MW-312	04/16/2014	ND	6.0000	1.1000	**
Antimony	ug/L	MW-312	09/01/2015	ND	1.0000	1.1000	**
Antimony	ug/L	MW-312	03/22/2016	ND	0.2370	1.1000	**
Antimony	ug/L	MW-312	10/21/2016	ND	0.2370	1.1000	**
Antimony	ug/L	MW-312	03/08/2017	ND	0.1850	1.1000	**
Antimony	ug/L	MW-312	09/25/2017	ND	0.1850	1.1000	**
Antimony	ug/L	MW-312	03/13/2018	ND	0.7400	1.1000	**
Antimony	ug/L	MW-312	10/01/2018	ND	1.3200	1.1000	**
Antimony	ug/L	MW-312	03/27/2019	ND	0.5300	1.1000	**
Antimony	ug/L	MW-312	09/23/2019	ND	0.5300	1.1000	**
Antimony	ug/L	MW-312	03/09/2020	ND	0.5800	1.1000	**
Antimony	ug/L	MW-312	09/15/2020	ND	0.5100	1.1000	**
Antimony	ug/L	MW-312	04/15/2021	ND	1.1000		
Antimony	ug/L	MW-312	10/27/2021	ND	1.1000		
Antimony	ug/L	MW-312	04/14/2022	ND	2.7600	1.1000	**
Antimony	ug/L	MW-312	09/01/2022	ND	2.0000	1.1000	**
Antimony	ug/L	MW-312	03/06/2023	ND	2.0000	1.1000	**
Antimony	ug/L	MW-312	09/29/2023	ND	2.0000	1.1000	**
Antimony	ug/L	MW-312	03/19/2024	ND	2.0000	1.1000	**
Arsenic	ug/L	MW-312	09/20/2012	ND	1.0000	2.0000	**
Arsenic	ug/L	MW-312	12/12/2012	ND	2.0000		
Arsenic	ug/L	MW-312	03/28/2013	ND	1.0000	2.0000	**
Arsenic	ug/L	MW-312	06/19/2013	ND	3.0000	2.0000	**
Arsenic	ug/L	MW-312	09/26/2013		2.3200		
Arsenic	ug/L	MW-312	04/16/2014	ND	1.0000	2.0000	**
Arsenic	ug/L	MW-312	09/01/2015	ND	2.0000		
Arsenic	ug/L	MW-312	03/22/2016	ND	0.6720	2.0000	**
Arsenic	ug/L	MW-312	10/21/2016		1.4300		
Arsenic	ug/L	MW-312	03/08/2017		1.0200		
Arsenic	ug/L	MW-312	09/25/2017		1.2300		
Arsenic	ug/L	MW-312	03/13/2018	ND	2.0200	2.0000	**
Arsenic	ug/L	MW-312	10/01/2018		1.8400		
Arsenic	ug/L	MW-312	03/27/2019		1.1300		
Arsenic	ug/L	MW-312	09/23/2019		1.2200		
Arsenic	ug/L	MW-312	03/09/2020	ND	0.8800	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	
Arsenic	ug/L	MW-312	09/15/2020		2.1500		
Arsenic	ug/L	MW-312	04/15/2021		1.2800		
Arsenic	ug/L	MW-312	10/27/2021		1.2900		
Arsenic	ug/L	MW-312	04/14/2022	ND	3.0000	2.0000	**
Arsenic	ug/L	MW-312	09/01/2022	ND	4.0000	2.0000	**
Arsenic	ug/L	MW-312	03/06/2023	ND	4.0000	2.0000	**
Arsenic	ug/L	MW-312	09/29/2023	ND	4.0000	2.0000	**
Arsenic	ug/L	MW-312	03/19/2024	ND	4.0000	2.0000	**
Barium	ug/L	MW-312	09/20/2012		16.6000		
Barium	ug/L	MW-312	12/12/2012		18.5000		
Barium	ug/L	MW-312	03/28/2013		12.3000		
Barium	ug/L	MW-312	06/19/2013		16.7000		
Barium	ug/L	MW-312	09/26/2013		8.4700		
Barium	ug/L	MW-312	04/16/2014		10.7000		
Barium	ug/L	MW-312	09/01/2015		15.4000		
Barium	ug/L	MW-312	03/22/2016		24.9000		
Barium	ug/L	MW-312	10/21/2016		13.8000		
Barium	ug/L	MW-312	03/08/2017		14.1000		
Barium	ug/L	MW-312	09/25/2017		16.5000		
Barium	ug/L	MW-312	03/13/2018		12.8000		
Barium	ug/L	MW-312	10/01/2018		13.4000		
Barium	ug/L	MW-312	03/27/2019		14.6000		
Barium	ug/L	MW-312	09/23/2019		11.1000		
Barium	ug/L	MW-312	03/09/2020		14.9000		
Barium	ug/L	MW-312	09/15/2020		13.6000		
Barium	ug/L	MW-312	04/15/2021		12.5000		
Barium	ug/L	MW-312	10/27/2021		11.9000		
Barium	ug/L	MW-312	04/14/2022		14.6000		
Barium	ug/L	MW-312	09/01/2022		23.9000		
Barium	ug/L	MW-312	03/06/2023		25.3000		
Barium	ug/L	MW-312	09/29/2023		22.9000		
Barium	ug/L	MW-312	03/19/2024		24.3000		
Beryllium	ug/L	MW-312	09/20/2012	ND	1.0000		
Beryllium	ug/L	MW-312	12/12/2012	ND	1.0000		
Beryllium	ug/L	MW-312	03/28/2013	ND	1.0000		
Beryllium	ug/L	MW-312	06/19/2013	ND	1.0000		
Beryllium	ug/L	MW-312	09/26/2013		0.2800		
Beryllium	ug/L	MW-312	04/16/2014	ND	1.0000		
Beryllium	ug/L	MW-312	09/01/2015	ND	1.0000		
Beryllium	ug/L	MW-312	03/22/2016	ND	0.2210	1.0000	**
Beryllium	ug/L	MW-312	10/21/2016	ND	0.2210	1.0000	**
Beryllium	ug/L	MW-312	03/08/2017		0.1430		
Beryllium	ug/L	MW-312	09/25/2017		0.1980		
Beryllium	ug/L	MW-312	03/13/2018	ND	0.5000	1.0000	**
Beryllium	ug/L	MW-312	10/01/2018	ND	0.5300	1.0000	**
Beryllium	ug/L	MW-312	03/27/2019	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-312	09/23/2019		0.3180		
Beryllium	ug/L	MW-312	03/09/2020	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-312	09/15/2020	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-312	04/15/2021		0.3120		
Beryllium	ug/L	MW-312	10/27/2021		0.2750		
Beryllium	ug/L	MW-312	04/14/2022	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-312	09/01/2022	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-312	03/06/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-312	09/29/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-312	03/19/2024	ND	4.0000	1.0000	**
Cadmium	ug/L	MW-312	09/20/2012	ND	0.5000		
Cadmium	ug/L	MW-312	12/12/2012	ND	0.5000		
Cadmium	ug/L	MW-312	03/28/2013	ND	0.5000		
Cadmium	ug/L	MW-312	06/19/2013		0.2460		
Cadmium	ug/L	MW-312	09/26/2013	ND	0.5000		
Cadmium	ug/L	MW-312	04/16/2014	ND	0.5000		
Cadmium	ug/L	MW-312	09/01/2015	ND	0.5000		
Cadmium	ug/L	MW-312	03/22/2016		0.0670		
Cadmium	ug/L	MW-312	10/21/2016	ND	0.0351	0.5000	**
Cadmium	ug/L	MW-312	03/08/2017	ND	0.0441	0.5000	**
Cadmium	ug/L	MW-312	09/25/2017	ND	0.0441	0.5000	**
Cadmium	ug/L	MW-312	03/13/2018	ND	0.1760	0.5000	**
Cadmium	ug/L	MW-312	10/01/2018	ND	0.1670	0.5000	**
Cadmium	ug/L	MW-312	03/27/2019	ND	0.0770	0.5000	**
Cadmium	ug/L	MW-312	09/23/2019	ND	0.0390	0.5000	**
Cadmium	ug/L	MW-312	03/09/2020		0.0680		
Cadmium	ug/L	MW-312	09/15/2020	ND	0.0490	0.5000	**
Cadmium	ug/L	MW-312	04/15/2021	ND	0.0510	0.5000	**

* - 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	
Cadmium	ug/L	MW-312	10/27/2021	ND	0.0510	0.5000	**
Cadmium	ug/L	MW-312	04/14/2022	ND	0.2200	0.5000	**
Cadmium	ug/L	MW-312	09/01/2022	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-312	03/06/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-312	09/29/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-312	03/19/2024	ND	0.8000	0.5000	**
Chromium	ug/L	MW-312	09/20/2012	ND	20.0000	4.4000	**
Chromium	ug/L	MW-312	12/12/2012	ND	20.0000	4.4000	**
Chromium	ug/L	MW-312	03/28/2013	ND	20.0000	4.4000	**
Chromium	ug/L	MW-312	06/19/2013	ND	20.0000	4.4000	**
Chromium	ug/L	MW-312	09/26/2013		3.9000		
Chromium	ug/L	MW-312	04/16/2014	ND	20.0000	4.4000	**
Chromium	ug/L	MW-312	09/01/2015	ND	5.0000	4.4000	**
Chromium	ug/L	MW-312	03/22/2016	ND	0.3550	4.4000	**
Chromium	ug/L	MW-312	10/21/2016	ND	0.3550	4.4000	**
Chromium	ug/L	MW-312	03/08/2017	ND	0.7290	4.4000	**
Chromium	ug/L	MW-312	09/25/2017	ND	0.7290	4.4000	**
Chromium	ug/L	MW-312	03/13/2018	ND	2.9200	4.4000	**
Chromium	ug/L	MW-312	10/01/2018		1.2600		
Chromium	ug/L	MW-312	03/27/2019	ND	0.9800	4.4000	**
Chromium	ug/L	MW-312	09/23/2019	ND	0.9800	4.4000	**
Chromium	ug/L	MW-312	03/09/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-312	09/15/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-312	04/15/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-312	10/27/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-312	04/14/2022	ND	4.4000		
Chromium	ug/L	MW-312	09/01/2022	ND	8.0000	4.4000	**
Chromium	ug/L	MW-312	03/06/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-312	09/29/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-312	03/19/2024	ND	8.0000	4.4000	**
Cobalt	ug/L	MW-312	09/20/2012		36.2000		
Cobalt	ug/L	MW-312	12/12/2012		34.3000		
Cobalt	ug/L	MW-312	03/28/2013		54.5000		
Cobalt	ug/L	MW-312	06/19/2013		43.7000		
Cobalt	ug/L	MW-312	09/26/2013		44.9000		
Cobalt	ug/L	MW-312	04/16/2014		20.8000		
Cobalt	ug/L	MW-312	09/01/2015		32.4000		
Cobalt	ug/L	MW-312	03/22/2016		37.1000		
Cobalt	ug/L	MW-312	10/21/2016		36.4000		
Cobalt	ug/L	MW-312	03/08/2017		35.0000		
Cobalt	ug/L	MW-312	09/25/2017		30.3000		
Cobalt	ug/L	MW-312	03/13/2018		24.1000		
Cobalt	ug/L	MW-312	10/01/2018		29.8000		
Cobalt	ug/L	MW-312	03/27/2019		32.7000		
Cobalt	ug/L	MW-312	09/23/2019		34.9000		
Cobalt	ug/L	MW-312	03/09/2020		34.7000		
Cobalt	ug/L	MW-312	09/15/2020		41.4000		
Cobalt	ug/L	MW-312	04/15/2021		52.3000		
Cobalt	ug/L	MW-312	10/27/2021		38.6000		
Cobalt	ug/L	MW-312	04/14/2022		47.4000		
Cobalt	ug/L	MW-312	09/01/2022		34.0000		
Cobalt	ug/L	MW-312	03/06/2023		44.8000		
Cobalt	ug/L	MW-312	09/29/2023		42.9000		
Cobalt	ug/L	MW-312	03/19/2024		44.2000		
Copper	ug/L	MW-312	09/20/2012	ND	20.0000	4.0000	**
Copper	ug/L	MW-312	12/12/2012	ND	20.0000	4.0000	**
Copper	ug/L	MW-312	03/28/2013		2.1900		
Copper	ug/L	MW-312	06/19/2013	ND	20.0000	4.0000	**
Copper	ug/L	MW-312	09/26/2013	ND	20.0000	4.0000	**
Copper	ug/L	MW-312	04/16/2014	ND	20.0000	4.0000	**
Copper	ug/L	MW-312	09/01/2015	ND	2.0000	4.0000	**
Copper	ug/L	MW-312	03/22/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-312	10/21/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-312	03/08/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-312	09/25/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-312	03/13/2018	ND	8.7600	4.0000	**
Copper	ug/L	MW-312	10/01/2018		1.1800		
Copper	ug/L	MW-312	03/27/2019	ND	2.0000	4.0000	**
Copper	ug/L	MW-312	09/23/2019	ND	2.0000	4.0000	**
Copper	ug/L	MW-312	03/09/2020	ND	3.2000	4.0000	**
Copper	ug/L	MW-312	09/15/2020	ND	1.5000	4.0000	**
Copper	ug/L	MW-312	04/15/2021	ND	1.4000	4.0000	**
Copper	ug/L	MW-312	10/27/2021	ND	1.4000	4.0000	**
Copper	ug/L	MW-312	04/14/2022		7.9900		

* - Outlier for that well and constituent.
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*** - ND value replaced with manual RL.
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Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper	ug/L	MW-312	09/01/2022	ND	4.0000		
Copper	ug/L	MW-312	03/06/2023	ND	4.0000		
Copper	ug/L	MW-312	09/29/2023	ND	4.0000		
Copper	ug/L	MW-312	03/19/2024	ND	4.0000		
Lead	ug/L	MW-312	09/20/2012	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	12/12/2012	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	03/28/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	06/19/2013		1.6700		
Lead	ug/L	MW-312	09/26/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	04/16/2014	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	09/01/2015	ND	0.5000	1.3000	**
Lead	ug/L	MW-312	03/22/2016	ND	0.2110	1.3000	**
Lead	ug/L	MW-312	10/21/2016	ND	0.2110	1.3000	**
Lead	ug/L	MW-312	03/08/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-312	09/25/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-312	03/13/2018	ND	1.3000		
Lead	ug/L	MW-312	10/01/2018	ND	0.1860	1.3000	**
Lead	ug/L	MW-312	03/27/2019	ND	0.2700	1.3000	**
Lead	ug/L	MW-312	09/23/2019		0.2740		
Lead	ug/L	MW-312	03/09/2020	ND	0.2700	1.3000	**
Lead	ug/L	MW-312	09/15/2020		0.1770		
Lead	ug/L	MW-312	04/15/2021	ND	0.2100	1.3000	**
Lead	ug/L	MW-312	10/27/2021		1.4100		
Lead	ug/L	MW-312	04/14/2022	ND	0.9600	1.3000	**
Lead	ug/L	MW-312	09/01/2022	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	03/06/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	09/29/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	03/19/2024	ND	4.0000	1.3000	**
Nickel	ug/L	MW-312	09/20/2012		89.5000		
Nickel	ug/L	MW-312	12/12/2012		82.0000		
Nickel	ug/L	MW-312	03/28/2013		121.0000		
Nickel	ug/L	MW-312	06/19/2013		119.0000		
Nickel	ug/L	MW-312	09/26/2013		117.0000		
Nickel	ug/L	MW-312	04/16/2014		101.0000		
Nickel	ug/L	MW-312	09/01/2015		108.0000		
Nickel	ug/L	MW-312	03/22/2016		45.0000		
Nickel	ug/L	MW-312	10/21/2016		94.4000		
Nickel	ug/L	MW-312	03/08/2017		100.0000		
Nickel	ug/L	MW-312	09/25/2017		80.1000		
Nickel	ug/L	MW-312	03/13/2018		88.8000		
Nickel	ug/L	MW-312	10/01/2018		91.6000		
Nickel	ug/L	MW-312	03/27/2019		101.0000		
Nickel	ug/L	MW-312	09/23/2019		120.0000		
Nickel	ug/L	MW-312	03/09/2020		85.8000		
Nickel	ug/L	MW-312	09/15/2020		119.0000		
Nickel	ug/L	MW-312	04/15/2021		150.0000		
Nickel	ug/L	MW-312	10/27/2021		128.0000		
Nickel	ug/L	MW-312	04/14/2022		141.0000		
Nickel	ug/L	MW-312	09/01/2022		64.5000		
Nickel	ug/L	MW-312	03/06/2023		64.8000		
Nickel	ug/L	MW-312	09/29/2023		72.1000		
Nickel	ug/L	MW-312	03/19/2024		58.4000		
Selenium	ug/L	MW-312	09/20/2012	ND	5.0000	3.8400	**
Selenium	ug/L	MW-312	12/12/2012	ND	5.0000	3.8400	**
Selenium	ug/L	MW-312	03/28/2013	ND	5.0000	3.8400	**
Selenium	ug/L	MW-312	06/19/2013	ND	5.0000	3.8400	**
Selenium	ug/L	MW-312	09/26/2013	ND	5.0000	3.8400	**
Selenium	ug/L	MW-312	04/16/2014	ND	5.0000	3.8400	**
Selenium	ug/L	MW-312	09/01/2015	ND	5.0000	3.8400	**
Selenium	ug/L	MW-312	03/22/2016	ND	0.6300	3.8400	**
Selenium	ug/L	MW-312	10/21/2016	ND	0.6300	3.8400	**
Selenium	ug/L	MW-312	03/08/2017	ND	0.9280	3.8400	**
Selenium	ug/L	MW-312	09/25/2017	ND	0.9280	3.8400	**
Selenium	ug/L	MW-312	03/13/2018	ND	3.7100	3.8400	**
Selenium	ug/L	MW-312	10/01/2018	ND	0.9820	3.8400	**
Selenium	ug/L	MW-312	03/27/2019	ND	1.0000	3.8400	**
Selenium	ug/L	MW-312	09/23/2019	ND	1.0000	3.8400	**
Selenium	ug/L	MW-312	03/09/2020	ND	1.0000	3.8400	**
Selenium	ug/L	MW-312	09/15/2020	ND	1.0000	3.8400	**
Selenium	ug/L	MW-312	04/15/2021	ND	0.9600	3.8400	**
Selenium	ug/L	MW-312	10/27/2021	ND	0.9600	3.8400	**
Selenium	ug/L	MW-312	04/14/2022	ND	3.8400		
Selenium	ug/L	MW-312	09/01/2022	ND	4.0000	3.8400	**
Selenium	ug/L	MW-312	03/06/2023	ND	4.0000	3.8400	**

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** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
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Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Selenium	ug/L	MW-312	09/29/2023	ND	4.0000	3.8400	**
Selenium	ug/L	MW-312	03/19/2024	ND	4.0000	3.8400	**
Silver	ug/L	MW-312	09/20/2012	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	12/12/2012	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	03/28/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	06/19/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	09/26/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	04/16/2014	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	09/01/2015	ND	1.0000		
Silver	ug/L	MW-312	03/22/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-312	10/21/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-312	03/08/2017	ND	0.1400	1.0000	**
Silver	ug/L	MW-312	09/25/2017	ND	0.1400	1.0000	**
Silver	ug/L	MW-312	03/13/2018	ND	0.5600	1.0000	**
Silver	ug/L	MW-312	10/01/2018	ND	0.1150	1.0000	**
Silver	ug/L	MW-312	03/27/2019	ND	0.3700	1.0000	**
Silver	ug/L	MW-312	09/23/2019	ND	0.3700	1.0000	**
Silver	ug/L	MW-312	03/09/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-312	09/15/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-312	04/15/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-312	10/27/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-312	04/14/2022	ND	1.9600	1.0000	**
Silver	ug/L	MW-312	09/01/2022	ND	4.0000	1.0000	**
Silver	ug/L	MW-312	03/06/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-312	09/29/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-312	03/19/2024	ND	4.0000	1.0000	**
Thallium	ug/L	MW-312	09/20/2012	ND	2.0000	1.0000	**
Thallium	ug/L	MW-312	12/12/2012	ND	2.0000	1.0000	**
Thallium	ug/L	MW-312	03/28/2013	ND	2.0000	1.0000	**
Thallium	ug/L	MW-312	06/19/2013	ND	2.0000	1.0000	**
Thallium	ug/L	MW-312	09/26/2013	ND	2.0000	1.0000	**
Thallium	ug/L	MW-312	04/16/2014	ND	2.0000	1.0000	**
Thallium	ug/L	MW-312	09/01/2015	ND	1.0000		
Thallium	ug/L	MW-312	03/22/2016		0.0650		
Thallium	ug/L	MW-312	10/21/2016	ND	0.0255	1.0000	**
Thallium	ug/L	MW-312	03/08/2017	ND	0.0644	1.0000	**
Thallium	ug/L	MW-312	09/25/2017	ND	0.0644	1.0000	**
Thallium	ug/L	MW-312	03/13/2018	ND	0.2580	1.0000	**
Thallium	ug/L	MW-312	10/01/2018	ND	0.5700	1.0000	**
Thallium	ug/L	MW-312	03/27/2019	ND	0.2700	1.0000	**
Thallium	ug/L	MW-312	09/23/2019	ND	0.2700	1.0000	**
Thallium	ug/L	MW-312	03/09/2020	ND	0.2600	1.0000	**
Thallium	ug/L	MW-312	09/15/2020	ND	0.2600	1.0000	**
Thallium	ug/L	MW-312	04/15/2021	ND	0.2600	1.0000	**
Thallium	ug/L	MW-312	10/27/2021	ND	0.2600	1.0000	**
Thallium	ug/L	MW-312	04/14/2022	ND	1.0400	1.0000	**
Thallium	ug/L	MW-312	09/01/2022	ND	2.0000	1.0000	**
Thallium	ug/L	MW-312	03/06/2023	ND	2.0000	1.0000	**
Thallium	ug/L	MW-312	09/29/2023	ND	2.0000	1.0000	**
Thallium	ug/L	MW-312	03/19/2024	ND	2.0000	1.0000	**
Vanadium	ug/L	MW-312	09/20/2012	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	12/12/2012	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	03/28/2013	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	06/19/2013	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	09/26/2013	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	04/16/2014	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	09/01/2015	ND	5.0000	3.3600	**
Vanadium	ug/L	MW-312	03/22/2016	ND	0.2550	3.3600	**
Vanadium	ug/L	MW-312	10/21/2016	ND	0.2550	3.3600	**
Vanadium	ug/L	MW-312	03/08/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-312	09/25/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-312	03/13/2018	ND	3.3600		
Vanadium	ug/L	MW-312	10/01/2018	ND	2.1500	3.3600	**
Vanadium	ug/L	MW-312	03/27/2019	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-312	09/23/2019	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-312	03/09/2020	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-312	09/15/2020	ND	0.8500	3.3600	**
Vanadium	ug/L	MW-312	04/15/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-312	10/27/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-312	04/14/2022	ND	4.4000	3.3600	**
Vanadium	ug/L	MW-312	09/01/2022	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-312	03/06/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-312	09/29/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-312	03/19/2024	ND	20.0000	3.3600	**

* - 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	ug/L	MW-312	09/20/2012	ND	20.0000		
Zinc	ug/L	MW-312	12/12/2012		85.0000		
Zinc	ug/L	MW-312	03/28/2013		84.9000		
Zinc	ug/L	MW-312	06/19/2013		70.1000		
Zinc	ug/L	MW-312	09/26/2013		209.0000		
Zinc	ug/L	MW-312	04/16/2014	ND	60.0000	20.0000	**
Zinc	ug/L	MW-312	09/01/2015	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	03/22/2016		6.8000		
Zinc	ug/L	MW-312	10/21/2016		12.3000		
Zinc	ug/L	MW-312	03/08/2017		17.6000		
Zinc	ug/L	MW-312	09/25/2017	ND	11.5000	20.0000	**
Zinc	ug/L	MW-312	03/13/2018	ND	46.0000	20.0000	**
Zinc	ug/L	MW-312	10/01/2018		10.0000		
Zinc	ug/L	MW-312	03/27/2019	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	09/23/2019	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	03/09/2020	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	09/15/2020		12.9000		
Zinc	ug/L	MW-312	04/15/2021	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	10/27/2021	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	04/14/2022	ND	40.0000	20.0000	**
Zinc	ug/L	MW-312	09/01/2022	ND	20.0000		
Zinc	ug/L	MW-312	03/06/2023	ND	20.0000		
Zinc	ug/L	MW-312	09/29/2023	ND	20.0000		
Zinc	ug/L	MW-312	03/19/2024	ND	20.0000		
Antimony	ug/L	MW-390	09/18/2012	ND	6.0000	1.1000	**
Antimony	ug/L	MW-390	03/27/2013	ND	6.0000	1.1000	**
Antimony	ug/L	MW-390	09/25/2013	ND	6.0000	1.1000	**
Antimony	ug/L	MW-390	04/15/2014	ND	6.0000	1.1000	**
Antimony	ug/L	MW-390	09/01/2015	ND	1.0000	1.1000	**
Antimony	ug/L	MW-390	03/22/2016	ND	0.2370	1.1000	**
Antimony	ug/L	MW-390	10/21/2016	ND	0.2370	1.1000	**
Antimony	ug/L	MW-390	03/08/2017	ND	0.1850	1.1000	**
Antimony	ug/L	MW-390	09/25/2017	ND	0.1850	1.1000	**
Antimony	ug/L	MW-390	03/13/2018	ND	0.7400	1.1000	**
Antimony	ug/L	MW-390	10/01/2018	ND	1.3200	1.1000	**
Antimony	ug/L	MW-390	03/27/2019	ND	0.5300	1.1000	**
Antimony	ug/L	MW-390	09/23/2019	ND	2.1200	1.1000	**
Antimony	ug/L	MW-390	03/09/2020	ND	0.5800	1.1000	**
Antimony	ug/L	MW-390	09/17/2020	ND	0.5100	1.1000	**
Antimony	ug/L	MW-390	04/14/2021	ND	1.1000		
Antimony	ug/L	MW-390	10/26/2021	ND	1.1000		
Antimony	ug/L	MW-390	04/14/2022	ND	2.7600	1.1000	**
Antimony	ug/L	MW-390	09/01/2022	ND	2.0000	1.1000	**
Antimony	ug/L	MW-390	03/06/2023	ND	2.0000	1.1000	**
Antimony	ug/L	MW-390	09/29/2023	ND	2.0000	1.1000	**
Antimony	ug/L	MW-390	03/18/2024	ND	2.0000	1.1000	**
Arsenic	ug/L	MW-390	09/18/2012		13.9000		
Arsenic	ug/L	MW-390	03/27/2013		14.0000		
Arsenic	ug/L	MW-390	09/25/2013		14.7000		
Arsenic	ug/L	MW-390	04/15/2014		17.6000		
Arsenic	ug/L	MW-390	09/01/2015		22.3000		
Arsenic	ug/L	MW-390	03/22/2016		16.7000		
Arsenic	ug/L	MW-390	10/21/2016		13.7000		
Arsenic	ug/L	MW-390	03/08/2017		7.2500		
Arsenic	ug/L	MW-390	09/25/2017		13.6000		
Arsenic	ug/L	MW-390	03/13/2018		14.7000		
Arsenic	ug/L	MW-390	10/01/2018		13.9000		
Arsenic	ug/L	MW-390	03/27/2019		15.0000		
Arsenic	ug/L	MW-390	09/23/2019		19.7000		
Arsenic	ug/L	MW-390	03/09/2020		19.0000		
Arsenic	ug/L	MW-390	09/17/2020		14.8000		
Arsenic	ug/L	MW-390	04/14/2021		15.7000		
Arsenic	ug/L	MW-390	10/26/2021		11.3000		
Arsenic	ug/L	MW-390	04/14/2022		22.5000		
Arsenic	ug/L	MW-390	09/01/2022		19.4000		
Arsenic	ug/L	MW-390	03/06/2023		16.3000		
Arsenic	ug/L	MW-390	09/29/2023		16.0000		
Arsenic	ug/L	MW-390	03/18/2024		17.3000		
Barium	ug/L	MW-390	09/18/2012		30.6000		
Barium	ug/L	MW-390	03/27/2013		23.5000		
Barium	ug/L	MW-390	09/25/2013		29.7000		
Barium	ug/L	MW-390	04/15/2014		13.0000		
Barium	ug/L	MW-390	09/01/2015		49.9000		
Barium	ug/L	MW-390	03/22/2016		36.1000		

*   - 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	
Barium	ug/L	MW-390	10/21/2016		28.8000		
Barium	ug/L	MW-390	03/08/2017		17.8000		
Barium	ug/L	MW-390	09/25/2017		28.2000		
Barium	ug/L	MW-390	03/13/2018		21.5000		
Barium	ug/L	MW-390	10/01/2018		26.6000		
Barium	ug/L	MW-390	03/27/2019		30.0000		
Barium	ug/L	MW-390	09/23/2019		29.3000		
Barium	ug/L	MW-390	03/09/2020		26.9000		
Barium	ug/L	MW-390	09/17/2020		26.0000		
Barium	ug/L	MW-390	04/14/2021		26.1000		
Barium	ug/L	MW-390	10/26/2021		25.4000		
Barium	ug/L	MW-390	04/14/2022		19.0000		
Barium	ug/L	MW-390	09/01/2022		14.9000		
Barium	ug/L	MW-390	03/06/2023		17.3000		
Barium	ug/L	MW-390	09/29/2023		12.9000		
Barium	ug/L	MW-390	03/18/2024		17.0000		
Beryllium	ug/L	MW-390	09/18/2012	ND	1.0000		
Beryllium	ug/L	MW-390	03/27/2013	ND	1.0000		
Beryllium	ug/L	MW-390	09/25/2013		0.2000		
Beryllium	ug/L	MW-390	04/15/2014	ND	1.0000		
Beryllium	ug/L	MW-390	09/01/2015	ND	1.0000		
Beryllium	ug/L	MW-390	03/22/2016	ND	0.2210	1.0000	**
Beryllium	ug/L	MW-390	10/21/2016	ND	0.2210	1.0000	**
Beryllium	ug/L	MW-390	03/08/2017	ND	0.1250	1.0000	**
Beryllium	ug/L	MW-390	09/25/2017	ND	0.1250	1.0000	**
Beryllium	ug/L	MW-390	03/13/2018	ND	0.5000	1.0000	**
Beryllium	ug/L	MW-390	10/01/2018	ND	0.5300	1.0000	**
Beryllium	ug/L	MW-390	03/27/2019	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-390	09/23/2019	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-390	03/09/2020	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-390	09/17/2020	ND	0.5400	1.0000	**
Beryllium	ug/L	MW-390	04/14/2021	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-390	10/26/2021	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-390	04/14/2022	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-390	09/01/2022	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-390	03/06/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-390	09/29/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-390	03/18/2024	ND	4.0000	1.0000	**
Cadmium	ug/L	MW-390	09/18/2012		0.6620		
Cadmium	ug/L	MW-390	03/27/2013		0.2810		
Cadmium	ug/L	MW-390	09/25/2013	ND	0.5000		
Cadmium	ug/L	MW-390	04/15/2014		0.3260		
Cadmium	ug/L	MW-390	09/01/2015	ND	0.5000		
Cadmium	ug/L	MW-390	03/22/2016	ND	0.0351	0.5000	**
Cadmium	ug/L	MW-390	10/21/2016		0.3020		
Cadmium	ug/L	MW-390	03/08/2017		0.0770		
Cadmium	ug/L	MW-390	09/25/2017	ND	0.0441	0.5000	**
Cadmium	ug/L	MW-390	03/13/2018	ND	0.1760	0.5000	**
Cadmium	ug/L	MW-390	10/01/2018	ND	0.1670	0.5000	**
Cadmium	ug/L	MW-390	03/27/2019	ND	0.0770	0.5000	**
Cadmium	ug/L	MW-390	09/23/2019		1.1200		
Cadmium	ug/L	MW-390	03/09/2020		0.4670		
Cadmium	ug/L	MW-390	09/17/2020		0.1080		
Cadmium	ug/L	MW-390	04/14/2021		0.5250		
Cadmium	ug/L	MW-390	10/26/2021		0.3080		
Cadmium	ug/L	MW-390	04/14/2022		1.1900		
Cadmium	ug/L	MW-390	09/01/2022	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-390	03/06/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-390	09/29/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-390	03/18/2024	ND	0.8000	0.5000	**
Chromium	ug/L	MW-390	09/18/2012	ND	20.0000	4.4000	**
Chromium	ug/L	MW-390	03/27/2013	ND	20.0000	4.4000	**
Chromium	ug/L	MW-390	09/25/2013		5.5100		
Chromium	ug/L	MW-390	04/15/2014	ND	20.0000	4.4000	**
Chromium	ug/L	MW-390	09/01/2015	ND	5.0000	4.4000	**
Chromium	ug/L	MW-390	03/22/2016		0.5420		
Chromium	ug/L	MW-390	10/21/2016		1.0200		
Chromium	ug/L	MW-390	03/08/2017	ND	0.7290	4.4000	**
Chromium	ug/L	MW-390	09/25/2017	ND	0.7290	4.4000	**
Chromium	ug/L	MW-390	03/13/2018	ND	2.9200	4.4000	**
Chromium	ug/L	MW-390	10/01/2018		2.0600		
Chromium	ug/L	MW-390	03/27/2019	ND	0.9800	4.4000	**
Chromium	ug/L	MW-390	09/23/2019	ND	3.9200	4.4000	**
Chromium	ug/L	MW-390	03/09/2020	ND	1.1000	4.4000	**

* - 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	
Chromium	ug/L	MW-390	09/17/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-390	04/14/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-390	10/26/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-390	04/14/2022	ND	4.4000		
Chromium	ug/L	MW-390	09/01/2022	ND	8.0000	4.4000	**
Chromium	ug/L	MW-390	03/06/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-390	09/29/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-390	03/18/2024	ND	8.0000	4.4000	**
Cobalt	ug/L	MW-390	09/18/2012		108.0000		
Cobalt	ug/L	MW-390	03/27/2013		123.0000		
Cobalt	ug/L	MW-390	09/25/2013		97.7000		
Cobalt	ug/L	MW-390	04/15/2014		103.0000		
Cobalt	ug/L	MW-390	09/01/2015		108.0000		
Cobalt	ug/L	MW-390	03/22/2016		92.9000		
Cobalt	ug/L	MW-390	10/21/2016		90.4000		
Cobalt	ug/L	MW-390	03/08/2017		120.0000		
Cobalt	ug/L	MW-390	09/25/2017		107.0000		
Cobalt	ug/L	MW-390	03/13/2018		98.2000		
Cobalt	ug/L	MW-390	10/01/2018		98.9000		
Cobalt	ug/L	MW-390	03/27/2019		114.0000		
Cobalt	ug/L	MW-390	09/23/2019		112.0000		
Cobalt	ug/L	MW-390	03/09/2020		102.0000		
Cobalt	ug/L	MW-390	09/17/2020		108.0000		
Cobalt	ug/L	MW-390	04/14/2021		110.0000		
Cobalt	ug/L	MW-390	10/26/2021		113.0000		
Cobalt	ug/L	MW-390	04/14/2022		106.0000		
Cobalt	ug/L	MW-390	09/01/2022		103.0000		
Cobalt	ug/L	MW-390	03/06/2023		113.0000		
Cobalt	ug/L	MW-390	09/29/2023		96.9000		
Cobalt	ug/L	MW-390	03/18/2024		107.0000		
Copper	ug/L	MW-390	09/18/2012	ND	20.0000	4.0000	**
Copper	ug/L	MW-390	03/27/2013	ND	20.0000	4.0000	**
Copper	ug/L	MW-390	09/25/2013	ND	20.0000	4.0000	**
Copper	ug/L	MW-390	04/15/2014	ND	20.0000	4.0000	**
Copper	ug/L	MW-390	09/01/2015	ND	2.0000	4.0000	**
Copper	ug/L	MW-390	03/22/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-390	10/21/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-390	03/08/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-390	09/25/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-390	03/13/2018	ND	8.7600	4.0000	**
Copper	ug/L	MW-390	10/01/2018		1.5500		
Copper	ug/L	MW-390	03/27/2019	ND	2.0000	4.0000	**
Copper	ug/L	MW-390	09/23/2019	ND	8.0000	4.0000	**
Copper	ug/L	MW-390	03/09/2020	ND	3.2000	4.0000	**
Copper	ug/L	MW-390	09/17/2020	ND	1.5000	4.0000	**
Copper	ug/L	MW-390	04/14/2021	ND	1.4000	4.0000	**
Copper	ug/L	MW-390	10/26/2021	ND	1.4000	4.0000	**
Copper	ug/L	MW-390	04/14/2022	ND	7.2000	4.0000	**
Copper	ug/L	MW-390	09/01/2022	ND	4.0000		
Copper	ug/L	MW-390	03/06/2023	ND	4.0000		
Copper	ug/L	MW-390	09/29/2023	ND	4.0000		
Copper	ug/L	MW-390	03/18/2024	ND	4.0000		
Lead	ug/L	MW-390	09/18/2012	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	03/27/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	09/25/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	04/15/2014	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	09/01/2015		0.7200		
Lead	ug/L	MW-390	03/22/2016	ND	0.2110	1.3000	**
Lead	ug/L	MW-390	10/21/2016		2.8600		
Lead	ug/L	MW-390	03/08/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-390	09/25/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-390	03/13/2018	ND	1.3000		
Lead	ug/L	MW-390	10/01/2018		0.8710		
Lead	ug/L	MW-390	03/27/2019	ND	0.2700	1.3000	**
Lead	ug/L	MW-390	09/23/2019		2.9400		
Lead	ug/L	MW-390	03/09/2020		2.2700		
Lead	ug/L	MW-390	09/17/2020		0.4100		
Lead	ug/L	MW-390	04/14/2021		1.7300		
Lead	ug/L	MW-390	10/26/2021		2.3800		
Lead	ug/L	MW-390	04/14/2022		4.7800		
Lead	ug/L	MW-390	09/01/2022	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	03/06/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	09/29/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	03/18/2024	ND	4.0000	1.3000	**

*   - 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	
Nickel	ug/L	MW-390	09/18/2012	ND	50.0000		
Nickel	ug/L	MW-390	03/27/2013		63.8000		
Nickel	ug/L	MW-390	09/25/2013		60.3000		
Nickel	ug/L	MW-390	04/15/2014		51.0000		
Nickel	ug/L	MW-390	09/01/2015		54.5000		
Nickel	ug/L	MW-390	03/22/2016		45.4000		
Nickel	ug/L	MW-390	10/21/2016		49.7000		
Nickel	ug/L	MW-390	03/08/2017		61.3000		
Nickel	ug/L	MW-390	09/25/2017		45.4000		
Nickel	ug/L	MW-390	03/13/2018		48.3000		
Nickel	ug/L	MW-390	10/01/2018		47.7000		
Nickel	ug/L	MW-390	03/27/2019		54.6000		
Nickel	ug/L	MW-390	09/23/2019		60.7000		
Nickel	ug/L	MW-390	03/09/2020		54.0000		
Nickel	ug/L	MW-390	09/17/2020		58.4000		
Nickel	ug/L	MW-390	04/14/2021		55.1000		
Nickel	ug/L	MW-390	10/26/2021		53.8000		
Nickel	ug/L	MW-390	04/14/2022		56.0000		
Nickel	ug/L	MW-390	09/01/2022		53.5000		
Nickel	ug/L	MW-390	03/06/2023		62.0000		
Nickel	ug/L	MW-390	09/29/2023		50.0000		
Nickel	ug/L	MW-390	03/18/2024		54.1000		
Selenium	ug/L	MW-390	09/18/2012	ND	5.0000	3.8400	**
Selenium	ug/L	MW-390	03/27/2013	ND	5.0000	3.8400	**
Selenium	ug/L	MW-390	09/25/2013	ND	5.0000	3.8400	**
Selenium	ug/L	MW-390	04/15/2014	ND	5.0000	3.8400	**
Selenium	ug/L	MW-390	09/01/2015	ND	5.0000	3.8400	**
Selenium	ug/L	MW-390	03/22/2016	ND	0.6300	3.8400	**
Selenium	ug/L	MW-390	10/21/2016	ND	0.6300	3.8400	**
Selenium	ug/L	MW-390	03/08/2017	ND	0.9280	3.8400	**
Selenium	ug/L	MW-390	09/25/2017	ND	0.9280	3.8400	**
Selenium	ug/L	MW-390	03/13/2018	ND	3.7100	3.8400	**
Selenium	ug/L	MW-390	10/01/2018	ND	0.9820	3.8400	**
Selenium	ug/L	MW-390	03/27/2019	ND	1.0000	3.8400	**
Selenium	ug/L	MW-390	09/23/2019	ND	4.0000	3.8400	**
Selenium	ug/L	MW-390	03/09/2020	ND	1.0000	3.8400	**
Selenium	ug/L	MW-390	09/17/2020	ND	1.0000	3.8400	**
Selenium	ug/L	MW-390	04/14/2021	ND	0.9600	3.8400	**
Selenium	ug/L	MW-390	10/26/2021	ND	0.9600	3.8400	**
Selenium	ug/L	MW-390	04/14/2022	ND	3.8400		
Selenium	ug/L	MW-390	09/01/2022	ND	4.0000	3.8400	**
Selenium	ug/L	MW-390	03/06/2023	ND	4.0000	3.8400	**
Selenium	ug/L	MW-390	09/29/2023	ND	4.0000	3.8400	**
Selenium	ug/L	MW-390	03/18/2024	ND	4.0000	3.8400	**
Silver	ug/L	MW-390	09/18/2012	ND	20.0000	1.0000	**
Silver	ug/L	MW-390	03/27/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-390	09/25/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-390	04/15/2014	ND	20.0000	1.0000	**
Silver	ug/L	MW-390	09/01/2015	ND	1.0000		
Silver	ug/L	MW-390	03/22/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-390	10/21/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-390	03/08/2017	ND	0.1400	1.0000	**
Silver	ug/L	MW-390	09/25/2017		0.1730		
Silver	ug/L	MW-390	03/13/2018	ND	0.5600	1.0000	**
Silver	ug/L	MW-390	10/01/2018	ND	0.1150	1.0000	**
Silver	ug/L	MW-390	03/27/2019	ND	0.3700	1.0000	**
Silver	ug/L	MW-390	09/23/2019	ND	1.4800	1.0000	**
Silver	ug/L	MW-390	03/09/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-390	09/17/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-390	04/14/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-390	10/26/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-390	04/14/2022	ND	1.9600	1.0000	**
Silver	ug/L	MW-390	09/01/2022	ND	4.0000	1.0000	**
Silver	ug/L	MW-390	03/06/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-390	09/29/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-390	03/18/2024	ND	4.0000	1.0000	**
Thallium	ug/L	MW-390	09/18/2012	ND	2.0000	1.0000	**
Thallium	ug/L	MW-390	03/27/2013	ND	2.0000	1.0000	**
Thallium	ug/L	MW-390	09/25/2013	ND	2.0000	1.0000	**
Thallium	ug/L	MW-390	04/15/2014	ND	2.0000	1.0000	**
Thallium	ug/L	MW-390	09/01/2015	ND	1.0000		
Thallium	ug/L	MW-390	03/22/2016	ND	0.0255	1.0000	**
Thallium	ug/L	MW-390	10/21/2016		0.0450		
Thallium	ug/L	MW-390	03/08/2017	ND	0.0644	1.0000	**

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Thallium	ug/L	MW-390	09/25/2017	ND	0.0644	1.0000	**
Thallium	ug/L	MW-390	03/13/2018	ND	0.2580	1.0000	**
Thallium	ug/L	MW-390	10/01/2018	ND	0.5700	1.0000	**
Thallium	ug/L	MW-390	03/27/2019	ND	0.2700	1.0000	**
Thallium	ug/L	MW-390	09/23/2019	ND	1.0800	1.0000	**
Thallium	ug/L	MW-390	03/09/2020	ND	0.2600	1.0000	**
Thallium	ug/L	MW-390	09/17/2020	ND	0.2600	1.0000	**
Thallium	ug/L	MW-390	04/14/2021		1.1700		
Thallium	ug/L	MW-390	10/26/2021	ND	0.2600	1.0000	**
Thallium	ug/L	MW-390	04/14/2022	ND	1.0400	1.0000	**
Thallium	ug/L	MW-390	09/01/2022	ND	2.0000	1.0000	**
Thallium	ug/L	MW-390	03/06/2023	ND	2.0000	1.0000	**
Thallium	ug/L	MW-390	09/29/2023	ND	2.0000	1.0000	**
Thallium	ug/L	MW-390	03/18/2024	ND	2.0000	1.0000	**
Vanadium	ug/L	MW-390	09/18/2012	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-390	03/27/2013		8.9100		
Vanadium	ug/L	MW-390	09/25/2013	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-390	04/15/2014	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-390	09/01/2015	ND	5.0000	3.3600	**
Vanadium	ug/L	MW-390	03/22/2016		0.3780		
Vanadium	ug/L	MW-390	10/21/2016		0.6690		
Vanadium	ug/L	MW-390	03/08/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-390	09/25/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-390	03/13/2018	ND	3.3600		
Vanadium	ug/L	MW-390	10/01/2018	ND	2.1500	3.3600	**
Vanadium	ug/L	MW-390	03/27/2019	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-390	09/23/2019	ND	3.2800	3.3600	**
Vanadium	ug/L	MW-390	03/09/2020	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-390	09/17/2020	ND	0.8500	3.3600	**
Vanadium	ug/L	MW-390	04/14/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-390	10/26/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-390	04/14/2022	ND	4.4000	3.3600	**
Vanadium	ug/L	MW-390	09/01/2022	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-390	03/06/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-390	09/29/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-390	03/18/2024	ND	20.0000	3.3600	**
Zinc	ug/L	MW-390	09/18/2012		94.0000		
Zinc	ug/L	MW-390	03/27/2013		207.0000		
Zinc	ug/L	MW-390	09/25/2013		200.0000		
Zinc	ug/L	MW-390	04/15/2014		27.3000		
Zinc	ug/L	MW-390	09/01/2015		48.8000		
Zinc	ug/L	MW-390	03/22/2016	ND	5.2100		*
Zinc	ug/L	MW-390	10/21/2016		101.0000		
Zinc	ug/L	MW-390	03/08/2017		308.0000		
Zinc	ug/L	MW-390	09/25/2017		65.0000		
Zinc	ug/L	MW-390	03/13/2018		100.0000		
Zinc	ug/L	MW-390	10/01/2018		85.6000		
Zinc	ug/L	MW-390	03/27/2019		75.7000		
Zinc	ug/L	MW-390	09/23/2019		293.0000		
Zinc	ug/L	MW-390	03/09/2020		118.0000		
Zinc	ug/L	MW-390	09/17/2020		94.3000		
Zinc	ug/L	MW-390	04/14/2021		192.0000		
Zinc	ug/L	MW-390	10/26/2021		56.2000		
Zinc	ug/L	MW-390	04/14/2022		487.0000		
Zinc	ug/L	MW-390	09/01/2022		107.0000		
Zinc	ug/L	MW-390	03/06/2023		115.0000		
Zinc	ug/L	MW-390	09/29/2023		122.0000		
Zinc	ug/L	MW-390	03/18/2024		184.0000		

* - 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	ug/L	MW-300	03/19/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-300	03/19/2024	ND	4.0000		22.5000
Barium	ug/L	MW-300	03/19/2024		11.9000		49.9000
Beryllium	ug/L	MW-300	03/19/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-300	03/19/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-300	03/19/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-300	03/19/2024		691.0000	***	139.4524
Copper	ug/L	MW-300	03/19/2024	ND	4.0000		7.9900
Lead	ug/L	MW-300	03/19/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-300	03/19/2024		719.0000	***	145.6778
Selenium	ug/L	MW-300	03/19/2024	ND	4.0000		6.4000
Silver	ug/L	MW-300	03/19/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-300	03/19/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-300	03/19/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-300	03/19/2024		1350.0000		13580.5046
Antimony	ug/L	MW-303	03/19/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-303	03/19/2024	ND	4.0000		22.5000
Barium	ug/L	MW-303	03/19/2024		92.9000	*	49.9000
Beryllium	ug/L	MW-303	03/19/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-303	03/19/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-303	03/19/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-303	03/19/2024		23.1000		139.4524
Copper	ug/L	MW-303	03/19/2024	ND	4.0000		7.9900
Lead	ug/L	MW-303	03/19/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-303	03/19/2024		28.1000		145.6778
Selenium	ug/L	MW-303	03/19/2024	ND	4.0000		6.4000
Silver	ug/L	MW-303	03/19/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-303	03/19/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-303	03/19/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-303	03/19/2024	ND	20.0000		13580.5046
Antimony	ug/L	MW-304	03/19/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-304	03/19/2024	ND	4.0000		22.5000
Barium	ug/L	MW-304	03/19/2024		78.6000	***	49.9000
Beryllium	ug/L	MW-304	03/19/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-304	03/19/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-304	03/19/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-304	03/19/2024		4.6000		139.4524
Copper	ug/L	MW-304	03/19/2024	ND	4.0000		7.9900
Lead	ug/L	MW-304	03/19/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-304	03/19/2024		4.0000		145.6778
Selenium	ug/L	MW-304	03/19/2024	ND	4.0000		6.4000
Silver	ug/L	MW-304	03/19/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-304	03/19/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-304	03/19/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-304	03/19/2024	ND	20.0000		13580.5046
Antimony	ug/L	MW-313	03/19/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-313	03/19/2024		29.0000	*	22.5000
Barium	ug/L	MW-313	03/19/2024		42.0000		49.9000
Beryllium	ug/L	MW-313	03/19/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-313	03/19/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-313	03/19/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-313	03/19/2024		0.9000		139.4524
Copper	ug/L	MW-313	03/19/2024	ND	4.0000		7.9900
Lead	ug/L	MW-313	03/19/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-313	03/19/2024	ND	4.0000		145.6778
Selenium	ug/L	MW-313	03/19/2024	ND	4.0000		6.4000
Silver	ug/L	MW-313	03/19/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-313	03/19/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-313	03/19/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-313	03/19/2024	ND	20.0000		13580.5046
Antimony	ug/L	MW-335	03/19/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-335	03/19/2024		9.9000		22.5000
Barium	ug/L	MW-335	03/19/2024		13.2000		49.9000
Beryllium	ug/L	MW-335	03/19/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-335	03/19/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-335	03/19/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-335	03/19/2024		40.3000		139.4524
Copper	ug/L	MW-335	03/19/2024	ND	4.0000		7.9900
Lead	ug/L	MW-335	03/19/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-335	03/19/2024		39.4000		145.6778
Selenium	ug/L	MW-335	03/19/2024	ND	4.0000		6.4000
Silver	ug/L	MW-335	03/19/2024	ND	4.0000		1.0000

* - 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	ug/L	MW-335	03/19/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-335	03/19/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-335	03/19/2024		42.4000		13580.5046
Antimony	ug/L	MW-344	03/19/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-344	03/19/2024	ND	4.0000		22.5000
Barium	ug/L	MW-344	03/19/2024		10.6000		49.9000
Beryllium	ug/L	MW-344	03/19/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-344	03/19/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-344	03/19/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-344	03/19/2024		148.0000	***	139.4524
Copper	ug/L	MW-344	03/19/2024	ND	4.0000		7.9900
Lead	ug/L	MW-344	03/19/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-344	03/19/2024		108.0000		145.6778
Selenium	ug/L	MW-344	03/19/2024	ND	4.0000		6.4000
Silver	ug/L	MW-344	03/19/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-344	03/19/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-344	03/19/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-344	03/19/2024	ND	20.0000		13580.5046
Antimony	ug/L	MW-380	03/18/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-380	03/18/2024		5.4000		22.5000
Barium	ug/L	MW-380	03/18/2024		9.3000		49.9000
Beryllium	ug/L	MW-380	03/18/2024		4.9000	***	1.0000
Cadmium	ug/L	MW-380	03/18/2024		36.5000	***	1.1900
Chromium	ug/L	MW-380	03/18/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-380	03/18/2024		936.0000	***	139.4524
Copper	ug/L	MW-380	03/18/2024		71.8000	*	7.9900
Lead	ug/L	MW-380	03/18/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-380	03/18/2024		1290.0000	***	145.6778
Selenium	ug/L	MW-380	03/18/2024		8.5000	***	6.4000
Silver	ug/L	MW-380	03/18/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-380	03/18/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-380	03/18/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-380	03/18/2024		7070.0000		13580.5046
Antimony	ug/L	MW-381	03/19/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-381	03/19/2024	ND	4.0000		22.5000
Barium	ug/L	MW-381	03/19/2024		12.3000		49.9000
Beryllium	ug/L	MW-381	03/19/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-381	03/19/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-381	03/19/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-381	03/19/2024	ND	0.4000		139.4524
Copper	ug/L	MW-381	03/19/2024	ND	4.0000		7.9900
Lead	ug/L	MW-381	03/19/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-381	03/19/2024	ND	4.0000		145.6778
Selenium	ug/L	MW-381	03/19/2024	ND	4.0000		6.4000
Silver	ug/L	MW-381	03/19/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-381	03/19/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-381	03/19/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-381	03/19/2024	ND	20.0000		13580.5046
Antimony	ug/L	MW-382R	03/19/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-382R	03/19/2024	ND	4.0000		22.5000
Barium	ug/L	MW-382R	03/19/2024		23.8000		49.9000
Beryllium	ug/L	MW-382R	03/19/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-382R	03/19/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-382R	03/19/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-382R	03/19/2024		0.8000		139.4524
Copper	ug/L	MW-382R	03/19/2024	ND	4.0000		7.9900
Lead	ug/L	MW-382R	03/19/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-382R	03/19/2024	ND	4.0000		145.6778
Selenium	ug/L	MW-382R	03/19/2024	ND	4.0000		6.4000
Silver	ug/L	MW-382R	03/19/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-382R	03/19/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-382R	03/19/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-382R	03/19/2024	ND	20.0000		13580.5046
Antimony	ug/L	MW-384	03/19/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-384	03/19/2024	ND	4.0000		22.5000
Barium	ug/L	MW-384	03/19/2024		10.1000		49.9000
Beryllium	ug/L	MW-384	03/19/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-384	03/19/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-384	03/19/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-384	03/19/2024		15.8000		139.4524
Copper	ug/L	MW-384	03/19/2024	ND	4.0000		7.9900
Lead	ug/L	MW-384	03/19/2024	ND	4.0000		4.7800

* - 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
Nickel	ug/L	MW-384	03/19/2024		57.7000		145.6778
Selenium	ug/L	MW-384	03/19/2024	ND	4.0000		6.4000
Silver	ug/L	MW-384	03/19/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-384	03/19/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-384	03/19/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-384	03/19/2024	ND	20.0000		13580.5046
Antimony	ug/L	MW-385	03/19/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-385	03/19/2024	ND	4.0000		22.5000
Barium	ug/L	MW-385	03/19/2024		12.4000		49.9000
Beryllium	ug/L	MW-385	03/19/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-385	03/19/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-385	03/19/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-385	03/19/2024		4.7000		139.4524
Copper	ug/L	MW-385	03/19/2024	ND	4.0000		7.9900
Lead	ug/L	MW-385	03/19/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-385	03/19/2024		32.6000		145.6778
Selenium	ug/L	MW-385	03/19/2024	ND	4.0000		6.4000
Silver	ug/L	MW-385	03/19/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-385	03/19/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-385	03/19/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-385	03/19/2024		33.4000		13580.5046

* - 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	1	68	0.015	16	361	0.044
Arsenic	48	66	0.727	158	366	0.432
Barium	65	68	0.956	350	367	0.954
Beryllium	17	68	0.250	63	366	0.172
Cadmium	25	68	0.368	131	367	0.357
Chromium	7	68	0.103	31	364	0.085
Cobalt	67	67	1.000	332	366	0.907
Copper	7	68	0.103	42	365	0.115
Lead	14	68	0.206	63	366	0.172
Nickel	67	68	0.985	304	366	0.831
Selenium	8	68	0.118	23	366	0.063
Silver	1	66	0.015	7	364	0.019
Thallium	5	68	0.074	28	366	0.077
Vanadium	3	67	0.045	41	366	0.112
Zinc	51	66	0.773	250	367	0.681

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	1	68	0.015									nonpar
Arsenic	48	66	0.727	3.290	4.509					2.326	non-norm	nonpar
Barium	65	68	0.956	5.402	3.364					2.326	non-norm	nonpar
Beryllium	17	68	0.250	0.057	0.817					2.326	normal	nonpar
Cadmium	25	68	0.368	5.567	3.091					2.326	non-norm	nonpar
Chromium	7	68	0.103	0.735	1.408					2.326	normal	nonpar
Cobalt	67	67	1.000	0.847	1.102					2.326	normal	normal
Copper	7	68	0.103	1.104	0.126					2.326	normal	nonpar
Lead	14	68	0.206	0.581	0.573					2.326	normal	nonpar
Nickel	67	68	0.985	0.862	1.541					2.326	normal	normal
Selenium	8	68	0.118	3.344	1.069					2.326	lognor	nonpar
Silver	1	66	0.015									nonpar
Thallium	5	68	0.074									nonpar
Vanadium	3	67	0.045	1.578	0.451					2.326	normal	nonpar
Zinc	51	66	0.773	4.827	0.359					2.326	lognor	lognor

* - 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	ug/L	1	68					4.4000	nonpar		0.99
Arsenic	ug/L	48	66					22.5000	nonpar		0.99
Barium	ug/L	65	68					49.9000	nonpar		0.99
Beryllium	ug/L	17	68					1.0000	nonpar	***	0.99
Cadmium	ug/L	25	68					1.1900	nonpar		0.99
Chromium	ug/L	7	68					5.5100	nonpar		0.99
Cobalt	ug/L	67	67	64.6552	31.1410	0.0100	2.4019	139.4524	normal		
Copper	ug/L	7	68					7.9900	nonpar		0.99
Lead	ug/L	14	68					4.7800	nonpar		0.99
Nickel	ug/L	67	68	78.1368	28.1334	0.0100	2.4007	145.6778	normal		
Selenium	ug/L	8	68					6.4000	nonpar		0.99
Silver	ug/L	1	66					1.0000	nonpar	***	0.99
Thallium	ug/L	5	68					1.1700	nonpar		0.99
Vanadium	ug/L	3	67					8.9100	nonpar		0.99
Zinc	ug/L	51	66	3.8783	2.3462	0.0100	2.4031	13580.5046	lognor		

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
Arsenic	ug/L	MW-307	10/28/2021	0.7500	< 0.7500	09/18/2012-03/19/2024	22	0.5162
Arsenic	ug/L	MW-307	09/29/2023	31.9000		09/18/2012-03/19/2024	22	0.5162
Cobalt	ug/L	MW-307	10/28/2021	14.8000		09/18/2012-03/19/2024	22	0.5162
Zinc	ug/L	MW-307	10/28/2021	10.6000		09/18/2012-03/19/2024	22	0.5162
Zinc	ug/L	MW-390	03/22/2016	5.2100	< 5.2100	09/18/2012-03/18/2024	22	0.5162

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Cobalt	ug/L	MW-300	03/25/2008		630.0000	*	139.4524
Cobalt	ug/L	MW-300	04/22/2008		458.0000	*	139.4524
Cobalt	ug/L	MW-300	07/26/2008		413.0000	*	139.4524
Cobalt	ug/L	MW-300	08/27/2008		493.0000	*	139.4524
Cobalt	ug/L	MW-300	09/24/2008		555.0000	*	139.4524
Cobalt	ug/L	MW-300	03/17/2009		325.0000	*	139.4524
Cobalt	ug/L	MW-300	09/24/2009		350.0000	*	139.4524
Cobalt	ug/L	MW-300	03/25/2010		370.0000	*	139.4524
Cobalt	ug/L	MW-300	09/23/2010		437.0000	*	139.4524
Cobalt	ug/L	MW-300	03/29/2011		357.0000	*	139.4524
Cobalt	ug/L	MW-300	09/22/2011		304.0000	*	139.4524
Cobalt	ug/L	MW-300	03/15/2012		225.0000	*	139.4524
Cobalt	ug/L	MW-300	09/18/2012		357.0000	*	139.4524
Cobalt	ug/L	MW-300	03/27/2013		330.0000	*	139.4524
Cobalt	ug/L	MW-300	09/25/2013		332.0000	*	139.4524
Cobalt	ug/L	MW-300	04/16/2014		42.3000		139.4524
Cobalt	ug/L	MW-300	09/26/2014		289.0000	*	139.4524
Cobalt	ug/L	MW-300	03/12/2015		251.0000	*	139.4524
Cobalt	ug/L	MW-300	09/02/2015		383.0000	*	139.4524
Cobalt	ug/L	MW-300	03/23/2016		328.0000	*	139.4524
Cobalt	ug/L	MW-300	10/20/2016		337.0000	*	139.4524
Cobalt	ug/L	MW-300	03/07/2017		315.0000	*	139.4524
Cobalt	ug/L	MW-300	09/26/2017		306.0000	*	139.4524
Cobalt	ug/L	MW-300	03/14/2018		143.0000	*	139.4524
Cobalt	ug/L	MW-300	10/02/2018		232.0000	*	139.4524
Cobalt	ug/L	MW-300	03/28/2019		344.0000	*	139.4524
Cobalt	ug/L	MW-300	09/24/2019		292.0000	*	139.4524
Cobalt	ug/L	MW-300	03/10/2020		215.0000	*	139.4524
Cobalt	ug/L	MW-300	09/15/2020		282.0000	*	139.4524
Cobalt	ug/L	MW-300	04/15/2021		152.0000	*	139.4524
Cobalt	ug/L	MW-300	10/27/2021		260.0000	*	139.4524
Cobalt	ug/L	MW-300	04/13/2022		339.0000	*	139.4524
Cobalt	ug/L	MW-300	09/01/2022		1370.0000	*	139.4524
Cobalt	ug/L	MW-300	03/06/2023		294.0000	*	139.4524
Cobalt	ug/L	MW-300	09/29/2023		881.0000	*	139.4524
Cobalt	ug/L	MW-300	03/19/2024		691.0000	*	139.4524
Nickel	ug/L	MW-300	03/25/2008		544.0000	*	145.6778
Nickel	ug/L	MW-300	04/22/2008		580.0000	*	145.6778
Nickel	ug/L	MW-300	07/26/2008		404.0000	*	145.6778
Nickel	ug/L	MW-300	08/27/2008		500.0000	*	145.6778
Nickel	ug/L	MW-300	09/24/2008		579.0000	*	145.6778
Nickel	ug/L	MW-300	03/17/2009		274.0000	*	145.6778
Nickel	ug/L	MW-300	09/24/2009		348.0000	*	145.6778
Nickel	ug/L	MW-300	03/25/2010		576.0000	*	145.6778
Nickel	ug/L	MW-300	09/23/2010		484.0000	*	145.6778
Nickel	ug/L	MW-300	03/29/2011		337.0000	*	145.6778
Nickel	ug/L	MW-300	09/22/2011		262.0000	*	145.6778
Nickel	ug/L	MW-300	03/15/2012		247.0000	*	145.6778
Nickel	ug/L	MW-300	09/18/2012		269.0000	*	145.6778
Nickel	ug/L	MW-300	03/27/2013		225.0000	*	145.6778
Nickel	ug/L	MW-300	09/25/2013		279.0000	*	145.6778
Nickel	ug/L	MW-300	04/16/2014		98.6000		145.6778
Nickel	ug/L	MW-300	09/26/2014		286.0000	*	145.6778
Nickel	ug/L	MW-300	03/12/2015		204.0000	*	145.6778
Nickel	ug/L	MW-300	09/02/2015		329.0000	*	145.6778
Nickel	ug/L	MW-300	03/23/2016		250.0000	*	145.6778
Nickel	ug/L	MW-300	10/20/2016		221.0000	*	145.6778
Nickel	ug/L	MW-300	03/07/2017		288.0000	*	145.6778
Nickel	ug/L	MW-300	09/26/2017		218.0000	*	145.6778
Nickel	ug/L	MW-300	03/14/2018		149.0000	*	145.6778
Nickel	ug/L	MW-300	10/02/2018		189.0000	*	145.6778
Nickel	ug/L	MW-300	03/28/2019		253.0000	*	145.6778
Nickel	ug/L	MW-300	09/24/2019		257.0000	*	145.6778
Nickel	ug/L	MW-300	03/10/2020		185.0000	*	145.6778
Nickel	ug/L	MW-300	09/15/2020		248.0000	*	145.6778
Nickel	ug/L	MW-300	04/15/2021		156.0000	*	145.6778
Nickel	ug/L	MW-300	10/27/2021		237.0000	*	145.6778
Nickel	ug/L	MW-300	04/13/2022		365.0000	*	145.6778
Nickel	ug/L	MW-300	09/01/2022		1720.0000	*	145.6778
Nickel	ug/L	MW-300	03/06/2023		343.0000	*	145.6778
Nickel	ug/L	MW-300	09/29/2023		955.0000	*	145.6778

* - 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	ug/L	MW-300	03/19/2024		719.0000	*	145.6778
Barium	ug/L	MW-303	03/24/2008		26.6000		49.9000
Barium	ug/L	MW-303	04/21/2008	ND	10.0000		49.9000
Barium	ug/L	MW-303	07/23/2008		14.1000		49.9000
Barium	ug/L	MW-303	08/26/2008		30.8000		49.9000
Barium	ug/L	MW-303	09/23/2008	ND	10.0000		49.9000
Barium	ug/L	MW-303	03/17/2009		12.3000		49.9000
Barium	ug/L	MW-303	09/24/2009		23.4000		49.9000
Barium	ug/L	MW-303	03/24/2010		17.7000		49.9000
Barium	ug/L	MW-303	09/22/2010		23.9000		49.9000
Barium	ug/L	MW-303	03/28/2011		14.5000		49.9000
Barium	ug/L	MW-303	09/22/2011		20.4000		49.9000
Barium	ug/L	MW-303	03/16/2012		30.1000		49.9000
Barium	ug/L	MW-303	09/19/2012		31.9000		49.9000
Barium	ug/L	MW-303	03/27/2013		26.8000		49.9000
Barium	ug/L	MW-303	09/26/2013		39.1000		49.9000
Barium	ug/L	MW-303	04/15/2014		26.1000		49.9000
Barium	ug/L	MW-303	09/25/2014		106.0000	*	49.9000
Barium	ug/L	MW-303	03/11/2015		72.5000	*	49.9000
Barium	ug/L	MW-303	09/02/2015		36.6000		49.9000
Barium	ug/L	MW-303	03/22/2016		66.8000	*	49.9000
Barium	ug/L	MW-303	10/21/2016		69.2000	*	49.9000
Barium	ug/L	MW-303	03/08/2017		42.9000		49.9000
Barium	ug/L	MW-303	09/25/2017		68.4000	*	49.9000
Barium	ug/L	MW-303	03/13/2018		66.1000	*	49.9000
Barium	ug/L	MW-303	10/01/2018		37.4000		49.9000
Barium	ug/L	MW-303	03/27/2019		20.8000		49.9000
Barium	ug/L	MW-303	09/23/2019		39.1000		49.9000
Barium	ug/L	MW-303	03/10/2020		59.0000	*	49.9000
Barium	ug/L	MW-303	09/15/2020		25.0000		49.9000
Barium	ug/L	MW-303	04/14/2021		14.5000		49.9000
Barium	ug/L	MW-303	10/27/2021		73.3000	*	49.9000
Barium	ug/L	MW-303	04/14/2022		58.8000	*	49.9000
Barium	ug/L	MW-303	09/01/2022		58.0000	*	49.9000
Barium	ug/L	MW-303	03/06/2023		73.9000	*	49.9000
Barium	ug/L	MW-303	09/29/2023		35.5000		49.9000
Barium	ug/L	MW-303	03/19/2024		92.9000	*	49.9000
Barium	ug/L	MW-304	03/22/2016		77.5000	*	49.9000
Barium	ug/L	MW-304	10/20/2016		85.1000	*	49.9000
Barium	ug/L	MW-304	01/18/2017		43.2000		49.9000
Barium	ug/L	MW-304	03/07/2017		103.0000	*	49.9000
Barium	ug/L	MW-304	06/28/2017		74.3000	*	49.9000
Barium	ug/L	MW-304	09/26/2017		73.1000	*	49.9000
Barium	ug/L	MW-304	03/14/2018		39.9000		49.9000
Barium	ug/L	MW-304	10/02/2018		72.3000	*	49.9000
Barium	ug/L	MW-304	03/28/2019		75.6000	*	49.9000
Barium	ug/L	MW-304	09/24/2019		68.9000	*	49.9000
Barium	ug/L	MW-304	03/10/2020		71.1000	*	49.9000
Barium	ug/L	MW-304	09/15/2020		68.1000	*	49.9000
Barium	ug/L	MW-304	04/16/2021		42.4000		49.9000
Barium	ug/L	MW-304	10/27/2021		36.8000		49.9000
Barium	ug/L	MW-304	04/14/2022		40.8000		49.9000
Barium	ug/L	MW-304	09/01/2022		60.2000	*	49.9000
Barium	ug/L	MW-304	03/06/2023		66.5000	*	49.9000
Barium	ug/L	MW-304	09/29/2023		61.0000	*	49.9000
Barium	ug/L	MW-304	03/19/2024		78.6000	*	49.9000
Arsenic	ug/L	MW-313	03/25/2008	ND	1.0000		22.5000
Arsenic	ug/L	MW-313	04/21/2008		1.8200		22.5000
Arsenic	ug/L	MW-313	07/26/2008		10.4000		22.5000
Arsenic	ug/L	MW-313	08/27/2008		5.1300		22.5000
Arsenic	ug/L	MW-313	09/24/2008		7.2400		22.5000
Arsenic	ug/L	MW-313	03/18/2009		7.8400		22.5000
Arsenic	ug/L	MW-313	09/24/2009		11.3000		22.5000
Arsenic	ug/L	MW-313	03/25/2010		31.3000	*	22.5000
Arsenic	ug/L	MW-313	09/22/2010		9.4700		22.5000
Arsenic	ug/L	MW-313	03/29/2011		85.0000	*	22.5000
Arsenic	ug/L	MW-313	09/22/2011		37.8000	*	22.5000
Arsenic	ug/L	MW-313	03/16/2012		52.3000	*	22.5000
Arsenic	ug/L	MW-313	09/18/2012		4.5700		22.5000
Arsenic	ug/L	MW-313	03/28/2013		3.6000		22.5000
Arsenic	ug/L	MW-313	09/25/2013	ND	1.0000		22.5000

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Arsenic	ug/L	MW-313	04/16/2014		10.9000		22.5000
Arsenic	ug/L	MW-313	09/26/2014		25.7000	*	22.5000
Arsenic	ug/L	MW-313	03/11/2015		1.4900		22.5000
Arsenic	ug/L	MW-313	09/02/2015	ND	2.0000		22.5000
Arsenic	ug/L	MW-313	03/22/2016		13.5000		22.5000
Arsenic	ug/L	MW-313	10/21/2016		1.5400		22.5000
Arsenic	ug/L	MW-313	03/08/2017		6.8700		22.5000
Arsenic	ug/L	MW-313	09/25/2017		7.4900		22.5000
Arsenic	ug/L	MW-313	03/13/2018		1.2600		22.5000
Arsenic	ug/L	MW-313	10/01/2018		2.1900		22.5000
Arsenic	ug/L	MW-313	03/27/2019		3.1700		22.5000
Arsenic	ug/L	MW-313	09/23/2019		3.0400		22.5000
Arsenic	ug/L	MW-313	03/10/2020		4.7900		22.5000
Arsenic	ug/L	MW-313	09/16/2020		2.6400		22.5000
Arsenic	ug/L	MW-313	04/15/2021		8.8300		22.5000
Arsenic	ug/L	MW-313	10/26/2021		3.0800		22.5000
Arsenic	ug/L	MW-313	04/14/2022		9.4400		22.5000
Arsenic	ug/L	MW-313	09/01/2022		6.0000		22.5000
Arsenic	ug/L	MW-313	03/06/2023		4.9000		22.5000
Arsenic	ug/L	MW-313	09/29/2023		12.2000		22.5000
Arsenic	ug/L	MW-313	03/19/2024		29.0000	*	22.5000
Cobalt	ug/L	MW-344	03/25/2008	ND	20.0000		139.4524
Cobalt	ug/L	MW-344	04/22/2008	ND	20.0000		139.4524
Cobalt	ug/L	MW-344	07/26/2008	ND	20.0000		139.4524
Cobalt	ug/L	MW-344	08/27/2008	ND	20.0000		139.4524
Cobalt	ug/L	MW-344	09/24/2008	ND	20.0000		139.4524
Cobalt	ug/L	MW-344	03/18/2009	ND	20.0000		139.4524
Cobalt	ug/L	MW-344	09/24/2009		23.3000		139.4524
Cobalt	ug/L	MW-344	03/25/2010		34.7000		139.4524
Cobalt	ug/L	MW-344	09/22/2010		45.0000		139.4524
Cobalt	ug/L	MW-344	03/28/2011		33.2000		139.4524
Cobalt	ug/L	MW-344	09/22/2011		47.9000		139.4524
Cobalt	ug/L	MW-344	03/16/2012		86.5000		139.4524
Cobalt	ug/L	MW-344	09/20/2012		93.2000		139.4524
Cobalt	ug/L	MW-344	03/27/2013		172.0000	*	139.4524
Cobalt	ug/L	MW-344	09/25/2013		105.0000		139.4524
Cobalt	ug/L	MW-344	04/15/2014		50.0000		139.4524
Cobalt	ug/L	MW-344	09/26/2014		164.0000	*	139.4524
Cobalt	ug/L	MW-344	03/12/2015		176.0000	*	139.4524
Cobalt	ug/L	MW-344	09/02/2015		202.0000	*	139.4524
Cobalt	ug/L	MW-344	03/23/2016		269.0000	*	139.4524
Cobalt	ug/L	MW-344	10/19/2016		57.6000		139.4524
Cobalt	ug/L	MW-344	03/07/2017		107.0000		139.4524
Cobalt	ug/L	MW-344	09/26/2017		21.8000		139.4524
Cobalt	ug/L	MW-344	03/14/2018		114.0000		139.4524
Cobalt	ug/L	MW-344	10/02/2018		198.0000	*	139.4524
Cobalt	ug/L	MW-344	03/28/2019		128.0000		139.4524
Cobalt	ug/L	MW-344	09/24/2019		146.0000	*	139.4524
Cobalt	ug/L	MW-344	03/10/2020		206.0000	*	139.4524
Cobalt	ug/L	MW-344	09/15/2020		263.0000	*	139.4524
Cobalt	ug/L	MW-344	04/15/2021		258.0000	*	139.4524
Cobalt	ug/L	MW-344	10/27/2021		223.0000	*	139.4524
Cobalt	ug/L	MW-344	04/14/2022		310.0000	*	139.4524
Cobalt	ug/L	MW-344	09/01/2022		224.0000	*	139.4524
Cobalt	ug/L	MW-344	03/06/2023		209.0000	*	139.4524
Cobalt	ug/L	MW-344	09/29/2023		151.0000	*	139.4524
Cobalt	ug/L	MW-344	03/19/2024		148.0000	*	139.4524
Beryllium	ug/L	MW-380	03/25/2008		136.0000	*	1.0000
Beryllium	ug/L	MW-380	04/21/2008		12.6000	*	1.0000
Beryllium	ug/L	MW-380	07/26/2008		17.9000	*	1.0000
Beryllium	ug/L	MW-380	08/26/2008		22.3000	*	1.0000
Beryllium	ug/L	MW-380	09/24/2008		28.5000	*	1.0000
Beryllium	ug/L	MW-380	03/17/2009		16.0000	*	1.0000
Beryllium	ug/L	MW-380	09/24/2009		22.6000	*	1.0000
Beryllium	ug/L	MW-380	03/25/2010		12.9000	*	1.0000
Beryllium	ug/L	MW-380	09/22/2010		21.6000	*	1.0000
Beryllium	ug/L	MW-380	03/28/2011		16.6000	*	1.0000
Beryllium	ug/L	MW-380	09/22/2011		19.6000	*	1.0000
Beryllium	ug/L	MW-380	03/15/2012		8.5400	*	1.0000
Beryllium	ug/L	MW-380	09/19/2012		9.7200	*	1.0000
Beryllium	ug/L	MW-380	03/27/2013		6.4000	*	1.0000

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Beryllium	ug/L	MW-380	09/25/2013		17.6000	*	1.0000
Beryllium	ug/L	MW-380	04/16/2014		5.1300	*	1.0000
Beryllium	ug/L	MW-380	09/26/2014		8.0700	*	1.0000
Beryllium	ug/L	MW-380	03/11/2015	ND	10.0000		1.0000
Beryllium	ug/L	MW-380	09/02/2015	ND	30.0000		1.0000
Beryllium	ug/L	MW-380	03/23/2016		7.2300	*	1.0000
Beryllium	ug/L	MW-380	10/20/2016		6.1100	*	1.0000
Beryllium	ug/L	MW-380	03/09/2017		11.6000	*	1.0000
Beryllium	ug/L	MW-380	09/26/2017		4.7200	*	1.0000
Beryllium	ug/L	MW-380	03/14/2018		6.9000	*	1.0000
Beryllium	ug/L	MW-380	10/02/2018		6.9900	*	1.0000
Beryllium	ug/L	MW-380	03/28/2019		5.1500	*	1.0000
Beryllium	ug/L	MW-380	09/24/2019		2.8600	*	1.0000
Beryllium	ug/L	MW-380	03/10/2020		2.8500	*	1.0000
Beryllium	ug/L	MW-380	09/15/2020		7.5100	*	1.0000
Beryllium	ug/L	MW-380	04/15/2021		7.4200	*	1.0000
Beryllium	ug/L	MW-380	10/27/2021		6.2200	*	1.0000
Beryllium	ug/L	MW-380	04/13/2022	ND	2.7000		1.0000
Beryllium	ug/L	MW-380	09/01/2022	ND	4.0000		1.0000
Beryllium	ug/L	MW-380	03/06/2023		4.7000	*	1.0000
Beryllium	ug/L	MW-380	09/29/2023		5.0000	*	1.0000
Beryllium	ug/L	MW-380	03/18/2024		4.9000	*	1.0000
Cadmium	ug/L	MW-380	03/25/2008		12.2000	*	1.1900
Cadmium	ug/L	MW-380	04/21/2008		14.8000	*	1.1900
Cadmium	ug/L	MW-380	07/26/2008		20.1000	*	1.1900
Cadmium	ug/L	MW-380	08/26/2008		18.8000	*	1.1900
Cadmium	ug/L	MW-380	09/24/2008		27.0000	*	1.1900
Cadmium	ug/L	MW-380	03/17/2009		17.5000	*	1.1900
Cadmium	ug/L	MW-380	09/24/2009		18.0000	*	1.1900
Cadmium	ug/L	MW-380	03/25/2010		16.2000	*	1.1900
Cadmium	ug/L	MW-380	09/22/2010		17.1000	*	1.1900
Cadmium	ug/L	MW-380	03/28/2011		15.0000	*	1.1900
Cadmium	ug/L	MW-380	09/22/2011		16.1000	*	1.1900
Cadmium	ug/L	MW-380	03/15/2012		9.0000	*	1.1900
Cadmium	ug/L	MW-380	09/19/2012		14.7000	*	1.1900
Cadmium	ug/L	MW-380	03/27/2013		5.3900	*	1.1900
Cadmium	ug/L	MW-380	09/25/2013		21.2000	*	1.1900
Cadmium	ug/L	MW-380	04/16/2014		7.1800	*	1.1900
Cadmium	ug/L	MW-380	09/26/2014		12.7000	*	1.1900
Cadmium	ug/L	MW-380	03/11/2015		15.9000	*	1.1900
Cadmium	ug/L	MW-380	09/02/2015		10.5000	*	1.1900
Cadmium	ug/L	MW-380	03/23/2016		6.3300	*	1.1900
Cadmium	ug/L	MW-380	10/20/2016		9.9800	*	1.1900
Cadmium	ug/L	MW-380	03/09/2017		57.4000	*	1.1900
Cadmium	ug/L	MW-380	06/28/2017		5.2100	*	1.1900
Cadmium	ug/L	MW-380	09/26/2017		9.2900	*	1.1900
Cadmium	ug/L	MW-380	03/14/2018		10.6000	*	1.1900
Cadmium	ug/L	MW-380	10/02/2018		12.5000	*	1.1900
Cadmium	ug/L	MW-380	03/28/2019		4.4000	*	1.1900
Cadmium	ug/L	MW-380	09/24/2019		6.8800	*	1.1900
Cadmium	ug/L	MW-380	03/10/2020		5.9000	*	1.1900
Cadmium	ug/L	MW-380	09/15/2020		8.9400	*	1.1900
Cadmium	ug/L	MW-380	04/15/2021		10.5000	*	1.1900
Cadmium	ug/L	MW-380	10/27/2021		7.2500	*	1.1900
Cadmium	ug/L	MW-380	04/13/2022		1.3600	*	1.1900
Cadmium	ug/L	MW-380	09/01/2022	ND	0.8000		1.1900
Cadmium	ug/L	MW-380	03/06/2023		3.1000	*	1.1900
Cadmium	ug/L	MW-380	09/29/2023		9.2000	*	1.1900
Cadmium	ug/L	MW-380	03/18/2024		36.5000	*	1.1900
Cobalt	ug/L	MW-380	03/25/2008		1180.0000	*	139.4524
Cobalt	ug/L	MW-380	04/21/2008		1250.0000	*	139.4524
Cobalt	ug/L	MW-380	07/26/2008		1510.0000	*	139.4524
Cobalt	ug/L	MW-380	08/26/2008		1310.0000	*	139.4524
Cobalt	ug/L	MW-380	09/24/2008		1480.0000	*	139.4524
Cobalt	ug/L	MW-380	03/17/2009		1400.0000	*	139.4524
Cobalt	ug/L	MW-380	09/24/2009		1490.0000	*	139.4524
Cobalt	ug/L	MW-380	03/25/2010		1250.0000	*	139.4524
Cobalt	ug/L	MW-380	09/22/2010		1390.0000	*	139.4524
Cobalt	ug/L	MW-380	03/28/2011		1410.0000	*	139.4524
Cobalt	ug/L	MW-380	09/22/2011		1270.0000	*	139.4524
Cobalt	ug/L	MW-380	03/15/2012		1500.0000	*	139.4524

* - Significantly increased over background.
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ND = Not Detected, Result = detection limit.

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Cobalt	ug/L	MW-380	09/19/2012		1420.0000	*	139.4524
Cobalt	ug/L	MW-380	03/27/2013		1120.0000	*	139.4524
Cobalt	ug/L	MW-380	09/25/2013		1450.0000	*	139.4524
Cobalt	ug/L	MW-380	04/16/2014		563.0000	*	139.4524
Cobalt	ug/L	MW-380	09/26/2014		1140.0000	*	139.4524
Cobalt	ug/L	MW-380	03/11/2015		1490.0000	*	139.4524
Cobalt	ug/L	MW-380	09/02/2015	ND	15.0000		139.4524
Cobalt	ug/L	MW-380	03/23/2016		1120.0000	*	139.4524
Cobalt	ug/L	MW-380	10/20/2016		1150.0000	*	139.4524
Cobalt	ug/L	MW-380	03/09/2017		1840.0000	*	139.4524
Cobalt	ug/L	MW-380	09/26/2017		1290.0000	*	139.4524
Cobalt	ug/L	MW-380	03/14/2018		1430.0000	*	139.4524
Cobalt	ug/L	MW-380	10/02/2018		1040.0000	*	139.4524
Cobalt	ug/L	MW-380	03/28/2019		607.0000	*	139.4524
Cobalt	ug/L	MW-380	09/24/2019		867.0000	*	139.4524
Cobalt	ug/L	MW-380	03/10/2020		856.0000	*	139.4524
Cobalt	ug/L	MW-380	09/15/2020		1180.0000	*	139.4524
Cobalt	ug/L	MW-380	04/15/2021		1150.0000	*	139.4524
Cobalt	ug/L	MW-380	10/27/2021		795.0000	*	139.4524
Cobalt	ug/L	MW-380	04/13/2022		701.0000	*	139.4524
Cobalt	ug/L	MW-380	09/01/2022		407.0000	*	139.4524
Cobalt	ug/L	MW-380	03/06/2023		758.0000	*	139.4524
Cobalt	ug/L	MW-380	09/29/2023		1130.0000	*	139.4524
Cobalt	ug/L	MW-380	03/18/2024		936.0000	*	139.4524
Copper	ug/L	MW-380	03/25/2008	ND	20.0000		7.9900
Copper	ug/L	MW-380	04/21/2008	ND	20.0000		7.9900
Copper	ug/L	MW-380	07/26/2008	ND	20.0000		7.9900
Copper	ug/L	MW-380	08/26/2008	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/24/2008	ND	20.0000		7.9900
Copper	ug/L	MW-380	03/17/2009	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/24/2009	ND	100.0000		7.9900
Copper	ug/L	MW-380	03/25/2010	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/22/2010	ND	20.0000		7.9900
Copper	ug/L	MW-380	03/28/2011	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/22/2011	ND	20.0000		7.9900
Copper	ug/L	MW-380	03/15/2012	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/19/2012	ND	20.0000		7.9900
Copper	ug/L	MW-380	03/27/2013	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/25/2013	ND	20.0000		7.9900
Copper	ug/L	MW-380	04/16/2014	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/26/2014	ND	4.8500		7.9900
Copper	ug/L	MW-380	03/11/2015	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/02/2015	ND	2.0000		7.9900
Copper	ug/L	MW-380	03/23/2016		2.0400		7.9900
Copper	ug/L	MW-380	10/20/2016		4.4200		7.9900
Copper	ug/L	MW-380	03/09/2017		3.4300		7.9900
Copper	ug/L	MW-380	09/26/2017	ND	21.9000		7.9900
Copper	ug/L	MW-380	03/14/2018	ND	110.0000		7.9900
Copper	ug/L	MW-380	10/02/2018		1.6800		7.9900
Copper	ug/L	MW-380	03/28/2019	ND	14.0000		7.9900
Copper	ug/L	MW-380	09/24/2019	ND	14.0000		7.9900
Copper	ug/L	MW-380	03/10/2020	ND	3.2000		7.9900
Copper	ug/L	MW-380	09/15/2020		3.5300		7.9900
Copper	ug/L	MW-380	04/15/2021		1.9900		7.9900
Copper	ug/L	MW-380	10/27/2021		1.6200		7.9900
Copper	ug/L	MW-380	04/13/2022	ND	18.0000		7.9900
Copper	ug/L	MW-380	09/01/2022	ND	4.0000		7.9900
Copper	ug/L	MW-380	03/06/2023	ND	4.0000		7.9900
Copper	ug/L	MW-380	09/29/2023	ND	4.0000		7.9900
Copper	ug/L	MW-380	03/18/2024		71.8000	*	7.9900
Nickel	ug/L	MW-380	03/25/2008		1750.0000	*	145.6778
Nickel	ug/L	MW-380	04/21/2008		1930.0000	*	145.6778
Nickel	ug/L	MW-380	07/26/2008		2260.0000	*	145.6778
Nickel	ug/L	MW-380	08/26/2008		1940.0000	*	145.6778
Nickel	ug/L	MW-380	09/24/2008		2230.0000	*	145.6778
Nickel	ug/L	MW-380	03/17/2009		1990.0000	*	145.6778
Nickel	ug/L	MW-380	09/24/2009		2220.0000	*	145.6778
Nickel	ug/L	MW-380	03/25/2010		1810.0000	*	145.6778
Nickel	ug/L	MW-380	09/22/2010		2010.0000	*	145.6778
Nickel	ug/L	MW-380	03/28/2011		2090.0000	*	145.6778
Nickel	ug/L	MW-380	09/22/2011		1870.0000	*	145.6778

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*** - 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	ug/L	MW-380	03/15/2012		2130.0000	*	145.6778
Nickel	ug/L	MW-380	09/19/2012		2120.0000	*	145.6778
Nickel	ug/L	MW-380	03/27/2013		1600.0000	*	145.6778
Nickel	ug/L	MW-380	09/25/2013		2140.0000	*	145.6778
Nickel	ug/L	MW-380	04/16/2014		818.0000	*	145.6778
Nickel	ug/L	MW-380	09/26/2014		1650.0000	*	145.6778
Nickel	ug/L	MW-380	03/11/2015		1290.0000	*	145.6778
Nickel	ug/L	MW-380	09/02/2015		1970.0000	*	145.6778
Nickel	ug/L	MW-380	03/23/2016		1450.0000	*	145.6778
Nickel	ug/L	MW-380	10/20/2016		1430.0000	*	145.6778
Nickel	ug/L	MW-380	03/09/2017		2660.0000	*	145.6778
Nickel	ug/L	MW-380	09/26/2017		1270.0000	*	145.6778
Nickel	ug/L	MW-380	03/14/2018		2070.0000	*	145.6778
Nickel	ug/L	MW-380	10/02/2018		1440.0000	*	145.6778
Nickel	ug/L	MW-380	03/28/2019		807.0000	*	145.6778
Nickel	ug/L	MW-380	09/24/2019		1270.0000	*	145.6778
Nickel	ug/L	MW-380	03/10/2020		1130.0000	*	145.6778
Nickel	ug/L	MW-380	09/15/2020		1670.0000	*	145.6778
Nickel	ug/L	MW-380	04/15/2021		1450.0000	*	145.6778
Nickel	ug/L	MW-380	10/27/2021		1100.0000	*	145.6778
Nickel	ug/L	MW-380	04/13/2022		1020.0000	*	145.6778
Nickel	ug/L	MW-380	09/01/2022		531.0000	*	145.6778
Nickel	ug/L	MW-380	03/06/2023		965.0000	*	145.6778
Nickel	ug/L	MW-380	09/29/2023		1410.0000	*	145.6778
Nickel	ug/L	MW-380	03/18/2024		1290.0000	*	145.6778
Selenium	ug/L	MW-380	03/25/2008	ND	5.0000		6.4000
Selenium	ug/L	MW-380	04/21/2008	ND	5.0000		6.4000
Selenium	ug/L	MW-380	07/26/2008	ND	5.0000		6.4000
Selenium	ug/L	MW-380	08/26/2008	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/24/2008	ND	15.0000		6.4000
Selenium	ug/L	MW-380	03/17/2009		5.2600		6.4000
Selenium	ug/L	MW-380	09/24/2009	ND	5.0000		6.4000
Selenium	ug/L	MW-380	03/25/2010	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/22/2010	ND	5.0000		6.4000
Selenium	ug/L	MW-380	03/28/2011	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/22/2011	ND	40.0000		6.4000
Selenium	ug/L	MW-380	03/15/2012	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/19/2012	ND	5.0000		6.4000
Selenium	ug/L	MW-380	03/27/2013	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/25/2013	ND	5.0000		6.4000
Selenium	ug/L	MW-380	04/16/2014	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/26/2014	ND	33.4000		6.4000
Selenium	ug/L	MW-380	03/11/2015	ND	50.0000		6.4000
Selenium	ug/L	MW-380	09/02/2015	ND	150.0000		6.4000
Selenium	ug/L	MW-380	03/23/2016		11.9000	*	6.4000
Selenium	ug/L	MW-380	10/20/2016		13.7000	*	6.4000
Selenium	ug/L	MW-380	03/09/2017		32.2000	*	6.4000
Selenium	ug/L	MW-380	09/26/2017	ND	9.2800		6.4000
Selenium	ug/L	MW-380	03/14/2018	ND	46.4000		6.4000
Selenium	ug/L	MW-380	10/02/2018		23.3000	*	6.4000
Selenium	ug/L	MW-380	03/28/2019	ND	7.0000		6.4000
Selenium	ug/L	MW-380	09/24/2019		10.6000	*	6.4000
Selenium	ug/L	MW-380	03/10/2020		7.7000	*	6.4000
Selenium	ug/L	MW-380	09/15/2020		15.6000	*	6.4000
Selenium	ug/L	MW-380	04/15/2021		13.3000	*	6.4000
Selenium	ug/L	MW-380	10/27/2021		5.4800		6.4000
Selenium	ug/L	MW-380	04/13/2022	ND	9.6000		6.4000
Selenium	ug/L	MW-380	09/01/2022	ND	4.0000		6.4000
Selenium	ug/L	MW-380	03/06/2023		9.6000	*	6.4000
Selenium	ug/L	MW-380	09/29/2023		9.6000	*	6.4000
Selenium	ug/L	MW-380	03/18/2024		8.5000	*	6.4000

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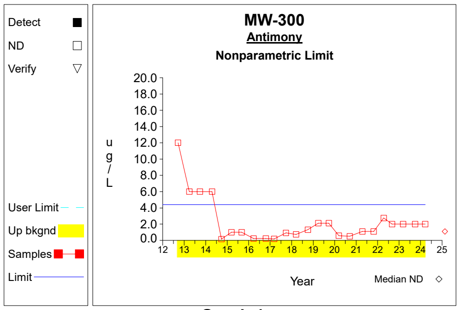
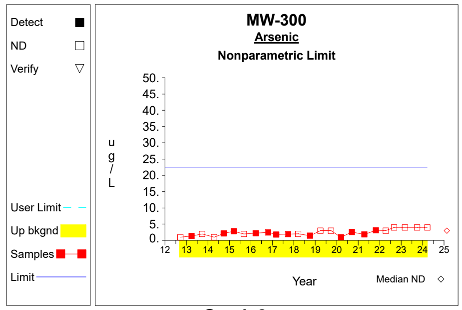
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

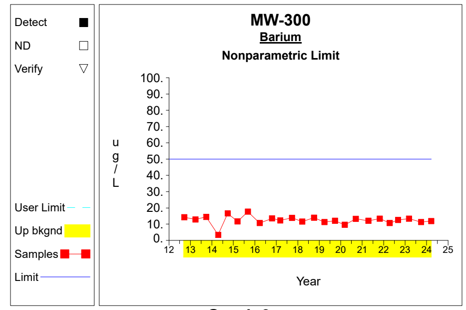
Up vs. Down Prediction Limits



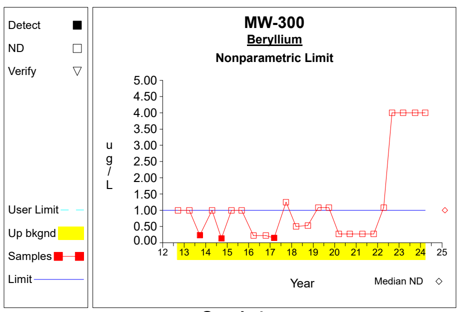
Graph 1



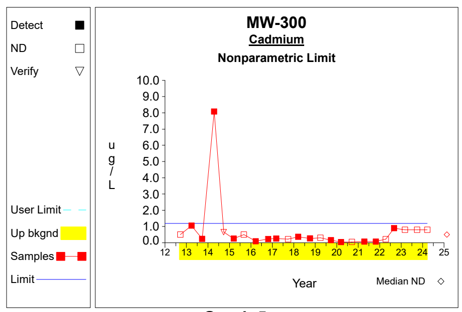
Graph 2



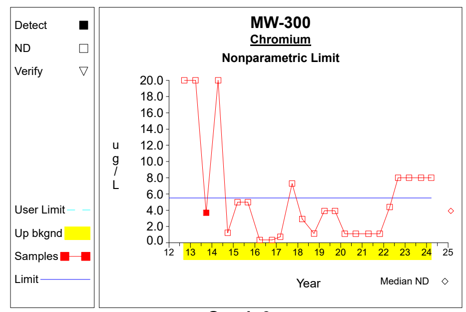
Graph 3



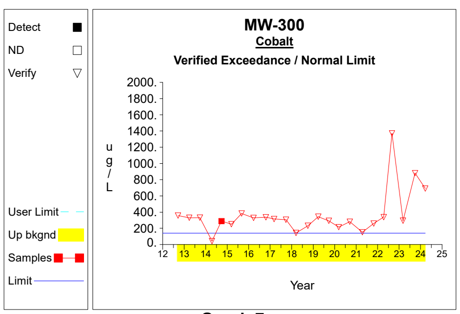
Graph 4



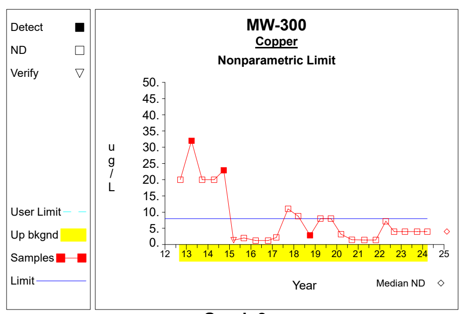
Graph 5



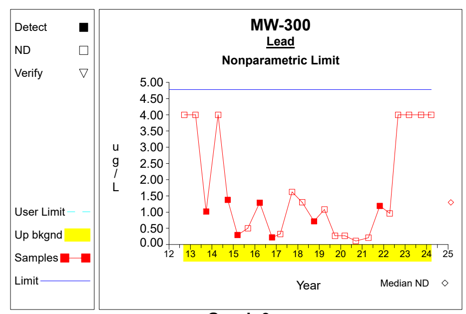
Graph 6



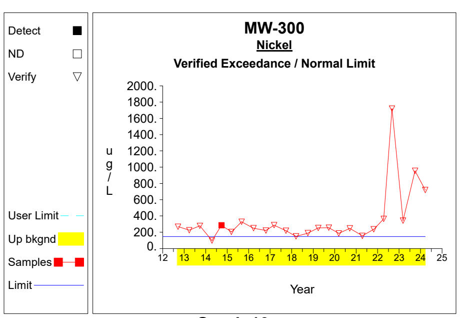
Graph 7



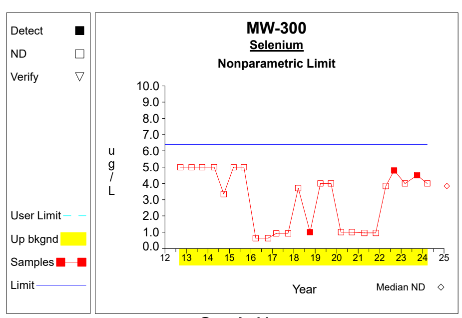
Graph 8



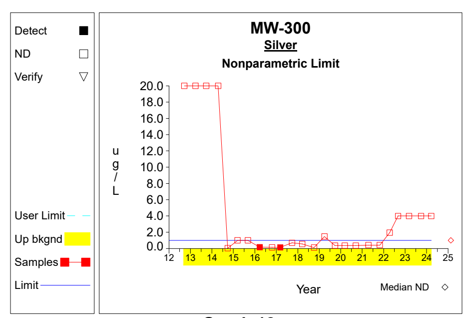
Graph 9



Graph 10



Graph 11



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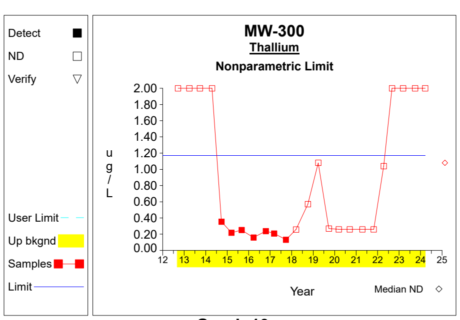
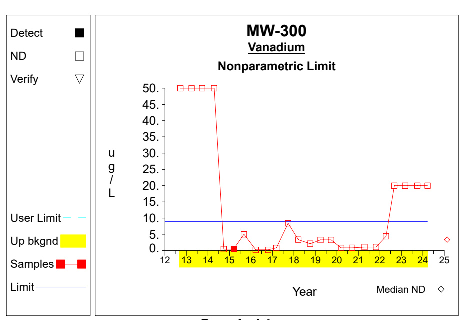


Graph 13



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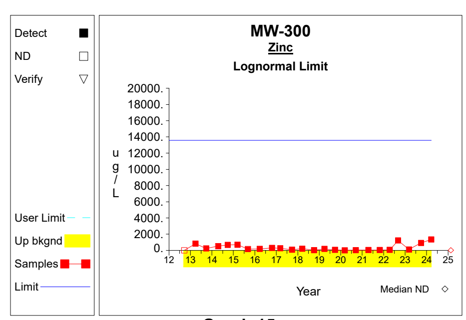

Graph 15

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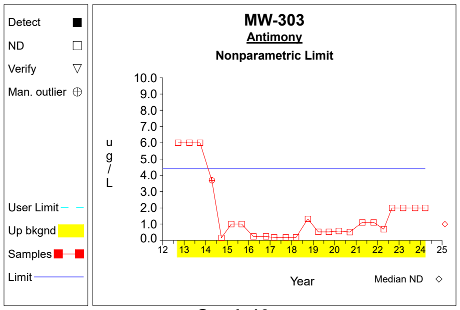
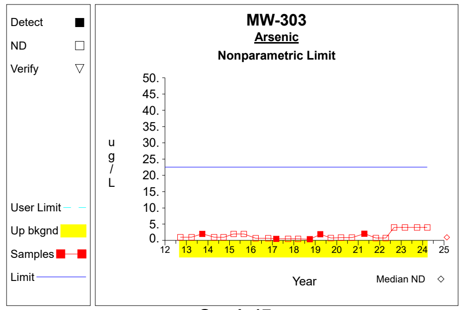
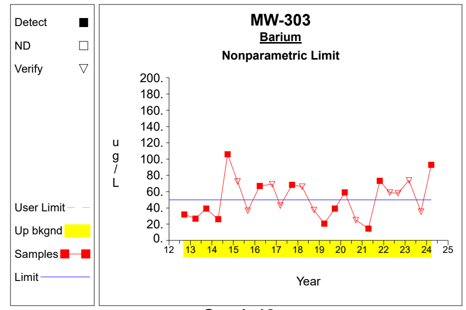
Up vs. Down Prediction Limits



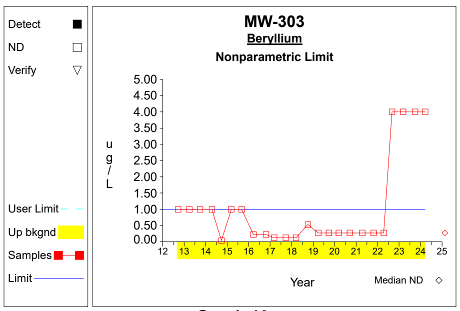
Graph 16



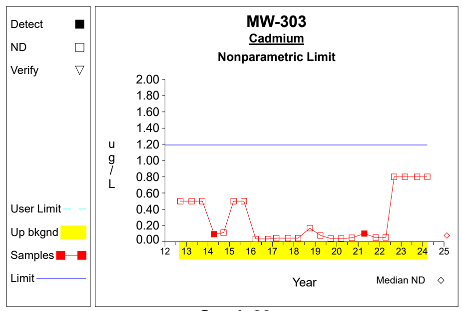
Graph 17



Graph 18



Graph 19



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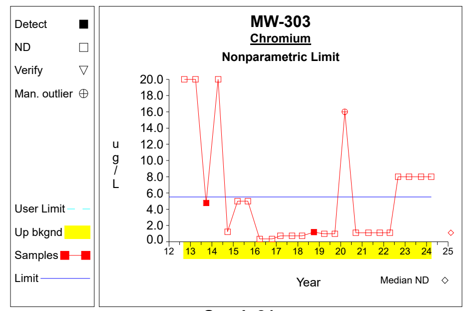

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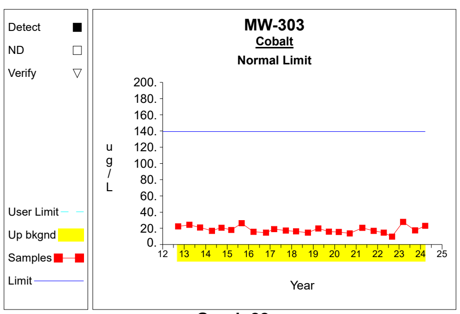

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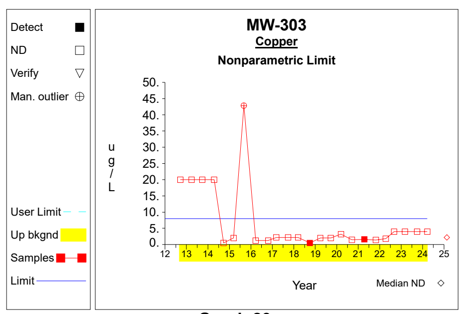

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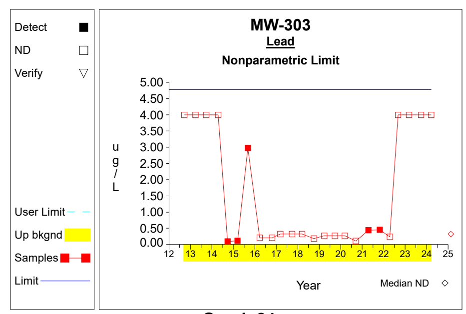

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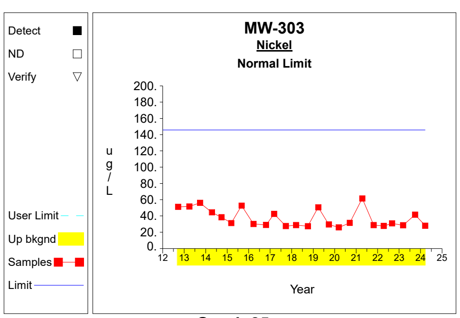

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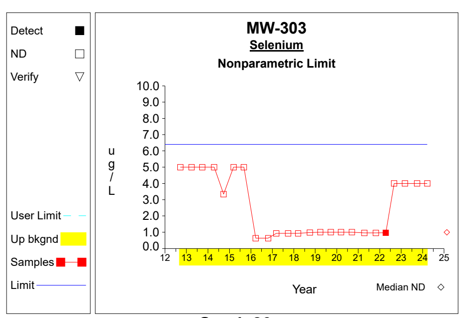
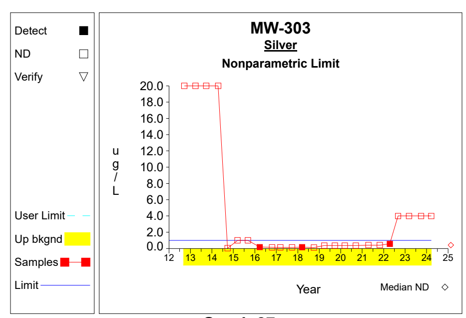
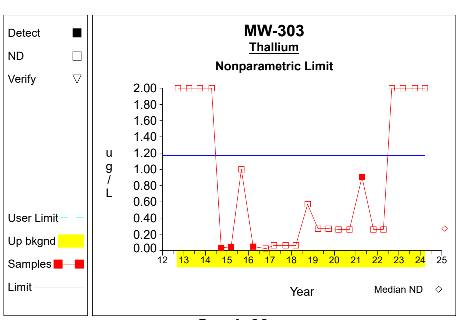


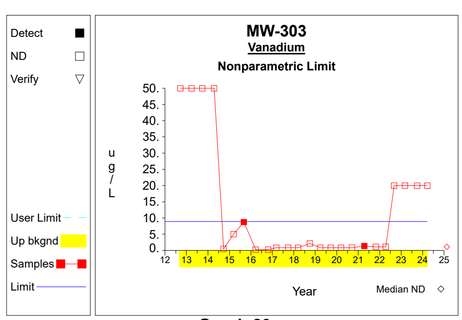
Graph 26



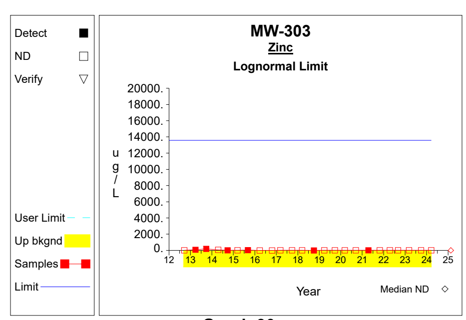
Graph 27



Graph 28



Graph 29



Graph 30

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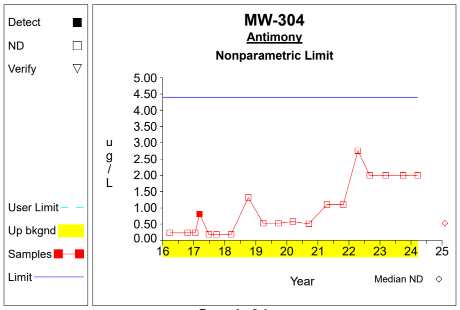
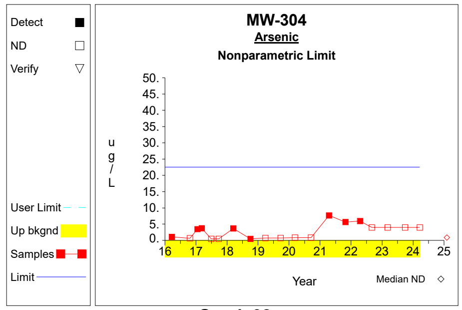
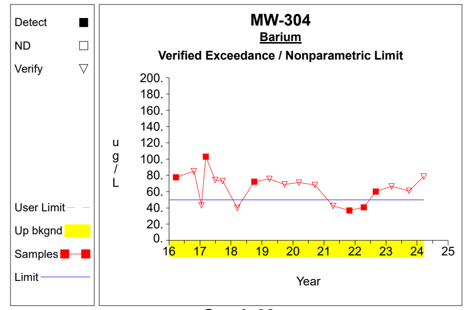
Up vs. Down Prediction Limits



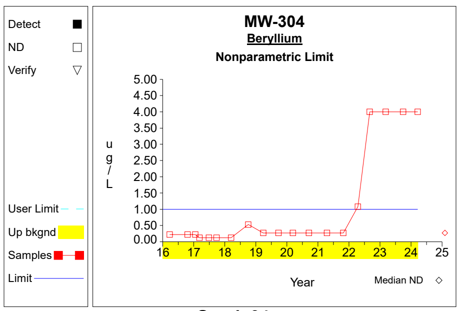
Graph 31



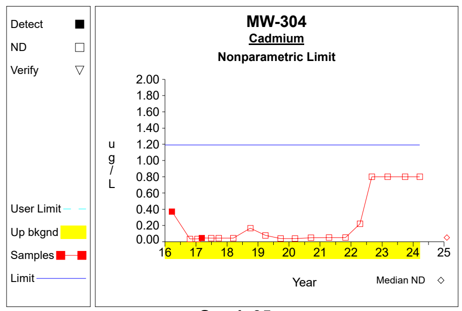
Graph 32



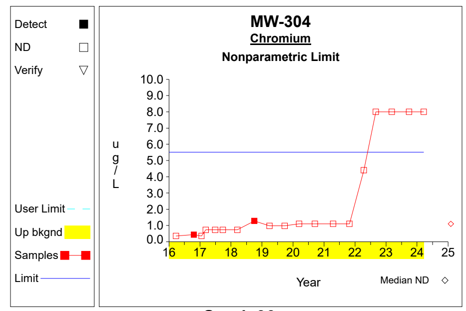
Graph 33



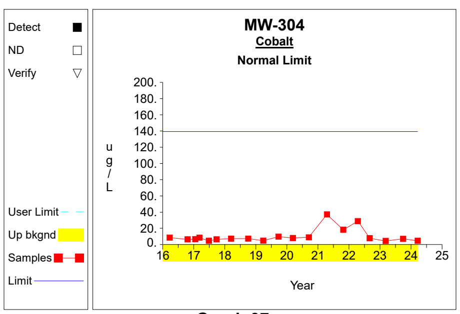
Graph 34



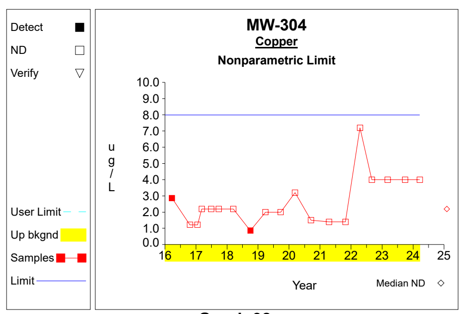
Graph 35



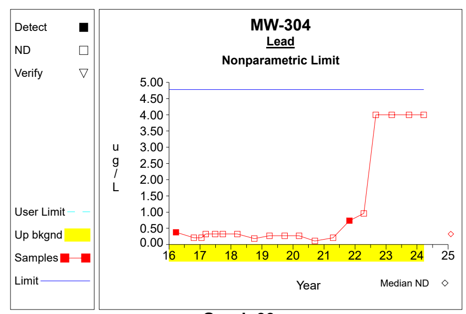
Graph 36



Graph 37



Graph 38



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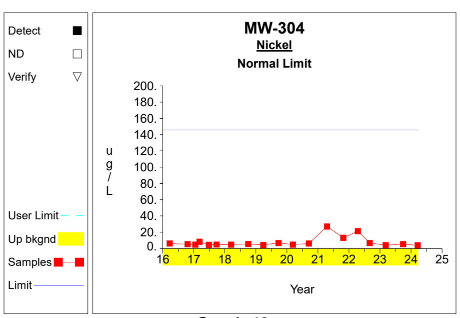

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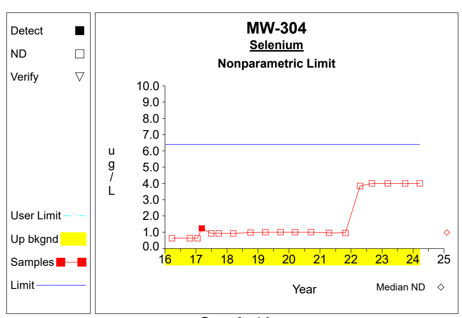

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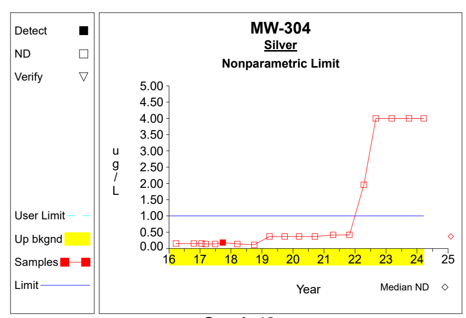

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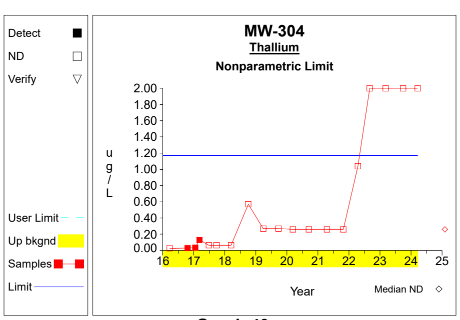
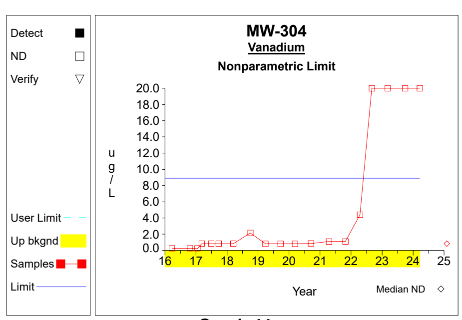
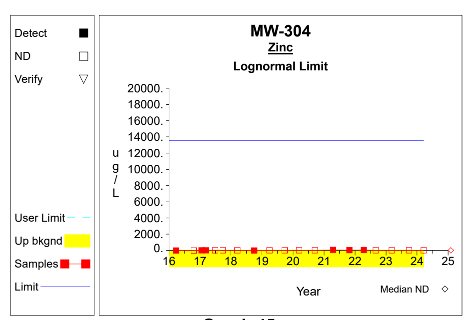


Graph 43



Graph 44



Graph 45

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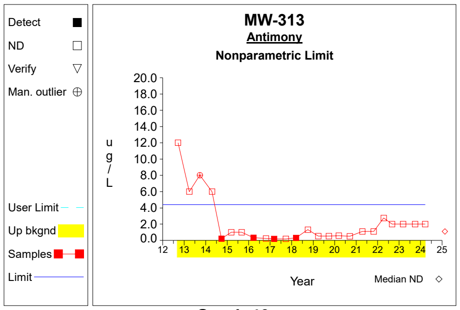
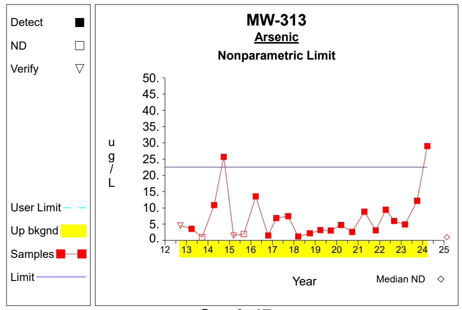
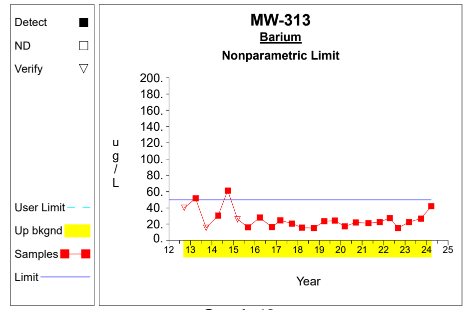
Up vs. Down Prediction Limits



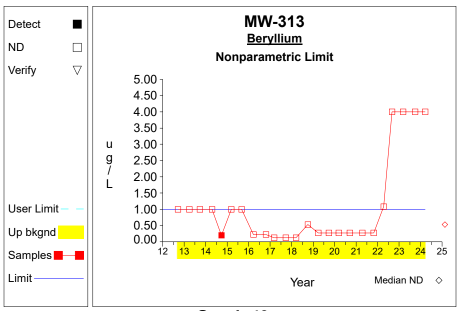
Graph 46



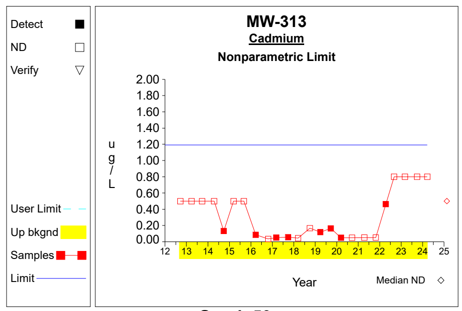
Graph 47



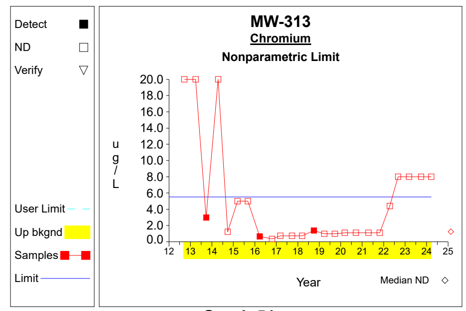
Graph 48



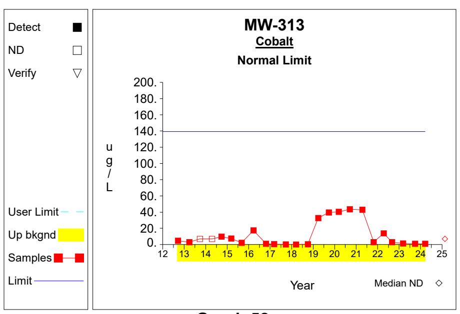
Graph 49



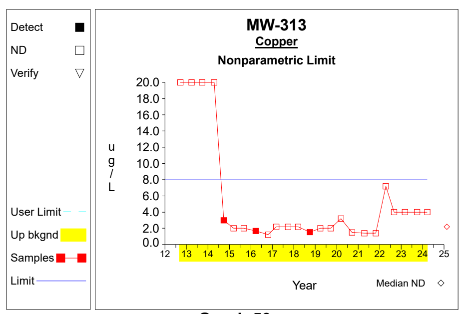
Graph 50



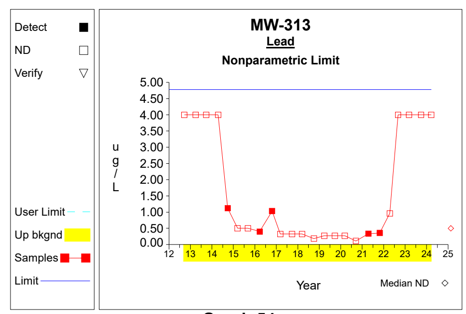
Graph 51



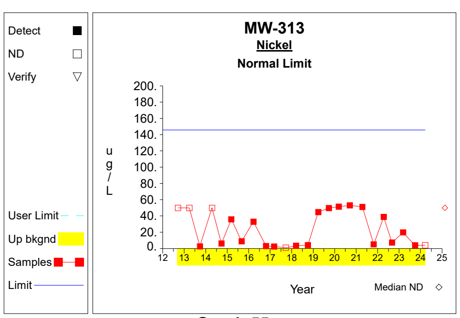
Graph 52



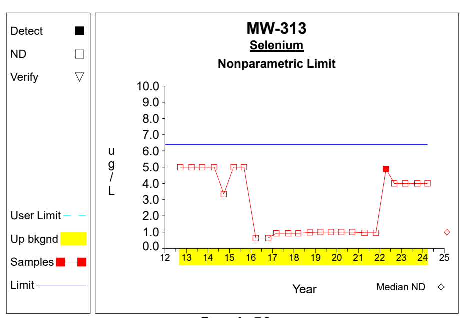
Graph 53



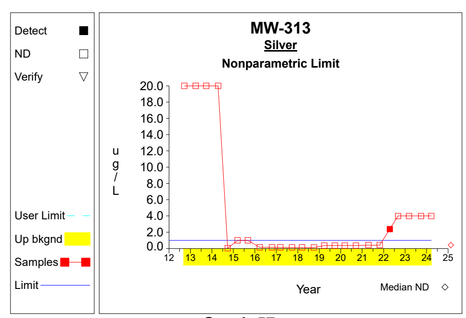
Graph 54



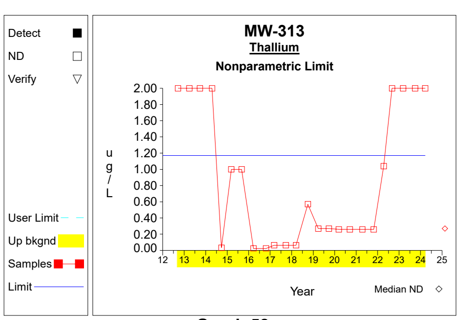
Graph 55



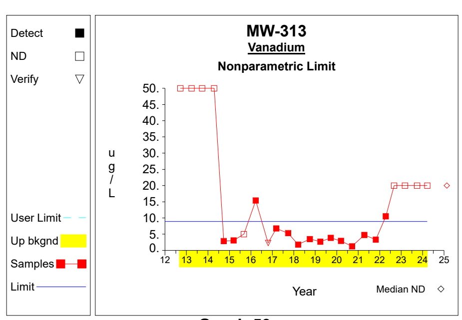
Graph 56



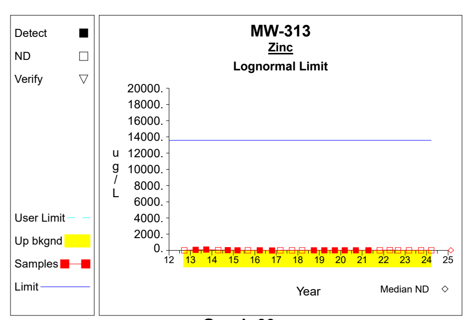
Graph 57



Graph 58



Graph 59



Graph 60

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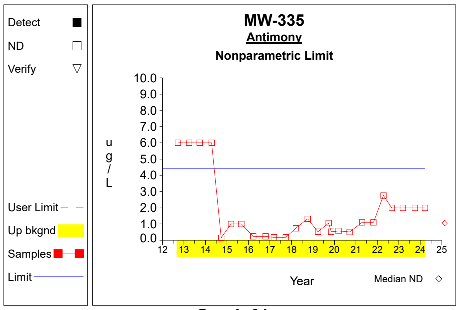
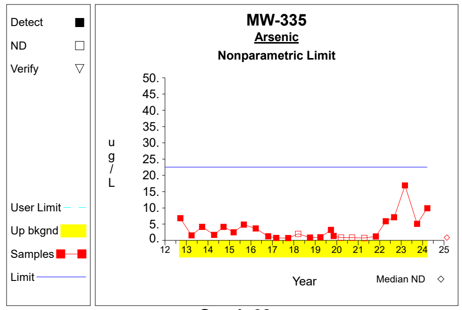
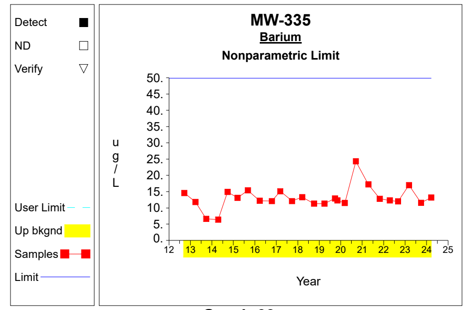
Up vs. Down Prediction Limits



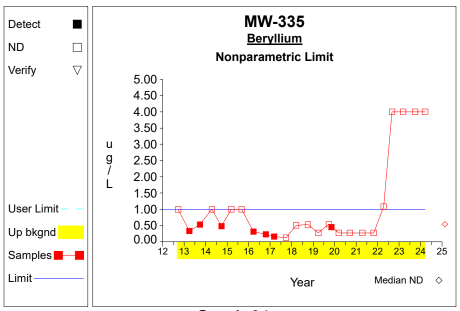
Graph 61



Graph 62



Graph 63



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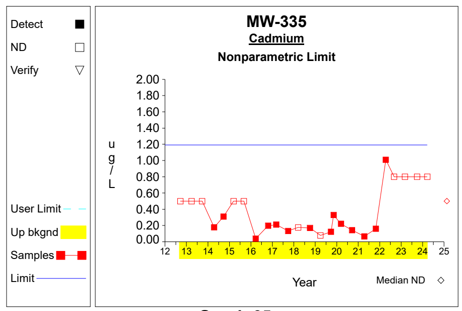
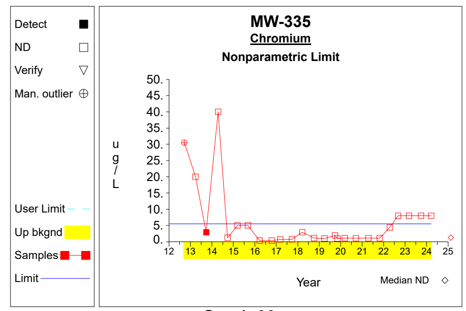
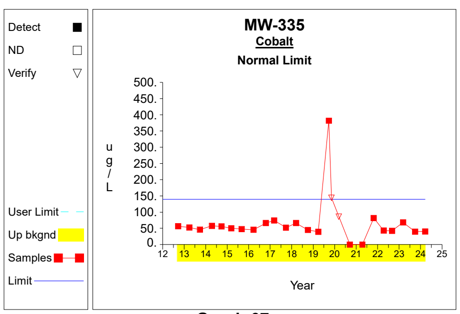


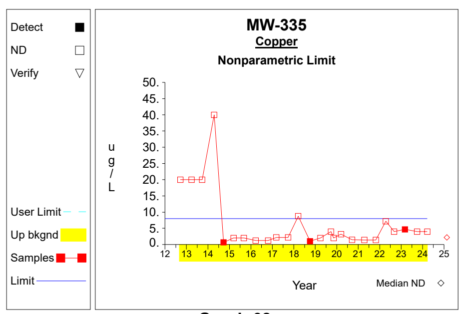
Graph 65



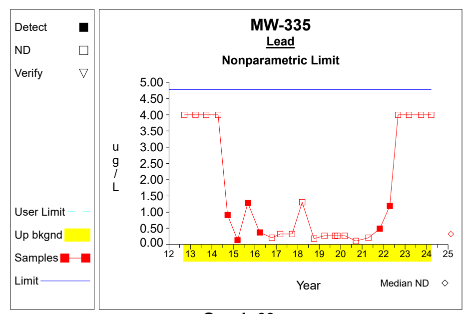
Graph 66



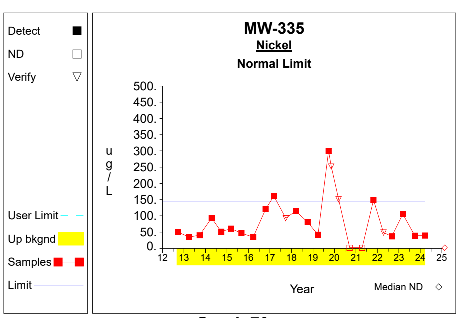
Graph 67



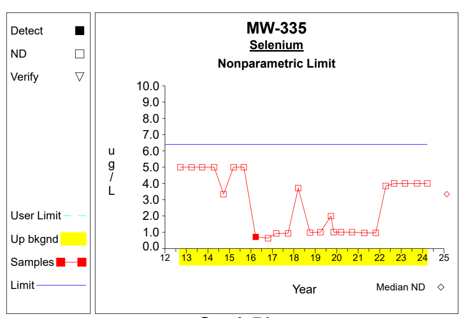
Graph 68



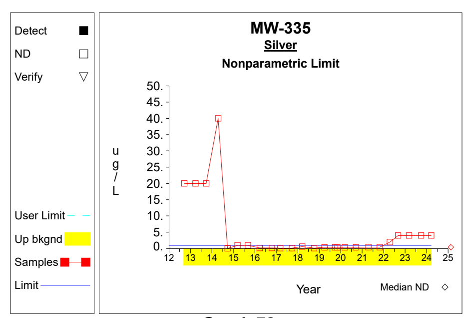
Graph 69



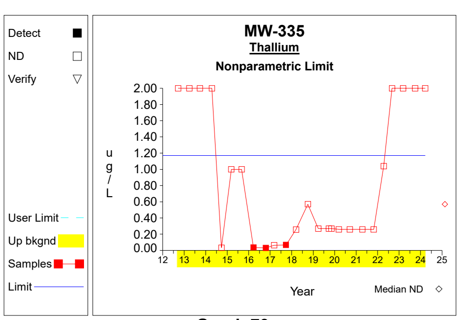
Graph 70



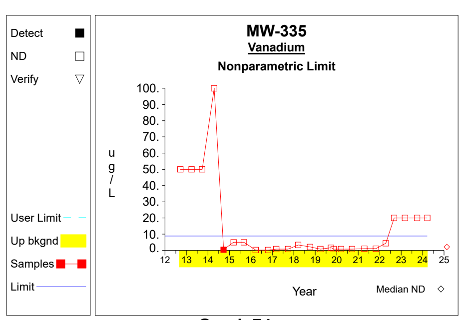
Graph 71



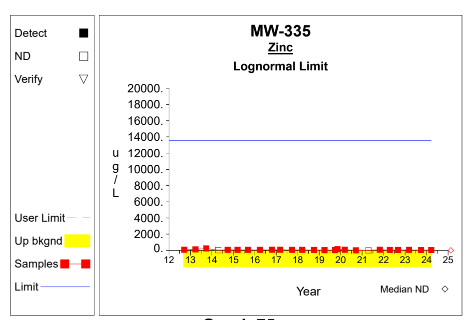
Graph 72



Graph 73



Graph 74



Graph 75

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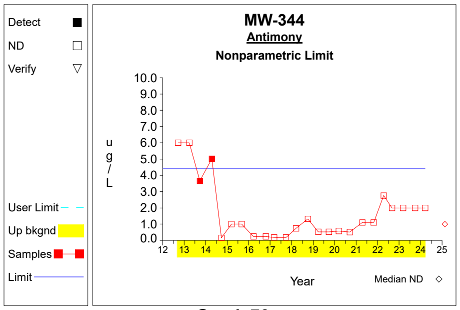
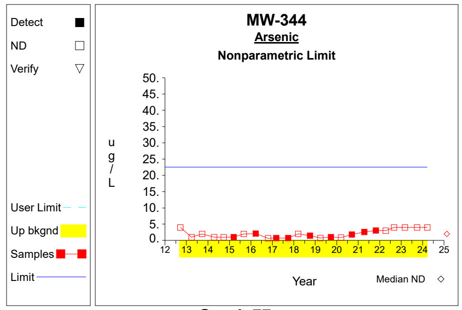
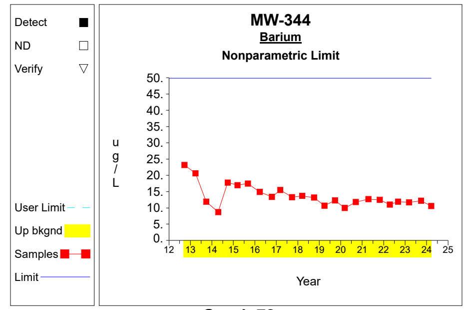
Up vs. Down Prediction Limits



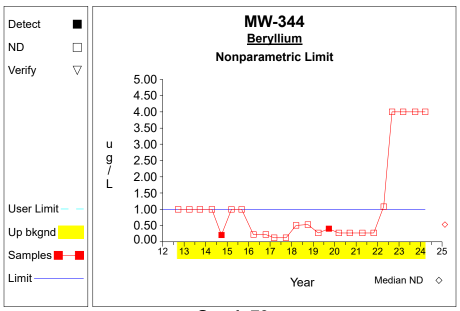
Graph 76



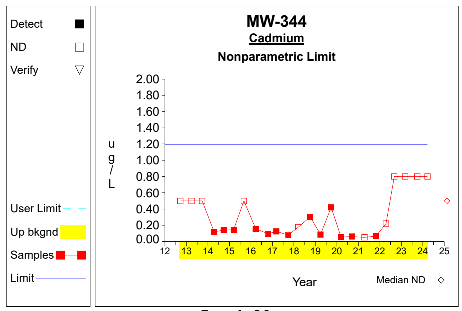
Graph 77



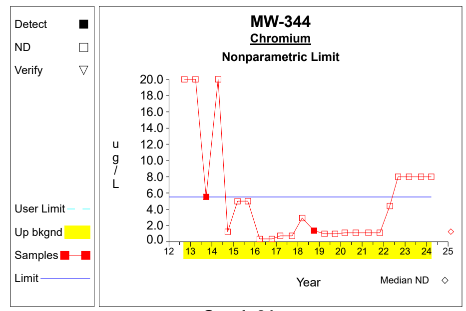
Graph 78



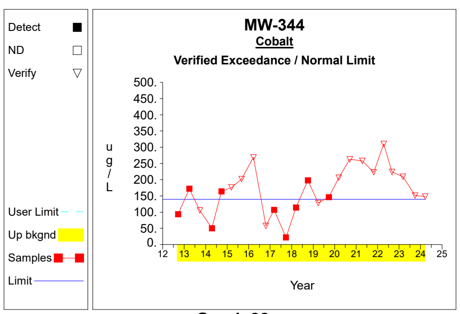
Graph 79



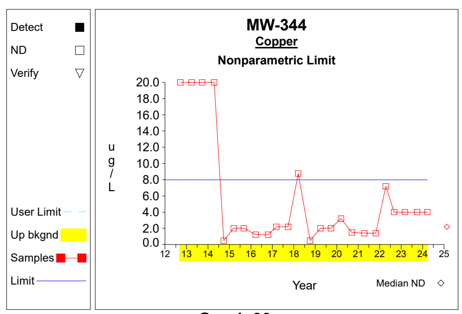
Graph 80



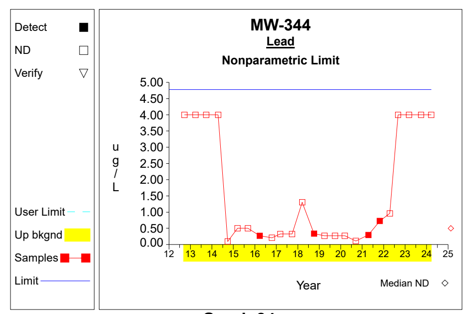
Graph 81



Graph 82



Graph 83



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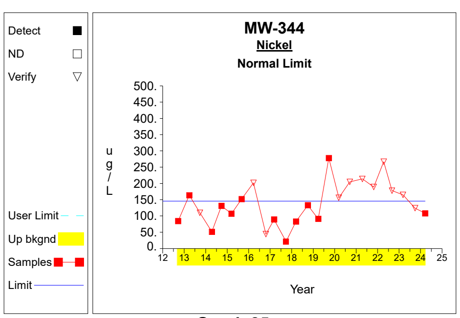

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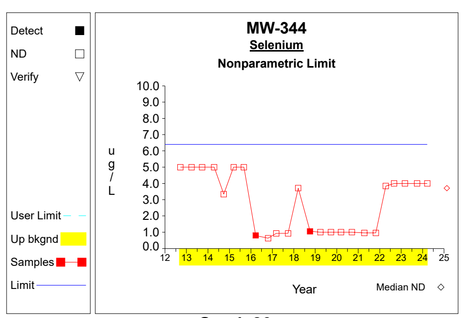

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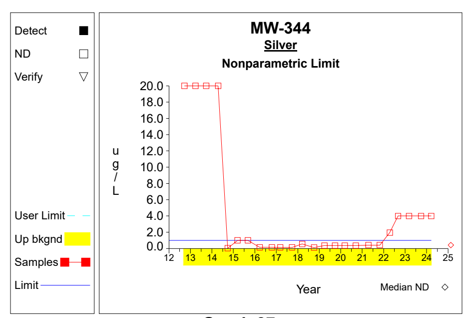

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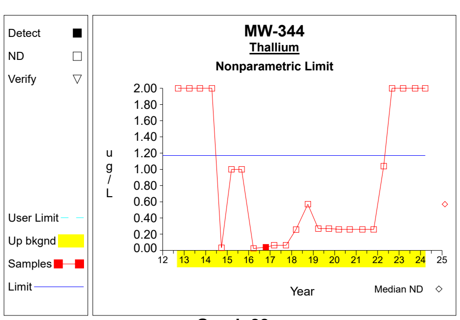

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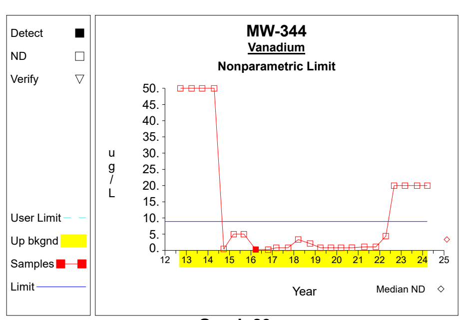
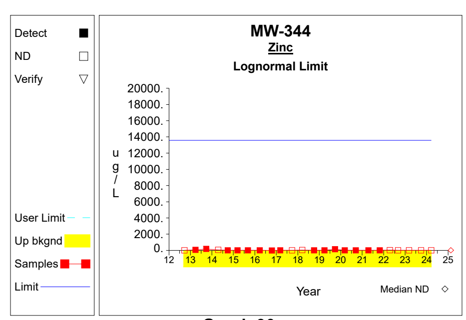
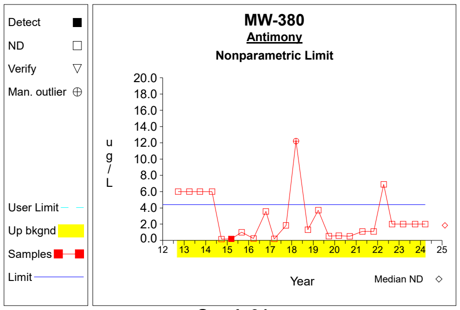


Graph 89

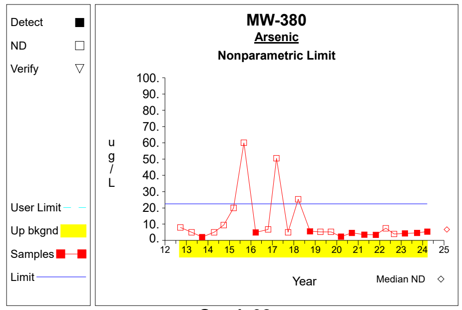


Graph 90

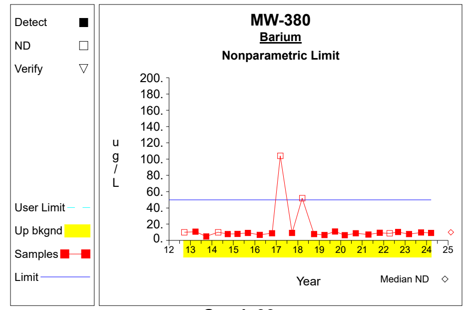
Up vs. Down Prediction Limits



Graph 91



Graph 92



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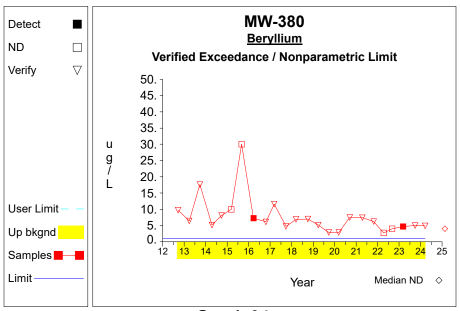

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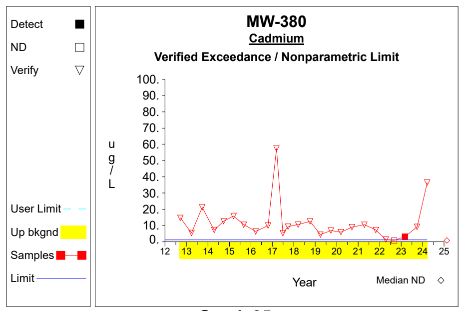

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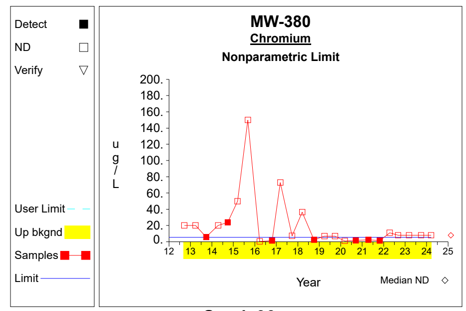

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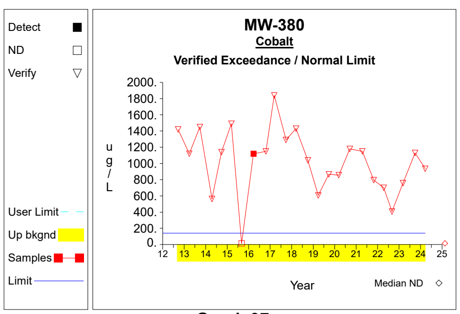

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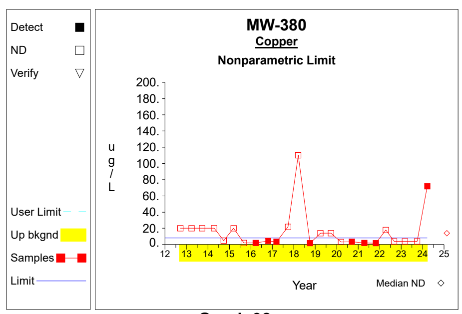

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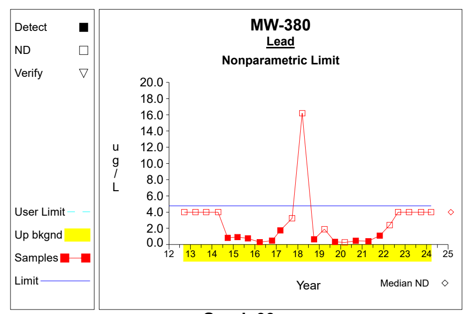

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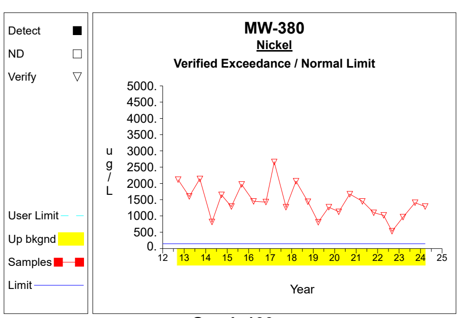

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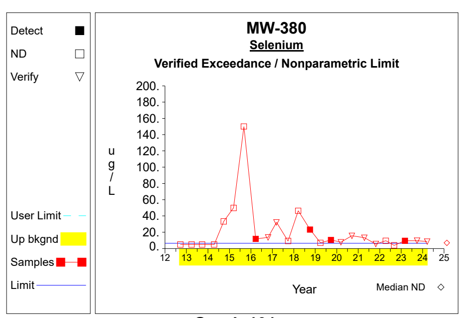

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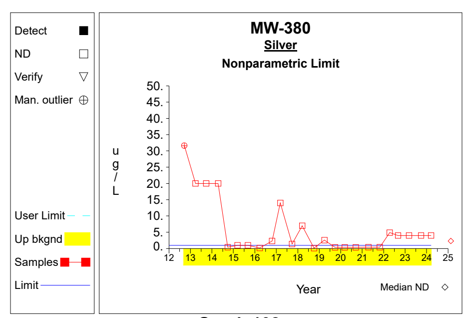

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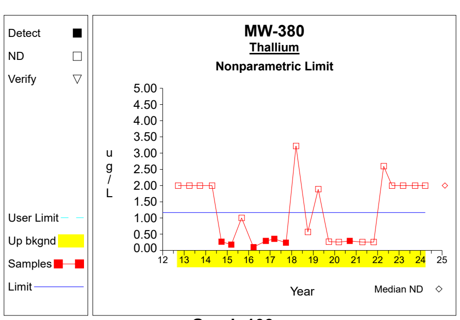
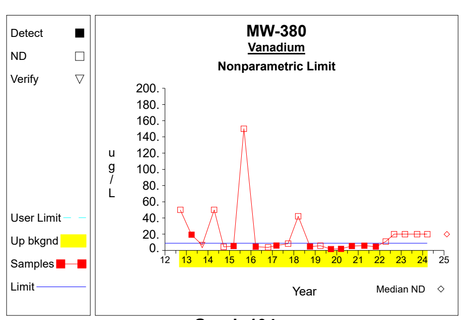


Graph 103



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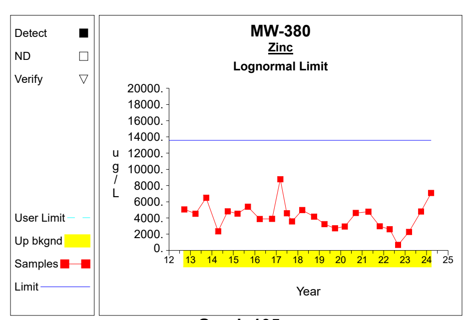
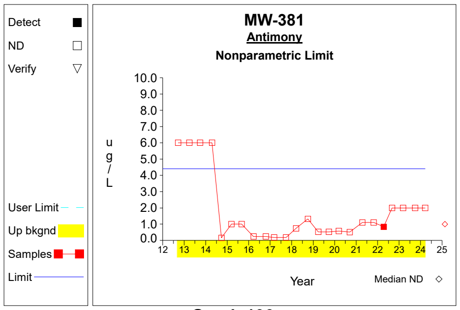


Graph 105

Up vs. Down Prediction Limits



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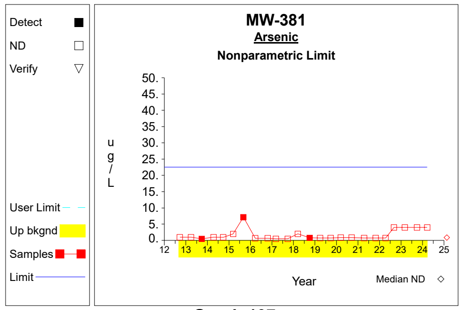

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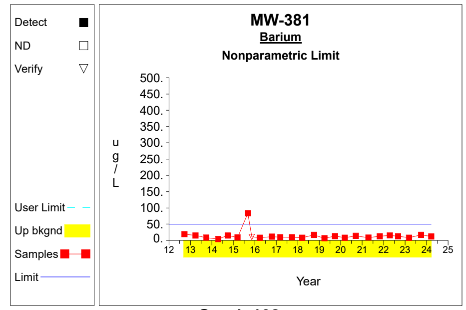

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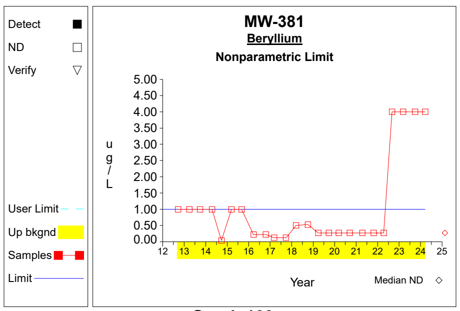

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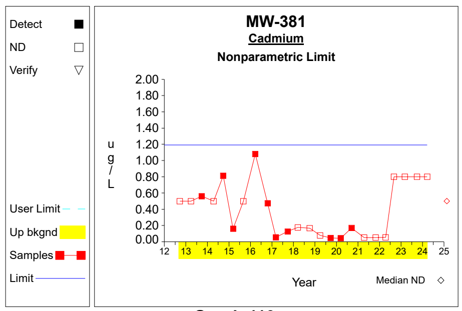

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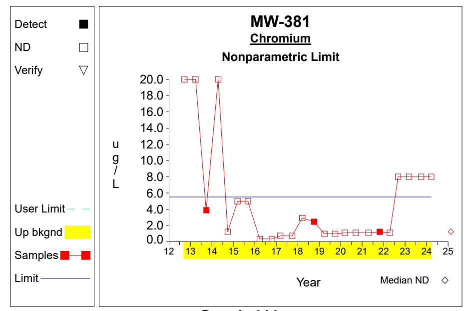
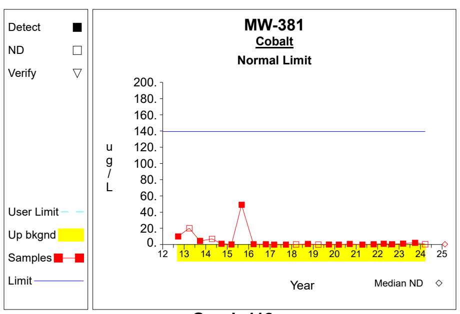
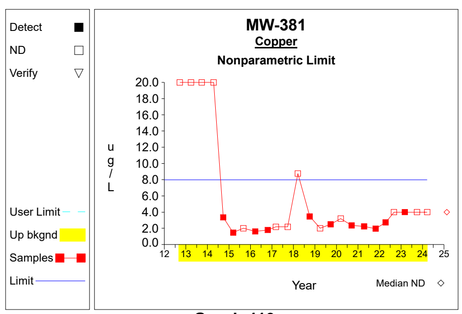


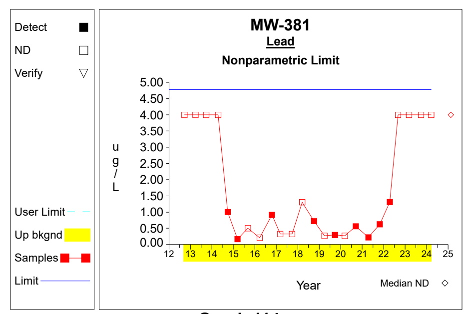
Graph 111



Graph 112



Graph 113



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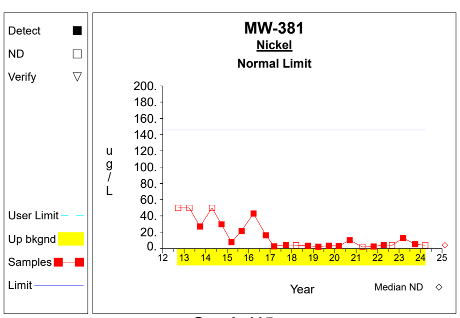

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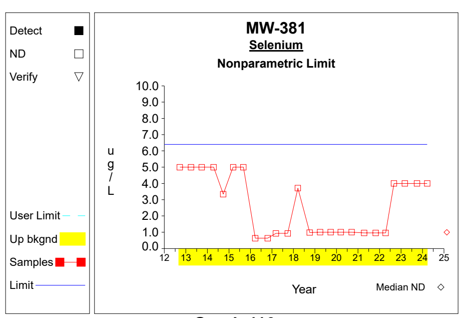

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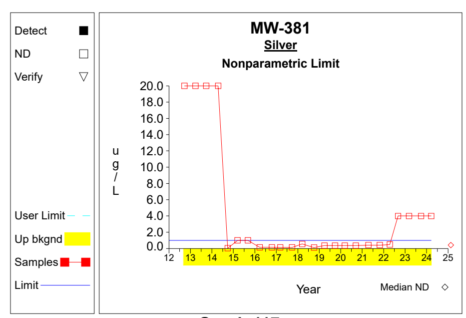
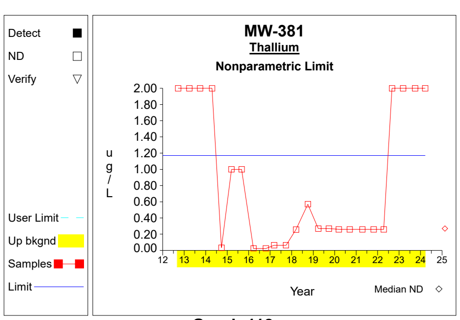
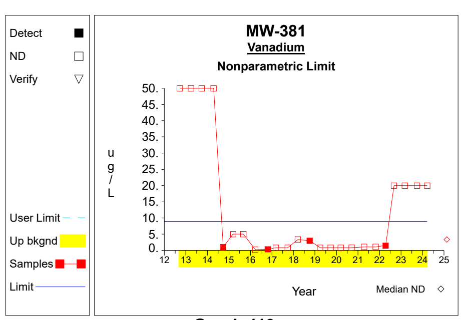


Graph 117



Graph 118



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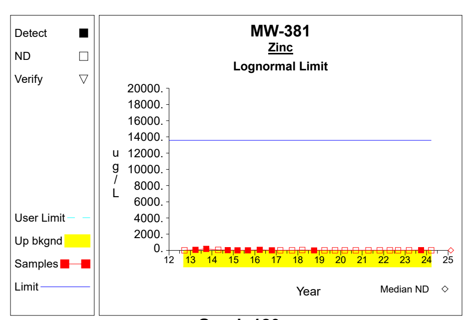
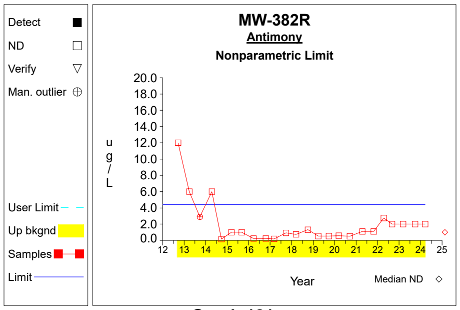


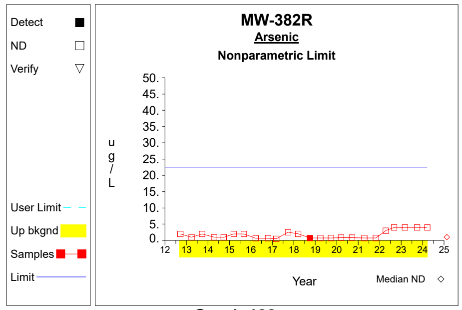
Graph 120

South Central Iowa SWA [GW] April 2024

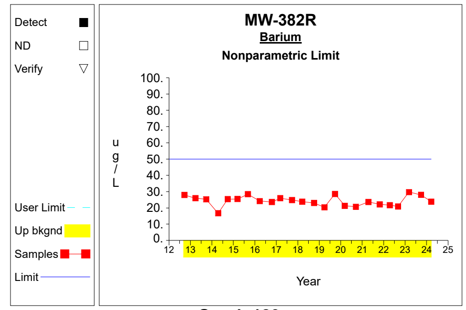
Up vs. Down Prediction Limits



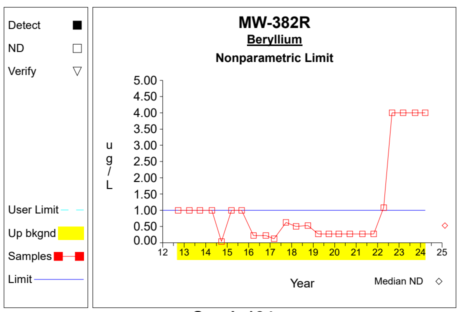
Graph 121



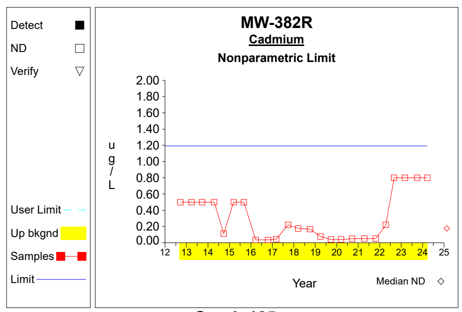
Graph 122



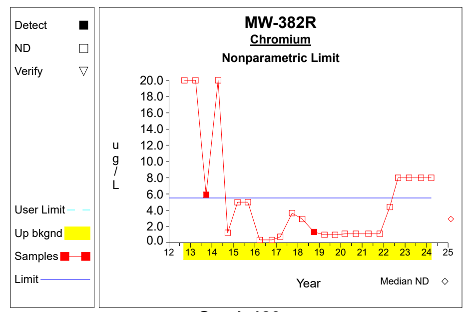
Graph 123



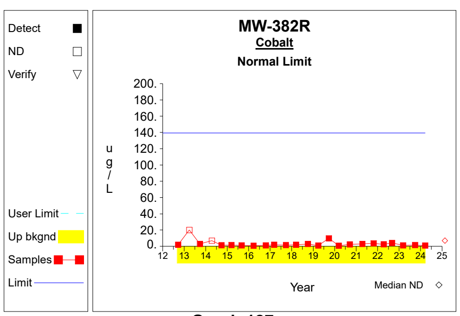
Graph 124



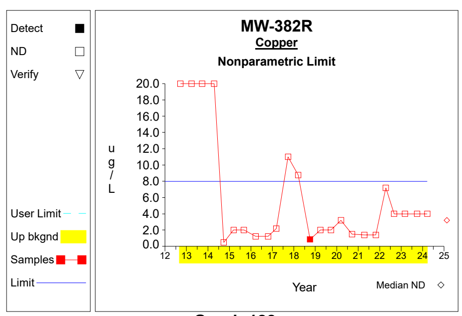
Graph 125



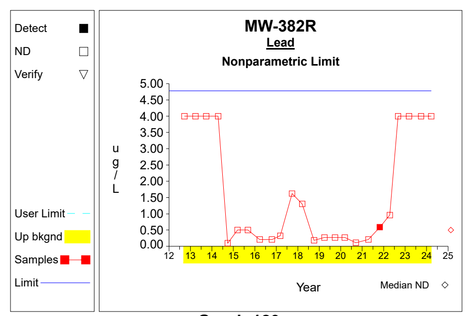
Graph 126



Graph 127



Graph 128



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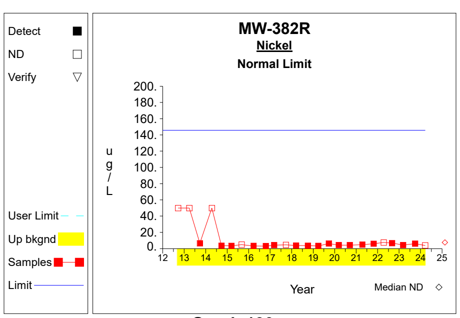
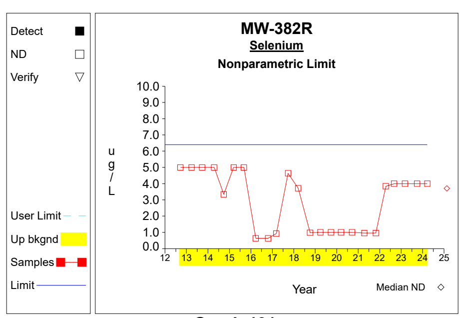


Graph 130



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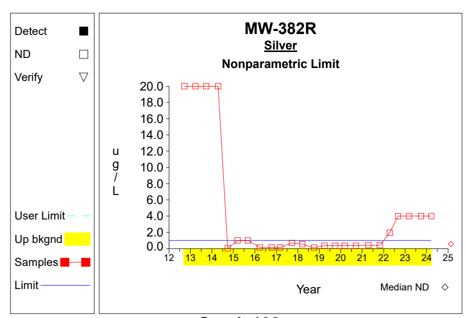

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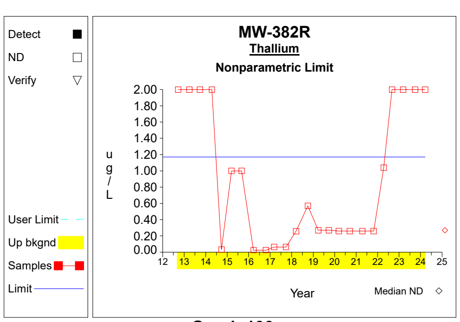
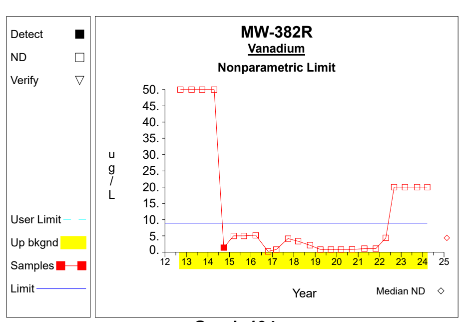


Graph 133



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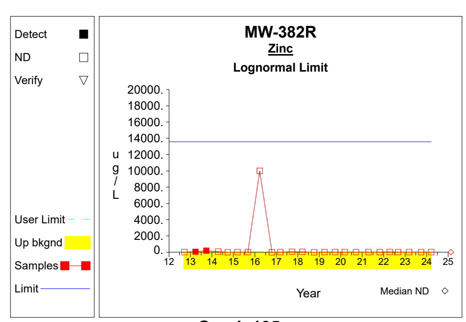
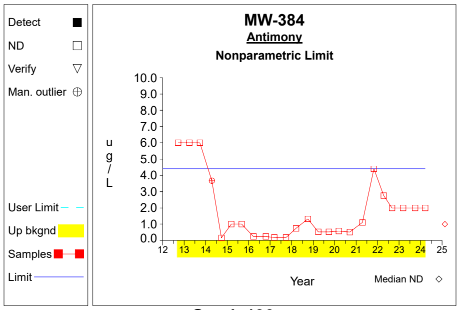


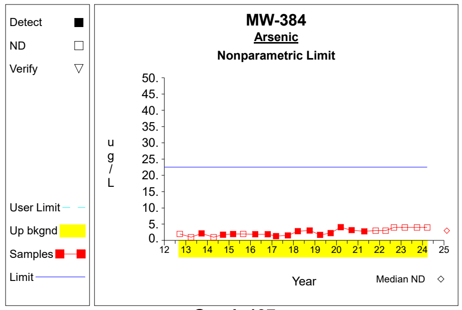
Graph 135

Prepared by: Otter Creek Environmental

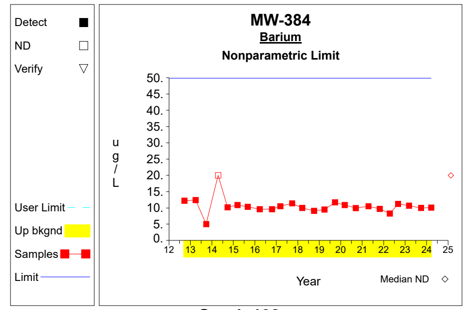
Up vs. Down Prediction Limits



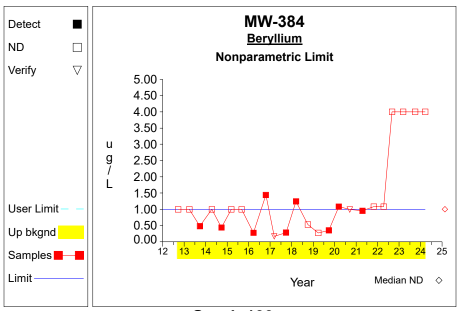
Graph 136



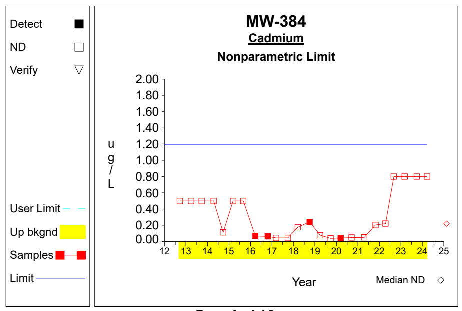
Graph 137



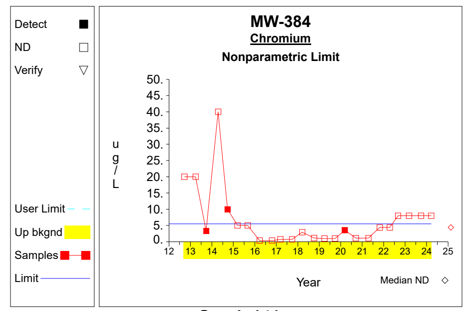
Graph 138



Graph 139



Graph 140



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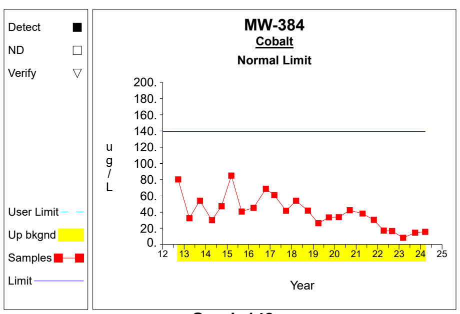

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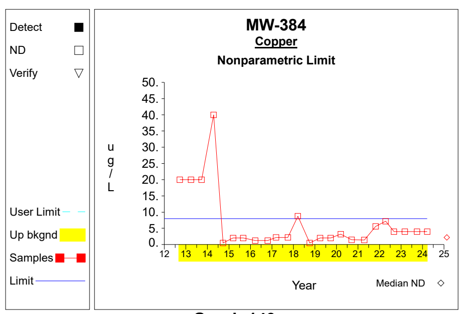
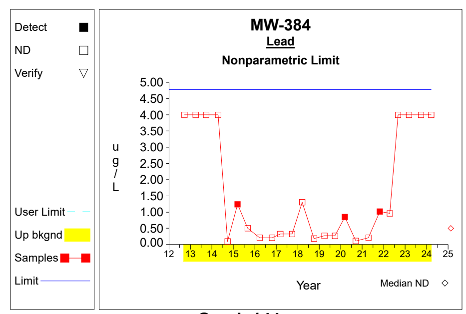


Graph 143



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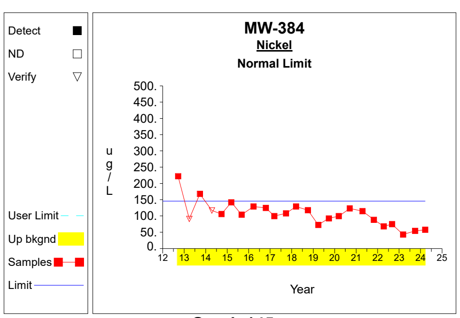
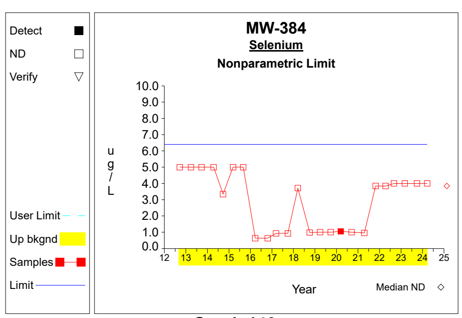
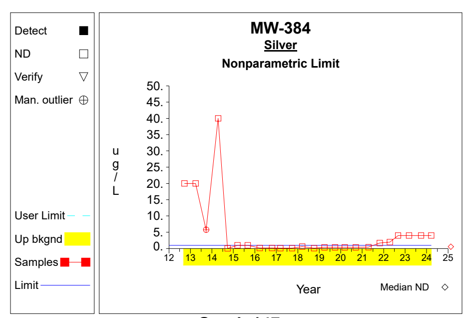


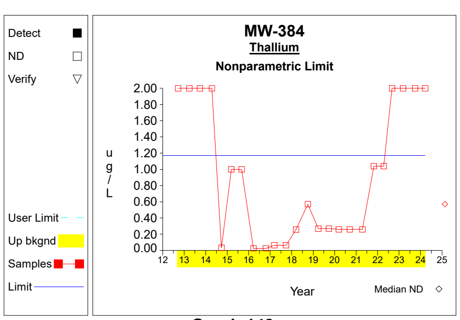
Graph 145



Graph 146



Graph 147



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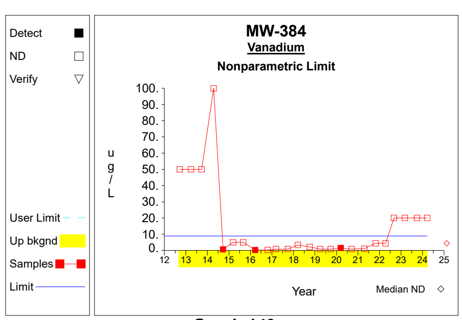
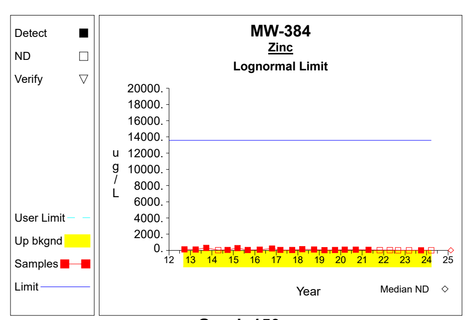
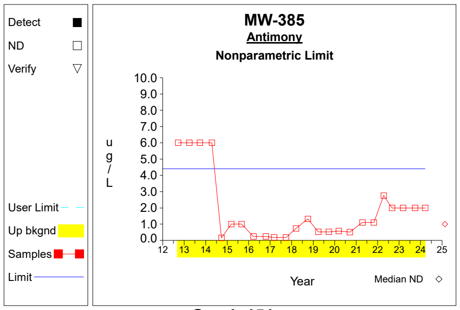


Graph 149

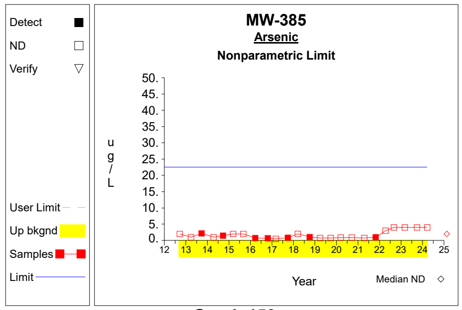


Graph 150

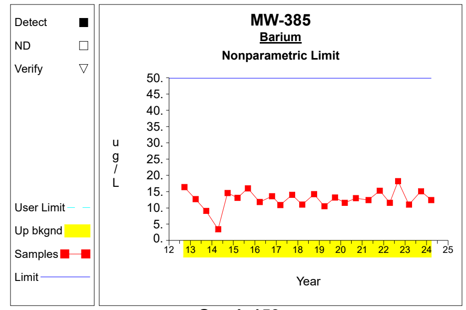
Up vs. Down Prediction Limits



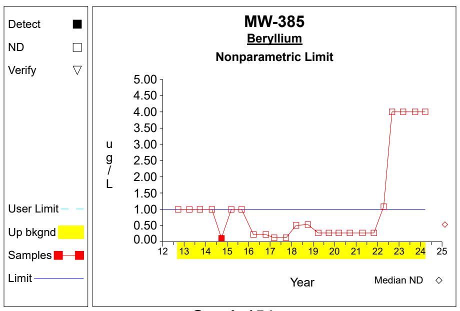
Graph 151



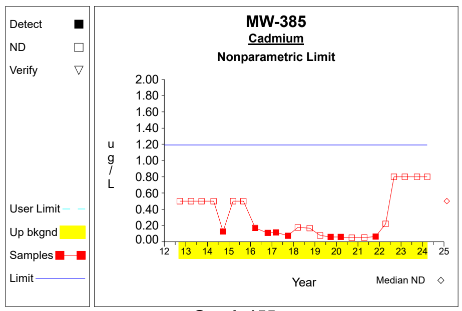
Graph 152



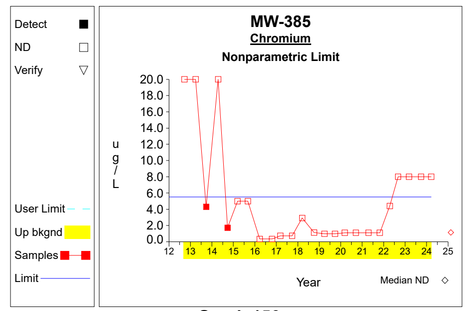
Graph 153



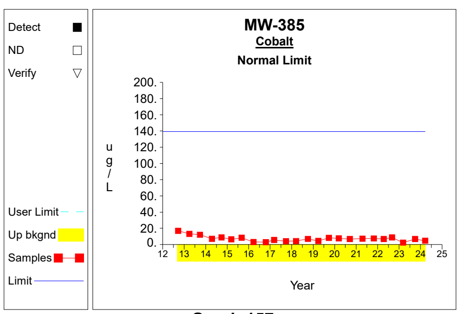
Graph 154



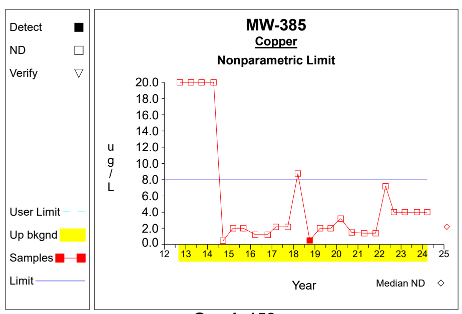
Graph 155



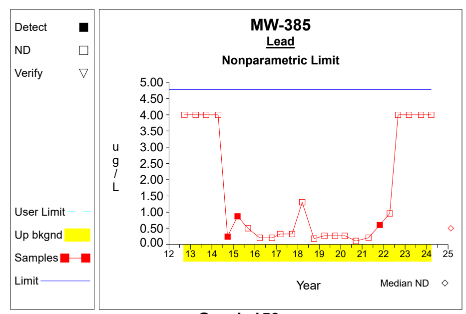
Graph 156



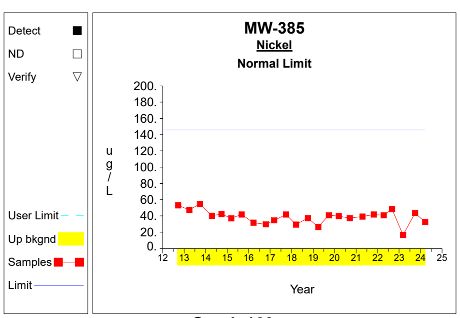
Graph 157



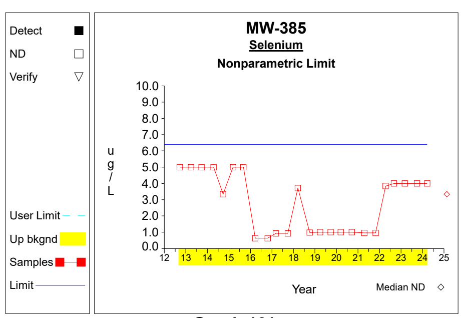
Graph 158



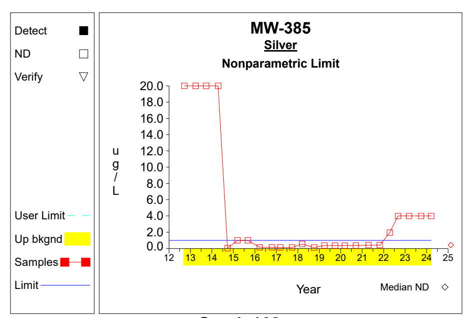
Graph 159



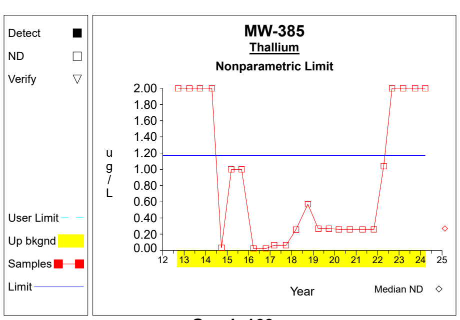
Graph 160



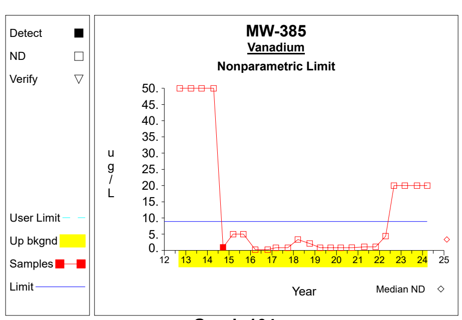
Graph 161



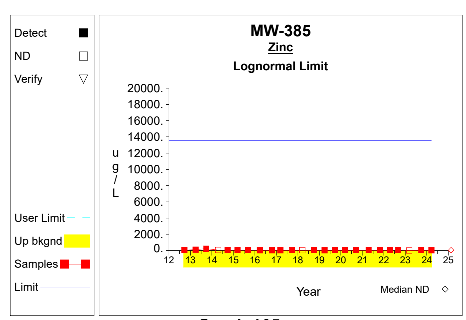
Graph 162



Graph 163

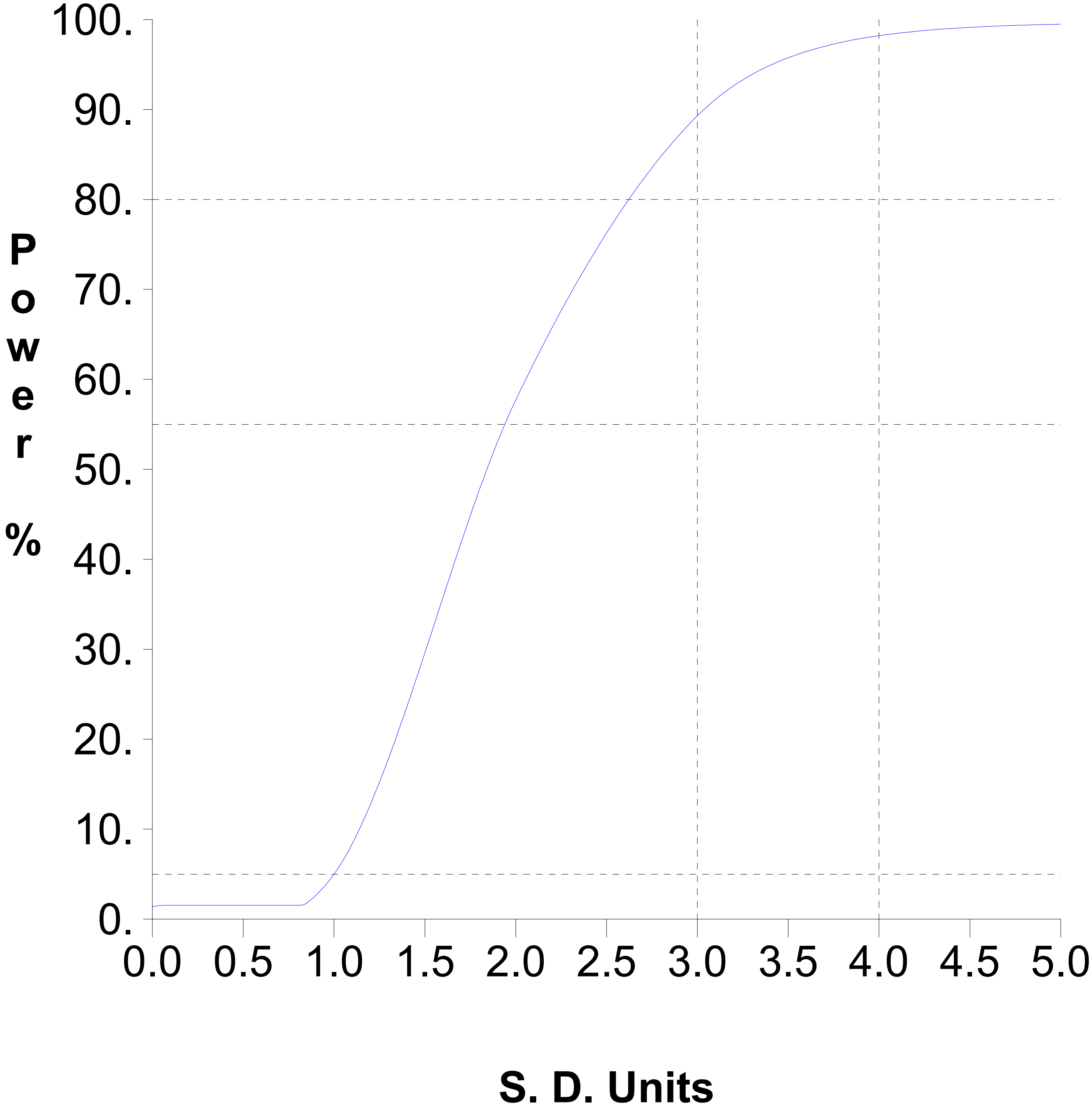


Graph 164



Graph 165

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



Attachment D

Summary Tables and Graphs for the LCL Comparisons – Trace Metals

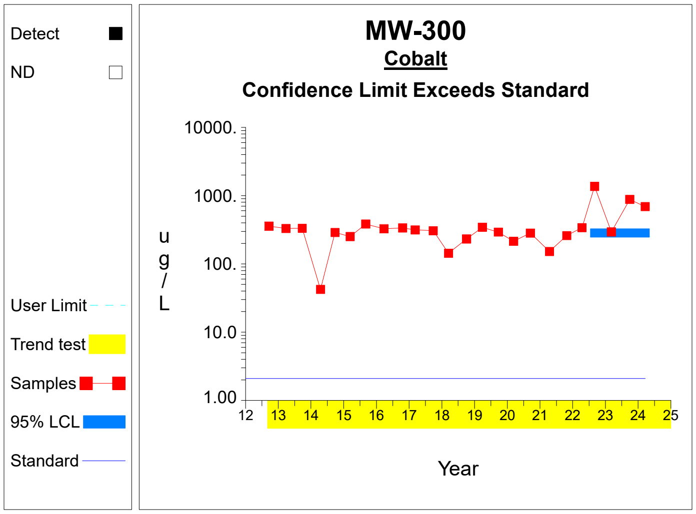
Table 1

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

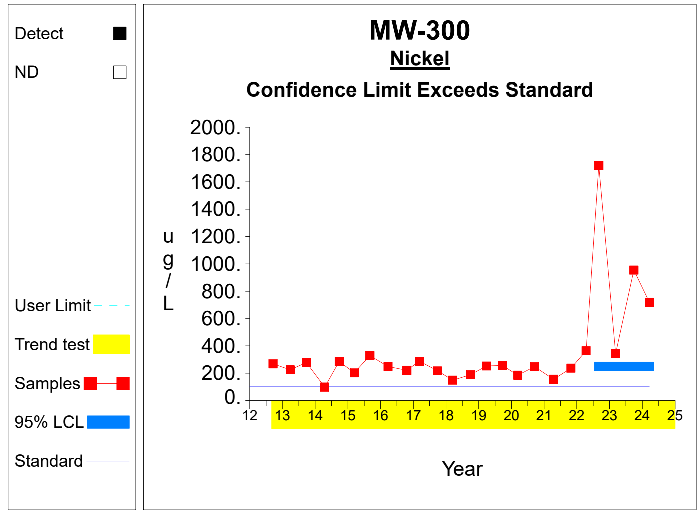
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Cobalt	ug/L	MW-300	4	809.000	446.861	1.176	283.363	1334.637	2.100		**
Nickel	ug/L	MW-300	4	934.250	581.304	1.176	250.469	1618.031	100.000		**

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

Confidence Limits (Assessment)



Graph 1



Graph 2

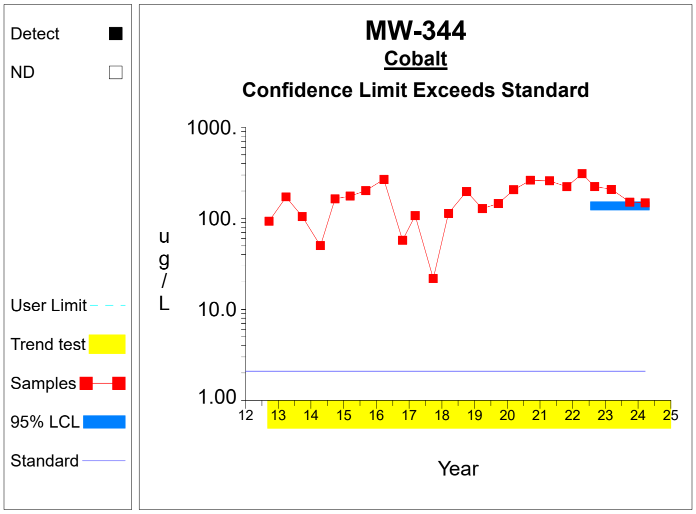
Table 1

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	
Cobalt	ug/L	MW-344	4	183.000	39.183	1.176	136.909	229.091	2.100		**

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

Confidence Limits (Assessment)



Graph 1

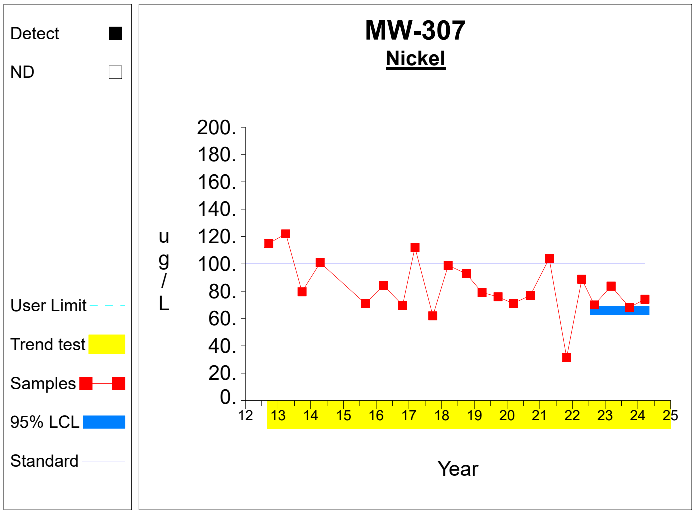
Table 1

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

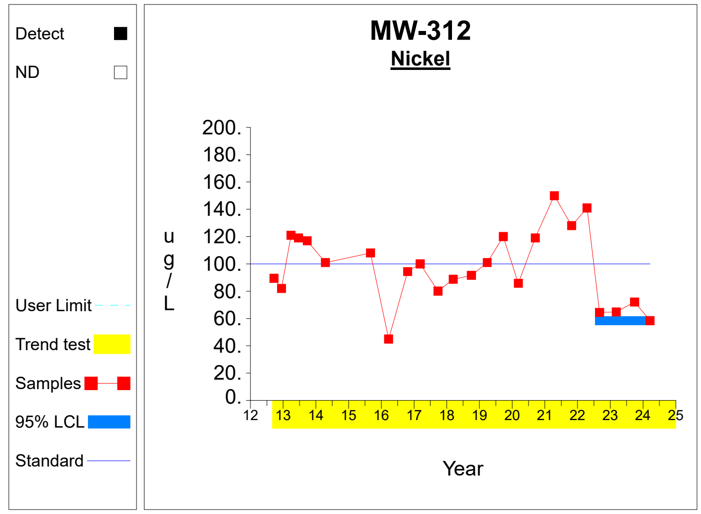
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Nickel	ug/L	MW-307	4	74.000	6.951	1.176	65.824	82.176	100.000		
Nickel	ug/L	MW-312	4	64.950	5.605	1.176	58.357	71.543	100.000		
Nickel	ug/L	MW-335	4	55.325	33.799	1.176	15.567	95.083	100.000		
Nickel	ug/L	MW-344	4	143.750	33.130	1.176	104.780	182.720	100.000		**
Nickel	ug/L	MW-384	4	57.525	13.082	1.176	42.137	72.913	100.000	dec	

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

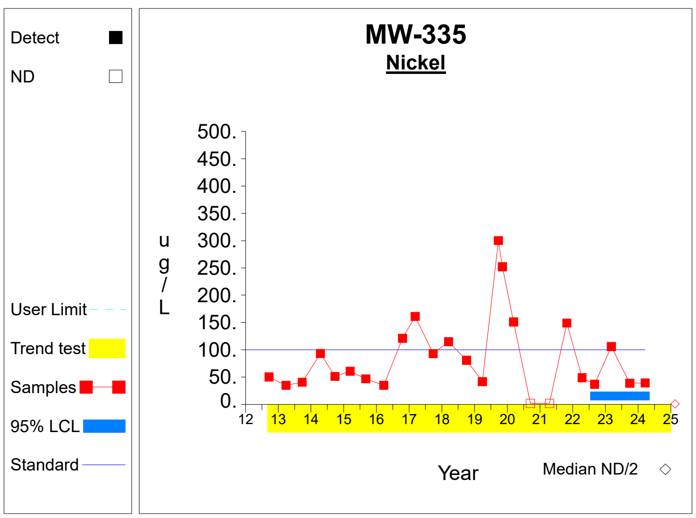
Confidence Limits (Assessment)



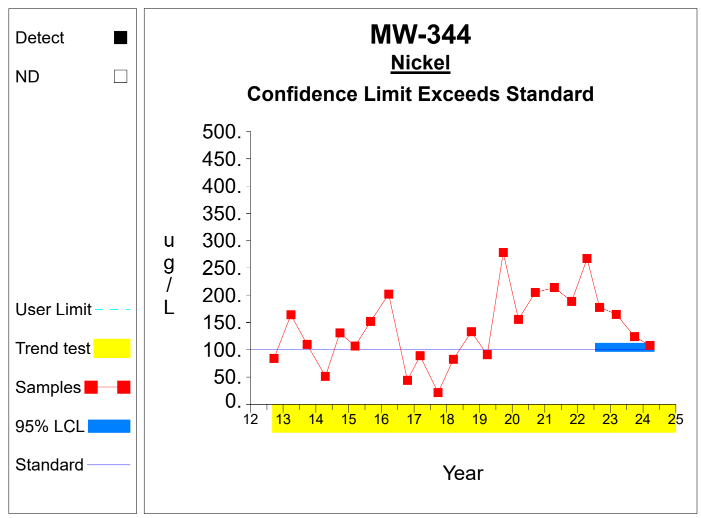
Graph 1



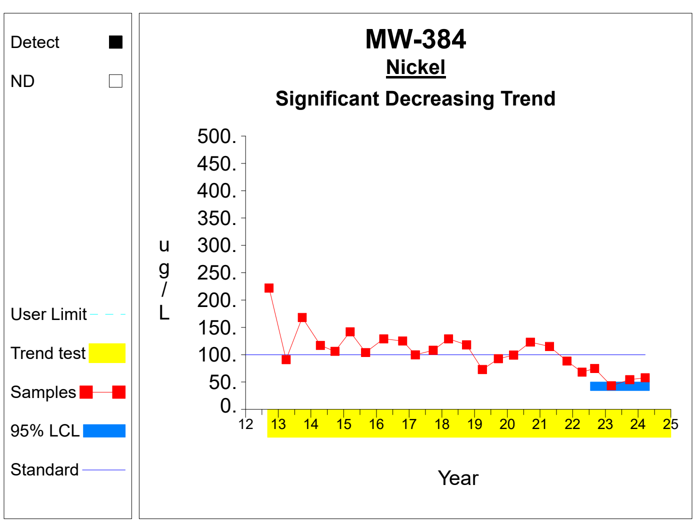
Graph 2



Graph 3



Graph 4



Graph 5

Prepared by: Otter Creek Environmental

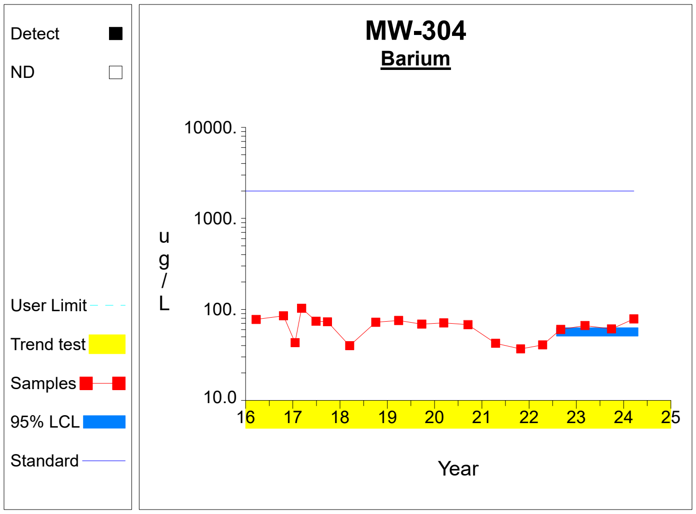
Table 1

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

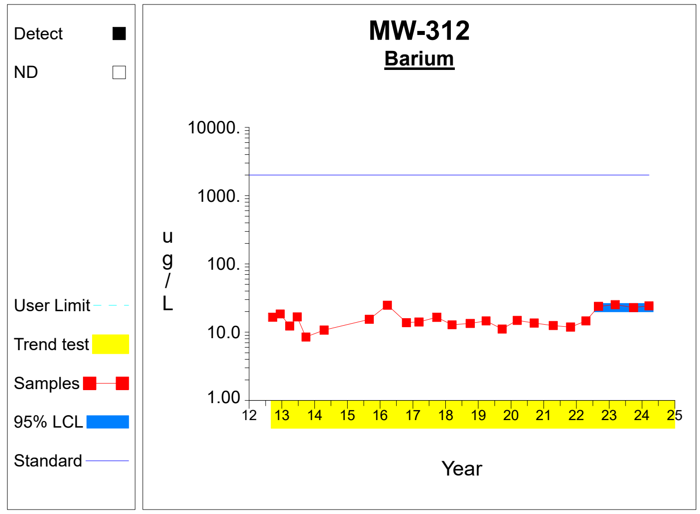
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
Barium	ug/L	MW-304	4	66.575	8.492	1.176	56.586	76.564	2000.000	
Barium	ug/L	MW-312	4	24.100	0.993	1.176	22.932	25.268	2000.000	

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

Confidence Limits (Assessment)



Graph 1



Graph 2

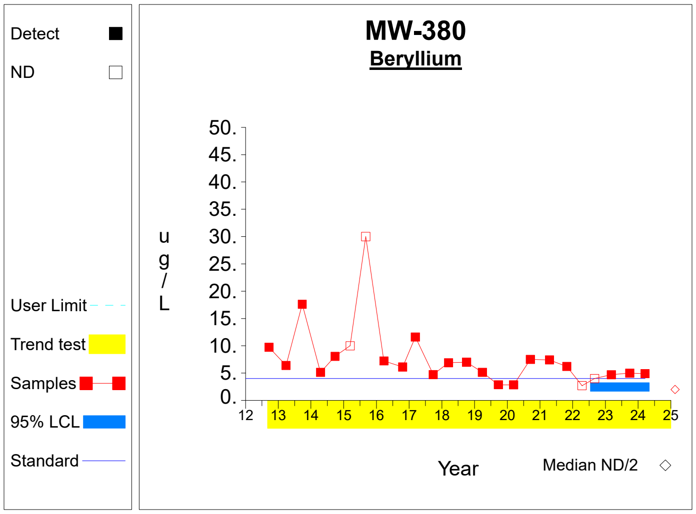
Table 1

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

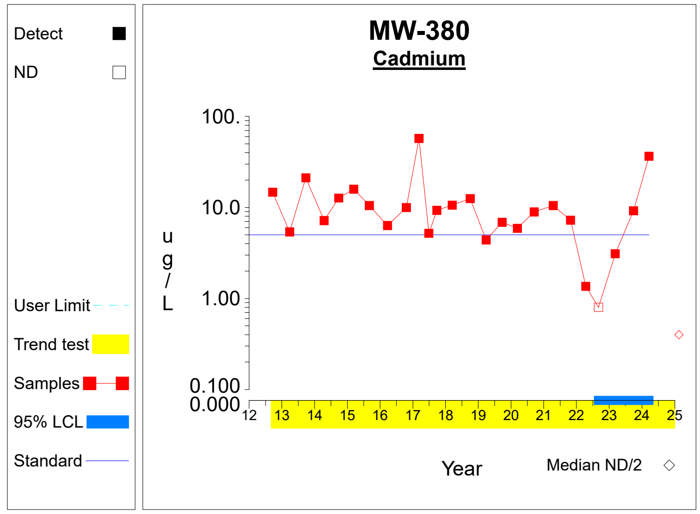
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Beryllium	ug/L	MW-380	4	4.150	1.439	1.176	2.458	5.842	4.000		
Cadmium	ug/L	MW-380	4	12.300	16.548	1.176	0.000	31.765	5.000		
Cobalt	ug/L	MW-380	4	807.750	307.337	1.176	446.233	1169.267	2.100		**
Nickel	ug/L	MW-380	4	1049.000	393.184	1.176	586.502	1511.498	100.000	dec	**
Selenium	ug/L	MW-380	4	7.800	2.913	1.176	4.373	11.227	50.000		

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

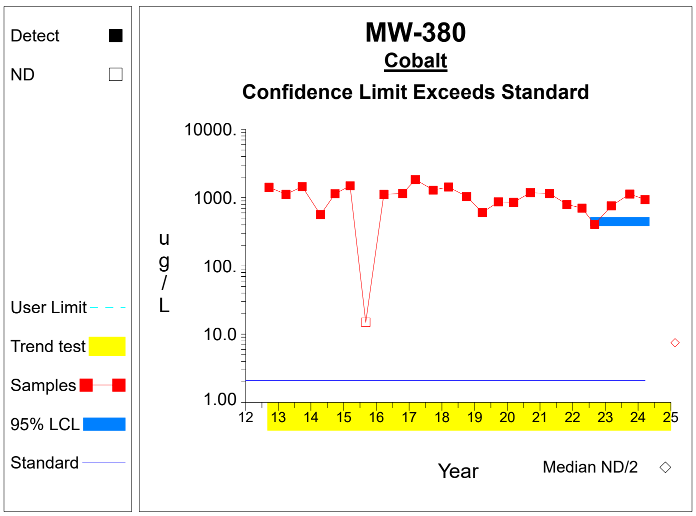
Confidence Limits (Assessment)



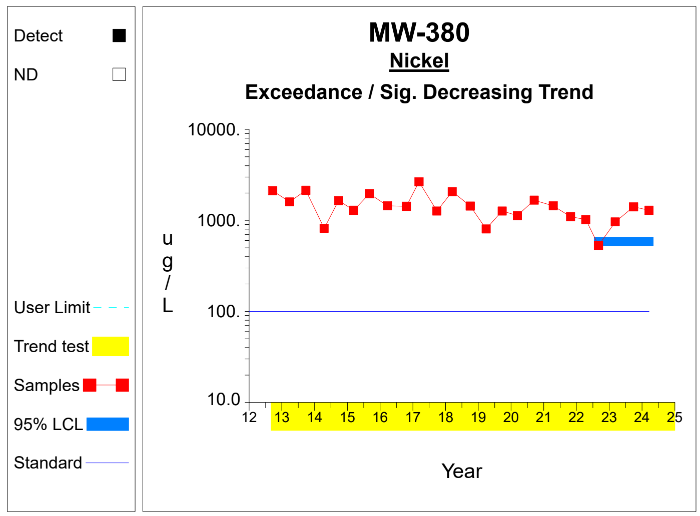
Graph 1



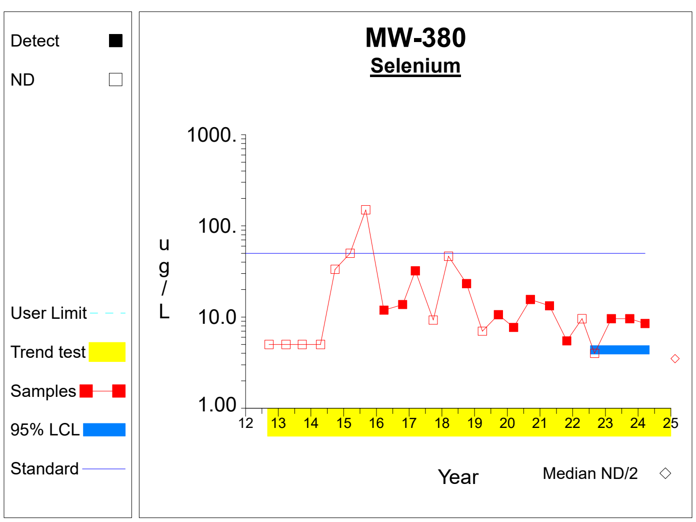
Graph 2



Graph 3



Graph 4



Graph 5

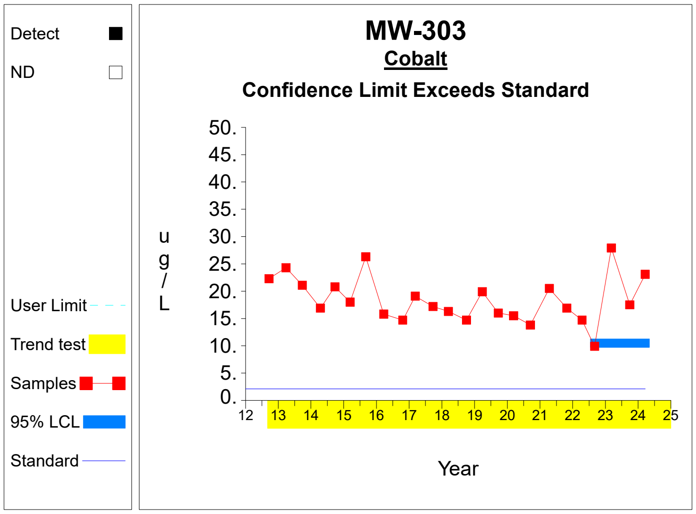
Table 1

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

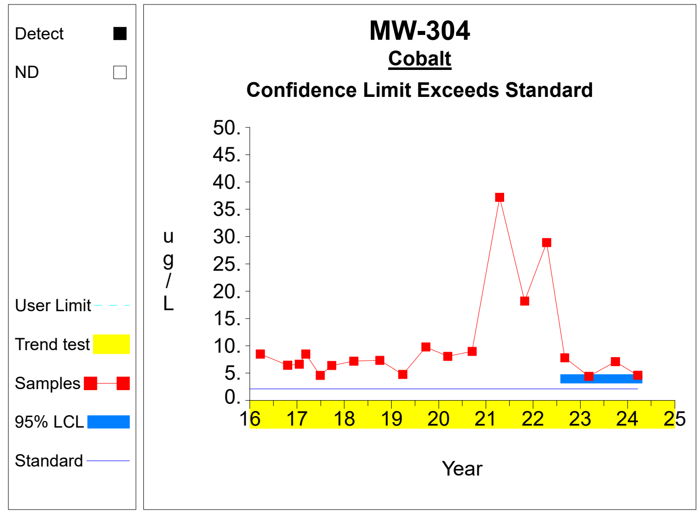
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Cobalt	ug/L	MW-303	4	19.600	7.738	1.176	10.498	28.702	2.100		**
Cobalt	ug/L	MW-304	4	5.975	1.729	1.176	3.941	8.009	2.100		**
Cobalt	ug/L	MW-307	4	41.950	5.048	1.176	36.012	47.888	2.100		**
Cobalt	ug/L	MW-312	4	41.475	5.046	1.176	35.539	47.411	2.100		**
Cobalt	ug/L	MW-313	4	1.475	0.922	1.176	0.391	2.559	2.100		
Cobalt	ug/L	MW-335	4	47.625	13.762	1.176	31.437	63.813	2.100		**
Cobalt	ug/L	MW-381	4	0.975	0.866	1.176	0.000	1.993	2.100		
Cobalt	ug/L	MW-382R	4	1.925	1.544	1.176	0.109	3.741	2.100		
Cobalt	ug/L	MW-384	4	13.900	3.775	1.176	9.459	18.341	2.100	dec	**
Cobalt	ug/L	MW-385	4	5.650	2.738	1.176	2.429	8.871	2.100		**
Cobalt	ug/L	MW-390	4	104.975	6.773	1.176	97.008	112.942	2.100		**

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

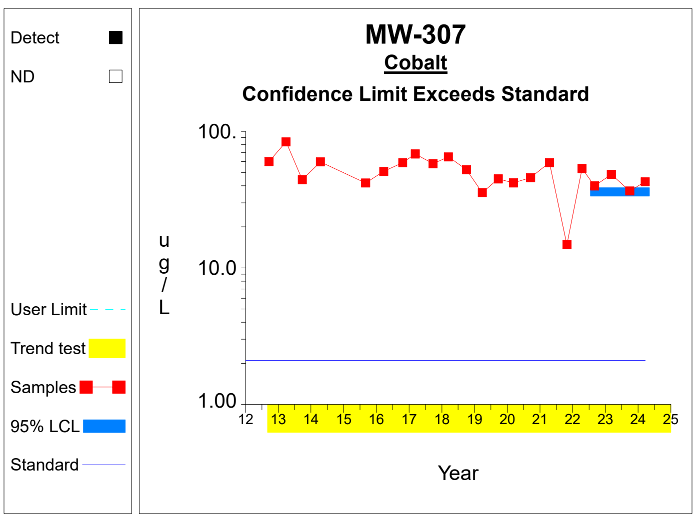
Confidence Limits (Assessment)



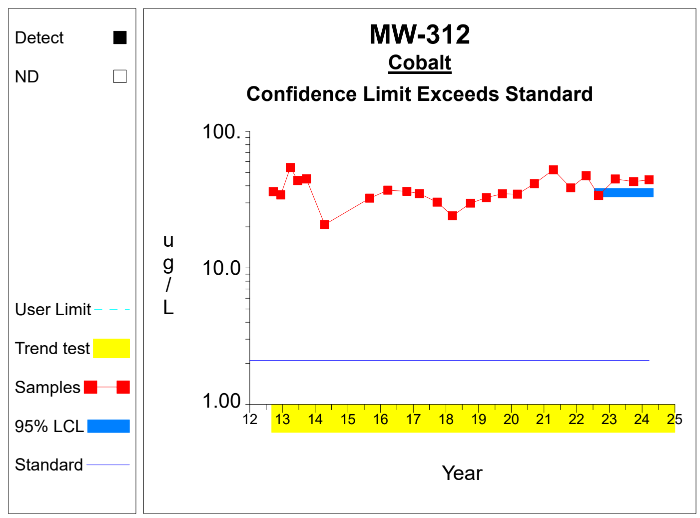
Graph 1



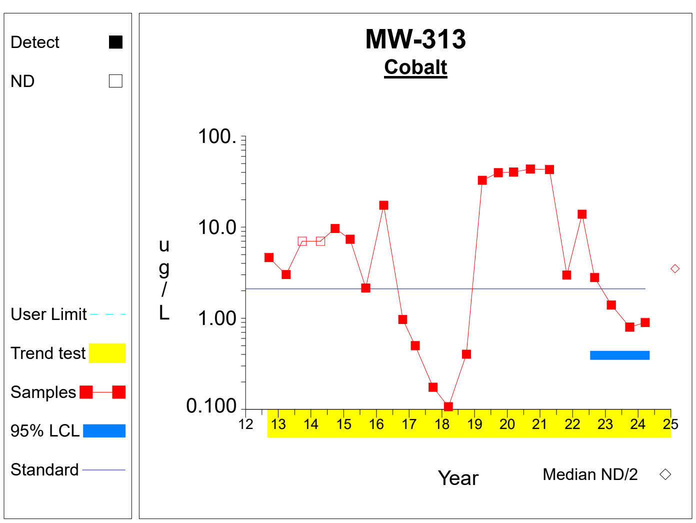
Graph 2



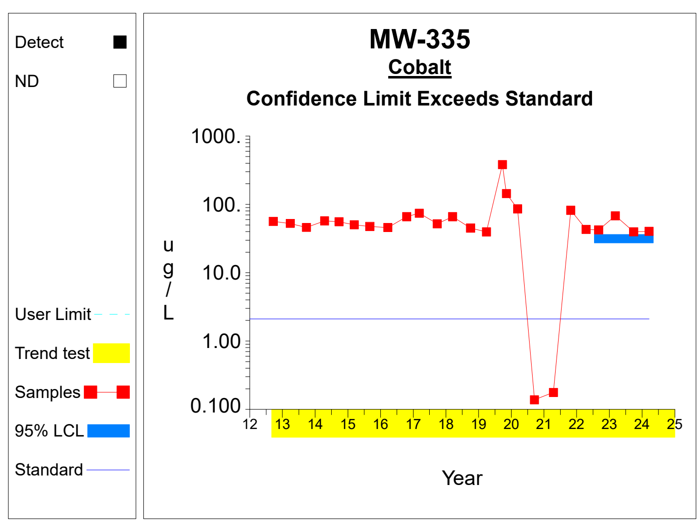
Graph 3



Graph 4



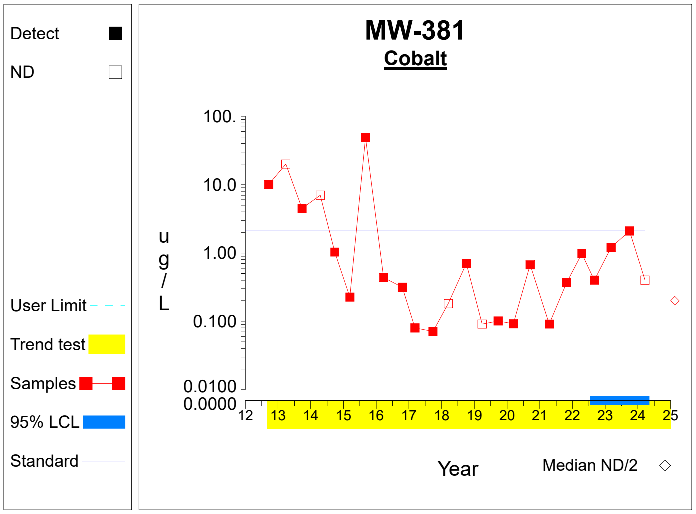
Graph 5



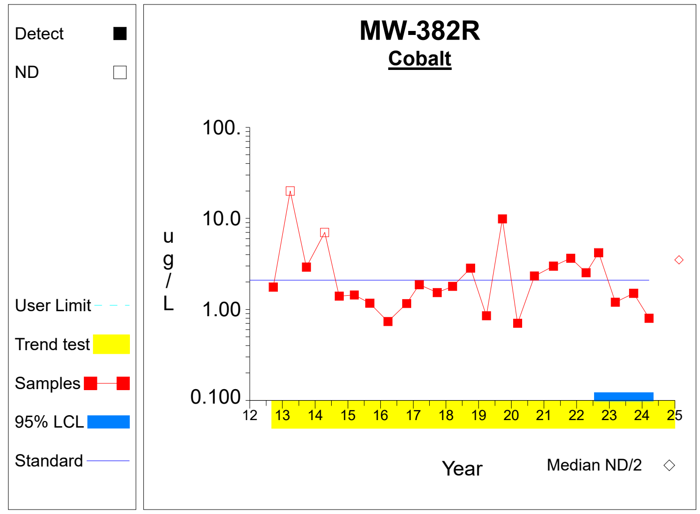
Graph 6

Prepared by: Otter Creek Environmental

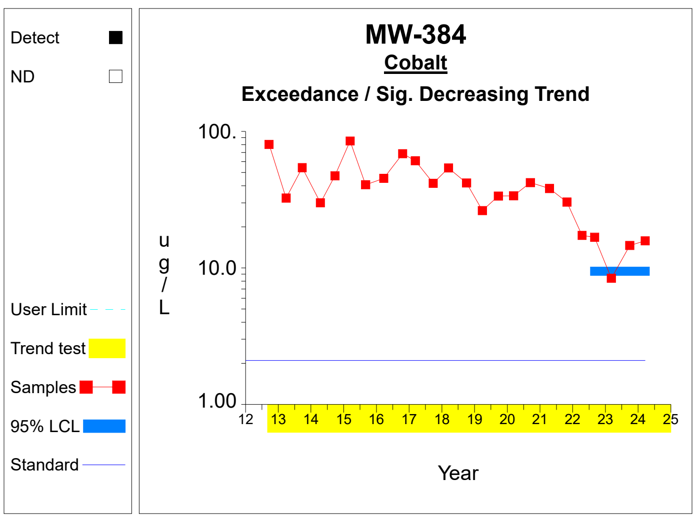
Confidence Limits (Assessment)



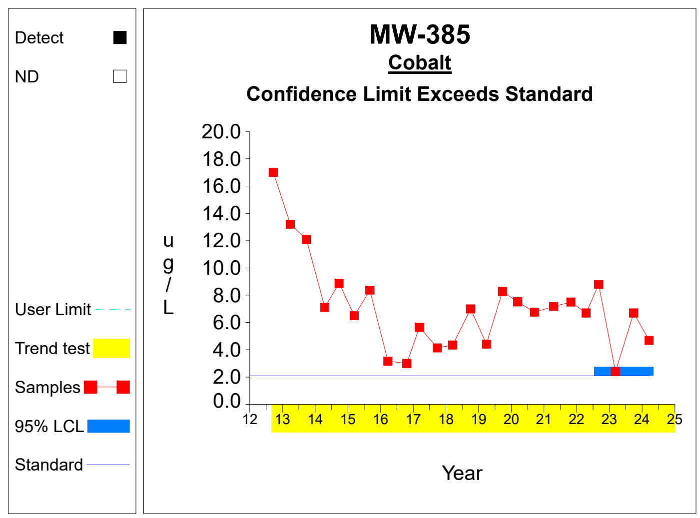
Graph 7



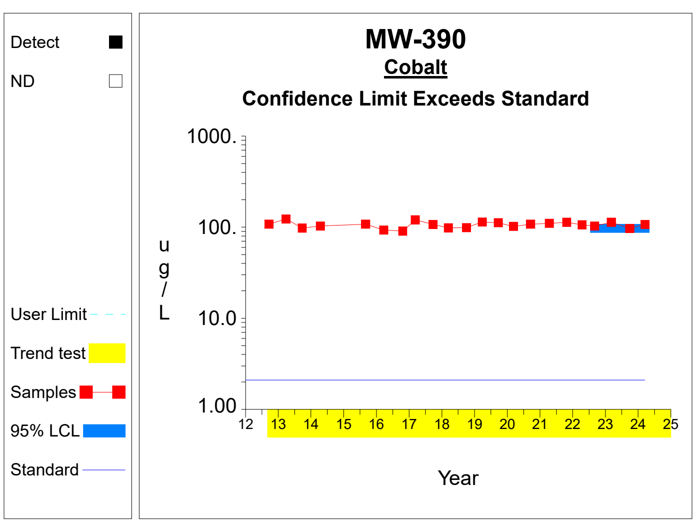
Graph 8



Graph 9



Graph 10



Graph 11

Attachment E

Historical VOC Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Acetone	GU-4A	9/27/2017		3.19	1.79	ug/L
Acetone	GU-4A	3/14/2018		2.79	1.79	ug/L
Bromomethane	GU-4A	10/20/2016		.433	.220	ug/L
Methylene Chloride	GU-4A	9/25/2014		.802	.170	ug/L
Methylene Chloride	GU-4A	10/20/2016		.303	.170	ug/L
Methylene Chloride	GU-4A	9/27/2017		.335	.170	ug/L
Vinyl Chloride	GU-4A	3/14/2018		.103	.100	ug/L
Acetone	MW-300	3/17/2009		16.40	4.62	ug/L
Acetone	MW-300	3/25/2010		12.50	.00	ug/L
Acetone	MW-300	9/23/2010		12.90	.00	ug/L
Acetone	MW-300	4/16/2014		47.80	1.79	ug/L
Acetone	MW-300	9/26/2017		4.29	1.79	ug/L
Acetone	MW-300	3/14/2018		48.60	1.79	ug/L
Acetone	MW-300	3/28/2019		3.10	3.10	ug/L
Acetone	MW-300	4/15/2021		5.12	3.10	ug/L
Acetone	MW-300	10/27/2021		5.67	3.10	ug/L
Methylene Chloride	MW-300	10/20/2016		.264	.170	ug/L
Methylene Chloride	MW-300	3/07/2017		.214	.170	ug/L
Styrene	MW-300	10/27/2021		.383	.370	ug/L
Xylenes, Total	MW-300	9/25/2013		1.11	.13	ug/L
Acetone	MW-303	9/25/2017		2.21	1.79	ug/L
Carbon Disulfide	MW-303	10/21/2016		.231	.150	ug/L
Methylene Chloride	MW-303	9/25/2014		.573	.170	ug/L
Methylene Chloride	MW-303	10/21/2016		.308	.170	ug/L
Methylene Chloride	MW-303	3/13/2018		.226	.170	ug/L
Xylenes, Total	MW-303	9/26/2013		.232	.130	ug/L
Xylenes, Total	MW-303	10/21/2016		.390	.130	ug/L
Xylenes, Total	MW-303	3/08/2017		.459	.130	ug/L
Acetone	MW-304	6/28/2017		3.74	1.79	ug/L
Acetone	MW-304	9/26/2017		2.99	1.79	ug/L
Bromomethane	MW-304	9/26/2017		.372	.220	ug/L
Bromomethane	MW-304	3/14/2018		.448	.220	ug/L
Methylene Chloride	MW-304	1/18/2017		.264	.170	ug/L
Acetone	MW-307	3/08/2017		2.61	1.79	ug/L
Acetone	MW-307	9/25/2017		2.41	1.79	ug/L
Acetonitrile	MW-307	9/26/2013		739	126	ug/L
Methylene Chloride	MW-307	10/21/2016		.231	.170	ug/L
Xylenes, Total	MW-307	10/21/2016		.324	.130	ug/L
Xylenes, Total	MW-307	3/08/2017		.362	.130	ug/L
Xylenes, Total	MW-307	3/27/2019		.481	.400	ug/L
Acetone	MW-310	3/08/2017		2.61	1.79	ug/L
Acetone	MW-310	9/27/2017		3.78	1.79	ug/L
Acetone	MW-310	3/14/2018		1.96	1.79	ug/L
Acetonitrile	MW-310	9/26/2013		841	126	ug/L
Methylene Chloride	MW-310	9/25/2014		.756	.170	ug/L
Methylene Chloride	MW-310	10/20/2016		.186	.170	ug/L
Xylenes, Total	MW-310	10/20/2016		.351	.130	ug/L
Xylenes, Total	MW-310	3/08/2017		1.090	.130	ug/L
Xylenes, Total	MW-310	9/27/2017		.363	.130	ug/L
Acetone	MW-312	3/08/2017		2.39	1.79	ug/L
Bromomethane	MW-312	9/25/2017		.233	.220	ug/L
Methylene Chloride	MW-312	10/21/2016		.295	.170	ug/L
Methylene Chloride	MW-312	3/13/2018		.334	.170	ug/L
Xylenes, Total	MW-312	3/08/2017		.654	.130	ug/L
Xylenes, Total	MW-312	10/27/2021		1.050	.400	ug/L
4,4`-DDD	MW-313	9/25/2013		.00214	.00188	ug/L
4,4`-DDE	MW-313	9/25/2013		.00320	.00219	ug/L
Acetone	MW-313	9/26/2014		1.88	1.79	ug/L
Acetone	MW-313	3/08/2017		1.87	1.79	ug/L
Acetone	MW-313	9/25/2017		2.76	1.79	ug/L
Acetone	MW-313	3/27/2019		3.82	3.10	ug/L
alpha-BHC	MW-313	9/25/2013		.00451	.00177	ug/L
beta-BHC	MW-313	9/25/2013		.00598	.00500	ug/L
Bromomethane	MW-313	10/21/2016		2.660	.220	ug/L
Bromomethane	MW-313	9/25/2017		.344	.220	ug/L
Bromomethane	MW-313	10/26/2021		1.280	1.100	ug/L
Chloromethane	MW-313	10/21/2016		.701	.310	ug/L
delta-BHC	MW-313	9/25/2013		.00444	.00240	ug/L
Iodomethane	MW-313	10/21/2016		1.41	.80	ug/L
Methylene Chloride	MW-313	10/21/2016		.277	.170	ug/L
Methylene Chloride	MW-313	3/13/2018		.207	.170	ug/L
Xylenes, Total	MW-313	9/25/2013		.321	.130	ug/L
Xylenes, Total	MW-313	10/21/2016		1.890	.130	ug/L
Xylenes, Total	MW-313	3/08/2017		.786	.130	ug/L
Acetonitrile	MW-333	9/26/2013		964	126	ug/L
Acetone	MW-335	9/26/2017		2.49	1.79	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
Acetone	MW-335	3/14/2018		2.33	1.79	ug/L
Bromomethane	MW-335	9/26/2017		.402	.220	ug/L
Chloromethane	MW-335	10/19/2016		.336	.310	ug/L
Methylene Chloride	MW-335	9/25/2014		.617	.170	ug/L
Methylene Chloride	MW-335	10/19/2016		.260	.170	ug/L
Xylenes, Total	MW-335	3/07/2017		.173	.130	ug/L
1,1-Dichloroethane	MW-344	3/07/2017		.290	.210	ug/L
1,1-Dichloroethane	MW-344	9/26/2017		.475	.210	ug/L
1,1-Dichloroethane	MW-344	3/14/2018		.474	.210	ug/L
1,1-Dichloroethane	MW-344	9/15/2020		.408	.220	ug/L
1,1-Dichloroethane	MW-344	4/15/2021		.345	.220	ug/L
1,2-Dichloroethane	MW-344	9/26/2017		.207	.180	ug/L
Acetone	MW-344	3/14/2018		3.22	1.79	ug/L
Acetone	MW-344	3/28/2019		3.61	3.10	ug/L
Benzene	MW-344	9/25/2013		.215	.110	ug/L
Benzene	MW-344	4/15/2014		.268	.110	ug/L
Benzene	MW-344	9/26/2014		.198	.110	ug/L
Benzene	MW-344	3/12/2015		.281	.500	ug/L
Benzene	MW-344	10/19/2016		.594	.110	ug/L
Benzene	MW-344	3/07/2017		.543	.110	ug/L
Benzene	MW-344	9/26/2017		.894	.110	ug/L
Benzene	MW-344	3/14/2018		.715	.110	ug/L
Benzene	MW-344	10/02/2018		.732	.220	ug/L
Benzene	MW-344	9/24/2019		.541	.220	ug/L
Benzene	MW-344	9/15/2020		.836	.220	ug/L
Benzene	MW-344	4/15/2021		.722	.220	ug/L
Benzene	MW-344	10/27/2021		.918	.220	ug/L
Benzene	MW-344	4/14/2022		.390	.220	ug/L
Benzene	MW-344	9/29/2023		1.100	1.000	ug/L
Chloroethane	MW-344	9/25/2013		.514	.150	ug/L
Chloroethane	MW-344	9/26/2017		.462	.150	ug/L
cis-1,2-Dichloroethene	MW-344	3/27/2013		.301	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/25/2013		.976	.130	ug/L
cis-1,2-Dichloroethene	MW-344	4/15/2014		1.300	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/26/2014		.819	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/02/2015		1.140	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	3/23/2016		1.120	.010	ug/L
cis-1,2-Dichloroethene	MW-344	10/19/2016		2.040	.130	ug/L
cis-1,2-Dichloroethene	MW-344	3/07/2017		1.820	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/26/2017		2.480	.130	ug/L
cis-1,2-Dichloroethene	MW-344	3/14/2018		2.240	.130	ug/L
cis-1,2-Dichloroethene	MW-344	10/02/2018		1.900	.210	ug/L
cis-1,2-Dichloroethene	MW-344	3/28/2019		1.180	.210	ug/L
cis-1,2-Dichloroethene	MW-344	9/24/2019		1.820	.210	ug/L
cis-1,2-Dichloroethene	MW-344	3/10/2020		1.360	.210	ug/L
cis-1,2-Dichloroethene	MW-344	9/15/2020		2.440	.210	ug/L
cis-1,2-Dichloroethene	MW-344	4/15/2021		2.020	.210	ug/L
cis-1,2-Dichloroethene	MW-344	10/27/2021		2.180	.210	ug/L
cis-1,2-Dichloroethene	MW-344	4/14/2022		1.270	.210	ug/L
cis-1,2-Dichloroethene	MW-344	9/01/2022		1.900	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	9/29/2023		2.400	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	3/19/2024		1.100	1.000	ug/L
delta-BHC	MW-344	10/02/2018		.0029	.0025	ug/L
Endosulfan I	MW-344	10/02/2018		.00217	.00217	ug/L
Endrin	MW-344	10/02/2018		.00264	.00207	ug/L
gamma-BHC (Lindane)	MW-344	10/02/2018		.00220	.00207	ug/L
Methylene Chloride	MW-344	10/19/2016		.251	.170	ug/L
Vinyl Chloride	MW-344	9/24/2009		1.110	.000	ug/L
Vinyl Chloride	MW-344	3/25/2010		1.030	.000	ug/L
Vinyl Chloride	MW-344	9/22/2011		1.070	.000	ug/L
Vinyl Chloride	MW-344	3/16/2012		1.270	.000	ug/L
Vinyl Chloride	MW-344	9/20/2012		1.500	.000	ug/L
Vinyl Chloride	MW-344	3/27/2013		1.320	.100	ug/L
Vinyl Chloride	MW-344	9/25/2013		.858	.100	ug/L
Vinyl Chloride	MW-344	4/15/2014		.884	.100	ug/L
Vinyl Chloride	MW-344	9/26/2014		.484	.100	ug/L
Vinyl Chloride	MW-344	3/12/2015		.428	1.000	ug/L
Vinyl Chloride	MW-344	10/19/2016		.587	.100	ug/L
Vinyl Chloride	MW-344	3/07/2017		1.050	.100	ug/L
Vinyl Chloride	MW-344	9/26/2017		.705	.100	ug/L
Vinyl Chloride	MW-344	3/14/2018		.569	.100	ug/L
Vinyl Chloride	MW-344	9/24/2019		.513	.180	ug/L
Vinyl Chloride	MW-344	9/15/2020		.903	.180	ug/L
Vinyl Chloride	MW-344	4/15/2021		.840	.180	ug/L
Vinyl Chloride	MW-344	10/27/2021		.986	.180	ug/L
Vinyl Chloride	MW-344	4/14/2022		.383	.180	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-345	9/25/2013		1.49	.20	ug/L
Methylene Chloride	MW-345	9/25/2014		.596	.170	ug/L
Acetone	MW-380	3/09/2017		12.20	1.79	ug/L
Acetone	MW-380	6/28/2017		4.52	1.79	ug/L
Acetone	MW-380	3/14/2018		2.46	1.79	ug/L
Bromomethane	MW-380	3/14/2018		.31	.22	ug/L
Methylene Chloride	MW-380	10/20/2016		.30	.17	ug/L
Xylenes, Total	MW-380	3/09/2017		.672	.130	ug/L
Acetone	MW-381	9/26/2017		2.94	1.79	ug/L
Acetone	MW-381	3/14/2018		2.87	1.79	ug/L
Bromomethane	MW-381	9/26/2017		.322	.220	ug/L
Bromomethane	MW-381	3/14/2018		.240	.220	ug/L
Methylene Chloride	MW-381	10/19/2016		.283	.170	ug/L
Xylenes, Total	MW-381	10/19/2016		.242	.130	ug/L
Xylenes, Total	MW-381	3/07/2017		.435	.130	ug/L
1,1-Dichloroethane	MW-382R	3/29/2011		2.90	.00	ug/L
1,1-Dichloroethane	MW-382R	6/25/2011		2.87	.00	ug/L
1,1-Dichloroethane	MW-382R	8/08/2011		2.74	.00	ug/L
1,1-Dichloroethane	MW-382R	9/22/2011		2.15	.00	ug/L
1,1-Dichloroethane	MW-382R	12/05/2011		2.98	.00	ug/L
1,1-Dichloroethane	MW-382R	3/16/2012		2.77	.00	ug/L
1,1-Dichloroethane	MW-382R	9/20/2012		2.10	.00	ug/L
1,1-Dichloroethane	MW-382R	3/27/2013		2.43	.21	ug/L
1,1-Dichloroethane	MW-382R	9/25/2013		2.00	.21	ug/L
1,1-Dichloroethane	MW-382R	4/15/2014		3.54	.21	ug/L
1,1-Dichloroethane	MW-382R	9/26/2014		2.00	.21	ug/L
1,1-Dichloroethane	MW-382R	3/12/2015		2.23	1.00	ug/L
1,1-Dichloroethane	MW-382R	9/02/2015		1.62	1.00	ug/L
1,1-Dichloroethane	MW-382R	3/23/2016		1.65	1.00	ug/L
1,1-Dichloroethane	MW-382R	10/19/2016		2.31	.21	ug/L
1,1-Dichloroethane	MW-382R	3/07/2017		1.81	.21	ug/L
1,1-Dichloroethane	MW-382R	9/26/2017		1.93	.21	ug/L
1,1-Dichloroethane	MW-382R	3/14/2018		2.60	.21	ug/L
1,1-Dichloroethane	MW-382R	10/02/2018		1.51	.22	ug/L
1,1-Dichloroethane	MW-382R	3/28/2019		1.60	.22	ug/L
1,1-Dichloroethane	MW-382R	9/24/2019		1.71	.22	ug/L
1,1-Dichloroethane	MW-382R	3/10/2020		1.74	.22	ug/L
1,1-Dichloroethane	MW-382R	9/16/2020		2.00	.22	ug/L
1,1-Dichloroethane	MW-382R	4/15/2021		1.41	.22	ug/L
1,1-Dichloroethane	MW-382R	10/27/2021		1.69	.22	ug/L
1,1-Dichloroethane	MW-382R	4/14/2022		1.09	.22	ug/L
1,1-Dichloroethane	MW-382R	3/06/2023		1.40	1.00	ug/L
Acetone	MW-382R	3/14/2018		2.06	1.79	ug/L
Bis(2-ethylhexyl)phthalate	MW-382R	9/29/2023		16	6	ug/L
Bromomethane	MW-382R	3/14/2018		.253	.220	ug/L
Chloroethane	MW-382R	9/25/2013		.433	.150	ug/L
cis-1,2-Dichloroethene	MW-382R	3/27/2013		.383	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	9/25/2013		.320	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	4/15/2014		.267	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	9/26/2014		.270	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	10/19/2016		.414	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	3/07/2017		.385	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	9/26/2017		.484	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	3/14/2018		.449	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	10/02/2018		.401	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	3/28/2019		.439	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	9/24/2019		.345	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	9/16/2020		.487	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	4/15/2021		.289	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	10/27/2021		.406	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	4/14/2022		.307	.210	ug/L
Dichlorodifluoromethane	MW-382R	3/16/2012		3.110	.000	ug/L
Dichlorodifluoromethane	MW-382R	3/27/2013		2.400	.200	ug/L
Dichlorodifluoromethane	MW-382R	9/25/2013		2.730	.200	ug/L
Dichlorodifluoromethane	MW-382R	4/15/2014		2.140	.200	ug/L
Dichlorodifluoromethane	MW-382R	9/26/2014		2.700	.200	ug/L
Dichlorodifluoromethane	MW-382R	3/12/2015		1.590	.200	ug/L
Dichlorodifluoromethane	MW-382R	10/19/2016		1.770	.200	ug/L
Dichlorodifluoromethane	MW-382R	3/07/2017		1.860	.200	ug/L
Dichlorodifluoromethane	MW-382R	9/26/2017		.898	.200	ug/L
Dichlorodifluoromethane	MW-382R	3/14/2018		1.110	.200	ug/L
Dichlorodifluoromethane	MW-382R	10/02/2018		.962	.250	ug/L
Methylene Chloride	MW-382R	3/27/2013		.193	.170	ug/L
Methylene Chloride	MW-382R	10/19/2016		.394	.170	ug/L
Methylene Chloride	MW-382R	3/07/2017		.312	.170	ug/L
Vinyl Chloride	MW-382R	9/25/2013		.345	.100	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
Vinyl Chloride	MW-382R	3/14/2018		.296	.100	ug/L
Vinyl Chloride	MW-382R	4/15/2021		.206	.180	ug/L
Vinyl Chloride	MW-382R	10/27/2021		.241	.180	ug/L
Xylenes, Total	MW-382R	9/25/2013		.134	.130	ug/L
Acetonitrile	MW-383	9/26/2013		1170	126	ug/L
Methylene Chloride	MW-383	3/27/2013		.238	.170	ug/L
Methylene Chloride	MW-383	9/25/2014		.424	.170	ug/L
1,2-Dichloroethane	MW-384	3/14/2018		.195	.180	ug/L
Acetone	MW-384	3/09/2017		2.77	1.79	ug/L
Acetone	MW-384	9/27/2017		2.49	1.79	ug/L
Bromomethane	MW-384	10/20/2016		.313	.220	ug/L
Methylene Chloride	MW-384	9/25/2014		.520	.170	ug/L
Methylene Chloride	MW-384	9/27/2017		.292	.170	ug/L
Xylenes, Total	MW-384	9/01/2015		3.000	3.000	ug/L
Xylenes, Total	MW-384	10/20/2016		.707	.130	ug/L
Xylenes, Total	MW-384	3/09/2017		.949	.130	ug/L
Acetone	MW-385	3/08/2017		3.51	1.79	ug/L
Acetone	MW-385	9/27/2017		3.14	1.79	ug/L
Bromomethane	MW-385	10/20/2016		.599	.220	ug/L
Methylene Chloride	MW-385	3/28/2013		.343	.170	ug/L
Methylene Chloride	MW-385	9/25/2014		.448	.170	ug/L
Methylene Chloride	MW-385	10/20/2016		.224	.170	ug/L
Methylene Chloride	MW-385	3/08/2017		.501	.170	ug/L
Methylene Chloride	MW-385	9/27/2017		.380	.170	ug/L
Xylenes, Total	MW-385	10/20/2016		.387	.130	ug/L
Xylenes, Total	MW-385	3/08/2017		.898	.130	ug/L
Xylenes, Total	MW-385	9/27/2017		.164	.130	ug/L
Acetone	MW-390	3/08/2017		7.42	1.79	ug/L
Acetone	MW-390	9/25/2017		2.90	1.79	ug/L
Acetone	MW-390	3/27/2019		3.35	3.10	ug/L
Acetone	MW-390	3/09/2020		5.37	3.10	ug/L
Carbon Disulfide	MW-390	9/25/2017		.177	.150	ug/L
Methylene Chloride	MW-390	10/21/2016		.397	.170	ug/L
Methylene Chloride	MW-390	3/13/2018		.209	.170	ug/L
Xylenes, Total	MW-390	10/21/2016		.464	.130	ug/L
Xylenes, Total	MW-390	3/08/2017		.566	.130	ug/L
Xylenes, Total	MW-390	3/27/2019		1.050	.400	ug/L
Benzene	MW-603	3/10/2020		.312	.220	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

Summary Tables and Graphs for the LCL Comparisons – VOCs

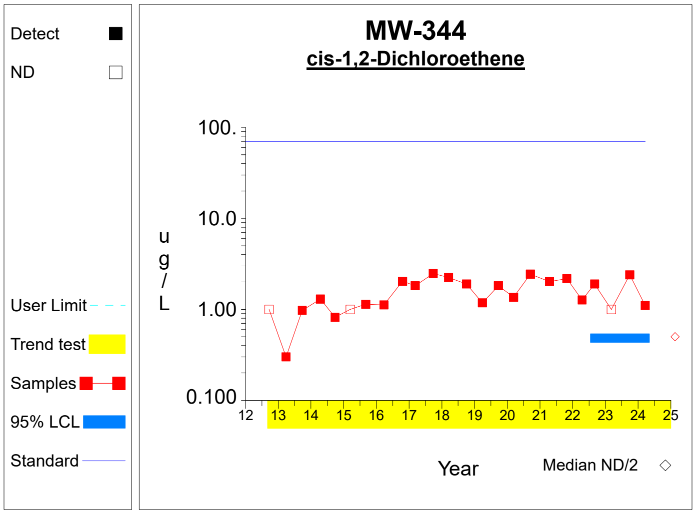
Table 1

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

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
cis-1,2-Dichloroethene	ug/L	MW-344	4	1.475	0.842	1.176	0.484	2.466	70.000	

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

Confidence Limits (Assessment)

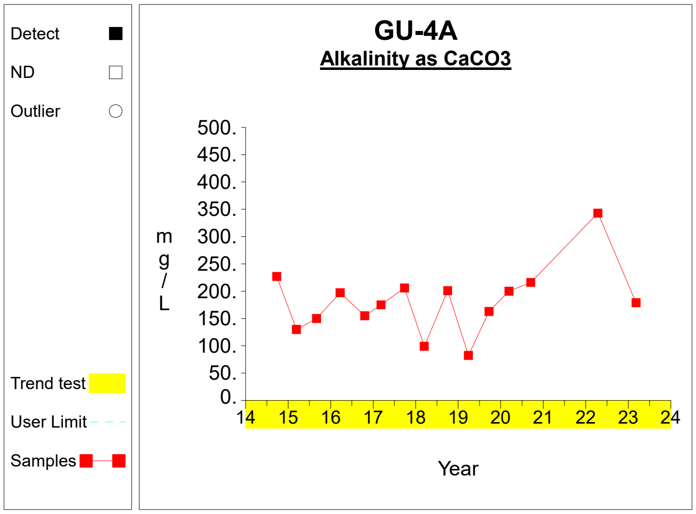


Graph 1

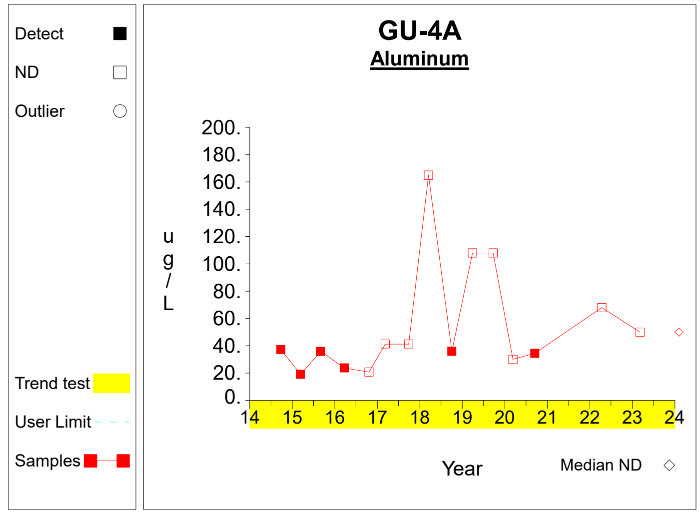
Attachment G

Time Series Plots of Inorganics

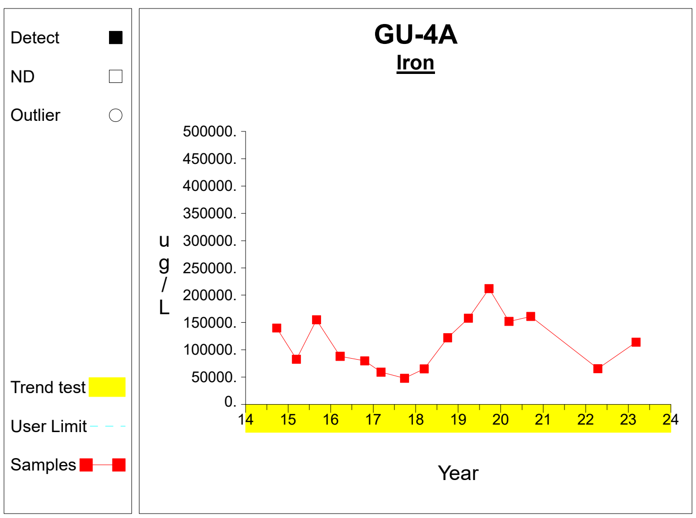
Time Series



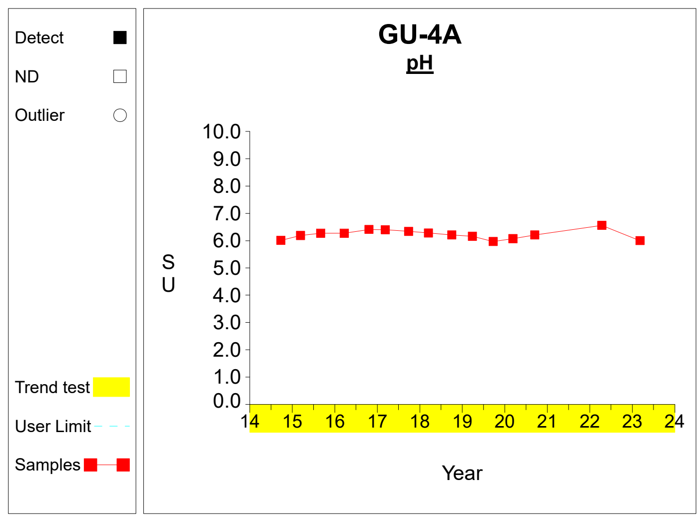
Graph 1



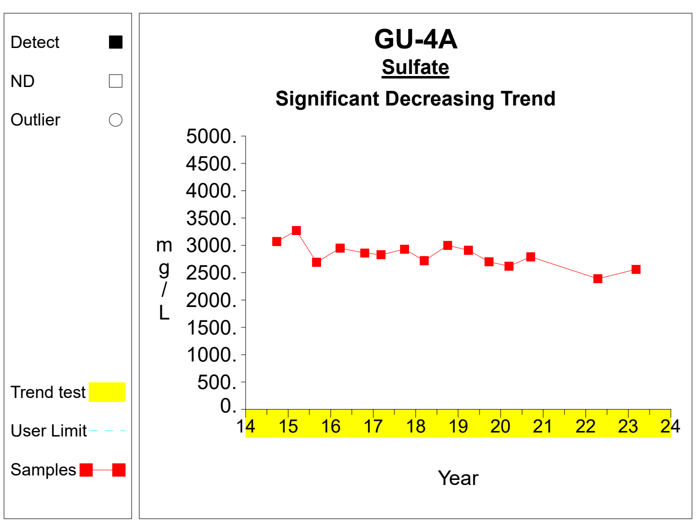
Graph 2



Graph 3

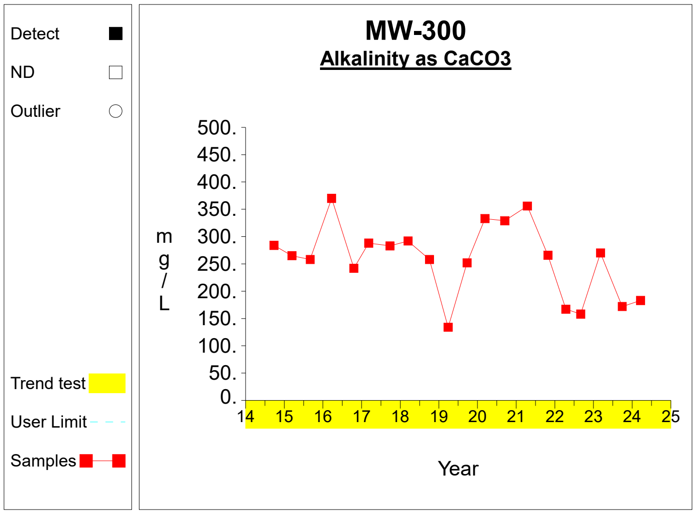


Graph 4

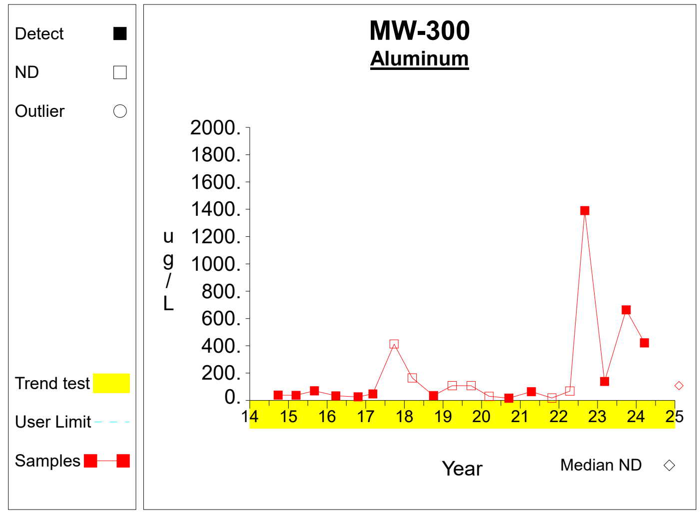


Graph 5

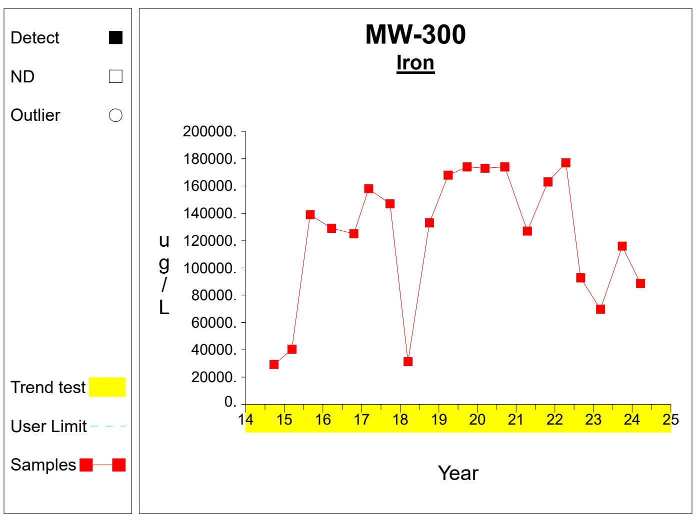
Time Series



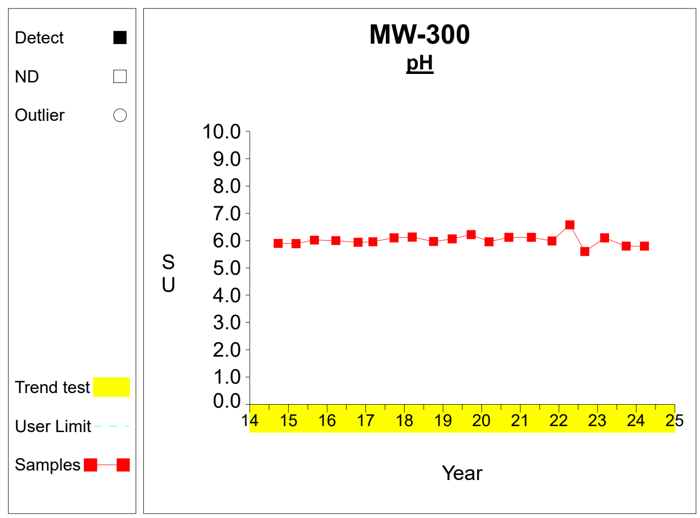
Graph 6



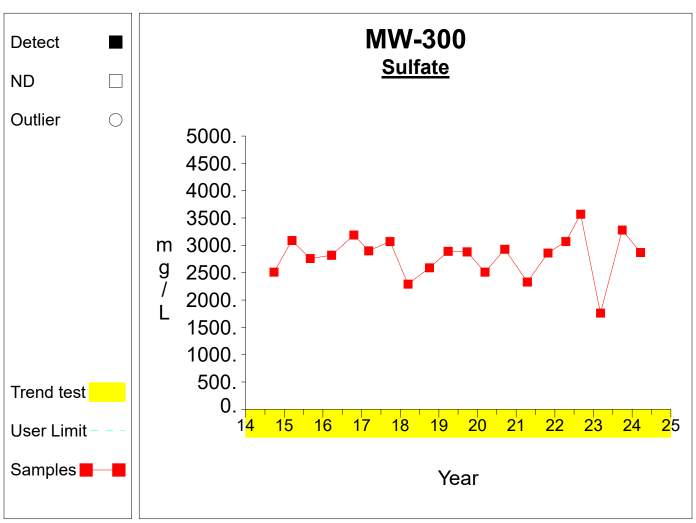
Graph 7



Graph 8

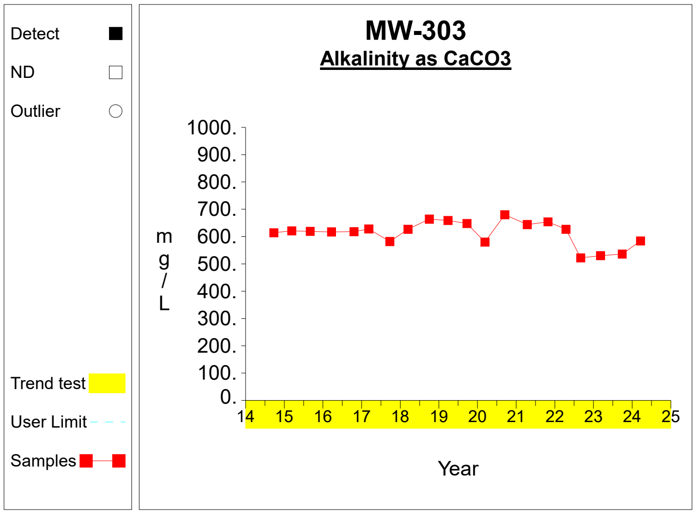


Graph 9

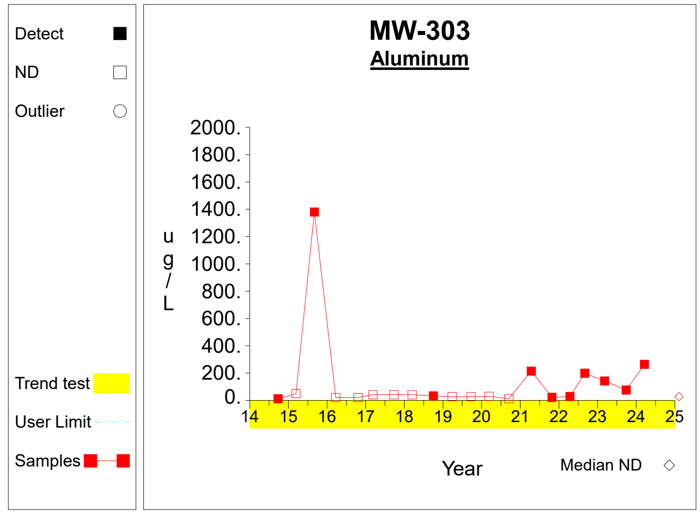


Graph 10

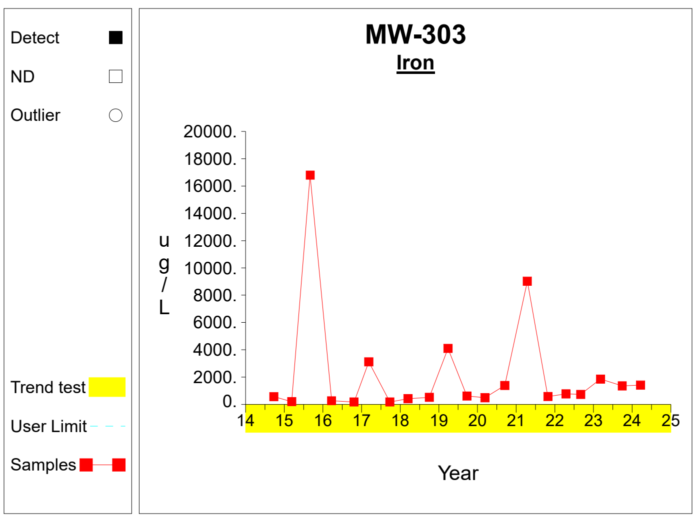
Time Series



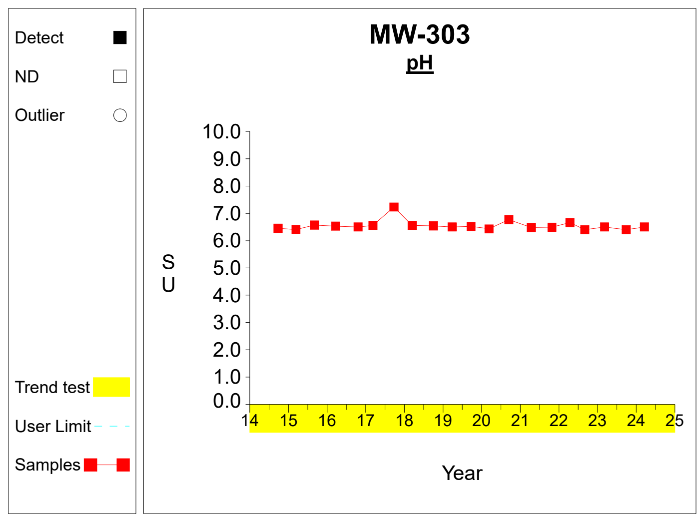
Graph 11



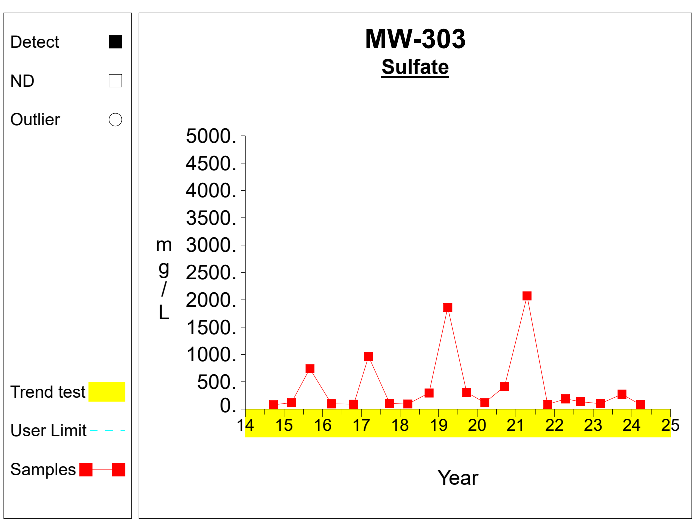
Graph 12



Graph 13

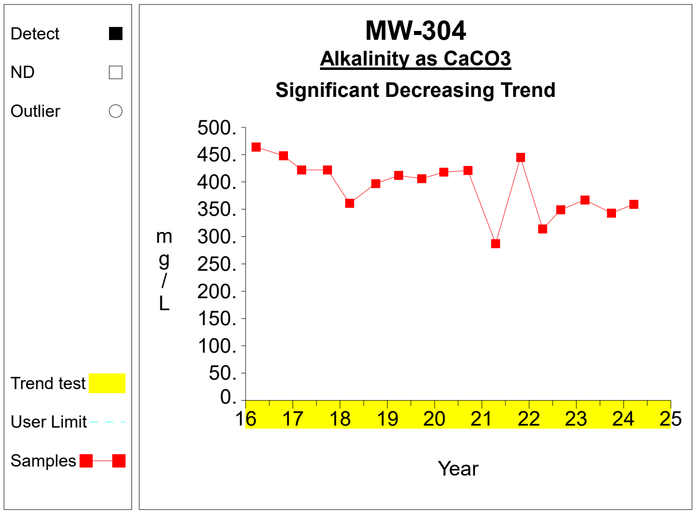


Graph 14

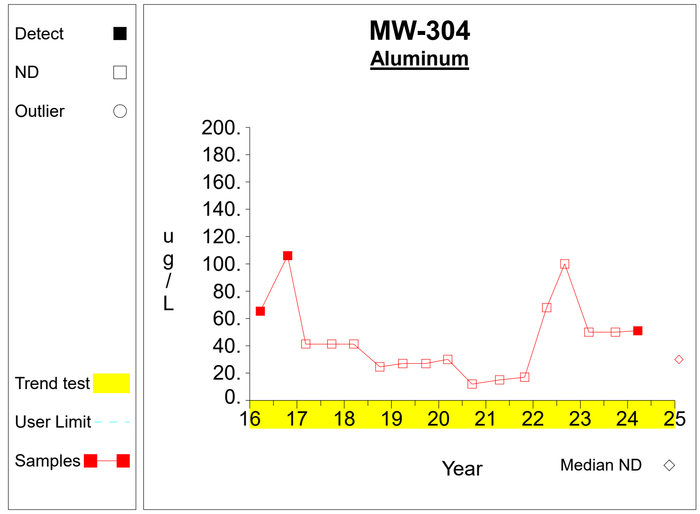


Graph 15

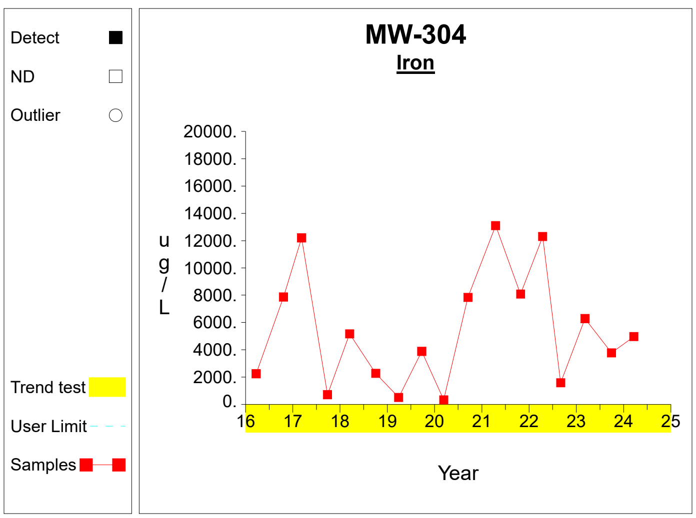
Time Series



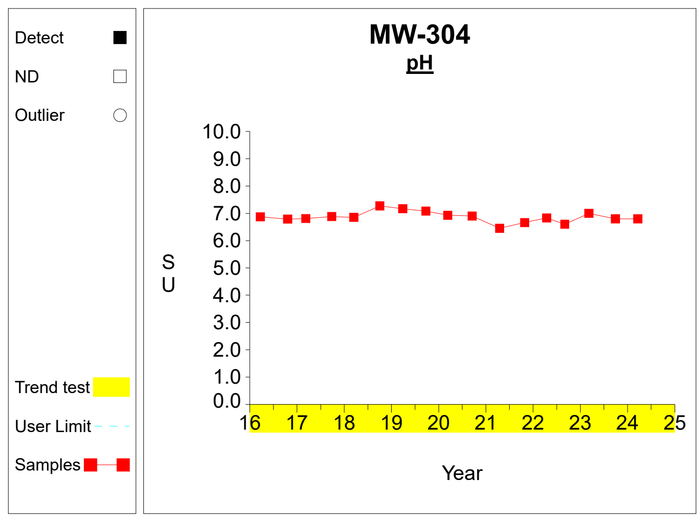
Graph 16



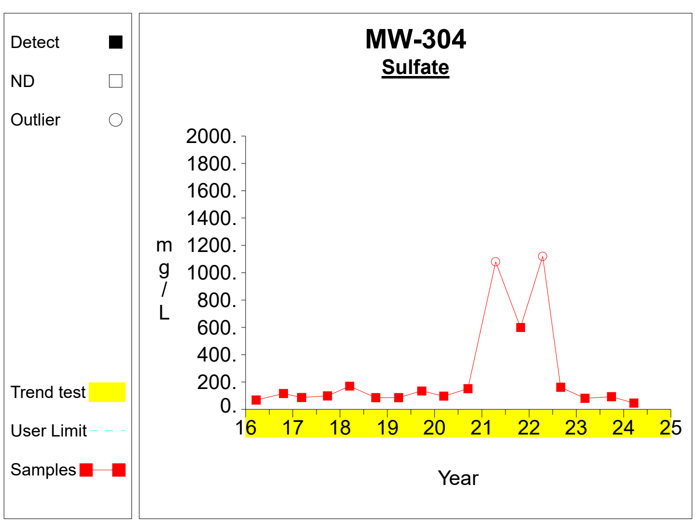
Graph 17



Graph 18

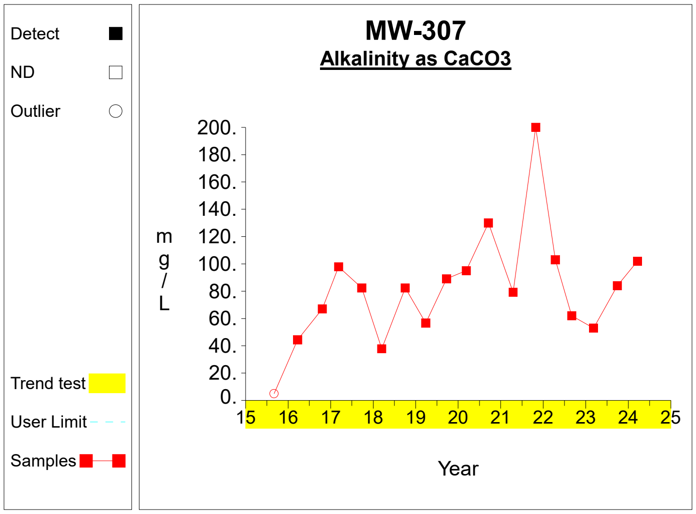


Graph 19

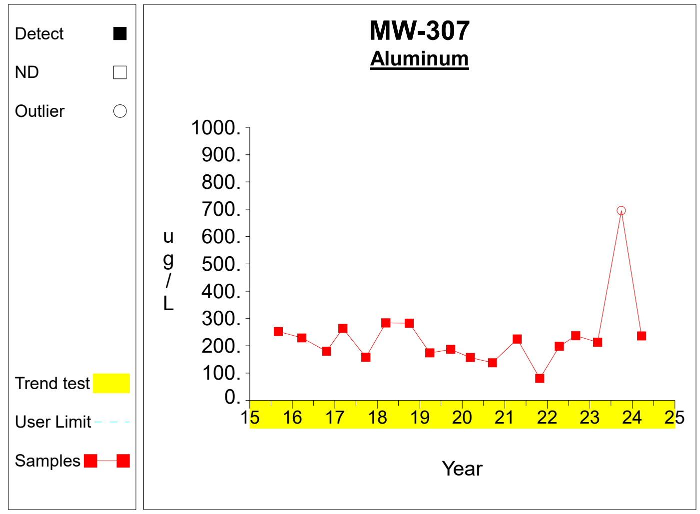


Graph 20

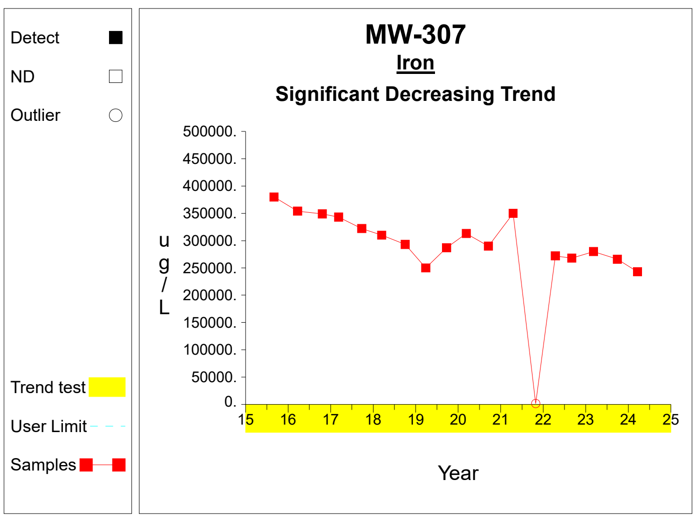
Time Series



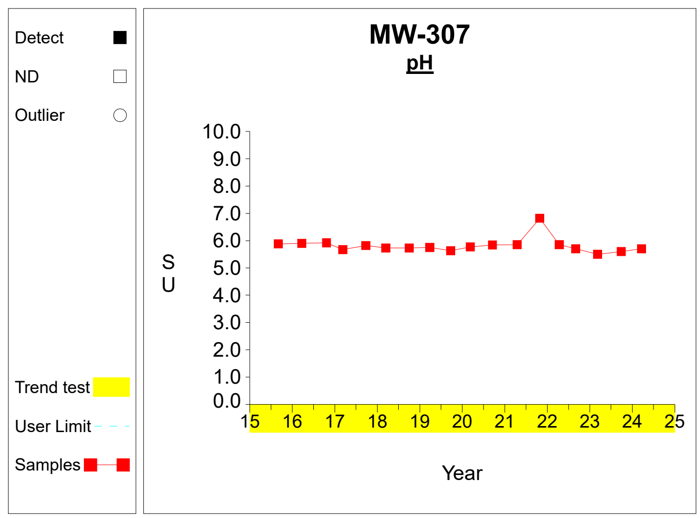
Graph 21



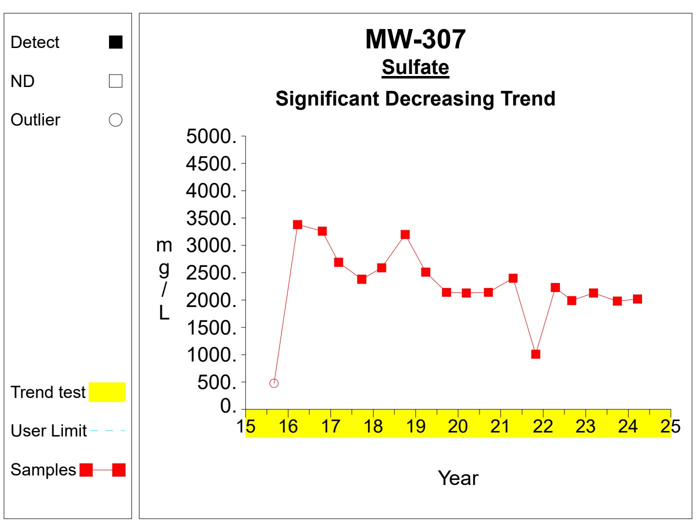
Graph 22



Graph 23

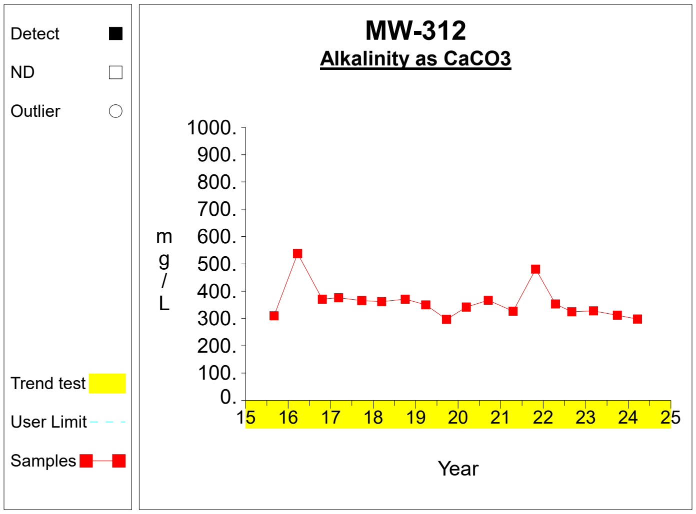


Graph 24

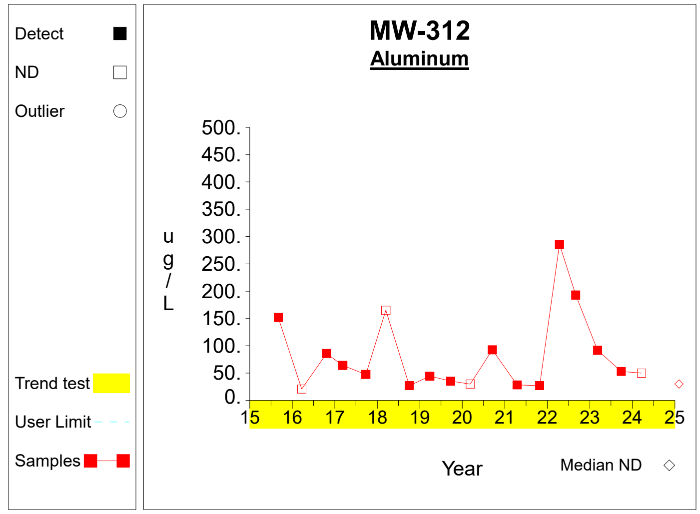


Graph 25

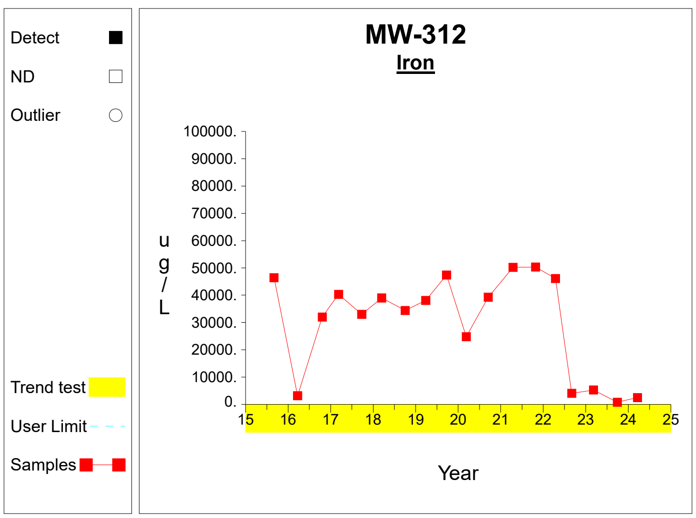
Time Series



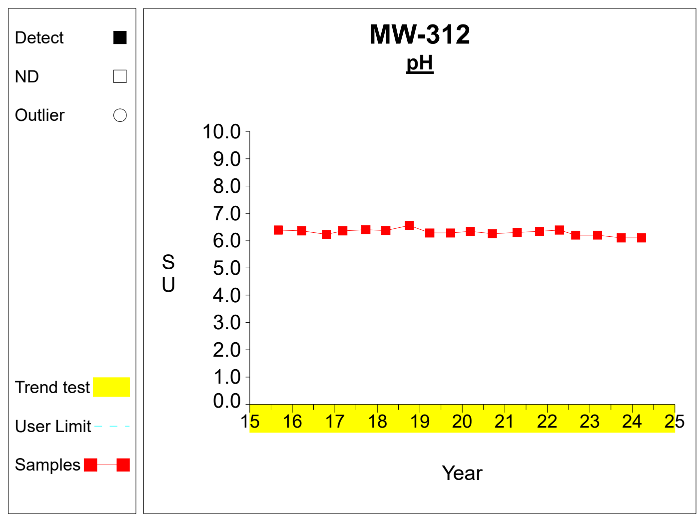
Graph 26



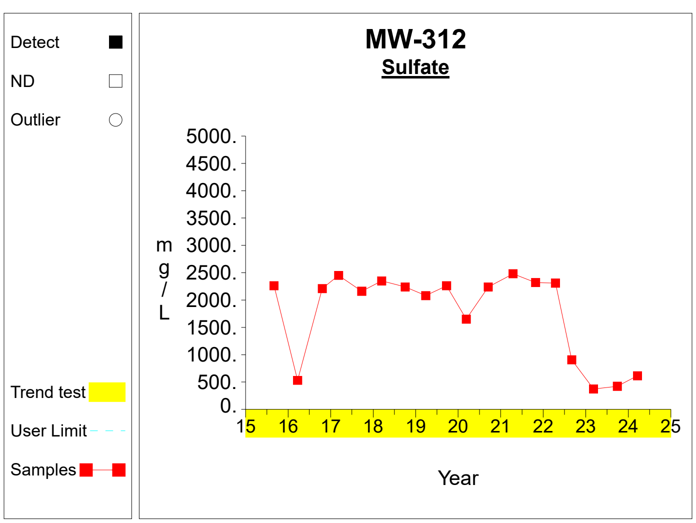
Graph 27



Graph 28

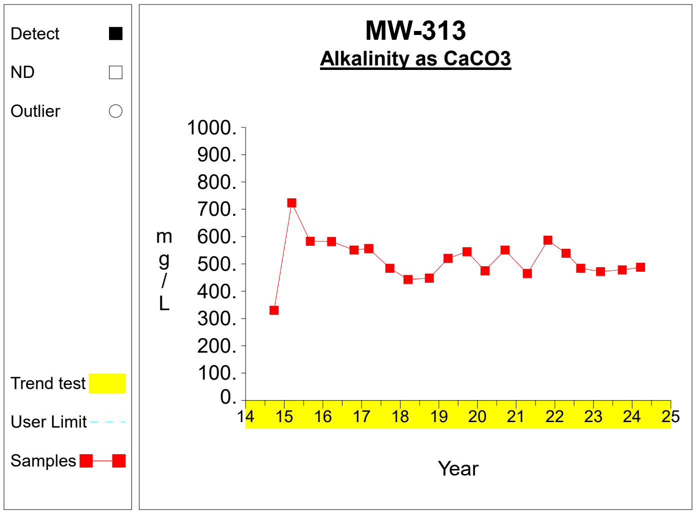


Graph 29

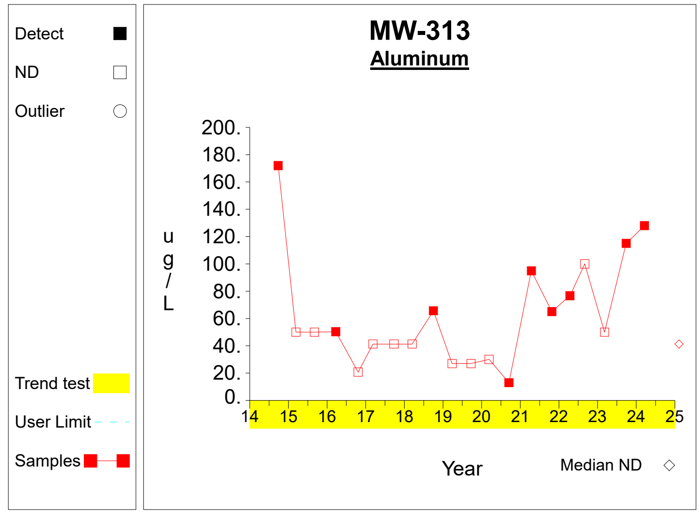


Graph 30

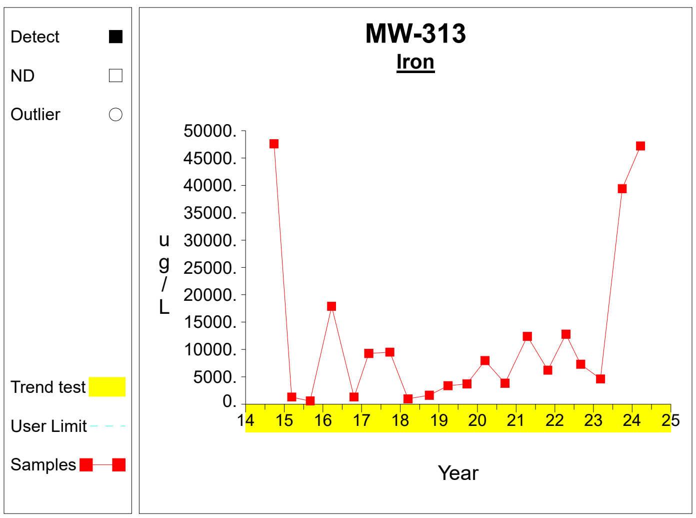
Time Series



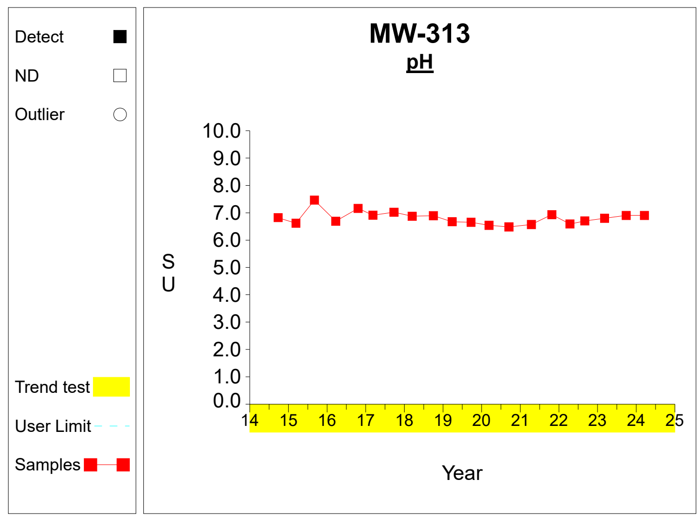
Graph 31



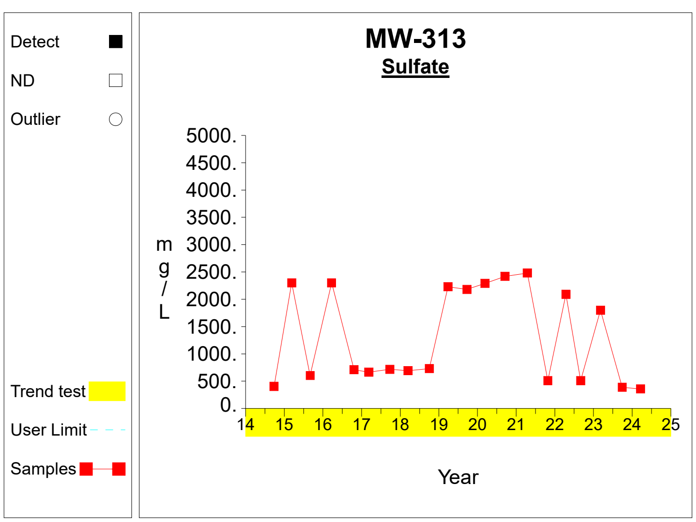
Graph 32



Graph 33

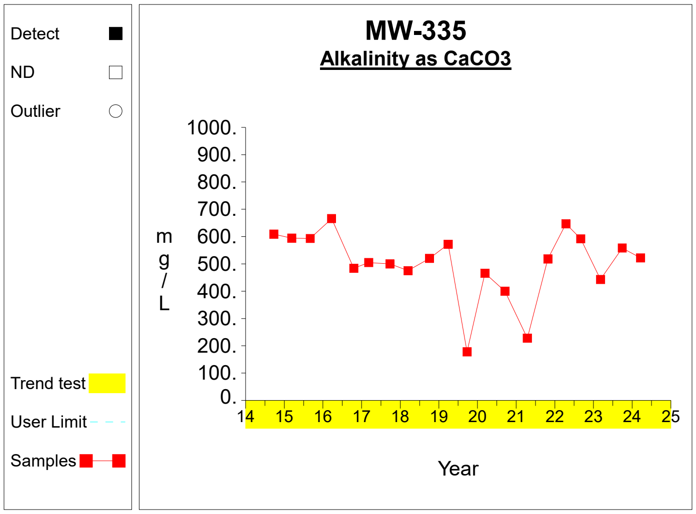


Graph 34

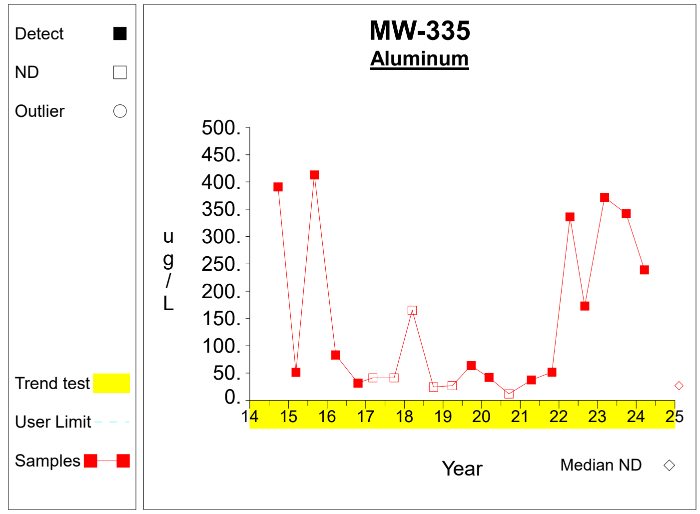


Graph 35

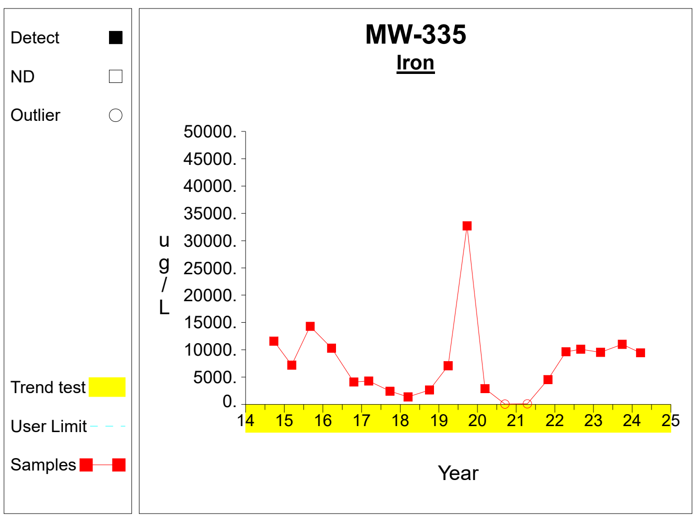
Time Series



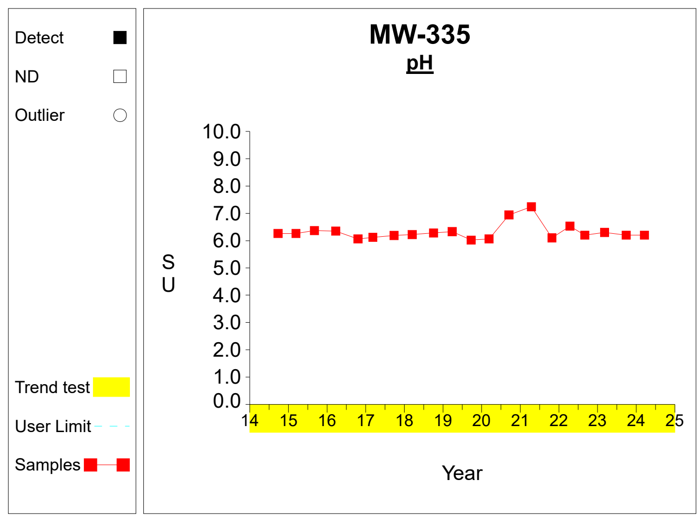
Graph 36



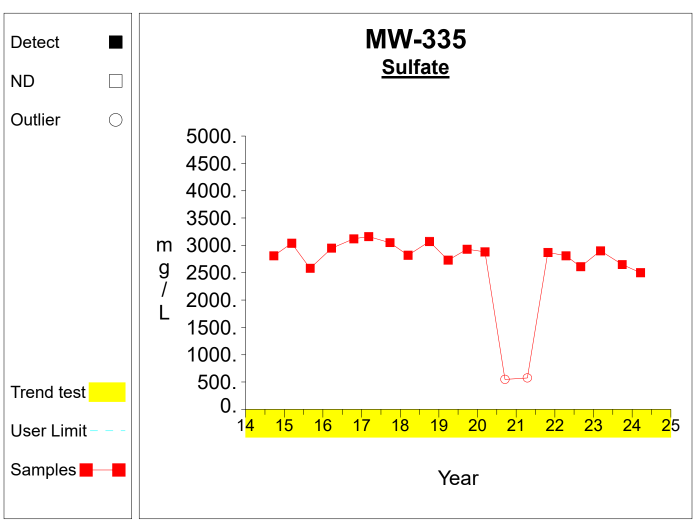
Graph 37



Graph 38

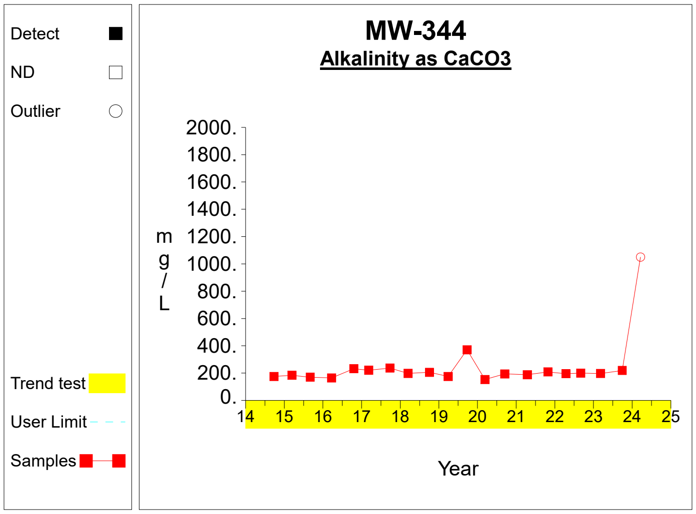


Graph 39

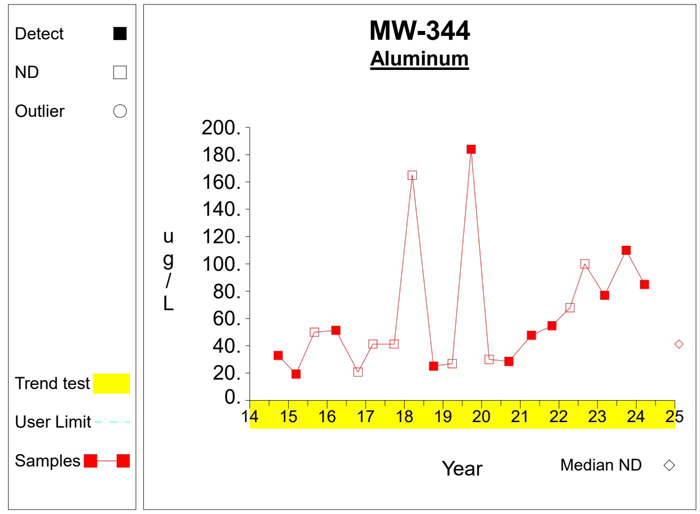


Graph 40

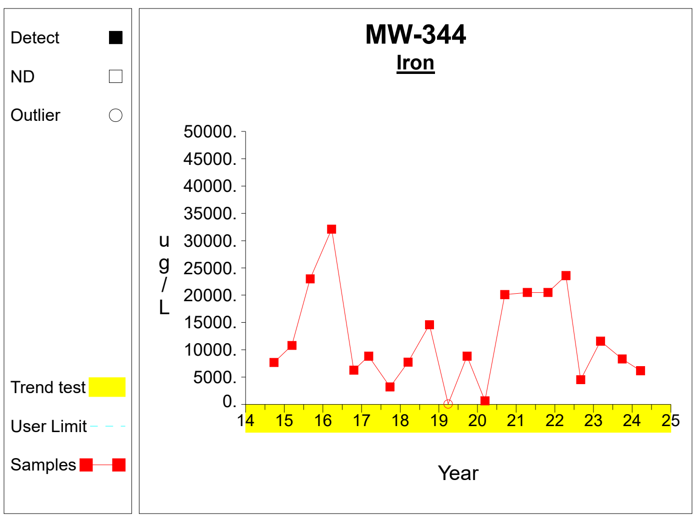
Time Series



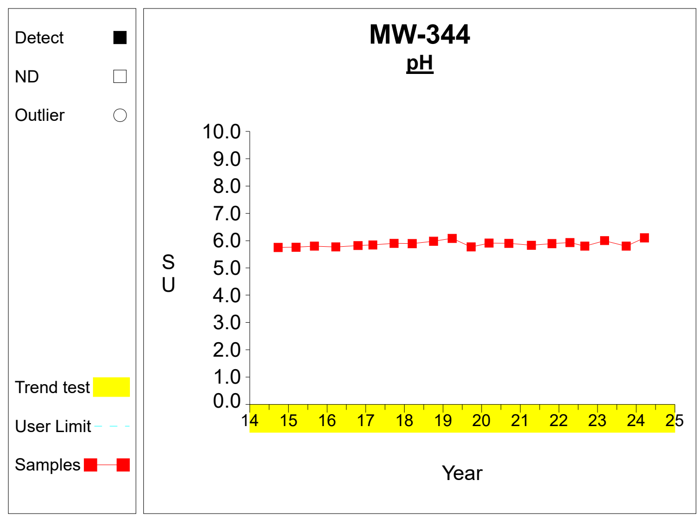
Graph 41



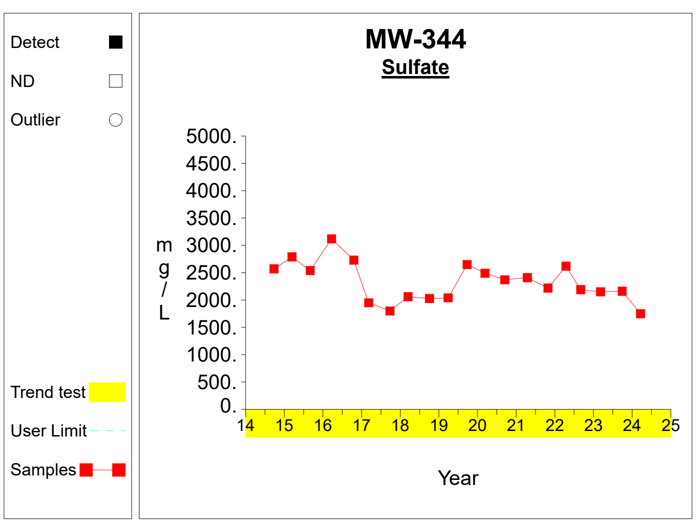
Graph 42



Graph 43

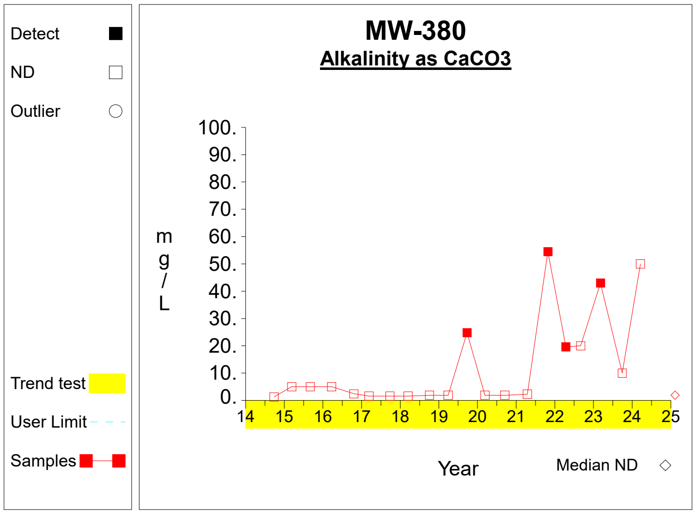


Graph 44

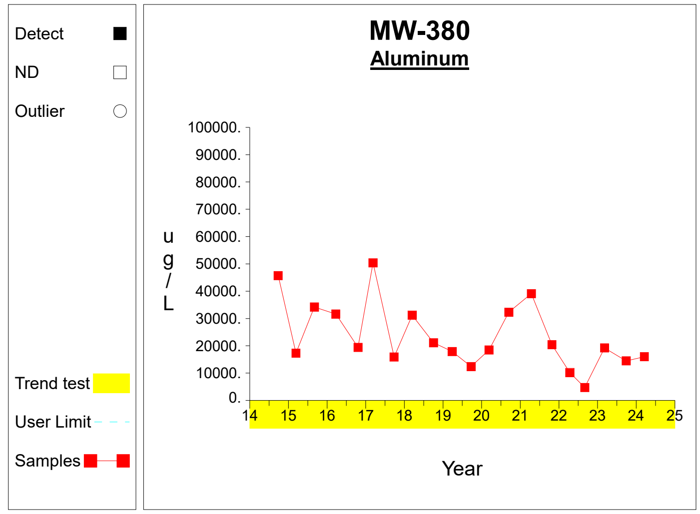


Graph 45

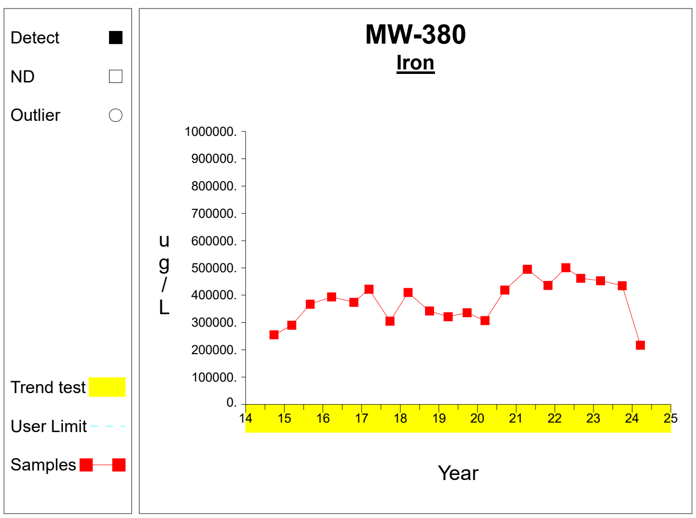
Time Series



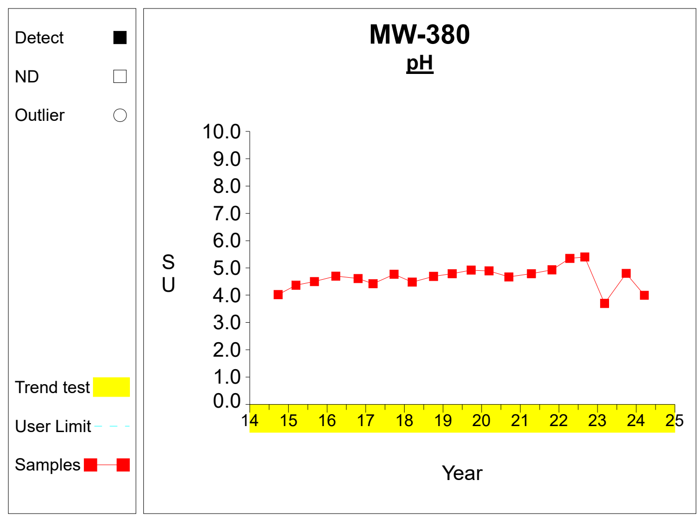
Graph 46



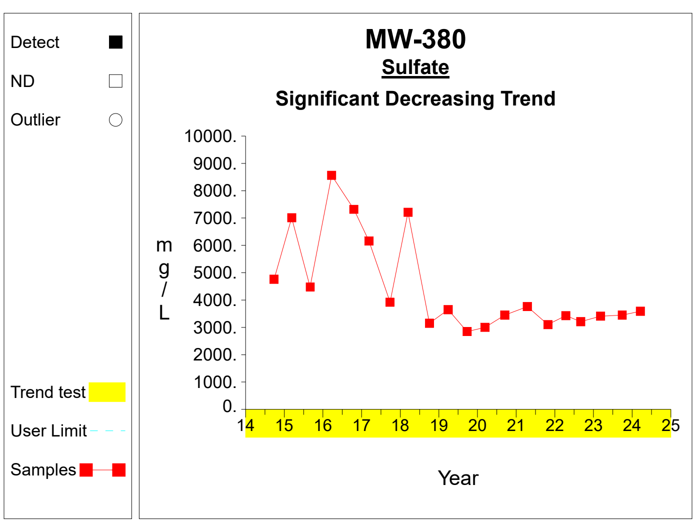
Graph 47



Graph 48

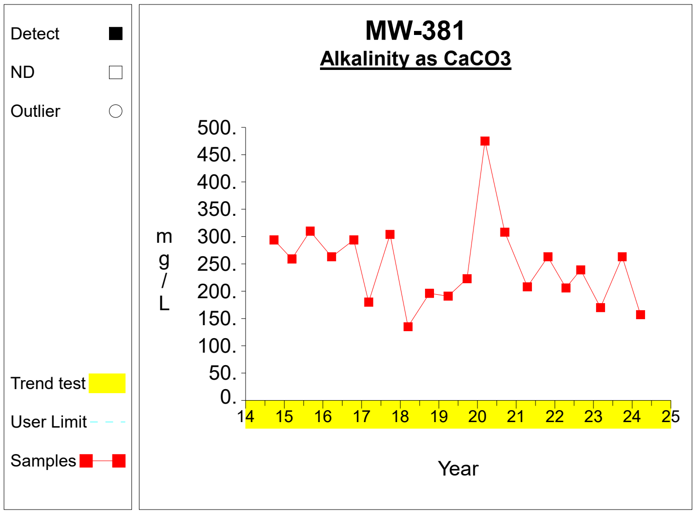


Graph 49

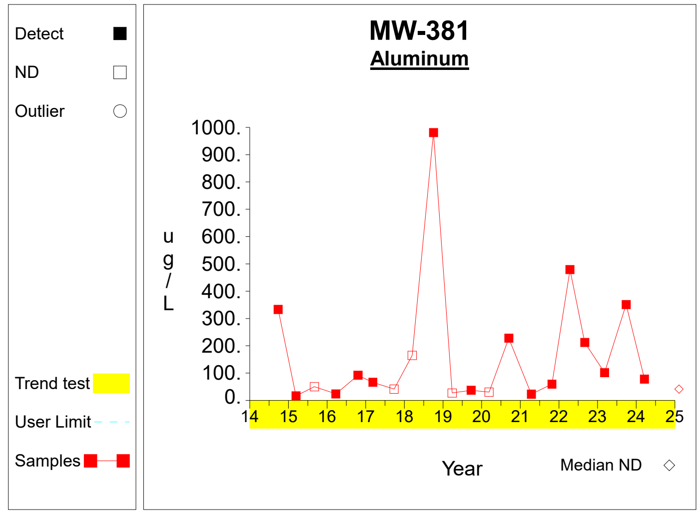


Graph 50

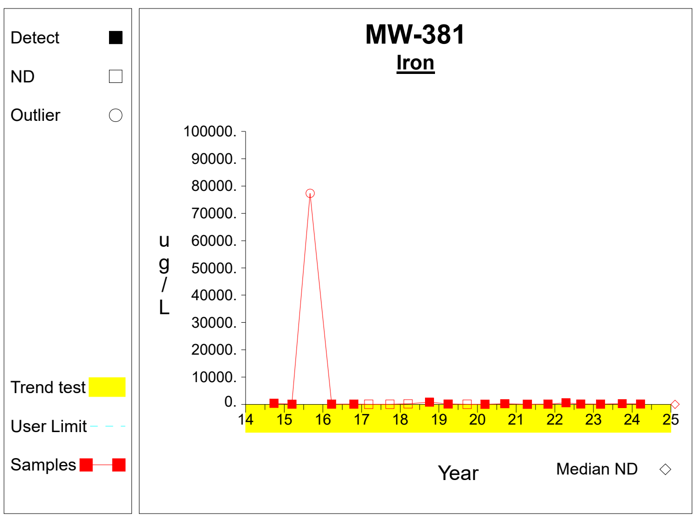
Time Series



Graph 51



Graph 52



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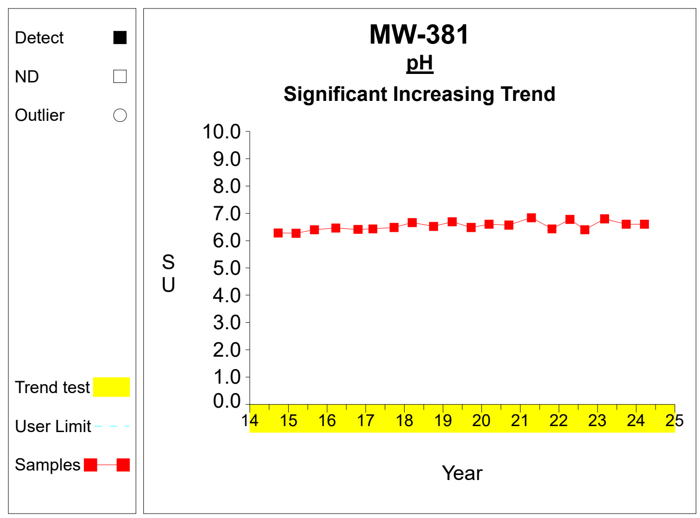
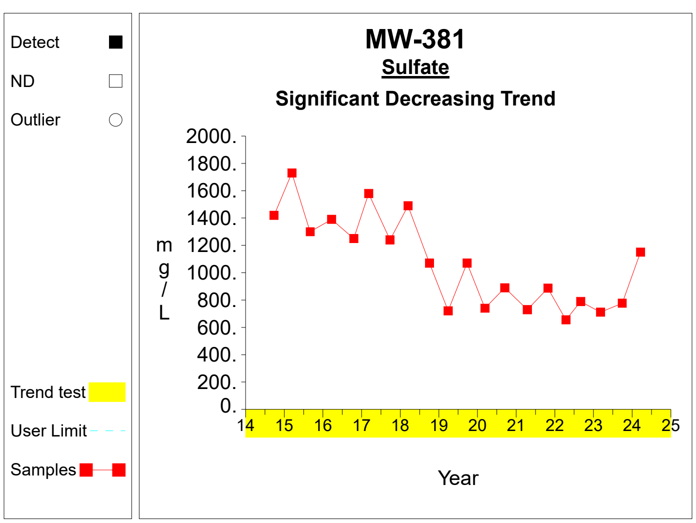
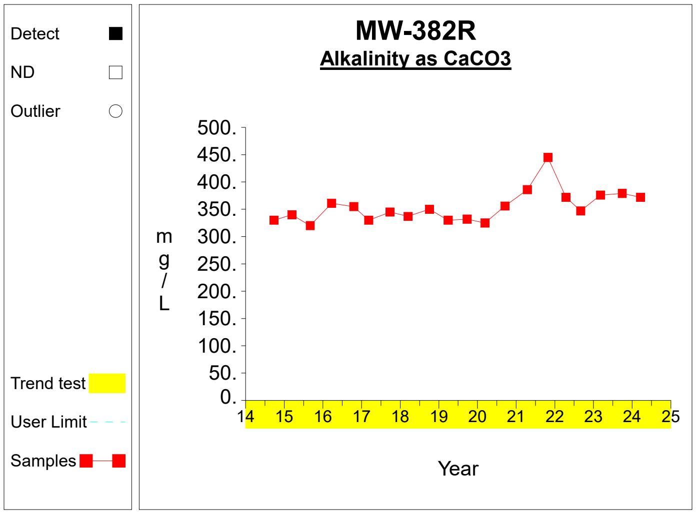


Graph 54



Graph 55

Time Series



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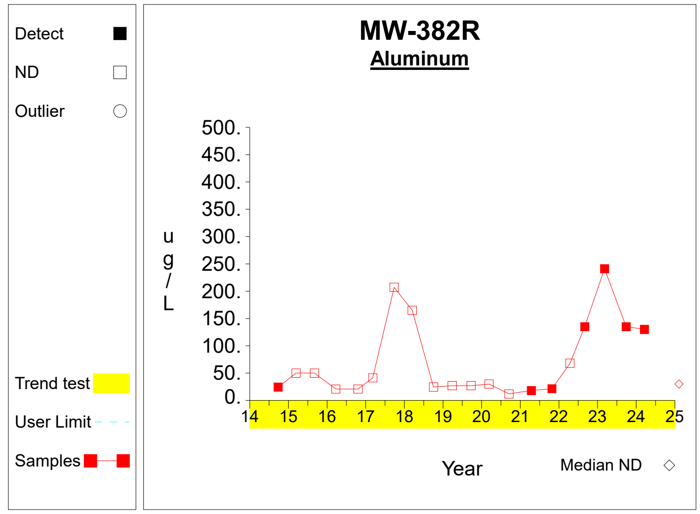

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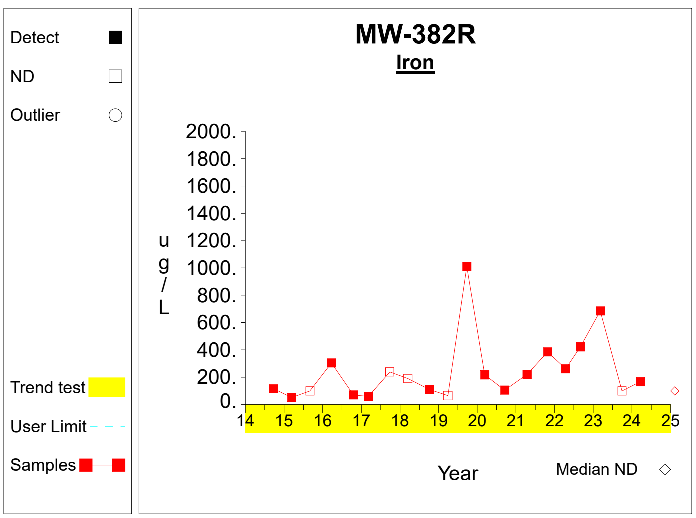

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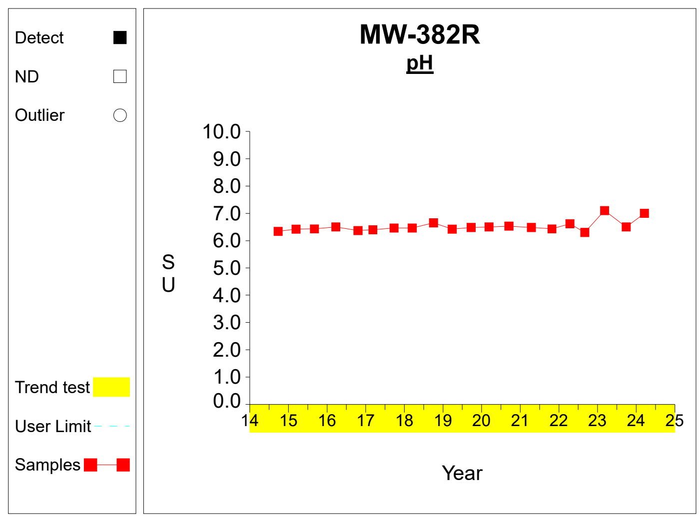
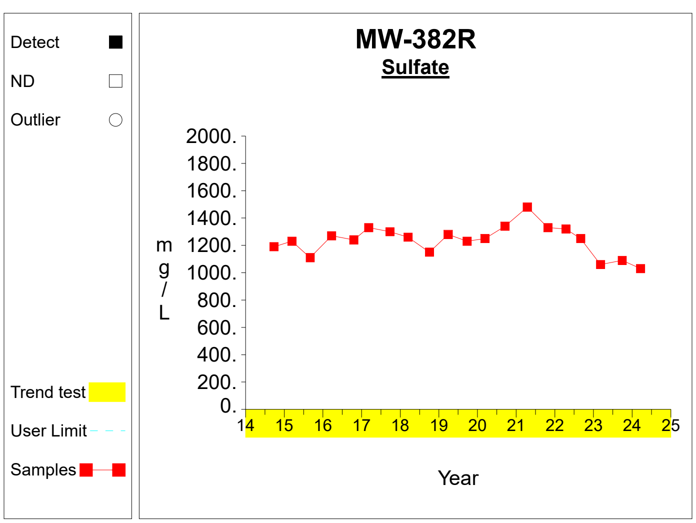
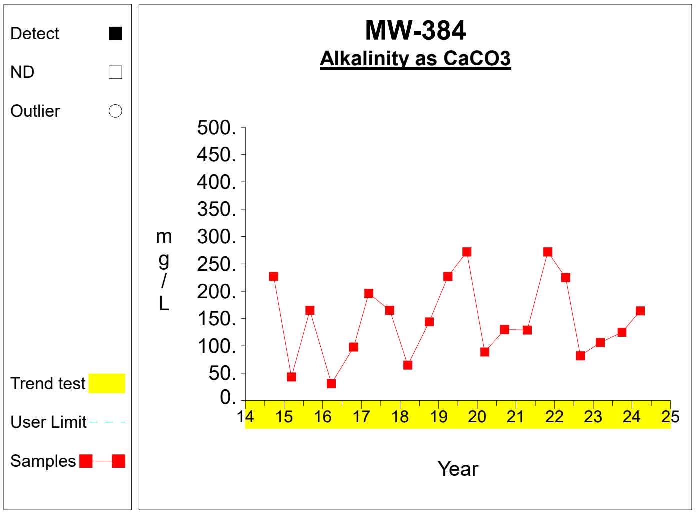


Graph 59

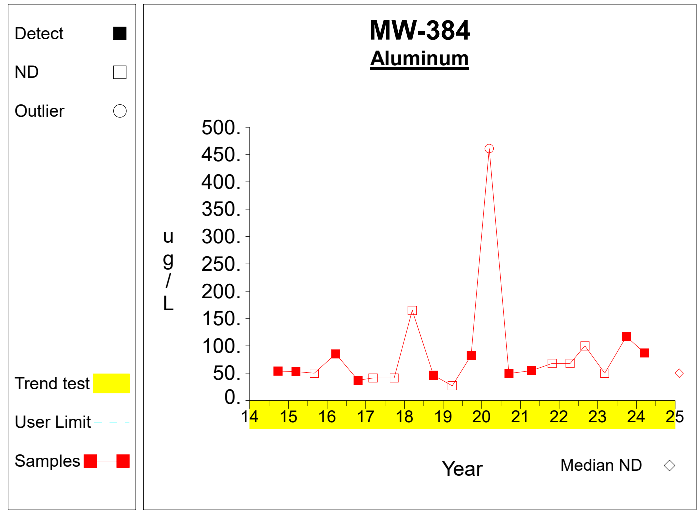


Graph 60

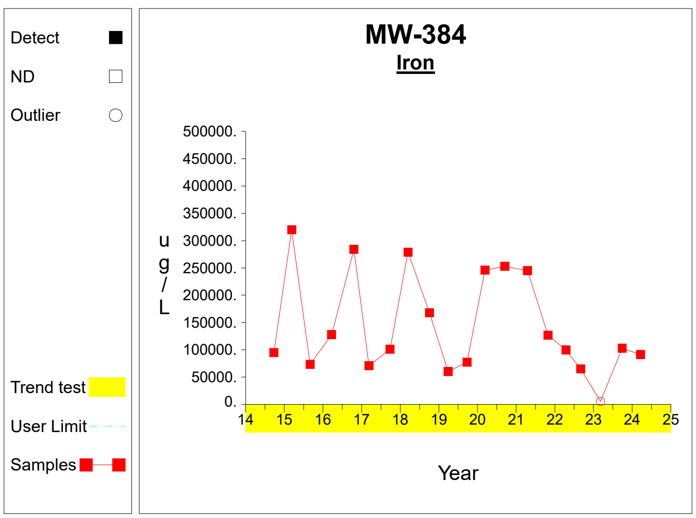
Time Series



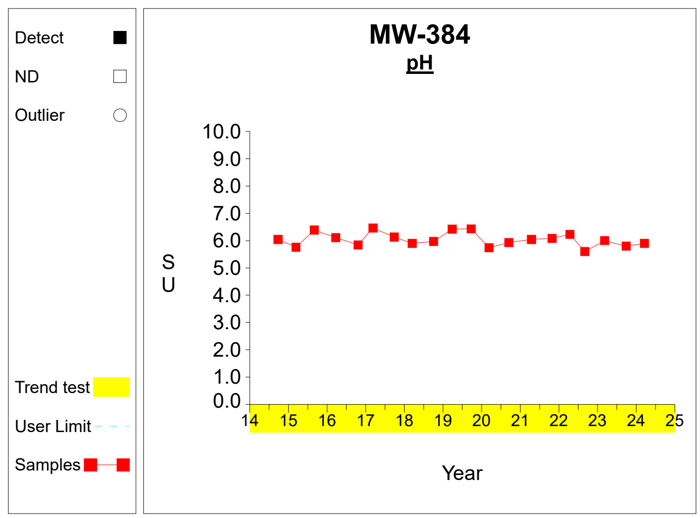
Graph 61



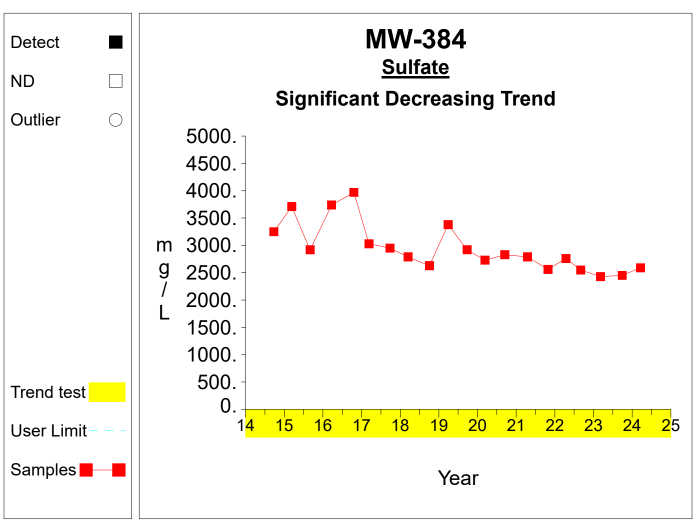
Graph 62



Graph 63

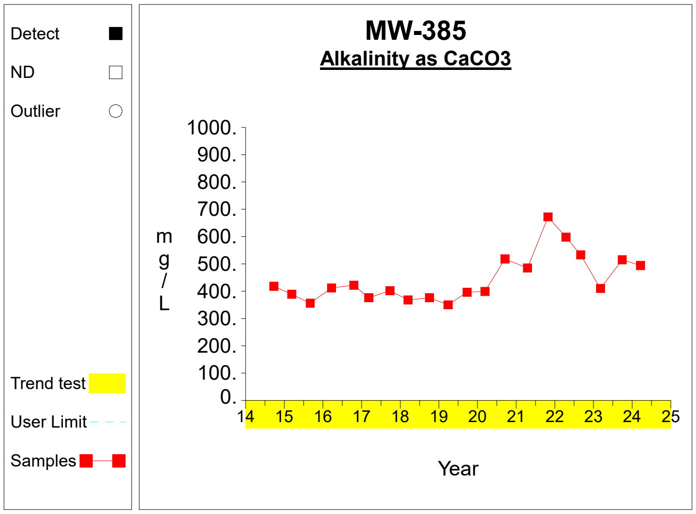


Graph 64



Graph 65

Time Series



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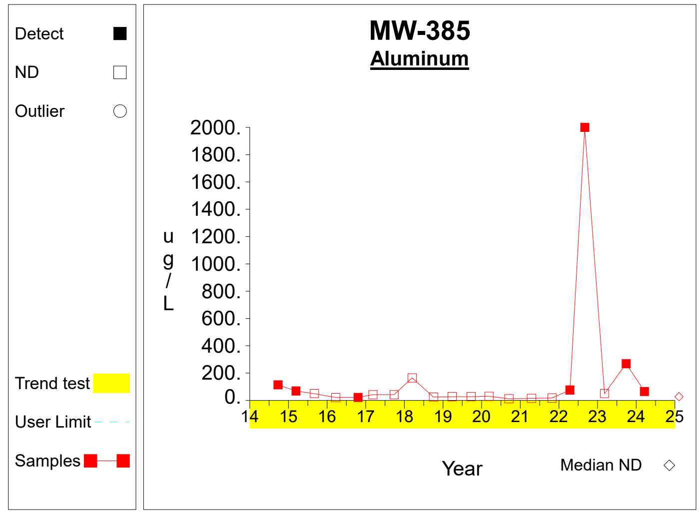
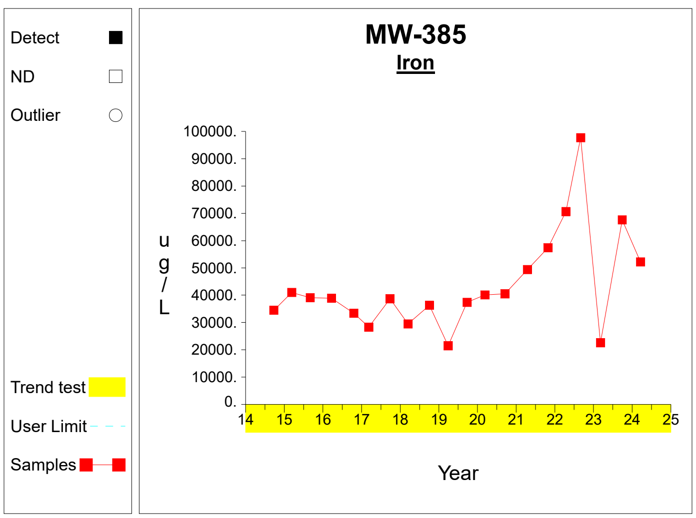
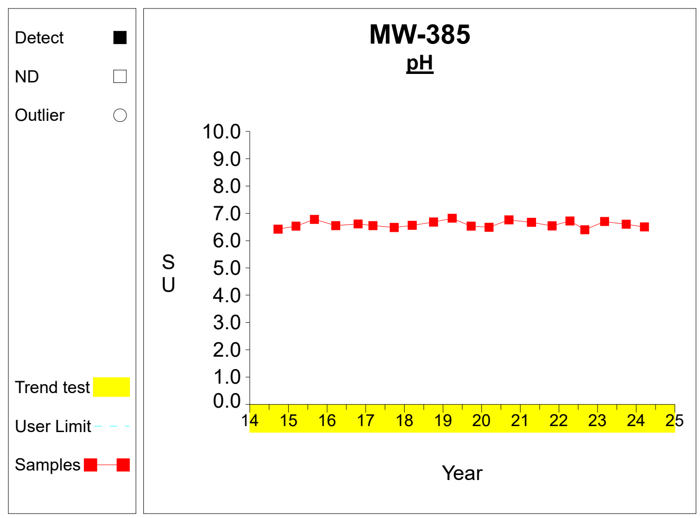


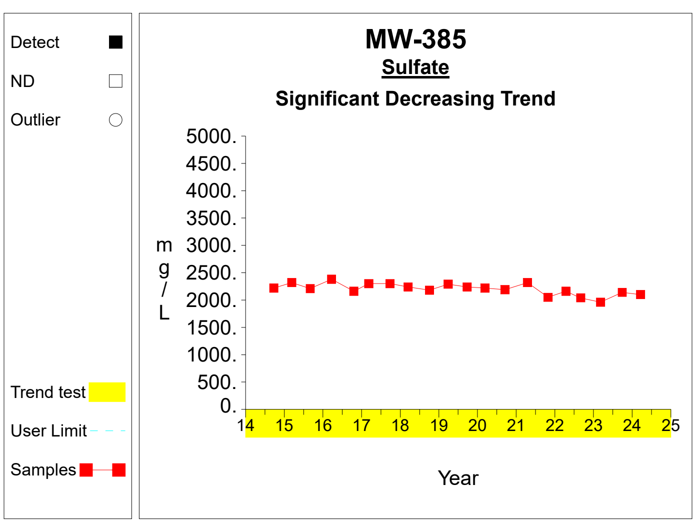
Graph 67



Graph 68

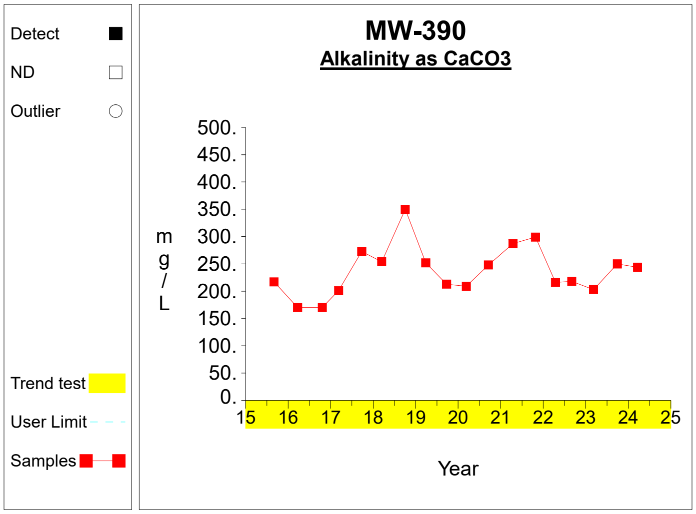


Graph 69



Graph 70

Time Series



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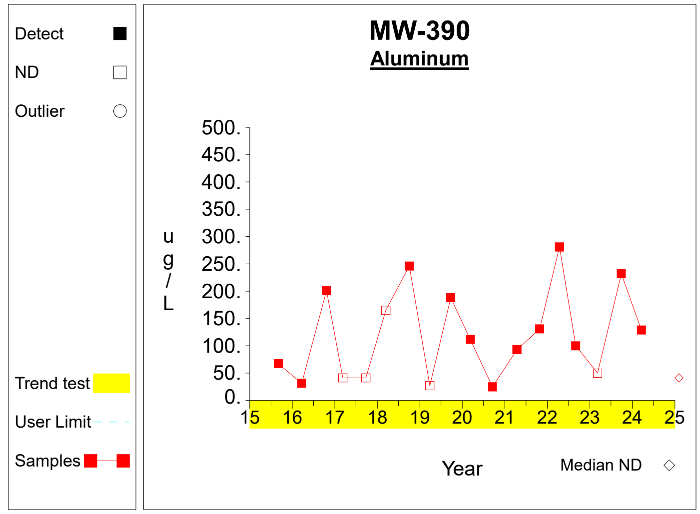

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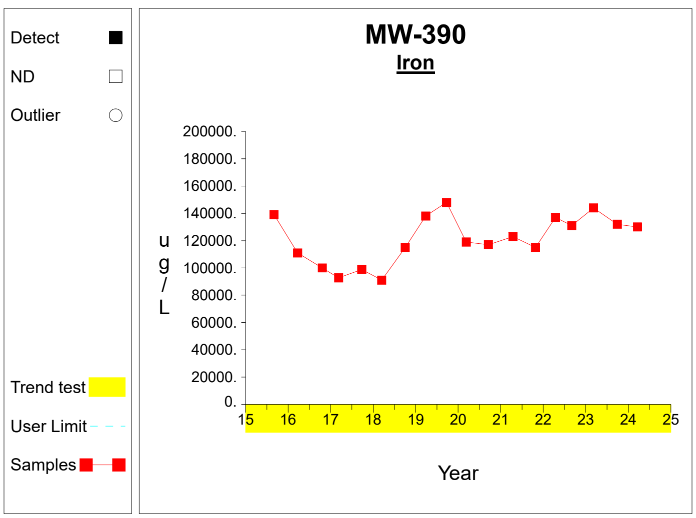

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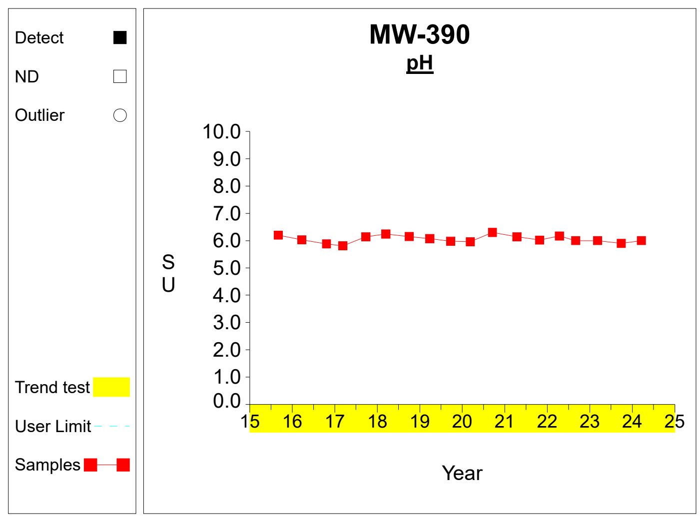

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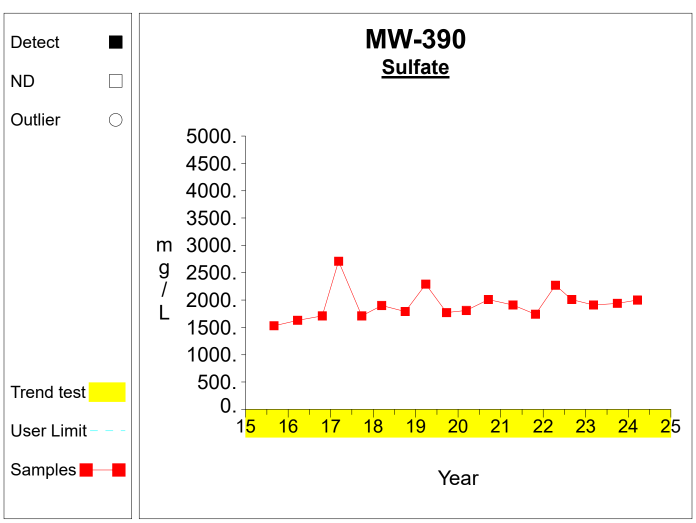
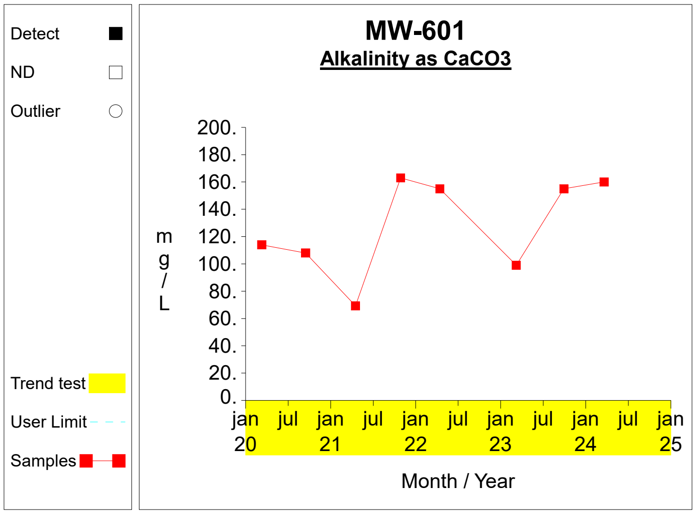


Graph 75

Time Series



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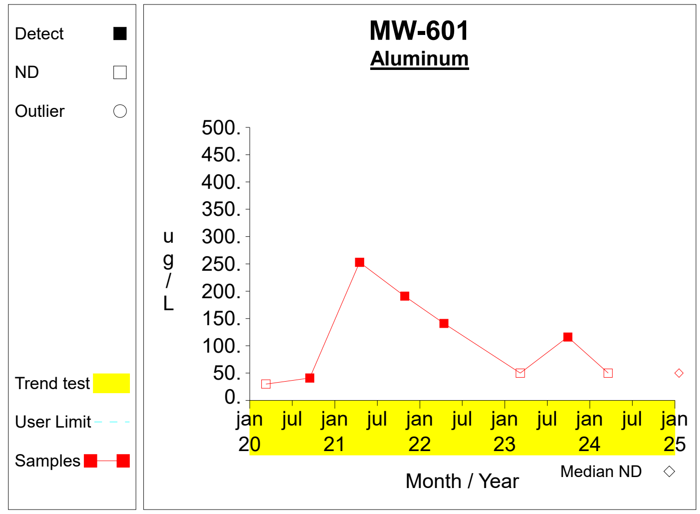

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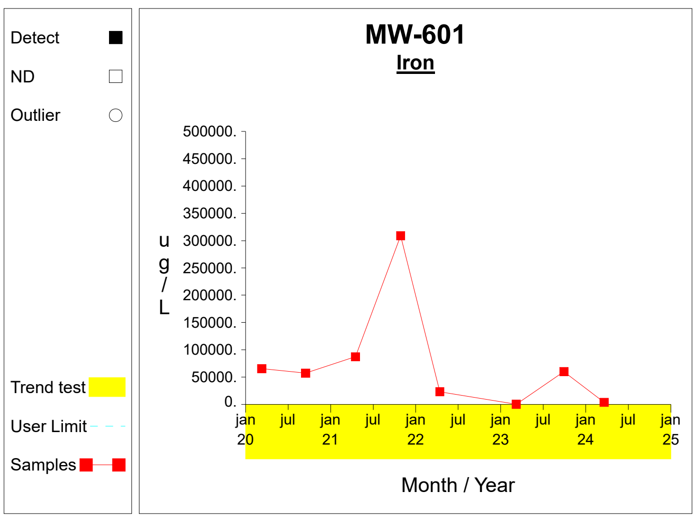
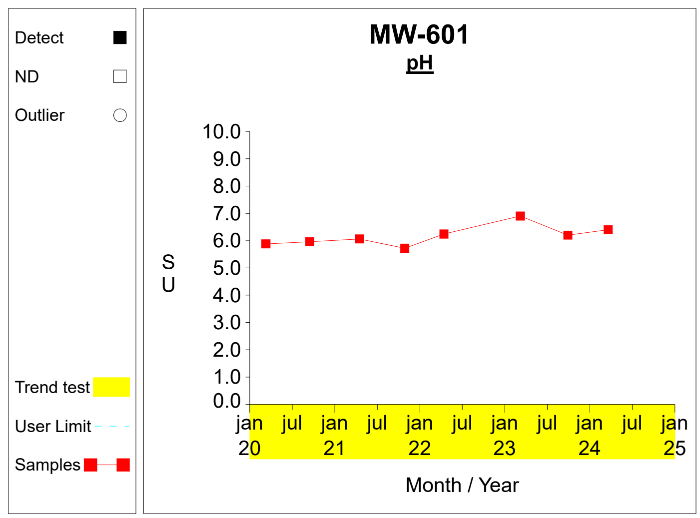


Graph 78



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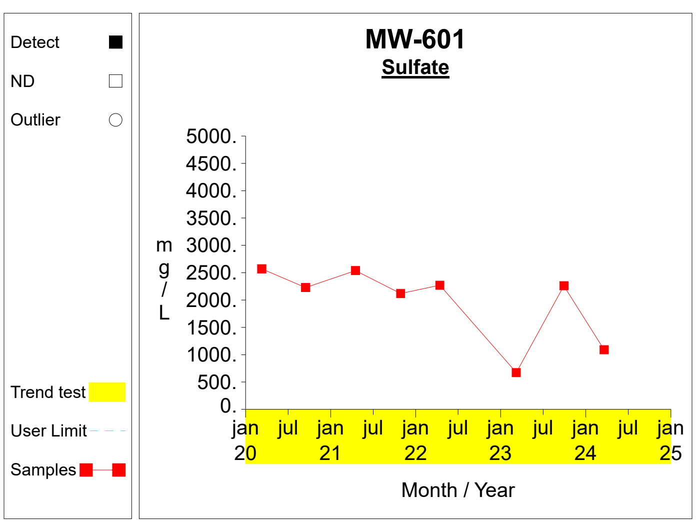
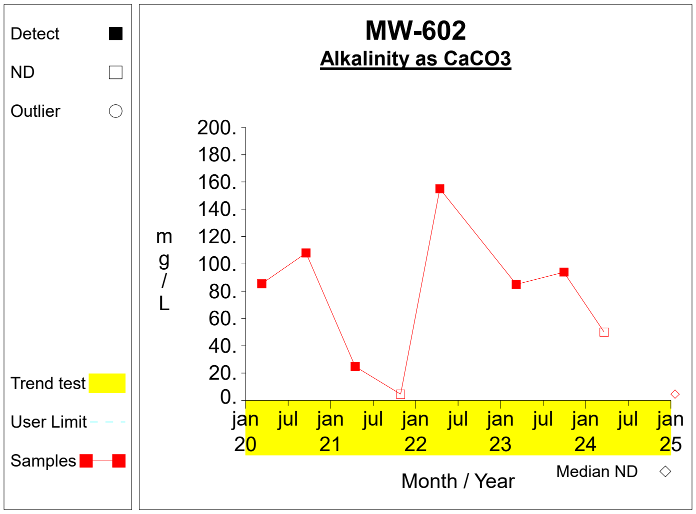
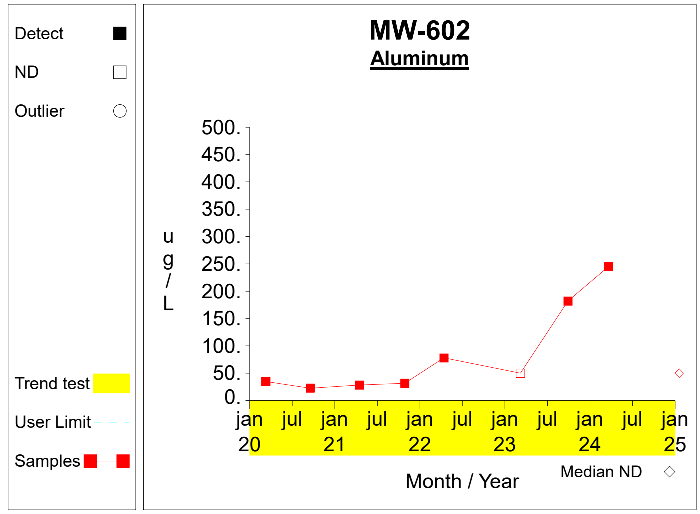


Graph 80

Time Series



Graph 81



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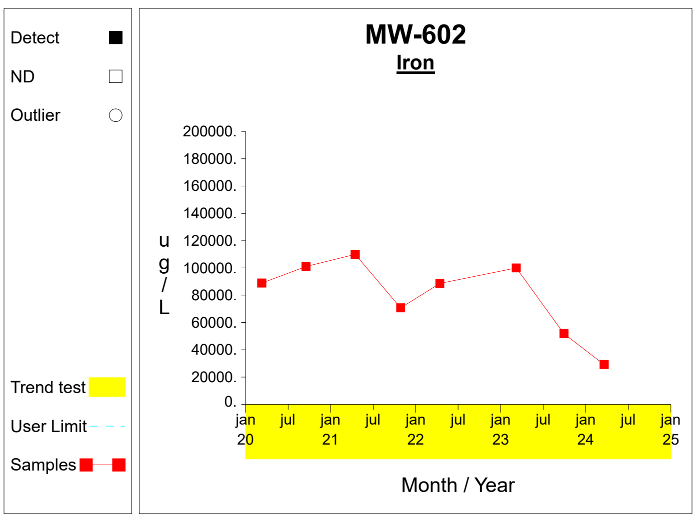

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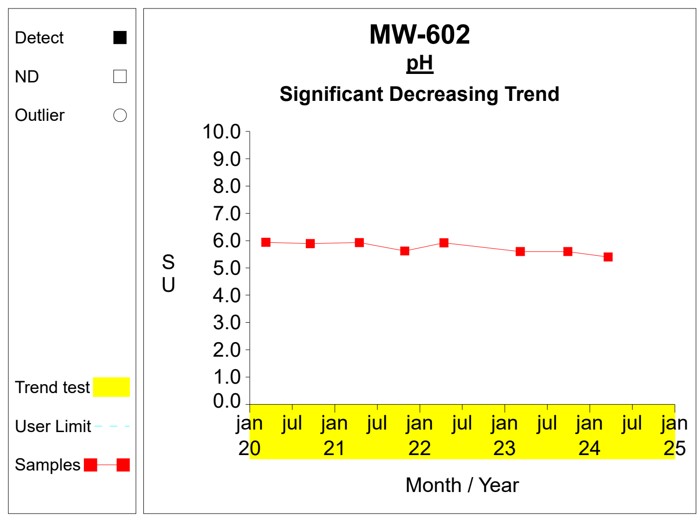
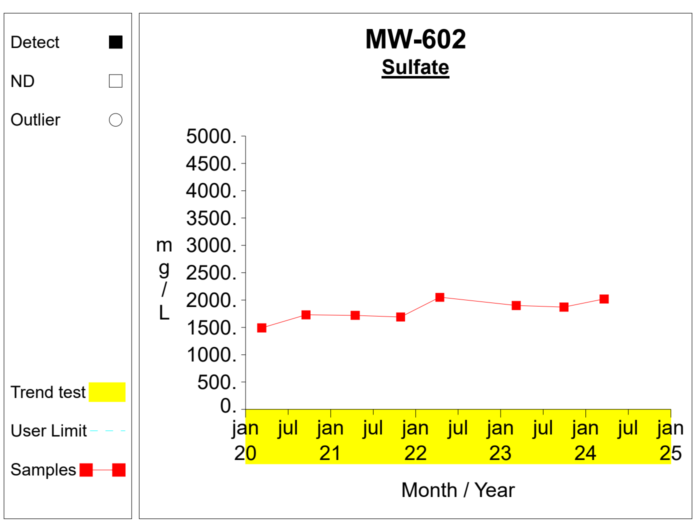
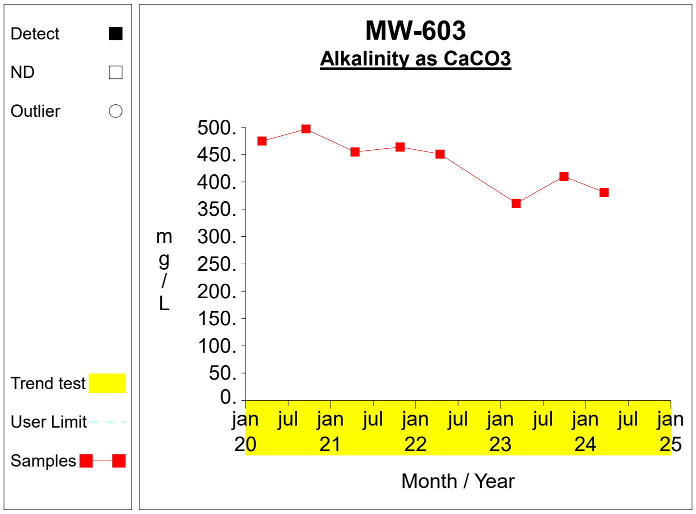


Graph 84



Graph 85

Time Series



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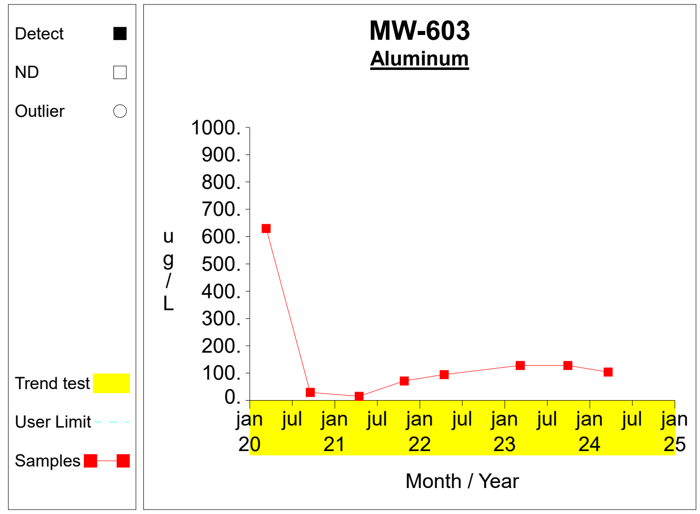
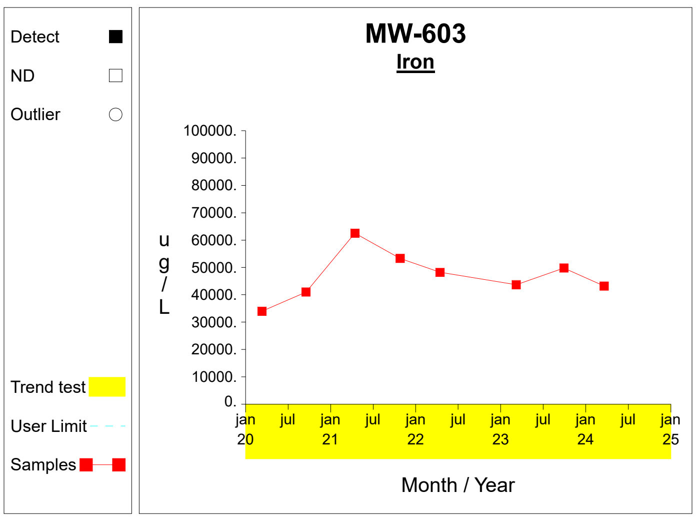


Graph 87



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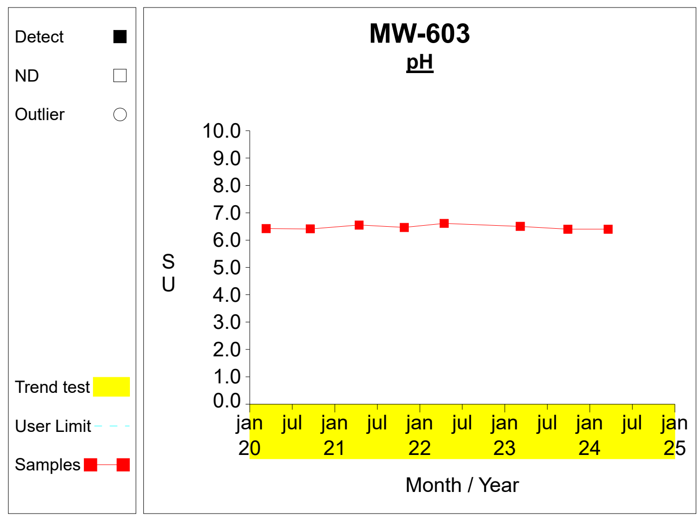
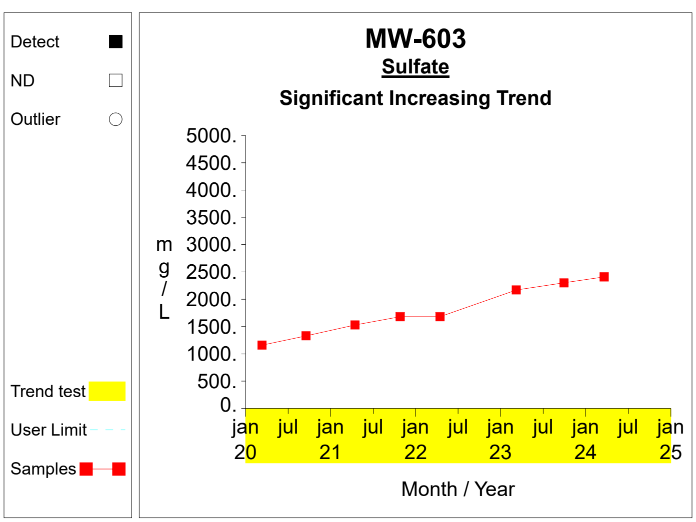


Graph 89



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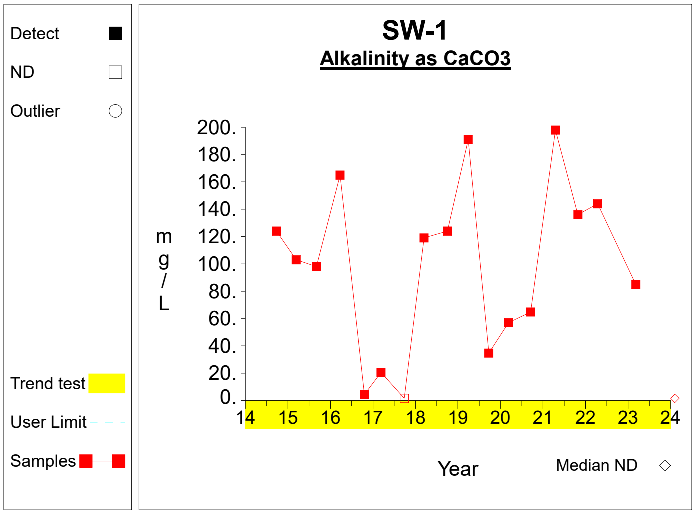
Time Series



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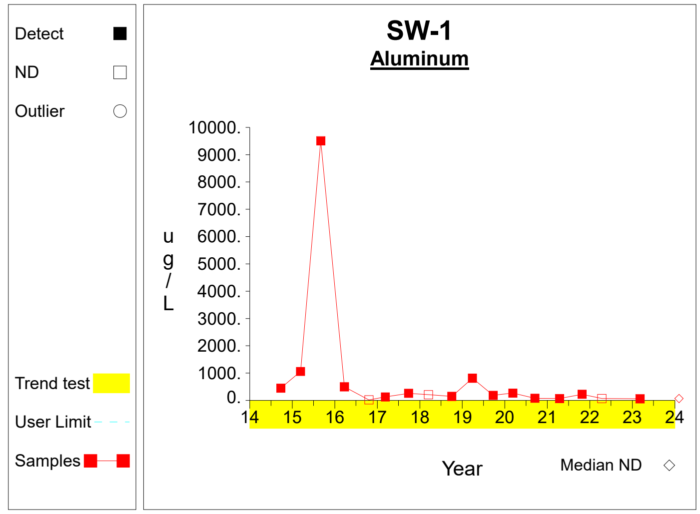

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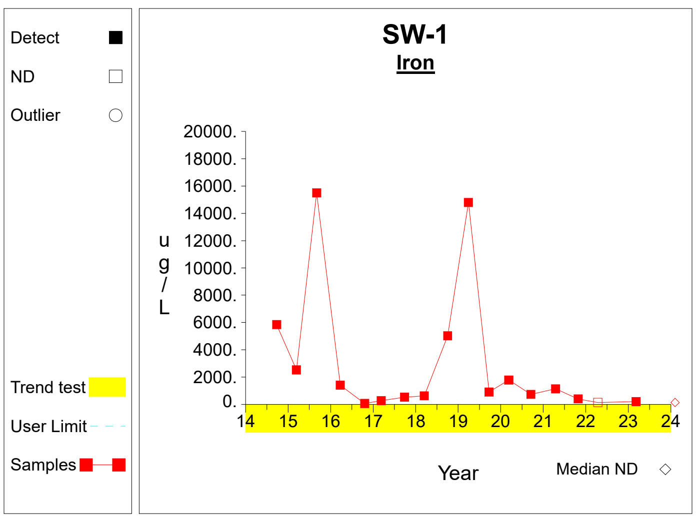

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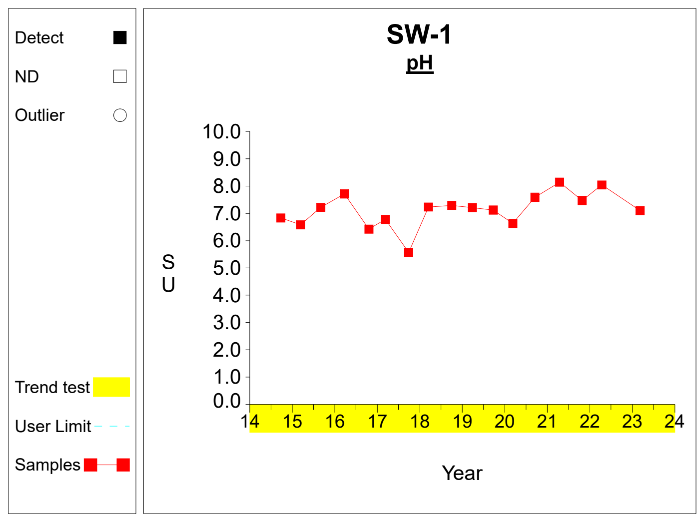

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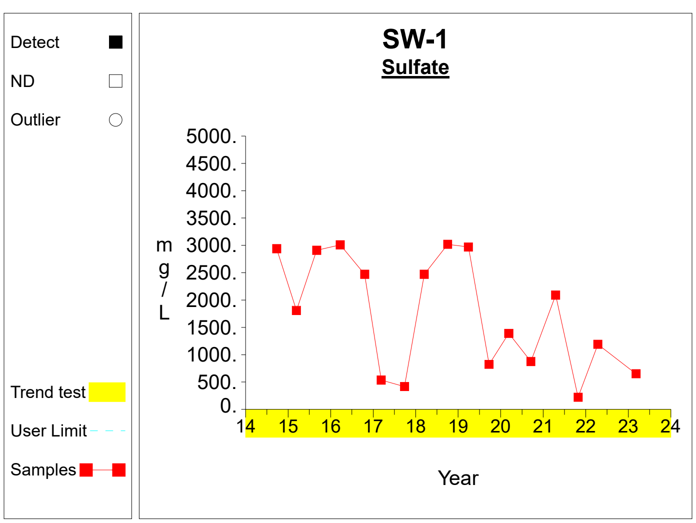

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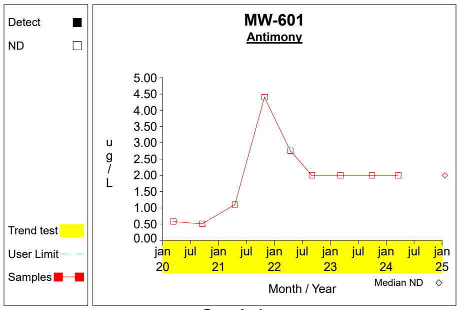
Time Series



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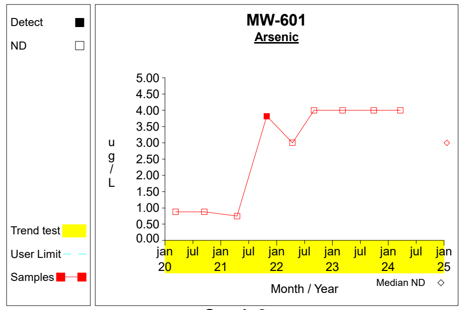

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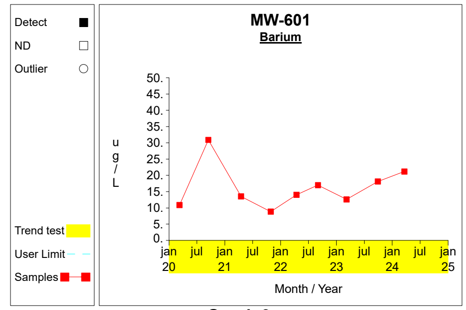

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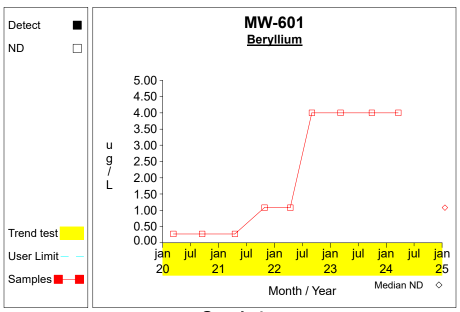

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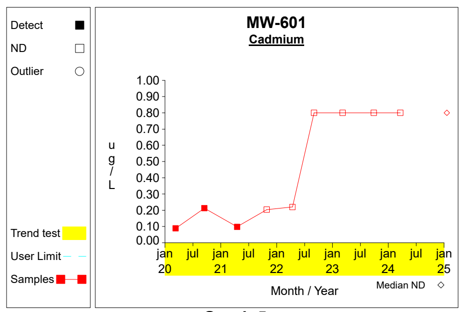

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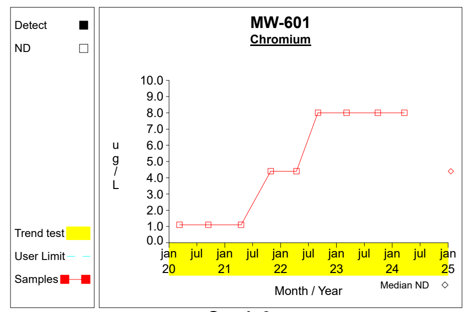

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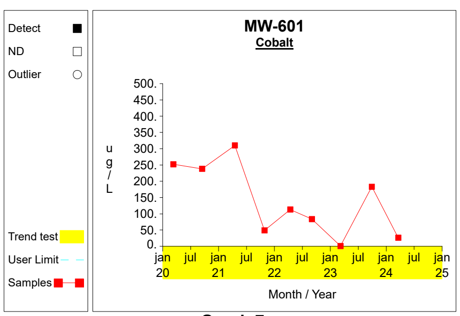

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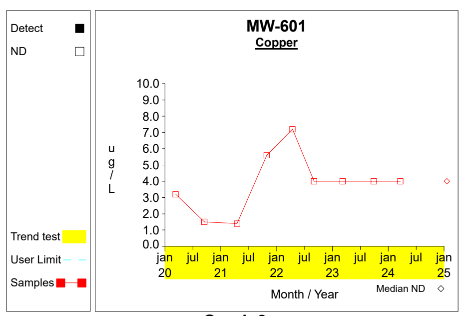

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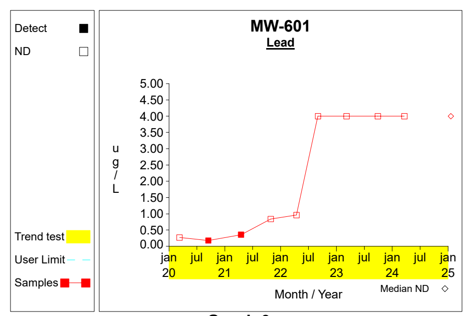

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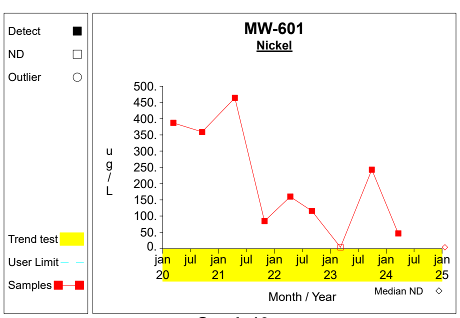

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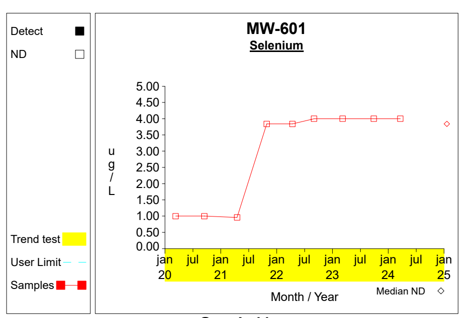

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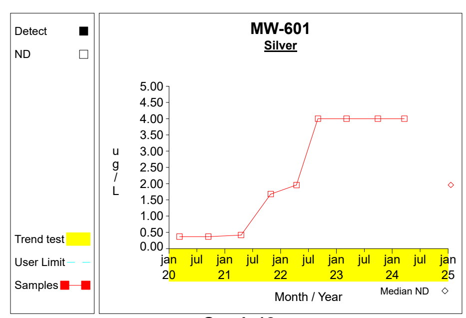

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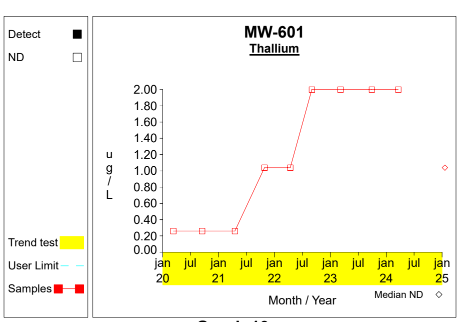

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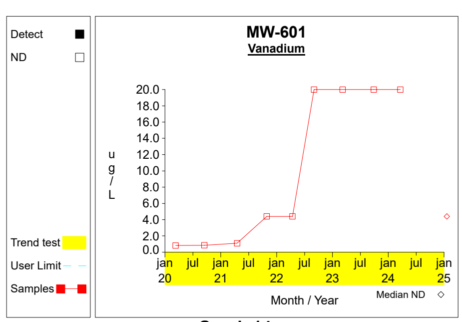

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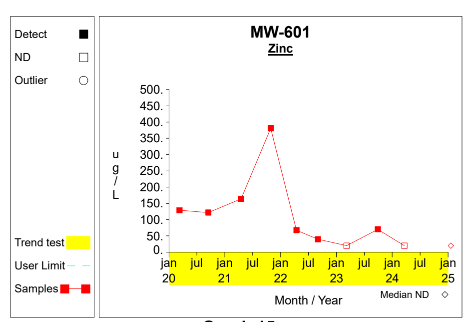

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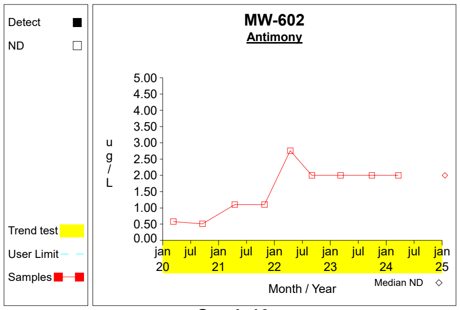
Time Series



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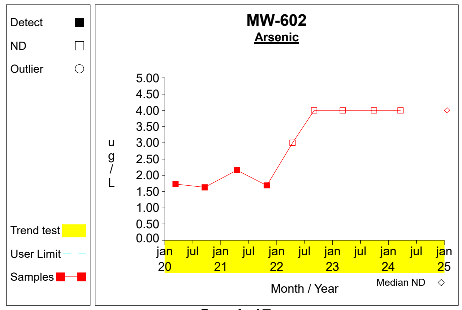

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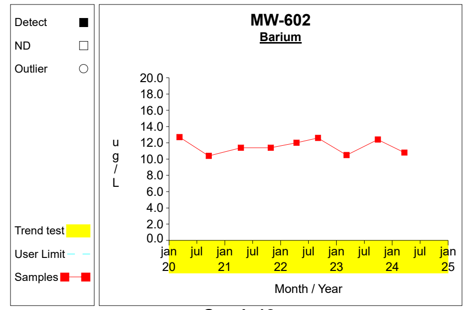

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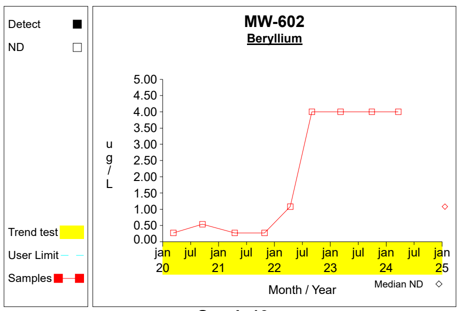

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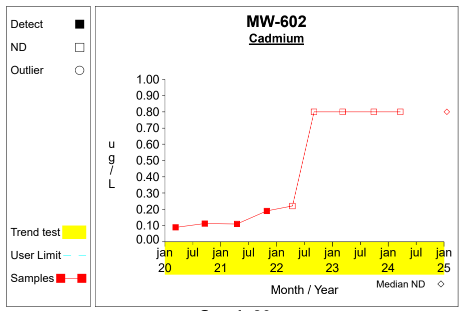

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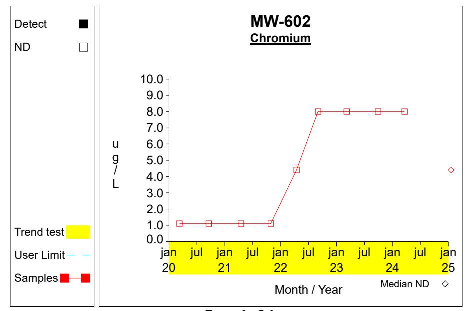

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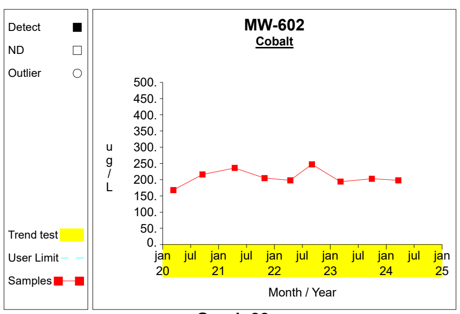

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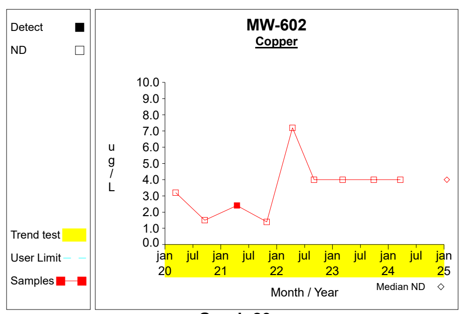

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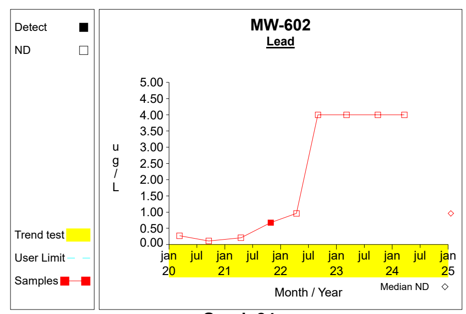

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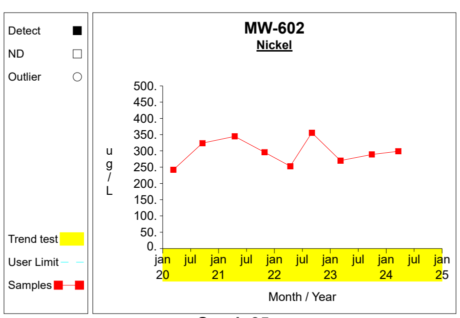

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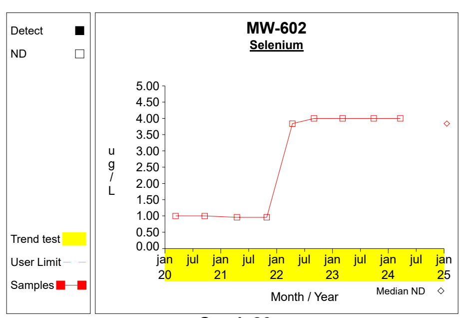

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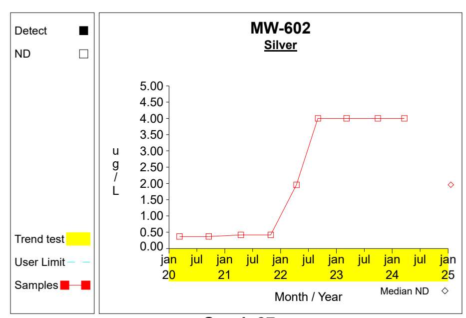

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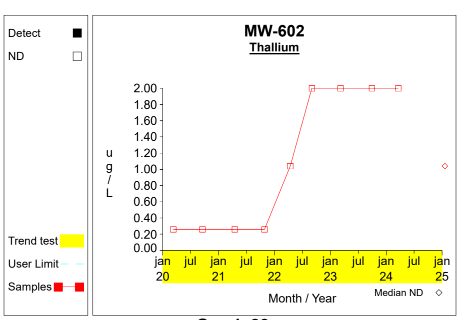

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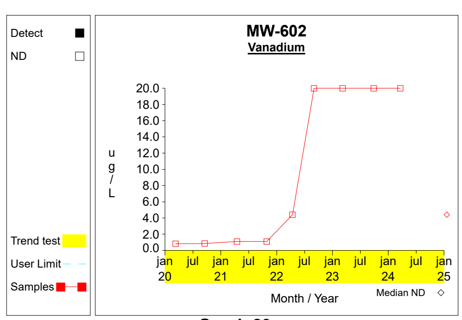

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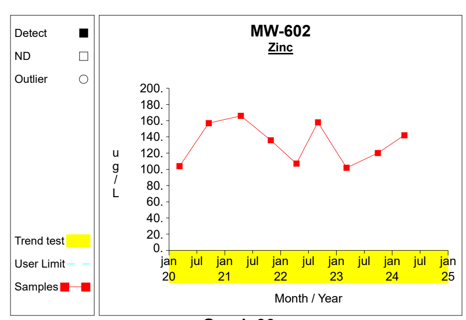

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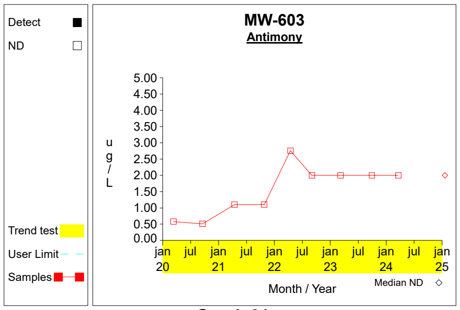
Time Series



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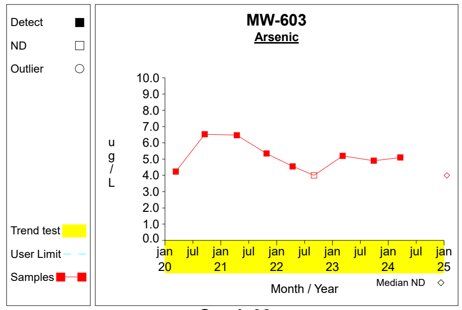

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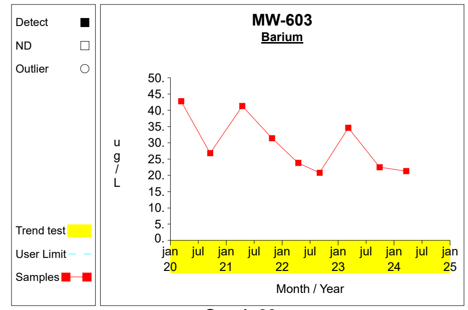

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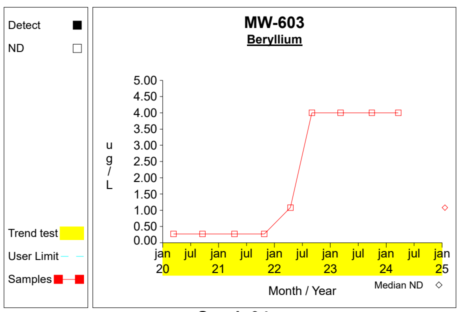

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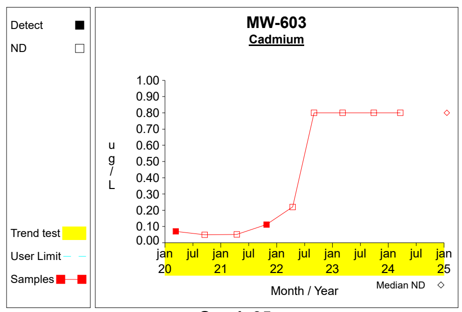

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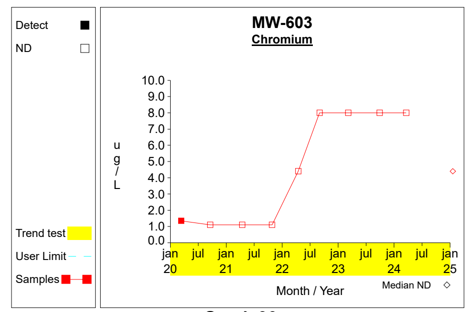

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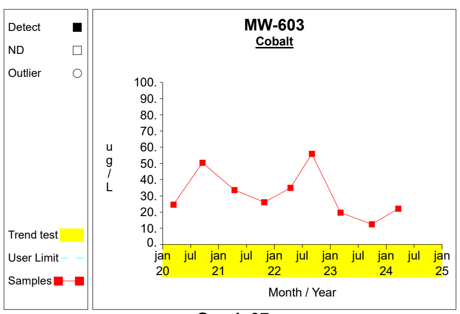

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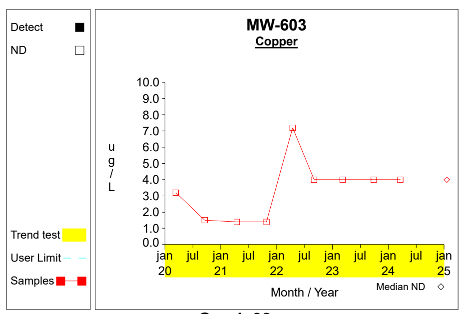

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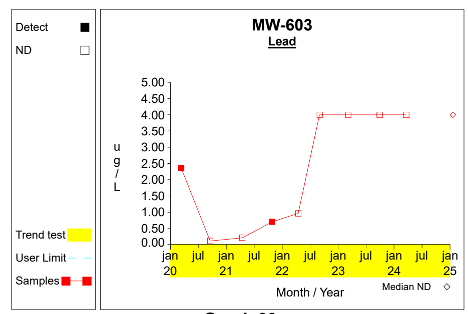

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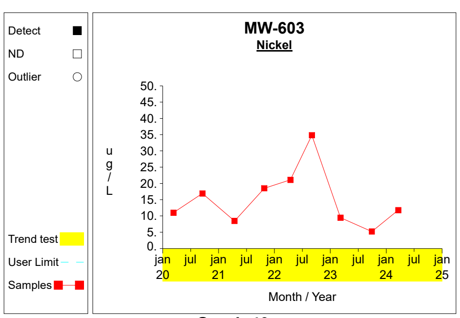

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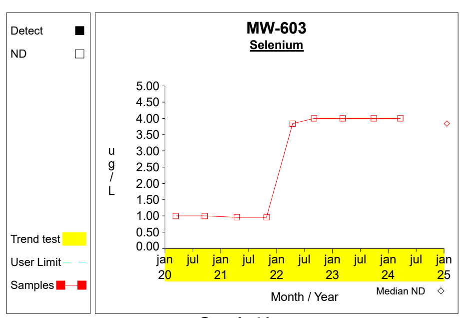

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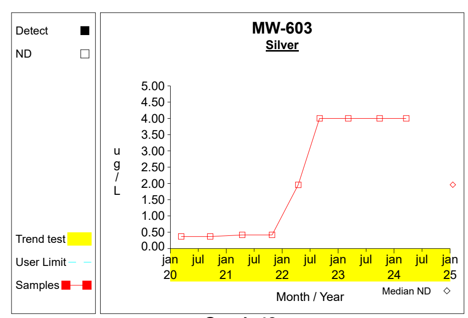

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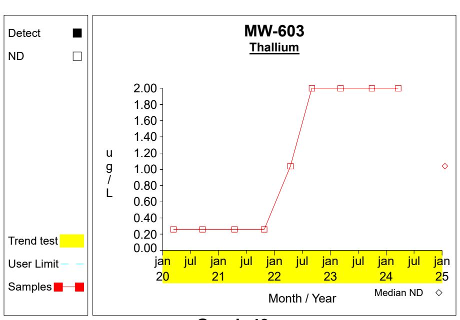

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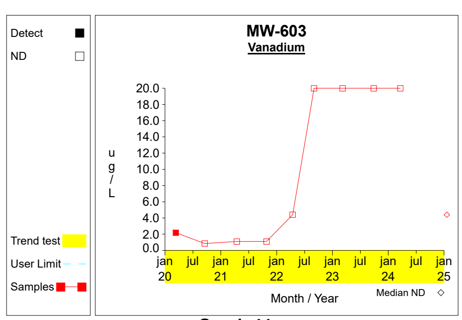

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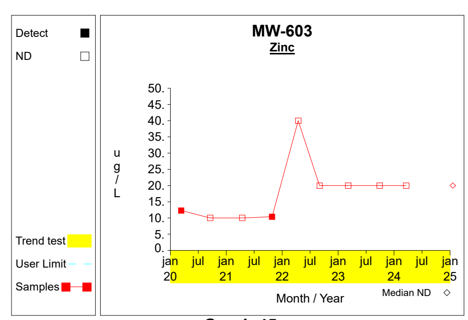

Graph 45

Appendix C.2 – Fall - Otter Creek Statistical Report

Results of the Ground Water Statistics

for South Central Iowa Solid Waste Agency Landfill

Second Semi-Annual Monitoring Events in 2024

Prepared for:
South Central Iowa Solid Waste Agency Landfill
1736 Highway T17
Tracy, IA 50256

Prepared by:
Jeffrey A. Holmgren
Otter Creek Environmental Services, L.L.C.
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Elgin, IL 60124
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October 2024

INTRODUCTION

This report contains the results of the statistical analyses used to evaluate the ground water data obtained during the second semi-annual monitoring event in 2024 at the South Central Iowa Solid Waste Agency (SCISWA) Landfill. The ground water monitoring wells were sampled on October 3, 2024 and analyzed for the parameters required by permit. 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. Both intrawell and interwell methodologies are described and then applied to the SCISWA Landfill data. The statistical plan conforms with IAC 567, Chapter 113.10, USEPA Guidance document ("*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance*", March 2009), and the American Society for Testing and Materials (ASTM) standard D6312-98, *Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*.

Ground Water Monitoring Program

The groundwater monitoring network for SCISWA Landfill includes wells MW-300, MW-303, MW-304, MW-307 (upgradient), MW-312 (upgradient), MW-313, MW-335, MW-344, MW-380, MW-381, MW-382R, MW-390 (upgradient), MW-601, MW-602, MW-603, and MW-604. An underdrain (GU-4AR) and surface water sample point (SW-1) are also available. Each of the groundwater monitoring wells is to be sampled at least semiannually and analyzed for the detection monitoring parameters listed below.

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 events in 2024 are summarized in Attachment A.

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

IAC 567, Chapter 113.10(4) provides several options for statistically evaluating the ground water data at those wells that monitor the open cells or contiguous MSWLF units. The preferred methods for comparing ground water data are using either prediction limits or using control charts. Both of these methods were applied to the SCISWA Landfill data using the DUMPStat® statistical program. DUMPStat® is a program for the statistical analysis of groundwater monitoring data using methods described in "Statistical Methods for Groundwater Monitoring" by Dr. Robert D. Gibbons. The DUMPStat program is consistent with all USEPA regulations and guidance and the ASTM D6312-98 guidance. Ground water statistics are to be done on the constituents listed.

Intrawell Statistics

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

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

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

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

Many groundwater monitoring parameters are not detected at a frequency great enough to generate the combined Shewhart-CUSUM control charts. For constituents that are detected less than 25% of the time at a particular well, the data should be plotted as a time series until a sufficient number of data points are available to provide a 99% confidence nonparametric prediction limit. Thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit. Eight independent measurements (for pass 1 of 2 resamples) are necessary to achieve a 99% confidence nonparametric prediction limit. The nonparametric prediction limit is the largest determination out of the data set collected for that well and parameter. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

In developing the statistical background, the historical data must be thoroughly screened for anomalous data due to sampling error, analytical error, or simply by chance alone. An erroneous data point, if not removed prior to the mean and variance computations, would yield a larger control limit thus increasing the false negative rate. The DUMPStat® program screens for outliers using the Dixon test. 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 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 detection monitoring constituents were evaluated using the combined Shewhart-CUSUM control chart method. The background used to determine control limits includes the data obtained from September 2012 through 2021. A summary of the intrawell statistics is included in Attachment B, Table 1 "Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts." The control charts or time series graphs follow the summary table. For the most current data, the control limit exceedances detected are summarized in the table below.

Control Limit Exceedances at SCISWA Landfill during the Second Semi-Annual Monitoring Event in 2024

Well	Parameter	Result	CUSUM Value	Control Limit	Prediction Limit Type	Verified/ Awaiting verification
MW-300	Arsenic, µg/L	6.3	5.9271	4.7721	Normal	Awaiting verification
	Cobalt, µg/L	799	1103.8410	653.2496	Normal	Verified
	Nickel, µg/L	829	954.3264	535.6816	Normal	Verified
	Zinc, µg/L	1030	1807.7347	1649.1135	Normal	Verified
MW-312	Barium, µg/L	24.9	37.4942	33.6507	Normal	Verified
MW-335	Arsenic, µg/L	11.7	18.0817	11.6924	Normal	Verified
MW-382R	Nickel, µg/L	12.3	11.4909	10.3302	Normal	Awaiting verification
MW-602	Barium, µg/L	17.7	16.7980	16.6539	Normal	Awaiting verification

An increasing trend was detected in the background data for nickel at MW-335.

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. The site-wide false positive rate is 16% and the test becomes sensitive to 4 standard deviation units over background.

Interwell Statistics: Upgradient versus Downgradient Comparisons

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

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

The background data used in this statistical analysis includes the ground water data collected from ground water wells MW-307, MW-312, and MW-390 during the period from September 2012 through the current data. A summary of the background data from monitoring wells MW-307, MW-312, and MW-390 is listed in Attachment C, 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-300, MW-303, MW-304, MW-313, MW-335, MW-344, MW-380, MW-381, and MW-382R, compared to the site prediction limits. Prediction limit exceedances are flagged with asterisks. For the most current data, the site prediction limit exceedances detected are summarized in the table below.

Prediction Limit Exceedances during the Second Semi-Annual Monitoring Event in 2024

Well	Parameter	Result	Prediction Limit	Prediction Limit Type	Verified/ Awaiting verification
MW-300	Cobalt, µg/L	799	139.5780	Normal	Verified
	Nickel, µg/L	829	143.9833	Normal	Verified
MW-303	Barium, µg/L	83.1	49.9000	Nonparametric	Verified
MW-304	Barium, µg/L	87.0	49.9000	Nonparametric	Verified
MW-344	Cobalt, µg/L	201	139.5780	Normal	Verified
	Nickel, µg/L	147	143.9833	Normal	Awaiting verification
MW-380	Cobalt, µg/L	263	139.5780	Normal	Verified
	Nickel, µg/L	440	143.9833	Normal	Verified
MW-602	Cobalt, µg/L	236	139.5780	Normal	Verified
	Nickel, µg/L	361	143.9833	Normal	Verified

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

A statistical power curve indicates the expected false assessments for the site as a whole. The false positive rate for interwell analyses is the percentage of failures when the upgradient versus downgradient true mean difference equals zero. False negative rate indicates the chance of missing contamination at a single well for a single constituent. The statistical power is a function of the number of wells included, the number of constituents compared, the detection frequencies, and the data distributions involved. For interwell analysis, the site-wide false positive rate is 1% and the test becomes sensitive to 4 standard deviation unit increases over background.

The trace metals which have exceeded ground water protection standards (GWPS) or verified statistical exceedances were evaluated against the GWPS using confidence limits (Attachment D). 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 GWPS under 40 CFR 264 (e.g. whether the verified constituent is detected at a significant level above the GWPS). An exceedance is verified if the LCL is above the Regulatory GWPS.

The 95% LCL for arsenic at MW-390 (15.747 µg/L) exceeded the GWPS of 10 µg/L.

The 95% LCL for cobalt at MW-300 (360.322 µg/L) exceeded the GWPS of 2.1 µg/L.
The 95% LCL for cobalt at MW-303 (13.415 µg/L) exceeded the GWPS of 2.1 µg/L.
The 95% LCL for cobalt at MW-304 (3.525 µg/L) exceeded the GWPS of 2.1 µg/L.
The 95% LCL for cobalt at MW-307 (35.929 µg/L) exceeded the GWPS of 2.1 µg/L.
The 95% LCL for cobalt at MW-312 (39.577 µg/L) exceeded the GWPS of 2.1 µg/L.
The 95% LCL for cobalt at MW-335 (29.340 µg/L) exceeded the GWPS of 2.1 µg/L.

The 95% LCL for cobalt at MW-344 (139.336 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for cobalt at MW-380 (334.601 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for cobalt at MW-390 (98.547 μg/L) exceeded the GWPS of 2.1 μg/L.
The 95% LCL for cobalt at MW-602 (185.177 μg/L) exceeded the GWPS of 2.1 μg/L.

The 95% LCL for nickel at MW-300 (401.065 μg/L) exceeded the GWPS of 100 μg/L.
The 95% LCL for nickel at MW-344 (106.475 μg/L) exceeded the GWPS of 100 μg/L.
The 95% LCL for nickel at MW-380 (516.102 μg/L) exceeded the GWPS of 100 μg/L.
The 95% LCL for nickel at MW-602 (258.426 μg/L) exceeded the GWPS of 100 μg/L.

The calculated 95% LCL for the remainder of the verified exceedances did not exceed GWPS.

Volatile Organic Compounds

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

Organic compounds detected 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-344	cis-1,2-Dichloroethene	1.8	1	Verified	70
MW-382R	1,1-Dichloroethane	1.4	1	Awaiting verification	140

The VOCs detections did not exceed GWPS. The verified VOC detections were evaluated against the GWPS using confidence limits (Attachment F). The analysis was conducted to evaluate whether verified concentrations are significantly above the water quality standard. The calculated LCLs for historically detected VOCs are below the respective GWPS.

Attachment A

Ground Water Data

Table 1

Analytical Data Summary for 9/26/2024

Constituents	Units	MW-604
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-Dichloroethene	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	ug/L	<10
2-Hexanone	ug/L	<5
4-Methyl-2-pentanone	ug/L	<5
Acetone	ug/L	<10
Acrylonitrile	ug/L	<5
Antimony	ug/L	<2
Arsenic	ug/L	<4
Barium	ug/L	40.6
Benzene	ug/L	<1
Beryllium	ug/L	<4
Bromochloromethane	ug/L	<1
Bromodichloromethane	ug/L	<1
Bromoform	ug/L	<1
Bromomethane	ug/L	<1
Cadmium	ug/L	<.8
Carbon Disulfide	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Chlorobenzene	ug/L	<1
Chlorodibromomethane	ug/L	<1
Chloroethane	ug/L	<1
Chloroform	ug/L	<1
Chloromethane	ug/L	<1
Chromium	ug/L	<8
cis-1,2-Dichloroethene	ug/L	<1
cis-1,3-Dichloropropene	ug/L	<1
Cobalt	ug/L	101
Copper	ug/L	<4
Dibromomethane	ug/L	<1
Ethylbenzene	ug/L	<1
Iodomethane	ug/L	<1
Lead	ug/L	<4
Methylene Chloride	ug/L	<5
Nickel	ug/L	128
Selenium	ug/L	<4
Silver	ug/L	<4
Styrene	ug/L	<1
Tetrachloroethene	ug/L	<1
Thallium	ug/L	<2
Toluene	ug/L	<1
trans-1,2-Dichloroethene	ug/L	<1
trans-1,3-Dichloropropene	ug/L	<1
trans-1,4-Dichloro-2-butene	ug/L	<5
Trichloroethene	ug/L	<1
Trichlorofluoromethane	ug/L	<1
Vanadium	ug/L	<20
Vinyl Acetate	ug/L	<5
Vinyl Chloride	ug/L	<1
Xylenes, Total	ug/L	<2
Zinc	ug/L	45.7

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

Table 2

Analytical Data Summary for 10/3/2024

Constituents	Units	GU-4AR	MW-300	MW-303	MW-304	MW-307	MW-312	MW-313	MW-335	MW-344	MW-380
1,1,1,2-Tetrachloroethane	ug/L	<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
1,1,2,2-Tetrachloroethane	ug/L	<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-Dichloroethane	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<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
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Alkalinity as CaCO3	mg/L	146	230	608	392	117	354	584	548	214	32
Aluminum	ug/L	111	502	<50	<50	245	58	86	127	57	1420
Antimony	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic	ug/L	4.1	6.3	<4.0	<4.0	4.5	<4.0	4.6	11.7	<4.0	11.2
Barium	ug/L	12.1	14.1	83.1	87.0	12.8	24.9	29.8	12.5	12.0	12.7
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bis(2-ethylhexyl)phthalate	ug/L										
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon Disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon Tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorodibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8
cis-1,2-Dichloroethene	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0
cis-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt	ug/L	56.2	799.0	14.0	4.3	39.7	38.9	.7	37.6	201.0	263.0
Copper	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iron	ug/L	162000	113000	984	513	225000	815	9620	14000	1840	184000
Lead	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methylene Chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel	ug/L	103.0	829.0	13.5	6.5	69.8	57.6	<4.0	55.7	147.0	440.0
pH	SU	5.8	5.7	6.4	6.7	5.6	6.1	6.7	6.0	5.7	5.0
Selenium	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfate	mg/L	2600.0	2810.0	76.6	75.7	1910.0	445.0	1140.0	2620.0	2410.0	2020.0
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<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
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl Acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl Chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, Total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc	ug/L	188.0	1030.0	<20.0	<20.0	253.0	<20.0	<20.0	26.4	<20.0	1150.0

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

Table 2

Analytical Data Summary for 10/3/2024

Constituents	MW-381	MW-382R	MW-390	MW-601	MW-602	MW-603	MW-604
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	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
2-Butanone	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	<5	<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5
Alkalinity as CaCO3	250	399	231	200	47	434	164
Aluminum	96	169	162	105	248	<50	111
Antimony	<2	<2	<2	<2	<2	<2	<2
Arsenic	<4.0	<4.0	18.3	<4.0	<4.0	<4.0	<4.0
Barium	12.1	25.1	16.3	39.2	17.7	19.2	24.2
Benzene	<1	<1	<1	<1	<1	<1	<1
Beryllium	<4	<4	<4	<4	<4	<4	<4
Bis(2-ethylhexyl)phthalate		<6					
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1
Cadmium	<.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
Chlorodibromomethane	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1
Chromium	<8	<8	<8	<8	<8	<8	<8
cis-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene	<1	<1	<1	<1	<1	<1	<1
Cobalt	.8	6.9	111.0	19.3	236.0	15.6	95.0
Copper	<4	<4	<4	<4	<4	<4	<4
Dibromomethane	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1	<1	<1
Iron	<100	1020	134000	19100	10100	47700	61700
Lead	<4	<4	<4	<4	<4	<4	<4
Methylene Chloride	<5	<5	<5	<5	<5	<5	<5
Nickel	<4.0	12.3	56.7	25.8	361.0	6.6	119.0
pH	6.3	6.4	6.0	6.3	5.3	6.3	5.8
Selenium	<4	<4	<4	<4	<4	<4	<4
Silver	<4	<4	<4	<4	<4	<4	<4
Styrene	<1	<1	<1	<1	<1	<1	<1
Sulfate	792.0	1130.0	2160.0	829.0	1900.0	2970.0	2170.0
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1
Thallium	<2	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	<1	<1	<1	<1	<1	<1	<1
trans-1,4-Dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1
Vanadium	<20	<20	<20	<20	<20	<20	<20
Vinyl Acetate	<5	<5	<5	<5	<5	<5	<5
Vinyl Chloride	<1	<1	<1	<1	<1	<1	<1
Xylenes, Total	<2	<2	<2	<2	<2	<2	<2
Zinc	<20.0	<20.0	170.0	<20.0	166.0	<20.0	41.2

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

Attachment B

Summary Tables and Graphs for the Intrawell Comparisons

Table 1

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

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Antimony	ug/L	MW-300	19	6	37			2.0000	2.0000			1.0000	nonpar	.99	**
Arsenic	ug/L	MW-300	19	6	37	2.0375	0.4972	4.0000	6.3000	2.0375	5.9271	4.7721	normal		
Barium	ug/L	MW-300	18	6	37	13.0861	1.9733	11.9000	14.1000	13.0861	13.0861	23.9395	normal		
Beryllium	ug/L	MW-300	19	6	37			4.0000	4.0000			0.5300	nonpar	.99	**
Cadmium	ug/L	MW-300	19	6	37	0.7042	1.8006	0.8000	0.8000	0.7042	0.7042	10.6077	normal		
Chromium	ug/L	MW-300	19	6	37			8.0000	8.0000			3.6900	nonpar	.99	**
Cobalt	ug/L	MW-300	18	6	37	286.0000	66.7727	691.0000	799.0000	640.9205	1103.8410	653.2496	normal		
Copper	ug/L	MW-300	19	6	37			4.0000	4.0000			32.0000	nonpar	.99	**
Lead	ug/L	MW-300	19	6	37	0.6372	0.3297	4.0000	4.0000	0.6372	0.6372	2.4507	normal		
Nickel	ug/L	MW-300	19	6	37	228.5053	55.8503	719.0000	829.0000	844.3264	954.3264	535.6816	normal		
Selenium	ug/L	MW-300	19	6	37			4.0000	4.0000			3.3400	nonpar	.99	**
Silver	ug/L	MW-300	19	6	37			4.0000	4.0000			0.5600	nonpar	.99	**
Thallium	ug/L	MW-300	19	6	37	0.2528	0.0475	2.0000	2.0000	0.2528	0.2528	0.5139	normal		
Vanadium	ug/L	MW-300	19	6	37			20.0000	20.0000			2.1500	nonpar	.99	**
Zinc	ug/L	MW-300	19	6	37	244.3421	255.4130	1350.0000	1030.0000	2127.7347	1807.7347	1649.1135	normal		
Antimony	ug/L	MW-303	18	6	37			2.0000	2.0000			0.5300	nonpar	.99	**
Arsenic	ug/L	MW-303	19	6	37	1.0109	0.4638	4.0000	4.0000	1.0109	1.0109	3.5619	normal		
Barium	ug/L	MW-303	19	6	37	48.5000	23.8902	92.9000	83.1000	74.9824	91.6647	179.8960	normal		
Beryllium	ug/L	MW-303	19	6	37			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-303	19	6	37			0.8000	0.8000			0.1000	nonpar	.99	**
Chromium	ug/L	MW-303	18	6	37			8.0000	8.0000			4.7600	nonpar	.99	**
Cobalt	ug/L	MW-303	19	6	37	18.4263	3.4367	23.1000	14.0000	23.9148	18.4263	37.3282	normal		
Copper	ug/L	MW-303	18	6	37			4.0000	4.0000			2.0000	nonpar	.99	**
Lead	ug/L	MW-303	19	6	37	0.4141	0.6266	4.0000	4.0000	0.4141	0.4141	3.8603	normal		
Nickel	ug/L	MW-303	19	6	37	38.9368	11.8360	28.1000	13.5000	38.9368	38.9368	104.0349	normal		
Selenium	ug/L	MW-303	19	6	37			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-303	19	6	37			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-303	19	6	37			2.0000	2.0000			0.9040	nonpar	.99	**
Vanadium	ug/L	MW-303	19	6	37			20.0000	20.0000			8.7300	nonpar	.99	**
Zinc	ug/L	MW-303	19	6	37	24.8742	44.8621	20.0000	20.0000	24.8742	24.8742	271.6156	normal		
Antimony	ug/L	MW-304	14	6	20			2.0000	2.0000			0.8160	nonpar	.99	**
Arsenic	ug/L	MW-304	14	6	20	2.2164	2.2660	4.0000	4.0000	2.2164	2.2164	14.6794	normal		
Barium	ug/L	MW-304	14	6	20	66.5214	19.1409	78.6000	87.0000	66.5214	72.6443	171.7966	normal		
Beryllium	ug/L	MW-304	14	6	20			4.0000	4.0000			0.2210	nonpar	.99	**
Cadmium	ug/L	MW-304	12	6	20								nonpar *		**
Chromium	ug/L	MW-304	14	6	20			8.0000	8.0000			1.2800	nonpar	.99	**
Cobalt	ug/L	MW-304	13	6	20	8.1031	3.3997	4.6000	4.3000	8.1031	8.1031	26.8014	normal		
Copper	ug/L	MW-304	14	6	20			4.0000	4.0000			2.8700	nonpar	.99	**
Lead	ug/L	MW-304	14	6	20			4.0000	4.0000			0.7370	nonpar	.99	**
Nickel	ug/L	MW-304	13	6	20	6.1354	2.3844	4.0000	6.5000	6.1354	6.1354	19.2496	normal		
Selenium	ug/L	MW-304	14	6	20			4.0000	4.0000			1.2400	nonpar	.99	**
Silver	ug/L	MW-304	14	6	20			4.0000	4.0000			0.1800	nonpar	.99	**
Thallium	ug/L	MW-304	14	6	20			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-304	11	6	20								nonpar *		**
Zinc	ug/L	MW-304	12	6	20	9.8533	1.6475	20.0000	20.0000	9.8533	9.8533	18.9147	normal		
Antimony	ug/L	MW-307	17	6	34			2.0000	2.0000			1.0000	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	ug/L	MW-307	17	6	34	3.2082	1.3796	4.0000	4.5000	3.2082	3.4653	10.7959	normal		
Barium	ug/L	MW-307	16	6	34	9.4050	2.3782	9.0000	12.8000	17.8278	19.4391	22.4849	normal		
Beryllium	ug/L	MW-307	17	6	34	0.6852	0.2854	4.0000	4.0000	0.6852	0.6852	2.2551	normal		
Cadmium	ug/L	MW-307	17	6	34	0.2898	0.2332	0.8000	0.8000	0.2898	0.2898	1.5724	normal		
Chromium	ug/L	MW-307	17	6	34			8.0000	8.0000			1.6000	nonpar	.99	**
Cobalt	ug/L	MW-307	16	6	34	54.4500	12.2189	42.8000	39.7000	54.4500	54.4500	121.6539	normal		
Copper	ug/L	MW-307	17	6	34			4.0000	4.0000			2.1900	nonpar	.99	**
Lead	ug/L	MW-307	17	6	34			4.0000	4.0000			0.7700	nonpar	.99	**
Nickel	ug/L	MW-307	17	6	34	85.1118	22.4967	74.2000	69.8000	85.1118	85.1118	208.8434	normal		
Selenium	ug/L	MW-307	17	6	34	2.8825	1.4130	4.0000	4.0000	2.8825	2.8825	10.6538	normal		
Silver	ug/L	MW-307	15	6	34			4.0000	4.0000			0.4200	nonpar	.99	**
Thallium	ug/L	MW-307	17	6	34			2.0000	2.0000			0.2700	nonpar	.99	**
Vanadium	ug/L	MW-307	16	6	34			20.0000	20.0000			1.1000	nonpar	.99	**
Zinc	ug/L	MW-307	16	6	34	421.3125	117.2108	304.0000	253.0000	421.3125	421.3125	1065.9717	normal		
Antimony	ug/L	MW-312	19	6	25			2.0000	2.0000			1.0000	nonpar	.99	**
Arsenic	ug/L	MW-312	19	6	25	1.2584	0.4060	4.0000	4.0000	1.2584	1.2584	3.4916	normal		
Barium	ug/L	MW-312	19	6	25	14.3563	3.5081	24.3000	24.9000	36.8942	37.4942	33.6507	normal		
Beryllium	ug/L	MW-312	19	6	25	0.4429	0.1366	4.0000	4.0000	0.4429	0.4429	1.1944	normal		
Cadmium	ug/L	MW-312	19	6	25			0.8000	0.8000			0.2460	nonpar	.99	**
Chromium	ug/L	MW-312	19	6	25			8.0000	8.0000			3.9000	nonpar	.99	**
Cobalt	ug/L	MW-312	19	6	25	36.5316	8.3421	44.2000	38.9000	40.0672	36.5316	82.4129	normal		
Copper	ug/L	MW-312	19	6	25			4.0000	4.0000			2.1900	nonpar	.99	**
Lead	ug/L	MW-312	19	6	25			4.0000	4.0000			1.6700	nonpar	.99	**
Nickel	ug/L	MW-312	19	6	25	102.1684	22.8484	58.4000	57.6000	102.1684	102.1684	227.8348	normal		
Selenium	ug/L	MW-312	19	6	25			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-312	19	6	25			4.0000	4.0000			0.4200	nonpar	.99	**
Thallium	ug/L	MW-312	19	6	25			2.0000	2.0000			0.2700	nonpar	.99	**
Vanadium	ug/L	MW-312	19	6	25			20.0000	20.0000			1.1000	nonpar	.99	**
Zinc	ug/L	MW-312	19	6	25	32.0316	50.1704	20.0000	20.0000	32.0316	32.0316	307.9690	normal		
Antimony	ug/L	MW-313	18	6	37			2.0000	2.0000			1.0000	nonpar	.99	**
Arsenic	ug/L	MW-313	19	6	37	5.6137	6.0073	29.0000	4.6000	26.5754	21.0563	38.6537	normal		
Barium	ug/L	MW-313	19	6	37	25.9579	12.4960	42.0000	29.8000	32.6280	27.0982	94.6857	normal		
Beryllium	ug/L	MW-313	19	6	37			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-313	19	6	37	0.1401	0.0446	0.8000	0.8000	0.1401	0.1401	0.3855	normal		
Chromium	ug/L	MW-313	19	6	37			8.0000	8.0000			2.9800	nonpar	.99	**
Cobalt	ug/L	MW-313	19	6	37	13.8165	16.6174	0.9000	0.7000	13.8165	13.8165	105.2120	normal		
Copper	ug/L	MW-313	19	6	37			4.0000	4.0000			2.9900	nonpar	.99	**
Lead	ug/L	MW-313	19	6	37	0.4094	0.2358	4.0000	4.0000	0.4094	0.4094	1.7062	normal		
Nickel	ug/L	MW-313	19	6	37	29.2011	22.2832	4.0000	4.0000	29.2011	29.2011	151.7589	normal		
Selenium	ug/L	MW-313	19	6	37			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-313	19	6	37			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-313	19	6	37			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-313	19	6	37	16.3084	20.8998	20.0000	20.0000	16.3084	16.3084	131.2575	normal		
Zinc	ug/L	MW-313	19	6	37	21.4774	25.4503	20.0000	20.0000	21.4774	21.4774	161.4540	normal		
Antimony	ug/L	MW-335	20	6	38			2.0000	2.0000			0.7400	nonpar	.99	**
Arsenic	ug/L	MW-335	20	6	38	2.1758	1.7303	9.9000	11.7000	16.2817	18.0817	11.6924	normal		

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
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Conf = confidence level for passing initial test or one verification resample (nonparametric test only).
* - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

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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	ug/L	MW-335	20	6	38	13.0605	3.6877	13.2000	12.5000	13.0605	13.0605	33.3427	normal		
Beryllium	ug/L	MW-335	20	6	38	0.4493	0.1047	4.0000	4.0000	0.4493	0.4493	1.0249	normal		
Cadmium	ug/L	MW-335	20	6	38	0.2887	0.1722	0.8000	0.8000	0.2887	0.2887	1.2355	normal		
Chromium	ug/L	MW-335	19	6	38			8.0000	8.0000			2.9300	nonpar	.99	**
Cobalt	ug/L	MW-335	17	6	38	62.7588	24.7589	40.3000	37.6000	62.7588	62.7588	198.9330	normal		
Copper	ug/L	MW-335	20	6	38			4.0000	4.0000			2.0000	nonpar	.99	**
Lead	ug/L	MW-335	20	6	38	0.3620	0.2657	4.0000	4.0000	0.3620	0.3620	1.8237	normal		
Nickel	ug/L	MW-335	18	6	38	104.3333	75.5987	39.4000	55.7000	104.3333	104.3333	520.1264	normal		
Selenium	ug/L	MW-335	20	6	38			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-335	20	6	38			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-335	20	6	38			2.0000	2.0000			0.2700	nonpar	.99	**
Vanadium	ug/L	MW-335	20	6	38			20.0000	20.0000			1.1000	nonpar	.99	**
Zinc	ug/L	MW-335	20	6	38	73.6000	54.9016	42.4000	26.4000	73.6000	73.6000	375.5586	normal		
Antimony	ug/L	MW-344	19	6	37			2.0000	2.0000			5.0200	nonpar	.99	**
Arsenic	ug/L	MW-344	19	6	37	1.2918	0.6384	4.0000	4.0000	1.2918	1.2918	4.8027	normal		
Barium	ug/L	MW-344	19	6	37	14.2484	3.6378	10.6000	12.0000	14.2484	14.2484	34.2564	normal		
Beryllium	ug/L	MW-344	19	6	37			4.0000	4.0000			0.4010	nonpar	.99	**
Cadmium	ug/L	MW-344	19	6	37	0.2549	0.1916	0.8000	0.8000	0.2549	0.2549	1.3088	normal		
Chromium	ug/L	MW-344	19	6	37			8.0000	8.0000			5.5200	nonpar	.99	**
Cobalt	ug/L	MW-344	19	6	37	155.4526	73.3058	148.0000	201.0000	155.4526	155.4526	558.6346	normal		
Copper	ug/L	MW-344	19	6	37			4.0000	4.0000			2.0000	nonpar	.99	**
Lead	ug/L	MW-344	19	6	37			4.0000	4.0000			0.7260	nonpar	.99	**
Nickel	ug/L	MW-344	19	6	37	131.8526	66.3648	108.0000	147.0000	131.8526	131.8526	496.8592	normal		
Selenium	ug/L	MW-344	19	6	37			4.0000	4.0000			1.0600	nonpar	.99	**
Silver	ug/L	MW-344	19	6	37			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-344	19	6	37			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-344	19	6	37			20.0000	20.0000			1.1000	nonpar	.99	**
Zinc	ug/L	MW-344	19	6	37	36.4368	45.8120	20.0000	20.0000	36.4368	36.4368	288.4030	normal		
Antimony	ug/L	MW-380	18	6	37			2.0000	2.0000			1.1000	nonpar	.99	**
Arsenic	ug/L	MW-380	19	6	37	5.6442	1.6391	5.4000	11.2000	5.6442	9.9706	14.6594	normal		
Barium	ug/L	MW-380	17	6	37	8.4441	1.6486	9.3000	12.7000	8.4441	11.4635	17.5116	normal		
Beryllium	ug/L	MW-380	19	6	37	7.4989	3.3671	4.9000	4.0000	7.4989	7.4989	26.0180	normal		
Cadmium	ug/L	MW-380	19	6	38	9.7553	4.2708	36.5000	0.8000	33.2969	9.7553	33.2446	normal		
Chromium	ug/L	MW-380	19	6	37	14.6711	8.5880	8.0000	8.0000	14.6711	14.6711	61.9049	normal		
Cobalt	ug/L	MW-380	18	6	37	1139.3333	325.1624	936.0000	263.0000	1139.3333	1139.3333	2927.7265	normal		
Copper	ug/L	MW-380	19	6	37	13.6163	8.6109	71.8000	4.0000	65.3418	13.6163	60.9762	normal		
Lead	ug/L	MW-380	19	6	37	2.1032	1.6916	4.0000	4.0000	2.1032	2.1032	11.4069	normal		
Nickel	ug/L	MW-380	19	6	37	1543.9474	478.1781	1290.0000	440.0000	1543.9474	1543.9474	4173.9268	normal		
Selenium	ug/L	MW-380	19	6	37	10.7253	6.8124	8.5000	4.0000	10.7253	10.7253	48.1936	normal		
Silver	ug/L	MW-380	18	6	37			4.0000	4.0000			1.0000	nonpar	.99	**
Thallium	ug/L	MW-380	19	6	37	0.7228	0.3760	2.0000	2.0000	0.7228	0.7228	2.7908	normal		
Vanadium	ug/L	MW-380	19	6	37	7.0337	3.7039	20.0000	20.0000	7.0337	7.0337	27.4053	normal		
Zinc	ug/L	MW-380	20	6	38	4417.5000	1437.7646	7070.0000	1150.0000	5991.6765	4417.5000	12325.2054	normal		
Antimony	ug/L	MW-381	19	6	37			2.0000	2.0000			0.7400	nonpar	.99	**
Arsenic	ug/L	MW-381	19	6	37			4.0000	4.0000			7.1400	nonpar	.99	**
Barium	ug/L	MW-381	19	6	38	11.0842	3.8217	12.3000	12.1000	12.2832	11.0842	32.1037	normal		

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Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Beryllium	ug/L	MW-381	19	6	37			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-381	19	6	37	0.2688	0.2736	0.8000	0.8000	0.2688	0.2688	1.7735	normal		
Chromium	ug/L	MW-381	19	6	37			8.0000	8.0000			3.9000	nonpar	.99	**
Cobalt	ug/L	MW-381	19	6	37	3.6049	11.2517	0.4000	0.8000	3.6049	3.6049	65.4894	normal		
Copper	ug/L	MW-381	19	6	37	2.7779	0.6573	4.0000	4.0000	2.7779	2.7779	6.3932	normal		
Lead	ug/L	MW-381	19	6	37	0.5266	0.1986	4.0000	4.0000	0.5266	0.5266	1.6188	normal		
Nickel	ug/L	MW-381	19	6	37	22.4942	20.1734	4.0000	4.0000	22.4942	22.4942	133.4479	normal		
Selenium	ug/L	MW-381	19	6	37			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-381	19	6	37			4.0000	4.0000			0.3700	nonpar	.99	**
Thallium	ug/L	MW-381	19	6	37			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-381	19	6	37			20.0000	20.0000			2.9800	nonpar	.99	**
Zinc	ug/L	MW-381	19	6	37	26.6526	44.1854	20.0000	20.0000	26.6526	26.6526	269.6723	normal		
Antimony	ug/L	MW-382R	18	6	31			2.0000	2.0000			0.7400	nonpar	.99	**
Arsenic	ug/L	MW-382R	19	6	31			4.0000	4.0000			0.8800	nonpar	.99	**
Barium	ug/L	MW-382R	19	6	31	24.0789	2.9735	23.8000	25.1000	26.6517	25.4426	40.4332	normal		
Beryllium	ug/L	MW-382R	19	6	31			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-382R	19	6	31			0.8000	0.8000			0.1120	nonpar	.99	**
Chromium	ug/L	MW-382R	19	6	31			8.0000	8.0000			5.9100	nonpar	.99	**
Cobalt	ug/L	MW-382R	19	6	31	2.7904	2.5011	0.8000	6.9000	2.7904	5.0242	16.5465	normal		
Copper	ug/L	MW-382R	19	6	31			4.0000	4.0000			2.0000	nonpar	.99	**
Lead	ug/L	MW-382R	19	6	31			4.0000	4.0000			0.5860	nonpar	.99	**
Nickel	ug/L	MW-382R	16	6	31	4.3969	1.0788	4.0000	12.3000	4.3969	11.4909	10.3302	normal		
Selenium	ug/L	MW-382R	19	6	31			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-382R	19	6	31			4.0000	4.0000			0.4200	nonpar	.99	**
Thallium	ug/L	MW-382R	19	6	31			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-382R	19	6	31			20.0000	20.0000			2.1500	nonpar	.99	**
Zinc	ug/L	MW-382R	18	6	31			20.0000	20.0000			175.0000	nonpar	.99	**
Antimony	ug/L	MW-390	17	6	31			2.0000	2.0000			1.0000	nonpar	.99	**
Arsenic	ug/L	MW-390	17	6	31	15.1676	3.3735	17.3000	18.3000	18.1789	18.7812	33.7217	normal		
Barium	ug/L	MW-390	17	6	31	27.6118	7.7772	17.0000	16.3000	27.6118	27.6118	70.3864	normal		
Beryllium	ug/L	MW-390	17	6	31			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-390	17	6	31	0.3144	0.2610	0.8000	0.8000	0.3144	0.3144	1.7499	normal		
Chromium	ug/L	MW-390	17	6	31			8.0000	8.0000			5.5100	nonpar	.99	**
Cobalt	ug/L	MW-390	17	6	31	106.2412	8.9517	107.0000	111.0000	106.2412	106.2412	155.4754	normal		
Copper	ug/L	MW-390	17	6	31			4.0000	4.0000			2.1900	nonpar	.99	**
Lead	ug/L	MW-390	17	6	31	1.5224	0.7021	4.0000	4.0000	1.5224	1.5224	5.3839	normal		
Nickel	ug/L	MW-390	17	6	31	53.7647	5.6887	54.1000	56.7000	53.7647	53.7647	85.0525	normal		
Selenium	ug/L	MW-390	17	6	31			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-390	17	6	31			4.0000	4.0000			0.4200	nonpar	.99	**
Thallium	ug/L	MW-390	17	6	31			2.0000	2.0000			1.1700	nonpar	.99	**
Vanadium	ug/L	MW-390	17	6	31			20.0000	20.0000			8.9100	nonpar	.99	**
Zinc	ug/L	MW-390	16	6	31	129.1187	85.2843	184.0000	170.0000	178.7090	155.6271	598.1822	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.

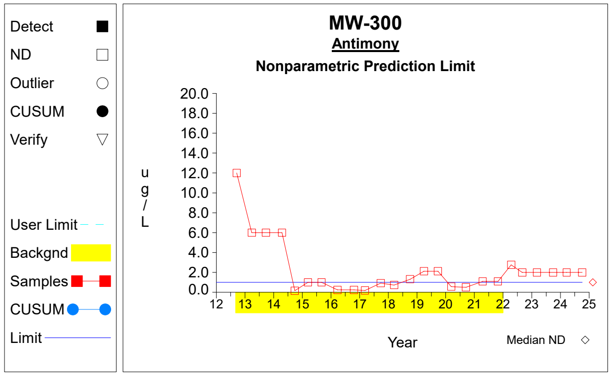
Table 4

Dixon's Test Outliers
1% Significance Level

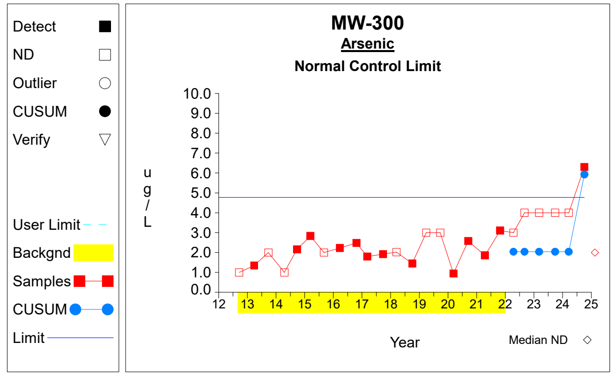
Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Barium	ug/L	MW-300	04/16/2014	3.4400		09/18/2012-10/27/2021	19	0.5503
Cobalt	ug/L	MW-300	04/16/2014	42.3000		09/18/2012-10/27/2021	19	0.5503
Cadmium	ug/L	MW-304	03/22/2016	0.3710		03/22/2016-10/27/2021	14	0.6174
Cadmium	ug/L	MW-304	10/02/2018	0.1670	< 0.1670	03/22/2016-10/27/2021	14	0.6174
Cobalt	ug/L	MW-304	04/16/2021	37.2000		03/22/2016-10/27/2021	14	0.6403
Nickel	ug/L	MW-304	04/16/2021	27.1000		03/22/2016-10/27/2021	14	0.6403
Vanadium	ug/L	MW-304	03/22/2016	0.2550	< 0.2550	03/22/2016-10/27/2021	14	0.6174
Vanadium	ug/L	MW-304	10/20/2016	0.2550	< 0.2550	03/22/2016-10/27/2021	14	0.6174
Vanadium	ug/L	MW-304	01/18/2017	0.2550	< 0.2550	03/22/2016-10/27/2021	14	0.6174
Zinc	ug/L	MW-304	04/16/2021	66.3000		03/22/2016-10/27/2021	14	0.6174
Zinc	ug/L	MW-304	10/27/2021	31.1000		03/22/2016-10/27/2021	14	0.6174
Barium	ug/L	MW-307	09/26/2013	30.0000	< 30.0000	09/18/2012-10/28/2021	17	0.5798
Cobalt	ug/L	MW-307	10/28/2021	14.8000		09/18/2012-10/28/2021	17	0.5798
Zinc	ug/L	MW-307	10/28/2021	10.6000		09/18/2012-10/28/2021	17	0.5798
Cobalt	ug/L	MW-335	09/24/2019	382.0000		09/19/2012-10/27/2021	20	0.5381
Cobalt	ug/L	MW-335	09/16/2020	0.1380		09/19/2012-10/27/2021	20	0.5503
Cobalt	ug/L	MW-335	04/15/2021	0.1770		09/19/2012-10/27/2021	20	0.5503
Nickel	ug/L	MW-335	09/16/2020	1.9000	< 1.9000	09/19/2012-10/27/2021	20	0.5503
Nickel	ug/L	MW-335	04/15/2021	1.9000	< 1.9000	09/19/2012-10/27/2021	20	0.5503
Barium	ug/L	MW-380	03/09/2017	104.0000	< 104.0000	09/19/2012-10/27/2021	19	0.5643
Barium	ug/L	MW-380	03/14/2018	52.0000	< 52.0000	09/19/2012-10/27/2021	19	0.5643
Cadmium	ug/L	MW-380	03/09/2017	57.4000		09/19/2012-10/27/2021	20	0.5381
Cobalt	ug/L	MW-380	09/02/2015	15.0000	< 15.0000	09/19/2012-10/27/2021	19	0.5503
Barium	ug/L	MW-381	09/02/2015	83.3000		09/20/2012-10/27/2021	20	0.5381
Nickel	ug/L	MW-382R	09/20/2012	50.0000	< 50.0000	09/20/2012-10/27/2021	19	0.5643
Nickel	ug/L	MW-382R	03/27/2013	50.0000	< 50.0000	09/20/2012-10/27/2021	19	0.5643
Nickel	ug/L	MW-382R	04/15/2014	50.0000	< 50.0000	09/20/2012-10/27/2021	19	0.5643
Zinc	ug/L	MW-382R	03/23/2016	10000.0000	< 10000.0000	09/20/2012-10/27/2021	19	0.5503
Zinc	ug/L	MW-390	03/22/2016	5.2100	< 5.2100	09/18/2012-10/26/2021	17	0.5798

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

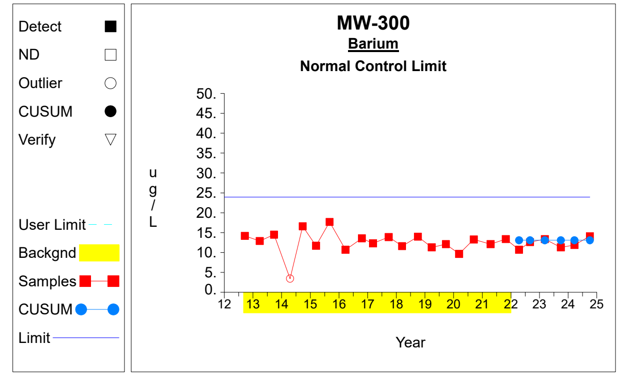
Intra-Well Control Charts / Prediction Limits



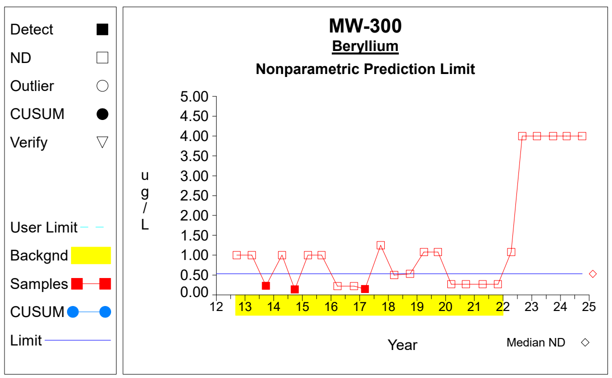
Graph 1



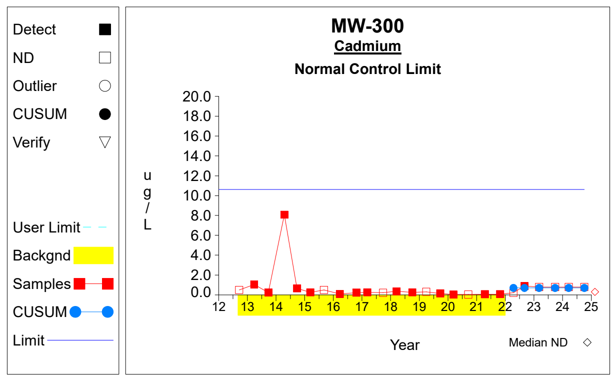
Graph 2



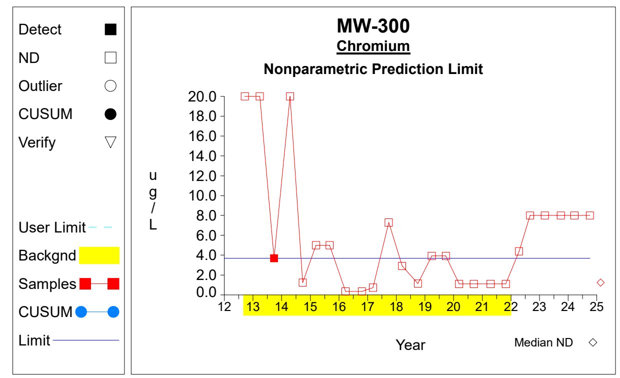
Graph 3



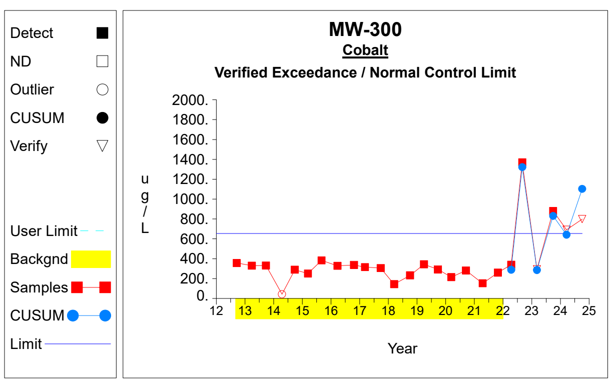
Graph 4



Graph 5



Graph 6



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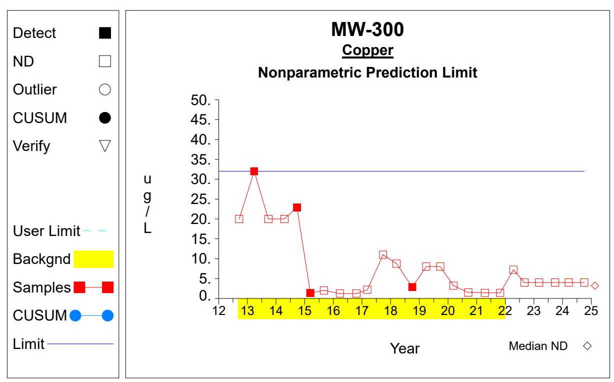
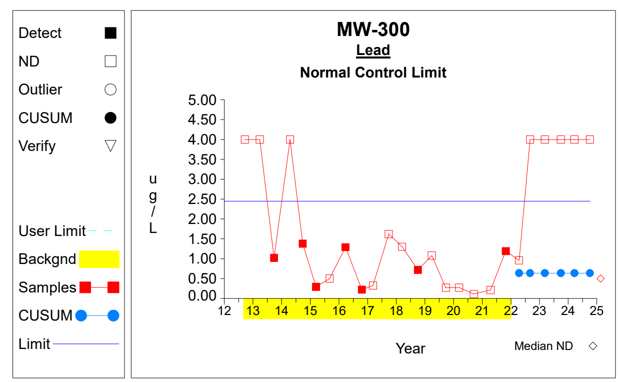


Graph 8



Graph 9

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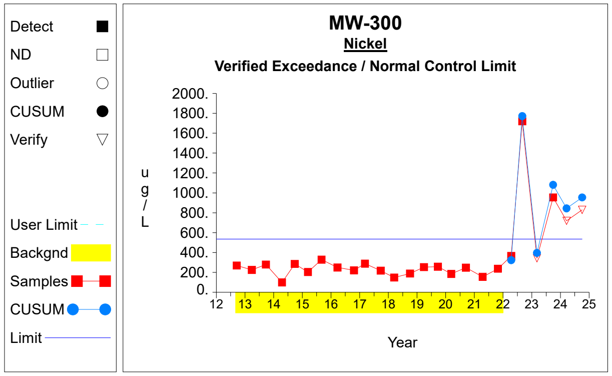
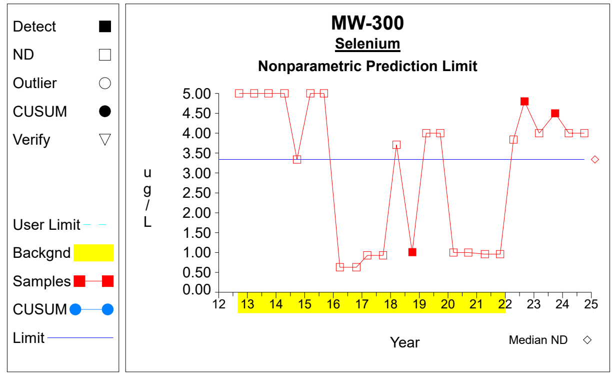
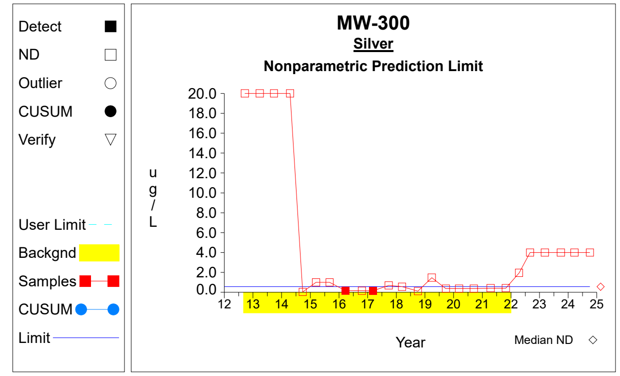
Intra-Well Control Charts / Prediction Limits



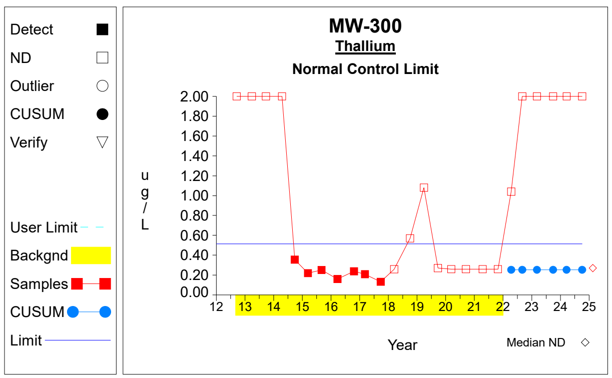
Graph 10



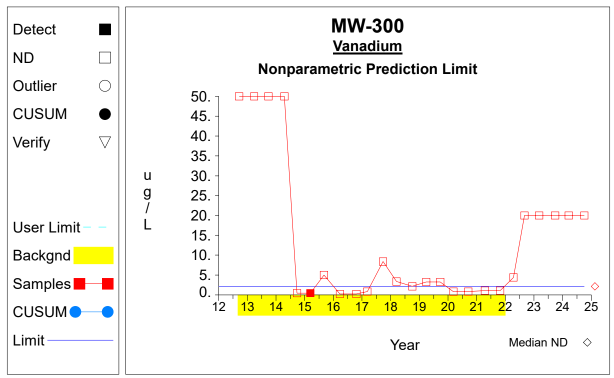
Graph 11



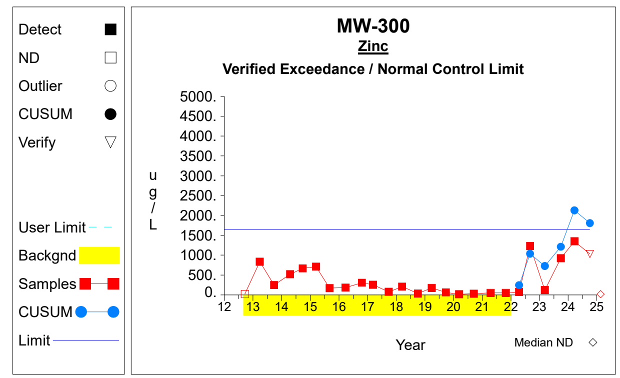
Graph 12



Graph 13



Graph 14



Graph 15

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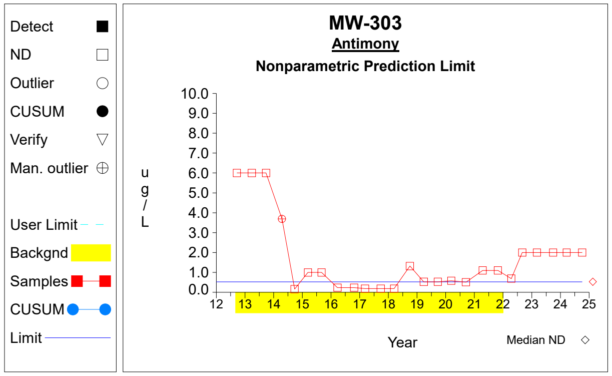
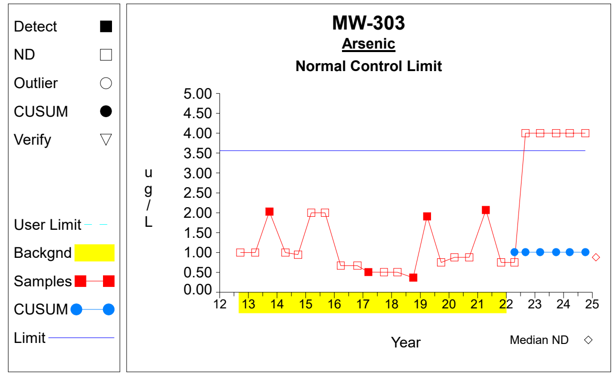
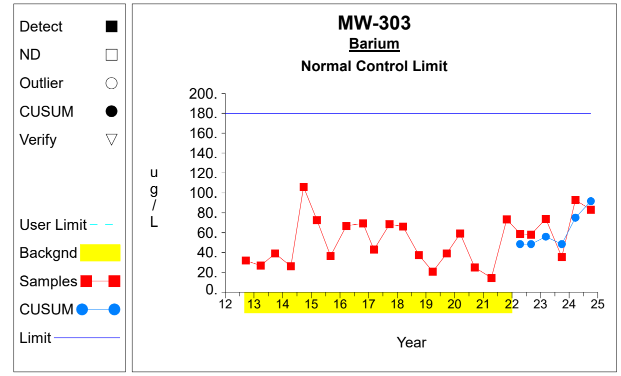
Intra-Well Control Charts / Prediction Limits



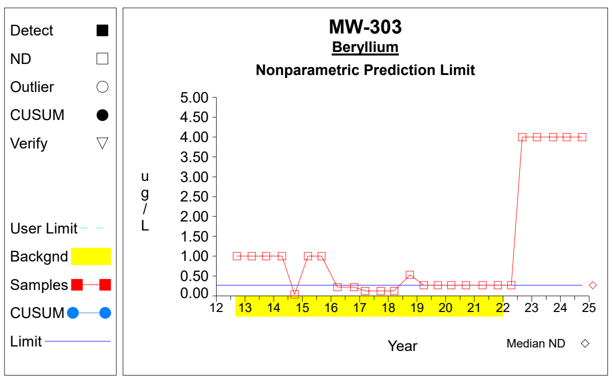
Graph 16



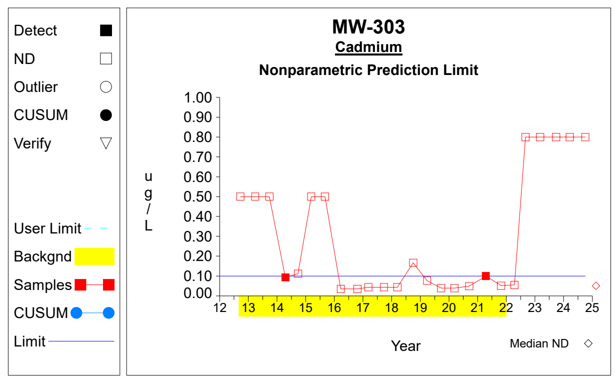
Graph 17



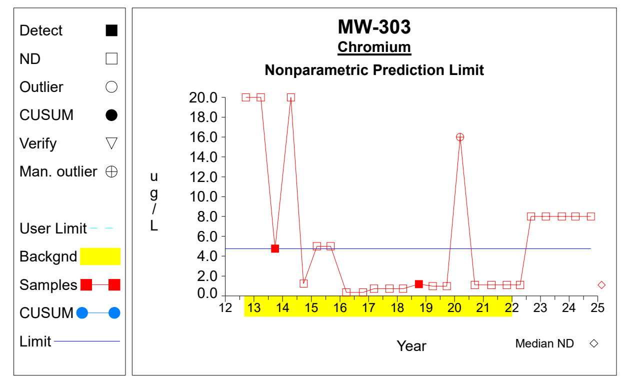
Graph 18



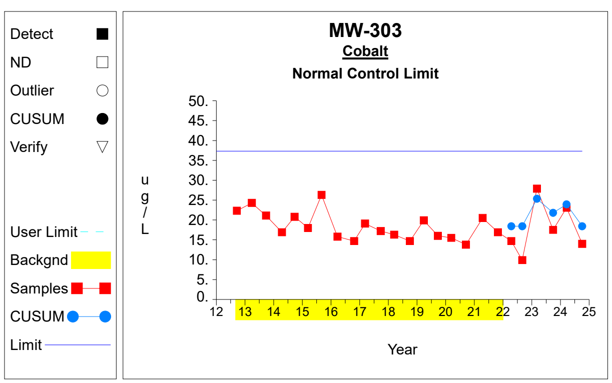
Graph 19



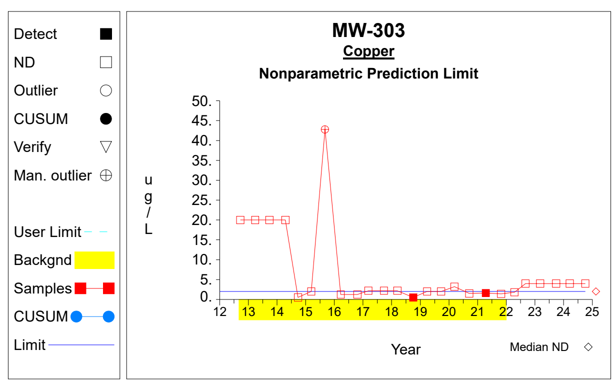
Graph 20



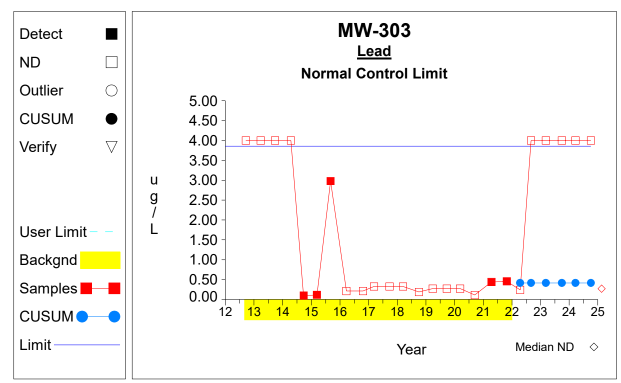
Graph 21



Graph 22



Graph 23



Graph 24

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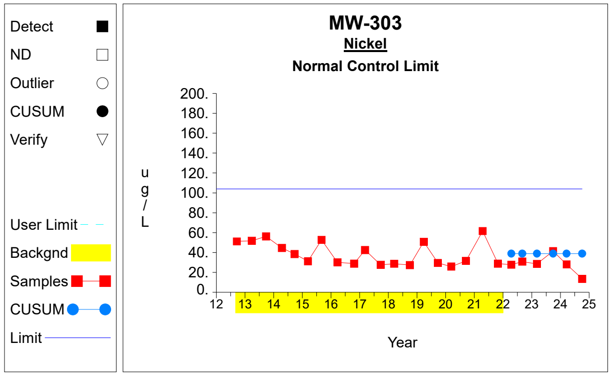
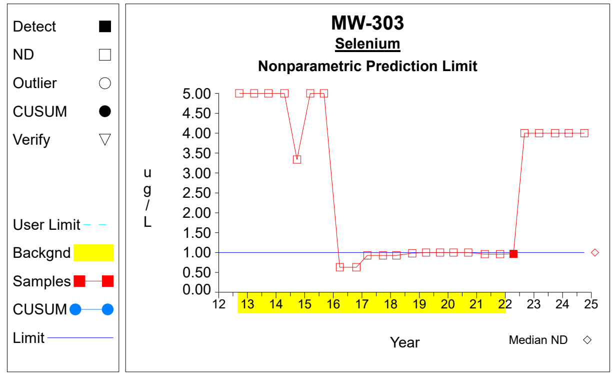
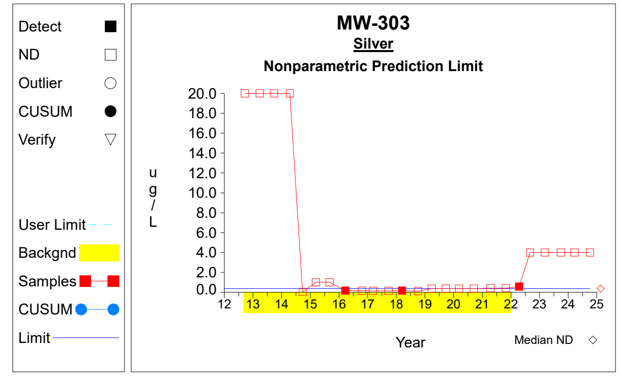
Intra-Well Control Charts / Prediction Limits



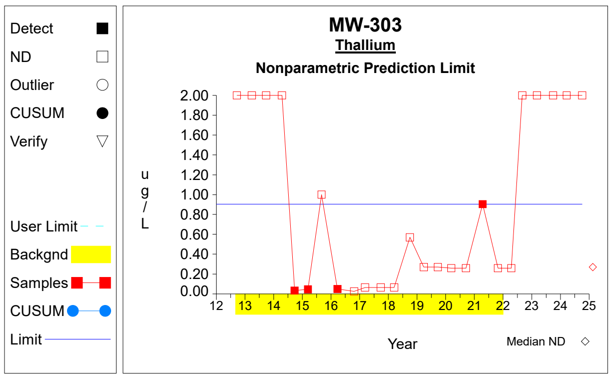
Graph 25



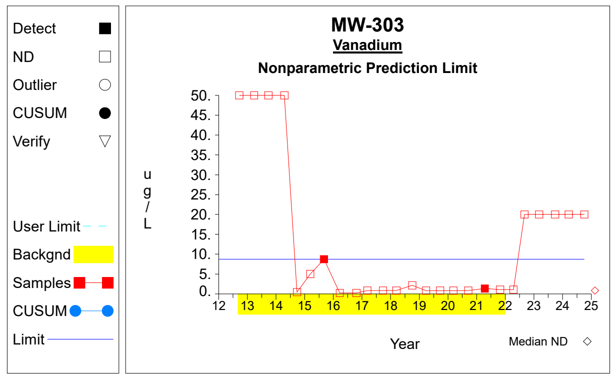
Graph 26



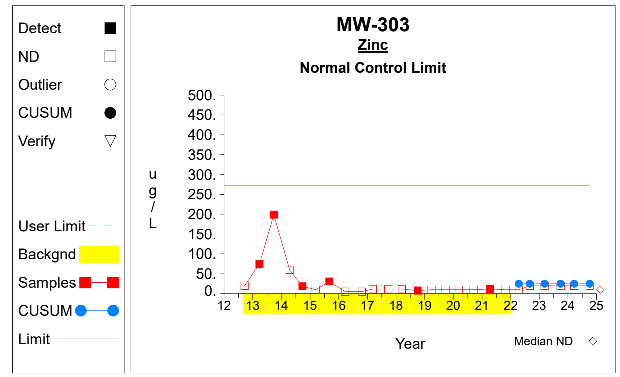
Graph 27



Graph 28



Graph 29



Graph 30

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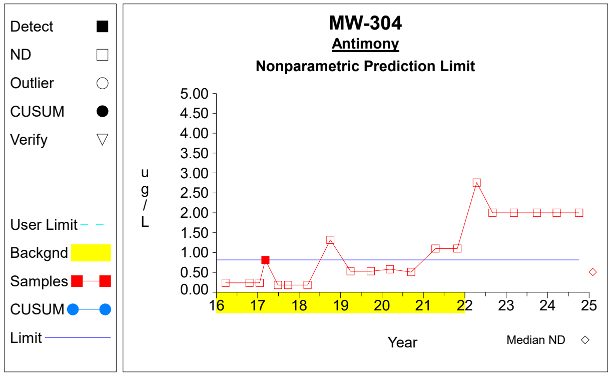
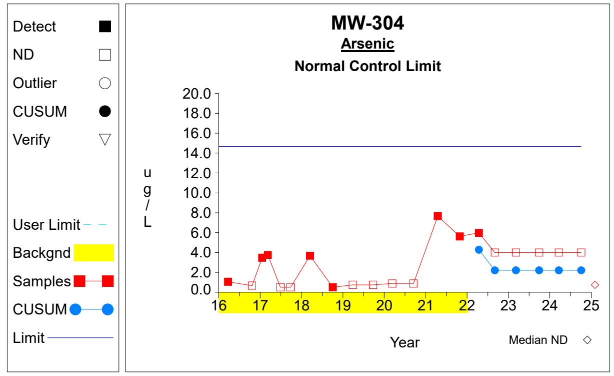
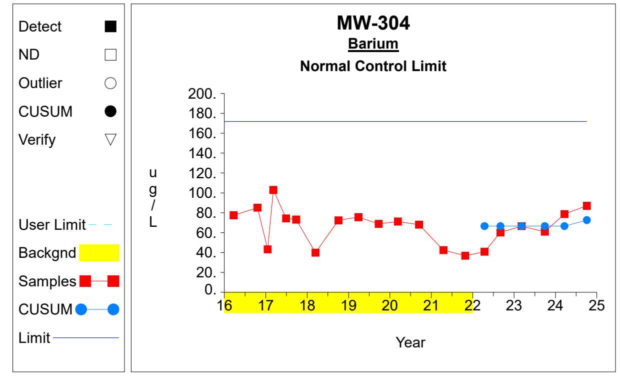
Intra-Well Control Charts / Prediction Limits



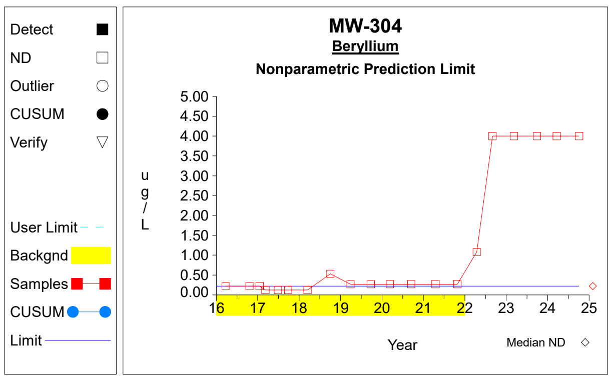
Graph 31



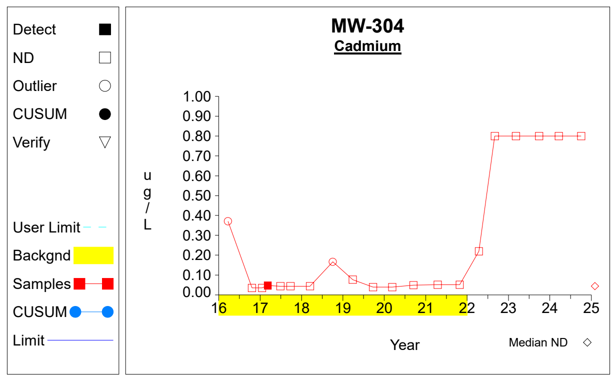
Graph 32



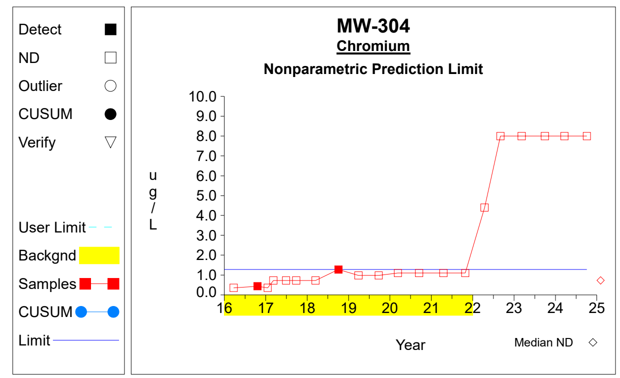
Graph 33



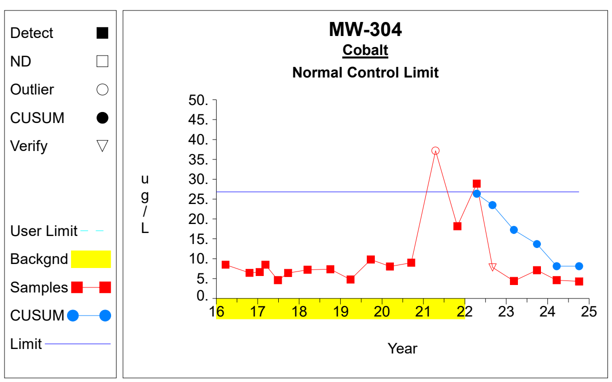
Graph 34



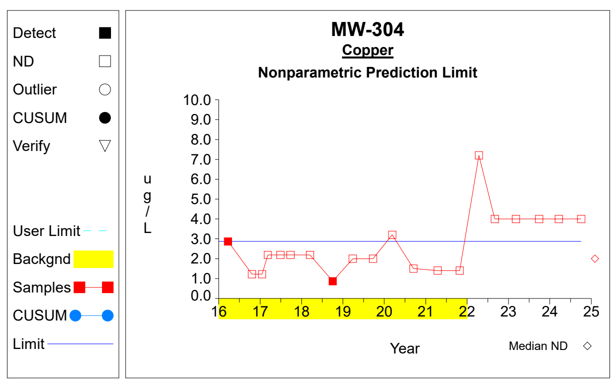
Graph 35



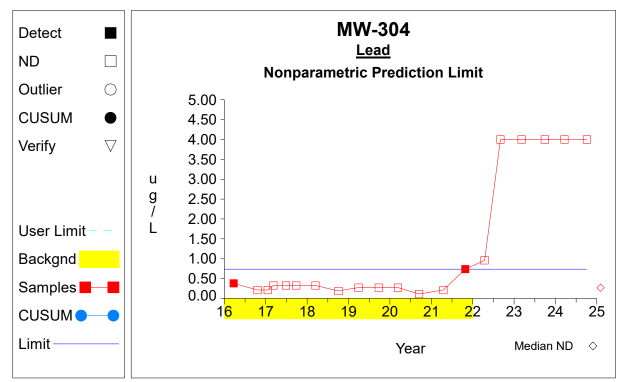
Graph 36



Graph 37



Graph 38



Graph 39

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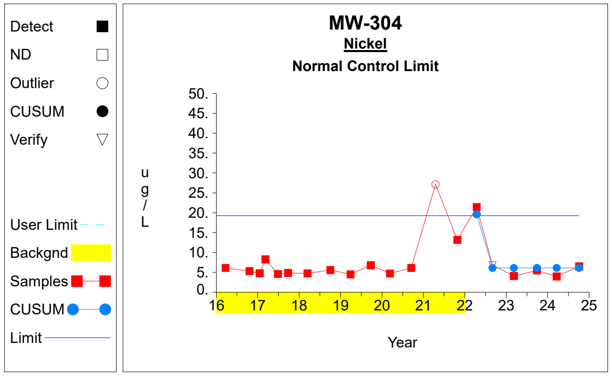
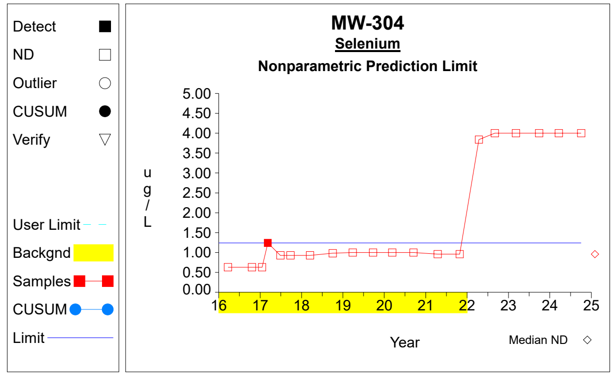
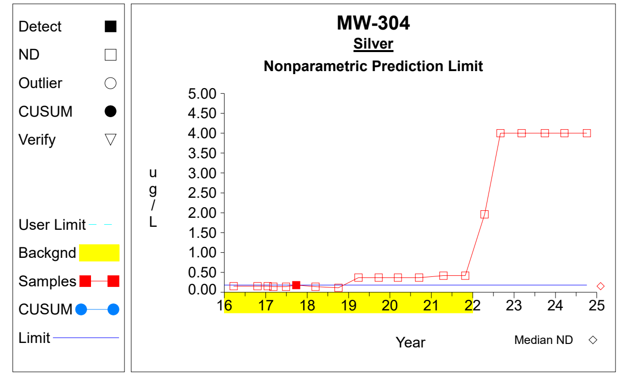
Intra-Well Control Charts / Prediction Limits



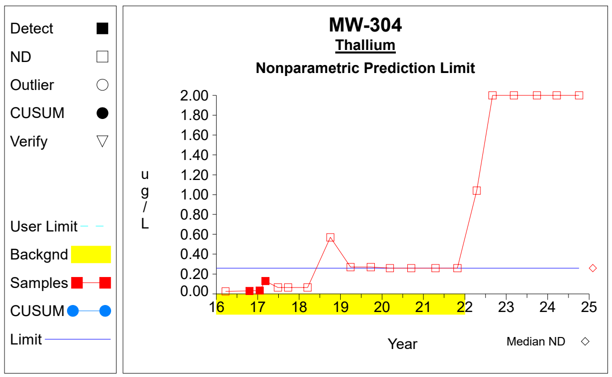
Graph 40



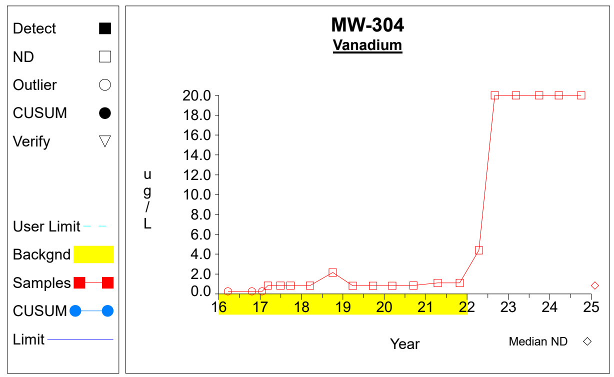
Graph 41



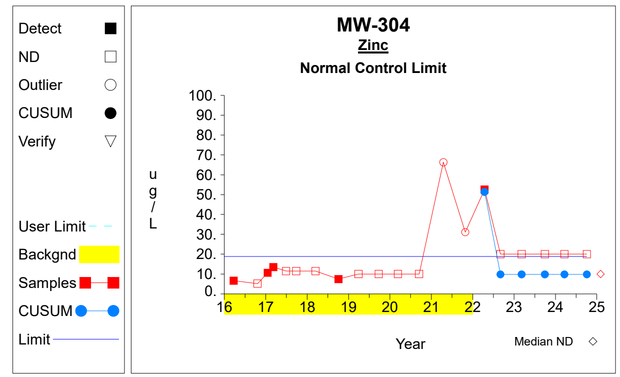
Graph 42



Graph 43



Graph 44



Graph 45

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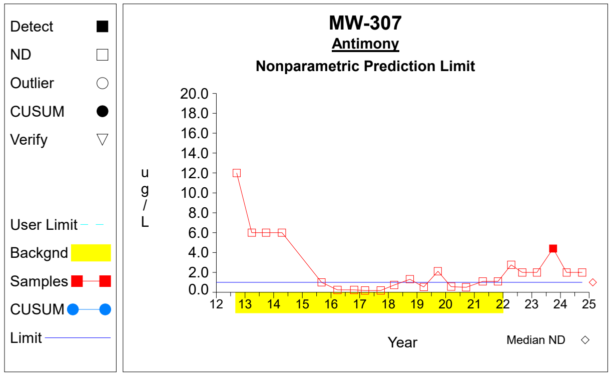
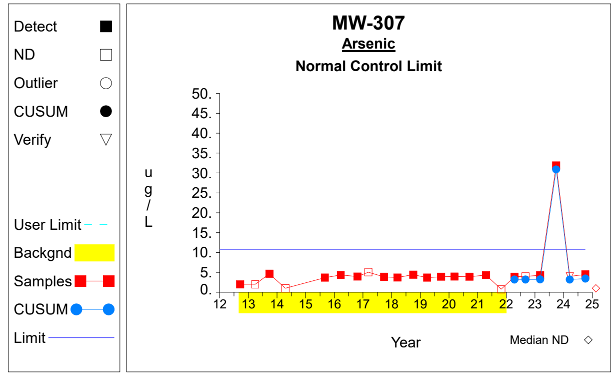
South Central Iowa SWA [GW] October 2024

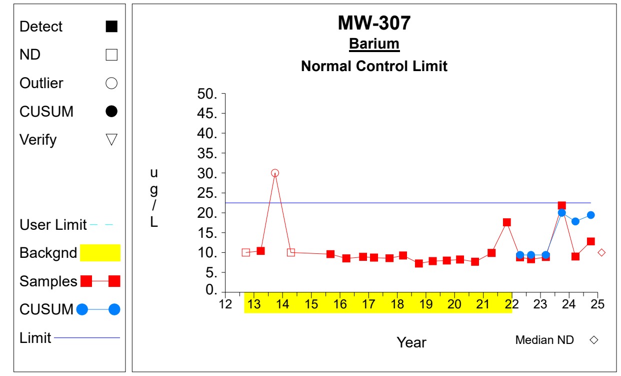
Intra-Well Control Charts / Prediction Limits



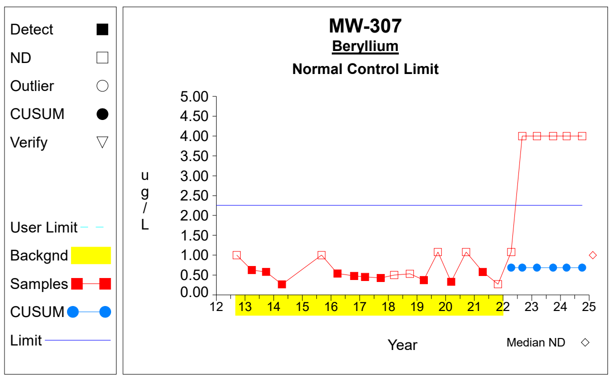
Graph 46



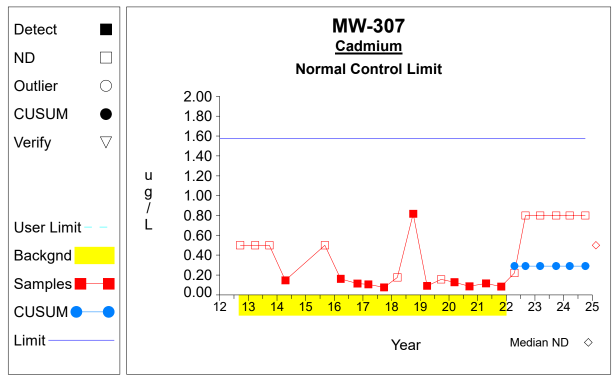
Graph 47



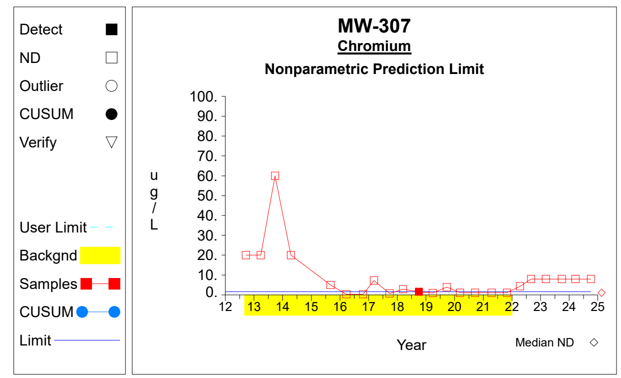
Graph 48



Graph 49



Graph 50



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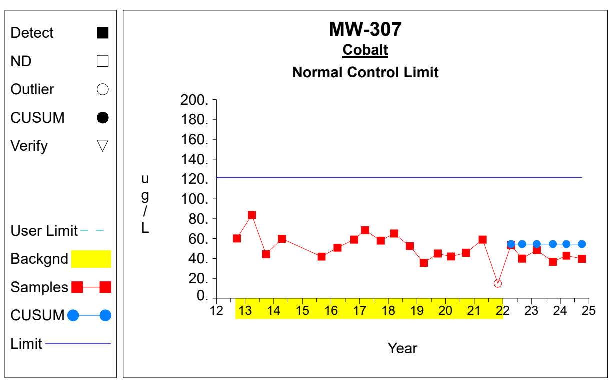

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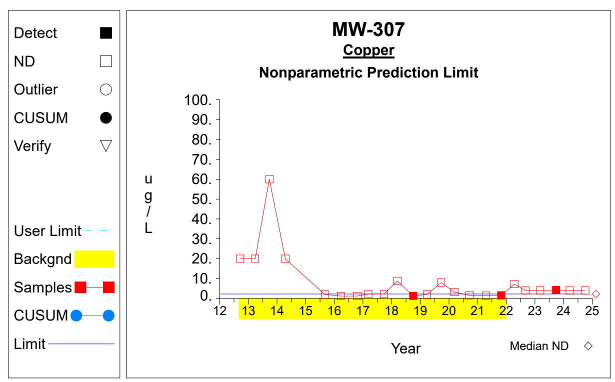
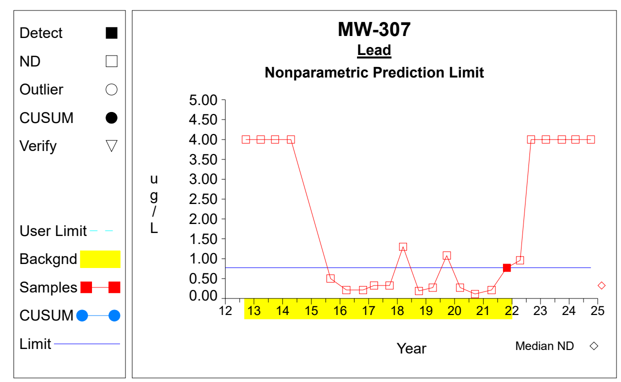


Graph 53



Graph 54

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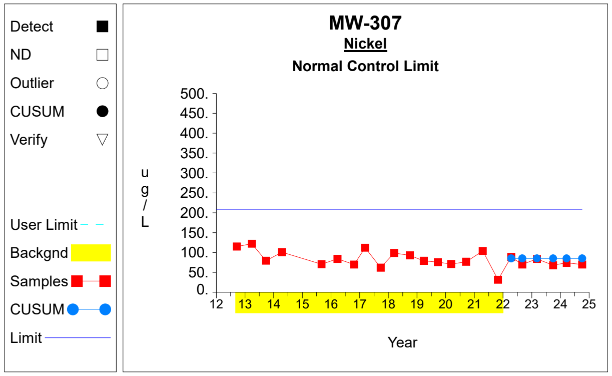
Intra-Well Control Charts / Prediction Limits



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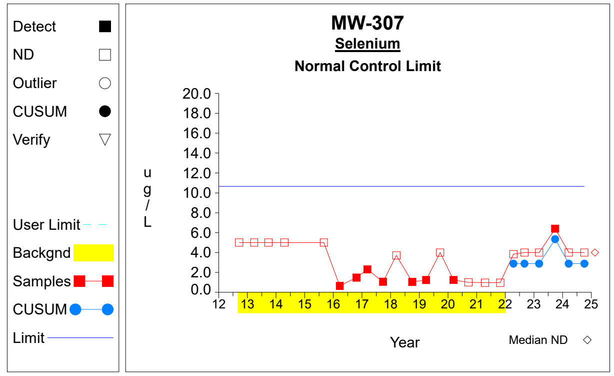
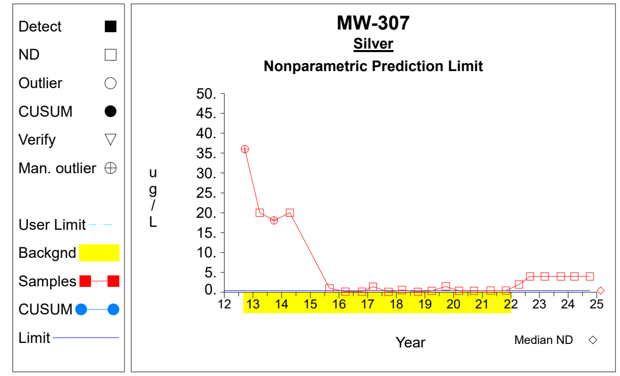


Graph 56



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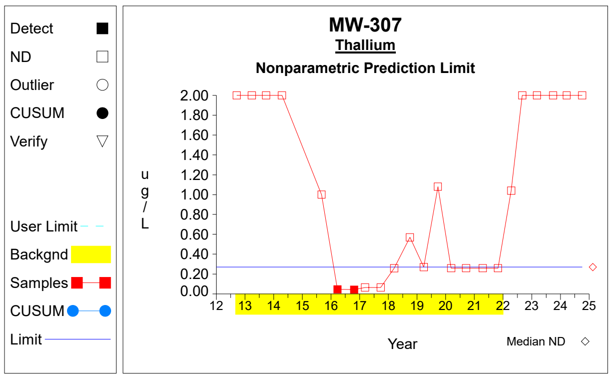

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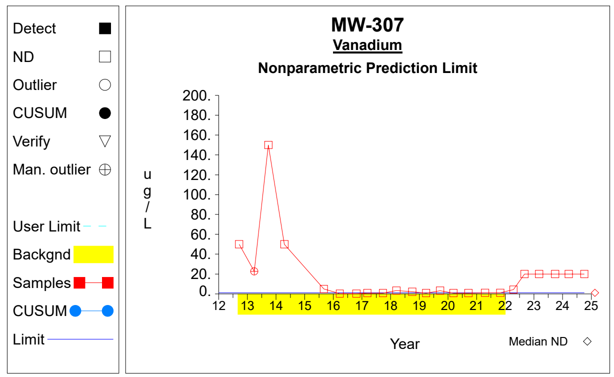

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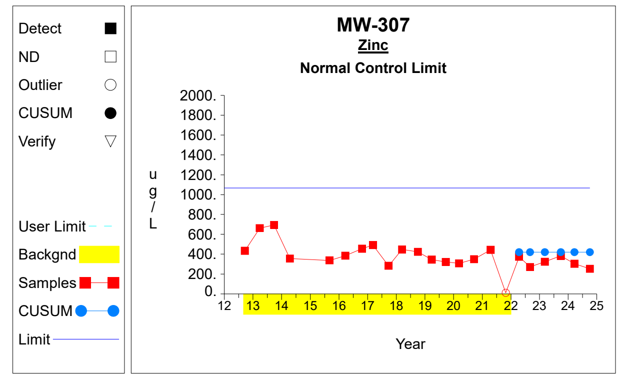
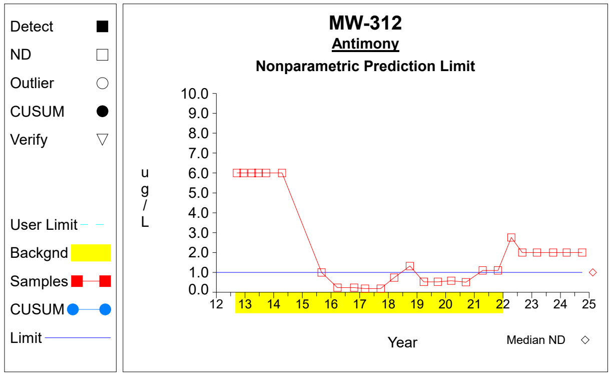
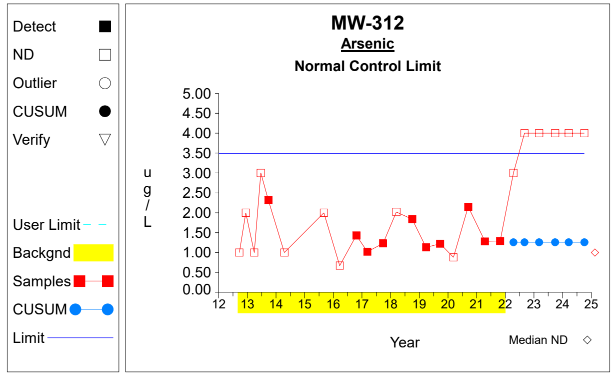


Graph 60

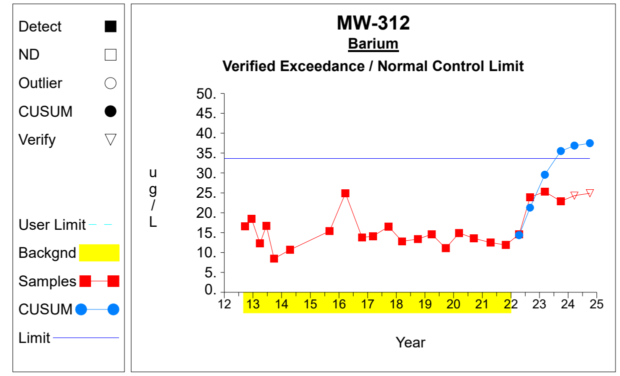
Intra-Well Control Charts / Prediction Limits



Graph 61



Graph 62



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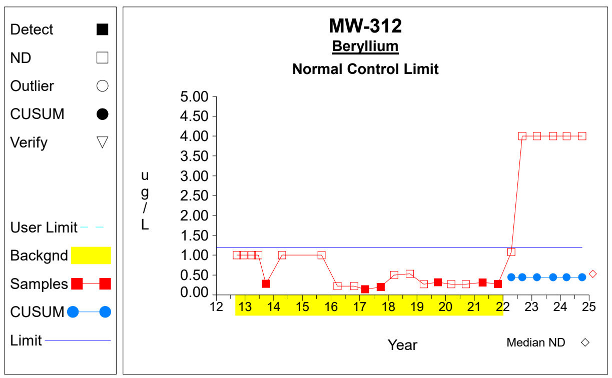

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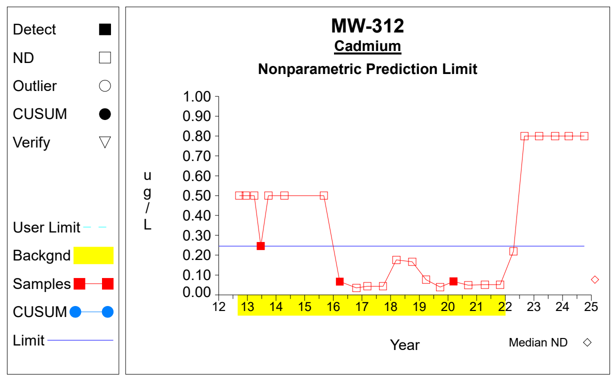

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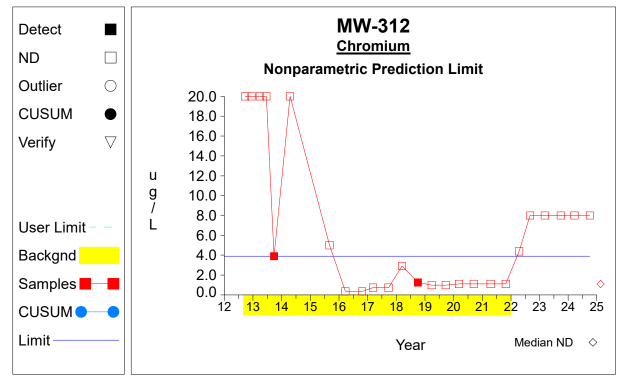

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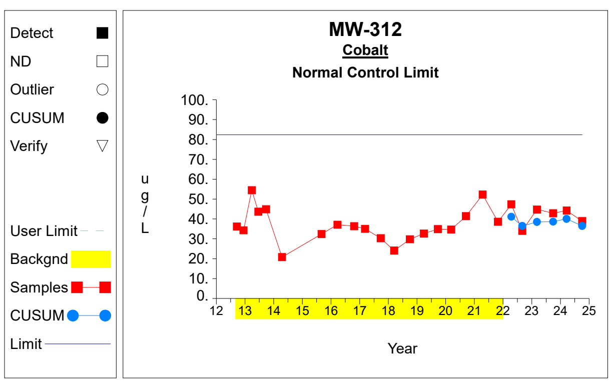

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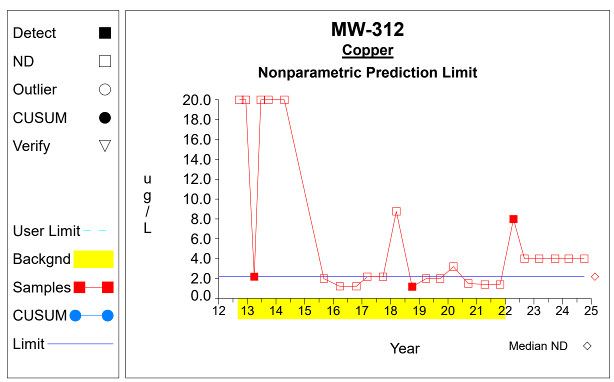

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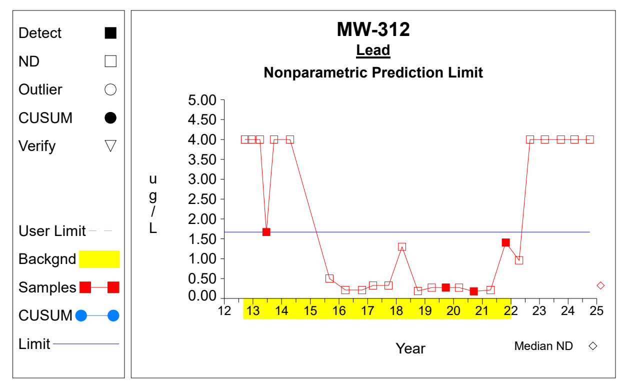

Graph 69

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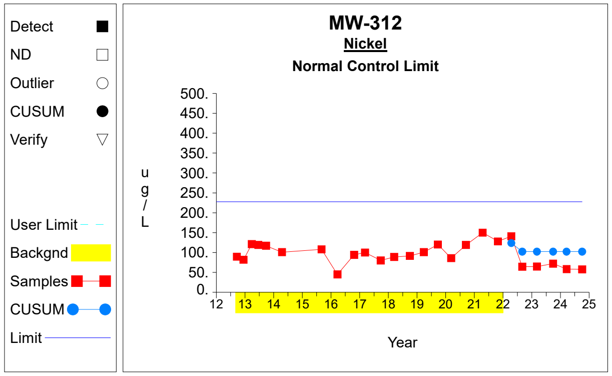
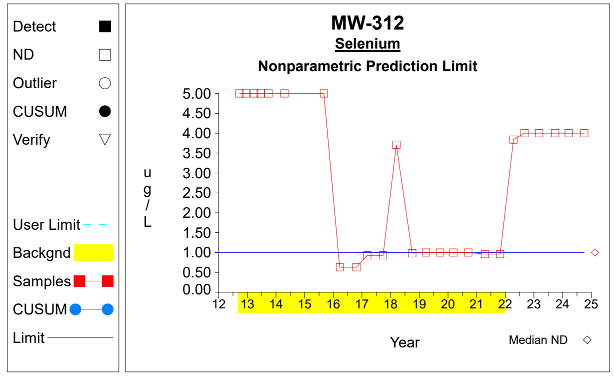
Intra-Well Control Charts / Prediction Limits



Graph 70



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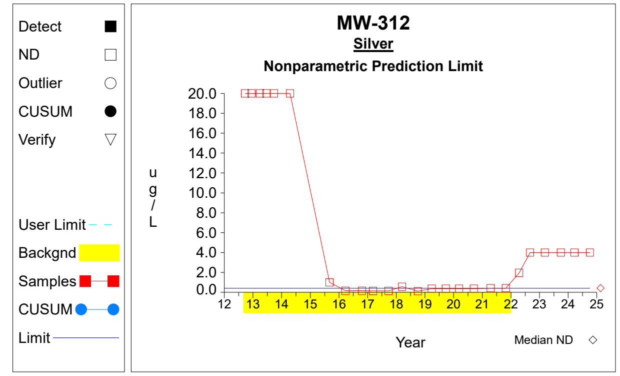
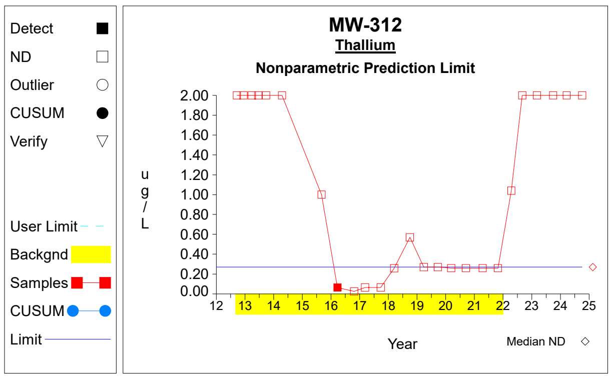


Graph 72



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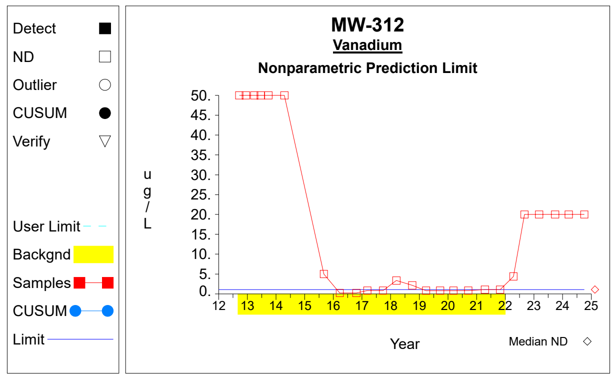
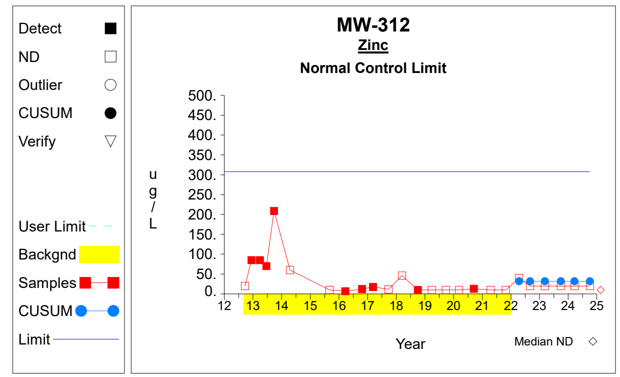
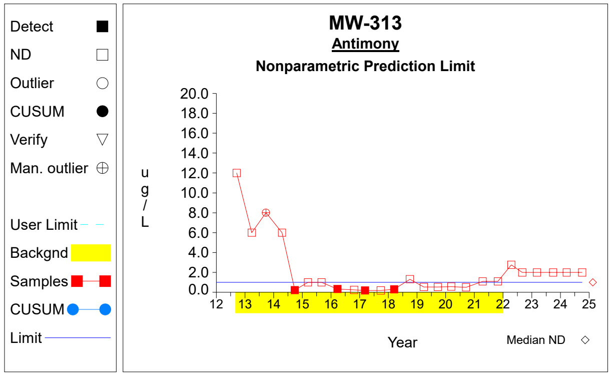


Graph 74



Graph 75

Intra-Well Control Charts / Prediction Limits



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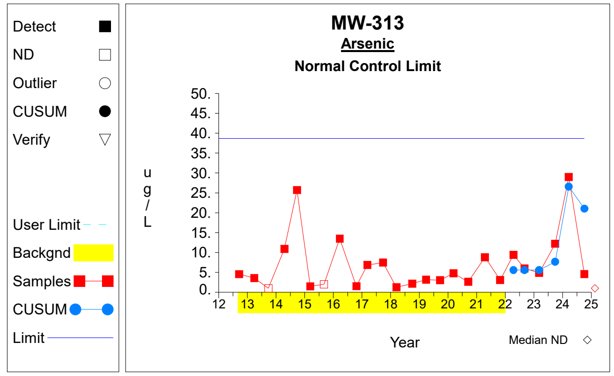

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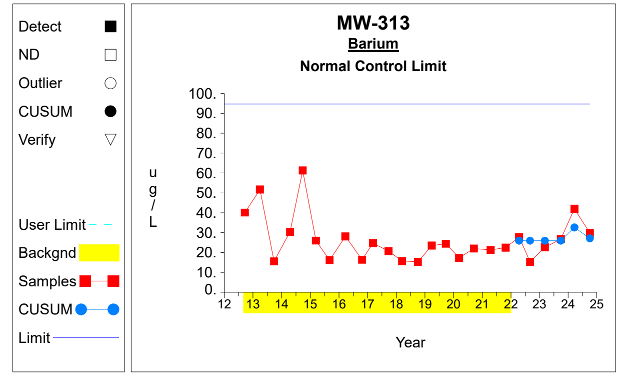

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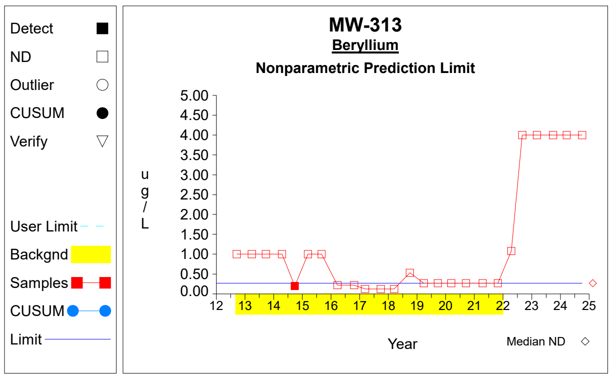

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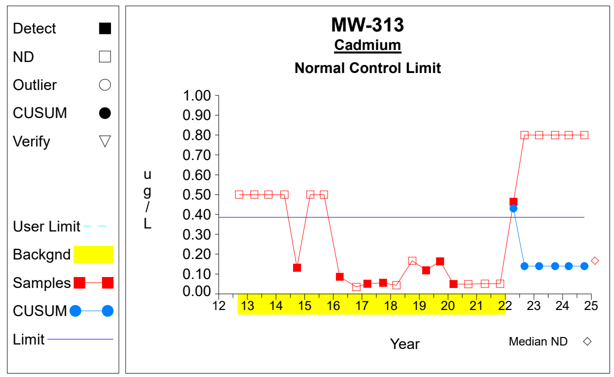

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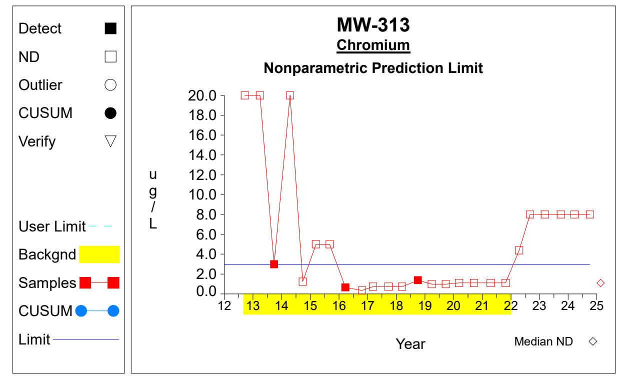

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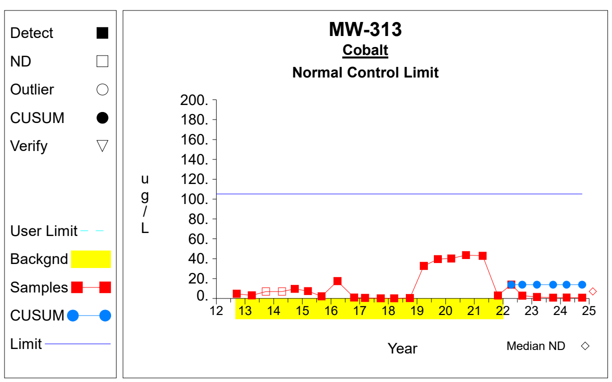

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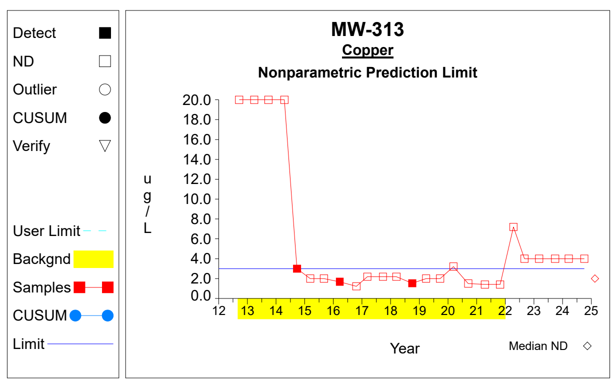

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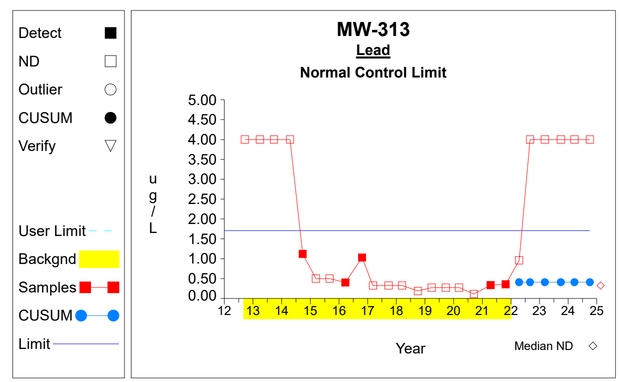

Graph 84

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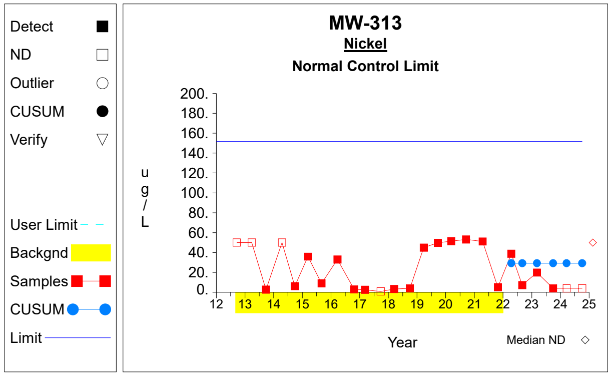
Intra-Well Control Charts / Prediction Limits



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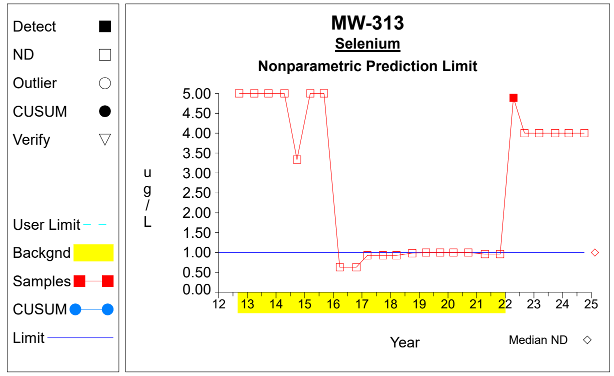

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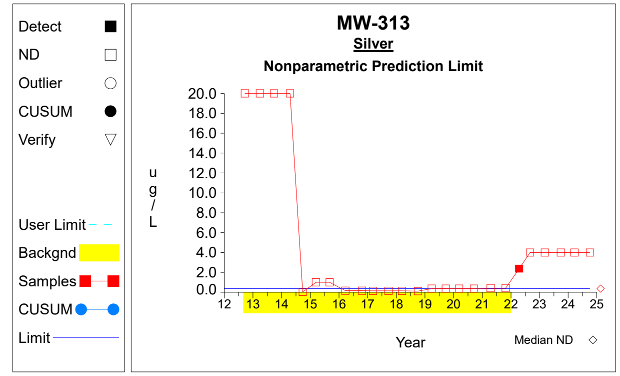
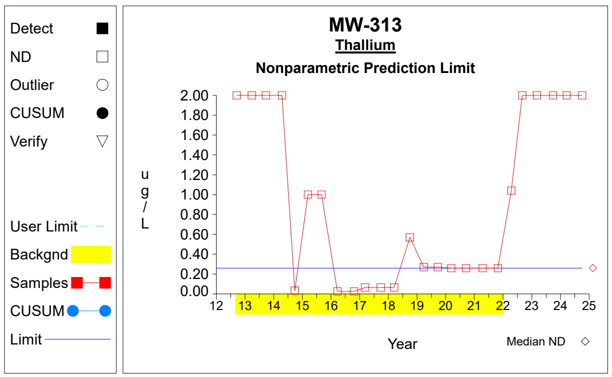


Graph 87



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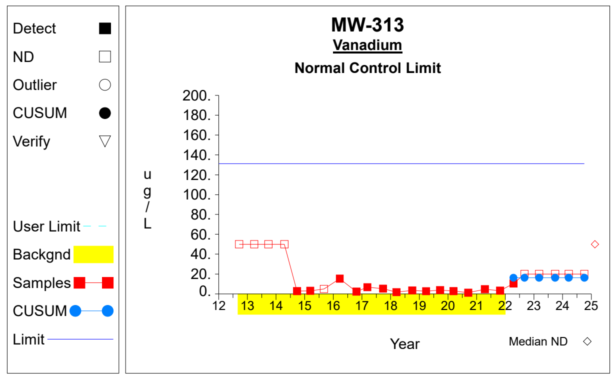
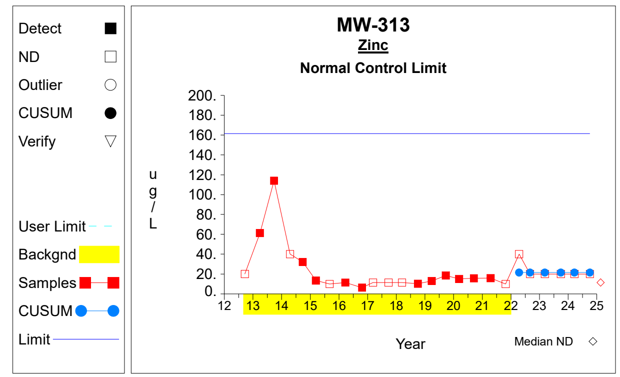


Graph 89



Graph 90

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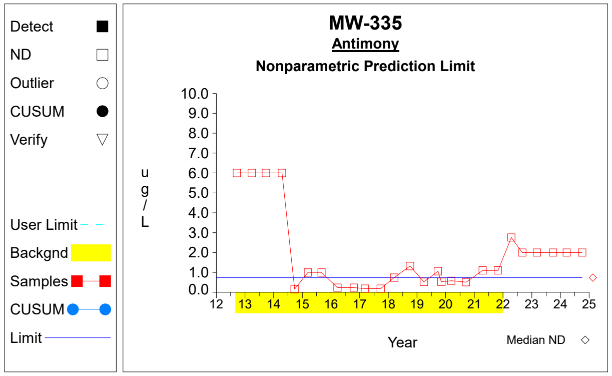
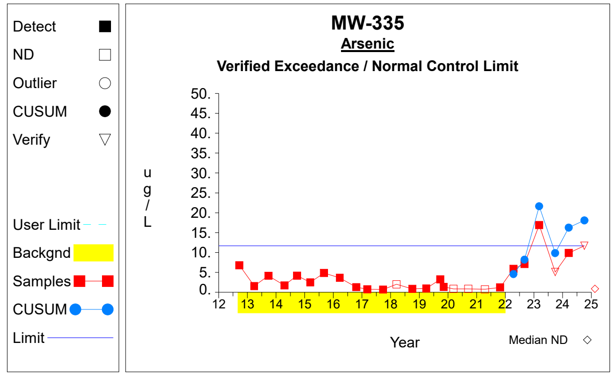
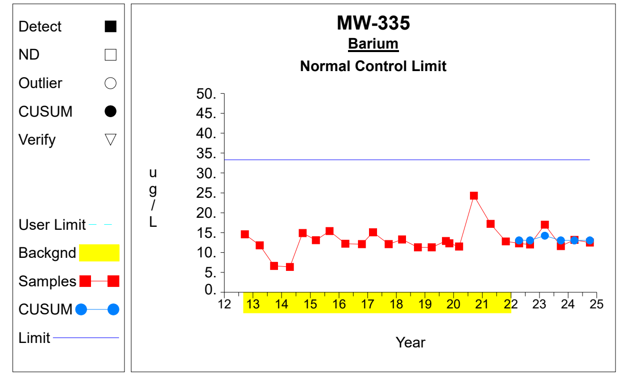
Intra-Well Control Charts / Prediction Limits



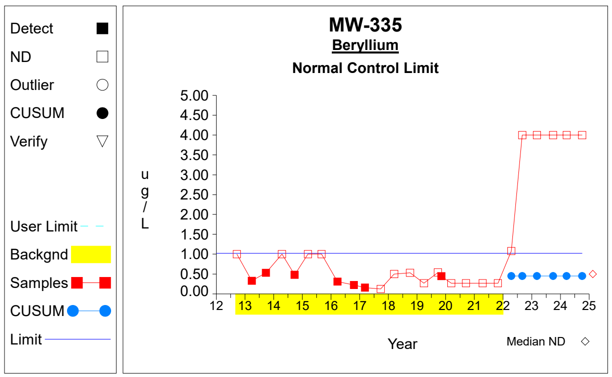
Graph 91



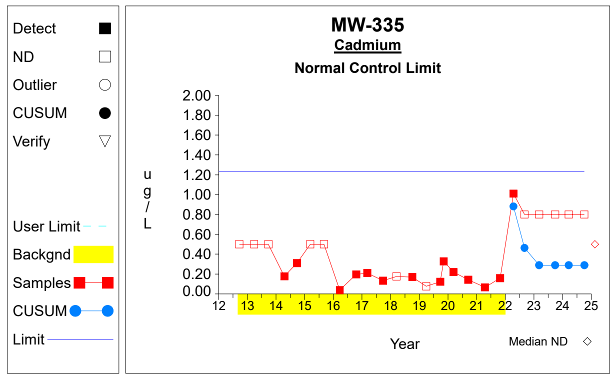
Graph 92



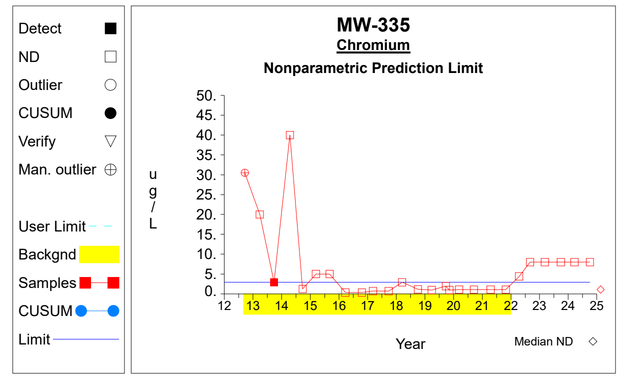
Graph 93



Graph 94



Graph 95



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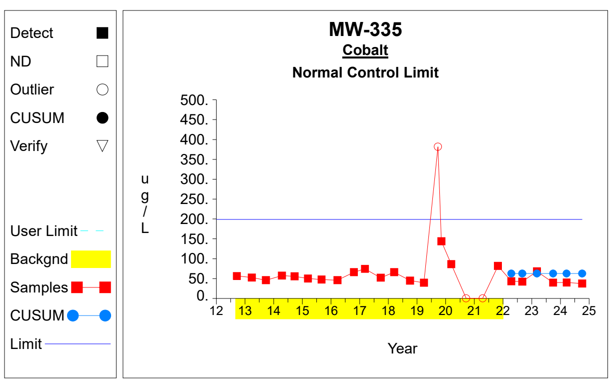

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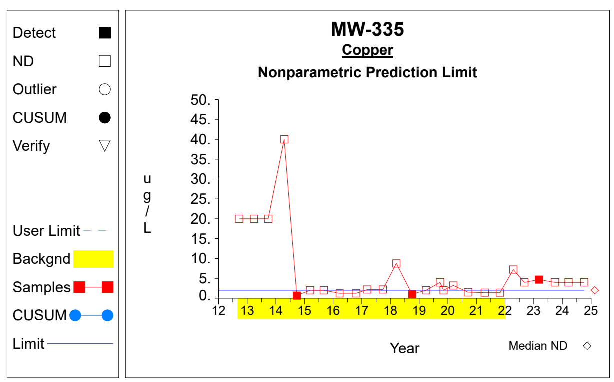
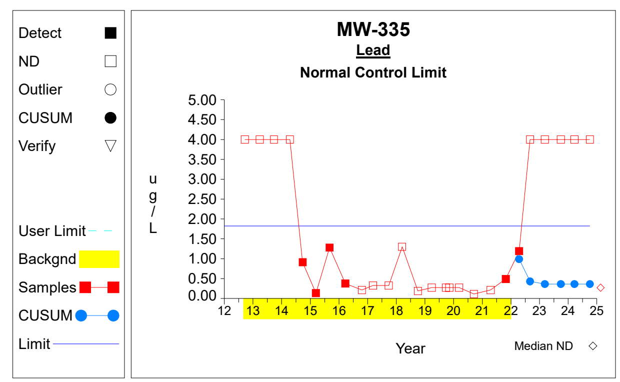


Graph 98



Graph 99

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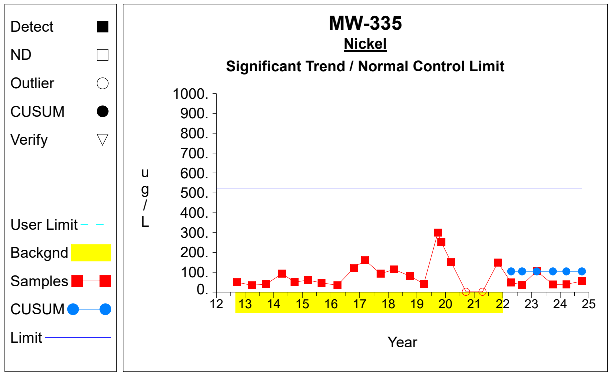
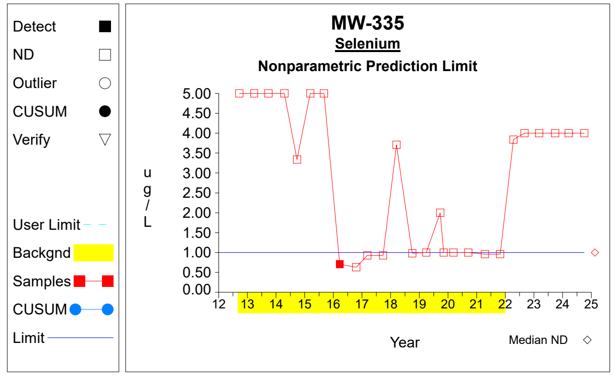
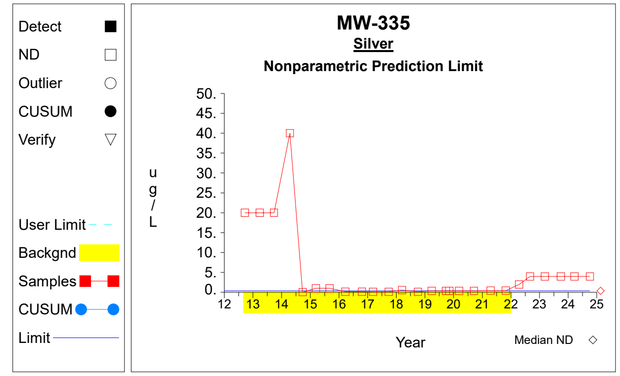
Intra-Well Control Charts / Prediction Limits



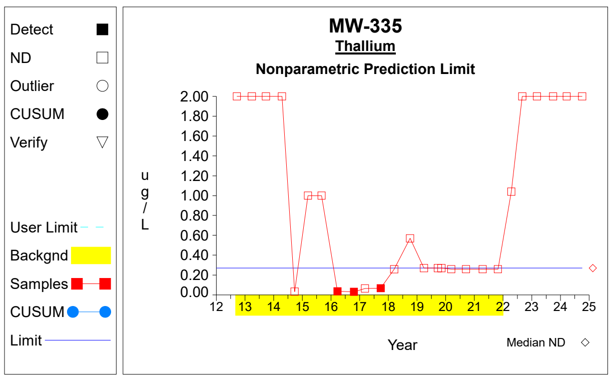
Graph 100



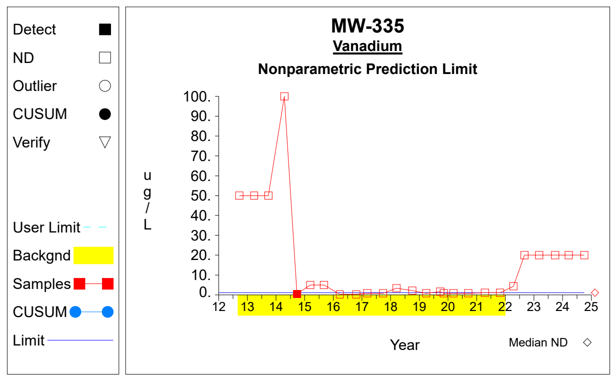
Graph 101



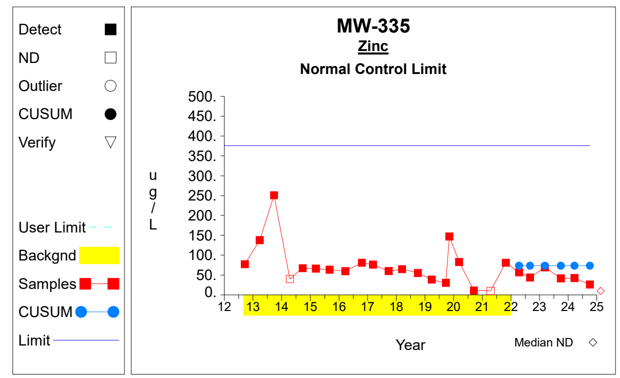
Graph 102



Graph 103



Graph 104



Graph 105

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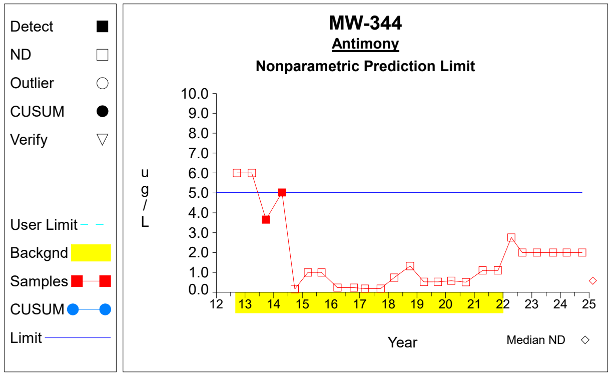
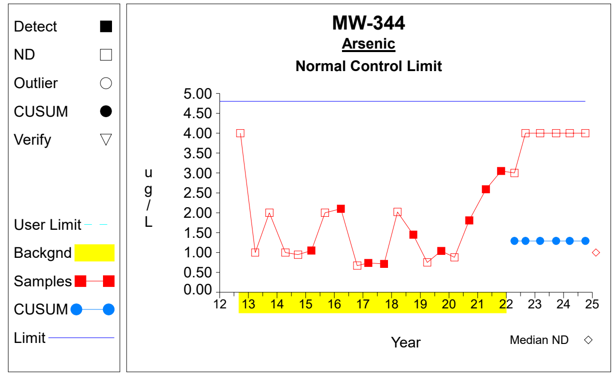
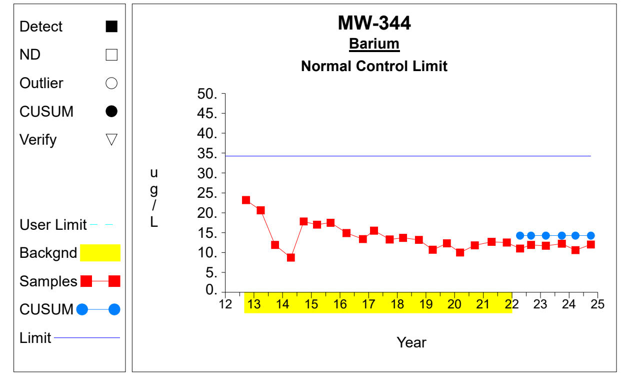
Intra-Well Control Charts / Prediction Limits



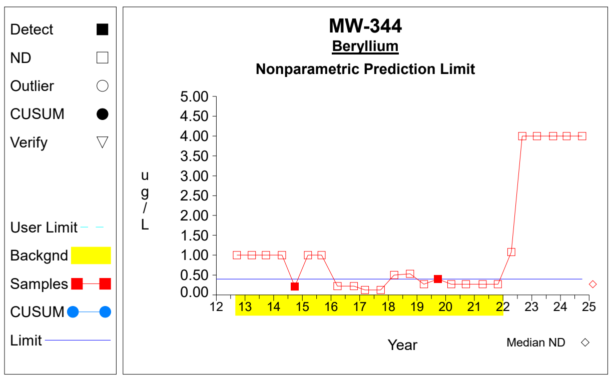
Graph 106



Graph 107



Graph 108



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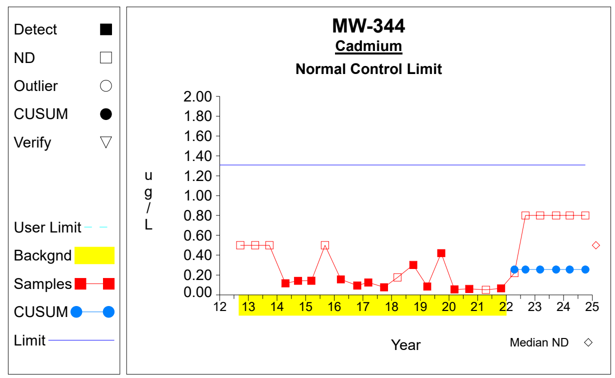

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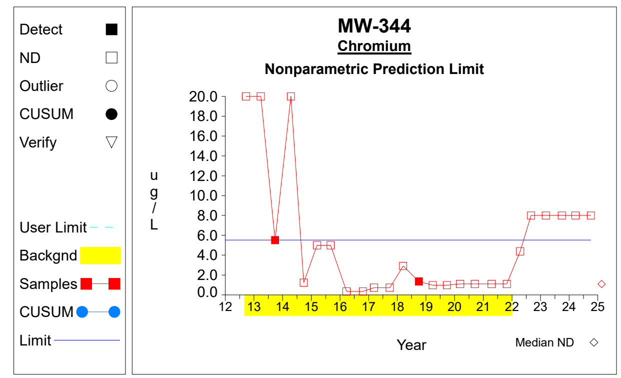
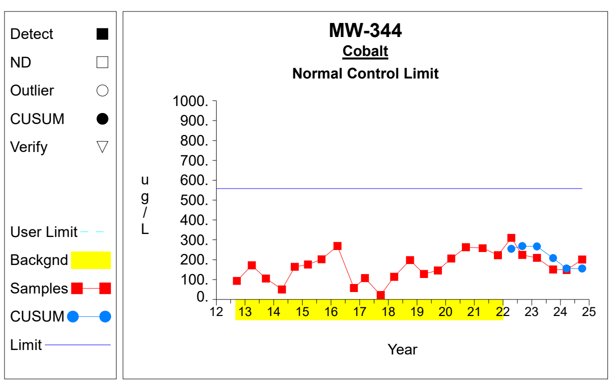
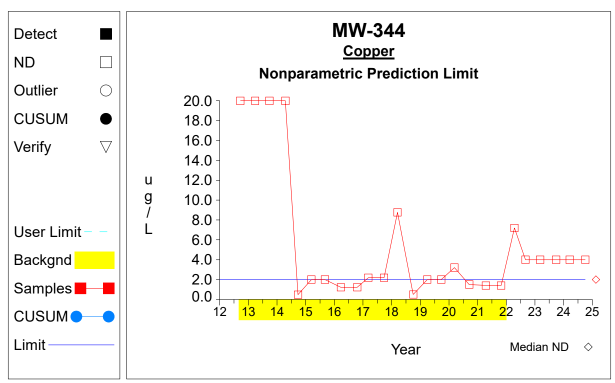


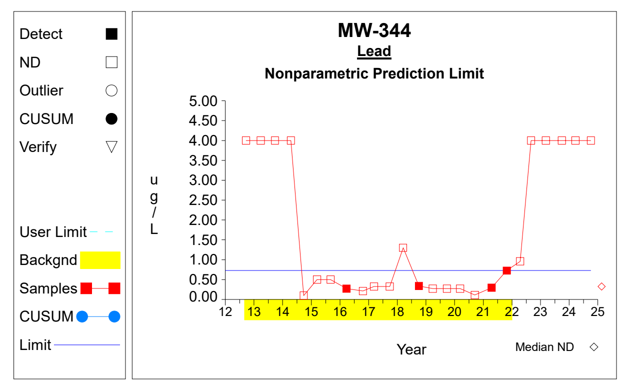
Graph 111



Graph 112



Graph 113



Graph 114

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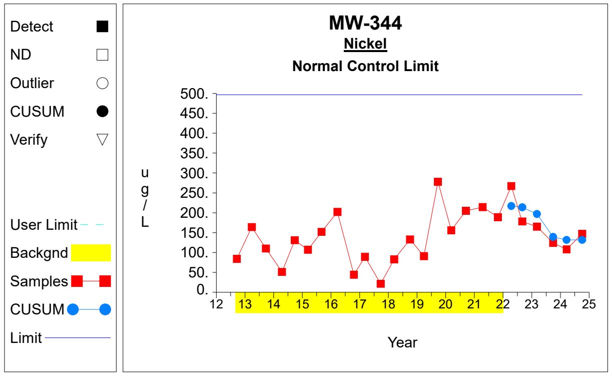
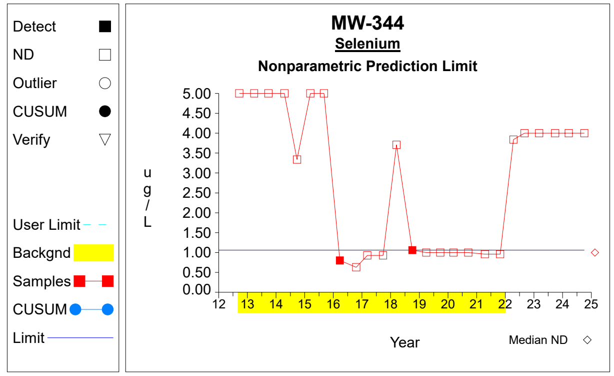
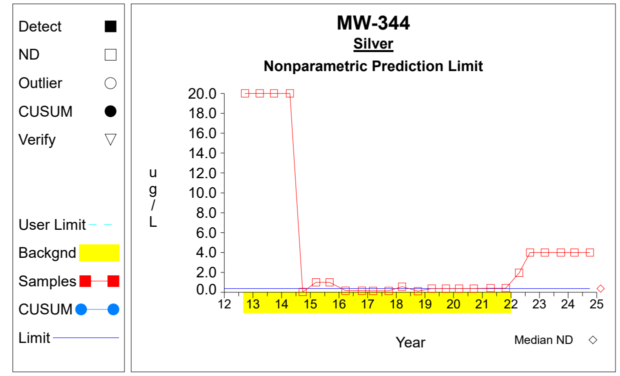
Intra-Well Control Charts / Prediction Limits



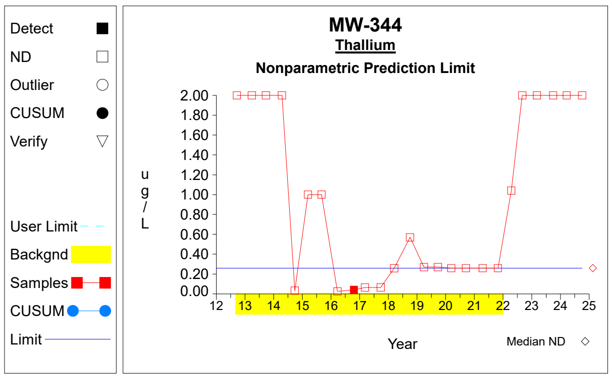
Graph 115



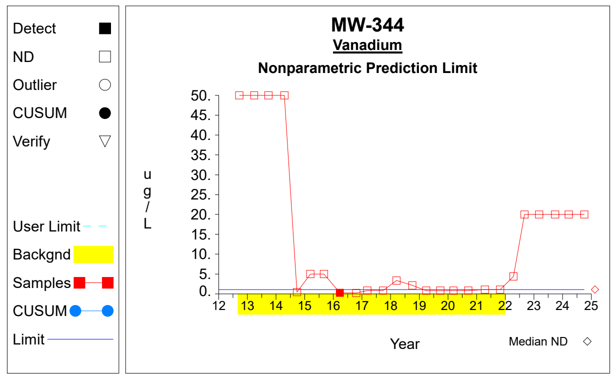
Graph 116



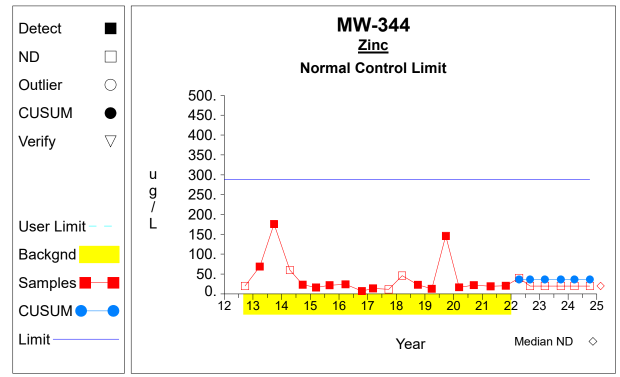
Graph 117



Graph 118

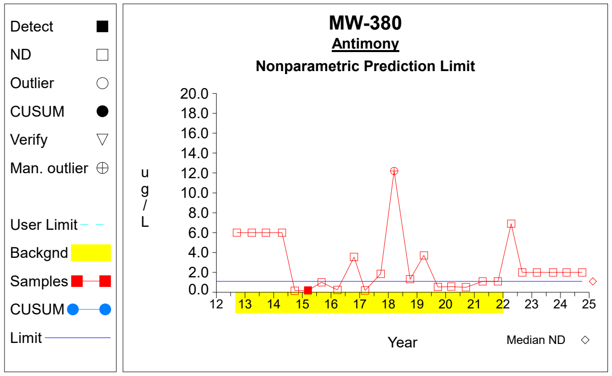


Graph 119

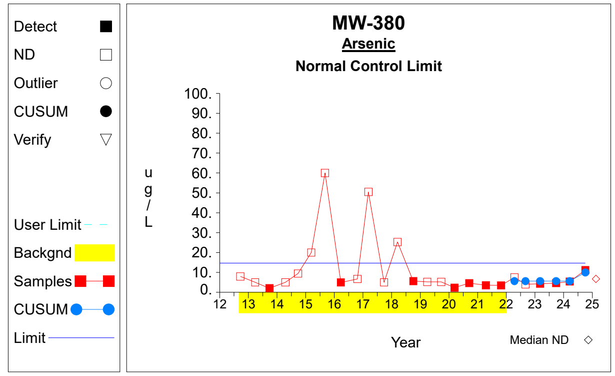


Graph 120

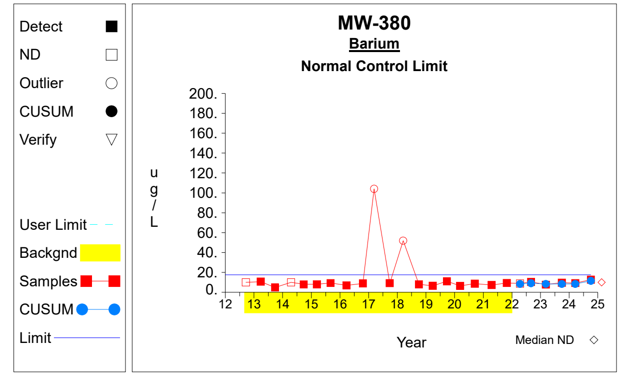
Intra-Well Control Charts / Prediction Limits



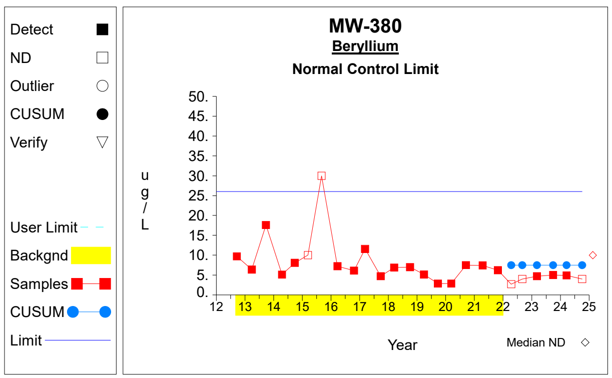
Graph 121



Graph 122



Graph 123



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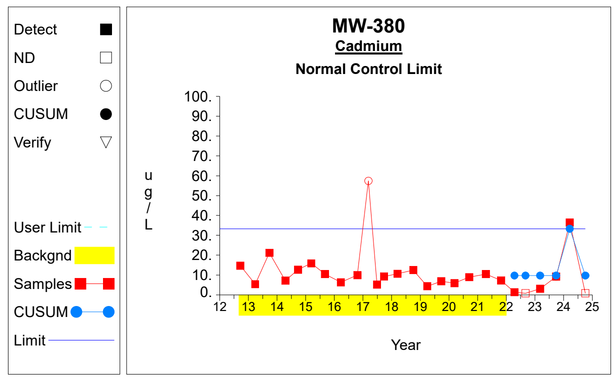

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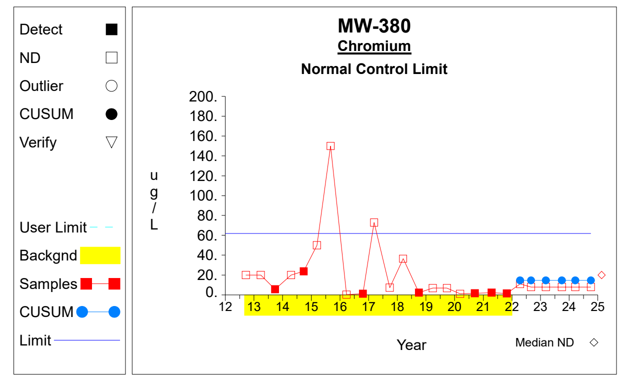

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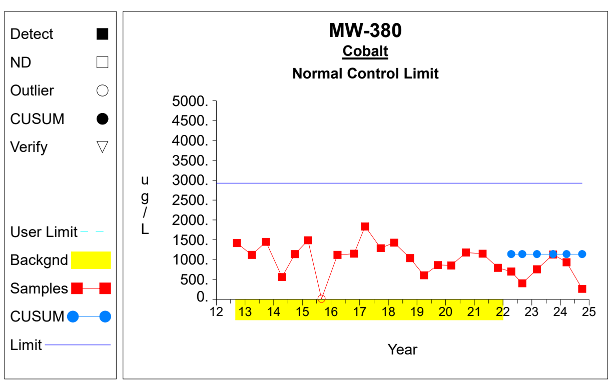

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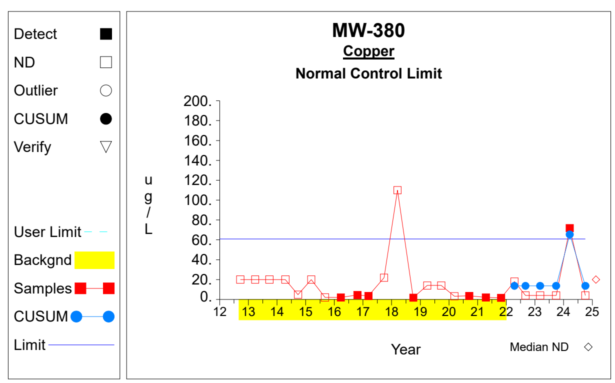
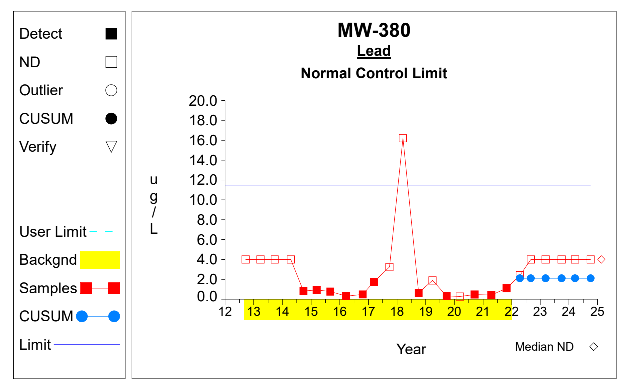
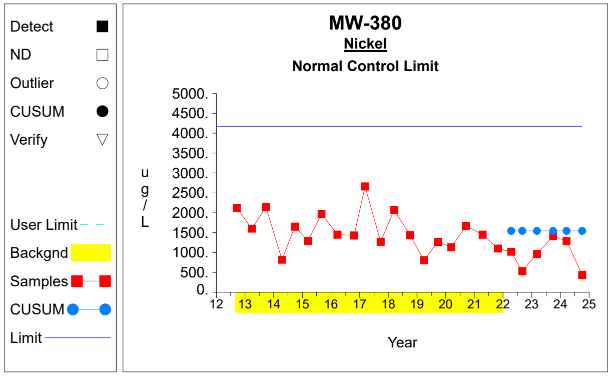


Graph 128



Graph 129

Intra-Well Control Charts / Prediction Limits



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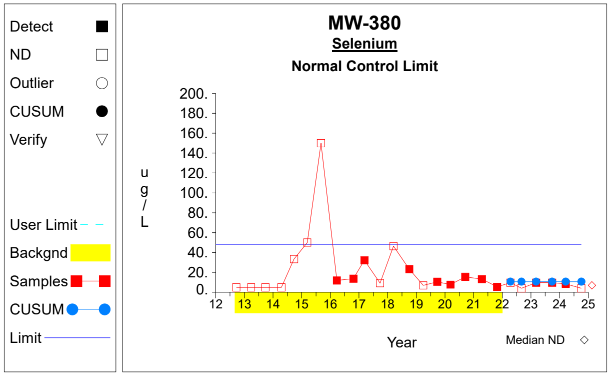

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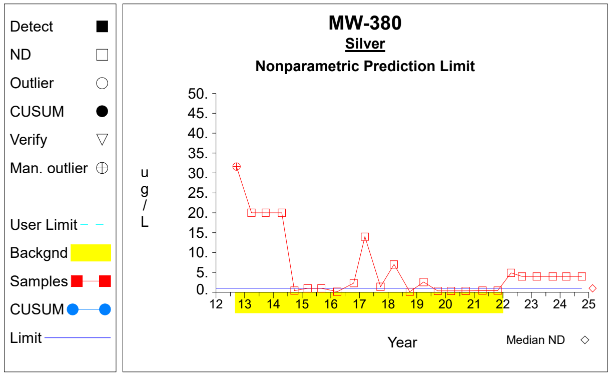

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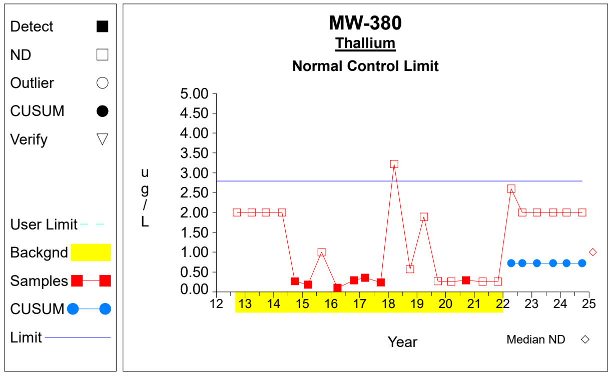

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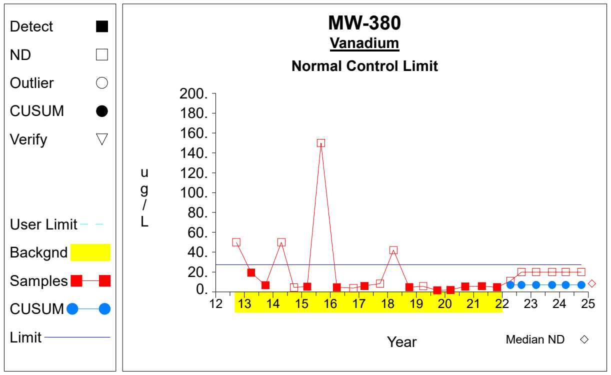

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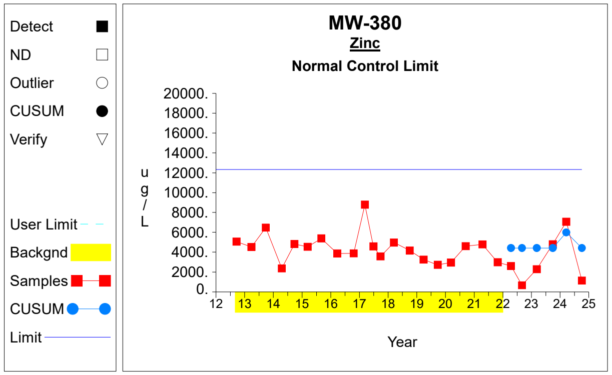

Graph 135

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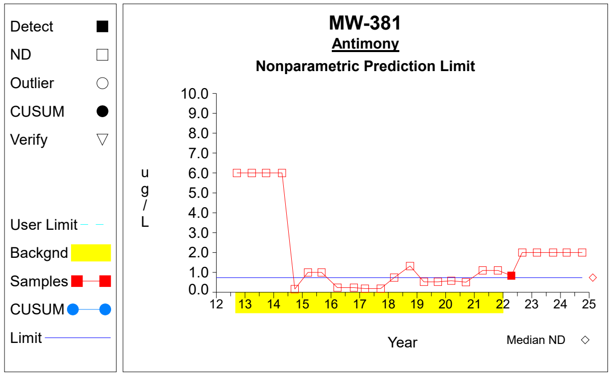
Intra-Well Control Charts / Prediction Limits



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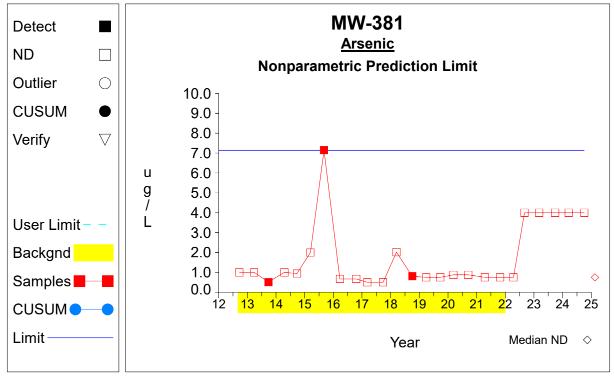

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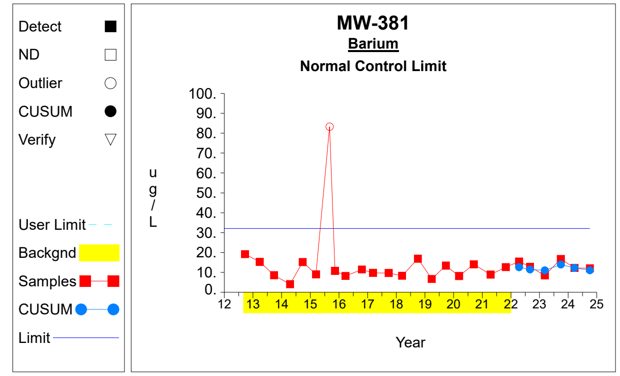

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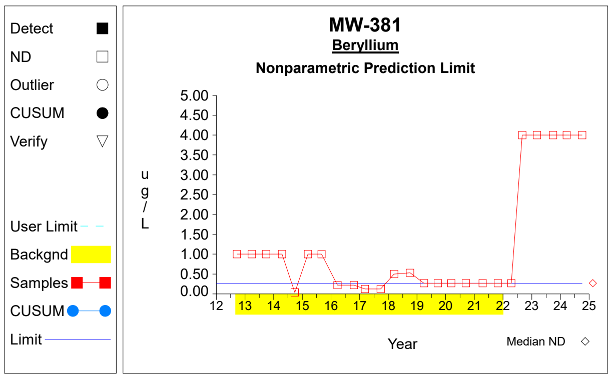

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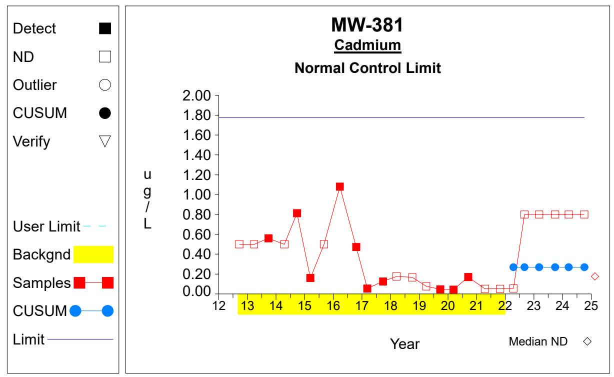

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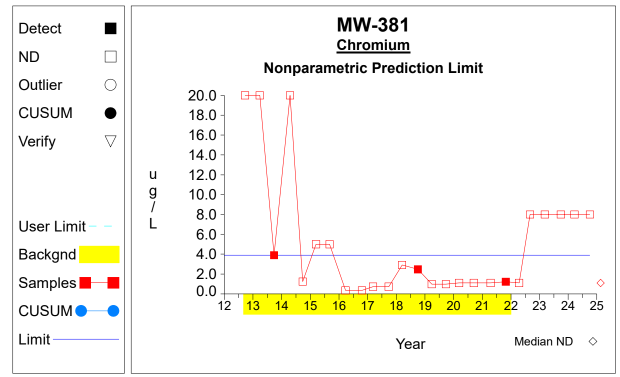

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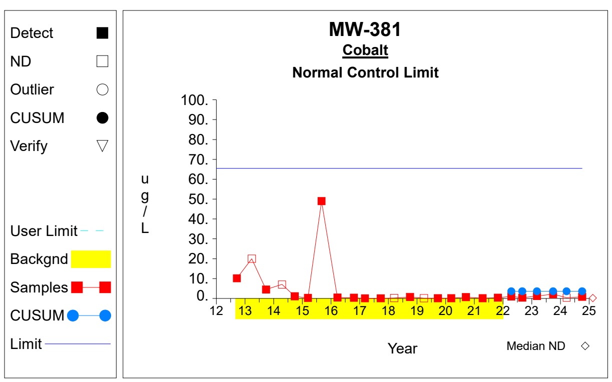

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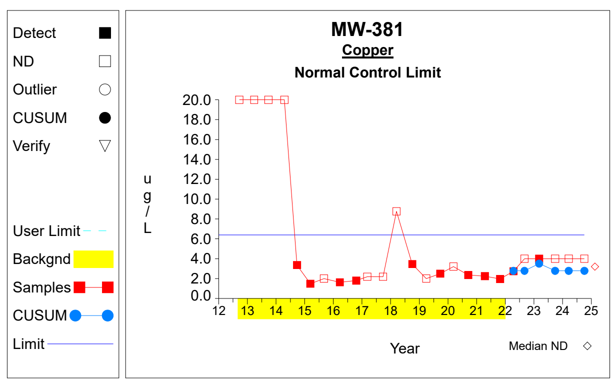
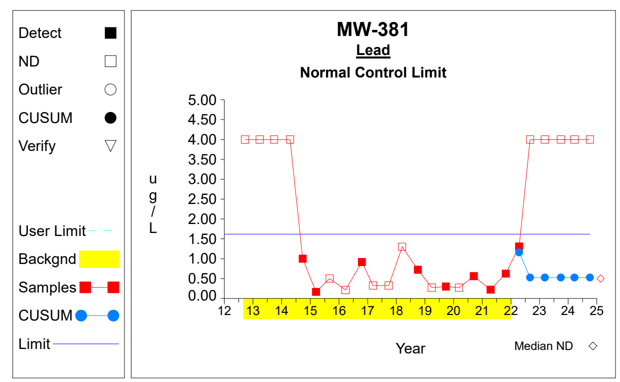


Graph 143



Graph 144

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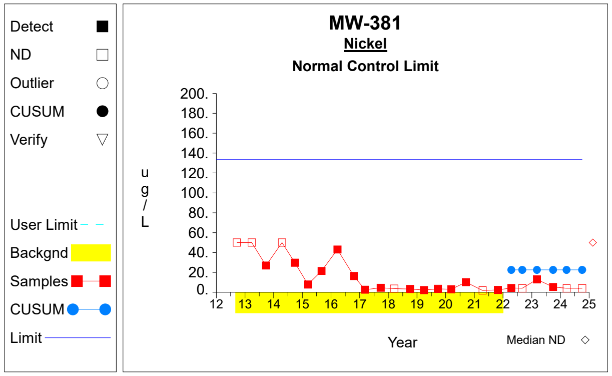
Intra-Well Control Charts / Prediction Limits



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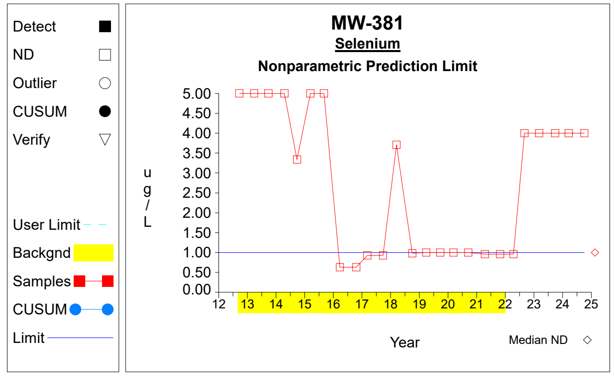

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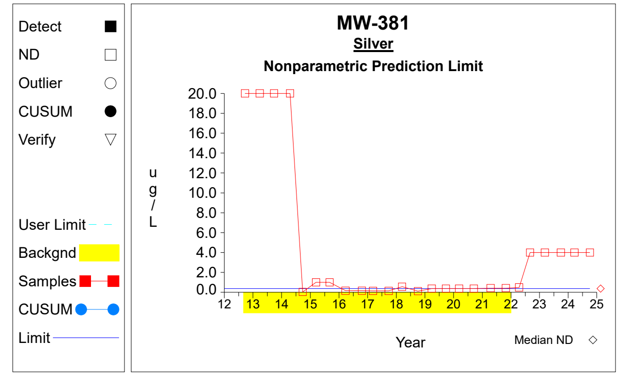
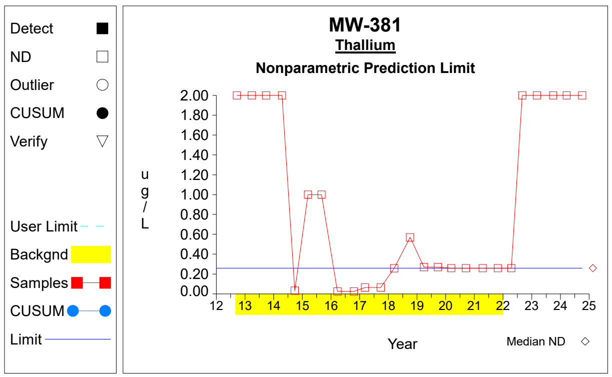


Graph 147



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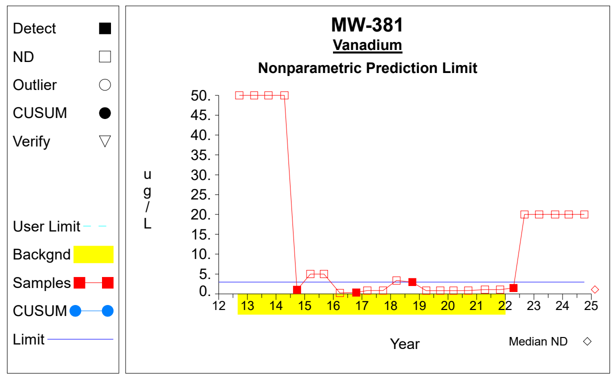

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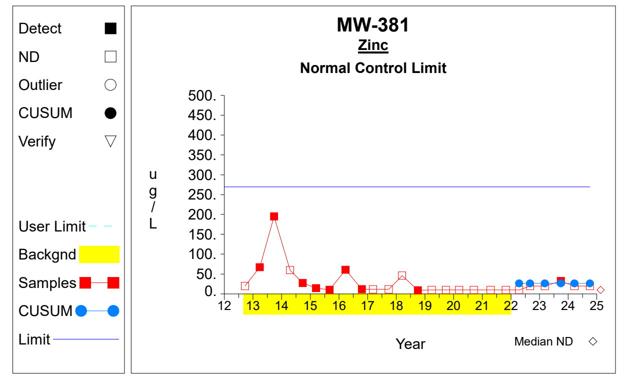

Graph 150

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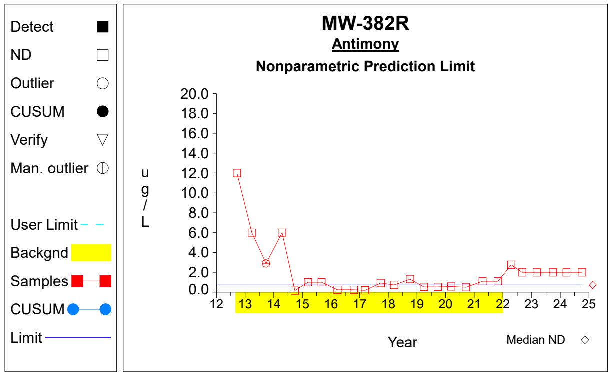
South Central Iowa SWA [GW] October 2024

Intra-Well Control Charts / Prediction Limits



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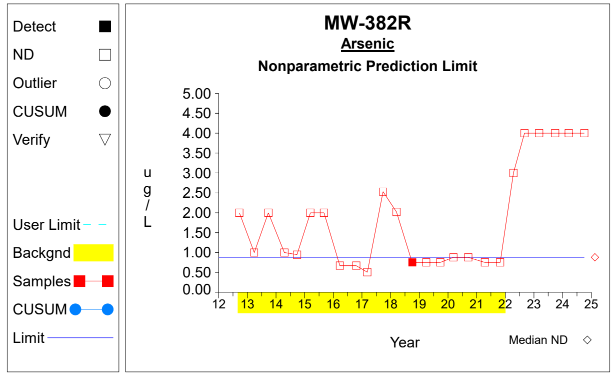

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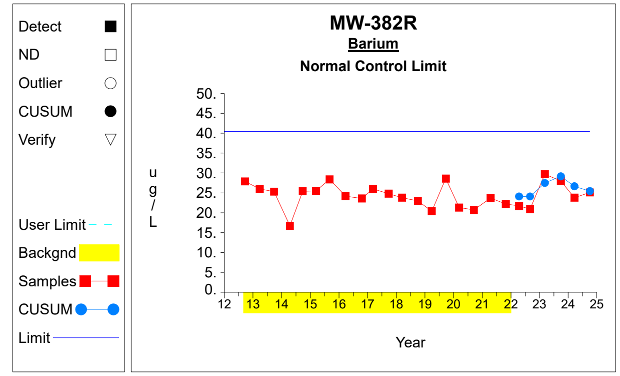

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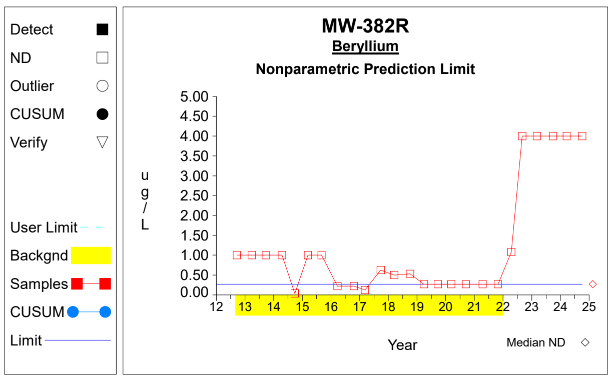

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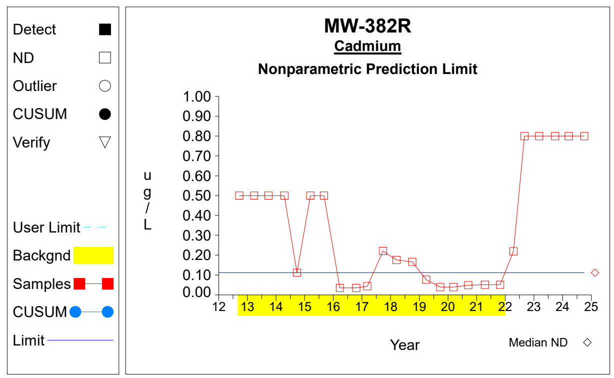

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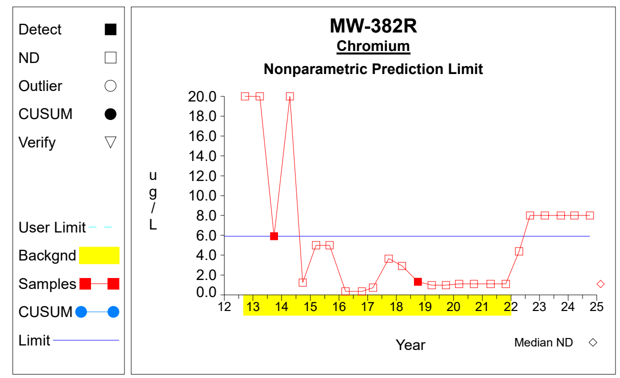

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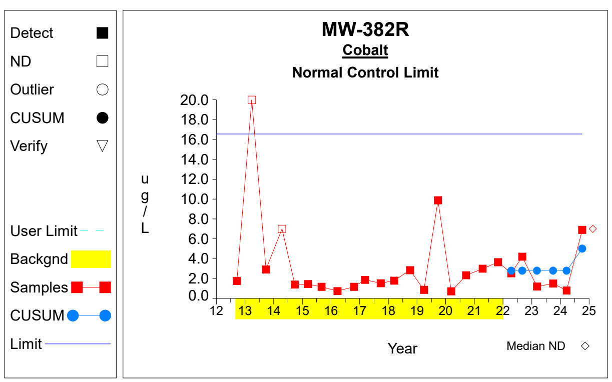

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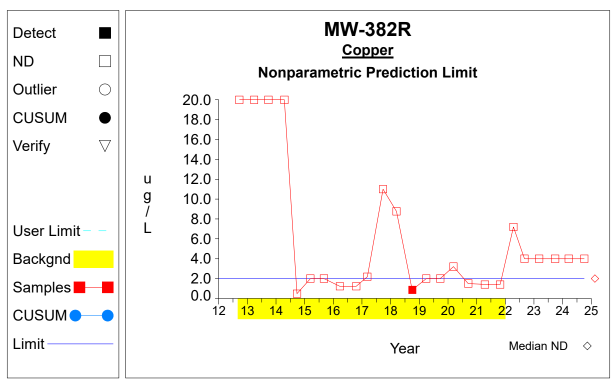

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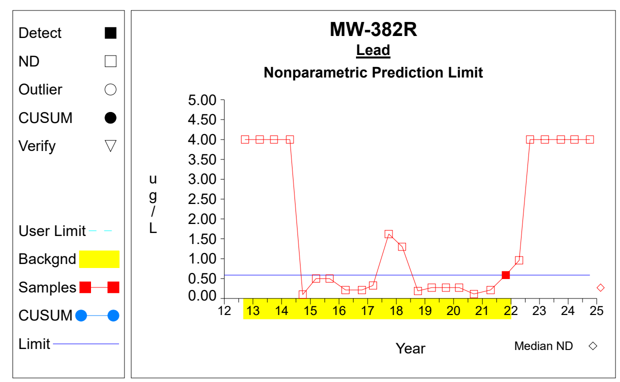

Graph 159

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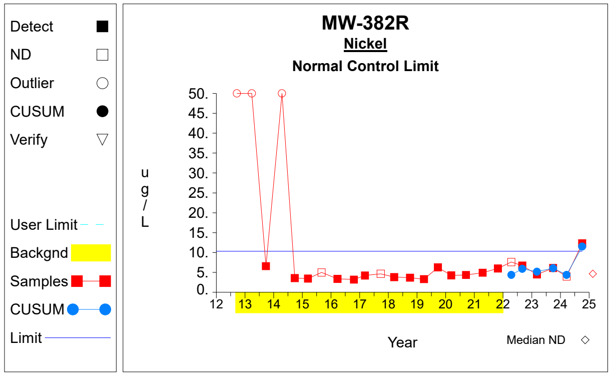
Intra-Well Control Charts / Prediction Limits



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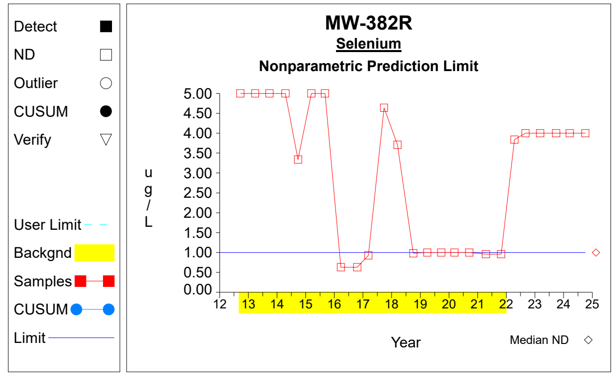
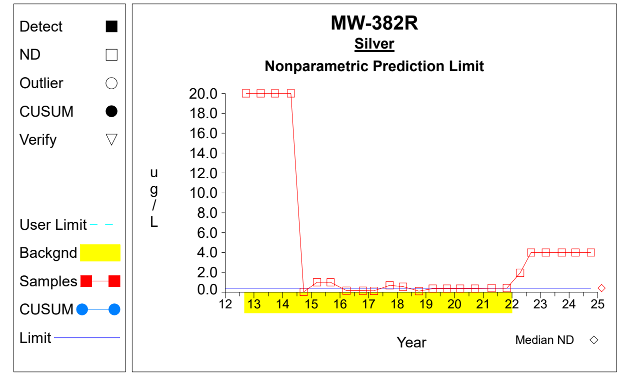


Graph 161



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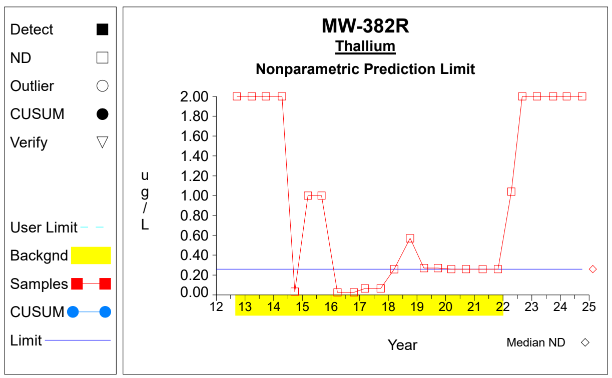
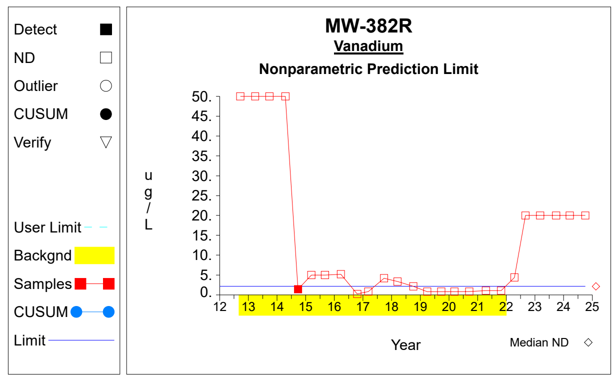


Graph 163



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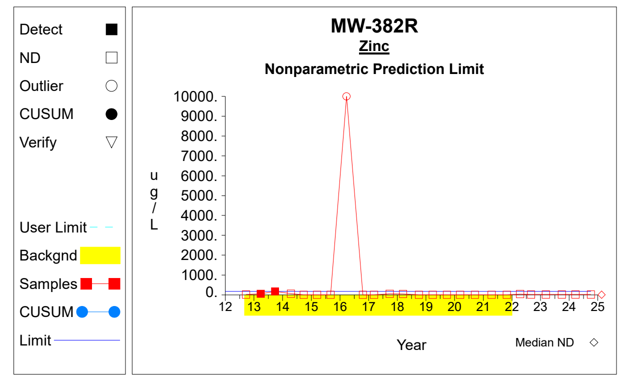

Graph 165

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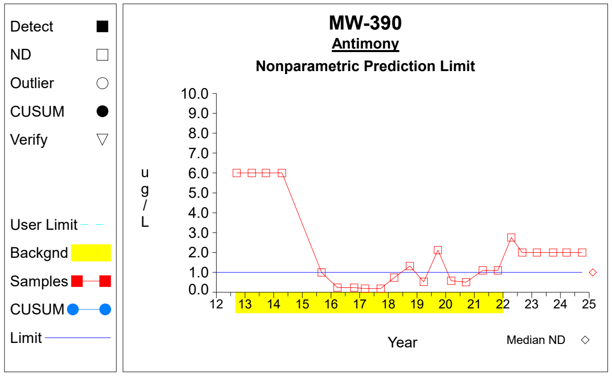
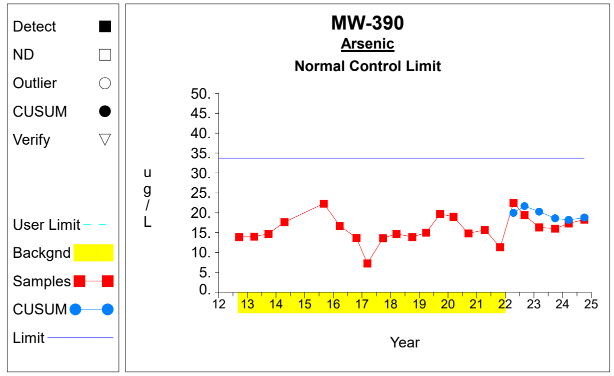
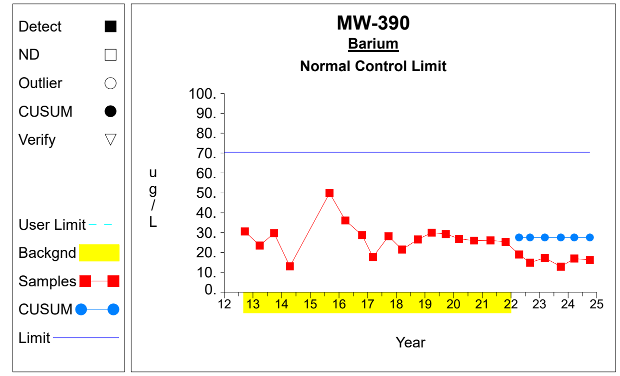
Intra-Well Control Charts / Prediction Limits



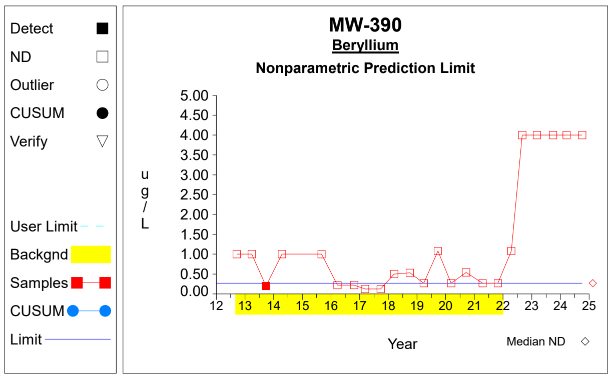
Graph 166



Graph 167



Graph 168



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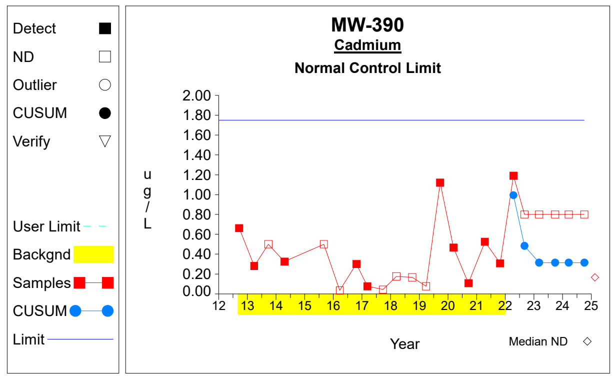

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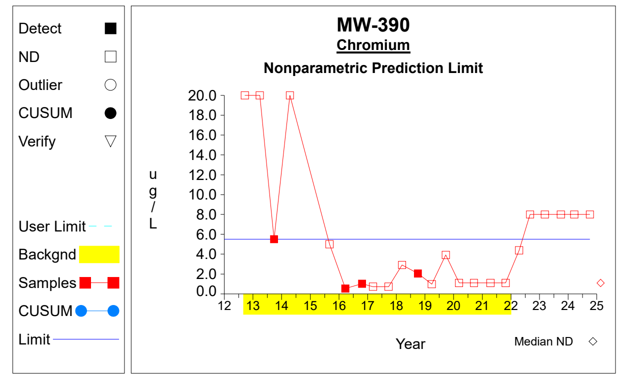
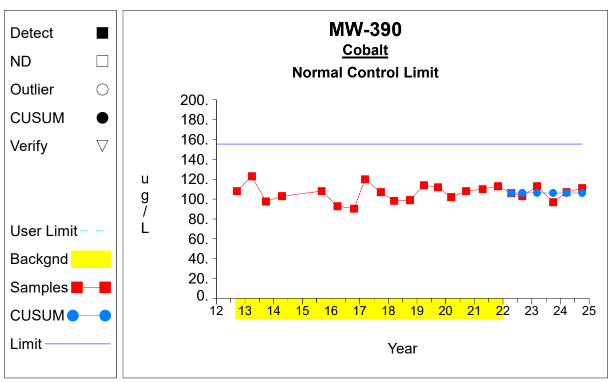
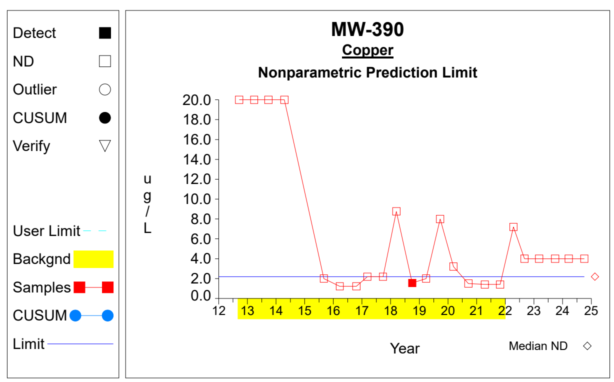


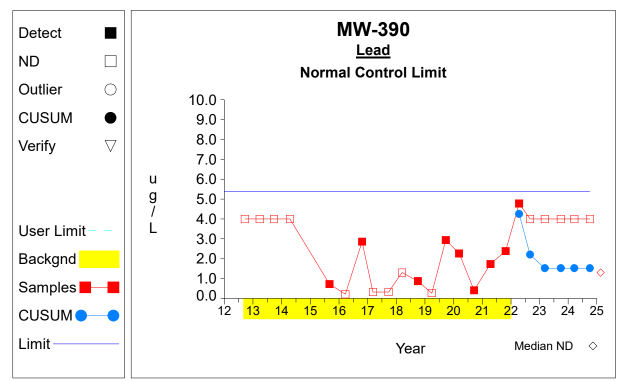
Graph 171



Graph 172



Graph 173



Graph 174

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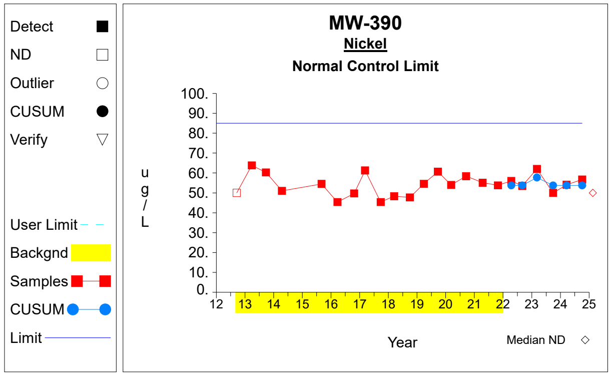
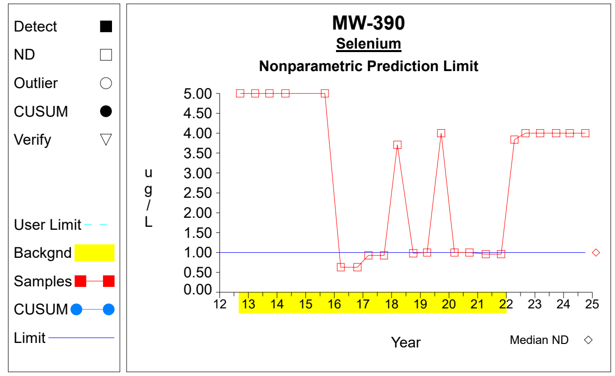
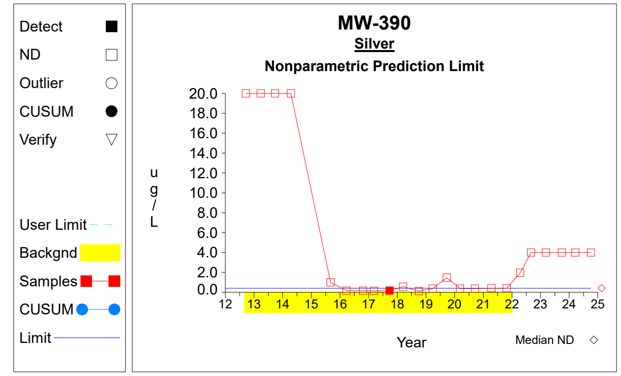
Intra-Well Control Charts / Prediction Limits



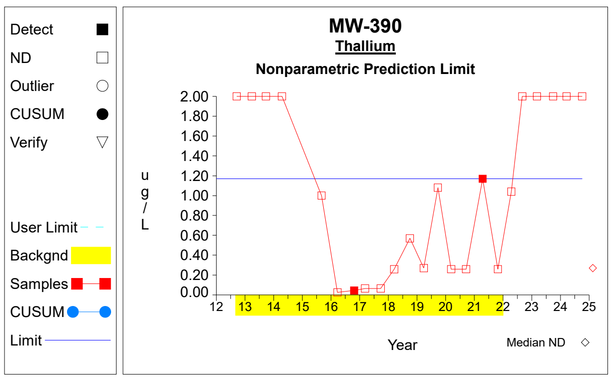
Graph 175



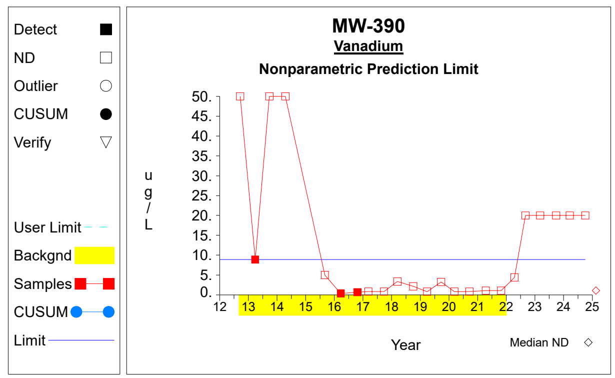
Graph 176



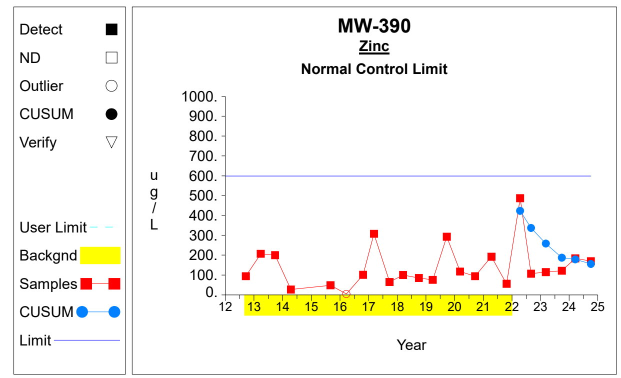
Graph 177



Graph 178



Graph 179



Graph 180

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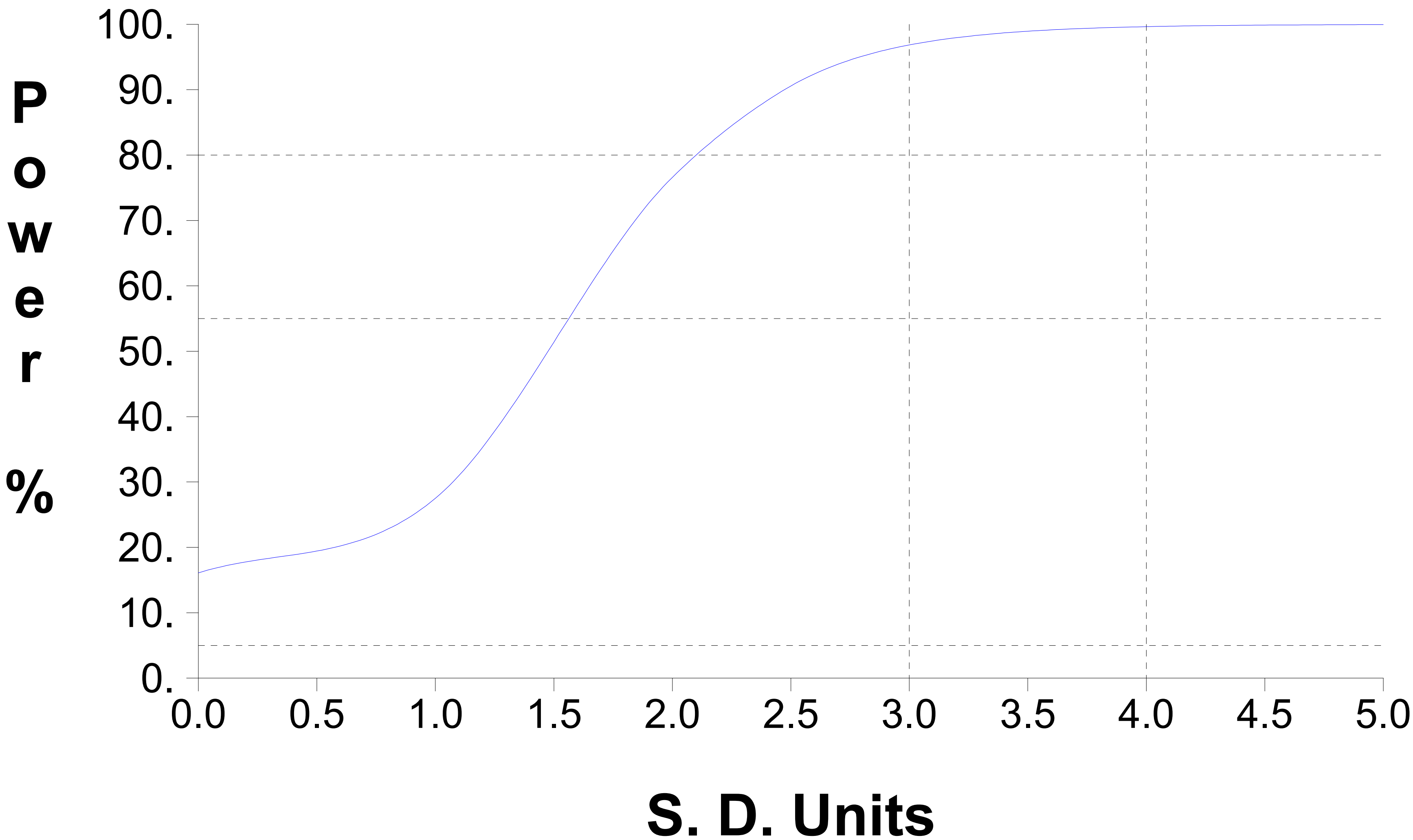
False Positive and False Negative Rates for Current Intra-Well Control Charts Monitoring Program



Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-300
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-300
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **38.712** / **19** = **2.037**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**83.325** - **1498.619**/**19**) / (**19**-1))$^{1/2}$ = **0.497**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **2.037** + **5.5** * **0.497** = **4.772**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **772.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - $\mathbf{Z}_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**171** - **2.326** * **772.667**$^{1/2}$) / 2 = **53.172**	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) = **-0.069**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium (ug/L) at MW-300
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **235.55** / **18** = **13.086**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**3148.633** - **55483.803**/**18**) / (**18**-1))^{½} = **1.973**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **13.086** + **5.5** * **1.973** = **23.939**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **18** * (**18**-1) / 2 = **153**	Number of sample pairs during trend detection period.
5	S = **-0.196**	Sen's estimator of trend.
6	var(S) = **696.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**153** - **2.326** * **696.0**^{½}) / 2 = **45.818**	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) = **-0.706**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-300
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.53**	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
Cadmium (ug/L) at MW-300
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **13.38** / **19** = **0.704**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**67.783** - **179.024**/**19**) / (**19**-1))$^{1/2}$ = **1.801**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **0.704** + **5.5** * **1.801** = **10.608**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.036**	Sen's estimator of trend.
6	var(S) = **800.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**171** - **2.326** * **800.333**$^{1/2}$) / 2 = **52.599**	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) = **-0.1**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-300
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **3.69**	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 (ug/L) at MW-300
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **5148.0** / **18** = **286.0**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**1.55x10^6** - **2.65x10^7**/**18**) / (**18**-1))^{½} = **66.773**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **286.0** + **5.5** * **66.773** = **653.25**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **18** * (**18**-1) / 2 = **153**	Number of sample pairs during trend detection period.
5	S = **-11.823**	Sen's estimator of trend.
6	var(S) = **697.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**153** - **2.326** * **697.0**^{½}) / 2 = **45.796**	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) = **-32.654**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-300
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **32.0**	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 (ug/L) at MW-300
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **12.107** / **19** = **0.637**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**9.672** - **146.579**/**19**) / (**19**-1))^{½} = **0.33**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **0.637** + **5.5** * **0.33** = **2.451**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **604.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **604.333**^{½}) / 2 = **56.91**	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) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel (ug/L) at MW-300
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **4341.6** / **19** = **228.505**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{1.05{\times}10^6} - \mathbf{1.88{\times}10^7}/\mathbf{19}) / (\mathbf{19}-1))^{½}$ = **55.85**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **228.505** + **5.5** * **55.85** = **535.682**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-5.193**	Sen's estimator of trend.
6	var(S) = **817.0**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{171} - \mathbf{2.326} * \mathbf{817.0}^{½}) / 2$ = **52.258**	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) = **-16.367**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-300
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **3.34**	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
Silver (ug/L) at MW-300
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.56**	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
Thallium (ug/L) at MW-300
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **4.803** / **19** = **0.253**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**1.255** - **23.069**/**19**) / (**19**-1))^{½} = **0.047**	Compute background sd.
3	SCL = **$\overline{X}$** + **F** * **S** = **0.253** + **5.5** * **0.047** = **0.514**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **604.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **604.333**^{½}) / 2 = **56.91**	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
Vanadium (ug/L) at MW-300
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.15**	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 (ug/L) at MW-300
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **4642.5** / **19** = **244.342**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**2.31**x**10^6** - **2.16**x**10^7**/**19**) / (**19**-1))^{½} = **255.413**	Compute background sd.
3	SCL = **$\overline{X}$** + **F** * **S** = **244.342** + **5.5** * **255.413** = **1649.114**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-47.097**	Sen's estimator of trend.
6	var(S) = **817.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **817.0**^{½}) / 2 = **52.258**	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) = **-98.458**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-303
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.53**	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 (ug/L) at MW-303
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **19.208** / **19** = **1.011**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**23.29** - **368.947**/**19**) / (**19**-1))^{½} = **0.464**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **1.011** + **5.5** * **0.464** = **3.562**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **483.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **483.333**^{½}) / 2 = **59.932**	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
Barium (ug/L) at MW-303
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{921.5} / \mathbf{19}$ $= \mathbf{48.5}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{54966.09} - \mathbf{849162.25}/\mathbf{19}) / (\mathbf{19}-1))^{½}$ $= \mathbf{23.89}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{48.5} + \mathbf{5.5} * \mathbf{23.89}$ $= \mathbf{179.896}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{19} * (\mathbf{19}-1) / 2$ $= \mathbf{171}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-0.862}$	Sen's estimator of trend.
6	$var(S) = \mathbf{816.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{171} - \mathbf{2.326} * \mathbf{816.0}^{½}) / 2$ $= \mathbf{52.278}$	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	$LCL(S) = \mathbf{-7.24}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-303
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.27**	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 (ug/L) at MW-303
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.1**	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
Chromium (ug/L) at MW-303
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **4.76**	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 (ug/L) at MW-303
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **350.1** / **19** = **18.426**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**6663.65** - **122570.01**/**19**) / (**19**-1))$^{1/2}$ = **3.437**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **18.426** + **5.5** * **3.437** = **37.328**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.692**	Sen's estimator of trend.
6	var(S) = **815.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**171** - **2.326** * **815.0**$^{1/2}$) / 2 = **52.298**	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) = **-1.278**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-303
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.0**	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 (ug/L) at MW-303
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **7.868** / **19** = **0.414**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**10.325** - **61.905**/**19**) / (**19**-1))^{½} = **0.627**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **0.414** + **5.5** * **0.627** = **3.86**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **483.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**171** - **2.326** * **483.333**^{½}) / 2 = **59.932**	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
Nickel (ug/L) at MW-303
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **739.8** / **19** = **38.937**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{31327.12} - \mathbf{547304.04/19}) / (\mathbf{19}-1))^{1/2}$ = **11.836**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **38.937** + **5.5** * **11.836** = **104.035**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-1.722**	Sen's estimator of trend.
6	var(S) = **817.0**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{171} - \mathbf{2.326} * \mathbf{817.0}^{1/2}) / 2$ = **52.258**	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) = **-4.183**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-303
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-303
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.37**	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
Thallium (ug/L) at MW-303
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.904**	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 (ug/L) at MW-303
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **8.73**	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 (ug/L) at MW-303
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{472.61} / \textbf{19}$ $= \textbf{24.874}$	Compute background mean.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$ $= ((\textbf{47982.698} - \textbf{223360.212}/\textbf{19}) / (\textbf{19}-1))^{½}$ $= \textbf{44.862}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{24.874} + \textbf{5.5} * \textbf{44.862}$ $= \textbf{271.616}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{19} * (\textbf{19}-1) / 2$ $= \textbf{171}$	Number of sample pairs during trend detection period.
5	$S = \textbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \textbf{548.333}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$ $= (\textbf{171} - \textbf{2.326} * \textbf{548.333}^{½}) / 2$ $= \textbf{58.267}$	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	$LCL(S) = \textbf{-1.387}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-304
Nonparametric Prediction Limit

Step	Equation	Description
1	$PL = max(X)$ $= \textbf{0.816}$	Compute nonparametric prediction limit as largest background measurement.
2	$Conf = \textbf{0.99}$	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic (ug/L) at MW-304
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **31.029** / **14**	
	= **2.216**	
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$	Compute background sd.
	= ((**135.524** - **962.799/14**) / (**14**-1))$^{1/2}$	
	= **2.266**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **2.216** + **5.5** * **2.266**	
	= **14.679**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **14** * (**14**-1) / 2	
	= **91**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **289.333**	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.
	= (**91** - **2.326** * **289.333$^{1/2}$**) / 2	
	= **25.718**	
8	LCL(S) = **-0.195**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium (ug/L) at MW-304
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **931.3** / **14** = **66.521**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**66714.29** - **867319.69**/**14**) / (**14**-1))^{½} = **19.141**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **66.521** + **5.5** * **19.141** = **171.797**	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 = **-4.132**	Sen's estimator of trend.
6	var(S) = **333.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**91** - **2.326** * **333.667**^{½}) / 2 = **24.256**	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) = **-13.198**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-304
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.221**	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 (ug/L) at MW-304
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.28**	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 (ug/L) at MW-304
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **105.34** / **13** = **8.103**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**992.273** - **11096.516**/**13**) / (**13**-1))^{½} = **3.4**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **8.103** + **5.5** * **3.4** = **26.801**	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 = **0.529**	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) = **-0.655**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-304
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.87**	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 (ug/L) at MW-304
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.737**	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 (ug/L) at MW-304
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{79.76} / \mathbf{13}$ $= \mathbf{6.135}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{557.583} - \mathbf{6361.658}/\mathbf{13}) / (\mathbf{13}-1))^{1/2}$ $= \mathbf{2.384}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{6.135} + \mathbf{5.5} * \mathbf{2.384}$ $= \mathbf{19.25}$	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	$S = \mathbf{0.113}$	Sen's estimator of trend.
6	$var(S) = \mathbf{267.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{78} - \mathbf{2.326} * \mathbf{267.667}^{1/2}) / 2$ $= \mathbf{19.973}$	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	$LCL(S) = \mathbf{-0.535}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-304
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) $= \mathbf{1.24}$	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
Silver (ug/L) at MW-304
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **0.18**	
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 (ug/L) at MW-304
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **0.26**	
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 (ug/L) at MW-304
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **118.24** / **12** = **9.853**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{1194.916} - \mathbf{13980.698}/\mathbf{12}) / (\mathbf{12}-1))^{1/2}$ = **1.648**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **9.853** + **5.5** * **1.648** = **18.915**	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) = **147.333**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{66} - \mathbf{2.326} * \mathbf{147.333}^{1/2}) / 2$ = **18.883**	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) = **-0.195**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-307
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-307
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{54.54} / \mathbf{17}$ $= \mathbf{3.208}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2] - sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{205.429} - \mathbf{2974.612}/\mathbf{17}) / (\mathbf{17}-1))^{½}$ $= \mathbf{1.38}$	Compute background sd.
3	$SCL = \mathbf{\bar{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{3.208} + \mathbf{5.5} * \mathbf{1.38}$ $= \mathbf{10.796}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{17} * (\mathbf{17}-1) / 2$ $= \mathbf{136}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.038}$	Sen's estimator of trend.
6	$var(S) = \mathbf{580.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{136} - \mathbf{2.326} * \mathbf{580.667}^{½}) / 2$ $= \mathbf{39.975}$	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	$LCL(S) = \mathbf{-0.111}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium (ug/L) at MW-307
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **150.48** / **16**	
	= **9.405**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**1500.099** - **22644.23**/**16**) / (**16**-1))^{½}	
	= **2.378**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **9.405** + **5.5** * **2.378**	
	= **22.485**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **16** * (**16**-1) / 2	
	= **120**	
5	S = **-0.259**	Sen's estimator of trend.
6	var(S) = **492.333**	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.
	= (**120** - **2.326** * **492.333**^{½}) / 2	
	= **34.195**	
8	LCL(S) = **-0.405**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-307
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **11.649** / **17** = **0.685**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**9.286** - **135.699/17**) / (**17**-1))$^{1/2}$ = **0.285**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **0.685** + **5.5** * **0.285** = **2.255**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **17** * (**17**-1) / 2 = **136**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **545.0**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**136** - **2.326** * **545.0**$^{1/2}$) / 2 = **40.849**	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) = **-0.043**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium (ug/L) at MW-307
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **4.927** / **17**	
	= **0.29**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**2.298** - **24.275**/**17**) / (**17**-1))^{½}	
	= **0.233**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **0.29** + **5.5** * **0.233**	
	= **1.572**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **17** * (**17**-1) / 2	
	= **136**	
5	S = **-0.013**	Sen's estimator of trend.
6	var(S) = **561.0**	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.
	= (**136** - **2.326** * **561.0**^{½}) / 2	
	= **40.454**	
8	LCL(S) = **-0.072**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-307
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
Cobalt (ug/L) at MW-307
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{871.2} / \textbf{16}$ $= \textbf{54.45}$	Compute background mean.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{49676.36} - \textbf{758989.44}/\textbf{16}) / (\textbf{16}-1))^{1/2}$ $= \textbf{12.219}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{54.45} + \textbf{5.5} * \textbf{12.219}$ $= \textbf{121.654}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{16} * (\textbf{16}-1) / 2$ $= \textbf{120}$	Number of sample pairs during trend detection period.
5	$S = \textbf{-1.685}$	Sen's estimator of trend.
6	$var(S) = \textbf{492.333}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{120} - \textbf{2.326} * \textbf{492.333}^{1/2}) / 2$ $= \textbf{34.195}$	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	$LCL(S) = \textbf{-5.082}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-307
Nonparametric Prediction Limit

Step	Equation	Description
1	$PL = max(X)$ $= \textbf{2.19}$	Compute nonparametric prediction limit as largest background measurement.
2	$Conf = \textbf{0.99}$	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead (ug/L) at MW-307
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.77**	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 (ug/L) at MW-307
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1446.9** / **17** = **85.112**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**131245.81** - **2.09**x**10^6**/**17**) / (**17**-1))^{½} = **22.497**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **85.112** + **5.5** * **22.497** = **208.843**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **17** * (**17**-1) / 2 = **136**	Number of sample pairs during trend detection period.
5	S = **-4.415**	Sen's estimator of trend.
6	var(S) = **589.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**136** - **2.326** * **589.333**^{½}) / 2 = **39.767**	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) = **-9.548**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-307
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{49.003} / \mathbf{17}$ $= \mathbf{2.883}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{173.196} - \mathbf{2401.294}/\mathbf{17}) / (\mathbf{17}-1))^{½}$ $= \mathbf{1.413}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{2.883} + \mathbf{5.5} * \mathbf{1.413}$ $= \mathbf{10.654}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{17} * (\mathbf{17}-1) / 2$ $= \mathbf{136}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \mathbf{464.333}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{136} - \mathbf{2.326} * \mathbf{464.333}^{½}) / 2$ $= \mathbf{42.939}$	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	$LCL(S) = \mathbf{-0.37}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver (ug/L) at MW-307
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.42**	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 (ug/L) at MW-307
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.27**	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 (ug/L) at MW-307
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.1**	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 (ug/L) at MW-307
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **6741.0** / **16**	
	= **421.313**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**3.05x10^6** - **4.54x10^7**/**16**) / (**16**-1))^{½}	
	= **117.211**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **421.313** + **5.5** * **117.211**	
	= **1065.972**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **16** * (**16**-1) / 2	
	= **120**	
5	S = **-16.213**	Sen's estimator of trend.
6	var(S) = **493.333**	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.
	= (**120** - **2.326** * **493.333**^{½}) / 2	
	= **34.168**	
8	LCL(S) = **-48.192**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-312
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **1.0**	
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 (ug/L) at MW-312
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **23.91** / **19** = **1.258**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**33.057** - **571.688**/**19**) / (**19**-1))^{½} = **0.406**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **1.258** + **5.5** * **0.406** = **3.492**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.022**	Sen's estimator of trend.
6	var(S) = **725.0**	Variance estimate for slope.
7	M_1(S) = (**N' - Z$_{.99}$** * **var(S)**^{½}) / 2 = (**171 - 2.326** * **725.0**^{½}) / 2 = **54.185**	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
Barium (ug/L) at MW-312
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **272.77** / **19** = **14.356**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**4137.491** - **74403.473**/**19**) / (**19**-1))$^{1/2}$ = **3.508**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **14.356** + **5.5** * **3.508** = **33.651**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.39**	Sen's estimator of trend.
6	var(S) = **817.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**171** - **2.326** * **817.0**$^{1/2}$) / 2 = **52.258**	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) = **-0.89**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-312
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.416** / **19** = **0.443**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**4.064** - **70.829**/**19**) / (**19**-1))^{½} = **0.137**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **0.443** + **5.5** * **0.137** = **1.194**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **548.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **548.333**^{½}) / 2 = **58.267**	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) = **-0.026**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium (ug/L) at MW-312
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.246**	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 (ug/L) at MW-312
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **3.9**	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
Cobalt (ug/L) at MW-312
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **694.1** / **19** = **36.532**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**26609.19** - **481774.81/19**) / (**19**-1))^{½} = **8.342**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **36.532** + **5.5** * **8.342** = **82.413**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.1**	Sen's estimator of trend.
6	var(S) = **817.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **817.0**^{½}) / 2 = **52.258**	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) = **-1.827**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-312
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.19**	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 (ug/L) at MW-312
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.67**	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 (ug/L) at MW-312
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{1941.2} / \mathbf{19}$ $= \mathbf{102.168}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{207726.26} - \mathbf{3.77{\times}10^6/19}) / (\mathbf{19}-1))^{1/2}$ $= \mathbf{22.848}$	Compute background sd.
3	$SCL = \overline{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{102.168} + \mathbf{5.5} * \mathbf{22.848}$ $= \mathbf{227.835}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{19} * (\mathbf{19}-1) / 2$ $= \mathbf{171}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{1.765}$	Sen's estimator of trend.
6	$var(S) = \mathbf{815.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{171} - \mathbf{2.326} * \mathbf{815.0}^{1/2}) / 2$ $= \mathbf{52.298}$	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	$LCL(S) = \mathbf{-3.819}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-312
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-312
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.42**	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 (ug/L) at MW-312
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.27**	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 (ug/L) at MW-312
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.1**	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 (ug/L) at MW-312
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **608.6** / **19** = **32.032**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**64801.72** - **370393.96**/**19**) / (**19**-1))^{½} = **50.17**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **32.032** + **5.5** * **50.17** = **307.969**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **652.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **652.0**^{½}) / 2 = **55.804**	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) = **-8.506**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-313
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.0**	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
Arsenic (ug/L) at MW-313
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$	Compute background mean.
	$= \mathbf{106.66} / \mathbf{19}$	
	$= \mathbf{5.614}$	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$	Compute background sd.
	$= ((\mathbf{1248.327} - \mathbf{11376.356/19}) / (\mathbf{19}-1))^{½}$	
	$= \mathbf{6.007}$	
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$	Compute combined Shewhart-CUSUM normal control limit.
	$= \mathbf{5.614} + \mathbf{5.5} * \mathbf{6.007}$	
	$= \mathbf{38.654}$	
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$	Number of sample pairs during trend detection period.
	$= \mathbf{19} * (\mathbf{19}-1) / 2$	
	$= \mathbf{171}$	
5	$S = \mathbf{0.029}$	Sen's estimator of trend.
6	$var(S) = \mathbf{816.0}$	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.
	$= (\mathbf{171} - \mathbf{2.326} * \mathbf{816.0}^{½}) / 2$	
	$= \mathbf{52.278}$	
8	$LCL(S) = \mathbf{-1.08}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium (ug/L) at MW-313
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **493.2** / **19** = **25.958**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**15613.12** - **243246.24**/**19**) / (**19**-1))^{½} = **12.496**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **25.958** + **5.5** * **12.496** = **94.686**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-1.103**	Sen's estimator of trend.
6	var(S) = **817.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **817.0**^{½}) / 2 = **52.258**	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) = **-3.843**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-313
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.27**	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
Cadmium (ug/L) at MW-313
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.662** / **19** = **0.14**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**0.409** - **7.086**/**19**) / (**19**-1))$^{1/2}$ = **0.045**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **0.14** + **5.5** * **0.045** = **0.385**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **604.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**171** - **2.326** * **604.333**$^{1/2}$) / 2 = **56.91**	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) = **-7.65**x**10**$^{-4}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-313
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.98**	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 (ug/L) at MW-313
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **262.514** / **19**	
	= **13.817**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$	Compute background sd.
	= ((**8597.488** - **68913.6**/**19**) / (**19**-1))$^{1/2}$	
	= **16.617**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **13.817** + **5.5** * **16.617**	
	= **105.212**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **19** * (**19**-1) / 2	
	= **171**	
5	S = **2.317**	Sen's estimator of trend.
6	var(S) = **816.0**	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_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**171** - **2.326** * **816.0**$^{1/2}$) / 2	
	= **52.278**	
8	LCL(S) = **-0.655**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-313
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **2.99**	
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 (ug/L) at MW-313
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{7.778} / \mathbf{19}$ $= \mathbf{0.409}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{4.185} - \mathbf{60.497}/\mathbf{19}) / (\mathbf{19}-1))^{1/2}$ $= \mathbf{0.236}$	Compute background sd.
3	$SCL = \overline{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{0.409} + \mathbf{5.5} * \mathbf{0.236}$ $= \mathbf{1.706}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{19} * (\mathbf{19}-1) / 2$ $= \mathbf{171}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \mathbf{483.333}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{171} - \mathbf{2.326} * \mathbf{483.333}^{1/2}) / 2$ $= \mathbf{59.932}$	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	$LCL(S) = \mathbf{0.0}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel (ug/L) at MW-313
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **554.82** / **19** = **29.201**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**25139.103** - **307825.232**/**19**) / (**19**-1))$^{1/2}$ = **22.283**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **29.201** + **5.5** * **22.283** = **151.759**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.237**	Sen's estimator of trend.
6	var(S) = **808.333**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**171** - **2.326** * **808.333**$^{1/2}$) / 2 = **52.435**	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) = **-3.142**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-313
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-313
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.37**	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 (ug/L) at MW-313
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.26**	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 (ug/L) at MW-313
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **309.86** / **19** = **16.308**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{12915.781} - \mathbf{96013.22}/\mathbf{19}) / (\mathbf{19}-1))^{1/2}$ = **20.9**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **16.308** + **5.5** * **20.9** = **131.257**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-2.097**	Sen's estimator of trend.
6	var(S) = **800.333**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{171} - \mathbf{2.326} * \mathbf{800.333}^{1/2}) / 2$ = **52.599**	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) = **-7.624**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc (ug/L) at MW-313
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{408.07} / \textbf{19}$ $= \textbf{21.477}$	Compute background mean.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{20423.187} - \textbf{166521.125}/\textbf{19}) / (\textbf{19}-1))^{1/2}$ $= \textbf{25.45}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{21.477} + \textbf{5.5} * \textbf{25.45}$ $= \textbf{161.454}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{19} * (\textbf{19}-1) / 2$ $= \textbf{171}$	Number of sample pairs during trend detection period.
5	$S = \textbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \textbf{772.667}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{171} - \textbf{2.326} * \textbf{772.667}^{1/2}) / 2$ $= \textbf{53.172}$	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	$LCL(S) = \textbf{-2.742}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-335
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.74**	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 (ug/L) at MW-335
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **43.516** / **20** = **2.176**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**151.566** - **1893.642**/**20**) / (**20**-1))^{½} = **1.73**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **2.176** + **5.5** * **1.73** = **11.692**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
5	S = **-0.2**	Sen's estimator of trend.
6	var(S) = **941.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**190** - **2.326** * **941.333**^{½}) / 2 = **59.318**	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) = **-0.646**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium (ug/L) at MW-335
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **261.21** / **20** = **13.061**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**3669.912** - **68230.664**/**20**) / (**20**-1))^{½} = **3.688**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **13.061** + **5.5** * **3.688** = **33.343**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
5	S = **0.114**	Sen's estimator of trend.
6	var(S) = **948.0**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**190** - **2.326** * **948.0**^{½}) / 2 = **59.192**	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) = **-0.386**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-335
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{8.986} / \mathbf{20}$ $= \mathbf{0.449}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2] - sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{4.246 - 80.748/20}) / (\mathbf{20}-1))^{1/2}$ $= \mathbf{0.105}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{0.449} + \mathbf{5.5} * \mathbf{0.105}$ $= \mathbf{1.025}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{20} * (\mathbf{20}-1) / 2$ $= \mathbf{190}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \mathbf{681.333}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{190} - \mathbf{2.326} * \mathbf{681.333}^{1/2}) / 2$ $= \mathbf{64.643}$	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	$LCL(S) = \mathbf{0.0}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium (ug/L) at MW-335
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **5.774** / **20**	
	= **0.289**	
2	S = ((**sum[X²] - sum[X]**²/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**2.23** - **33.339**/**20**) / (**20**-1))^{½}	
	= **0.172**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **0.289** + **5.5** * **0.172**	
	= **1.236**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **20** * (**20**-1) / 2	
	= **190**	
5	S = **-0.029**	Sen's estimator of trend.
6	var(S) = **905.667**	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.
	= (**190** - **2.326** * **905.667**^{½}) / 2	
	= **60.0**	
8	LCL(S) = **-0.063**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-335
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **2.93**	
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 (ug/L) at MW-335
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **1066.9** / **17**	
	= **62.759**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**76765.47** - **1.14**x**10^6**/**17**) / (**17**-1))^{½}	
	= **24.759**	
3	SCL = **$\bar{X}$** + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **62.759** + **5.5** * **24.759**	
	= **198.933**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **17** * (**17**-1) / 2	
	= **136**	
5	S = **2.739**	Sen's estimator of trend.
6	var(S) = **588.333**	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.
	= (**136** - **2.326** * **588.333**^{½}) / 2	
	= **39.791**	
8	LCL(S) = **-2.176**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-335
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **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
Lead (ug/L) at MW-335
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **7.241** / **20** = **0.362**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**3.963** - **52.432**/**20**) / (**20**-1))^{½} = **0.266**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **0.362** + **5.5** * **0.266** = **1.824**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **541.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**190** - **2.326** * **541.667**^{½}) / 2 = **67.933**	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
Nickel (ug/L) at MW-335
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **1878.0** / **18**	
	= **104.333**	
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½}	Compute background sd.
	= ((**293095.86 - 3.53**x**10^6/18**) / (**18**-1))^{½}	
	= **75.599**	
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **104.333** + **5.5** * **75.599**	
	= **520.126**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **18** * (**18**-1) / 2	
	= **153**	
5	S = **13.462**	Sen's estimator of trend.
6	var(S) = **696.0**	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.
	= (**153** - **2.326** * **696.0**^{½}) / 2	
	= **45.818**	
8	LCL(S) = **1.012**	One-sided lower confidence limit for slope.
9	LCL(S) > 0	**Significant increasing trend.**

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-335
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **1.0**	
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
Silver (ug/L) at MW-335
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.37**	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 (ug/L) at MW-335
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.27**	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 (ug/L) at MW-335
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.1**	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
Zinc (ug/L) at MW-335
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1472.0** / **20** = **73.6**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**165608.66** - **2.17**x**10^6**/**20**) / (**20**-1))^{½} = **54.902**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **73.6** + **5.5** * **54.902** = **375.559**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
5	S = **-5.865**	Sen's estimator of trend.
6	var(S) = **948.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**190** - **2.326** * **948.0**^{½}) / 2 = **59.192**	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) = **-15.555**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-344
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **5.02**	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
Arsenic (ug/L) at MW-344
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **24.544** / **19** = **1.292**	Compute background mean.
2	S = ((**sum[X²]** - **sum[X]**²/**N**) / (**N**-1))^½ = ((**39.041** - **602.408**/**19**) / (**19**-1))^½ = **0.638**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **1.292** + **5.5** * **0.638** = **4.803**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.008**	Sen's estimator of trend.
6	var(S) = **692.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^½) / 2 = (**171** - **2.326** * **692.0**^½) / 2 = **54.906**	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) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium (ug/L) at MW-344
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **270.72** / **19**	
	= **14.248**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**4095.538** - **73289.318**/**19**) / (**19**-1))^{½}	
	= **3.638**	
3	SCL = **$\overline{X}$** + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **14.248** + **5.5** * **3.638**	
	= **34.256**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **19** * (**19**-1) / 2	
	= **171**	
5	S = **-0.941**	Sen's estimator of trend.
6	var(S) = **817.0**	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.
	= (**171** - **2.326** * **817.0**^{½}) / 2	
	= **52.258**	
8	LCL(S) = **-1.449**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-344
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **0.401**	
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 (ug/L) at MW-344
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **4.844** / **19**	
	= **0.255**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**1.896** - **23.464**/**19**) / (**19**-1))^{½}	
	= **0.192**	
3	SCL = $\overline{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **0.255** + **5.5** * **0.192**	
	= **1.309**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **19** * (**19**-1) / 2	
	= **171**	
5	S = **-0.013**	Sen's estimator of trend.
6	var(S) = **788.667**	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.
	= (**171** - **2.326** * **788.667**^{½}) / 2	
	= **52.839**	
8	LCL(S) = **-0.059**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-344
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **5.52**	
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 (ug/L) at MW-344
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$	Compute background mean.
	$= \mathbf{2953.6} / \mathbf{19}$	
	$= \mathbf{155.453}$	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$	Compute background sd.
	$= ((\mathbf{555872.24} - \mathbf{8.72{\times}10^6/19}) / (\mathbf{19}-1))^{½}$	
	$= \mathbf{73.306}$	
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$	Compute combined Shewhart-CUSUM normal control limit.
	$= \mathbf{155.453} + \mathbf{5.5} * \mathbf{73.306}$	
	$= \mathbf{558.635}$	
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$	Number of sample pairs during trend detection period.
	$= \mathbf{19} * (\mathbf{19}-1) / 2$	
	$= \mathbf{171}$	
5	$S = \mathbf{13.458}$	Sen's estimator of trend.
6	$var(S) = \mathbf{817.0}$	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.
	$= (\mathbf{171} - \mathbf{2.326} * \mathbf{817.0}^{½}) / 2$	
	$= \mathbf{52.258}$	
8	$LCL(S) = \mathbf{-1.328}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-344
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
Lead (ug/L) at MW-344
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.726**	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 (ug/L) at MW-344
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2505.2** / **19** = **131.853**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**409594.44** - **6.28**x**10^6**/**19**) / (**19**-1))^{½} = **66.365**	Compute background sd.
3	SCL = **$\overline{X}$** + **F** * **S** = **131.853** + **5.5** * **66.365** = **496.859**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **11.039**	Sen's estimator of trend.
6	var(S) = **817.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**171** - **2.326** * **817.0**^{½}) / 2 = **52.258**	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) = **-5.44**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-344
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.06**	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
Silver (ug/L) at MW-344
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.37**	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 (ug/L) at MW-344
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.26**	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 (ug/L) at MW-344
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.1**	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
Zinc (ug/L) at MW-344
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **692.3** / **19** = **36.437**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**63002.57** - **479279.29**/**19**) / (**19**-1))^{½} = **45.812**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **36.437** + **5.5** * **45.812** = **288.403**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.409**	Sen's estimator of trend.
6	var(S) = **808.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **808.333**^{½}) / 2 = **52.435**	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) = **-2.94**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-380
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.1**	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
Arsenic (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **107.24** / **19** = **5.644**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**653.647** - **11500.418/19**) / (**19**-1))^{½} = **1.639**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **5.644** + **5.5** * **1.639** = **14.659**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **604.333**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**171** - **2.326** * **604.333**^{½}) / 2 = **56.91**	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) = **-0.436**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **143.55** / **17** = **8.444**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1255.641** - **20606.603/17**) / (**17**-1))^{½} = **1.649**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **8.444** + **5.5** * **1.649** = **17.512**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **17** * (**17**-1) / 2 = **136**	Number of sample pairs during trend detection period.
5	S = **-0.121**	Sen's estimator of trend.
6	var(S) = **588.333**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)^{½}**) / 2 = (**136** - **2.326** * **588.333**^{½}) / 2 = **39.791**	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) = **-0.488**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **142.48** / **19** = **7.499**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{1272.523} - \mathbf{20300.55/19}) / (\mathbf{19}-1))^{½}$ = **3.367**	Compute background sd.
3	SCL = $\mathbf{\bar{X}}$ + **F** * **S** = **7.499** + **5.5** * **3.367** = **26.018**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.451**	Sen's estimator of trend.
6	var(S) = **816.0**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{171} - \mathbf{2.326} * \mathbf{816.0}^{½}) / 2$ = **52.278**	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) = **-1.161**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **185.35** / **19**	
	= **9.755**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**2136.453** - **34354.623**/**19**) / (**19**-1))^{½}	
	= **4.271**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **9.755** + **5.5** * **4.271**	
	= **33.245**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **19** * (**19**-1) / 2	
	= **171**	
5	S = **-0.562**	Sen's estimator of trend.
6	var(S) = **816.0**	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.
	= (**171** - **2.326** * **816.0**^{½}) / 2	
	= **52.278**	
8	LCL(S) = **-1.407**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **278.75** / **19** = **14.671**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**5417.116** - **77701.563**/**19**) / (**19**-1))^{½} = **8.588**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **14.671** + **5.5** * **8.588** = **61.905**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **604.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**171** - **2.326** * **604.333**^{½}) / 2 = **56.91**	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) = **-2.306**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{20508.0} / \mathbf{18}$ $= \mathbf{1139.333}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{2.52{\times}10^7} - \mathbf{4.21{\times}10^8/18}) / (\mathbf{18}-1))^{½}$ $= \mathbf{325.162}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{1139.333} + \mathbf{5.5} * \mathbf{325.162}$ $= \mathbf{2927.727}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{18} * (\mathbf{18}-1) / 2$ $= \mathbf{153}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-38.718}$	Sen's estimator of trend.
6	$var(S) = \mathbf{695.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{153} - \mathbf{2.326} * \mathbf{695.0}^{½}) / 2$ $= \mathbf{45.84}$	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	$LCL(S) = \mathbf{-97.297}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **258.71** / **19**	
	= **13.616**	
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½}	Compute background sd.
	= ((**4857.331** - **66930.864/19**) / (**19**-1))^{½}	
	= **8.611**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **13.616** + **5.5** * **8.611**	
	= **60.976**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **19** * (**19**-1) / 2	
	= **171**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **604.333**	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.
	= (**171** - **2.326** * **604.333**^{½}) / 2	
	= **56.91**	
8	LCL(S) = **-2.575**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **39.961** / **19** = **2.103**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**135.553** - **1596.882**/**19**) / (**19**-1))$^{1/2}$ = **1.692**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **2.103** + **5.5** * **1.692** = **11.407**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.062**	Sen's estimator of trend.
6	var(S) = **751.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - $\mathbf{Z}_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**171** - **2.326** * **751.667**$^{1/2}$) / 2 = **53.615**	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) = **-0.517**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **29335.0** / **19** = **1543.947**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**4.94**x**10^7** - **8.61**x**10^8**/**19**) / (**19**-1))$^{1/2}$ = **478.178**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **1543.947** + **5.5** * **478.178** = **4173.927**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-58.232**	Sen's estimator of trend.
6	var(S) = **815.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**171** - **2.326** * **815.0**$^{1/2}$) / 2 = **52.298**	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) = **-159.202**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **203.78** / **19** = **10.725**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**3020.96** - **41526.288**/**19**) / (**19**-1))^{½} = **6.812**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **10.725** + **5.5** * **6.812** = **48.194**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **692.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **692.0**^{½}) / 2 = **54.906**	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
Silver (ug/L) at MW-380
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{13.733} / \textbf{19}$ $= \textbf{0.723}$	Compute background mean.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$ $= ((\textbf{12.471} - \textbf{188.595}/\textbf{19}) / (\textbf{19}-1))^{½}$ $= \textbf{0.376}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{0.723} + \textbf{5.5} * \textbf{0.376}$ $= \textbf{2.791}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{19} * (\textbf{19}-1) / 2$ $= \textbf{171}$	Number of sample pairs during trend detection period.
5	$S = \textbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \textbf{604.333}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$ $= (\textbf{171} - \textbf{2.326} * \textbf{604.333}^{½}) / 2$ $= \textbf{56.91}$	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	$LCL(S) = \textbf{0.0}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **133.64** / **19**	
	= **7.034**	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\mathbf{1186.926} - \mathbf{17859.65}/\mathbf{19}) / (\mathbf{19}-1))^{1/2}$	
	= **3.704**	
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **7.034** + **5.5** * **3.704**	
	= **27.405**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **19** * (**19**-1) / 2	
	= **171**	
5	S = **-0.494**	Sen's estimator of trend.
6	var(S) = **751.667**	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.
	$= (\mathbf{171} - \mathbf{2.326} * \mathbf{751.667}^{1/2}) / 2$	
	= **53.615**	
8	LCL(S) = **-1.073**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc (ug/L) at MW-380
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **88350.0** / **20** = **4417.5**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{4.30{\times}10^8} - \mathbf{7.81{\times}10^9}/\mathbf{20}) / (\mathbf{20}-1))^{1/2}$ = **1437.765**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **4417.5** + **5.5** * **1437.765** = **12325.205**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
5	S = **-198.95**	Sen's estimator of trend.
6	var(S) = **950.0**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{190} - \mathbf{2.326} * \mathbf{950.0}^{1/2}) / 2$ = **59.154**	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) = **-395.207**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-381
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.74**	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 (ug/L) at MW-381
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **7.14**	
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
Barium (ug/L) at MW-381
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **210.6** / **19**	
	= **11.084**	
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**2597.234** - **44352.36**/**19**) / (**19**-1))^{½}	
	= **3.822**	
3	SCL = **$\bar{X}$** + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **11.084** + **5.5** * **3.822**	
	= **32.104**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **19** * (**19**-1) / 2	
	= **171**	
5	S = **-0.174**	Sen's estimator of trend.
6	var(S) = **817.0**	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.
	= (**171** - **2.326** * **817.0**^{½}) / 2	
	= **52.258**	
8	LCL(S) = **-1.235**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-381
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.27**	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 (ug/L) at MW-381
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **5.108** / **19** = **0.269**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**2.72** - **26.092**/**19**) / (**19**-1))$^{1/2}$ = **0.274**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **0.269** + **5.5** * **0.274** = **1.773**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.001**	Sen's estimator of trend.
6	var(S) = **725.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**171** - **2.326** * **725.0**$^{1/2}$) / 2 = **54.185**	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) = **-0.05**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-381
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **3.9**	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
Cobalt (ug/L) at MW-381
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **68.494** / **19** = **3.605**	Compute background mean.
2	S = ((**sum[X²]** - **sum[X]**²/**N**) / (**N**-1))^½ = ((**2525.738** - **4691.428**/**19**) / (**19**-1))^½ = **11.252**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **3.605** + **5.5** * **11.252** = **65.489**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.044**	Sen's estimator of trend.
6	var(S) = **808.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - $\mathbf{Z}_{.99}$ * **var(S)**^½) / 2 = (**171** - **2.326** * **808.333**^½) / 2 = **52.435**	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) = **-0.383**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-381
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **52.78** / **19**	
	= **2.778**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**154.395** - **2785.728**/**19**) / (**19**-1))^{½}	
	= **0.657**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **2.778** + **5.5** * **0.657**	
	= **6.393**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **19** * (**19**-1) / 2	
	= **171**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **692.0**	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.
	= (**171** - **2.326** * **692.0**^{½}) / 2	
	= **54.906**	
8	LCL(S) = **-0.167**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead (ug/L) at MW-381
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **10.006** / **19** = **0.527**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**5.979** - **100.12**/**19**) / (**19**-1))^{½} = **0.199**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **0.527** + **5.5** * **0.199** = **1.619**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **652.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **652.0**^{½}) / 2 = **55.804**	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) = **-0.031**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel (ug/L) at MW-381
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **427.39** / **19** = **22.494**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**16939.189** - **182662.212**/**19**) / (**19**-1))^{½} = **20.173**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **22.494** + **5.5** * **20.173** = **133.448**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-3.563**	Sen's estimator of trend.
6	var(S) = **800.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**171** - **2.326** * **800.333**^{½}) / 2 = **52.599**	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) = **-7.303**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-381
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-381
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.37**	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 (ug/L) at MW-381
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.26**	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 (ug/L) at MW-381
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.98**	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 (ug/L) at MW-381
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **506.4** / **19** = **26.653**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**48639.18** - **256440.96/19**) / (**19**-1))^{½} = **44.185**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **26.653** + **5.5** * **44.185** = **269.672**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.158**	Sen's estimator of trend.
6	var(S) = **652.0**	Variance estimate for slope.
7	M_1(S) = (**N' - Z$_{.99}$** * **var(S)**^{½}) / 2 = (**171** - **2.326** * **652.0**^{½}) / 2 = **55.804**	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) = **-2.738**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.74**	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 (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.88**	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
Barium (ug/L) at MW-382R
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **457.5** / **19** = **24.079**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**11175.27** - **209306.25**/**19**) / (**19**-1))^{½} = **2.974**	Compute background sd.
3	SCL = **$\overline{X}$** + **F** * **S** = **24.079** + **5.5** * **2.974** = **40.433**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **-0.498**	Sen's estimator of trend.
6	var(S) = **816.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**171** - **2.326** * **816.0**^{½}) / 2 = **52.278**	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) = **-0.96**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.27**	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 (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.112**	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 (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **5.91**	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 (ug/L) at MW-382R
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **53.018** / **19** = **2.79**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**260.543** - **2810.908**/**19**) / (**19**-1))$^{1/2}$ = **2.501**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **2.79** + **5.5** * **2.501** = **16.547**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **0.025**	Sen's estimator of trend.
6	var(S) = **816.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**171** - **2.326** * **816.0**$^{1/2}$) / 2 = **52.278**	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) = **-0.346**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.0**	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 (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.586**	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 (ug/L) at MW-382R
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **70.35** / **16** = **4.397**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**326.777** - **4949.123**/**16**) / (**16**-1))$^{1/2}$ = **1.079**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **4.397** + **5.5** * **1.079** = **10.33**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **16** * (**16**-1) / 2 = **120**	Number of sample pairs during trend detection period.
5	S = **0.147**	Sen's estimator of trend.
6	var(S) = **492.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**120** - **2.326** * **492.333**$^{1/2}$) / 2 = **34.195**	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) = **-0.179**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.42**	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 (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.26**	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 (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.15**	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 (ug/L) at MW-382R
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **175.0**	
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
Antimony (ug/L) at MW-390
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **1.0**	
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 (ug/L) at MW-390
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **257.85** / **17** = **15.168**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**4093.063** - **66486.623**/**17**) / (**17**-1))^{½} = **3.373**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **15.168** + **5.5** * **3.373** = **33.722**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **17** * (**17**-1) / 2 = **136**	Number of sample pairs during trend detection period.
5	S = **0.079**	Sen's estimator of trend.
6	var(S) = **587.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**136** - **2.326** * **587.333**^{½}) / 2 = **39.815**	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) = **-0.732**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium (ug/L) at MW-390
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{469.4} / \mathbf{17}$ $= \mathbf{27.612}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{13928.72} - \mathbf{220336.36/17}) / (\mathbf{17}-1))^{1/2}$ $= \mathbf{7.777}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{27.612} + \mathbf{5.5} * \mathbf{7.777}$ $= \mathbf{70.386}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{17} * (\mathbf{17}-1) / 2$ $= \mathbf{136}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-0.51}$	Sen's estimator of trend.
6	$var(S) = \mathbf{589.333}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{136} - \mathbf{2.326} * \mathbf{589.333}^{1/2}) / 2$ $= \mathbf{39.767}$	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	$LCL(S) = \mathbf{-1.844}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-390
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.27**	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
Cadmium (ug/L) at MW-390
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **5.345** / **17**	
	= **0.314**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**2.77** - **28.569**/**17**) / (**17**-1))^{½}	
	= **0.261**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **0.314** + **5.5** * **0.261**	
	= **1.75**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **17** * (**17**-1) / 2	
	= **136**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **545.0**	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.
	= (**136** - **2.326** * **545.0**^{½}) / 2	
	= **40.849**	
8	LCL(S) = **-0.032**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-390
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **5.51**	
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 (ug/L) at MW-390
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{1806.1} / \textbf{17}$ $= \textbf{106.241}$	Compute background mean.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$ $= ((\textbf{193164.31} - \textbf{3.26}\times\textbf{10}^{\textbf{6}}/\textbf{17}) / (\textbf{17}-1))^{½}$ $= \textbf{8.952}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{106.241} + \textbf{5.5} * \textbf{8.952}$ $= \textbf{155.475}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{17} * (\textbf{17}-1) / 2$ $= \textbf{136}$	Number of sample pairs during trend detection period.
5	$S = \textbf{0.618}$	Sen's estimator of trend.
6	$var(S) = \textbf{585.667}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$ $= (\textbf{136} - \textbf{2.326} * \textbf{585.667}^{½}) / 2$ $= \textbf{39.855}$	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	$LCL(S) = \textbf{-1.931}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-390
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.19**	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 (ug/L) at MW-390
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **25.881** / **17** = **1.522**	Compute background mean.
2	S = ((**sum[X²] - sum[X]²/N**) / (**N**-1))^{½} = ((**47.289** - **669.826/17**) / (**17**-1))^{½} = **0.702**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **1.522** + **5.5** * **0.702** = **5.384**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **17** * (**17**-1) / 2 = **136**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **497.333**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**136** - **2.326** * **497.333**^{½}) / 2 = **42.064**	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) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel (ug/L) at MW-390
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **914.0** / **17** = **53.765**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**49658.72** - **835396.0**/**17**) / (**17**-1))^{½} = **5.689**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **53.765** + **5.5** * **5.689** = **85.052**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **17** * (**17**-1) / 2 = **136**	Number of sample pairs during trend detection period.
5	S = **0.014**	Sen's estimator of trend.
6	var(S) = **588.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**136** - **2.326** * **588.333**^{½}) / 2 = **39.791**	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) = **-1.332**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-390
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-390
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.42**	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
Thallium (ug/L) at MW-390
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.17**	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 (ug/L) at MW-390
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **8.91**	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 (ug/L) at MW-390
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **2065.9** / **16**	
	= **129.119**	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\mathbf{375847.51} - \mathbf{4.27}\times\mathbf{10^6}/\mathbf{16}) / (\mathbf{16}-1))^{1/2}$	
	= **85.284**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **129.119** + **5.5** * **85.284**	
	= **598.182**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **16** * (**16**-1) / 2	
	= **120**	
5	S = **-0.341**	Sen's estimator of trend.
6	var(S) = **493.333**	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.
	$= (\mathbf{120} - \mathbf{2.326} * \mathbf{493.333}^{1/2}) / 2$	
	= **34.168**	
8	LCL(S) = **-21.372**	One-sided lower confidence limit for slope.

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	ug/L	MW-601	8	2	10			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic	ug/L	MW-601	8	2	10			4.0000	4.0000			3.8200	nonpar	.99	**
Barium	ug/L	MW-601	8	2	10	15.7275	6.8264	21.2000	39.2000	15.7275	32.3736	53.2727	normal		
Beryllium	ug/L	MW-601	8	2	10			4.0000	4.0000			1.0800	nonpar	.99	**
Cadmium	ug/L	MW-601	8	2	10	0.5500	0.3470	0.8000	0.8000	0.5500	0.5500	2.4585	normal		
Chromium	ug/L	MW-601	8	2	10			8.0000	8.0000			4.4000	nonpar	.99	**
Cobalt	ug/L	MW-601	7	2	10	175.5143	96.8444	26.5000	19.3000	175.5143	175.5143	708.1585	normal		
Copper	ug/L	MW-601	8	2	10			4.0000	4.0000			4.0000	nonpar	.99	**
Lead	ug/L	MW-601	8	2	10	0.7870	0.3238	4.0000	4.0000	0.7870	0.7870	2.5682	normal		
Nickel	ug/L	MW-601	8	2	10	227.2000	163.1237	46.8000	25.8000	227.2000	227.2000	1124.3805	normal		
Selenium	ug/L	MW-601	8	2	10			4.0000	4.0000			3.8400	nonpar	.99	**
Silver	ug/L	MW-601	8	2	10			4.0000	4.0000			1.6800	nonpar	.99	**
Thallium	ug/L	MW-601	8	2	10			2.0000	2.0000			1.0400	nonpar	.99	**
Vanadium	ug/L	MW-601	8	2	10			20.0000	20.0000			4.4000	nonpar	.99	**
Zinc	ug/L	MW-601	8	2	10	124.2500	114.4054	20.0000	20.0000	124.2500	124.2500	753.4797	normal		
Antimony	ug/L	MW-602	8	2	10			2.0000	2.0000			1.1000	nonpar	.99	**
Arsenic	ug/L	MW-602	8	2	10	2.9013	1.1852	4.0000	4.0000	2.9013	2.9013	9.4200	normal		
Barium	ug/L	MW-602	8	2	10	11.6750	0.9020	10.8000	17.7000	11.6750	16.7980	16.6359	normal		
Beryllium	ug/L	MW-602	8	2	10			4.0000	4.0000			0.5400	nonpar	.99	**
Cadmium	ug/L	MW-602	8	2	10	0.4625	0.3620	0.8000	0.8000	0.4625	0.4625	2.4534	normal		
Chromium	ug/L	MW-602	8	2	10			8.0000	8.0000			1.1000	nonpar	.99	**
Cobalt	ug/L	MW-602	8	2	10	208.3750	24.7787	198.0000	236.0000	208.3750	211.2213	344.6576	normal		
Copper	ug/L	MW-602	8	2	10			4.0000	4.0000			4.0000	nonpar	.99	**
Lead	ug/L	MW-602	8	2	10			4.0000	4.0000			0.9600	nonpar	.99	**
Nickel	ug/L	MW-602	8	2	10	296.8750	41.8652	299.0000	361.0000	296.8750	319.1348	527.1337	normal		
Selenium	ug/L	MW-602	8	2	10			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-602	8	2	10			4.0000	4.0000			0.4200	nonpar	.99	**
Thallium	ug/L	MW-602	8	2	10			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-602	8	2	10			20.0000	20.0000			1.1000	nonpar	.99	**
Zinc	ug/L	MW-602	8	2	10	131.2500	26.5155	142.0000	166.0000	131.2500	139.4845	277.0852	normal		
Antimony	ug/L	MW-603	8	2	10			2.0000	2.0000			1.1000	nonpar	.99	**
Arsenic	ug/L	MW-603	8	2	10	5.1550	0.9458	5.1000	4.0000	5.1550	5.1550	10.3571	normal		
Barium	ug/L	MW-603	8	2	10	30.5000	8.4703	21.3000	19.2000	30.5000	30.5000	77.0866	normal		
Beryllium	ug/L	MW-603	8	2	10			4.0000	4.0000			0.2700	nonpar	.99	**
Cadmium	ug/L	MW-603	8	2	10	0.1878	0.0608	0.8000	0.8000	0.1878	0.1878	0.5219	normal		
Chromium	ug/L	MW-603	8	2	10			8.0000	8.0000			4.4000	nonpar	.99	**
Cobalt	ug/L	MW-603	8	2	10	32.2125	14.8396	22.1000	15.6000	32.2125	32.2125	113.8301	normal		
Copper	ug/L	MW-603	8	2	10			4.0000	4.0000			3.2000	nonpar	.99	**
Lead	ug/L	MW-603	8	2	10	1.1030	0.5157	4.0000	4.0000	1.1030	1.1030	3.9396	normal		
Nickel	ug/L	MW-603	8	2	10	15.6813	9.4611	11.8000	6.6000	15.6813	15.6813	67.7174	normal		
Selenium	ug/L	MW-603	8	2	10			4.0000	4.0000			1.0000	nonpar	.99	**
Silver	ug/L	MW-603	8	2	10			4.0000	4.0000			0.4200	nonpar	.99	**
Thallium	ug/L	MW-603	8	2	10			2.0000	2.0000			0.2600	nonpar	.99	**
Vanadium	ug/L	MW-603	8	2	10			20.0000	20.0000			4.4000	nonpar	.99	**
Zinc	ug/L	MW-603	8	2	10	17.8375	4.0362	20.0000	20.0000	17.8375	17.8375	40.0368	normal		

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).
* - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

Table 4

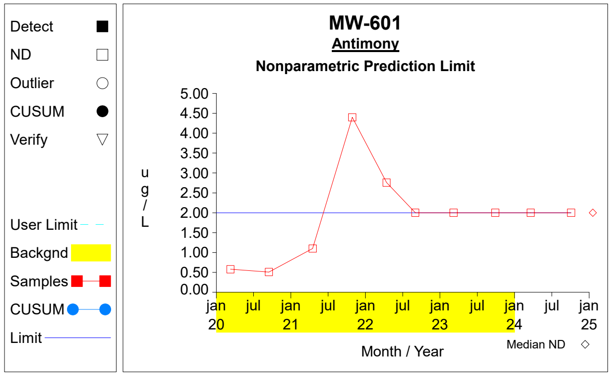
Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Cobalt	ug/L	MW-601	03/06/2023	0.8000		03/09/2020-09/29/2023	8	0.6808

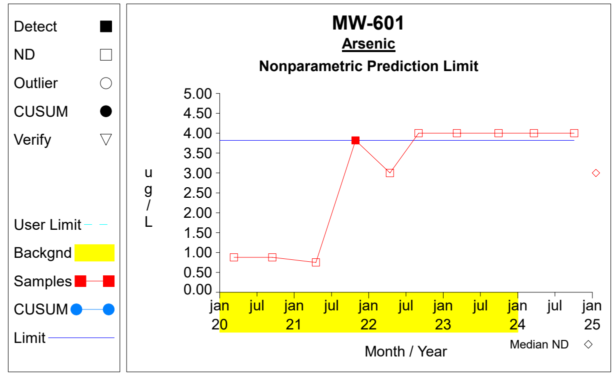
N = Total number of independent measurements in background at each well.
Date Range = Dates of the first and last measurements included in background at each well.
Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

South Central Iowa SWA [GW] October 2024

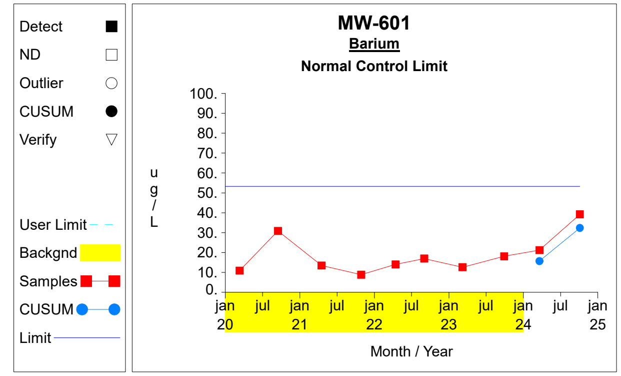
Intra-Well Control Charts / Prediction Limits



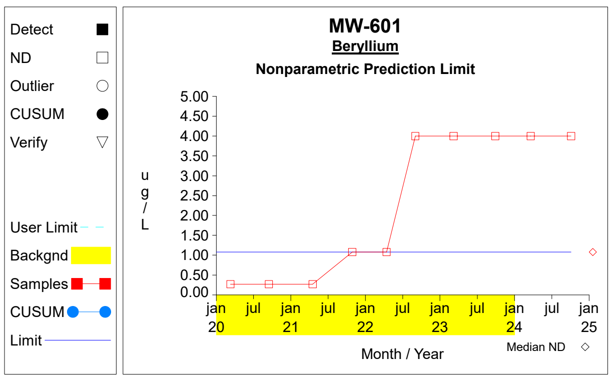
Graph 1



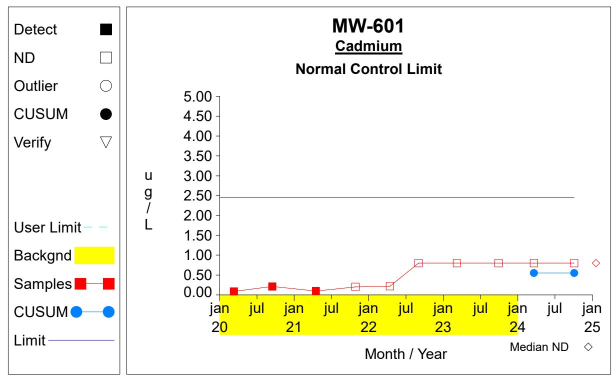
Graph 2



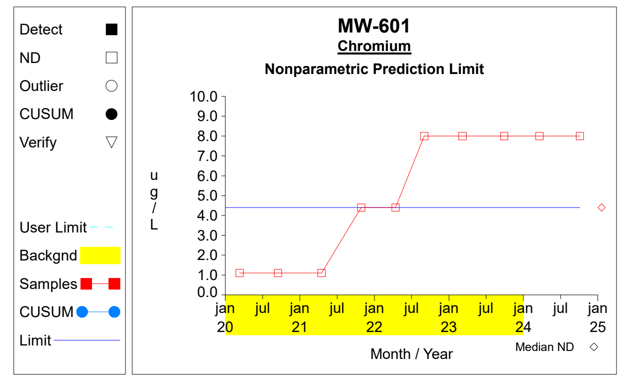
Graph 3



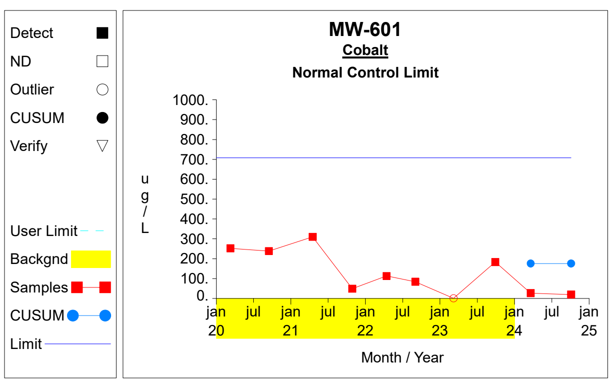
Graph 4



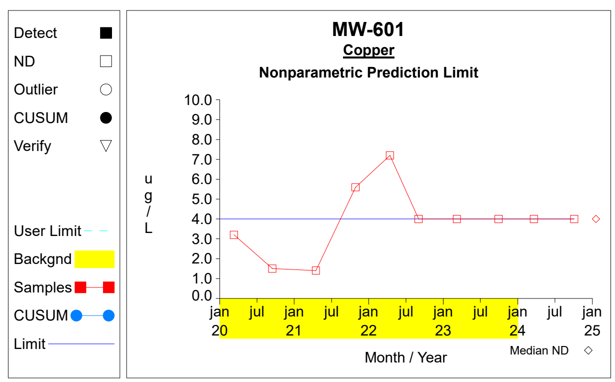
Graph 5



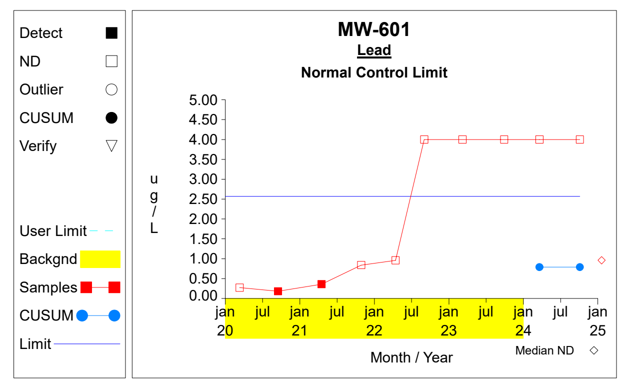
Graph 6



Graph 7



Graph 8



Graph 9

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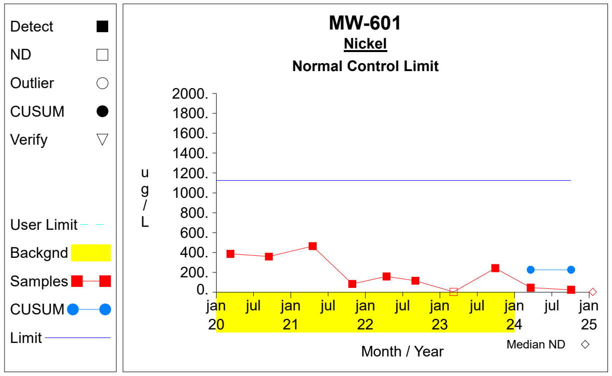
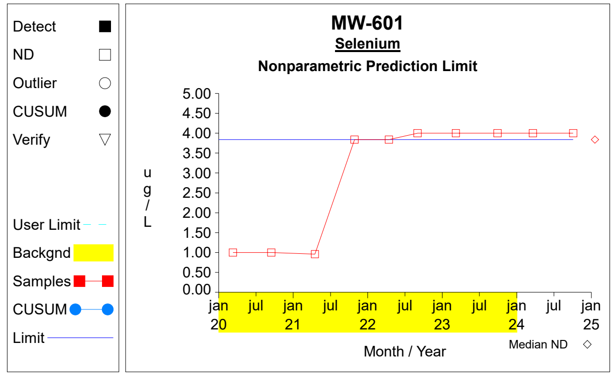
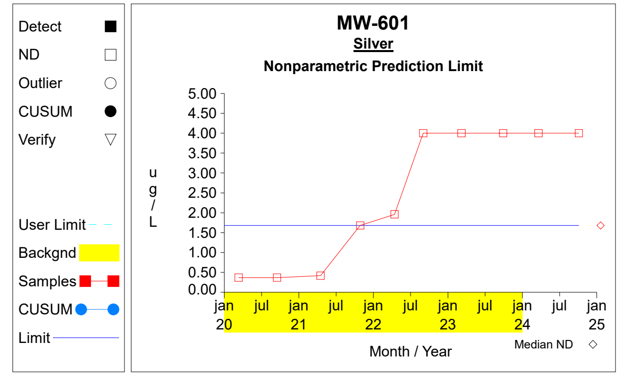
Intra-Well Control Charts / Prediction Limits



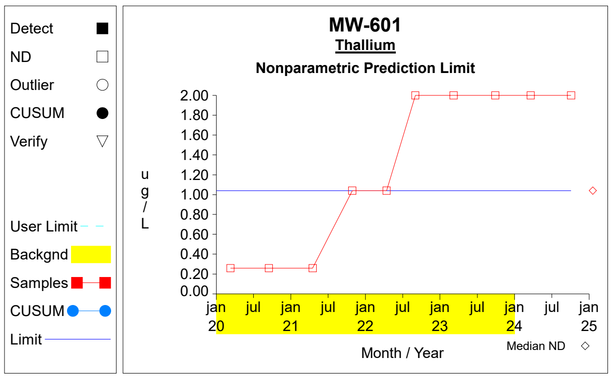
Graph 10



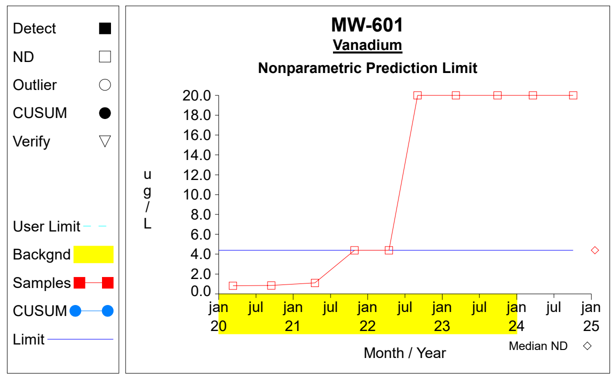
Graph 11



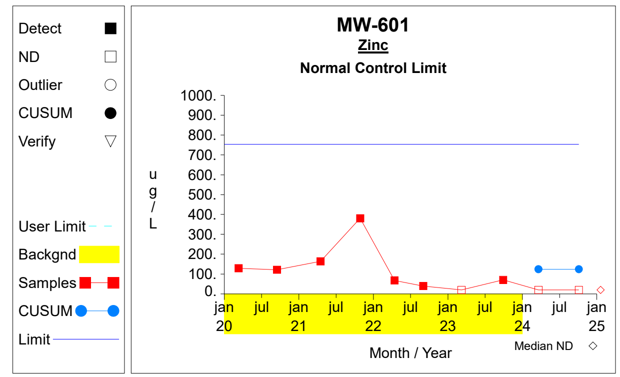
Graph 12



Graph 13



Graph 14



Graph 15

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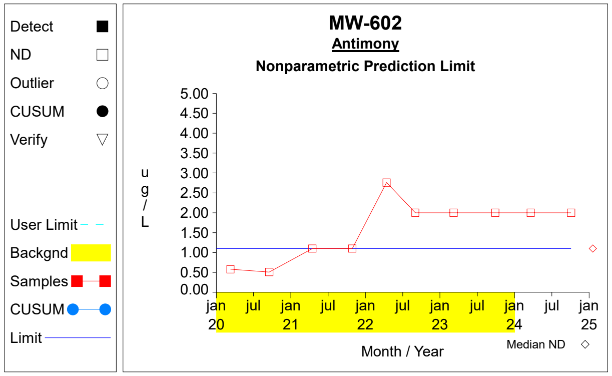
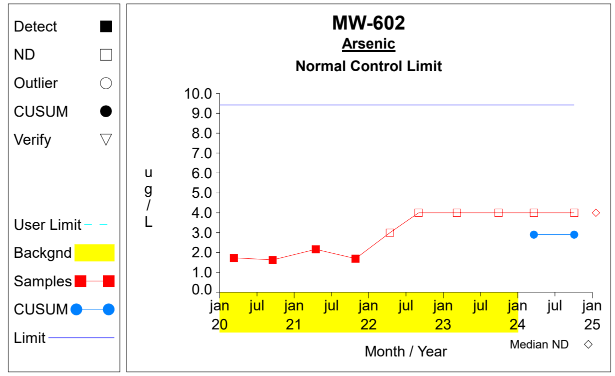
South Central Iowa SWA [GW] October 2024

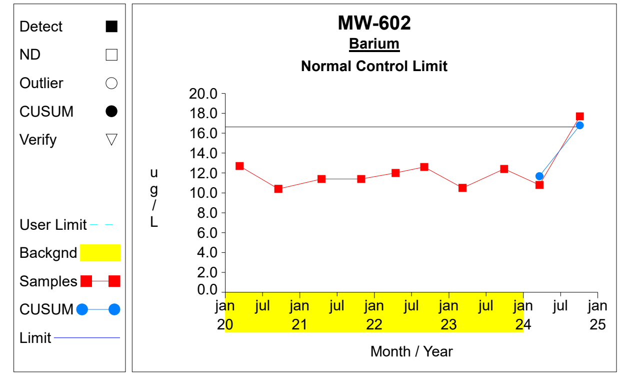
Intra-Well Control Charts / Prediction Limits



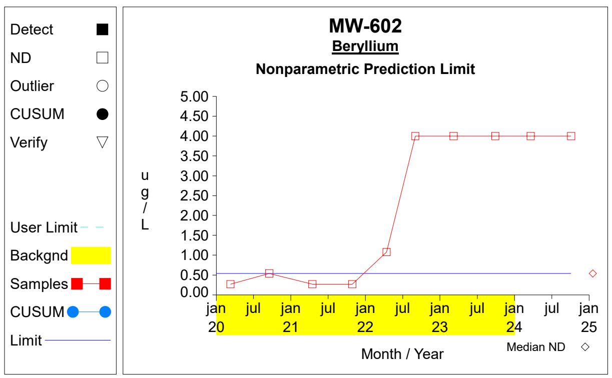
Graph 16



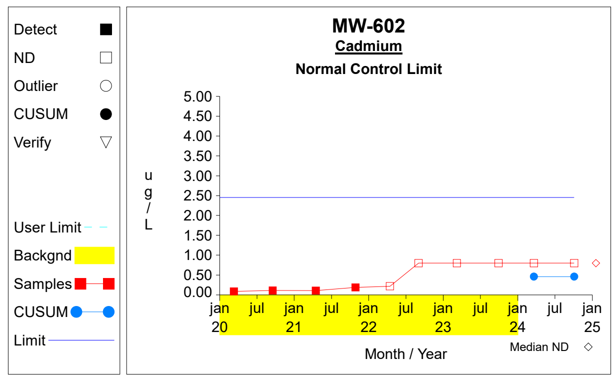
Graph 17



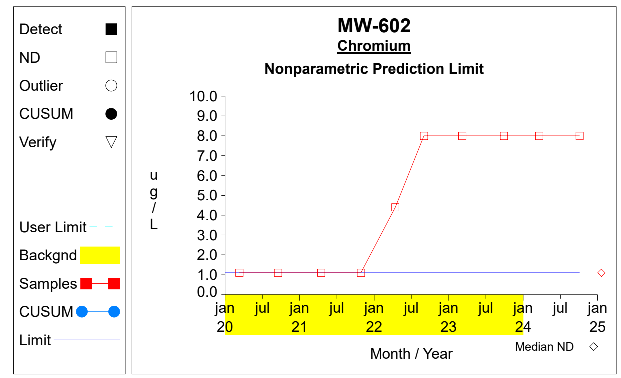
Graph 18



Graph 19



Graph 20



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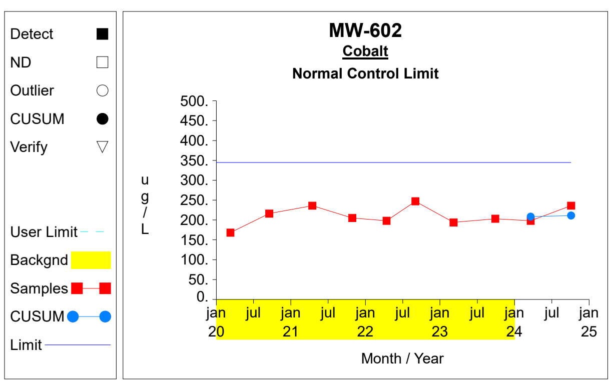
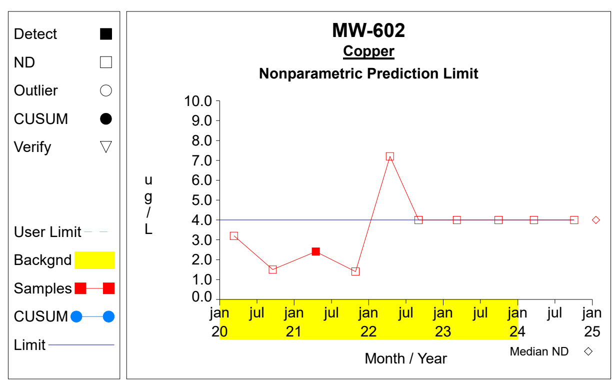
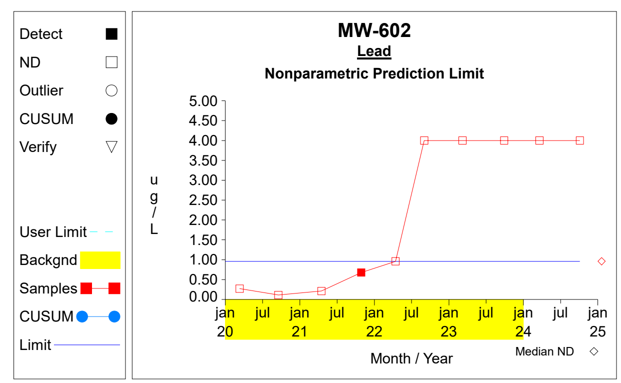


Graph 22



Graph 23



Graph 24

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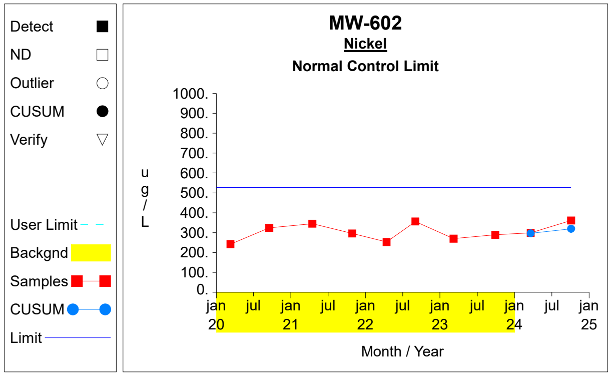
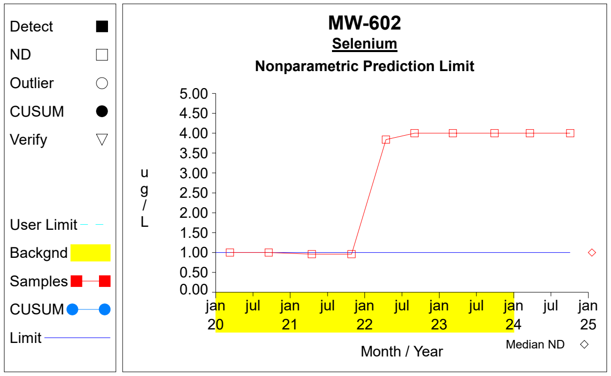
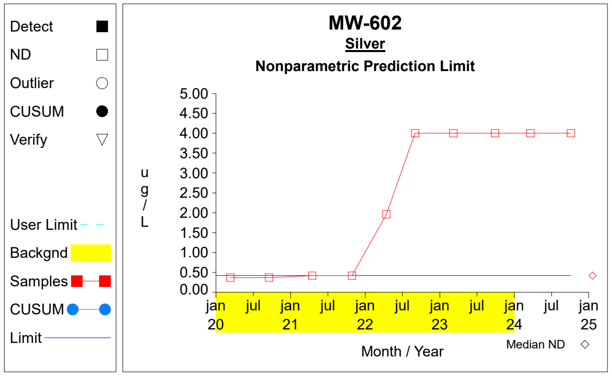
Intra-Well Control Charts / Prediction Limits



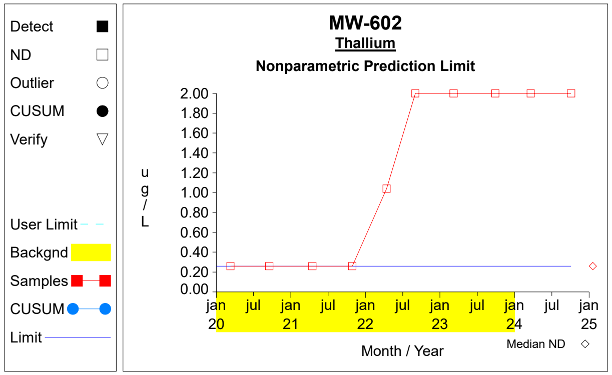
Graph 25



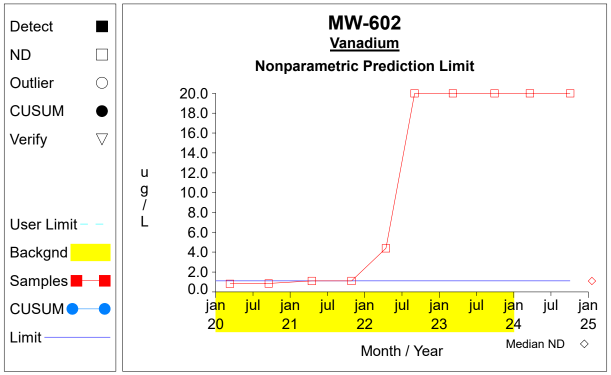
Graph 26



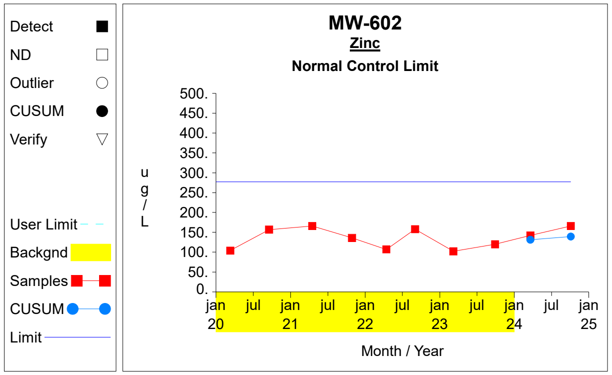
Graph 27



Graph 28



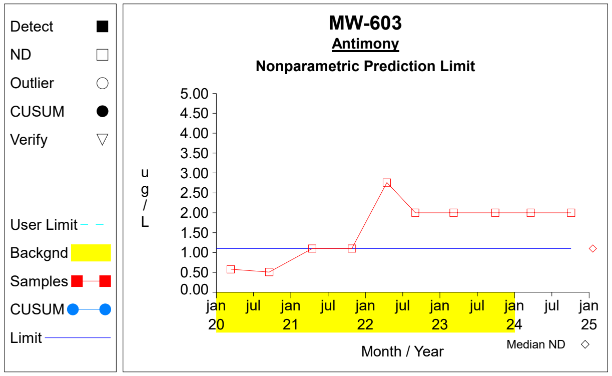
Graph 29



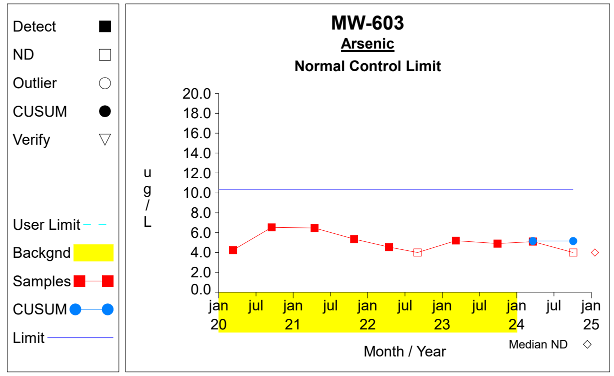
Graph 30

South Central Iowa SWA [GW] October 2024

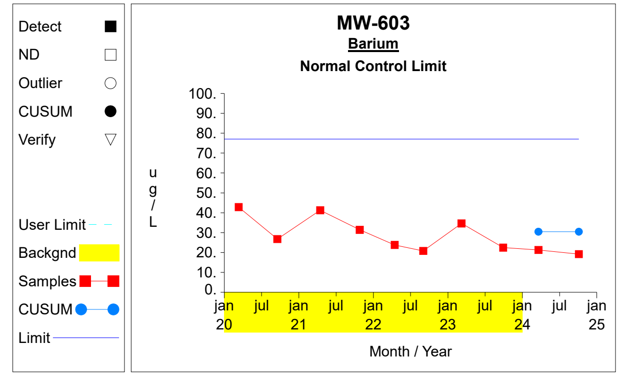
Intra-Well Control Charts / Prediction Limits



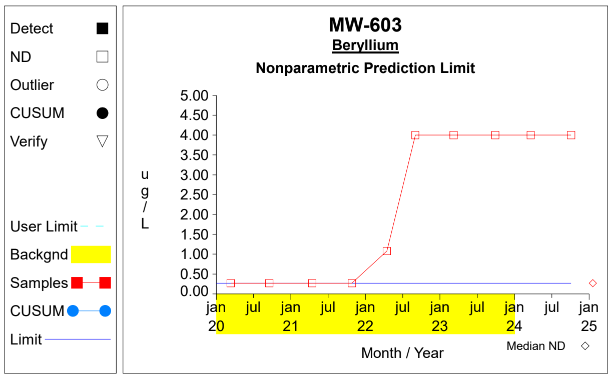
Graph 31



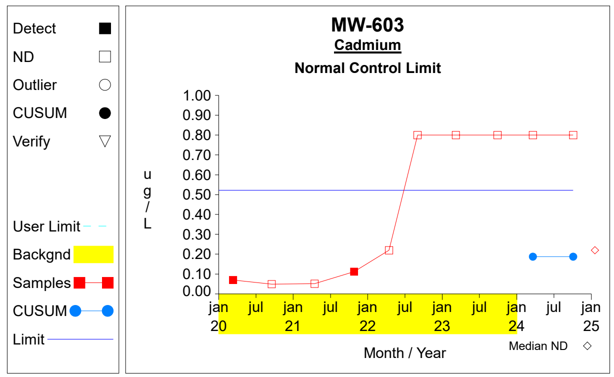
Graph 32



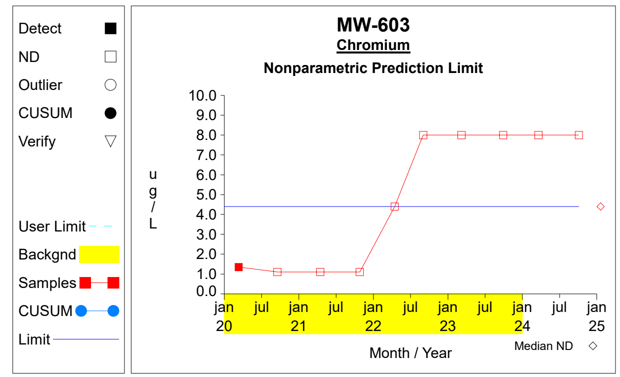
Graph 33



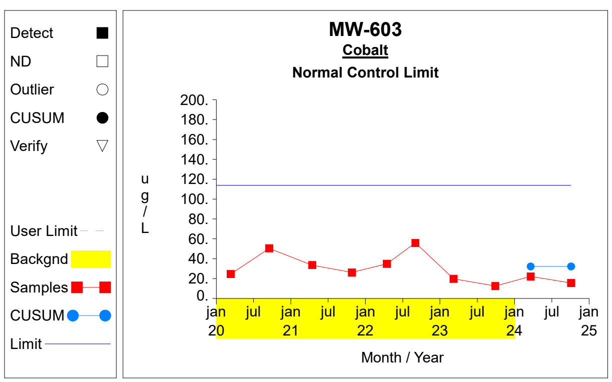
Graph 34



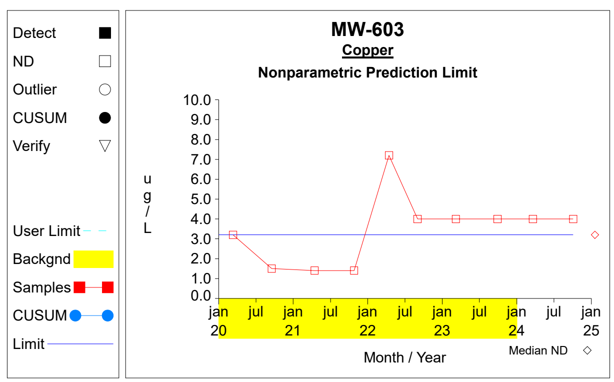
Graph 35



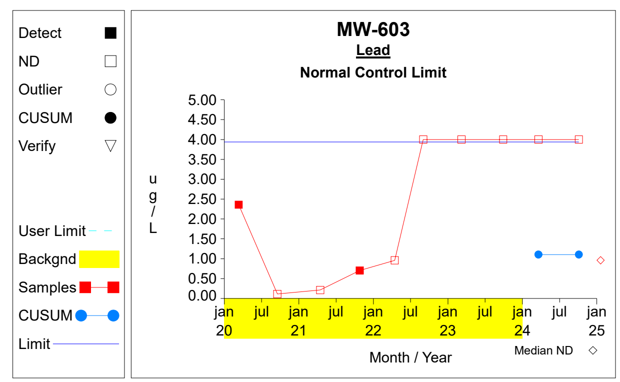
Graph 36



Graph 37



Graph 38



Graph 39

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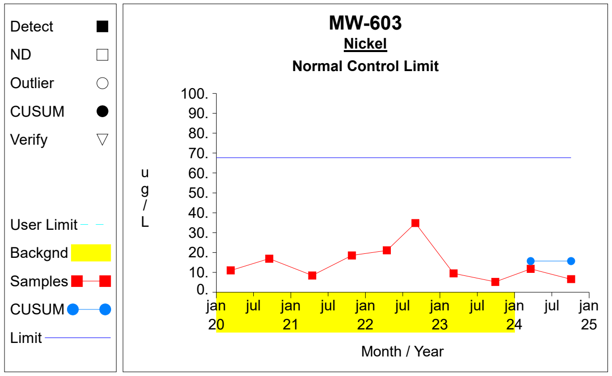
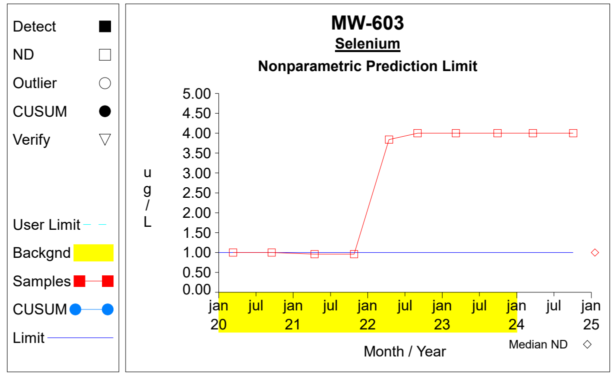
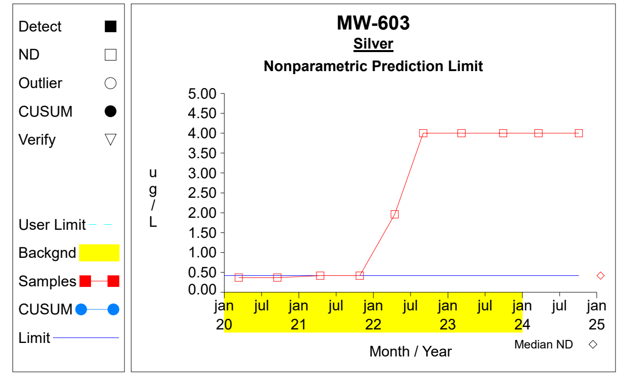
Intra-Well Control Charts / Prediction Limits



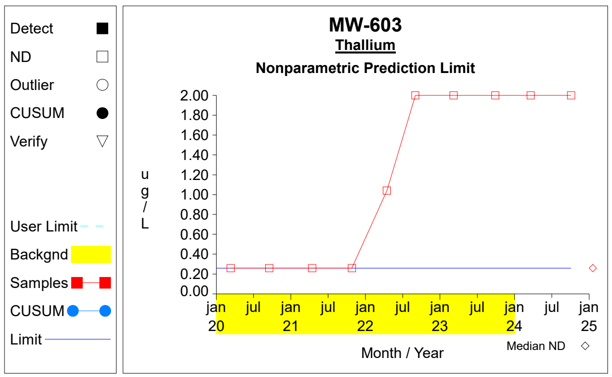
Graph 40



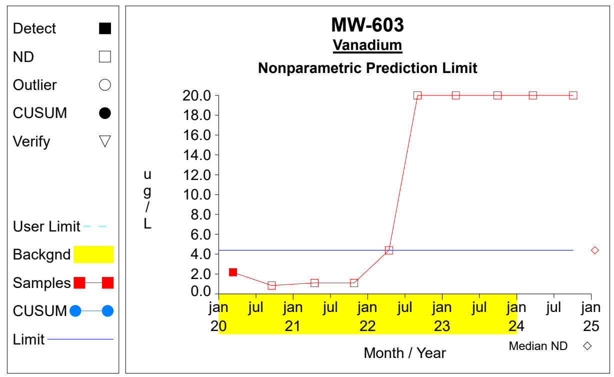
Graph 41



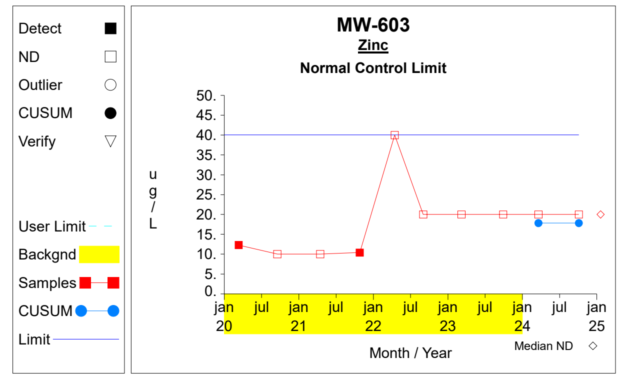
Graph 42



Graph 43



Graph 44



Graph 45

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-601
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 (ug/L) at MW-601
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **3.82**	
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
Barium (ug/L) at MW-601
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **125.82** / **8** = **15.728**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**2305.032** - **15830.672**/**8**) / (**8**-1))^{½} = **6.826**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **15.728** + **5.5** * **6.826** = **53.273**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **8** * (**8**-1) / 2 = **28**	Number of sample pairs during trend detection period.
5	S = **1.251**	Sen's estimator of trend.
6	var(S) = **65.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**28** - **2.326** * **65.333**^{½}) / 2 = **4.6**	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) = **-8.685**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-601
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.08**	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 (ug/L) at MW-601
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{4.4} / \mathbf{8}$ $= \mathbf{0.55}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{3.263} - \mathbf{19.36}/\mathbf{8}) / (\mathbf{8}-1))^{1/2}$ $= \mathbf{0.347}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{0.55} + \mathbf{5.5} * \mathbf{0.347}$ $= \mathbf{2.459}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{8} * (\mathbf{8}-1) / 2$ $= \mathbf{28}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.219}$	Sen's estimator of trend.
6	$var(S) = \mathbf{48.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{28} - \mathbf{2.326} * \mathbf{48.667}^{1/2}) / 2$ $= \mathbf{5.887}$	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	$LCL(S) = \mathbf{0.0}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-601
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.4**	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 (ug/L) at MW-601
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1228.6** / **7** = **175.514**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**271909.88** - **1.51**x**10^6**/**7**) / (**7**-1))^{½} = **96.844**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **175.514** + **5.5** * **96.844** = **708.158**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **7** * (**7**-1) / 2 = **21**	Number of sample pairs during trend detection period.
5	S = **-51.735**	Sen's estimator of trend.
6	var(S) = **44.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**21** - **2.326** * **44.333**^{½}) / 2 = **2.756**	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) = **-176.509**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-601
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
Lead (ug/L) at MW-601
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{6.296} / \mathbf{8}$ $= \mathbf{0.787}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{5.689} - \mathbf{39.64}/\mathbf{8}) / (\mathbf{8}-1))^{1/2}$ $= \mathbf{0.324}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{0.787} + \mathbf{5.5} * \mathbf{0.324}$ $= \mathbf{2.568}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{8} * (\mathbf{8}-1) / 2$ $= \mathbf{28}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \mathbf{37.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{28} - \mathbf{2.326} * \mathbf{37.0}^{1/2}) / 2$ $= \mathbf{6.926}$	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	$LCL(S) = \mathbf{0.0}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel (ug/L) at MW-601
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **1817.6** / **8**	
	= **227.2**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**599224.16** - **3.30**x**10^6**/**8**) / (**8**-1))^{½}	
	= **163.124**	
3	SCL = **$\bar{X}$** + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **227.2** + **5.5** * **163.124**	
	= **1124.38**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **8** * (**8**-1) / 2	
	= **28**	
5	S = **-108.849**	Sen's estimator of trend.
6	var(S) = **65.333**	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.
	= (**28** - **2.326** * **65.333**^{½}) / 2	
	= **4.6**	
8	LCL(S) = **-244.476**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-601
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **3.84**	
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 (ug/L) at MW-601
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.68**	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 (ug/L) at MW-601
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.04**	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 (ug/L) at MW-601
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.4**	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 (ug/L) at MW-601
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **994.0** / **8** = **124.25**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**215124.66** - **988036.0**/**8**) / (**8**-1))^{½} = **114.405**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **124.25** + **5.5** * **114.405** = **753.48**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **8** * (**8**-1) / 2 = **28**	Number of sample pairs during trend detection period.
5	S = **-36.234**	Sen's estimator of trend.
6	var(S) = **65.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**28** - **2.326** * **65.333**^{½}) / 2 = **4.6**	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) = **-122.855**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-602
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.1**	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 (ug/L) at MW-602
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **23.21** / **8** = **2.901**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**77.172** - **538.704**/**8**) / (**8**-1))$^{1/2}$ = **1.185**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **2.901** + **5.5** * **1.185** = **9.42**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **8** * (**8**-1) / 2 = **28**	Number of sample pairs during trend detection period.
5	S = **0.77**	Sen's estimator of trend.
6	var(S) = **56.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**28** - **2.326** * **56.667**$^{1/2}$) / 2 = **5.245**	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
Barium (ug/L) at MW-602
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **93.4** / **8** = **11.675**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**1096.14** - **8723.56/8**) / (**8**-1))^{½} = **0.902**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **11.675** + **5.5** * **0.902** = **16.636**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **8** * (**8**-1) / 2 = **28**	Number of sample pairs during trend detection period.
5	S = **0.157**	Sen's estimator of trend.
6	var(S) = **64.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**28** - **2.326** * **64.333**^{½}) / 2 = **4.672**	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) = **-0.922**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-602
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.54**	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 (ug/L) at MW-602
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **3.7** / **8**	
	= **0.463**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$	Compute background sd.
	= ((**2.628** - **13.69**/**8**) / (**8**-1))$^{1/2}$	
	= **0.362**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **0.463** + **5.5** * **0.362**	
	= **2.453**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **8** * (**8**-1) / 2	
	= **28**	
5	S = **0.232**	Sen's estimator of trend.
6	var(S) = **56.667**	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.
	= (**28** - **2.326** * **56.667**$^{1/2}$) / 2	
	= **5.245**	
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-602
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **1.1**	
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 (ug/L) at MW-602
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1667.0** / **8** = **208.375**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**351659.0** - **2.78**x**10^6**/**8**) / (**8**-1))^{½} = **24.779**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **208.375** + **5.5** * **24.779** = **344.658**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **8** * (**8**-1) / 2 = **28**	Number of sample pairs during trend detection period.
5	S = **1.188**	Sen's estimator of trend.
6	var(S) = **65.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**28** - **2.326** * **65.333**^{½}) / 2 = **4.6**	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) = **-28.621**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-602
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 (ug/L) at MW-602
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **0.96**	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 (ug/L) at MW-602
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2375.0** / **8** = **296.875**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{717347.0} - \mathbf{5.64}\times 10^{6}/\mathbf{8}) / (\mathbf{8}-1))^{1/2}$ = **41.865**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **296.875** + **5.5** * **41.865** = **527.134**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **8** * (**8**-1) / 2 = **28**	Number of sample pairs during trend detection period.
5	S = **6.61**	Sen's estimator of trend.
6	var(S) = **65.333**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{28} - \mathbf{2.326} * \mathbf{65.333}^{1/2}) / 2$ = **4.6**	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) = **-73.848**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-602
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-602
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.42**	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 (ug/L) at MW-602
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.26**	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 (ug/L) at MW-602
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.1**	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 (ug/L) at MW-602
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1050.0** / **8** = **131.25**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{142734.0} - \mathbf{1.10{\times}10^6/8}) / (\mathbf{8}-1))^{½}$ = **26.515**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **131.25** + **5.5** * **26.515** = **277.085**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **8** * (**8**-1) / 2 = **28**	Number of sample pairs during trend detection period.
5	S = **-5.687**	Sen's estimator of trend.
6	var(S) = **65.333**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{28} - \mathbf{2.326} * \mathbf{65.333}^{½}) / 2$ = **4.6**	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) = **-43.531**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony (ug/L) at MW-603
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.1**	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 (ug/L) at MW-603
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **41.24** / **8**	
	= **5.155**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$	Compute background sd.
	= ((**218.854** - **1700.738**/**8**) / (**8**-1))$^{1/2}$	
	= **0.946**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **5.155** + **5.5** * **0.946**	
	= **10.357**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **8** * (**8**-1) / 2	
	= **28**	
5	S = **-0.381**	Sen's estimator of trend.
6	var(S) = **65.333**	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.
	= (**28** - **2.326** * **65.333**$^{1/2}$) / 2	
	= **4.6**	
8	LCL(S) = **-1.641**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium (ug/L) at MW-603
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **244.0** / **8** = **30.5**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**7944.22** - **59536.0**/**8**) / (**8**-1))^{½} = **8.47**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **30.5** + **5.5** * **8.47** = **77.087**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **8** * (**8**-1) / 2 = **28**	Number of sample pairs during trend detection period.
5	S = **-4.08**	Sen's estimator of trend.
6	var(S) = **65.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**28** - **2.326** * **65.333**^{½}) / 2 = **4.6**	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) = **-16.791**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium (ug/L) at MW-603
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.27**	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 (ug/L) at MW-603
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **1.502** / **8**	
	= **0.188**	
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½}	Compute background sd.
	= ((**0.308** - **2.256**/**8**) / (**8**-1))^{½}	
	= **0.061**	
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **0.188** + **5.5** * **0.061**	
	= **0.522**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **8** * (**8**-1) / 2	
	= **28**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **37.0**	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.
	= (**28** - **2.326** * **37.0**^{½}) / 2	
	= **6.926**	
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium (ug/L) at MW-603
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **4.4**	
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 (ug/L) at MW-603
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **257.7** / **8** = **32.213**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**9842.65** - **66409.29**/**8**) / (**8**-1))$^{1/2}$ = **14.84**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **32.213** + **5.5** * **14.84** = **113.83**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **8** * (**8**-1) / 2 = **28**	Number of sample pairs during trend detection period.
5	S = **-5.885**	Sen's estimator of trend.
6	var(S) = **65.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**28** - **2.326** * **65.333**$^{1/2}$) / 2 = **4.6**	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) = **-19.001**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper (ug/L) at MW-603
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **3.2**	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
Lead (ug/L) at MW-603
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **8.824** / **8** = **1.103**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**11.595** - **77.863/8**) / (**8**-1))^{½} = **0.516**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **1.103** + **5.5** * **0.516** = **3.94**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **8** * (**8**-1) / 2 = **28**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **37.0**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**28** - **2.326** * **37.0**^{½}) / 2 = **6.926**	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) = **-0.47**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel (ug/L) at MW-603
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{125.45} / \textbf{8}$ $= \textbf{15.681}$	Compute background mean.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$ $= ((\textbf{2593.803} - \textbf{15737.703}/\textbf{8}) / (\textbf{8}-1))^{½}$ $= \textbf{9.461}$	Compute background sd.
3	$SCL = \overline{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{15.681} + \textbf{5.5} * \textbf{9.461}$ $= \textbf{67.717}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{8} * (\textbf{8}-1) / 2$ $= \textbf{28}$	Number of sample pairs during trend detection period.
5	$S = \textbf{0.026}$	Sen's estimator of trend.
6	$var(S) = \textbf{65.333}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$ $= (\textbf{28} - \textbf{2.326} * \textbf{65.333}^{½}) / 2$ $= \textbf{4.6}$	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	$LCL(S) = \textbf{-11.729}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium (ug/L) at MW-603
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **1.0**	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 (ug/L) at MW-603
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.42**	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 (ug/L) at MW-603
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.26**	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 (ug/L) at MW-603
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **4.4**	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 2 - Intra-Well Control Charts / Prediction Limits
Zinc (ug/L) at MW-603
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **142.7** / **8**	
	= **17.838**	
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½}	Compute background sd.
	= ((**2659.45** - **20363.29/8**) / (**8**-1))^{½}	
	= **4.036**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **17.838** + **5.5** * **4.036**	
	= **40.037**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **8** * (**8**-1) / 2	
	= **28**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **37.0**	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.
	= (**28** - **2.326** * **37.0**^{½}) / 2	
	= **6.926**	
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Attachment C

Summary Tables and Graphs for the Interwell Comparisons

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Antimony	ug/L	MW-307	09/18/2012	ND	12.0000	1.3200	**
Antimony	ug/L	MW-307	03/27/2013	ND	6.0000	1.3200	**
Antimony	ug/L	MW-307	09/26/2013	ND	6.0000	1.3200	**
Antimony	ug/L	MW-307	04/15/2014	ND	6.0000	1.3200	**
Antimony	ug/L	MW-307	09/01/2015	ND	1.0000	1.3200	**
Antimony	ug/L	MW-307	03/22/2016	ND	0.2370	1.3200	**
Antimony	ug/L	MW-307	10/21/2016	ND	0.2370	1.3200	**
Antimony	ug/L	MW-307	03/08/2017	ND	0.1850	1.3200	**
Antimony	ug/L	MW-307	09/25/2017	ND	0.1850	1.3200	**
Antimony	ug/L	MW-307	03/13/2018	ND	0.7400	1.3200	**
Antimony	ug/L	MW-307	10/01/2018	ND	1.3200		
Antimony	ug/L	MW-307	03/27/2019	ND	0.5300	1.3200	**
Antimony	ug/L	MW-307	09/23/2019	ND	2.1200	1.3200	**
Antimony	ug/L	MW-307	03/09/2020	ND	0.5800	1.3200	**
Antimony	ug/L	MW-307	09/17/2020	ND	0.5100	1.3200	**
Antimony	ug/L	MW-307	04/16/2021	ND	1.1000	1.3200	**
Antimony	ug/L	MW-307	10/28/2021	ND	1.1000	1.3200	**
Antimony	ug/L	MW-307	04/13/2022	ND	2.7600	1.3200	**
Antimony	ug/L	MW-307	09/01/2022	ND	2.0000	1.3200	**
Antimony	ug/L	MW-307	03/06/2023	ND	2.0000	1.3200	**
Antimony	ug/L	MW-307	09/29/2023		4.4000		
Antimony	ug/L	MW-307	03/19/2024	ND	2.0000	1.3200	**
Antimony	ug/L	MW-307	10/03/2024	ND	2.0000	1.3200	**
Arsenic	ug/L	MW-307	09/18/2012		2.0100		
Arsenic	ug/L	MW-307	03/27/2013	ND	2.0000	2.0200	**
Arsenic	ug/L	MW-307	09/26/2013		4.6700		
Arsenic	ug/L	MW-307	04/15/2014	ND	1.0000	2.0200	**
Arsenic	ug/L	MW-307	09/01/2015		3.7000		
Arsenic	ug/L	MW-307	03/22/2016		4.3500		
Arsenic	ug/L	MW-307	10/21/2016		3.9600		
Arsenic	ug/L	MW-307	03/08/2017	ND	5.0500	2.0200	**
Arsenic	ug/L	MW-307	09/25/2017		3.8900		
Arsenic	ug/L	MW-307	03/13/2018		3.7200		
Arsenic	ug/L	MW-307	10/01/2018		4.4100		
Arsenic	ug/L	MW-307	03/27/2019		3.6900		
Arsenic	ug/L	MW-307	09/23/2019		3.9100		
Arsenic	ug/L	MW-307	03/09/2020		3.9700		
Arsenic	ug/L	MW-307	09/17/2020		3.9200		
Arsenic	ug/L	MW-307	04/16/2021		4.3400		
Arsenic	ug/L	MW-307	10/28/2021	ND	0.7500		*
Arsenic	ug/L	MW-307	04/13/2022		3.9200		
Arsenic	ug/L	MW-307	09/01/2022	ND	4.0000	2.0200	**
Arsenic	ug/L	MW-307	03/06/2023		4.3000		
Arsenic	ug/L	MW-307	09/29/2023		31.9000		*
Arsenic	ug/L	MW-307	03/19/2024		4.0000		
Arsenic	ug/L	MW-307	10/03/2024		4.5000		
Barium	ug/L	MW-307	09/18/2012	ND	10.0000		
Barium	ug/L	MW-307	03/27/2013		10.4000		
Barium	ug/L	MW-307	09/26/2013	ND	30.0000	10.0000	**
Barium	ug/L	MW-307	04/15/2014	ND	10.0000		
Barium	ug/L	MW-307	09/01/2015		9.5900		
Barium	ug/L	MW-307	03/22/2016		8.5100		
Barium	ug/L	MW-307	10/21/2016		8.9200		
Barium	ug/L	MW-307	03/08/2017		8.7100		
Barium	ug/L	MW-307	09/25/2017		8.5700		
Barium	ug/L	MW-307	03/13/2018		9.2700		
Barium	ug/L	MW-307	10/01/2018		7.2400		
Barium	ug/L	MW-307	03/27/2019		7.8600		
Barium	ug/L	MW-307	09/23/2019		7.9700		
Barium	ug/L	MW-307	03/09/2020		8.2600		
Barium	ug/L	MW-307	09/17/2020		7.6700		
Barium	ug/L	MW-307	04/16/2021		9.9100		
Barium	ug/L	MW-307	10/28/2021		17.6000		
Barium	ug/L	MW-307	04/13/2022		8.8200		
Barium	ug/L	MW-307	09/01/2022		8.3000		
Barium	ug/L	MW-307	03/06/2023		8.9000		
Barium	ug/L	MW-307	09/29/2023		21.8000		
Barium	ug/L	MW-307	03/19/2024		9.0000		
Barium	ug/L	MW-307	10/03/2024		12.8000		
Beryllium	ug/L	MW-307	09/18/2012	ND	1.0000		
Beryllium	ug/L	MW-307	03/27/2013		0.6240		
Beryllium	ug/L	MW-307	09/26/2013		0.5800		
Beryllium	ug/L	MW-307	04/15/2014		0.2650		
Beryllium	ug/L	MW-307	09/01/2015	ND	1.0000		

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium	ug/L	MW-307	03/22/2016		0.5390		
Beryllium	ug/L	MW-307	10/21/2016		0.4770		
Beryllium	ug/L	MW-307	03/08/2017		0.4550		
Beryllium	ug/L	MW-307	09/25/2017		0.4270		
Beryllium	ug/L	MW-307	03/13/2018	ND	0.5000	1.0000	**
Beryllium	ug/L	MW-307	10/01/2018	ND	0.5300	1.0000	**
Beryllium	ug/L	MW-307	03/27/2019		0.3750		
Beryllium	ug/L	MW-307	09/23/2019	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-307	03/09/2020		0.3300		
Beryllium	ug/L	MW-307	09/17/2020	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-307	04/16/2021		0.5770		
Beryllium	ug/L	MW-307	10/28/2021	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-307	04/13/2022	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-307	09/01/2022	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-307	03/06/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-307	09/29/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-307	03/19/2024	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-307	10/03/2024	ND	4.0000	1.0000	**
Cadmium	ug/L	MW-307	09/18/2012	ND	0.5000		
Cadmium	ug/L	MW-307	03/27/2013	ND	0.5000		
Cadmium	ug/L	MW-307	09/26/2013	ND	0.5000		
Cadmium	ug/L	MW-307	04/15/2014		0.1470		
Cadmium	ug/L	MW-307	09/01/2015	ND	0.5000		
Cadmium	ug/L	MW-307	03/22/2016		0.1620		
Cadmium	ug/L	MW-307	10/21/2016		0.1150		
Cadmium	ug/L	MW-307	03/08/2017		0.1060		
Cadmium	ug/L	MW-307	09/25/2017		0.0750		
Cadmium	ug/L	MW-307	03/13/2018	ND	0.1760	0.5000	**
Cadmium	ug/L	MW-307	10/01/2018		0.8170		
Cadmium	ug/L	MW-307	03/27/2019		0.0910		
Cadmium	ug/L	MW-307	09/23/2019	ND	0.1560	0.5000	**
Cadmium	ug/L	MW-307	03/09/2020		0.1280		
Cadmium	ug/L	MW-307	09/17/2020		0.0860		
Cadmium	ug/L	MW-307	04/16/2021		0.1160		
Cadmium	ug/L	MW-307	10/28/2021		0.0840		
Cadmium	ug/L	MW-307	04/13/2022	ND	0.2200	0.5000	**
Cadmium	ug/L	MW-307	09/01/2022	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-307	03/06/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-307	09/29/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-307	03/19/2024	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-307	10/03/2024	ND	0.8000	0.5000	**
Chromium	ug/L	MW-307	09/18/2012	ND	20.0000	4.4000	**
Chromium	ug/L	MW-307	03/27/2013	ND	20.0000	4.4000	**
Chromium	ug/L	MW-307	09/26/2013	ND	60.0000	4.4000	**
Chromium	ug/L	MW-307	04/15/2014	ND	20.0000	4.4000	**
Chromium	ug/L	MW-307	09/01/2015	ND	5.0000	4.4000	**
Chromium	ug/L	MW-307	03/22/2016	ND	0.3550	4.4000	**
Chromium	ug/L	MW-307	10/21/2016	ND	0.3550	4.4000	**
Chromium	ug/L	MW-307	03/08/2017	ND	7.2900	4.4000	**
Chromium	ug/L	MW-307	09/25/2017	ND	0.7290	4.4000	**
Chromium	ug/L	MW-307	03/13/2018	ND	2.9200	4.4000	**
Chromium	ug/L	MW-307	10/01/2018		1.6000		
Chromium	ug/L	MW-307	03/27/2019	ND	0.9800	4.4000	**
Chromium	ug/L	MW-307	09/23/2019	ND	3.9200	4.4000	**
Chromium	ug/L	MW-307	03/09/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-307	09/17/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-307	04/16/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-307	10/28/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-307	04/13/2022	ND	4.4000		
Chromium	ug/L	MW-307	09/01/2022	ND	8.0000	4.4000	**
Chromium	ug/L	MW-307	03/06/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-307	09/29/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-307	03/19/2024	ND	8.0000	4.4000	**
Chromium	ug/L	MW-307	10/03/2024	ND	8.0000	4.4000	**
Cobalt	ug/L	MW-307	09/18/2012		60.1000		
Cobalt	ug/L	MW-307	03/27/2013		83.8000		
Cobalt	ug/L	MW-307	09/26/2013		44.3000		
Cobalt	ug/L	MW-307	04/15/2014		59.8000		
Cobalt	ug/L	MW-307	09/01/2015		41.9000		
Cobalt	ug/L	MW-307	03/22/2016		50.9000		
Cobalt	ug/L	MW-307	10/21/2016		59.1000		
Cobalt	ug/L	MW-307	03/08/2017		68.4000		
Cobalt	ug/L	MW-307	09/25/2017		58.0000		
Cobalt	ug/L	MW-307	03/13/2018		65.1000		

*   - 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	
Cobalt	ug/L	MW-307	10/01/2018		52.4000		
Cobalt	ug/L	MW-307	03/27/2019		35.6000		
Cobalt	ug/L	MW-307	09/23/2019		44.9000		
Cobalt	ug/L	MW-307	03/09/2020		42.0000		
Cobalt	ug/L	MW-307	09/17/2020		45.8000		
Cobalt	ug/L	MW-307	04/16/2021		59.1000		
Cobalt	ug/L	MW-307	10/28/2021		14.8000		*
Cobalt	ug/L	MW-307	04/13/2022		53.5000		
Cobalt	ug/L	MW-307	09/01/2022		39.9000		
Cobalt	ug/L	MW-307	03/06/2023		48.5000		
Cobalt	ug/L	MW-307	09/29/2023		36.6000		
Cobalt	ug/L	MW-307	03/19/2024		42.8000		
Cobalt	ug/L	MW-307	10/03/2024		39.7000		
Copper	ug/L	MW-307	09/18/2012	ND	20.0000	4.0000	**
Copper	ug/L	MW-307	03/27/2013	ND	20.0000	4.0000	**
Copper	ug/L	MW-307	09/26/2013	ND	60.0000	4.0000	**
Copper	ug/L	MW-307	04/15/2014	ND	20.0000	4.0000	**
Copper	ug/L	MW-307	09/01/2015	ND	2.0000	4.0000	**
Copper	ug/L	MW-307	03/22/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-307	10/21/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-307	03/08/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-307	09/25/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-307	03/13/2018	ND	8.7600	4.0000	**
Copper	ug/L	MW-307	10/01/2018		1.2400		
Copper	ug/L	MW-307	03/27/2019	ND	2.0000	4.0000	**
Copper	ug/L	MW-307	09/23/2019	ND	8.0000	4.0000	**
Copper	ug/L	MW-307	03/09/2020	ND	3.2000	4.0000	**
Copper	ug/L	MW-307	09/17/2020	ND	1.5000	4.0000	**
Copper	ug/L	MW-307	04/16/2021	ND	1.4000	4.0000	**
Copper	ug/L	MW-307	10/28/2021		1.5400		
Copper	ug/L	MW-307	04/13/2022	ND	7.2000	4.0000	**
Copper	ug/L	MW-307	09/01/2022	ND	4.0000		
Copper	ug/L	MW-307	03/06/2023	ND	4.0000		
Copper	ug/L	MW-307	09/29/2023		4.2000		
Copper	ug/L	MW-307	03/19/2024	ND	4.0000		
Copper	ug/L	MW-307	10/03/2024	ND	4.0000		
Lead	ug/L	MW-307	09/18/2012	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	03/27/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	09/26/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	04/15/2014	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	09/01/2015	ND	0.5000	1.3000	**
Lead	ug/L	MW-307	03/22/2016	ND	0.2110	1.3000	**
Lead	ug/L	MW-307	10/21/2016	ND	0.2110	1.3000	**
Lead	ug/L	MW-307	03/08/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-307	09/25/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-307	03/13/2018	ND	1.3000		
Lead	ug/L	MW-307	10/01/2018	ND	0.1860	1.3000	**
Lead	ug/L	MW-307	03/27/2019	ND	0.2700	1.3000	**
Lead	ug/L	MW-307	09/23/2019	ND	1.0800	1.3000	**
Lead	ug/L	MW-307	03/09/2020	ND	0.2700	1.3000	**
Lead	ug/L	MW-307	09/17/2020	ND	0.1100	1.3000	**
Lead	ug/L	MW-307	04/16/2021	ND	0.2100	1.3000	**
Lead	ug/L	MW-307	10/28/2021		0.7700		
Lead	ug/L	MW-307	04/13/2022	ND	0.9600	1.3000	**
Lead	ug/L	MW-307	09/01/2022	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	03/06/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	09/29/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	03/19/2024	ND	4.0000	1.3000	**
Lead	ug/L	MW-307	10/03/2024	ND	4.0000	1.3000	**
Nickel	ug/L	MW-307	09/18/2012		115.0000		
Nickel	ug/L	MW-307	03/27/2013		122.0000		
Nickel	ug/L	MW-307	09/26/2013		79.6000		
Nickel	ug/L	MW-307	04/15/2014		101.0000		
Nickel	ug/L	MW-307	09/01/2015		70.9000		
Nickel	ug/L	MW-307	03/22/2016		84.3000		
Nickel	ug/L	MW-307	10/21/2016		69.8000		
Nickel	ug/L	MW-307	03/08/2017		112.0000		
Nickel	ug/L	MW-307	09/25/2017		62.0000		
Nickel	ug/L	MW-307	03/13/2018		98.9000		
Nickel	ug/L	MW-307	10/01/2018		92.9000		
Nickel	ug/L	MW-307	03/27/2019		79.1000		
Nickel	ug/L	MW-307	09/23/2019		75.9000		
Nickel	ug/L	MW-307	03/09/2020		71.1000		
Nickel	ug/L	MW-307	09/17/2020		76.9000		

* - 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	ug/L	MW-307	04/16/2021		104.0000		
Nickel	ug/L	MW-307	10/28/2021		31.5000		
Nickel	ug/L	MW-307	04/13/2022		88.8000		
Nickel	ug/L	MW-307	09/01/2022		70.0000		
Nickel	ug/L	MW-307	03/06/2023		83.7000		
Nickel	ug/L	MW-307	09/29/2023		68.1000		
Nickel	ug/L	MW-307	03/19/2024		74.2000		
Nickel	ug/L	MW-307	10/03/2024		69.8000		
Selenium	ug/L	MW-307	09/18/2012	ND	5.0000	4.0000	**
Selenium	ug/L	MW-307	03/27/2013	ND	5.0000	4.0000	**
Selenium	ug/L	MW-307	09/26/2013	ND	5.0000	4.0000	**
Selenium	ug/L	MW-307	04/15/2014	ND	5.0000	4.0000	**
Selenium	ug/L	MW-307	09/01/2015	ND	5.0000	4.0000	**
Selenium	ug/L	MW-307	03/22/2016		0.6430		
Selenium	ug/L	MW-307	10/21/2016		1.4800		
Selenium	ug/L	MW-307	03/08/2017		2.3100		
Selenium	ug/L	MW-307	09/25/2017		1.0600		
Selenium	ug/L	MW-307	03/13/2018	ND	3.7100	4.0000	**
Selenium	ug/L	MW-307	10/01/2018		1.0400		
Selenium	ug/L	MW-307	03/27/2019		1.2300		
Selenium	ug/L	MW-307	09/23/2019	ND	4.0000		
Selenium	ug/L	MW-307	03/09/2020		1.2400		
Selenium	ug/L	MW-307	09/17/2020	ND	1.0000	4.0000	**
Selenium	ug/L	MW-307	04/16/2021	ND	0.9600	4.0000	**
Selenium	ug/L	MW-307	10/28/2021	ND	0.9600	4.0000	**
Selenium	ug/L	MW-307	04/13/2022	ND	3.8400	4.0000	**
Selenium	ug/L	MW-307	09/01/2022	ND	4.0000		
Selenium	ug/L	MW-307	03/06/2023	ND	4.0000		
Selenium	ug/L	MW-307	09/29/2023		6.4000		
Selenium	ug/L	MW-307	03/19/2024	ND	4.0000		
Selenium	ug/L	MW-307	10/03/2024	ND	4.0000		
Silver	ug/L	MW-307	09/18/2012		36.0000		*
Silver	ug/L	MW-307	03/27/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-307	09/26/2013		18.1000		*
Silver	ug/L	MW-307	04/15/2014	ND	20.0000	1.0000	**
Silver	ug/L	MW-307	09/01/2015	ND	1.0000		
Silver	ug/L	MW-307	03/22/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-307	10/21/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-307	03/08/2017	ND	1.4000	1.0000	**
Silver	ug/L	MW-307	09/25/2017	ND	0.1400	1.0000	**
Silver	ug/L	MW-307	03/13/2018	ND	0.5600	1.0000	**
Silver	ug/L	MW-307	10/01/2018	ND	0.1150	1.0000	**
Silver	ug/L	MW-307	03/27/2019	ND	0.3700	1.0000	**
Silver	ug/L	MW-307	09/23/2019	ND	1.4800	1.0000	**
Silver	ug/L	MW-307	03/09/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-307	09/17/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-307	04/16/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-307	10/28/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-307	04/13/2022	ND	1.9600	1.0000	**
Silver	ug/L	MW-307	09/01/2022	ND	4.0000	1.0000	**
Silver	ug/L	MW-307	03/06/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-307	09/29/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-307	03/19/2024	ND	4.0000	1.0000	**
Silver	ug/L	MW-307	10/03/2024	ND	4.0000	1.0000	**
Thallium	ug/L	MW-307	09/18/2012	ND	2.0000	1.0400	**
Thallium	ug/L	MW-307	03/27/2013	ND	2.0000	1.0400	**
Thallium	ug/L	MW-307	09/26/2013	ND	2.0000	1.0400	**
Thallium	ug/L	MW-307	04/15/2014	ND	2.0000	1.0400	**
Thallium	ug/L	MW-307	09/01/2015	ND	1.0000	1.0400	**
Thallium	ug/L	MW-307	03/22/2016		0.0460		
Thallium	ug/L	MW-307	10/21/2016		0.0440		
Thallium	ug/L	MW-307	03/08/2017	ND	0.0644	1.0400	**
Thallium	ug/L	MW-307	09/25/2017	ND	0.0644	1.0400	**
Thallium	ug/L	MW-307	03/13/2018	ND	0.2580	1.0400	**
Thallium	ug/L	MW-307	10/01/2018	ND	0.5700	1.0400	**
Thallium	ug/L	MW-307	03/27/2019	ND	0.2700	1.0400	**
Thallium	ug/L	MW-307	09/23/2019	ND	1.0800	1.0400	**
Thallium	ug/L	MW-307	03/09/2020	ND	0.2600	1.0400	**
Thallium	ug/L	MW-307	09/17/2020	ND	0.2600	1.0400	**
Thallium	ug/L	MW-307	04/16/2021	ND	0.2600	1.0400	**
Thallium	ug/L	MW-307	10/28/2021	ND	0.2600	1.0400	**
Thallium	ug/L	MW-307	04/13/2022	ND	1.0400		
Thallium	ug/L	MW-307	09/01/2022	ND	2.0000	1.0400	**
Thallium	ug/L	MW-307	03/06/2023	ND	2.0000	1.0400	**

* - 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	ug/L	MW-307	09/29/2023	ND	2.0000	1.0400	**
Thallium	ug/L	MW-307	03/19/2024	ND	2.0000	1.0400	**
Thallium	ug/L	MW-307	10/03/2024	ND	2.0000	1.0400	**
Vanadium	ug/L	MW-307	09/18/2012	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-307	03/27/2013		22.7000		*
Vanadium	ug/L	MW-307	09/26/2013	ND	150.0000	3.3600	**
Vanadium	ug/L	MW-307	04/15/2014	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-307	09/01/2015	ND	5.0000	3.3600	**
Vanadium	ug/L	MW-307	03/22/2016	ND	0.2550	3.3600	**
Vanadium	ug/L	MW-307	10/21/2016	ND	0.2550	3.3600	**
Vanadium	ug/L	MW-307	03/08/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-307	09/25/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-307	03/13/2018	ND	3.3600		
Vanadium	ug/L	MW-307	10/01/2018	ND	2.1500	3.3600	**
Vanadium	ug/L	MW-307	03/27/2019	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-307	09/23/2019	ND	3.2800	3.3600	**
Vanadium	ug/L	MW-307	03/09/2020	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-307	09/17/2020	ND	0.8500	3.3600	**
Vanadium	ug/L	MW-307	04/16/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-307	10/28/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-307	04/13/2022	ND	4.4000	3.3600	**
Vanadium	ug/L	MW-307	09/01/2022	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-307	03/06/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-307	09/29/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-307	03/19/2024	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-307	10/03/2024	ND	20.0000	3.3600	**
Zinc	ug/L	MW-307	09/18/2012		434.0000		
Zinc	ug/L	MW-307	03/27/2013		663.0000		
Zinc	ug/L	MW-307	09/26/2013		695.0000		
Zinc	ug/L	MW-307	04/15/2014		356.0000		
Zinc	ug/L	MW-307	09/01/2015		338.0000		
Zinc	ug/L	MW-307	03/22/2016		385.0000		
Zinc	ug/L	MW-307	10/21/2016		456.0000		
Zinc	ug/L	MW-307	03/08/2017		492.0000		
Zinc	ug/L	MW-307	09/25/2017		283.0000		
Zinc	ug/L	MW-307	03/13/2018		447.0000		
Zinc	ug/L	MW-307	10/01/2018		424.0000		
Zinc	ug/L	MW-307	03/27/2019		346.0000		
Zinc	ug/L	MW-307	09/23/2019		322.0000		
Zinc	ug/L	MW-307	03/09/2020		308.0000		
Zinc	ug/L	MW-307	09/17/2020		349.0000		
Zinc	ug/L	MW-307	04/16/2021		443.0000		
Zinc	ug/L	MW-307	10/28/2021		10.6000		*
Zinc	ug/L	MW-307	04/13/2022		374.0000		
Zinc	ug/L	MW-307	09/01/2022		271.0000		
Zinc	ug/L	MW-307	03/06/2023		324.0000		
Zinc	ug/L	MW-307	09/29/2023		383.0000		
Zinc	ug/L	MW-307	03/19/2024		304.0000		
Zinc	ug/L	MW-307	10/03/2024		253.0000		
Antimony	ug/L	MW-312	09/20/2012	ND	6.0000	1.3200	**
Antimony	ug/L	MW-312	12/12/2012	ND	6.0000	1.3200	**
Antimony	ug/L	MW-312	03/28/2013	ND	6.0000	1.3200	**
Antimony	ug/L	MW-312	06/19/2013	ND	6.0000	1.3200	**
Antimony	ug/L	MW-312	09/26/2013	ND	6.0000	1.3200	**
Antimony	ug/L	MW-312	04/16/2014	ND	6.0000	1.3200	**
Antimony	ug/L	MW-312	09/01/2015	ND	1.0000	1.3200	**
Antimony	ug/L	MW-312	03/22/2016	ND	0.2370	1.3200	**
Antimony	ug/L	MW-312	10/21/2016	ND	0.2370	1.3200	**
Antimony	ug/L	MW-312	03/08/2017	ND	0.1850	1.3200	**
Antimony	ug/L	MW-312	09/25/2017	ND	0.1850	1.3200	**
Antimony	ug/L	MW-312	03/13/2018	ND	0.7400	1.3200	**
Antimony	ug/L	MW-312	10/01/2018	ND	1.3200		
Antimony	ug/L	MW-312	03/27/2019	ND	0.5300	1.3200	**
Antimony	ug/L	MW-312	09/23/2019	ND	0.5300	1.3200	**
Antimony	ug/L	MW-312	03/09/2020	ND	0.5800	1.3200	**
Antimony	ug/L	MW-312	09/15/2020	ND	0.5100	1.3200	**
Antimony	ug/L	MW-312	04/15/2021	ND	1.1000	1.3200	**
Antimony	ug/L	MW-312	10/27/2021	ND	1.1000	1.3200	**
Antimony	ug/L	MW-312	04/14/2022	ND	2.7600	1.3200	**
Antimony	ug/L	MW-312	09/01/2022	ND	2.0000	1.3200	**
Antimony	ug/L	MW-312	03/06/2023	ND	2.0000	1.3200	**
Antimony	ug/L	MW-312	09/29/2023	ND	2.0000	1.3200	**
Antimony	ug/L	MW-312	03/19/2024	ND	2.0000	1.3200	**
Antimony	ug/L	MW-312	10/03/2024	ND	2.0000	1.3200	**

* - 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	ug/L	MW-312	09/20/2012	ND	1.0000	2.0200	**
Arsenic	ug/L	MW-312	12/12/2012	ND	2.0000	2.0200	**
Arsenic	ug/L	MW-312	03/28/2013	ND	1.0000	2.0200	**
Arsenic	ug/L	MW-312	06/19/2013	ND	3.0000	2.0200	**
Arsenic	ug/L	MW-312	09/26/2013		2.3200		
Arsenic	ug/L	MW-312	04/16/2014	ND	1.0000	2.0200	**
Arsenic	ug/L	MW-312	09/01/2015	ND	2.0000	2.0200	**
Arsenic	ug/L	MW-312	03/22/2016	ND	0.6720	2.0200	**
Arsenic	ug/L	MW-312	10/21/2016		1.4300		
Arsenic	ug/L	MW-312	03/08/2017		1.0200		
Arsenic	ug/L	MW-312	09/25/2017		1.2300		
Arsenic	ug/L	MW-312	03/13/2018	ND	2.0200		
Arsenic	ug/L	MW-312	10/01/2018		1.8400		
Arsenic	ug/L	MW-312	03/27/2019		1.1300		
Arsenic	ug/L	MW-312	09/23/2019		1.2200		
Arsenic	ug/L	MW-312	03/09/2020	ND	0.8800	2.0200	**
Arsenic	ug/L	MW-312	09/15/2020		2.1500		
Arsenic	ug/L	MW-312	04/15/2021		1.2800		
Arsenic	ug/L	MW-312	10/27/2021		1.2900		
Arsenic	ug/L	MW-312	04/14/2022	ND	3.0000	2.0200	**
Arsenic	ug/L	MW-312	09/01/2022	ND	4.0000	2.0200	**
Arsenic	ug/L	MW-312	03/06/2023	ND	4.0000	2.0200	**
Arsenic	ug/L	MW-312	09/29/2023	ND	4.0000	2.0200	**
Arsenic	ug/L	MW-312	03/19/2024	ND	4.0000	2.0200	**
Arsenic	ug/L	MW-312	10/03/2024	ND	4.0000	2.0200	**
Barium	ug/L	MW-312	09/20/2012		16.6000		
Barium	ug/L	MW-312	12/12/2012		18.5000		
Barium	ug/L	MW-312	03/28/2013		12.3000		
Barium	ug/L	MW-312	06/19/2013		16.7000		
Barium	ug/L	MW-312	09/26/2013		8.4700		
Barium	ug/L	MW-312	04/16/2014		10.7000		
Barium	ug/L	MW-312	09/01/2015		15.4000		
Barium	ug/L	MW-312	03/22/2016		24.9000		
Barium	ug/L	MW-312	10/21/2016		13.8000		
Barium	ug/L	MW-312	03/08/2017		14.1000		
Barium	ug/L	MW-312	09/25/2017		16.5000		
Barium	ug/L	MW-312	03/13/2018		12.8000		
Barium	ug/L	MW-312	10/01/2018		13.4000		
Barium	ug/L	MW-312	03/27/2019		14.6000		
Barium	ug/L	MW-312	09/23/2019		11.1000		
Barium	ug/L	MW-312	03/09/2020		14.9000		
Barium	ug/L	MW-312	09/15/2020		13.6000		
Barium	ug/L	MW-312	04/15/2021		12.5000		
Barium	ug/L	MW-312	10/27/2021		11.9000		
Barium	ug/L	MW-312	04/14/2022		14.6000		
Barium	ug/L	MW-312	09/01/2022		23.9000		
Barium	ug/L	MW-312	03/06/2023		25.3000		
Barium	ug/L	MW-312	09/29/2023		22.9000		
Barium	ug/L	MW-312	03/19/2024		24.3000		
Barium	ug/L	MW-312	10/03/2024		24.9000		
Beryllium	ug/L	MW-312	09/20/2012	ND	1.0000		
Beryllium	ug/L	MW-312	12/12/2012	ND	1.0000		
Beryllium	ug/L	MW-312	03/28/2013	ND	1.0000		
Beryllium	ug/L	MW-312	06/19/2013	ND	1.0000		
Beryllium	ug/L	MW-312	09/26/2013		0.2800		
Beryllium	ug/L	MW-312	04/16/2014	ND	1.0000		
Beryllium	ug/L	MW-312	09/01/2015	ND	1.0000		
Beryllium	ug/L	MW-312	03/22/2016	ND	0.2210	1.0000	**
Beryllium	ug/L	MW-312	10/21/2016	ND	0.2210	1.0000	**
Beryllium	ug/L	MW-312	03/08/2017		0.1430		
Beryllium	ug/L	MW-312	09/25/2017		0.1980		
Beryllium	ug/L	MW-312	03/13/2018	ND	0.5000	1.0000	**
Beryllium	ug/L	MW-312	10/01/2018	ND	0.5300	1.0000	**
Beryllium	ug/L	MW-312	03/27/2019	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-312	09/23/2019		0.3180		
Beryllium	ug/L	MW-312	03/09/2020	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-312	09/15/2020	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-312	04/15/2021		0.3120		
Beryllium	ug/L	MW-312	10/27/2021		0.2750		
Beryllium	ug/L	MW-312	04/14/2022	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-312	09/01/2022	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-312	03/06/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-312	09/29/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-312	03/19/2024	ND	4.0000	1.0000	**

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

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium	ug/L	MW-312	10/03/2024	ND	4.0000	1.0000	**
Cadmium	ug/L	MW-312	09/20/2012	ND	0.5000		
Cadmium	ug/L	MW-312	12/12/2012	ND	0.5000		
Cadmium	ug/L	MW-312	03/28/2013	ND	0.5000		
Cadmium	ug/L	MW-312	06/19/2013		0.2460		
Cadmium	ug/L	MW-312	09/26/2013	ND	0.5000		
Cadmium	ug/L	MW-312	04/16/2014	ND	0.5000		
Cadmium	ug/L	MW-312	09/01/2015	ND	0.5000		
Cadmium	ug/L	MW-312	03/22/2016		0.0670		
Cadmium	ug/L	MW-312	10/21/2016	ND	0.0351	0.5000	**
Cadmium	ug/L	MW-312	03/08/2017	ND	0.0441	0.5000	**
Cadmium	ug/L	MW-312	09/25/2017	ND	0.0441	0.5000	**
Cadmium	ug/L	MW-312	03/13/2018	ND	0.1760	0.5000	**
Cadmium	ug/L	MW-312	10/01/2018	ND	0.1670	0.5000	**
Cadmium	ug/L	MW-312	03/27/2019	ND	0.0770	0.5000	**
Cadmium	ug/L	MW-312	09/23/2019	ND	0.0390	0.5000	**
Cadmium	ug/L	MW-312	03/09/2020		0.0680		
Cadmium	ug/L	MW-312	09/15/2020	ND	0.0490	0.5000	**
Cadmium	ug/L	MW-312	04/15/2021	ND	0.0510	0.5000	**
Cadmium	ug/L	MW-312	10/27/2021	ND	0.0510	0.5000	**
Cadmium	ug/L	MW-312	04/14/2022	ND	0.2200	0.5000	**
Cadmium	ug/L	MW-312	09/01/2022	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-312	03/06/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-312	09/29/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-312	03/19/2024	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-312	10/03/2024	ND	0.8000	0.5000	**
Chromium	ug/L	MW-312	09/20/2012	ND	20.0000	4.4000	**
Chromium	ug/L	MW-312	12/12/2012	ND	20.0000	4.4000	**
Chromium	ug/L	MW-312	03/28/2013	ND	20.0000	4.4000	**
Chromium	ug/L	MW-312	06/19/2013	ND	20.0000	4.4000	**
Chromium	ug/L	MW-312	09/26/2013		3.9000		
Chromium	ug/L	MW-312	04/16/2014	ND	20.0000	4.4000	**
Chromium	ug/L	MW-312	09/01/2015	ND	5.0000	4.4000	**
Chromium	ug/L	MW-312	03/22/2016	ND	0.3550	4.4000	**
Chromium	ug/L	MW-312	10/21/2016	ND	0.3550	4.4000	**
Chromium	ug/L	MW-312	03/08/2017	ND	0.7290	4.4000	**
Chromium	ug/L	MW-312	09/25/2017	ND	0.7290	4.4000	**
Chromium	ug/L	MW-312	03/13/2018	ND	2.9200	4.4000	**
Chromium	ug/L	MW-312	10/01/2018		1.2600		
Chromium	ug/L	MW-312	03/27/2019	ND	0.9800	4.4000	**
Chromium	ug/L	MW-312	09/23/2019	ND	0.9800	4.4000	**
Chromium	ug/L	MW-312	03/09/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-312	09/15/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-312	04/15/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-312	10/27/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-312	04/14/2022	ND	4.4000		
Chromium	ug/L	MW-312	09/01/2022	ND	8.0000	4.4000	**
Chromium	ug/L	MW-312	03/06/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-312	09/29/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-312	03/19/2024	ND	8.0000	4.4000	**
Chromium	ug/L	MW-312	10/03/2024	ND	8.0000	4.4000	**
Cobalt	ug/L	MW-312	09/20/2012		36.2000		
Cobalt	ug/L	MW-312	12/12/2012		34.3000		
Cobalt	ug/L	MW-312	03/28/2013		54.5000		
Cobalt	ug/L	MW-312	06/19/2013		43.7000		
Cobalt	ug/L	MW-312	09/26/2013		44.9000		
Cobalt	ug/L	MW-312	04/16/2014		20.8000		
Cobalt	ug/L	MW-312	09/01/2015		32.4000		
Cobalt	ug/L	MW-312	03/22/2016		37.1000		
Cobalt	ug/L	MW-312	10/21/2016		36.4000		
Cobalt	ug/L	MW-312	03/08/2017		35.0000		
Cobalt	ug/L	MW-312	09/25/2017		30.3000		
Cobalt	ug/L	MW-312	03/13/2018		24.1000		
Cobalt	ug/L	MW-312	10/01/2018		29.8000		
Cobalt	ug/L	MW-312	03/27/2019		32.7000		
Cobalt	ug/L	MW-312	09/23/2019		34.9000		
Cobalt	ug/L	MW-312	03/09/2020		34.7000		
Cobalt	ug/L	MW-312	09/15/2020		41.4000		
Cobalt	ug/L	MW-312	04/15/2021		52.3000		
Cobalt	ug/L	MW-312	10/27/2021		38.6000		
Cobalt	ug/L	MW-312	04/14/2022		47.4000		
Cobalt	ug/L	MW-312	09/01/2022		34.0000		
Cobalt	ug/L	MW-312	03/06/2023		44.8000		
Cobalt	ug/L	MW-312	09/29/2023		42.9000		

* - 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	
Cobalt	ug/L	MW-312	03/19/2024		44.2000		
Cobalt	ug/L	MW-312	10/03/2024		38.9000		
Copper	ug/L	MW-312	09/20/2012	ND	20.0000	4.0000	**
Copper	ug/L	MW-312	12/12/2012	ND	20.0000	4.0000	**
Copper	ug/L	MW-312	03/28/2013		2.1900		
Copper	ug/L	MW-312	06/19/2013	ND	20.0000	4.0000	**
Copper	ug/L	MW-312	09/26/2013	ND	20.0000	4.0000	**
Copper	ug/L	MW-312	04/16/2014	ND	20.0000	4.0000	**
Copper	ug/L	MW-312	09/01/2015	ND	2.0000	4.0000	**
Copper	ug/L	MW-312	03/22/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-312	10/21/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-312	03/08/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-312	09/25/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-312	03/13/2018	ND	8.7600	4.0000	**
Copper	ug/L	MW-312	10/01/2018		1.1800		
Copper	ug/L	MW-312	03/27/2019	ND	2.0000	4.0000	**
Copper	ug/L	MW-312	09/23/2019	ND	2.0000	4.0000	**
Copper	ug/L	MW-312	03/09/2020	ND	3.2000	4.0000	**
Copper	ug/L	MW-312	09/15/2020	ND	1.5000	4.0000	**
Copper	ug/L	MW-312	04/15/2021	ND	1.4000	4.0000	**
Copper	ug/L	MW-312	10/27/2021	ND	1.4000	4.0000	**
Copper	ug/L	MW-312	04/14/2022		7.9900		
Copper	ug/L	MW-312	09/01/2022	ND	4.0000		
Copper	ug/L	MW-312	03/06/2023	ND	4.0000		
Copper	ug/L	MW-312	09/29/2023	ND	4.0000		
Copper	ug/L	MW-312	03/19/2024	ND	4.0000		
Copper	ug/L	MW-312	10/03/2024	ND	4.0000		
Lead	ug/L	MW-312	09/20/2012	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	12/12/2012	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	03/28/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	06/19/2013		1.6700		
Lead	ug/L	MW-312	09/26/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	04/16/2014	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	09/01/2015	ND	0.5000	1.3000	**
Lead	ug/L	MW-312	03/22/2016	ND	0.2110	1.3000	**
Lead	ug/L	MW-312	10/21/2016	ND	0.2110	1.3000	**
Lead	ug/L	MW-312	03/08/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-312	09/25/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-312	03/13/2018	ND	1.3000		
Lead	ug/L	MW-312	10/01/2018	ND	0.1860	1.3000	**
Lead	ug/L	MW-312	03/27/2019	ND	0.2700	1.3000	**
Lead	ug/L	MW-312	09/23/2019		0.2740		
Lead	ug/L	MW-312	03/09/2020	ND	0.2700	1.3000	**
Lead	ug/L	MW-312	09/15/2020		0.1770		
Lead	ug/L	MW-312	04/15/2021	ND	0.2100	1.3000	**
Lead	ug/L	MW-312	10/27/2021		1.4100		
Lead	ug/L	MW-312	04/14/2022	ND	0.9600	1.3000	**
Lead	ug/L	MW-312	09/01/2022	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	03/06/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	09/29/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	03/19/2024	ND	4.0000	1.3000	**
Lead	ug/L	MW-312	10/03/2024	ND	4.0000	1.3000	**
Nickel	ug/L	MW-312	09/20/2012		89.5000		
Nickel	ug/L	MW-312	12/12/2012		82.0000		
Nickel	ug/L	MW-312	03/28/2013		121.0000		
Nickel	ug/L	MW-312	06/19/2013		119.0000		
Nickel	ug/L	MW-312	09/26/2013		117.0000		
Nickel	ug/L	MW-312	04/16/2014		101.0000		
Nickel	ug/L	MW-312	09/01/2015		108.0000		
Nickel	ug/L	MW-312	03/22/2016		45.0000		
Nickel	ug/L	MW-312	10/21/2016		94.4000		
Nickel	ug/L	MW-312	03/08/2017		100.0000		
Nickel	ug/L	MW-312	09/25/2017		80.1000		
Nickel	ug/L	MW-312	03/13/2018		88.8000		
Nickel	ug/L	MW-312	10/01/2018		91.6000		
Nickel	ug/L	MW-312	03/27/2019		101.0000		
Nickel	ug/L	MW-312	09/23/2019		120.0000		
Nickel	ug/L	MW-312	03/09/2020		85.8000		
Nickel	ug/L	MW-312	09/15/2020		119.0000		
Nickel	ug/L	MW-312	04/15/2021		150.0000		
Nickel	ug/L	MW-312	10/27/2021		128.0000		
Nickel	ug/L	MW-312	04/14/2022		141.0000		
Nickel	ug/L	MW-312	09/01/2022		64.5000		
Nickel	ug/L	MW-312	03/06/2023		64.8000		

* - Outlier for that well and constituent.
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Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Nickel	ug/L	MW-312	09/29/2023		72.1000		
Nickel	ug/L	MW-312	03/19/2024		58.4000		
Nickel	ug/L	MW-312	10/03/2024		57.6000		
Selenium	ug/L	MW-312	09/20/2012	ND	5.0000	4.0000	**
Selenium	ug/L	MW-312	12/12/2012	ND	5.0000	4.0000	**
Selenium	ug/L	MW-312	03/28/2013	ND	5.0000	4.0000	**
Selenium	ug/L	MW-312	06/19/2013	ND	5.0000	4.0000	**
Selenium	ug/L	MW-312	09/26/2013	ND	5.0000	4.0000	**
Selenium	ug/L	MW-312	04/16/2014	ND	5.0000	4.0000	**
Selenium	ug/L	MW-312	09/01/2015	ND	5.0000	4.0000	**
Selenium	ug/L	MW-312	03/22/2016	ND	0.6300	4.0000	**
Selenium	ug/L	MW-312	10/21/2016	ND	0.6300	4.0000	**
Selenium	ug/L	MW-312	03/08/2017	ND	0.9280	4.0000	**
Selenium	ug/L	MW-312	09/25/2017	ND	0.9280	4.0000	**
Selenium	ug/L	MW-312	03/13/2018	ND	3.7100	4.0000	**
Selenium	ug/L	MW-312	10/01/2018	ND	0.9820	4.0000	**
Selenium	ug/L	MW-312	03/27/2019	ND	1.0000	4.0000	**
Selenium	ug/L	MW-312	09/23/2019	ND	1.0000	4.0000	**
Selenium	ug/L	MW-312	03/09/2020	ND	1.0000	4.0000	**
Selenium	ug/L	MW-312	09/15/2020	ND	1.0000	4.0000	**
Selenium	ug/L	MW-312	04/15/2021	ND	0.9600	4.0000	**
Selenium	ug/L	MW-312	10/27/2021	ND	0.9600	4.0000	**
Selenium	ug/L	MW-312	04/14/2022	ND	3.8400	4.0000	**
Selenium	ug/L	MW-312	09/01/2022	ND	4.0000		
Selenium	ug/L	MW-312	03/06/2023	ND	4.0000		
Selenium	ug/L	MW-312	09/29/2023	ND	4.0000		
Selenium	ug/L	MW-312	03/19/2024	ND	4.0000		
Selenium	ug/L	MW-312	10/03/2024	ND	4.0000		
Silver	ug/L	MW-312	09/20/2012	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	12/12/2012	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	03/28/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	06/19/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	09/26/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	04/16/2014	ND	20.0000	1.0000	**
Silver	ug/L	MW-312	09/01/2015	ND	1.0000		
Silver	ug/L	MW-312	03/22/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-312	10/21/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-312	03/08/2017	ND	0.1400	1.0000	**
Silver	ug/L	MW-312	09/25/2017	ND	0.1400	1.0000	**
Silver	ug/L	MW-312	03/13/2018	ND	0.5600	1.0000	**
Silver	ug/L	MW-312	10/01/2018	ND	0.1150	1.0000	**
Silver	ug/L	MW-312	03/27/2019	ND	0.3700	1.0000	**
Silver	ug/L	MW-312	09/23/2019	ND	0.3700	1.0000	**
Silver	ug/L	MW-312	03/09/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-312	09/15/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-312	04/15/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-312	10/27/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-312	04/14/2022	ND	1.9600	1.0000	**
Silver	ug/L	MW-312	09/01/2022	ND	4.0000	1.0000	**
Silver	ug/L	MW-312	03/06/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-312	09/29/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-312	03/19/2024	ND	4.0000	1.0000	**
Silver	ug/L	MW-312	10/03/2024	ND	4.0000	1.0000	**
Thallium	ug/L	MW-312	09/20/2012	ND	2.0000	1.0400	**
Thallium	ug/L	MW-312	12/12/2012	ND	2.0000	1.0400	**
Thallium	ug/L	MW-312	03/28/2013	ND	2.0000	1.0400	**
Thallium	ug/L	MW-312	06/19/2013	ND	2.0000	1.0400	**
Thallium	ug/L	MW-312	09/26/2013	ND	2.0000	1.0400	**
Thallium	ug/L	MW-312	04/16/2014	ND	2.0000	1.0400	**
Thallium	ug/L	MW-312	09/01/2015	ND	1.0000	1.0400	**
Thallium	ug/L	MW-312	03/22/2016		0.0650		
Thallium	ug/L	MW-312	10/21/2016	ND	0.0255	1.0400	**
Thallium	ug/L	MW-312	03/08/2017	ND	0.0644	1.0400	**
Thallium	ug/L	MW-312	09/25/2017	ND	0.0644	1.0400	**
Thallium	ug/L	MW-312	03/13/2018	ND	0.2580	1.0400	**
Thallium	ug/L	MW-312	10/01/2018	ND	0.5700	1.0400	**
Thallium	ug/L	MW-312	03/27/2019	ND	0.2700	1.0400	**
Thallium	ug/L	MW-312	09/23/2019	ND	0.2700	1.0400	**
Thallium	ug/L	MW-312	03/09/2020	ND	0.2600	1.0400	**
Thallium	ug/L	MW-312	09/15/2020	ND	0.2600	1.0400	**
Thallium	ug/L	MW-312	04/15/2021	ND	0.2600	1.0400	**
Thallium	ug/L	MW-312	10/27/2021	ND	0.2600	1.0400	**
Thallium	ug/L	MW-312	04/14/2022	ND	1.0400		
Thallium	ug/L	MW-312	09/01/2022	ND	2.0000	1.0400	**

*   - 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	ug/L	MW-312	03/06/2023	ND	2.0000	1.0400	**
Thallium	ug/L	MW-312	09/29/2023	ND	2.0000	1.0400	**
Thallium	ug/L	MW-312	03/19/2024	ND	2.0000	1.0400	**
Thallium	ug/L	MW-312	10/03/2024	ND	2.0000	1.0400	**
Vanadium	ug/L	MW-312	09/20/2012	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	12/12/2012	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	03/28/2013	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	06/19/2013	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	09/26/2013	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	04/16/2014	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-312	09/01/2015	ND	5.0000	3.3600	**
Vanadium	ug/L	MW-312	03/22/2016	ND	0.2550	3.3600	**
Vanadium	ug/L	MW-312	10/21/2016	ND	0.2550	3.3600	**
Vanadium	ug/L	MW-312	03/08/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-312	09/25/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-312	03/13/2018	ND	3.3600		
Vanadium	ug/L	MW-312	10/01/2018	ND	2.1500	3.3600	**
Vanadium	ug/L	MW-312	03/27/2019	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-312	09/23/2019	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-312	03/09/2020	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-312	09/15/2020	ND	0.8500	3.3600	**
Vanadium	ug/L	MW-312	04/15/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-312	10/27/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-312	04/14/2022	ND	4.4000	3.3600	**
Vanadium	ug/L	MW-312	09/01/2022	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-312	03/06/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-312	09/29/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-312	03/19/2024	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-312	10/03/2024	ND	20.0000	3.3600	**
Zinc	ug/L	MW-312	09/20/2012	ND	20.0000		
Zinc	ug/L	MW-312	12/12/2012		85.0000		
Zinc	ug/L	MW-312	03/28/2013		84.9000		
Zinc	ug/L	MW-312	06/19/2013		70.1000		
Zinc	ug/L	MW-312	09/26/2013		209.0000		
Zinc	ug/L	MW-312	04/16/2014	ND	60.0000	20.0000	**
Zinc	ug/L	MW-312	09/01/2015	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	03/22/2016		6.8000		
Zinc	ug/L	MW-312	10/21/2016		12.3000		
Zinc	ug/L	MW-312	03/08/2017		17.6000		
Zinc	ug/L	MW-312	09/25/2017	ND	11.5000	20.0000	**
Zinc	ug/L	MW-312	03/13/2018	ND	46.0000	20.0000	**
Zinc	ug/L	MW-312	10/01/2018		10.0000		
Zinc	ug/L	MW-312	03/27/2019	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	09/23/2019	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	03/09/2020	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	09/15/2020		12.9000		
Zinc	ug/L	MW-312	04/15/2021	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	10/27/2021	ND	10.0000	20.0000	**
Zinc	ug/L	MW-312	04/14/2022	ND	40.0000	20.0000	**
Zinc	ug/L	MW-312	09/01/2022	ND	20.0000		
Zinc	ug/L	MW-312	03/06/2023	ND	20.0000		
Zinc	ug/L	MW-312	09/29/2023	ND	20.0000		
Zinc	ug/L	MW-312	03/19/2024	ND	20.0000		
Zinc	ug/L	MW-312	10/03/2024	ND	20.0000		
Antimony	ug/L	MW-390	09/18/2012	ND	6.0000	1.3200	**
Antimony	ug/L	MW-390	03/27/2013	ND	6.0000	1.3200	**
Antimony	ug/L	MW-390	09/25/2013	ND	6.0000	1.3200	**
Antimony	ug/L	MW-390	04/15/2014	ND	6.0000	1.3200	**
Antimony	ug/L	MW-390	09/01/2015	ND	1.0000	1.3200	**
Antimony	ug/L	MW-390	03/22/2016	ND	0.2370	1.3200	**
Antimony	ug/L	MW-390	10/21/2016	ND	0.2370	1.3200	**
Antimony	ug/L	MW-390	03/08/2017	ND	0.1850	1.3200	**
Antimony	ug/L	MW-390	09/25/2017	ND	0.1850	1.3200	**
Antimony	ug/L	MW-390	03/13/2018	ND	0.7400	1.3200	**
Antimony	ug/L	MW-390	10/01/2018	ND	1.3200		
Antimony	ug/L	MW-390	03/27/2019	ND	0.5300	1.3200	**
Antimony	ug/L	MW-390	09/23/2019	ND	2.1200	1.3200	**
Antimony	ug/L	MW-390	03/09/2020	ND	0.5800	1.3200	**
Antimony	ug/L	MW-390	09/17/2020	ND	0.5100	1.3200	**
Antimony	ug/L	MW-390	04/14/2021	ND	1.1000	1.3200	**
Antimony	ug/L	MW-390	10/26/2021	ND	1.1000	1.3200	**
Antimony	ug/L	MW-390	04/14/2022	ND	2.7600	1.3200	**
Antimony	ug/L	MW-390	09/01/2022	ND	2.0000	1.3200	**
Antimony	ug/L	MW-390	03/06/2023	ND	2.0000	1.3200	**

* - 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	ug/L	MW-390	09/29/2023	ND	2.0000	1.3200	**
Antimony	ug/L	MW-390	03/18/2024	ND	2.0000	1.3200	**
Antimony	ug/L	MW-390	10/03/2024	ND	2.0000	1.3200	**
Arsenic	ug/L	MW-390	09/18/2012		13.9000		
Arsenic	ug/L	MW-390	03/27/2013		14.0000		
Arsenic	ug/L	MW-390	09/25/2013		14.7000		
Arsenic	ug/L	MW-390	04/15/2014		17.6000		
Arsenic	ug/L	MW-390	09/01/2015		22.3000		
Arsenic	ug/L	MW-390	03/22/2016		16.7000		
Arsenic	ug/L	MW-390	10/21/2016		13.7000		
Arsenic	ug/L	MW-390	03/08/2017		7.2500		
Arsenic	ug/L	MW-390	09/25/2017		13.6000		
Arsenic	ug/L	MW-390	03/13/2018		14.7000		
Arsenic	ug/L	MW-390	10/01/2018		13.9000		
Arsenic	ug/L	MW-390	03/27/2019		15.0000		
Arsenic	ug/L	MW-390	09/23/2019		19.7000		
Arsenic	ug/L	MW-390	03/09/2020		19.0000		
Arsenic	ug/L	MW-390	09/17/2020		14.8000		
Arsenic	ug/L	MW-390	04/14/2021		15.7000		
Arsenic	ug/L	MW-390	10/26/2021		11.3000		
Arsenic	ug/L	MW-390	04/14/2022		22.5000		
Arsenic	ug/L	MW-390	09/01/2022		19.4000		
Arsenic	ug/L	MW-390	03/06/2023		16.3000		
Arsenic	ug/L	MW-390	09/29/2023		16.0000		
Arsenic	ug/L	MW-390	03/18/2024		17.3000		
Arsenic	ug/L	MW-390	10/03/2024		18.3000		
Barium	ug/L	MW-390	09/18/2012		30.6000		
Barium	ug/L	MW-390	03/27/2013		23.5000		
Barium	ug/L	MW-390	09/25/2013		29.7000		
Barium	ug/L	MW-390	04/15/2014		13.0000		
Barium	ug/L	MW-390	09/01/2015		49.9000		
Barium	ug/L	MW-390	03/22/2016		36.1000		
Barium	ug/L	MW-390	10/21/2016		28.8000		
Barium	ug/L	MW-390	03/08/2017		17.8000		
Barium	ug/L	MW-390	09/25/2017		28.2000		
Barium	ug/L	MW-390	03/13/2018		21.5000		
Barium	ug/L	MW-390	10/01/2018		26.6000		
Barium	ug/L	MW-390	03/27/2019		30.0000		
Barium	ug/L	MW-390	09/23/2019		29.3000		
Barium	ug/L	MW-390	03/09/2020		26.9000		
Barium	ug/L	MW-390	09/17/2020		26.0000		
Barium	ug/L	MW-390	04/14/2021		26.1000		
Barium	ug/L	MW-390	10/26/2021		25.4000		
Barium	ug/L	MW-390	04/14/2022		19.0000		
Barium	ug/L	MW-390	09/01/2022		14.9000		
Barium	ug/L	MW-390	03/06/2023		17.3000		
Barium	ug/L	MW-390	09/29/2023		12.9000		
Barium	ug/L	MW-390	03/18/2024		17.0000		
Barium	ug/L	MW-390	10/03/2024		16.3000		
Beryllium	ug/L	MW-390	09/18/2012	ND	1.0000		
Beryllium	ug/L	MW-390	03/27/2013	ND	1.0000		
Beryllium	ug/L	MW-390	09/25/2013		0.2000		
Beryllium	ug/L	MW-390	04/15/2014	ND	1.0000		
Beryllium	ug/L	MW-390	09/01/2015	ND	1.0000		
Beryllium	ug/L	MW-390	03/22/2016	ND	0.2210	1.0000	**
Beryllium	ug/L	MW-390	10/21/2016	ND	0.2210	1.0000	**
Beryllium	ug/L	MW-390	03/08/2017	ND	0.1250	1.0000	**
Beryllium	ug/L	MW-390	09/25/2017	ND	0.1250	1.0000	**
Beryllium	ug/L	MW-390	03/13/2018	ND	0.5000	1.0000	**
Beryllium	ug/L	MW-390	10/01/2018	ND	0.5300	1.0000	**
Beryllium	ug/L	MW-390	03/27/2019	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-390	09/23/2019	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-390	03/09/2020	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-390	09/17/2020	ND	0.5400	1.0000	**
Beryllium	ug/L	MW-390	04/14/2021	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-390	10/26/2021	ND	0.2700	1.0000	**
Beryllium	ug/L	MW-390	04/14/2022	ND	1.0800	1.0000	**
Beryllium	ug/L	MW-390	09/01/2022	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-390	03/06/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-390	09/29/2023	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-390	03/18/2024	ND	4.0000	1.0000	**
Beryllium	ug/L	MW-390	10/03/2024	ND	4.0000	1.0000	**
Cadmium	ug/L	MW-390	09/18/2012		0.6620		
Cadmium	ug/L	MW-390	03/27/2013		0.2810		

*   - 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	
Cadmium	ug/L	MW-390	09/25/2013	ND	0.5000		
Cadmium	ug/L	MW-390	04/15/2014		0.3260		
Cadmium	ug/L	MW-390	09/01/2015	ND	0.5000		
Cadmium	ug/L	MW-390	03/22/2016	ND	0.0351	0.5000	**
Cadmium	ug/L	MW-390	10/21/2016		0.3020		
Cadmium	ug/L	MW-390	03/08/2017		0.0770		
Cadmium	ug/L	MW-390	09/25/2017	ND	0.0441	0.5000	**
Cadmium	ug/L	MW-390	03/13/2018	ND	0.1760	0.5000	**
Cadmium	ug/L	MW-390	10/01/2018	ND	0.1670	0.5000	**
Cadmium	ug/L	MW-390	03/27/2019	ND	0.0770	0.5000	**
Cadmium	ug/L	MW-390	09/23/2019		1.1200		
Cadmium	ug/L	MW-390	03/09/2020		0.4670		
Cadmium	ug/L	MW-390	09/17/2020		0.1080		
Cadmium	ug/L	MW-390	04/14/2021		0.5250		
Cadmium	ug/L	MW-390	10/26/2021		0.3080		
Cadmium	ug/L	MW-390	04/14/2022		1.1900		
Cadmium	ug/L	MW-390	09/01/2022	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-390	03/06/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-390	09/29/2023	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-390	03/18/2024	ND	0.8000	0.5000	**
Cadmium	ug/L	MW-390	10/03/2024	ND	0.8000	0.5000	**
Chromium	ug/L	MW-390	09/18/2012	ND	20.0000	4.4000	**
Chromium	ug/L	MW-390	03/27/2013	ND	20.0000	4.4000	**
Chromium	ug/L	MW-390	09/25/2013		5.5100		
Chromium	ug/L	MW-390	04/15/2014	ND	20.0000	4.4000	**
Chromium	ug/L	MW-390	09/01/2015	ND	5.0000	4.4000	**
Chromium	ug/L	MW-390	03/22/2016		0.5420		
Chromium	ug/L	MW-390	10/21/2016		1.0200		
Chromium	ug/L	MW-390	03/08/2017	ND	0.7290	4.4000	**
Chromium	ug/L	MW-390	09/25/2017	ND	0.7290	4.4000	**
Chromium	ug/L	MW-390	03/13/2018	ND	2.9200	4.4000	**
Chromium	ug/L	MW-390	10/01/2018		2.0600		
Chromium	ug/L	MW-390	03/27/2019	ND	0.9800	4.4000	**
Chromium	ug/L	MW-390	09/23/2019	ND	3.9200	4.4000	**
Chromium	ug/L	MW-390	03/09/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-390	09/17/2020	ND	1.1000	4.4000	**
Chromium	ug/L	MW-390	04/14/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-390	10/26/2021	ND	1.1000	4.4000	**
Chromium	ug/L	MW-390	04/14/2022	ND	4.4000		
Chromium	ug/L	MW-390	09/01/2022	ND	8.0000	4.4000	**
Chromium	ug/L	MW-390	03/06/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-390	09/29/2023	ND	8.0000	4.4000	**
Chromium	ug/L	MW-390	03/18/2024	ND	8.0000	4.4000	**
Chromium	ug/L	MW-390	10/03/2024	ND	8.0000	4.4000	**
Cobalt	ug/L	MW-390	09/18/2012		108.0000		
Cobalt	ug/L	MW-390	03/27/2013		123.0000		
Cobalt	ug/L	MW-390	09/25/2013		97.7000		
Cobalt	ug/L	MW-390	04/15/2014		103.0000		
Cobalt	ug/L	MW-390	09/01/2015		108.0000		
Cobalt	ug/L	MW-390	03/22/2016		92.9000		
Cobalt	ug/L	MW-390	10/21/2016		90.4000		
Cobalt	ug/L	MW-390	03/08/2017		120.0000		
Cobalt	ug/L	MW-390	09/25/2017		107.0000		
Cobalt	ug/L	MW-390	03/13/2018		98.2000		
Cobalt	ug/L	MW-390	10/01/2018		98.9000		
Cobalt	ug/L	MW-390	03/27/2019		114.0000		
Cobalt	ug/L	MW-390	09/23/2019		112.0000		
Cobalt	ug/L	MW-390	03/09/2020		102.0000		
Cobalt	ug/L	MW-390	09/17/2020		108.0000		
Cobalt	ug/L	MW-390	04/14/2021		110.0000		
Cobalt	ug/L	MW-390	10/26/2021		113.0000		
Cobalt	ug/L	MW-390	04/14/2022		106.0000		
Cobalt	ug/L	MW-390	09/01/2022		103.0000		
Cobalt	ug/L	MW-390	03/06/2023		113.0000		
Cobalt	ug/L	MW-390	09/29/2023		96.9000		
Cobalt	ug/L	MW-390	03/18/2024		107.0000		
Cobalt	ug/L	MW-390	10/03/2024		111.0000		
Copper	ug/L	MW-390	09/18/2012	ND	20.0000	4.0000	**
Copper	ug/L	MW-390	03/27/2013	ND	20.0000	4.0000	**
Copper	ug/L	MW-390	09/25/2013	ND	20.0000	4.0000	**
Copper	ug/L	MW-390	04/15/2014	ND	20.0000	4.0000	**
Copper	ug/L	MW-390	09/01/2015	ND	2.0000	4.0000	**
Copper	ug/L	MW-390	03/22/2016	ND	1.2200	4.0000	**
Copper	ug/L	MW-390	10/21/2016	ND	1.2200	4.0000	**

* - Outlier for that well and constituent.
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*** - ND value replaced with manual RL.
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Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper	ug/L	MW-390	03/08/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-390	09/25/2017	ND	2.1900	4.0000	**
Copper	ug/L	MW-390	03/13/2018	ND	8.7600	4.0000	**
Copper	ug/L	MW-390	10/01/2018		1.5500		
Copper	ug/L	MW-390	03/27/2019	ND	2.0000	4.0000	**
Copper	ug/L	MW-390	09/23/2019	ND	8.0000	4.0000	**
Copper	ug/L	MW-390	03/09/2020	ND	3.2000	4.0000	**
Copper	ug/L	MW-390	09/17/2020	ND	1.5000	4.0000	**
Copper	ug/L	MW-390	04/14/2021	ND	1.4000	4.0000	**
Copper	ug/L	MW-390	10/26/2021	ND	1.4000	4.0000	**
Copper	ug/L	MW-390	04/14/2022	ND	7.2000	4.0000	**
Copper	ug/L	MW-390	09/01/2022	ND	4.0000		
Copper	ug/L	MW-390	03/06/2023	ND	4.0000		
Copper	ug/L	MW-390	09/29/2023	ND	4.0000		
Copper	ug/L	MW-390	03/18/2024	ND	4.0000		
Copper	ug/L	MW-390	10/03/2024	ND	4.0000		
Lead	ug/L	MW-390	09/18/2012	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	03/27/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	09/25/2013	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	04/15/2014	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	09/01/2015		0.7200		
Lead	ug/L	MW-390	03/22/2016	ND	0.2110	1.3000	**
Lead	ug/L	MW-390	10/21/2016		2.8600		
Lead	ug/L	MW-390	03/08/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-390	09/25/2017	ND	0.3240	1.3000	**
Lead	ug/L	MW-390	03/13/2018	ND	1.3000		
Lead	ug/L	MW-390	10/01/2018		0.8710		
Lead	ug/L	MW-390	03/27/2019	ND	0.2700	1.3000	**
Lead	ug/L	MW-390	09/23/2019		2.9400		
Lead	ug/L	MW-390	03/09/2020		2.2700		
Lead	ug/L	MW-390	09/17/2020		0.4100		
Lead	ug/L	MW-390	04/14/2021		1.7300		
Lead	ug/L	MW-390	10/26/2021		2.3800		
Lead	ug/L	MW-390	04/14/2022		4.7800		
Lead	ug/L	MW-390	09/01/2022	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	03/06/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	09/29/2023	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	03/18/2024	ND	4.0000	1.3000	**
Lead	ug/L	MW-390	10/03/2024	ND	4.0000	1.3000	**
Nickel	ug/L	MW-390	09/18/2012	ND	50.0000		
Nickel	ug/L	MW-390	03/27/2013		63.8000		
Nickel	ug/L	MW-390	09/25/2013		60.3000		
Nickel	ug/L	MW-390	04/15/2014		51.0000		
Nickel	ug/L	MW-390	09/01/2015		54.5000		
Nickel	ug/L	MW-390	03/22/2016		45.4000		
Nickel	ug/L	MW-390	10/21/2016		49.7000		
Nickel	ug/L	MW-390	03/08/2017		61.3000		
Nickel	ug/L	MW-390	09/25/2017		45.4000		
Nickel	ug/L	MW-390	03/13/2018		48.3000		
Nickel	ug/L	MW-390	10/01/2018		47.7000		
Nickel	ug/L	MW-390	03/27/2019		54.6000		
Nickel	ug/L	MW-390	09/23/2019		60.7000		
Nickel	ug/L	MW-390	03/09/2020		54.0000		
Nickel	ug/L	MW-390	09/17/2020		58.4000		
Nickel	ug/L	MW-390	04/14/2021		55.1000		
Nickel	ug/L	MW-390	10/26/2021		53.8000		
Nickel	ug/L	MW-390	04/14/2022		56.0000		
Nickel	ug/L	MW-390	09/01/2022		53.5000		
Nickel	ug/L	MW-390	03/06/2023		62.0000		
Nickel	ug/L	MW-390	09/29/2023		50.0000		
Nickel	ug/L	MW-390	03/18/2024		54.1000		
Nickel	ug/L	MW-390	10/03/2024		56.7000		
Selenium	ug/L	MW-390	09/18/2012	ND	5.0000	4.0000	**
Selenium	ug/L	MW-390	03/27/2013	ND	5.0000	4.0000	**
Selenium	ug/L	MW-390	09/25/2013	ND	5.0000	4.0000	**
Selenium	ug/L	MW-390	04/15/2014	ND	5.0000	4.0000	**
Selenium	ug/L	MW-390	09/01/2015	ND	5.0000	4.0000	**
Selenium	ug/L	MW-390	03/22/2016	ND	0.6300	4.0000	**
Selenium	ug/L	MW-390	10/21/2016	ND	0.6300	4.0000	**
Selenium	ug/L	MW-390	03/08/2017	ND	0.9280	4.0000	**
Selenium	ug/L	MW-390	09/25/2017	ND	0.9280	4.0000	**
Selenium	ug/L	MW-390	03/13/2018	ND	3.7100	4.0000	**
Selenium	ug/L	MW-390	10/01/2018	ND	0.9820	4.0000	**
Selenium	ug/L	MW-390	03/27/2019	ND	1.0000	4.0000	**

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Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Selenium	ug/L	MW-390	09/23/2019	ND	4.0000		
Selenium	ug/L	MW-390	03/09/2020	ND	1.0000	4.0000	**
Selenium	ug/L	MW-390	09/17/2020	ND	1.0000	4.0000	**
Selenium	ug/L	MW-390	04/14/2021	ND	0.9600	4.0000	**
Selenium	ug/L	MW-390	10/26/2021	ND	0.9600	4.0000	**
Selenium	ug/L	MW-390	04/14/2022	ND	3.8400	4.0000	**
Selenium	ug/L	MW-390	09/01/2022	ND	4.0000		
Selenium	ug/L	MW-390	03/06/2023	ND	4.0000		
Selenium	ug/L	MW-390	09/29/2023	ND	4.0000		
Selenium	ug/L	MW-390	03/18/2024	ND	4.0000		
Selenium	ug/L	MW-390	10/03/2024	ND	4.0000		
Silver	ug/L	MW-390	09/18/2012	ND	20.0000	1.0000	**
Silver	ug/L	MW-390	03/27/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-390	09/25/2013	ND	20.0000	1.0000	**
Silver	ug/L	MW-390	04/15/2014	ND	20.0000	1.0000	**
Silver	ug/L	MW-390	09/01/2015	ND	1.0000		
Silver	ug/L	MW-390	03/22/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-390	10/21/2016	ND	0.1530	1.0000	**
Silver	ug/L	MW-390	03/08/2017	ND	0.1400	1.0000	**
Silver	ug/L	MW-390	09/25/2017		0.1730		
Silver	ug/L	MW-390	03/13/2018	ND	0.5600	1.0000	**
Silver	ug/L	MW-390	10/01/2018	ND	0.1150	1.0000	**
Silver	ug/L	MW-390	03/27/2019	ND	0.3700	1.0000	**
Silver	ug/L	MW-390	09/23/2019	ND	1.4800	1.0000	**
Silver	ug/L	MW-390	03/09/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-390	09/17/2020	ND	0.3700	1.0000	**
Silver	ug/L	MW-390	04/14/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-390	10/26/2021	ND	0.4200	1.0000	**
Silver	ug/L	MW-390	04/14/2022	ND	1.9600	1.0000	**
Silver	ug/L	MW-390	09/01/2022	ND	4.0000	1.0000	**
Silver	ug/L	MW-390	03/06/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-390	09/29/2023	ND	4.0000	1.0000	**
Silver	ug/L	MW-390	03/18/2024	ND	4.0000	1.0000	**
Silver	ug/L	MW-390	10/03/2024	ND	4.0000	1.0000	**
Thallium	ug/L	MW-390	09/18/2012	ND	2.0000	1.0400	**
Thallium	ug/L	MW-390	03/27/2013	ND	2.0000	1.0400	**
Thallium	ug/L	MW-390	09/25/2013	ND	2.0000	1.0400	**
Thallium	ug/L	MW-390	04/15/2014	ND	2.0000	1.0400	**
Thallium	ug/L	MW-390	09/01/2015	ND	1.0000	1.0400	**
Thallium	ug/L	MW-390	03/22/2016	ND	0.0255	1.0400	**
Thallium	ug/L	MW-390	10/21/2016		0.0450		
Thallium	ug/L	MW-390	03/08/2017	ND	0.0644	1.0400	**
Thallium	ug/L	MW-390	09/25/2017	ND	0.0644	1.0400	**
Thallium	ug/L	MW-390	03/13/2018	ND	0.2580	1.0400	**
Thallium	ug/L	MW-390	10/01/2018	ND	0.5700	1.0400	**
Thallium	ug/L	MW-390	03/27/2019	ND	0.2700	1.0400	**
Thallium	ug/L	MW-390	09/23/2019	ND	1.0800	1.0400	**
Thallium	ug/L	MW-390	03/09/2020	ND	0.2600	1.0400	**
Thallium	ug/L	MW-390	09/17/2020	ND	0.2600	1.0400	**
Thallium	ug/L	MW-390	04/14/2021		1.1700		
Thallium	ug/L	MW-390	10/26/2021	ND	0.2600	1.0400	**
Thallium	ug/L	MW-390	04/14/2022	ND	1.0400		
Thallium	ug/L	MW-390	09/01/2022	ND	2.0000	1.0400	**
Thallium	ug/L	MW-390	03/06/2023	ND	2.0000	1.0400	**
Thallium	ug/L	MW-390	09/29/2023	ND	2.0000	1.0400	**
Thallium	ug/L	MW-390	03/18/2024	ND	2.0000	1.0400	**
Thallium	ug/L	MW-390	10/03/2024	ND	2.0000	1.0400	**
Vanadium	ug/L	MW-390	09/18/2012	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-390	03/27/2013		8.9100		
Vanadium	ug/L	MW-390	09/25/2013	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-390	04/15/2014	ND	50.0000	3.3600	**
Vanadium	ug/L	MW-390	09/01/2015	ND	5.0000	3.3600	**
Vanadium	ug/L	MW-390	03/22/2016		0.3780		
Vanadium	ug/L	MW-390	10/21/2016		0.6690		
Vanadium	ug/L	MW-390	03/08/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-390	09/25/2017	ND	0.8400	3.3600	**
Vanadium	ug/L	MW-390	03/13/2018	ND	3.3600		
Vanadium	ug/L	MW-390	10/01/2018	ND	2.1500	3.3600	**
Vanadium	ug/L	MW-390	03/27/2019	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-390	09/23/2019	ND	3.2800	3.3600	**
Vanadium	ug/L	MW-390	03/09/2020	ND	0.8200	3.3600	**
Vanadium	ug/L	MW-390	09/17/2020	ND	0.8500	3.3600	**
Vanadium	ug/L	MW-390	04/14/2021	ND	1.1000	3.3600	**
Vanadium	ug/L	MW-390	10/26/2021	ND	1.1000	3.3600	**

* - 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	ug/L	MW-390	04/14/2022	ND	4.4000	3.3600	**
Vanadium	ug/L	MW-390	09/01/2022	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-390	03/06/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-390	09/29/2023	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-390	03/18/2024	ND	20.0000	3.3600	**
Vanadium	ug/L	MW-390	10/03/2024	ND	20.0000	3.3600	**
Zinc	ug/L	MW-390	09/18/2012		94.0000		
Zinc	ug/L	MW-390	03/27/2013		207.0000		
Zinc	ug/L	MW-390	09/25/2013		200.0000		
Zinc	ug/L	MW-390	04/15/2014		27.3000		
Zinc	ug/L	MW-390	09/01/2015		48.8000		
Zinc	ug/L	MW-390	03/22/2016	ND	5.2100		*
Zinc	ug/L	MW-390	10/21/2016		101.0000		
Zinc	ug/L	MW-390	03/08/2017		308.0000		
Zinc	ug/L	MW-390	09/25/2017		65.0000		
Zinc	ug/L	MW-390	03/13/2018		100.0000		
Zinc	ug/L	MW-390	10/01/2018		85.6000		
Zinc	ug/L	MW-390	03/27/2019		75.7000		
Zinc	ug/L	MW-390	09/23/2019		293.0000		
Zinc	ug/L	MW-390	03/09/2020		118.0000		
Zinc	ug/L	MW-390	09/17/2020		94.3000		
Zinc	ug/L	MW-390	04/14/2021		192.0000		
Zinc	ug/L	MW-390	10/26/2021		56.2000		
Zinc	ug/L	MW-390	04/14/2022		487.0000		
Zinc	ug/L	MW-390	09/01/2022		107.0000		
Zinc	ug/L	MW-390	03/06/2023		115.0000		
Zinc	ug/L	MW-390	09/29/2023		122.0000		
Zinc	ug/L	MW-390	03/18/2024		184.0000		
Zinc	ug/L	MW-390	10/03/2024		170.0000		

* - 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	ug/L	MW-300	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-300	10/03/2024		6.3000		22.5000
Barium	ug/L	MW-300	10/03/2024		14.1000		49.9000
Beryllium	ug/L	MW-300	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-300	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-300	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-300	10/03/2024		799.0000	***	139.5780
Copper	ug/L	MW-300	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-300	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-300	10/03/2024		829.0000	***	143.9833
Selenium	ug/L	MW-300	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-300	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-300	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-300	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-300	10/03/2024		1030.0000		13569.0797
Antimony	ug/L	MW-303	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-303	10/03/2024	ND	4.0000		22.5000
Barium	ug/L	MW-303	10/03/2024		83.1000	***	49.9000
Beryllium	ug/L	MW-303	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-303	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-303	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-303	10/03/2024		14.0000		139.5780
Copper	ug/L	MW-303	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-303	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-303	10/03/2024		13.5000		143.9833
Selenium	ug/L	MW-303	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-303	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-303	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-303	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-303	10/03/2024	ND	20.0000		13569.0797
Antimony	ug/L	MW-304	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-304	10/03/2024	ND	4.0000		22.5000
Barium	ug/L	MW-304	10/03/2024		87.0000	***	49.9000
Beryllium	ug/L	MW-304	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-304	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-304	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-304	10/03/2024		4.3000		139.5780
Copper	ug/L	MW-304	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-304	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-304	10/03/2024		6.5000		143.9833
Selenium	ug/L	MW-304	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-304	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-304	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-304	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-304	10/03/2024	ND	20.0000		13569.0797
Antimony	ug/L	MW-313	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-313	10/03/2024		4.6000	**	22.5000
Barium	ug/L	MW-313	10/03/2024		29.8000		49.9000
Beryllium	ug/L	MW-313	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-313	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-313	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-313	10/03/2024		0.7000		139.5780
Copper	ug/L	MW-313	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-313	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-313	10/03/2024	ND	4.0000		143.9833
Selenium	ug/L	MW-313	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-313	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-313	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-313	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-313	10/03/2024	ND	20.0000		13569.0797
Antimony	ug/L	MW-335	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-335	10/03/2024		11.7000		22.5000
Barium	ug/L	MW-335	10/03/2024		12.5000		49.9000
Beryllium	ug/L	MW-335	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-335	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-335	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-335	10/03/2024		37.6000		139.5780
Copper	ug/L	MW-335	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-335	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-335	10/03/2024		55.7000		143.9833
Selenium	ug/L	MW-335	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-335	10/03/2024	ND	4.0000		1.0000

* - 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	ug/L	MW-335	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-335	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-335	10/03/2024		26.4000		13569.0797
Antimony	ug/L	MW-344	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-344	10/03/2024	ND	4.0000		22.5000
Barium	ug/L	MW-344	10/03/2024		12.0000		49.9000
Beryllium	ug/L	MW-344	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-344	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-344	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-344	10/03/2024		201.0000	***	139.5780
Copper	ug/L	MW-344	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-344	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-344	10/03/2024		147.0000	*	143.9833
Selenium	ug/L	MW-344	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-344	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-344	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-344	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-344	10/03/2024	ND	20.0000		13569.0797
Antimony	ug/L	MW-380	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-380	10/03/2024		11.2000		22.5000
Barium	ug/L	MW-380	10/03/2024		12.7000		49.9000
Beryllium	ug/L	MW-380	10/03/2024	ND	4.0000	**	1.0000
Cadmium	ug/L	MW-380	10/03/2024	ND	0.8000	**	1.1900
Chromium	ug/L	MW-380	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-380	10/03/2024		263.0000	***	139.5780
Copper	ug/L	MW-380	10/03/2024	ND	4.0000	**	7.9900
Lead	ug/L	MW-380	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-380	10/03/2024		440.0000	***	143.9833
Selenium	ug/L	MW-380	10/03/2024	ND	4.0000	**	6.4000
Silver	ug/L	MW-380	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-380	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-380	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-380	10/03/2024		1150.0000		13569.0797
Antimony	ug/L	MW-381	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-381	10/03/2024	ND	4.0000		22.5000
Barium	ug/L	MW-381	10/03/2024		12.1000		49.9000
Beryllium	ug/L	MW-381	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-381	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-381	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-381	10/03/2024		0.8000		139.5780
Copper	ug/L	MW-381	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-381	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-381	10/03/2024	ND	4.0000		143.9833
Selenium	ug/L	MW-381	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-381	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-381	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-381	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-381	10/03/2024	ND	20.0000		13569.0797
Antimony	ug/L	MW-382R	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-382R	10/03/2024	ND	4.0000		22.5000
Barium	ug/L	MW-382R	10/03/2024		25.1000		49.9000
Beryllium	ug/L	MW-382R	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-382R	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-382R	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-382R	10/03/2024		6.9000		139.5780
Copper	ug/L	MW-382R	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-382R	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-382R	10/03/2024		12.3000		143.9833
Selenium	ug/L	MW-382R	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-382R	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-382R	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-382R	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-382R	10/03/2024	ND	20.0000		13569.0797
Antimony	ug/L	MW-601	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-601	10/03/2024	ND	4.0000		22.5000
Barium	ug/L	MW-601	10/03/2024		39.2000		49.9000
Beryllium	ug/L	MW-601	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-601	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-601	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-601	10/03/2024		19.3000		139.5780
Copper	ug/L	MW-601	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-601	10/03/2024	ND	4.0000		4.7800

* - 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
Nickel	ug/L	MW-601	10/03/2024		25.8000		143.9833
Selenium	ug/L	MW-601	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-601	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-601	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-601	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-601	10/03/2024	ND	20.0000		13569.0797
Antimony	ug/L	MW-602	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-602	10/03/2024	ND	4.0000		22.5000
Barium	ug/L	MW-602	10/03/2024		17.7000		49.9000
Beryllium	ug/L	MW-602	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-602	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-602	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-602	10/03/2024		236.0000	***	139.5780
Copper	ug/L	MW-602	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-602	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-602	10/03/2024		361.0000	***	143.9833
Selenium	ug/L	MW-602	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-602	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-602	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-602	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-602	10/03/2024		166.0000		13569.0797
Antimony	ug/L	MW-603	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-603	10/03/2024	ND	4.0000		22.5000
Barium	ug/L	MW-603	10/03/2024		19.2000		49.9000
Beryllium	ug/L	MW-603	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-603	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-603	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-603	10/03/2024		15.6000		139.5780
Copper	ug/L	MW-603	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-603	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-603	10/03/2024		6.6000		143.9833
Selenium	ug/L	MW-603	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-603	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-603	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-603	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-603	10/03/2024	ND	20.0000		13569.0797
Antimony	ug/L	MW-604	10/03/2024	ND	2.0000		4.4000
Arsenic	ug/L	MW-604	10/03/2024	ND	4.0000		22.5000
Barium	ug/L	MW-604	10/03/2024		24.2000		49.9000
Beryllium	ug/L	MW-604	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-604	10/03/2024	ND	0.8000		1.1900
Chromium	ug/L	MW-604	10/03/2024	ND	8.0000		5.5100
Cobalt	ug/L	MW-604	10/03/2024		95.0000		139.5780
Copper	ug/L	MW-604	10/03/2024	ND	4.0000		7.9900
Lead	ug/L	MW-604	10/03/2024	ND	4.0000		4.7800
Nickel	ug/L	MW-604	10/03/2024		119.0000		143.9833
Selenium	ug/L	MW-604	10/03/2024	ND	4.0000		6.4000
Silver	ug/L	MW-604	10/03/2024	ND	4.0000		1.0000
Thallium	ug/L	MW-604	10/03/2024	ND	2.0000		1.1700
Vanadium	ug/L	MW-604	10/03/2024	ND	20.0000		8.9100
Zinc	ug/L	MW-604	10/03/2024		41.2000		13569.0797

* - 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	1	71	0.014	14	339	0.041
Arsenic	50	69	0.725	149	343	0.434
Barium	68	71	0.958	328	344	0.953
Beryllium	17	71	0.239	49	343	0.143
Cadmium	25	71	0.352	123	344	0.358
Chromium	7	71	0.099	27	341	0.079
Cobalt	70	70	1.000	313	343	0.913
Copper	7	71	0.099	42	342	0.123
Lead	14	71	0.197	61	343	0.178
Nickel	70	71	0.986	282	343	0.822
Selenium	8	71	0.113	22	343	0.064
Silver	1	69	0.014	7	342	0.020
Thallium	5	71	0.070	27	343	0.079
Vanadium	3	70	0.043	38	343	0.111
Zinc	53	69	0.768	219	344	0.637

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	1	71	0.014									nonpar
Arsenic	50	69	0.725	3.151	4.541					2.326	non-norm	nonpar
Barium	68	71	0.958	5.317	3.250					2.326	non-norm	nonpar
Beryllium	17	71	0.239	0.057	0.817					2.326	normal	nonpar
Cadmium	25	71	0.352	5.567	3.091					2.326	non-norm	nonpar
Chromium	7	71	0.099	0.735	1.408					2.326	normal	nonpar
Cobalt	70	70	1.000	0.727	0.698					2.326	normal	normal
Copper	7	71	0.099	1.104	0.126					2.326	normal	nonpar
Lead	14	71	0.197	0.581	0.573					2.326	normal	nonpar
Nickel	70	71	0.986	0.460	1.513					2.326	normal	normal
Selenium	8	71	0.113	3.344	1.069					2.326	lognor	nonpar
Silver	1	69	0.014									nonpar
Thallium	5	71	0.070									nonpar
Vanadium	3	70	0.043	1.578	0.451					2.326	normal	nonpar
Zinc	53	69	0.768	4.695	0.163					2.326	lognor	lognor

* - 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	ug/L	1	71					4.4000	nonpar		0.99
Arsenic	ug/L	50	69					22.5000	nonpar		0.99
Barium	ug/L	68	71					49.9000	nonpar		0.99
Beryllium	ug/L	17	71					1.0000	nonpar	***	0.99
Cadmium	ug/L	25	71					1.1900	nonpar		0.99
Chromium	ug/L	7	71					5.5100	nonpar		0.99
Cobalt	ug/L	70	70	64.5929	31.2628	0.0100	2.3985	139.5780	normal		
Copper	ug/L	7	71					7.9900	nonpar		0.99
Lead	ug/L	14	71					4.7800	nonpar		0.99
Nickel	ug/L	70	71	77.4282	27.7603	0.0100	2.3975	143.9833	normal		
Selenium	ug/L	8	71					6.4000	nonpar		0.99
Silver	ug/L	1	69					1.0000	nonpar	***	0.99
Thallium	ug/L	5	71					1.1700	nonpar		0.99
Vanadium	ug/L	3	70					8.9100	nonpar		0.99
Zinc	ug/L	53	69	3.8643	2.3551	0.0100	2.3996	13569.0797	lognor		

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
Arsenic	ug/L	MW-307	10/28/2021	0.7500	< 0.7500	09/18/2012-10/03/2024	23	0.5065
Arsenic	ug/L	MW-307	09/29/2023	31.9000		09/18/2012-10/03/2024	23	0.5065
Cobalt	ug/L	MW-307	10/28/2021	14.8000		09/18/2012-10/03/2024	23	0.5065
Zinc	ug/L	MW-307	10/28/2021	10.6000		09/18/2012-10/03/2024	23	0.5065
Zinc	ug/L	MW-390	03/22/2016	5.2100	< 5.2100	09/18/2012-10/03/2024	23	0.5065

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Cobalt	ug/L	MW-300	03/25/2008		630.0000	*	139.5780
Cobalt	ug/L	MW-300	04/22/2008		458.0000	*	139.5780
Cobalt	ug/L	MW-300	07/26/2008		413.0000	*	139.5780
Cobalt	ug/L	MW-300	08/27/2008		493.0000	*	139.5780
Cobalt	ug/L	MW-300	09/24/2008		555.0000	*	139.5780
Cobalt	ug/L	MW-300	03/17/2009		325.0000	*	139.5780
Cobalt	ug/L	MW-300	09/24/2009		350.0000	*	139.5780
Cobalt	ug/L	MW-300	03/25/2010		370.0000	*	139.5780
Cobalt	ug/L	MW-300	09/23/2010		437.0000	*	139.5780
Cobalt	ug/L	MW-300	03/29/2011		357.0000	*	139.5780
Cobalt	ug/L	MW-300	09/22/2011		304.0000	*	139.5780
Cobalt	ug/L	MW-300	03/15/2012		225.0000	*	139.5780
Cobalt	ug/L	MW-300	09/18/2012		357.0000	*	139.5780
Cobalt	ug/L	MW-300	03/27/2013		330.0000	*	139.5780
Cobalt	ug/L	MW-300	09/25/2013		332.0000	*	139.5780
Cobalt	ug/L	MW-300	04/16/2014		42.3000		139.5780
Cobalt	ug/L	MW-300	09/26/2014		289.0000	*	139.5780
Cobalt	ug/L	MW-300	03/12/2015		251.0000	*	139.5780
Cobalt	ug/L	MW-300	09/02/2015		383.0000	*	139.5780
Cobalt	ug/L	MW-300	03/23/2016		328.0000	*	139.5780
Cobalt	ug/L	MW-300	10/20/2016		337.0000	*	139.5780
Cobalt	ug/L	MW-300	03/07/2017		315.0000	*	139.5780
Cobalt	ug/L	MW-300	09/26/2017		306.0000	*	139.5780
Cobalt	ug/L	MW-300	03/14/2018		143.0000	*	139.5780
Cobalt	ug/L	MW-300	10/02/2018		232.0000	*	139.5780
Cobalt	ug/L	MW-300	03/28/2019		344.0000	*	139.5780
Cobalt	ug/L	MW-300	09/24/2019		292.0000	*	139.5780
Cobalt	ug/L	MW-300	03/10/2020		215.0000	*	139.5780
Cobalt	ug/L	MW-300	09/15/2020		282.0000	*	139.5780
Cobalt	ug/L	MW-300	04/15/2021		152.0000	*	139.5780
Cobalt	ug/L	MW-300	10/27/2021		260.0000	*	139.5780
Cobalt	ug/L	MW-300	04/13/2022		339.0000	*	139.5780
Cobalt	ug/L	MW-300	09/01/2022		1370.0000	*	139.5780
Cobalt	ug/L	MW-300	03/06/2023		294.0000	*	139.5780
Cobalt	ug/L	MW-300	09/29/2023		881.0000	*	139.5780
Cobalt	ug/L	MW-300	03/19/2024		691.0000	*	139.5780
Cobalt	ug/L	MW-300	10/03/2024		799.0000	*	139.5780
Nickel	ug/L	MW-300	03/25/2008		544.0000	*	143.9833
Nickel	ug/L	MW-300	04/22/2008		580.0000	*	143.9833
Nickel	ug/L	MW-300	07/26/2008		404.0000	*	143.9833
Nickel	ug/L	MW-300	08/27/2008		500.0000	*	143.9833
Nickel	ug/L	MW-300	09/24/2008		579.0000	*	143.9833
Nickel	ug/L	MW-300	03/17/2009		274.0000	*	143.9833
Nickel	ug/L	MW-300	09/24/2009		348.0000	*	143.9833
Nickel	ug/L	MW-300	03/25/2010		576.0000	*	143.9833
Nickel	ug/L	MW-300	09/23/2010		484.0000	*	143.9833
Nickel	ug/L	MW-300	03/29/2011		337.0000	*	143.9833
Nickel	ug/L	MW-300	09/22/2011		262.0000	*	143.9833
Nickel	ug/L	MW-300	03/15/2012		247.0000	*	143.9833
Nickel	ug/L	MW-300	09/18/2012		269.0000	*	143.9833
Nickel	ug/L	MW-300	03/27/2013		225.0000	*	143.9833
Nickel	ug/L	MW-300	09/25/2013		279.0000	*	143.9833
Nickel	ug/L	MW-300	04/16/2014		98.6000		143.9833
Nickel	ug/L	MW-300	09/26/2014		286.0000	*	143.9833
Nickel	ug/L	MW-300	03/12/2015		204.0000	*	143.9833
Nickel	ug/L	MW-300	09/02/2015		329.0000	*	143.9833
Nickel	ug/L	MW-300	03/23/2016		250.0000	*	143.9833
Nickel	ug/L	MW-300	10/20/2016		221.0000	*	143.9833
Nickel	ug/L	MW-300	03/07/2017		288.0000	*	143.9833
Nickel	ug/L	MW-300	09/26/2017		218.0000	*	143.9833
Nickel	ug/L	MW-300	03/14/2018		149.0000	*	143.9833
Nickel	ug/L	MW-300	10/02/2018		189.0000	*	143.9833
Nickel	ug/L	MW-300	03/28/2019		253.0000	*	143.9833
Nickel	ug/L	MW-300	09/24/2019		257.0000	*	143.9833
Nickel	ug/L	MW-300	03/10/2020		185.0000	*	143.9833
Nickel	ug/L	MW-300	09/15/2020		248.0000	*	143.9833
Nickel	ug/L	MW-300	04/15/2021		156.0000	*	143.9833
Nickel	ug/L	MW-300	10/27/2021		237.0000	*	143.9833
Nickel	ug/L	MW-300	04/13/2022		365.0000	*	143.9833
Nickel	ug/L	MW-300	09/01/2022		1720.0000	*	143.9833
Nickel	ug/L	MW-300	03/06/2023		343.0000	*	143.9833

*   - 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	ug/L	MW-300	09/29/2023		955.0000	*	143.9833
Nickel	ug/L	MW-300	03/19/2024		719.0000	*	143.9833
Nickel	ug/L	MW-300	10/03/2024		829.0000	*	143.9833
Barium	ug/L	MW-303	03/24/2008		26.6000		49.9000
Barium	ug/L	MW-303	04/21/2008	ND	10.0000		49.9000
Barium	ug/L	MW-303	07/23/2008		14.1000		49.9000
Barium	ug/L	MW-303	08/26/2008		30.8000		49.9000
Barium	ug/L	MW-303	09/23/2008	ND	10.0000		49.9000
Barium	ug/L	MW-303	03/17/2009		12.3000		49.9000
Barium	ug/L	MW-303	09/24/2009		23.4000		49.9000
Barium	ug/L	MW-303	03/24/2010		17.7000		49.9000
Barium	ug/L	MW-303	09/22/2010		23.9000		49.9000
Barium	ug/L	MW-303	03/28/2011		14.5000		49.9000
Barium	ug/L	MW-303	09/22/2011		20.4000		49.9000
Barium	ug/L	MW-303	03/16/2012		30.1000		49.9000
Barium	ug/L	MW-303	09/19/2012		31.9000		49.9000
Barium	ug/L	MW-303	03/27/2013		26.8000		49.9000
Barium	ug/L	MW-303	09/26/2013		39.1000		49.9000
Barium	ug/L	MW-303	04/15/2014		26.1000		49.9000
Barium	ug/L	MW-303	09/25/2014		106.0000	*	49.9000
Barium	ug/L	MW-303	03/11/2015		72.5000	*	49.9000
Barium	ug/L	MW-303	09/02/2015		36.6000		49.9000
Barium	ug/L	MW-303	03/22/2016		66.8000	*	49.9000
Barium	ug/L	MW-303	10/21/2016		69.2000	*	49.9000
Barium	ug/L	MW-303	03/08/2017		42.9000		49.9000
Barium	ug/L	MW-303	09/25/2017		68.4000	*	49.9000
Barium	ug/L	MW-303	03/13/2018		66.1000	*	49.9000
Barium	ug/L	MW-303	10/01/2018		37.4000		49.9000
Barium	ug/L	MW-303	03/27/2019		20.8000		49.9000
Barium	ug/L	MW-303	09/23/2019		39.1000		49.9000
Barium	ug/L	MW-303	03/10/2020		59.0000	*	49.9000
Barium	ug/L	MW-303	09/15/2020		25.0000		49.9000
Barium	ug/L	MW-303	04/14/2021		14.5000		49.9000
Barium	ug/L	MW-303	10/27/2021		73.3000	*	49.9000
Barium	ug/L	MW-303	04/14/2022		58.8000	*	49.9000
Barium	ug/L	MW-303	09/01/2022		58.0000	*	49.9000
Barium	ug/L	MW-303	03/06/2023		73.9000	*	49.9000
Barium	ug/L	MW-303	09/29/2023		35.5000		49.9000
Barium	ug/L	MW-303	03/19/2024		92.9000	*	49.9000
Barium	ug/L	MW-303	10/03/2024		83.1000	*	49.9000
Barium	ug/L	MW-304	03/22/2016		77.5000	*	49.9000
Barium	ug/L	MW-304	10/20/2016		85.1000	*	49.9000
Barium	ug/L	MW-304	01/18/2017		43.2000		49.9000
Barium	ug/L	MW-304	03/07/2017		103.0000	*	49.9000
Barium	ug/L	MW-304	06/28/2017		74.3000	*	49.9000
Barium	ug/L	MW-304	09/26/2017		73.1000	*	49.9000
Barium	ug/L	MW-304	03/14/2018		39.9000		49.9000
Barium	ug/L	MW-304	10/02/2018		72.3000	*	49.9000
Barium	ug/L	MW-304	03/28/2019		75.6000	*	49.9000
Barium	ug/L	MW-304	09/24/2019		68.9000	*	49.9000
Barium	ug/L	MW-304	03/10/2020		71.1000	*	49.9000
Barium	ug/L	MW-304	09/15/2020		68.1000	*	49.9000
Barium	ug/L	MW-304	04/16/2021		42.4000		49.9000
Barium	ug/L	MW-304	10/27/2021		36.8000		49.9000
Barium	ug/L	MW-304	04/14/2022		40.8000		49.9000
Barium	ug/L	MW-304	09/01/2022		60.2000	*	49.9000
Barium	ug/L	MW-304	03/06/2023		66.5000	*	49.9000
Barium	ug/L	MW-304	09/29/2023		61.0000	*	49.9000
Barium	ug/L	MW-304	03/19/2024		78.6000	*	49.9000
Barium	ug/L	MW-304	10/03/2024		87.0000	*	49.9000
Arsenic	ug/L	MW-313	03/25/2008	ND	1.0000		22.5000
Arsenic	ug/L	MW-313	04/21/2008		1.8200		22.5000
Arsenic	ug/L	MW-313	07/26/2008		10.4000		22.5000
Arsenic	ug/L	MW-313	08/27/2008		5.1300		22.5000
Arsenic	ug/L	MW-313	09/24/2008		7.2400		22.5000
Arsenic	ug/L	MW-313	03/18/2009		7.8400		22.5000
Arsenic	ug/L	MW-313	09/24/2009		11.3000		22.5000
Arsenic	ug/L	MW-313	03/25/2010		31.3000	*	22.5000
Arsenic	ug/L	MW-313	09/22/2010		9.4700		22.5000
Arsenic	ug/L	MW-313	03/29/2011		85.0000	*	22.5000
Arsenic	ug/L	MW-313	09/22/2011		37.8000	*	22.5000

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

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Arsenic	ug/L	MW-313	03/16/2012		52.3000	*	22.5000
Arsenic	ug/L	MW-313	09/18/2012		4.5700		22.5000
Arsenic	ug/L	MW-313	03/28/2013		3.6000		22.5000
Arsenic	ug/L	MW-313	09/25/2013	ND	1.0000		22.5000
Arsenic	ug/L	MW-313	04/16/2014		10.9000		22.5000
Arsenic	ug/L	MW-313	09/26/2014		25.7000	*	22.5000
Arsenic	ug/L	MW-313	03/11/2015		1.4900		22.5000
Arsenic	ug/L	MW-313	09/02/2015	ND	2.0000		22.5000
Arsenic	ug/L	MW-313	03/22/2016		13.5000		22.5000
Arsenic	ug/L	MW-313	10/21/2016		1.5400		22.5000
Arsenic	ug/L	MW-313	03/08/2017		6.8700		22.5000
Arsenic	ug/L	MW-313	09/25/2017		7.4900		22.5000
Arsenic	ug/L	MW-313	03/13/2018		1.2600		22.5000
Arsenic	ug/L	MW-313	10/01/2018		2.1900		22.5000
Arsenic	ug/L	MW-313	03/27/2019		3.1700		22.5000
Arsenic	ug/L	MW-313	09/23/2019		3.0400		22.5000
Arsenic	ug/L	MW-313	03/10/2020		4.7900		22.5000
Arsenic	ug/L	MW-313	09/16/2020		2.6400		22.5000
Arsenic	ug/L	MW-313	04/15/2021		8.8300		22.5000
Arsenic	ug/L	MW-313	10/26/2021		3.0800		22.5000
Arsenic	ug/L	MW-313	04/14/2022		9.4400		22.5000
Arsenic	ug/L	MW-313	09/01/2022		6.0000		22.5000
Arsenic	ug/L	MW-313	03/06/2023		4.9000		22.5000
Arsenic	ug/L	MW-313	09/29/2023		12.2000		22.5000
Arsenic	ug/L	MW-313	03/19/2024		29.0000	*	22.5000
Arsenic	ug/L	MW-313	10/03/2024		4.6000		22.5000
Cobalt	ug/L	MW-344	03/25/2008	ND	20.0000		139.5780
Cobalt	ug/L	MW-344	04/22/2008	ND	20.0000		139.5780
Cobalt	ug/L	MW-344	07/26/2008	ND	20.0000		139.5780
Cobalt	ug/L	MW-344	08/27/2008	ND	20.0000		139.5780
Cobalt	ug/L	MW-344	09/24/2008	ND	20.0000		139.5780
Cobalt	ug/L	MW-344	03/18/2009	ND	20.0000		139.5780
Cobalt	ug/L	MW-344	09/24/2009		23.3000		139.5780
Cobalt	ug/L	MW-344	03/25/2010		34.7000		139.5780
Cobalt	ug/L	MW-344	09/22/2010		45.0000		139.5780
Cobalt	ug/L	MW-344	03/28/2011		33.2000		139.5780
Cobalt	ug/L	MW-344	09/22/2011		47.9000		139.5780
Cobalt	ug/L	MW-344	03/16/2012		86.5000		139.5780
Cobalt	ug/L	MW-344	09/20/2012		93.2000		139.5780
Cobalt	ug/L	MW-344	03/27/2013		172.0000	*	139.5780
Cobalt	ug/L	MW-344	09/25/2013		105.0000		139.5780
Cobalt	ug/L	MW-344	04/15/2014		50.0000		139.5780
Cobalt	ug/L	MW-344	09/26/2014		164.0000	*	139.5780
Cobalt	ug/L	MW-344	03/12/2015		176.0000	*	139.5780
Cobalt	ug/L	MW-344	09/02/2015		202.0000	*	139.5780
Cobalt	ug/L	MW-344	03/23/2016		269.0000	*	139.5780
Cobalt	ug/L	MW-344	10/19/2016		57.6000		139.5780
Cobalt	ug/L	MW-344	03/07/2017		107.0000		139.5780
Cobalt	ug/L	MW-344	09/26/2017		21.8000		139.5780
Cobalt	ug/L	MW-344	03/14/2018		114.0000		139.5780
Cobalt	ug/L	MW-344	10/02/2018		198.0000	*	139.5780
Cobalt	ug/L	MW-344	03/28/2019		128.0000		139.5780
Cobalt	ug/L	MW-344	09/24/2019		146.0000	*	139.5780
Cobalt	ug/L	MW-344	03/10/2020		206.0000	*	139.5780
Cobalt	ug/L	MW-344	09/15/2020		263.0000	*	139.5780
Cobalt	ug/L	MW-344	04/15/2021		258.0000	*	139.5780
Cobalt	ug/L	MW-344	10/27/2021		223.0000	*	139.5780
Cobalt	ug/L	MW-344	04/14/2022		310.0000	*	139.5780
Cobalt	ug/L	MW-344	09/01/2022		224.0000	*	139.5780
Cobalt	ug/L	MW-344	03/06/2023		209.0000	*	139.5780
Cobalt	ug/L	MW-344	09/29/2023		151.0000	*	139.5780
Cobalt	ug/L	MW-344	03/19/2024		148.0000	*	139.5780
Cobalt	ug/L	MW-344	10/03/2024		201.0000	*	139.5780
Nickel	ug/L	MW-344	03/25/2008	ND	50.0000		143.9833
Nickel	ug/L	MW-344	04/22/2008	ND	50.0000		143.9833
Nickel	ug/L	MW-344	07/26/2008	ND	50.0000		143.9833
Nickel	ug/L	MW-344	08/27/2008	ND	50.0000		143.9833
Nickel	ug/L	MW-344	09/24/2008	ND	50.0000		143.9833
Nickel	ug/L	MW-344	03/18/2009	ND	50.0000		143.9833
Nickel	ug/L	MW-344	09/24/2009	ND	50.0000		143.9833
Nickel	ug/L	MW-344	03/25/2010		57.0000		143.9833

* - 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	ug/L	MW-344	09/22/2010		70.1000		143.9833
Nickel	ug/L	MW-344	03/28/2011	ND	50.0000		143.9833
Nickel	ug/L	MW-344	09/22/2011		60.9000		143.9833
Nickel	ug/L	MW-344	03/16/2012		98.3000		143.9833
Nickel	ug/L	MW-344	09/20/2012		84.2000		143.9833
Nickel	ug/L	MW-344	03/27/2013		164.0000	*	143.9833
Nickel	ug/L	MW-344	09/25/2013		110.0000		143.9833
Nickel	ug/L	MW-344	04/15/2014		51.3000		143.9833
Nickel	ug/L	MW-344	09/26/2014		131.0000		143.9833
Nickel	ug/L	MW-344	03/12/2015		107.0000		143.9833
Nickel	ug/L	MW-344	09/02/2015		152.0000	*	143.9833
Nickel	ug/L	MW-344	03/23/2016		202.0000	*	143.9833
Nickel	ug/L	MW-344	10/19/2016		44.2000		143.9833
Nickel	ug/L	MW-344	03/07/2017		89.1000		143.9833
Nickel	ug/L	MW-344	09/26/2017		21.5000		143.9833
Nickel	ug/L	MW-344	03/14/2018		82.9000		143.9833
Nickel	ug/L	MW-344	10/02/2018		133.0000		143.9833
Nickel	ug/L	MW-344	03/28/2019		91.0000		143.9833
Nickel	ug/L	MW-344	09/24/2019		278.0000	*	143.9833
Nickel	ug/L	MW-344	03/10/2020		156.0000	*	143.9833
Nickel	ug/L	MW-344	09/15/2020		205.0000	*	143.9833
Nickel	ug/L	MW-344	04/15/2021		214.0000	*	143.9833
Nickel	ug/L	MW-344	10/27/2021		189.0000	*	143.9833
Nickel	ug/L	MW-344	04/14/2022		267.0000	*	143.9833
Nickel	ug/L	MW-344	09/01/2022		178.0000	*	143.9833
Nickel	ug/L	MW-344	03/06/2023		165.0000	*	143.9833
Nickel	ug/L	MW-344	09/29/2023		124.0000		143.9833
Nickel	ug/L	MW-344	03/19/2024		108.0000		143.9833
Nickel	ug/L	MW-344	10/03/2024		147.0000	*	143.9833
Beryllium	ug/L	MW-380	03/25/2008		136.0000	*	1.0000
Beryllium	ug/L	MW-380	04/21/2008		12.6000	*	1.0000
Beryllium	ug/L	MW-380	07/26/2008		17.9000	*	1.0000
Beryllium	ug/L	MW-380	08/26/2008		22.3000	*	1.0000
Beryllium	ug/L	MW-380	09/24/2008		28.5000	*	1.0000
Beryllium	ug/L	MW-380	03/17/2009		16.0000	*	1.0000
Beryllium	ug/L	MW-380	09/24/2009		22.6000	*	1.0000
Beryllium	ug/L	MW-380	03/25/2010		12.9000	*	1.0000
Beryllium	ug/L	MW-380	09/22/2010		21.6000	*	1.0000
Beryllium	ug/L	MW-380	03/28/2011		16.6000	*	1.0000
Beryllium	ug/L	MW-380	09/22/2011		19.6000	*	1.0000
Beryllium	ug/L	MW-380	03/15/2012		8.5400	*	1.0000
Beryllium	ug/L	MW-380	09/19/2012		9.7200	*	1.0000
Beryllium	ug/L	MW-380	03/27/2013		6.4000	*	1.0000
Beryllium	ug/L	MW-380	09/25/2013		17.6000	*	1.0000
Beryllium	ug/L	MW-380	04/16/2014		5.1300	*	1.0000
Beryllium	ug/L	MW-380	09/26/2014		8.0700	*	1.0000
Beryllium	ug/L	MW-380	03/11/2015	ND	10.0000		1.0000
Beryllium	ug/L	MW-380	09/02/2015	ND	30.0000		1.0000
Beryllium	ug/L	MW-380	03/23/2016		7.2300	*	1.0000
Beryllium	ug/L	MW-380	10/20/2016		6.1100	*	1.0000
Beryllium	ug/L	MW-380	03/09/2017		11.6000	*	1.0000
Beryllium	ug/L	MW-380	09/26/2017		4.7200	*	1.0000
Beryllium	ug/L	MW-380	03/14/2018		6.9000	*	1.0000
Beryllium	ug/L	MW-380	10/02/2018		6.9900	*	1.0000
Beryllium	ug/L	MW-380	03/28/2019		5.1500	*	1.0000
Beryllium	ug/L	MW-380	09/24/2019		2.8600	*	1.0000
Beryllium	ug/L	MW-380	03/10/2020		2.8500	*	1.0000
Beryllium	ug/L	MW-380	09/15/2020		7.5100	*	1.0000
Beryllium	ug/L	MW-380	04/15/2021		7.4200	*	1.0000
Beryllium	ug/L	MW-380	10/27/2021		6.2200	*	1.0000
Beryllium	ug/L	MW-380	04/13/2022	ND	2.7000		1.0000
Beryllium	ug/L	MW-380	09/01/2022	ND	4.0000		1.0000
Beryllium	ug/L	MW-380	03/06/2023		4.7000	*	1.0000
Beryllium	ug/L	MW-380	09/29/2023		5.0000	*	1.0000
Beryllium	ug/L	MW-380	03/18/2024		4.9000	*	1.0000
Beryllium	ug/L	MW-380	10/03/2024	ND	4.0000		1.0000
Cadmium	ug/L	MW-380	03/25/2008		12.2000	*	1.1900
Cadmium	ug/L	MW-380	04/21/2008		14.8000	*	1.1900
Cadmium	ug/L	MW-380	07/26/2008		20.1000	*	1.1900
Cadmium	ug/L	MW-380	08/26/2008		18.8000	*	1.1900
Cadmium	ug/L	MW-380	09/24/2008		27.0000	*	1.1900

* - 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
Cadmium	ug/L	MW-380	03/17/2009		17.5000	*	1.1900
Cadmium	ug/L	MW-380	09/24/2009		18.0000	*	1.1900
Cadmium	ug/L	MW-380	03/25/2010		16.2000	*	1.1900
Cadmium	ug/L	MW-380	09/22/2010		17.1000	*	1.1900
Cadmium	ug/L	MW-380	03/28/2011		15.0000	*	1.1900
Cadmium	ug/L	MW-380	09/22/2011		16.1000	*	1.1900
Cadmium	ug/L	MW-380	03/15/2012		9.0000	*	1.1900
Cadmium	ug/L	MW-380	09/19/2012		14.7000	*	1.1900
Cadmium	ug/L	MW-380	03/27/2013		5.3900	*	1.1900
Cadmium	ug/L	MW-380	09/25/2013		21.2000	*	1.1900
Cadmium	ug/L	MW-380	04/16/2014		7.1800	*	1.1900
Cadmium	ug/L	MW-380	09/26/2014		12.7000	*	1.1900
Cadmium	ug/L	MW-380	03/11/2015		15.9000	*	1.1900
Cadmium	ug/L	MW-380	09/02/2015		10.5000	*	1.1900
Cadmium	ug/L	MW-380	03/23/2016		6.3300	*	1.1900
Cadmium	ug/L	MW-380	10/20/2016		9.9800	*	1.1900
Cadmium	ug/L	MW-380	03/09/2017		57.4000	*	1.1900
Cadmium	ug/L	MW-380	06/28/2017		5.2100	*	1.1900
Cadmium	ug/L	MW-380	09/26/2017		9.2900	*	1.1900
Cadmium	ug/L	MW-380	03/14/2018		10.6000	*	1.1900
Cadmium	ug/L	MW-380	10/02/2018		12.5000	*	1.1900
Cadmium	ug/L	MW-380	03/28/2019		4.4000	*	1.1900
Cadmium	ug/L	MW-380	09/24/2019		6.8800	*	1.1900
Cadmium	ug/L	MW-380	03/10/2020		5.9000	*	1.1900
Cadmium	ug/L	MW-380	09/15/2020		8.9400	*	1.1900
Cadmium	ug/L	MW-380	04/15/2021		10.5000	*	1.1900
Cadmium	ug/L	MW-380	10/27/2021		7.2500	*	1.1900
Cadmium	ug/L	MW-380	04/13/2022		1.3600	*	1.1900
Cadmium	ug/L	MW-380	09/01/2022	ND	0.8000		1.1900
Cadmium	ug/L	MW-380	03/06/2023		3.1000	*	1.1900
Cadmium	ug/L	MW-380	09/29/2023		9.2000	*	1.1900
Cadmium	ug/L	MW-380	03/18/2024		36.5000	*	1.1900
Cadmium	ug/L	MW-380	10/03/2024	ND	0.8000		1.1900
Cobalt	ug/L	MW-380	03/25/2008		1180.0000	*	139.5780
Cobalt	ug/L	MW-380	04/21/2008		1250.0000	*	139.5780
Cobalt	ug/L	MW-380	07/26/2008		1510.0000	*	139.5780
Cobalt	ug/L	MW-380	08/26/2008		1310.0000	*	139.5780
Cobalt	ug/L	MW-380	09/24/2008		1480.0000	*	139.5780
Cobalt	ug/L	MW-380	03/17/2009		1400.0000	*	139.5780
Cobalt	ug/L	MW-380	09/24/2009		1490.0000	*	139.5780
Cobalt	ug/L	MW-380	03/25/2010		1250.0000	*	139.5780
Cobalt	ug/L	MW-380	09/22/2010		1390.0000	*	139.5780
Cobalt	ug/L	MW-380	03/28/2011		1410.0000	*	139.5780
Cobalt	ug/L	MW-380	09/22/2011		1270.0000	*	139.5780
Cobalt	ug/L	MW-380	03/15/2012		1500.0000	*	139.5780
Cobalt	ug/L	MW-380	09/19/2012		1420.0000	*	139.5780
Cobalt	ug/L	MW-380	03/27/2013		1120.0000	*	139.5780
Cobalt	ug/L	MW-380	09/25/2013		1450.0000	*	139.5780
Cobalt	ug/L	MW-380	04/16/2014		563.0000	*	139.5780
Cobalt	ug/L	MW-380	09/26/2014		1140.0000	*	139.5780
Cobalt	ug/L	MW-380	03/11/2015		1490.0000	*	139.5780
Cobalt	ug/L	MW-380	09/02/2015	ND	15.0000		139.5780
Cobalt	ug/L	MW-380	03/23/2016		1120.0000	*	139.5780
Cobalt	ug/L	MW-380	10/20/2016		1150.0000	*	139.5780
Cobalt	ug/L	MW-380	03/09/2017		1840.0000	*	139.5780
Cobalt	ug/L	MW-380	09/26/2017		1290.0000	*	139.5780
Cobalt	ug/L	MW-380	03/14/2018		1430.0000	*	139.5780
Cobalt	ug/L	MW-380	10/02/2018		1040.0000	*	139.5780
Cobalt	ug/L	MW-380	03/28/2019		607.0000	*	139.5780
Cobalt	ug/L	MW-380	09/24/2019		867.0000	*	139.5780
Cobalt	ug/L	MW-380	03/10/2020		856.0000	*	139.5780
Cobalt	ug/L	MW-380	09/15/2020		1180.0000	*	139.5780
Cobalt	ug/L	MW-380	04/15/2021		1150.0000	*	139.5780
Cobalt	ug/L	MW-380	10/27/2021		795.0000	*	139.5780
Cobalt	ug/L	MW-380	04/13/2022		701.0000	*	139.5780
Cobalt	ug/L	MW-380	09/01/2022		407.0000	*	139.5780
Cobalt	ug/L	MW-380	03/06/2023		758.0000	*	139.5780
Cobalt	ug/L	MW-380	09/29/2023		1130.0000	*	139.5780
Cobalt	ug/L	MW-380	03/18/2024		936.0000	*	139.5780
Cobalt	ug/L	MW-380	10/03/2024		263.0000	*	139.5780
Copper	ug/L	MW-380	03/25/2008	ND	20.0000		7.9900

* - Significantly increased over background.
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ND = Not Detected, Result = detection limit.

Table 8

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

Constituent	Units	Well	Date		Result		Pred. Limit
Copper	ug/L	MW-380	04/21/2008	ND	20.0000		7.9900
Copper	ug/L	MW-380	07/26/2008	ND	20.0000		7.9900
Copper	ug/L	MW-380	08/26/2008	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/24/2008	ND	20.0000		7.9900
Copper	ug/L	MW-380	03/17/2009	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/24/2009	ND	100.0000		7.9900
Copper	ug/L	MW-380	03/25/2010	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/22/2010	ND	20.0000		7.9900
Copper	ug/L	MW-380	03/28/2011	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/22/2011	ND	20.0000		7.9900
Copper	ug/L	MW-380	03/15/2012	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/19/2012	ND	20.0000		7.9900
Copper	ug/L	MW-380	03/27/2013	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/25/2013	ND	20.0000		7.9900
Copper	ug/L	MW-380	04/16/2014	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/26/2014	ND	4.8500		7.9900
Copper	ug/L	MW-380	03/11/2015	ND	20.0000		7.9900
Copper	ug/L	MW-380	09/02/2015	ND	2.0000		7.9900
Copper	ug/L	MW-380	03/23/2016		2.0400		7.9900
Copper	ug/L	MW-380	10/20/2016		4.4200		7.9900
Copper	ug/L	MW-380	03/09/2017		3.4300		7.9900
Copper	ug/L	MW-380	09/26/2017	ND	21.9000		7.9900
Copper	ug/L	MW-380	03/14/2018	ND	110.0000		7.9900
Copper	ug/L	MW-380	10/02/2018		1.6800		7.9900
Copper	ug/L	MW-380	03/28/2019	ND	14.0000		7.9900
Copper	ug/L	MW-380	09/24/2019	ND	14.0000		7.9900
Copper	ug/L	MW-380	03/10/2020	ND	3.2000		7.9900
Copper	ug/L	MW-380	09/15/2020		3.5300		7.9900
Copper	ug/L	MW-380	04/15/2021		1.9900		7.9900
Copper	ug/L	MW-380	10/27/2021		1.6200		7.9900
Copper	ug/L	MW-380	04/13/2022	ND	18.0000		7.9900
Copper	ug/L	MW-380	09/01/2022	ND	4.0000		7.9900
Copper	ug/L	MW-380	03/06/2023	ND	4.0000		7.9900
Copper	ug/L	MW-380	09/29/2023	ND	4.0000		7.9900
Copper	ug/L	MW-380	03/18/2024		71.8000	*	7.9900
Copper	ug/L	MW-380	10/03/2024	ND	4.0000		7.9900
Nickel	ug/L	MW-380	03/25/2008		1750.0000	*	143.9833
Nickel	ug/L	MW-380	04/21/2008		1930.0000	*	143.9833
Nickel	ug/L	MW-380	07/26/2008		2260.0000	*	143.9833
Nickel	ug/L	MW-380	08/26/2008		1940.0000	*	143.9833
Nickel	ug/L	MW-380	09/24/2008		2230.0000	*	143.9833
Nickel	ug/L	MW-380	03/17/2009		1990.0000	*	143.9833
Nickel	ug/L	MW-380	09/24/2009		2220.0000	*	143.9833
Nickel	ug/L	MW-380	03/25/2010		1810.0000	*	143.9833
Nickel	ug/L	MW-380	09/22/2010		2010.0000	*	143.9833
Nickel	ug/L	MW-380	03/28/2011		2090.0000	*	143.9833
Nickel	ug/L	MW-380	09/22/2011		1870.0000	*	143.9833
Nickel	ug/L	MW-380	03/15/2012		2130.0000	*	143.9833
Nickel	ug/L	MW-380	09/19/2012		2120.0000	*	143.9833
Nickel	ug/L	MW-380	03/27/2013		1600.0000	*	143.9833
Nickel	ug/L	MW-380	09/25/2013		2140.0000	*	143.9833
Nickel	ug/L	MW-380	04/16/2014		818.0000	*	143.9833
Nickel	ug/L	MW-380	09/26/2014		1650.0000	*	143.9833
Nickel	ug/L	MW-380	03/11/2015		1290.0000	*	143.9833
Nickel	ug/L	MW-380	09/02/2015		1970.0000	*	143.9833
Nickel	ug/L	MW-380	03/23/2016		1450.0000	*	143.9833
Nickel	ug/L	MW-380	10/20/2016		1430.0000	*	143.9833
Nickel	ug/L	MW-380	03/09/2017		2660.0000	*	143.9833
Nickel	ug/L	MW-380	09/26/2017		1270.0000	*	143.9833
Nickel	ug/L	MW-380	03/14/2018		2070.0000	*	143.9833
Nickel	ug/L	MW-380	10/02/2018		1440.0000	*	143.9833
Nickel	ug/L	MW-380	03/28/2019		807.0000	*	143.9833
Nickel	ug/L	MW-380	09/24/2019		1270.0000	*	143.9833
Nickel	ug/L	MW-380	03/10/2020		1130.0000	*	143.9833
Nickel	ug/L	MW-380	09/15/2020		1670.0000	*	143.9833
Nickel	ug/L	MW-380	04/15/2021		1450.0000	*	143.9833
Nickel	ug/L	MW-380	10/27/2021		1100.0000	*	143.9833
Nickel	ug/L	MW-380	04/13/2022		1020.0000	*	143.9833
Nickel	ug/L	MW-380	09/01/2022		531.0000	*	143.9833
Nickel	ug/L	MW-380	03/06/2023		965.0000	*	143.9833
Nickel	ug/L	MW-380	09/29/2023		1410.0000	*	143.9833

*   - Significantly increased over background.
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ND = Not Detected, Result = detection limit.

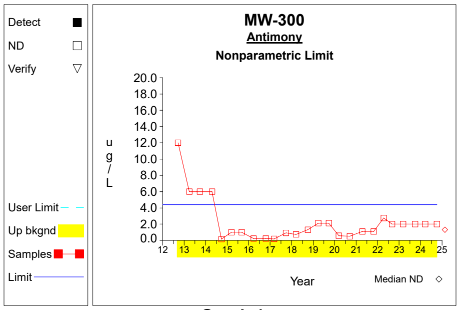
Table 8

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

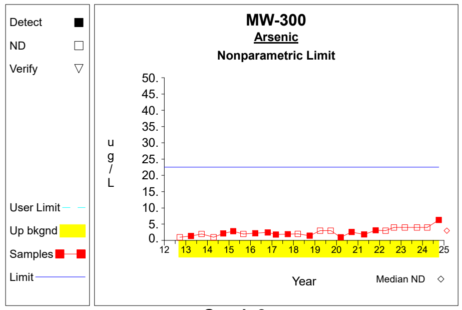
Constituent	Units	Well	Date		Result		Pred. Limit
Nickel	ug/L	MW-380	03/18/2024		1290.0000	*	143.9833
Nickel	ug/L	MW-380	10/03/2024		440.0000	*	143.9833
Selenium	ug/L	MW-380	03/25/2008	ND	5.0000		6.4000
Selenium	ug/L	MW-380	04/21/2008	ND	5.0000		6.4000
Selenium	ug/L	MW-380	07/26/2008	ND	5.0000		6.4000
Selenium	ug/L	MW-380	08/26/2008	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/24/2008	ND	15.0000		6.4000
Selenium	ug/L	MW-380	03/17/2009		5.2600		6.4000
Selenium	ug/L	MW-380	09/24/2009	ND	5.0000		6.4000
Selenium	ug/L	MW-380	03/25/2010	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/22/2010	ND	5.0000		6.4000
Selenium	ug/L	MW-380	03/28/2011	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/22/2011	ND	40.0000		6.4000
Selenium	ug/L	MW-380	03/15/2012	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/19/2012	ND	5.0000		6.4000
Selenium	ug/L	MW-380	03/27/2013	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/25/2013	ND	5.0000		6.4000
Selenium	ug/L	MW-380	04/16/2014	ND	5.0000		6.4000
Selenium	ug/L	MW-380	09/26/2014	ND	33.4000		6.4000
Selenium	ug/L	MW-380	03/11/2015	ND	50.0000		6.4000
Selenium	ug/L	MW-380	09/02/2015	ND	150.0000		6.4000
Selenium	ug/L	MW-380	03/23/2016		11.9000	*	6.4000
Selenium	ug/L	MW-380	10/20/2016		13.7000	*	6.4000
Selenium	ug/L	MW-380	03/09/2017		32.2000	*	6.4000
Selenium	ug/L	MW-380	09/26/2017	ND	9.2800		6.4000
Selenium	ug/L	MW-380	03/14/2018	ND	46.4000		6.4000
Selenium	ug/L	MW-380	10/02/2018		23.3000	*	6.4000
Selenium	ug/L	MW-380	03/28/2019	ND	7.0000		6.4000
Selenium	ug/L	MW-380	09/24/2019		10.6000	*	6.4000
Selenium	ug/L	MW-380	03/10/2020		7.7000	*	6.4000
Selenium	ug/L	MW-380	09/15/2020		15.6000	*	6.4000
Selenium	ug/L	MW-380	04/15/2021		13.3000	*	6.4000
Selenium	ug/L	MW-380	10/27/2021		5.4800		6.4000
Selenium	ug/L	MW-380	04/13/2022	ND	9.6000		6.4000
Selenium	ug/L	MW-380	09/01/2022	ND	4.0000		6.4000
Selenium	ug/L	MW-380	03/06/2023		9.6000	*	6.4000
Selenium	ug/L	MW-380	09/29/2023		9.6000	*	6.4000
Selenium	ug/L	MW-380	03/18/2024		8.5000	*	6.4000
Selenium	ug/L	MW-380	10/03/2024	ND	4.0000		6.4000
Cobalt	ug/L	MW-602	03/09/2020		168.0000	*	139.5780
Cobalt	ug/L	MW-602	09/17/2020		216.0000	*	139.5780
Cobalt	ug/L	MW-602	04/15/2021		236.0000	*	139.5780
Cobalt	ug/L	MW-602	10/28/2021		205.0000	*	139.5780
Cobalt	ug/L	MW-602	04/13/2022		198.0000	*	139.5780
Cobalt	ug/L	MW-602	09/01/2022		247.0000	*	139.5780
Cobalt	ug/L	MW-602	03/06/2023		194.0000	*	139.5780
Cobalt	ug/L	MW-602	09/29/2023		203.0000	*	139.5780
Cobalt	ug/L	MW-602	03/19/2024		198.0000	*	139.5780
Cobalt	ug/L	MW-602	10/03/2024		236.0000	*	139.5780
Nickel	ug/L	MW-602	03/09/2020		242.0000	*	143.9833
Nickel	ug/L	MW-602	09/17/2020		324.0000	*	143.9833
Nickel	ug/L	MW-602	04/15/2021		345.0000	*	143.9833
Nickel	ug/L	MW-602	10/28/2021		296.0000	*	143.9833
Nickel	ug/L	MW-602	04/13/2022		253.0000	*	143.9833
Nickel	ug/L	MW-602	09/01/2022		356.0000	*	143.9833
Nickel	ug/L	MW-602	03/06/2023		270.0000	*	143.9833
Nickel	ug/L	MW-602	09/29/2023		289.0000	*	143.9833
Nickel	ug/L	MW-602	03/19/2024		299.0000	*	143.9833
Nickel	ug/L	MW-602	10/03/2024		361.0000	*	143.9833

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

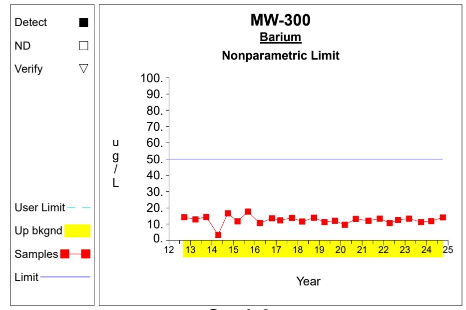
Up vs. Down Prediction Limits



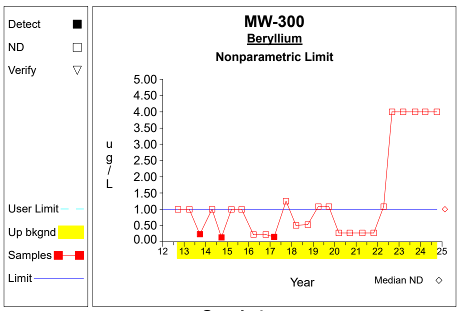
Graph 1



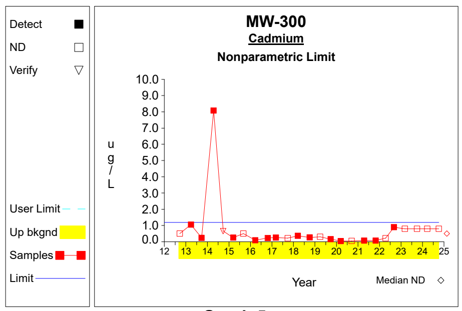
Graph 2



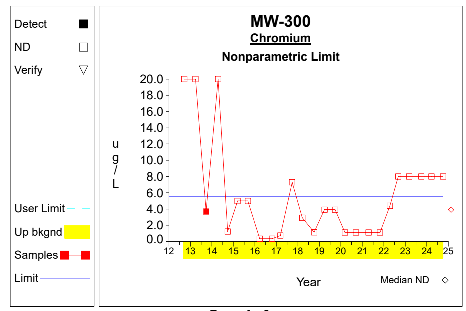
Graph 3



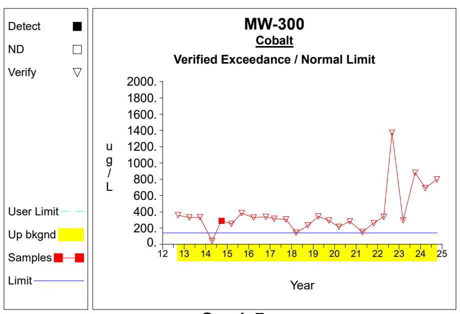
Graph 4



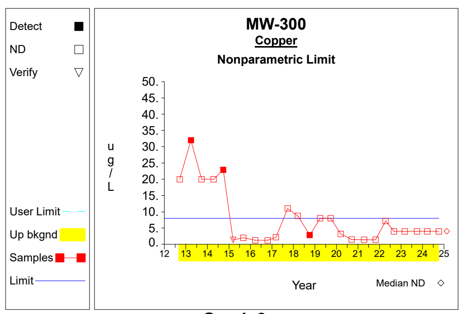
Graph 5



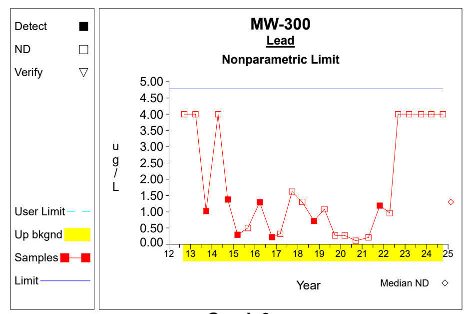
Graph 6



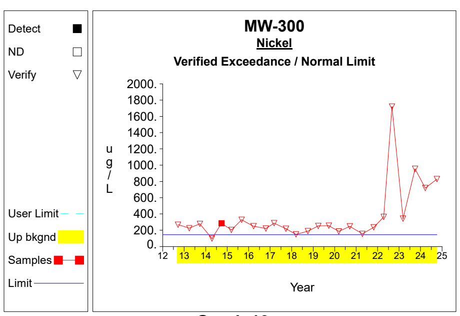
Graph 7



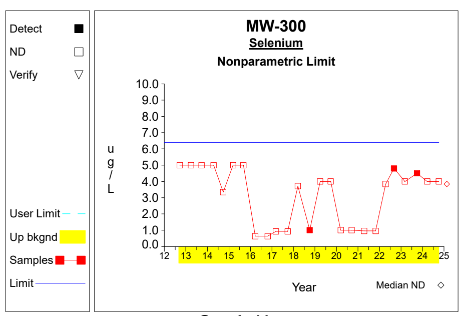
Graph 8



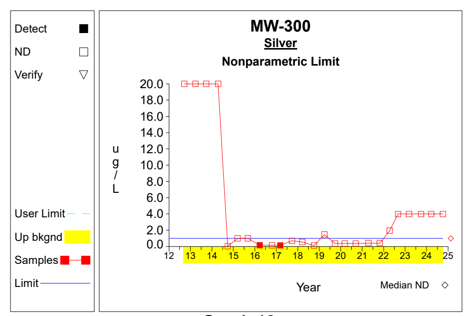
Graph 9



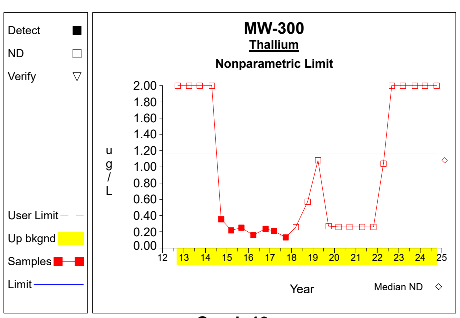
Graph 10



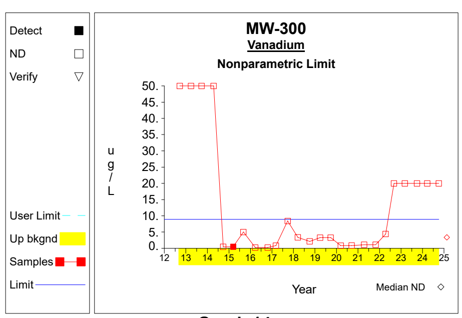
Graph 11



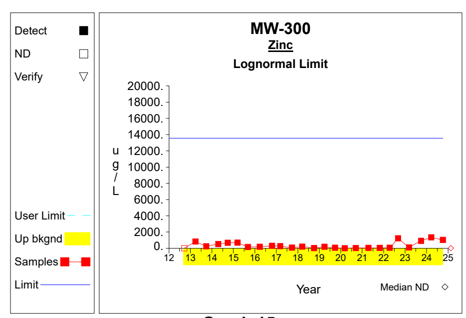
Graph 12



Graph 13



Graph 14



Graph 15

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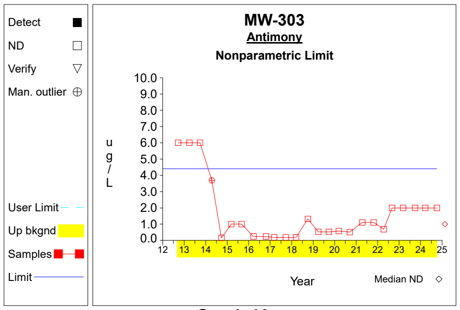
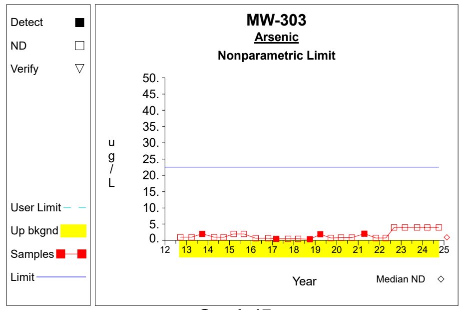
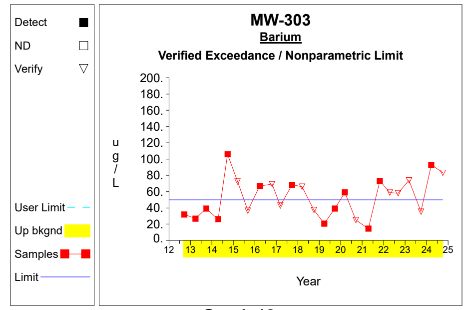
Up vs. Down Prediction Limits



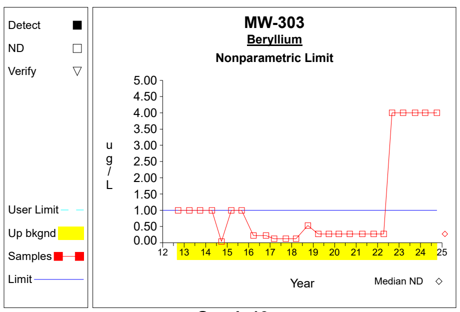
Graph 16



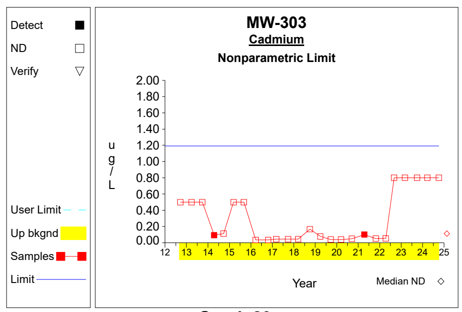
Graph 17



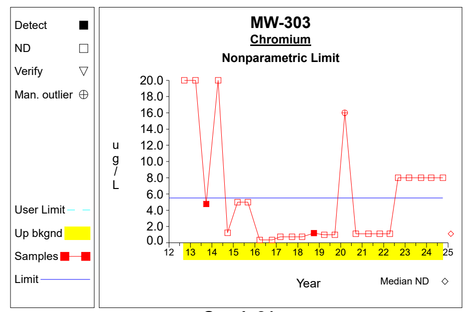
Graph 18



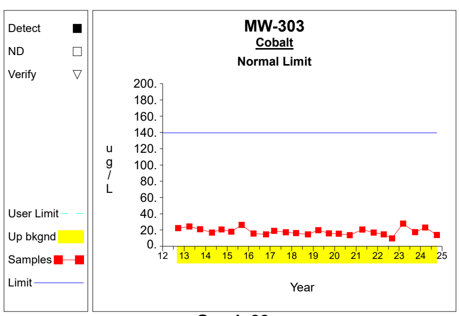
Graph 19



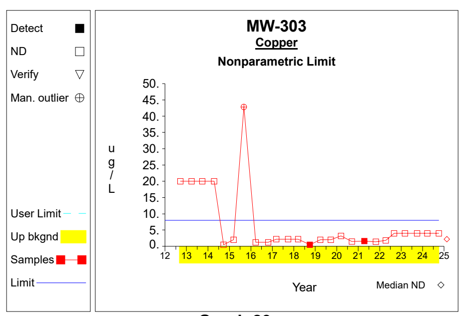
Graph 20



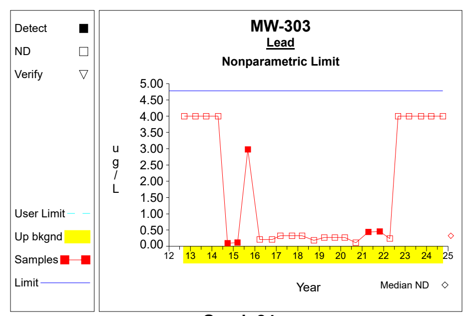
Graph 21



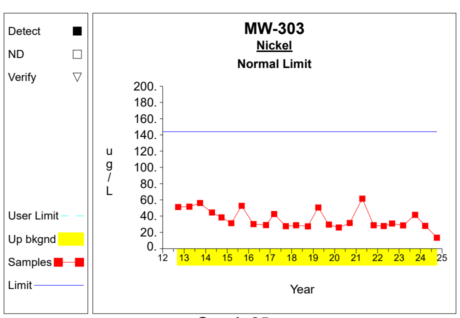
Graph 22



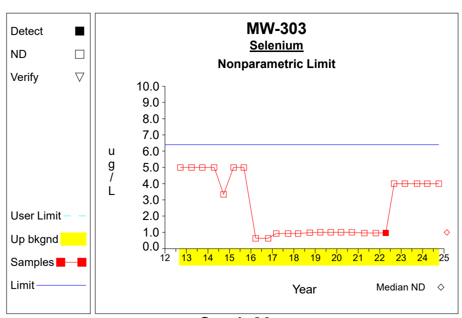
Graph 23



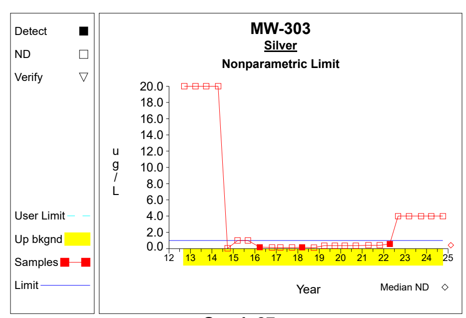
Graph 24



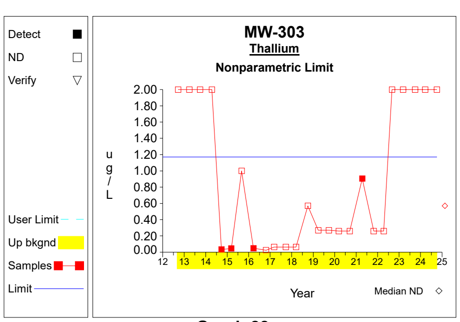
Graph 25



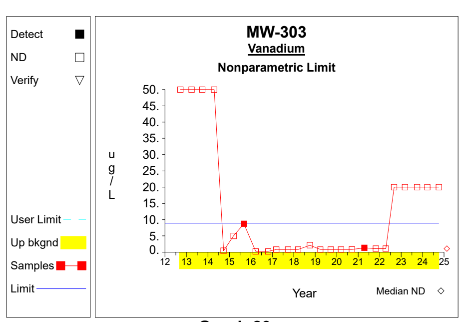
Graph 26



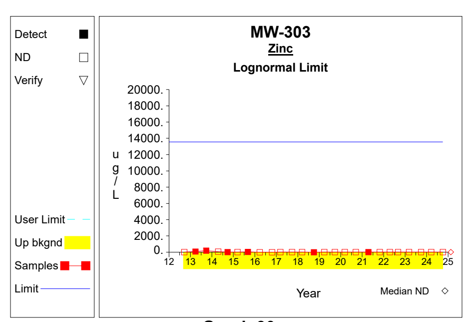
Graph 27



Graph 28



Graph 29



Graph 30

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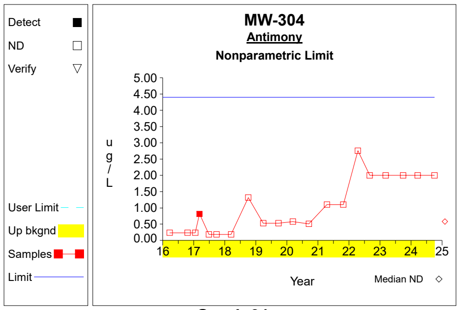
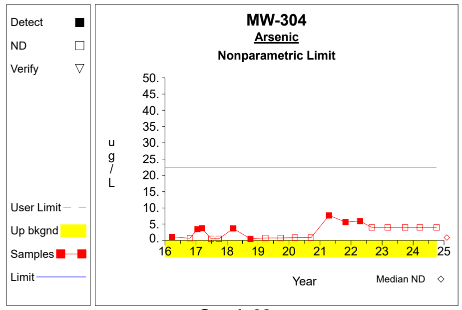
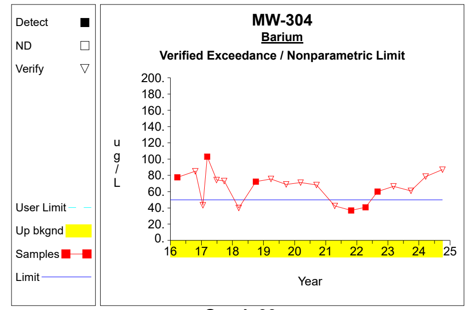
Up vs. Down Prediction Limits



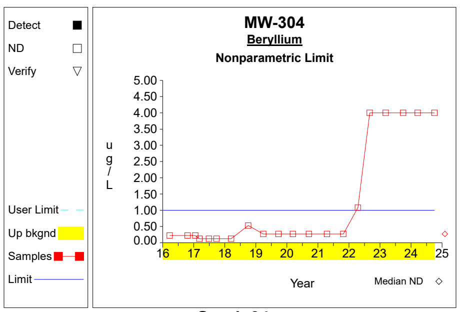
Graph 31



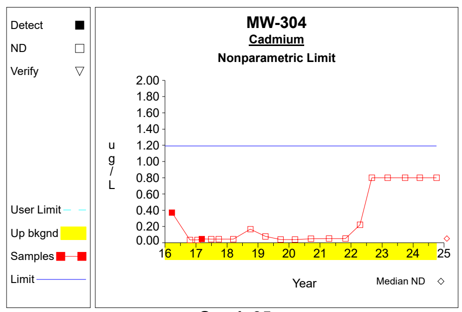
Graph 32



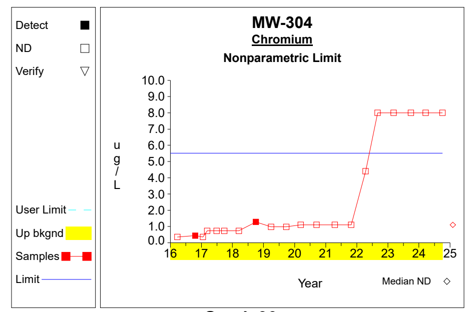
Graph 33



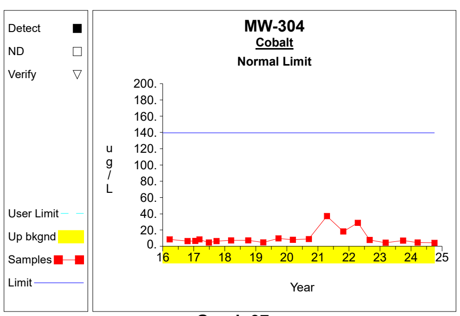
Graph 34



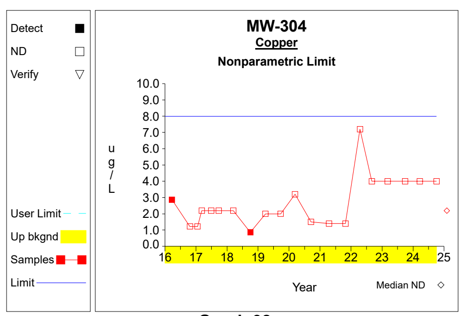
Graph 35



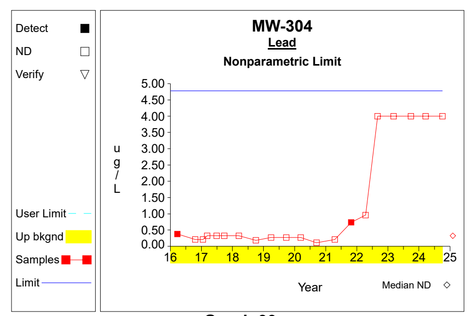
Graph 36



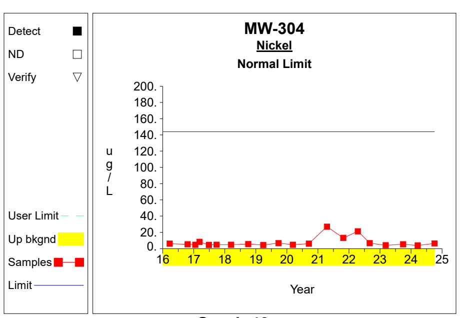
Graph 37



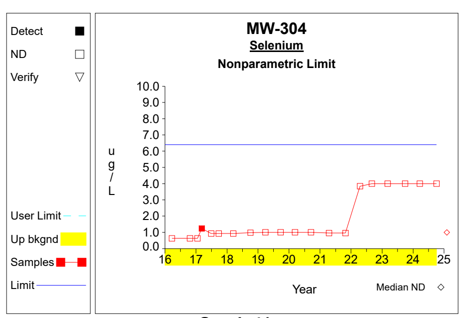
Graph 38



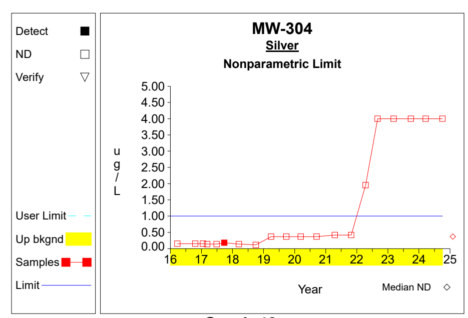
Graph 39



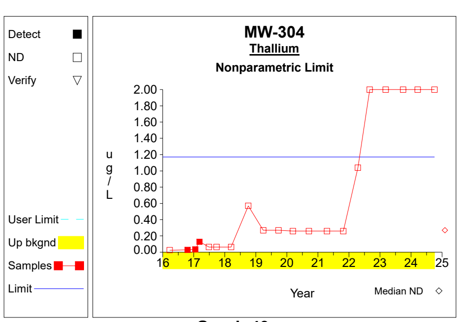
Graph 40



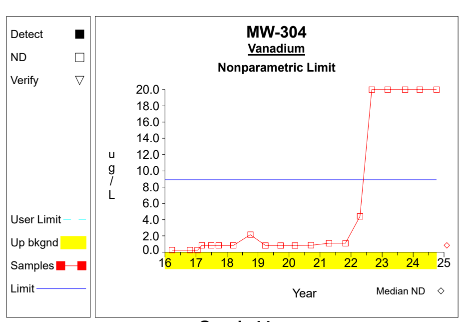
Graph 41



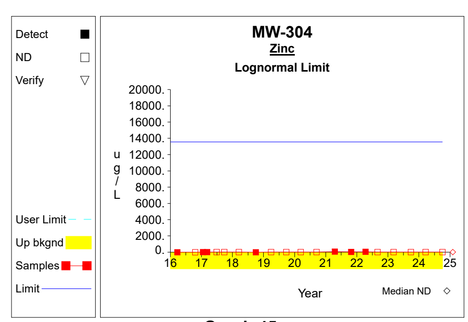
Graph 42



Graph 43

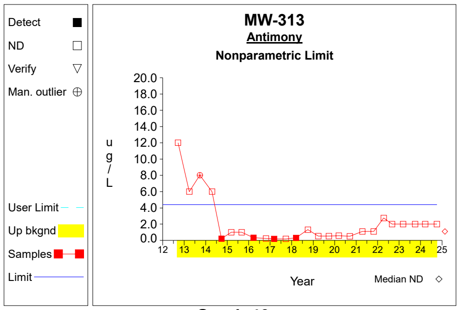


Graph 44

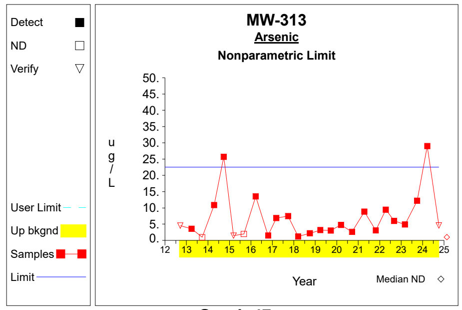


Graph 45

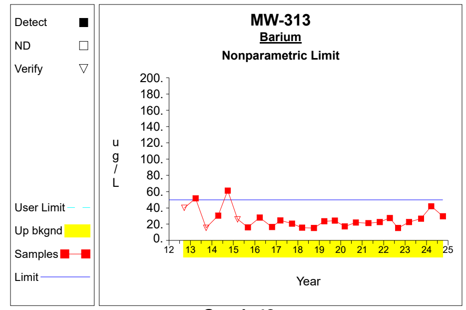
Up vs. Down Prediction Limits



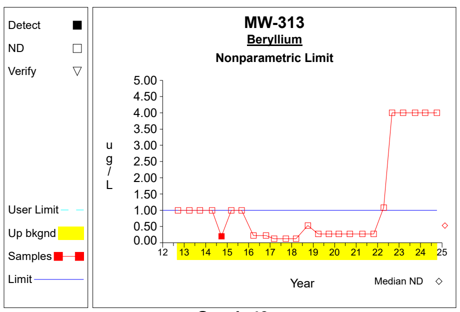
Graph 46



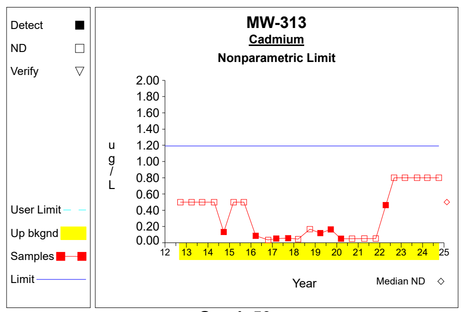
Graph 47



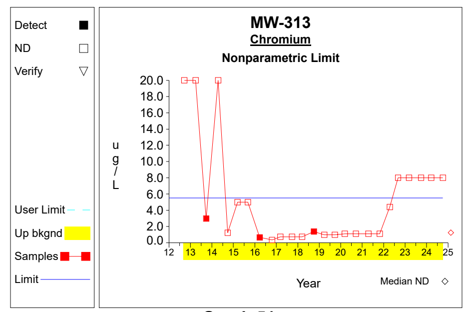
Graph 48



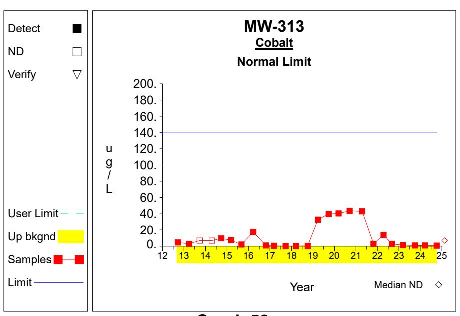
Graph 49



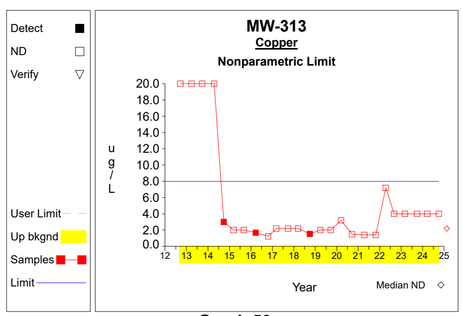
Graph 50



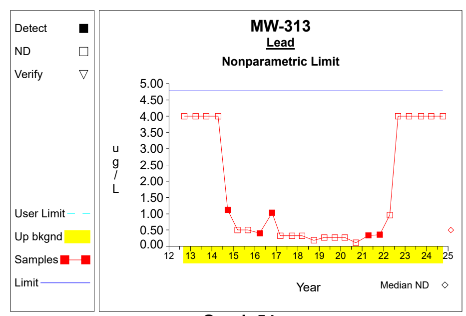
Graph 51



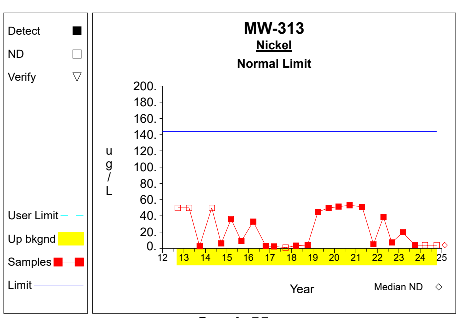
Graph 52



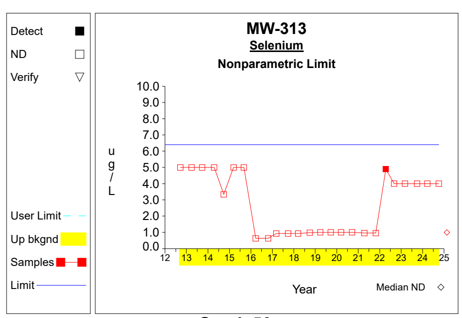
Graph 53



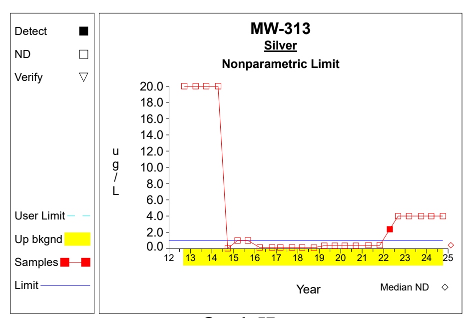
Graph 54



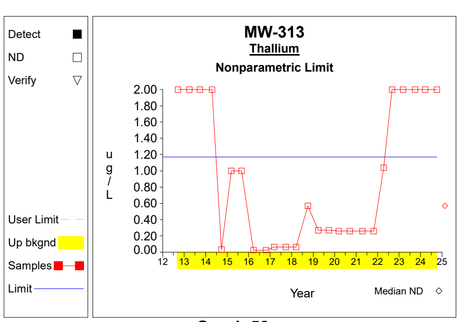
Graph 55



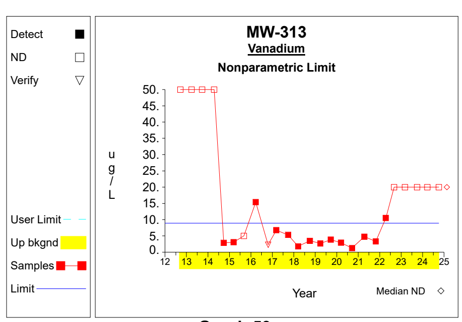
Graph 56



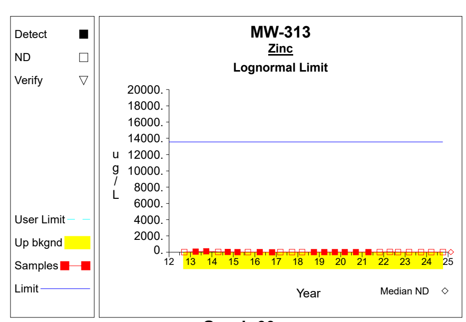
Graph 57



Graph 58

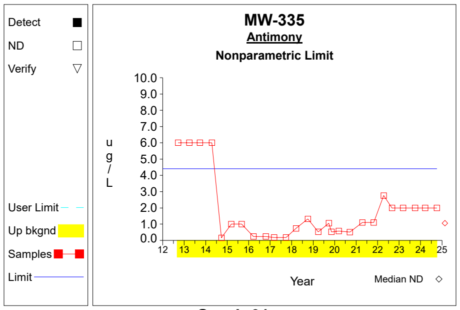


Graph 59

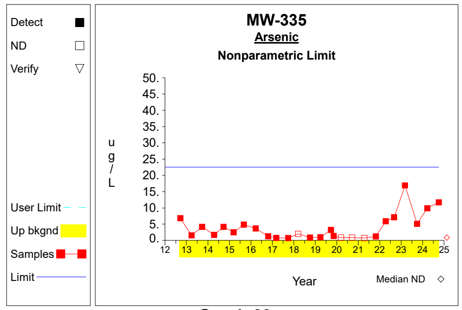


Graph 60

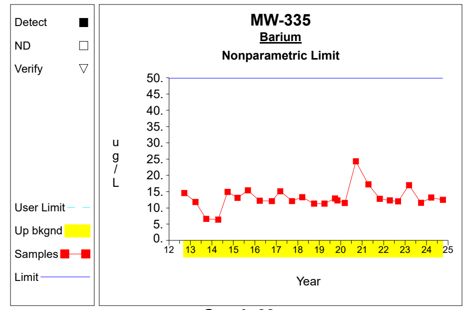
Up vs. Down Prediction Limits



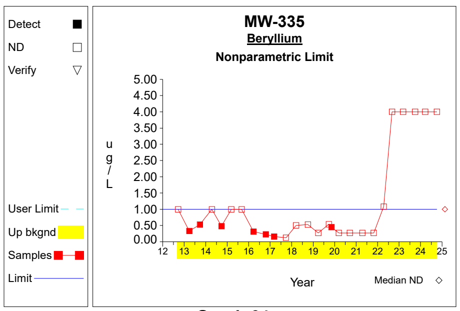
Graph 61



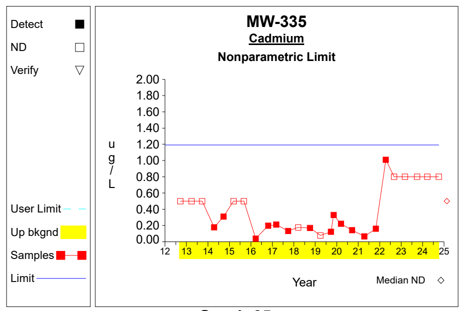
Graph 62



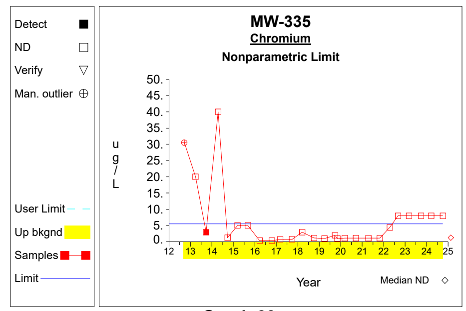
Graph 63



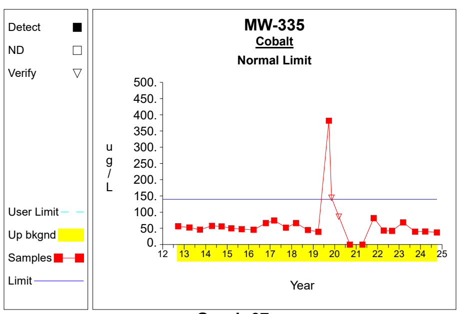
Graph 64



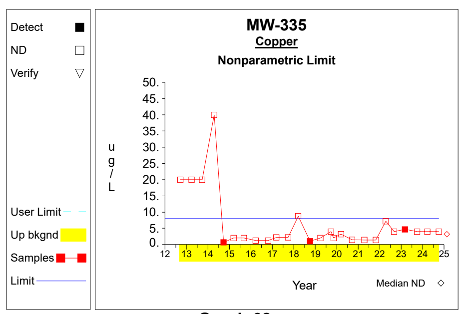
Graph 65



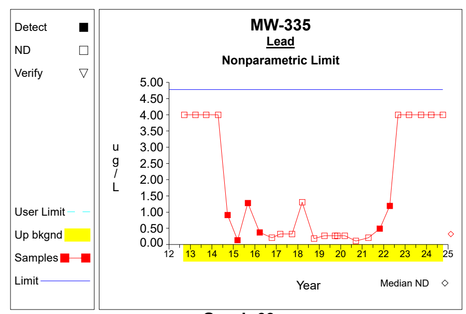
Graph 66



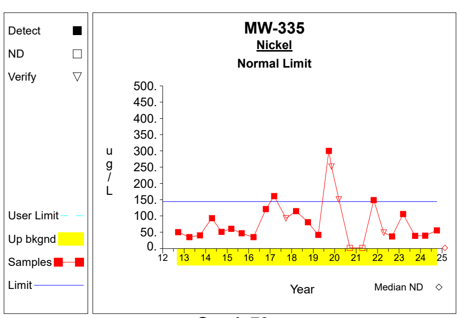
Graph 67



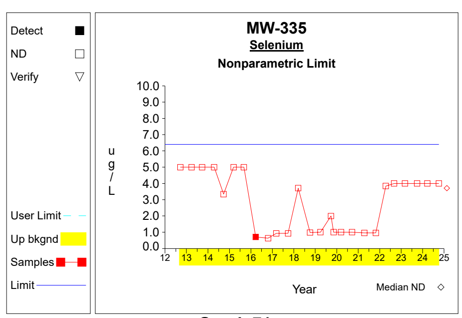
Graph 68



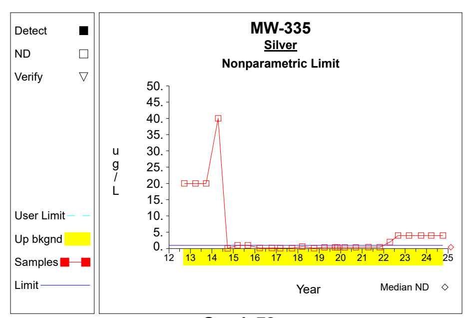
Graph 69



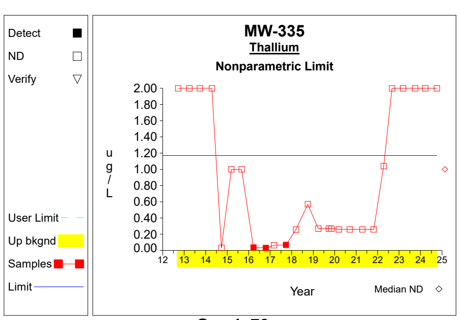
Graph 70



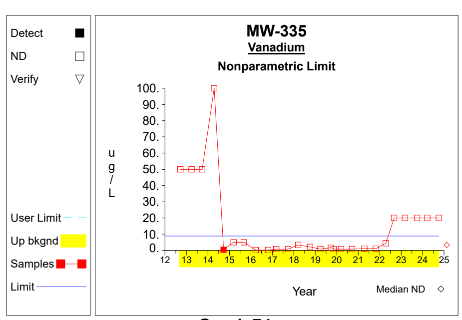
Graph 71



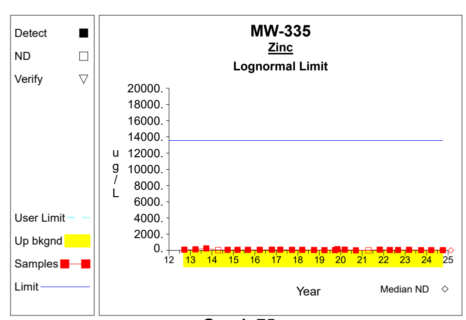
Graph 72



Graph 73

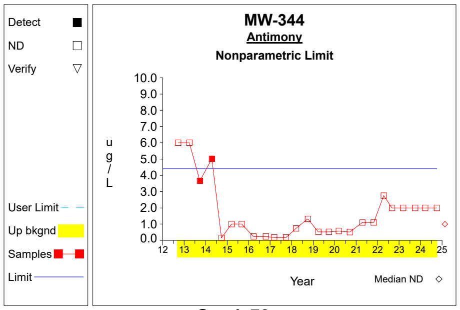


Graph 74

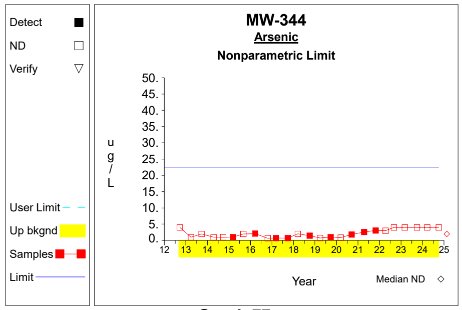


Graph 75

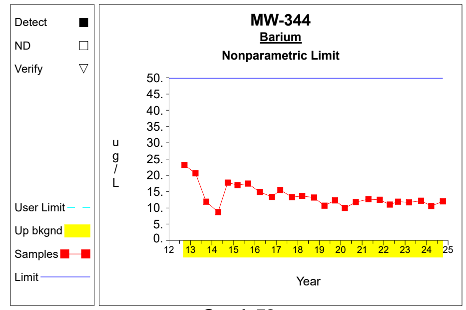
Up vs. Down Prediction Limits



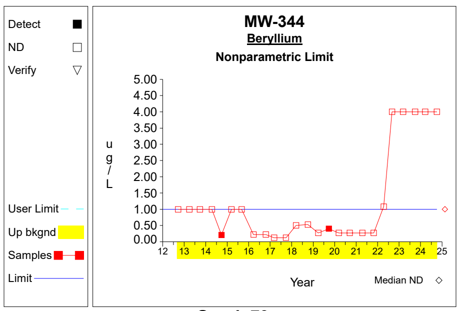
Graph 76



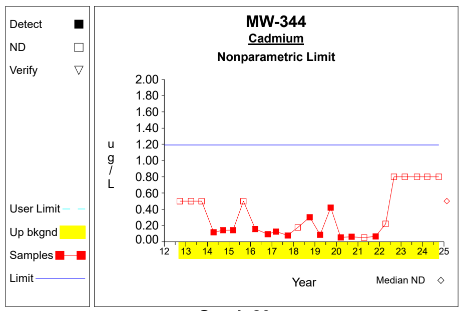
Graph 77



Graph 78



Graph 79



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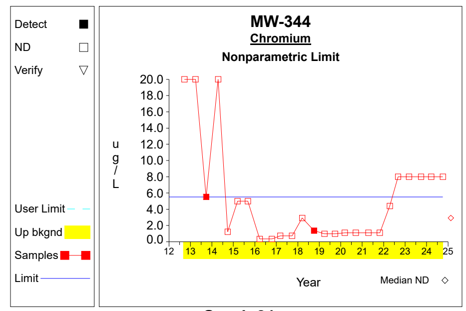

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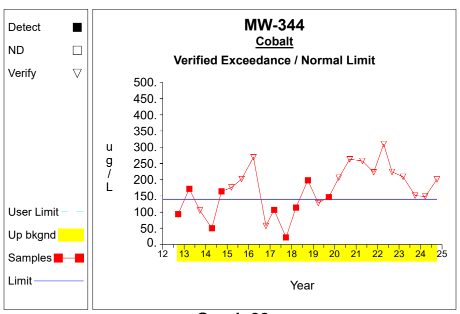

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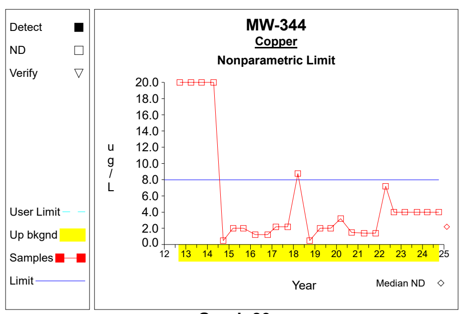

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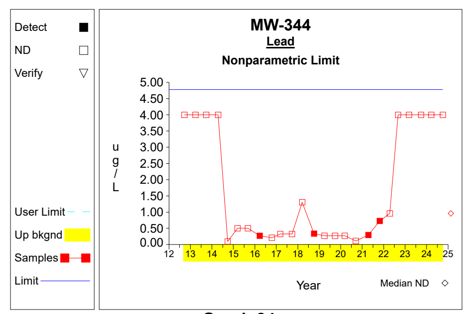

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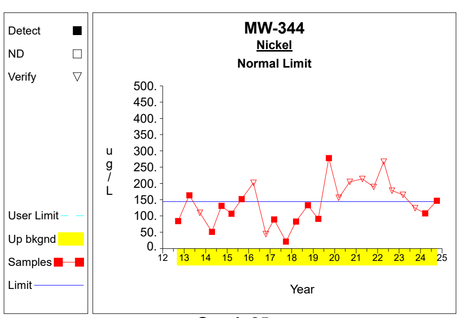

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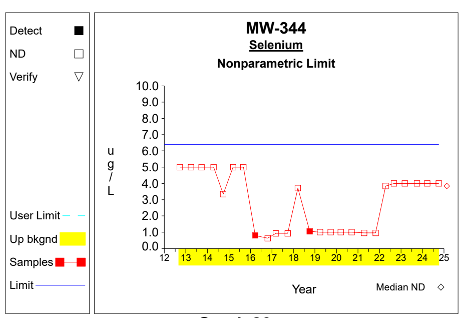

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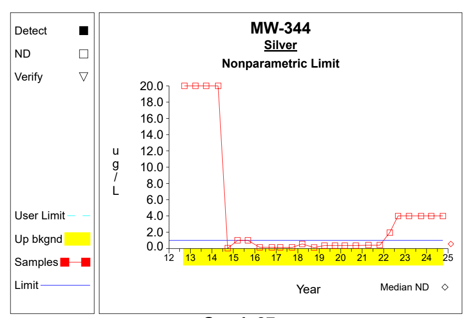

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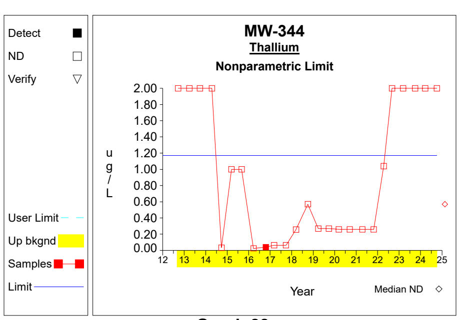

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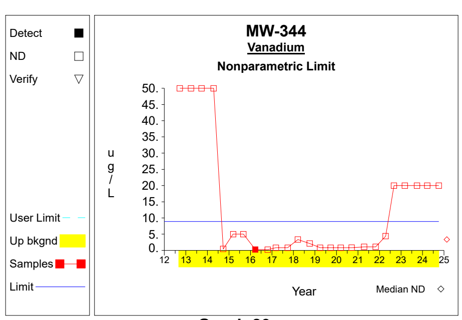
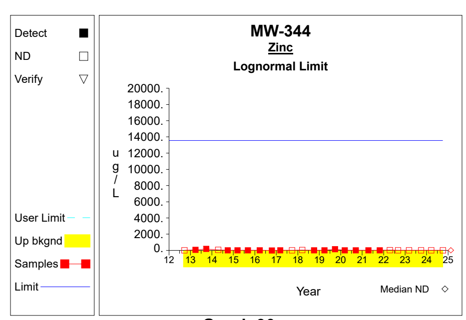
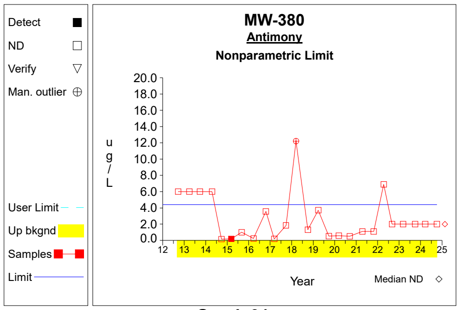


Graph 89

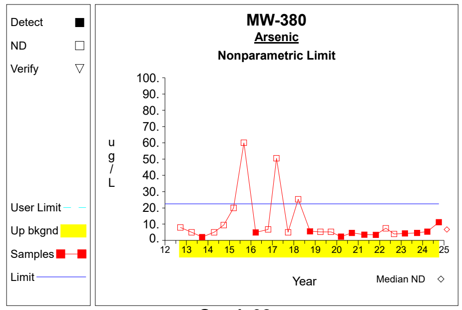


Graph 90

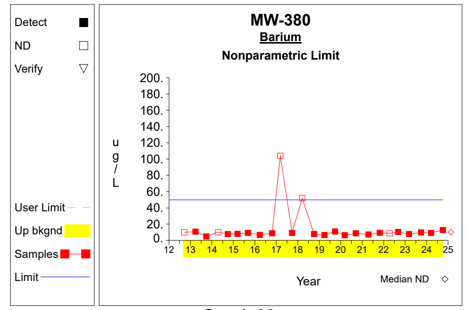
Up vs. Down Prediction Limits



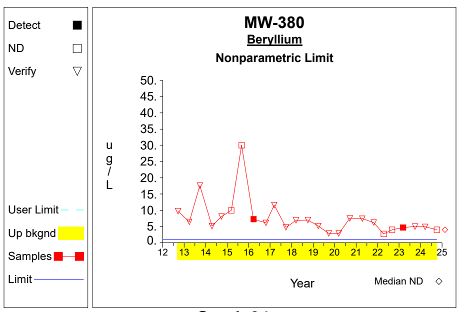
Graph 91



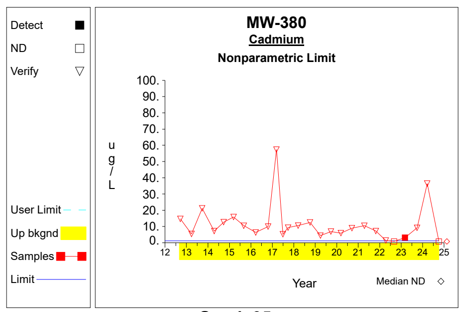
Graph 92



Graph 93



Graph 94



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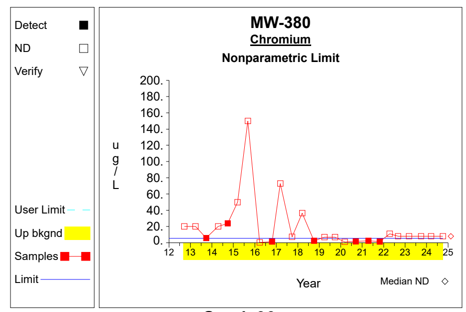

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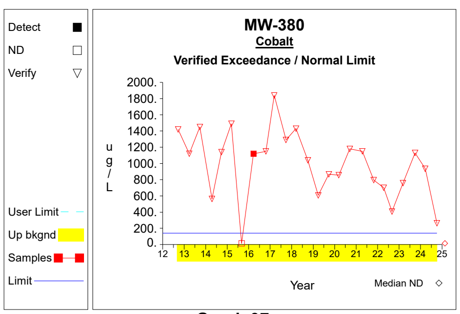

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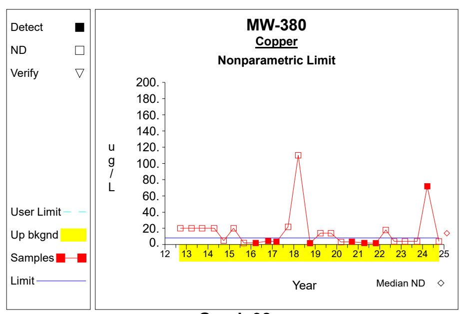
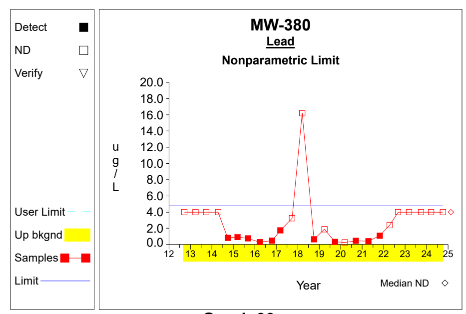


Graph 98



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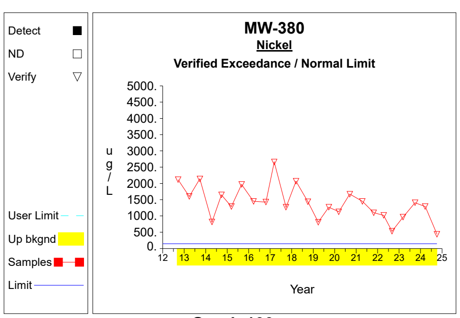

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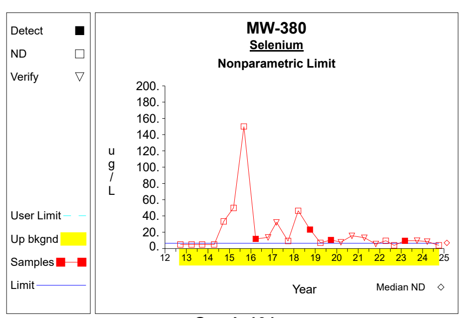

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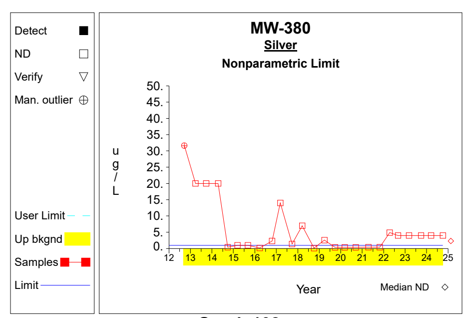

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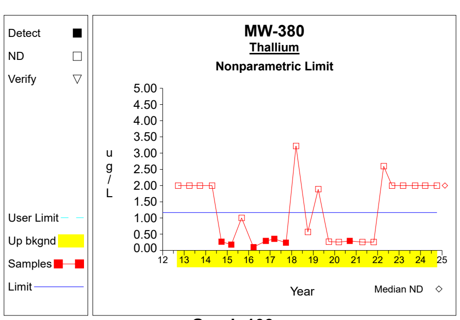

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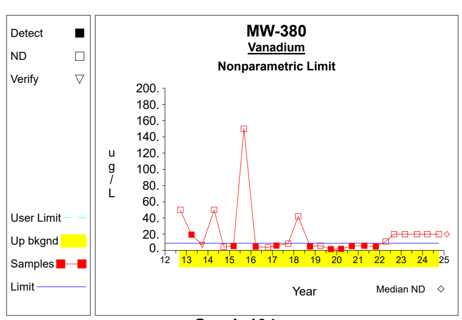
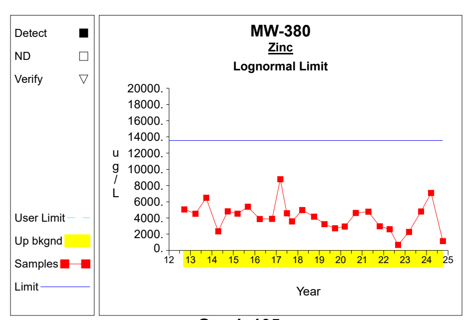
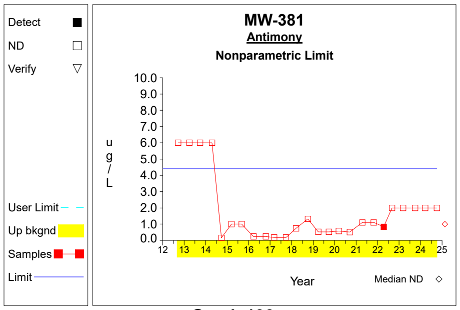


Graph 104

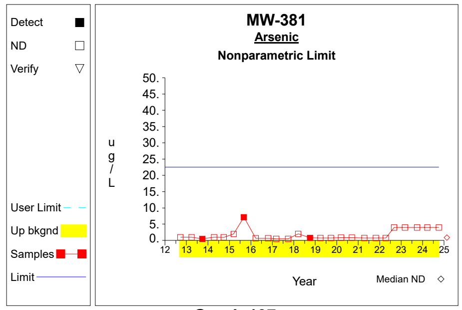


Graph 105

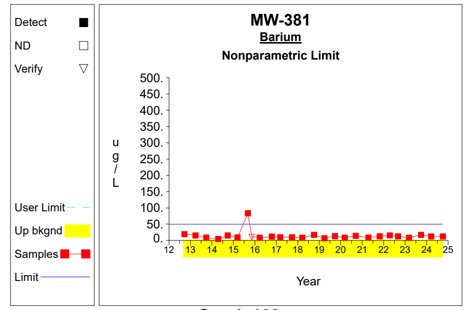
Up vs. Down Prediction Limits



Graph 106



Graph 107



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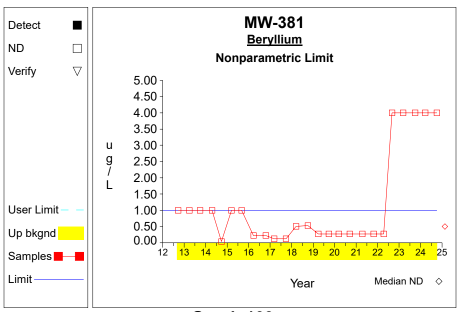
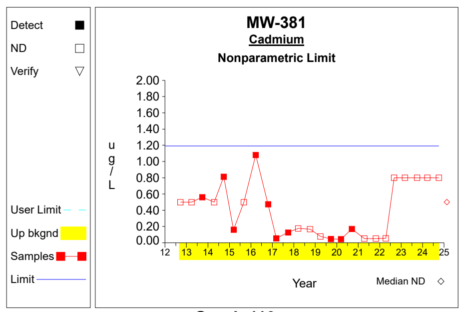


Graph 109



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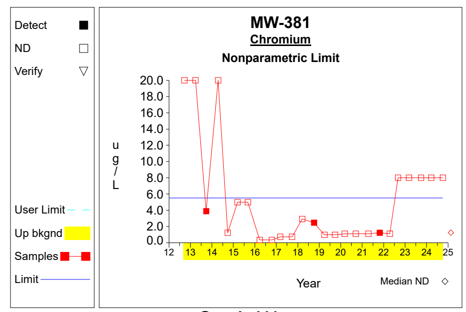

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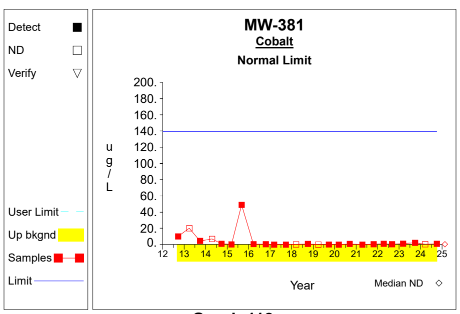
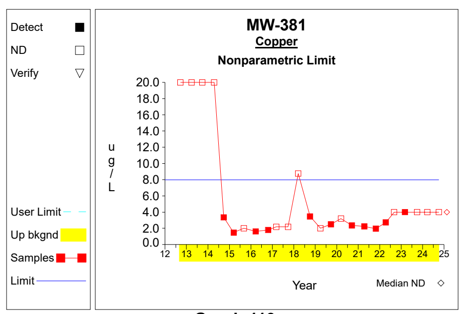
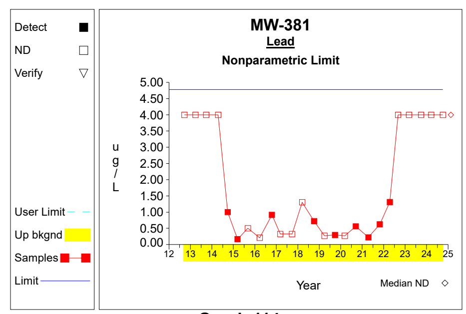


Graph 112



Graph 113



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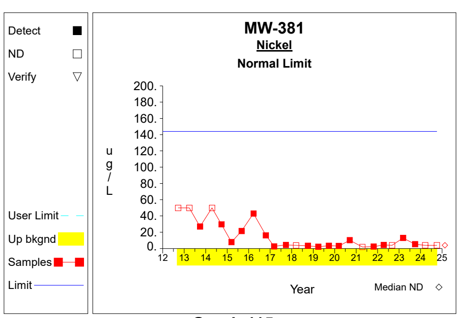
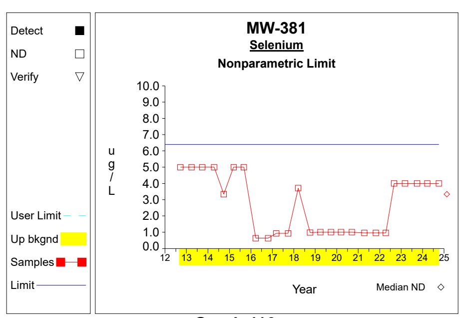
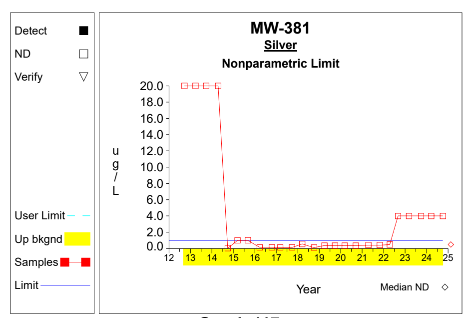


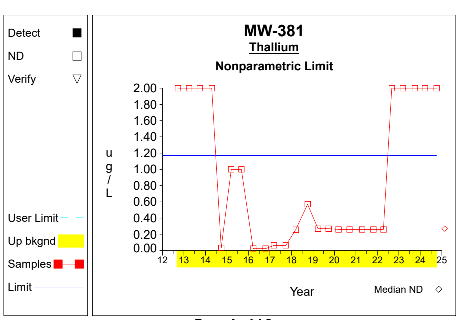
Graph 115



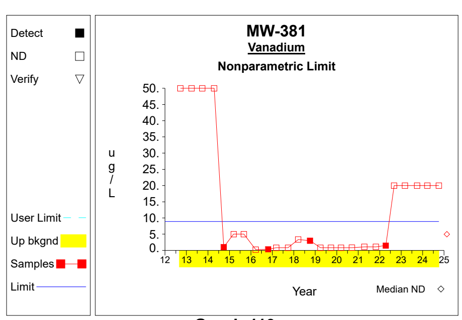
Graph 116



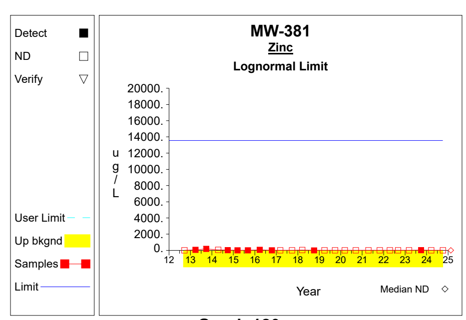
Graph 117



Graph 118



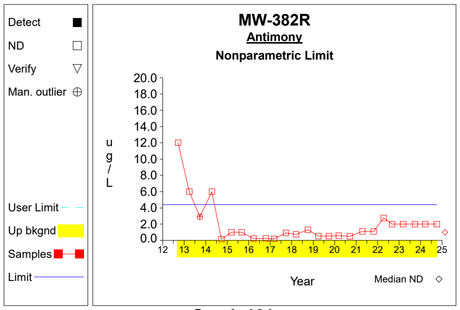
Graph 119



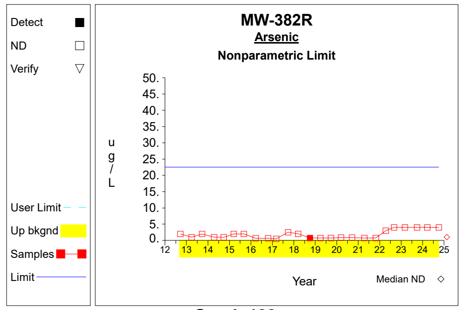
Graph 120

South Central Iowa SWA [GW] October 2024

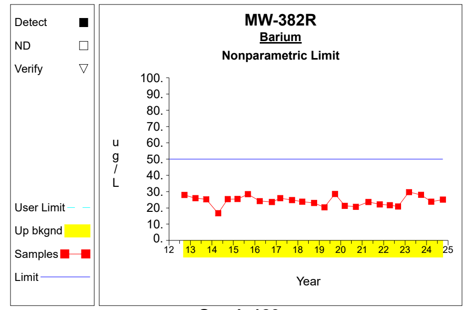
Up vs. Down Prediction Limits



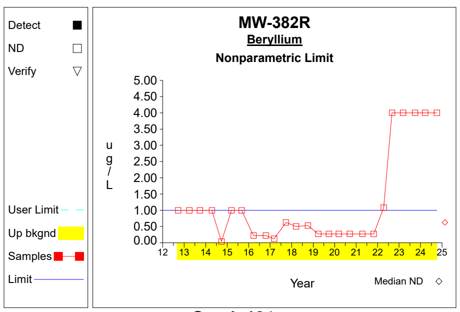
Graph 121



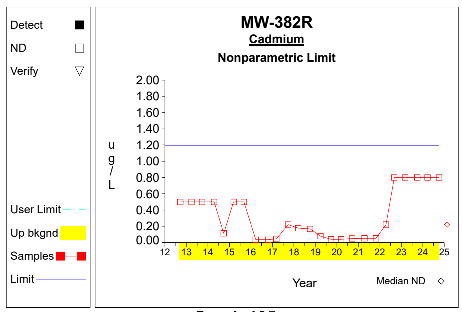
Graph 122



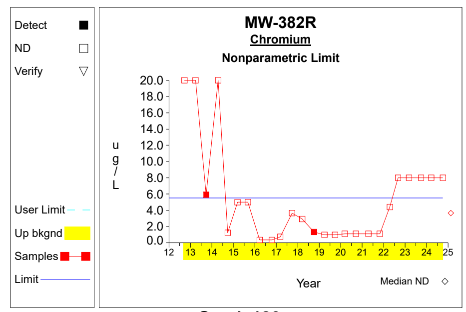
Graph 123



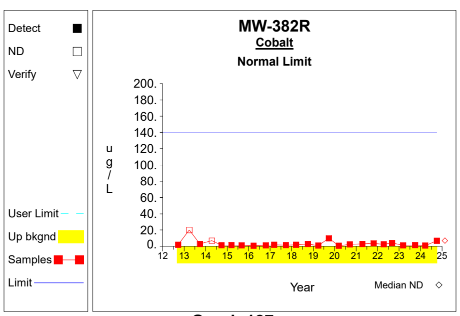
Graph 124



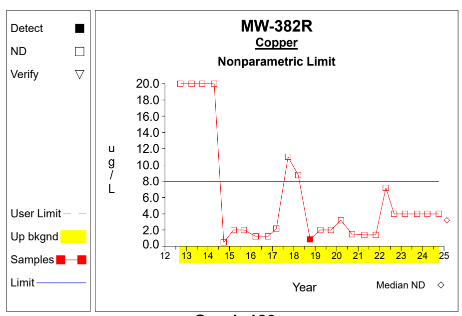
Graph 125



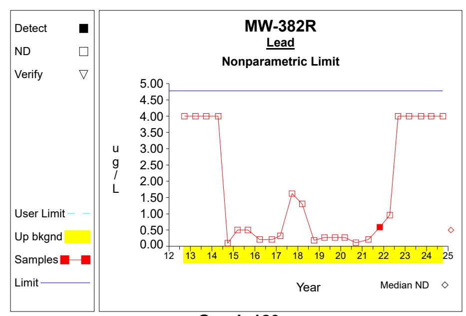
Graph 126



Graph 127



Graph 128



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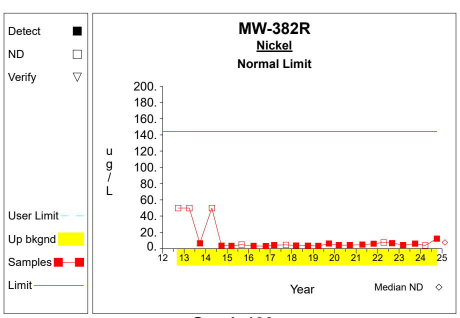
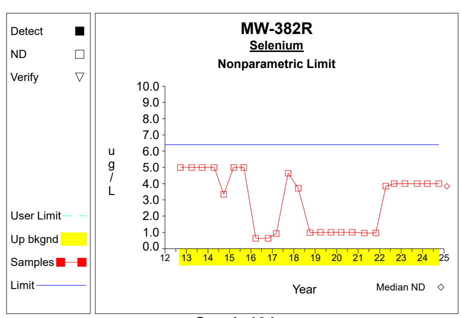


Graph 130



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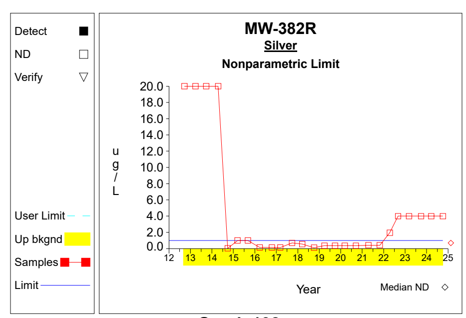
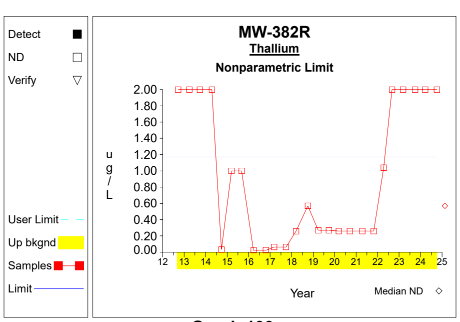
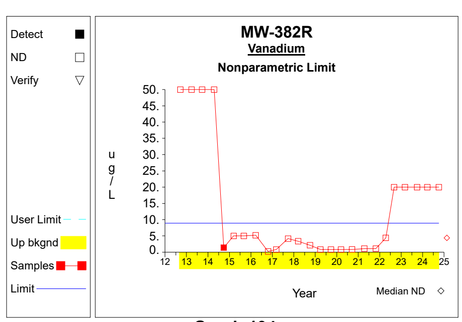


Graph 132



Graph 133



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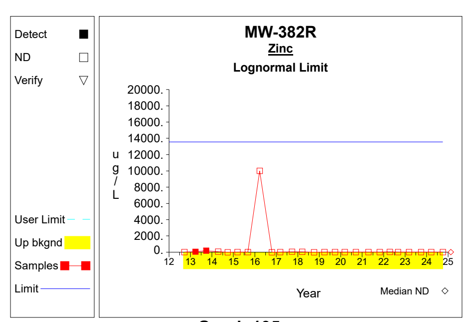
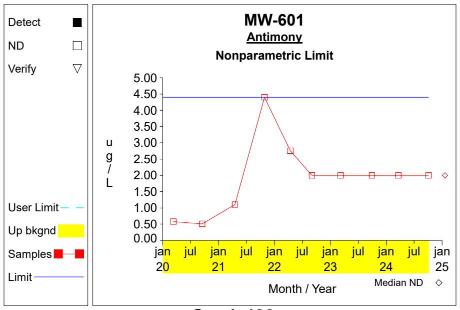


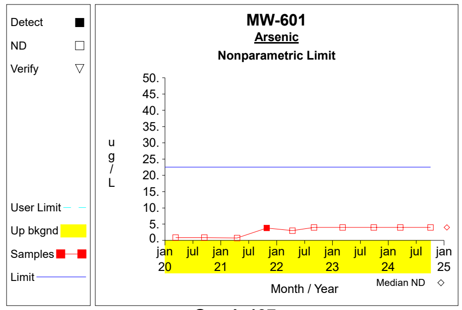
Graph 135

Prepared by: Otter Creek Environmental

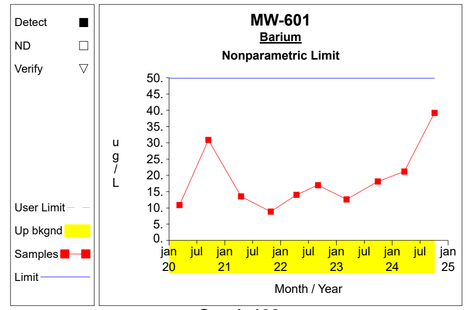
Up vs. Down Prediction Limits



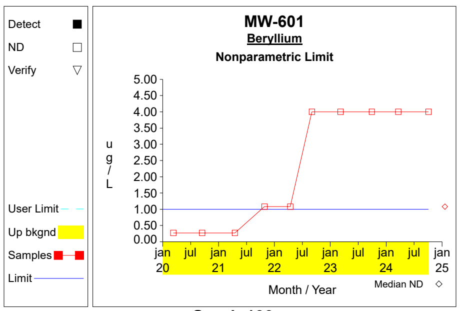
Graph 136



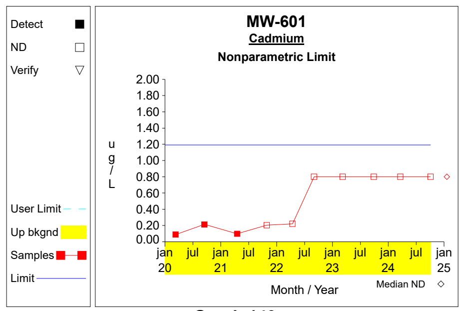
Graph 137



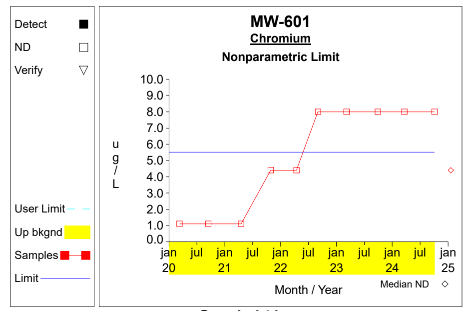
Graph 138



Graph 139



Graph 140



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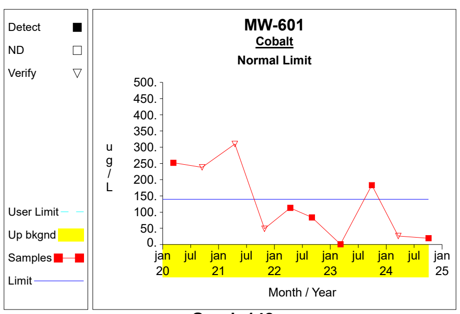
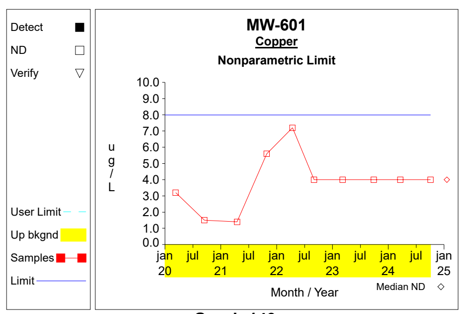
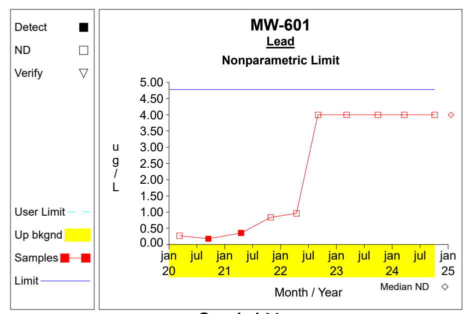


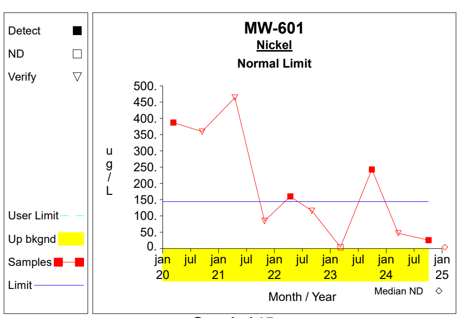
Graph 142



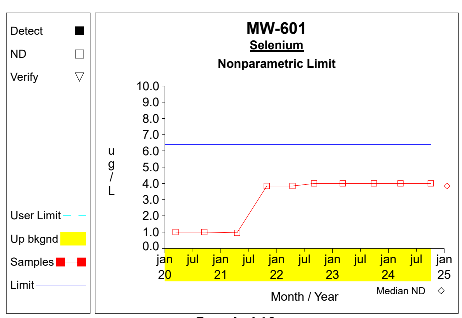
Graph 143



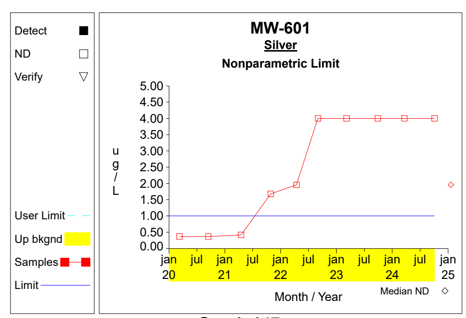
Graph 144



Graph 145



Graph 146



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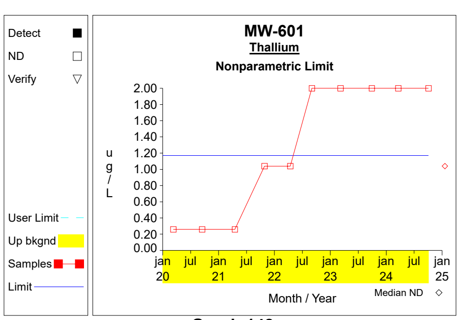
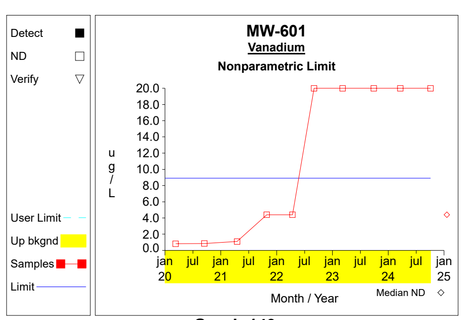
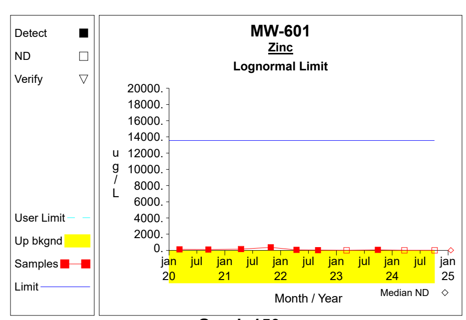


Graph 148

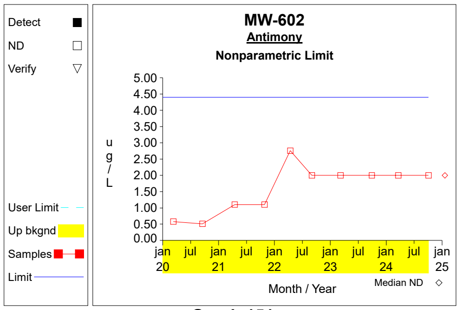


Graph 149

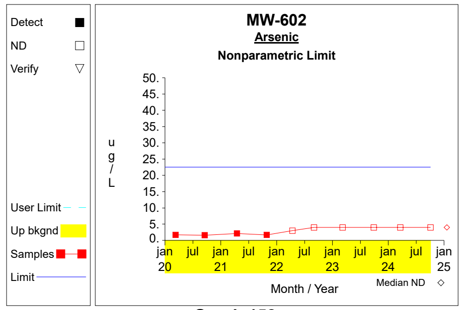


Graph 150

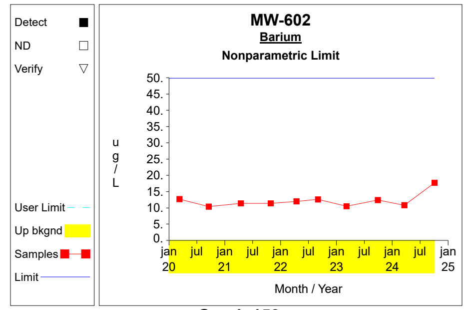
Up vs. Down Prediction Limits



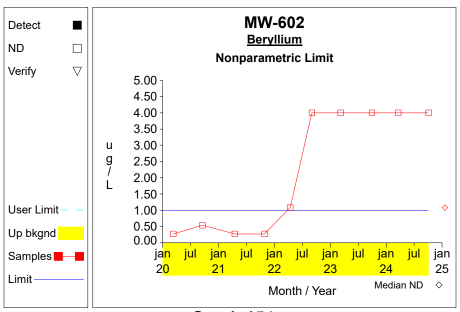
Graph 151



Graph 152



Graph 153



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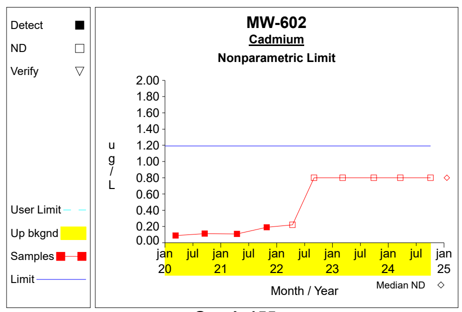
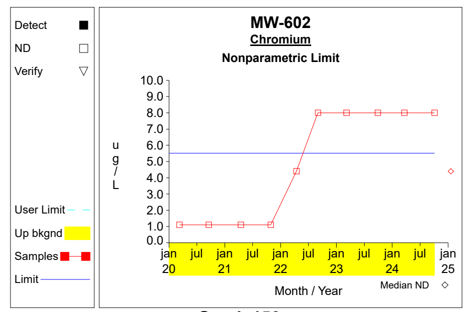
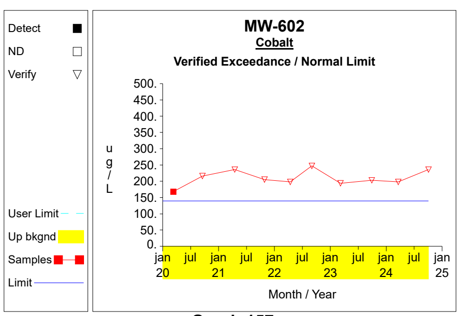


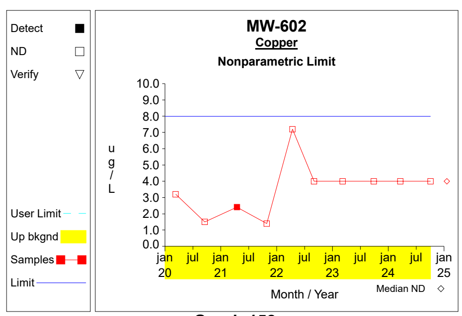
Graph 155



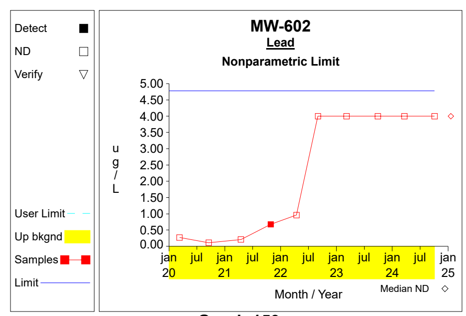
Graph 156



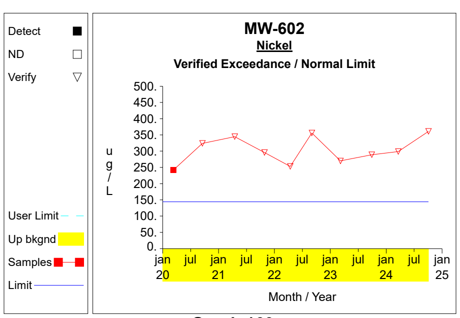
Graph 157



Graph 158



Graph 159



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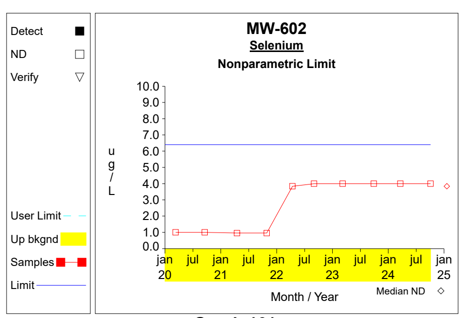

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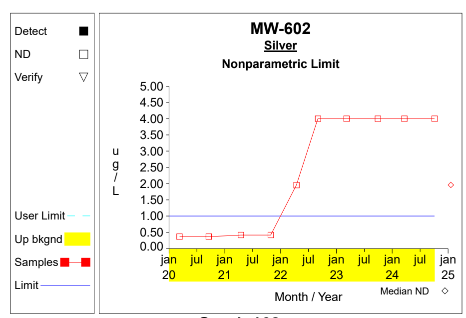

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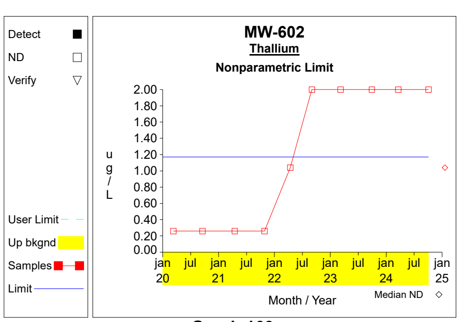

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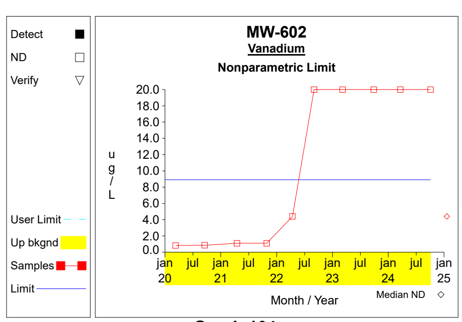
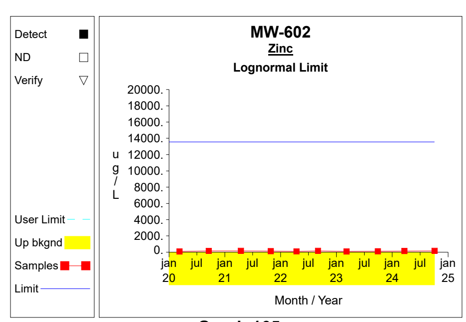


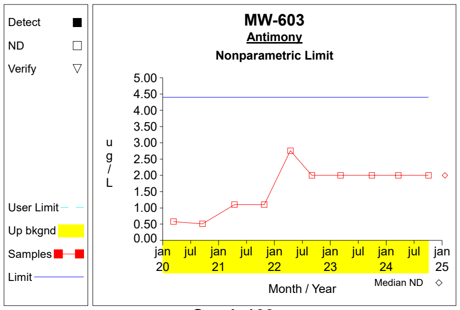
Graph 164



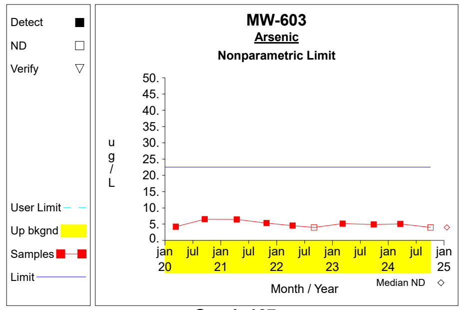
Graph 165

South Central Iowa SWA [GW] October 2024

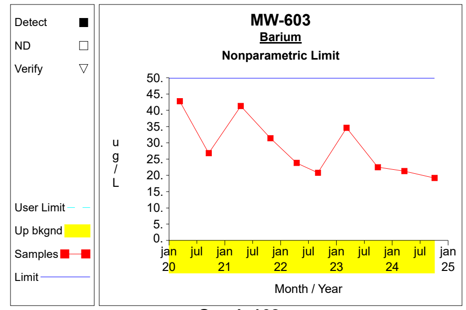
Up vs. Down Prediction Limits



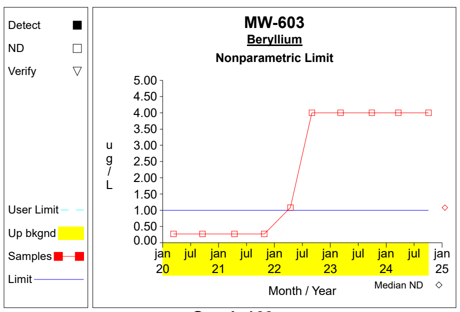
Graph 166



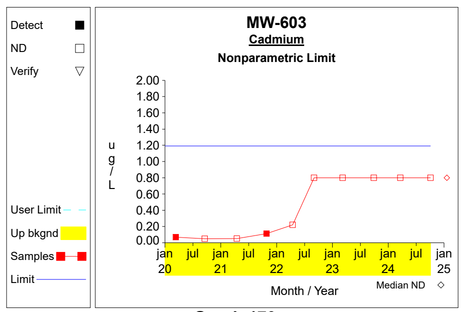
Graph 167



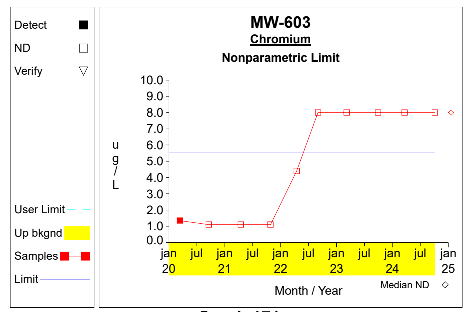
Graph 168



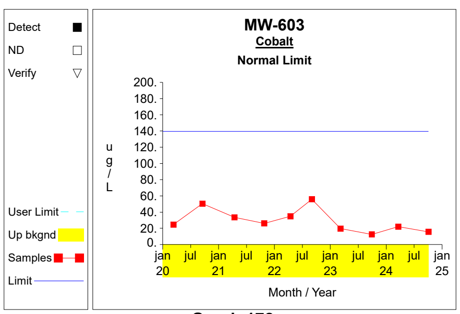
Graph 169



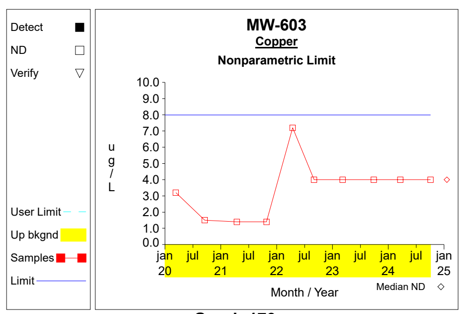
Graph 170



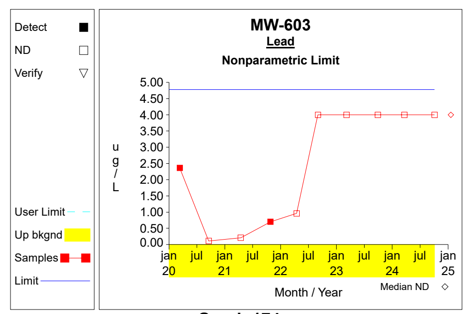
Graph 171



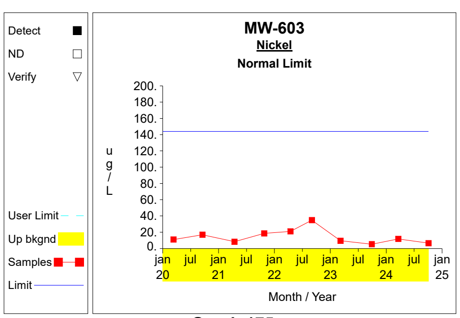
Graph 172



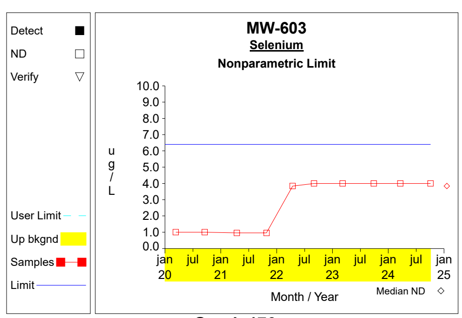
Graph 173



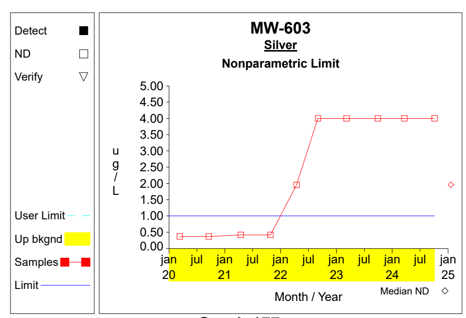
Graph 174



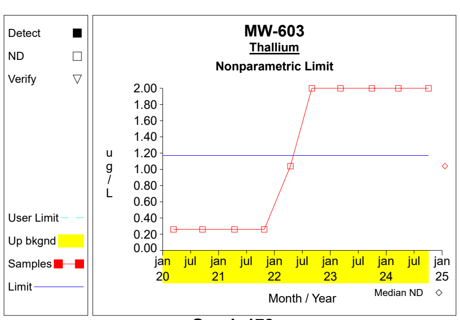
Graph 175



Graph 176



Graph 177



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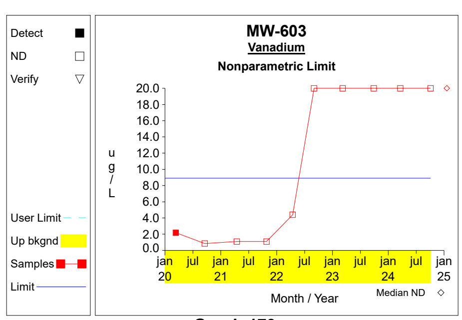
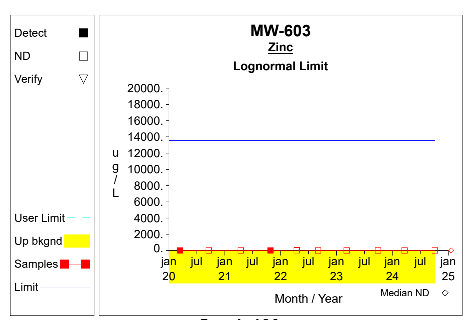
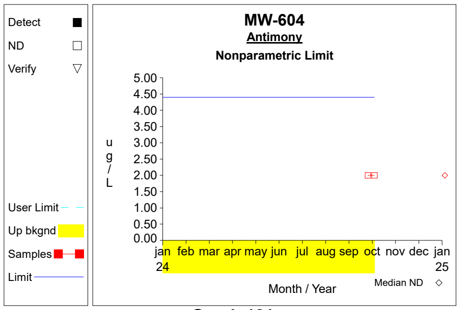


Graph 179

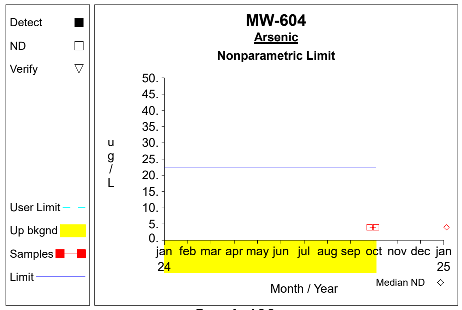


Graph 180

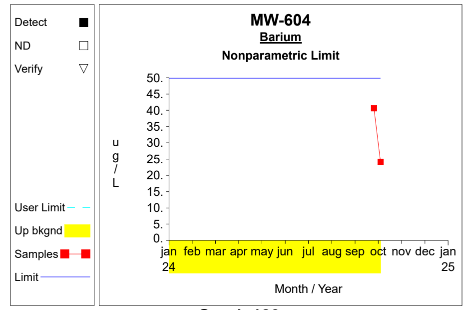
Up vs. Down Prediction Limits



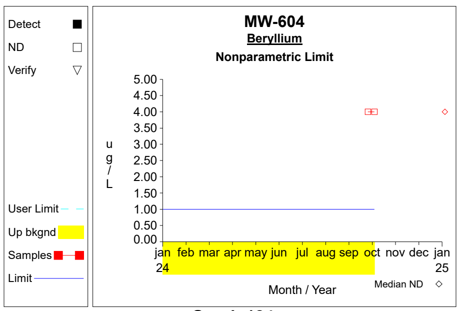
Graph 181



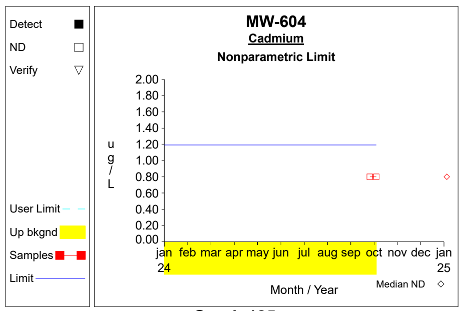
Graph 182



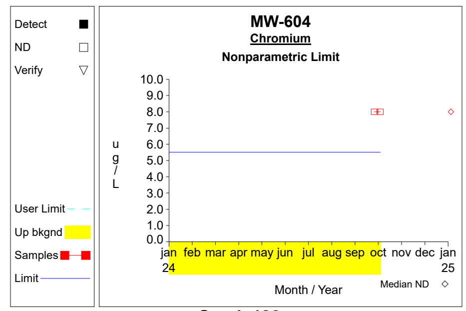
Graph 183



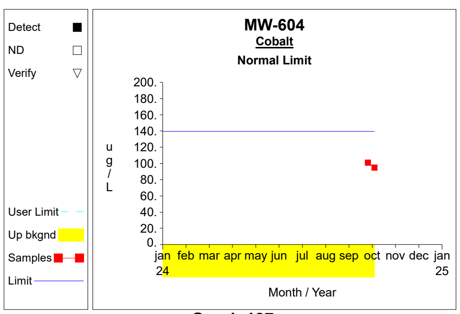
Graph 184



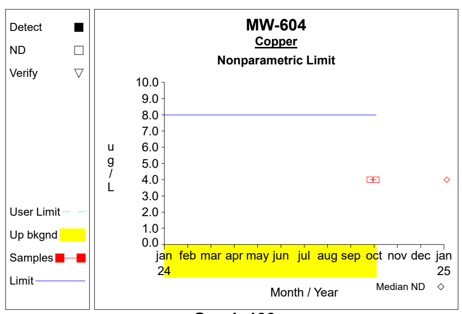
Graph 185



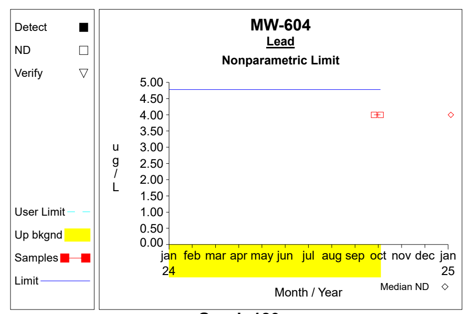
Graph 186



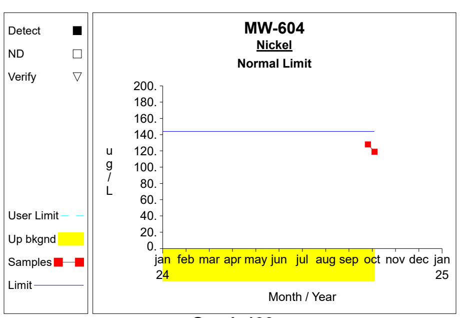
Graph 187



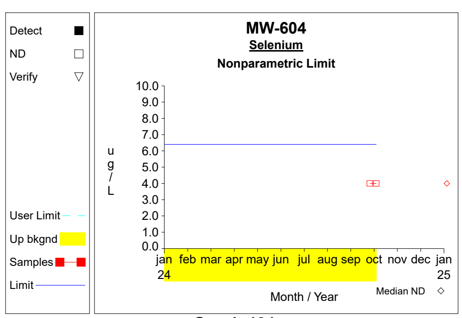
Graph 188



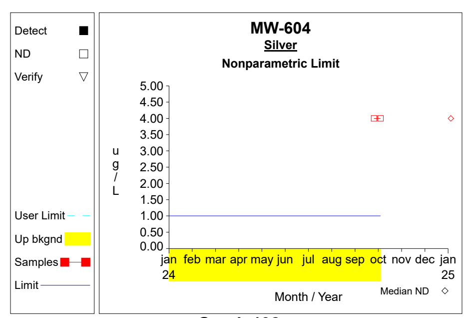
Graph 189



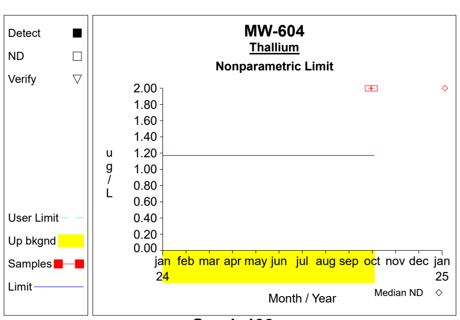
Graph 190



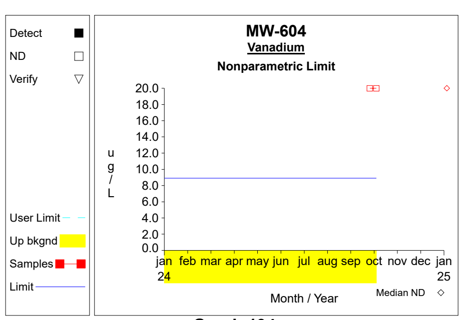
Graph 191



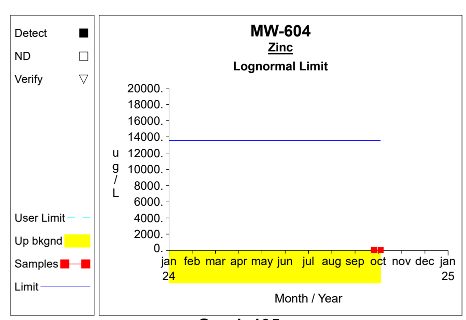
Graph 192



Graph 193

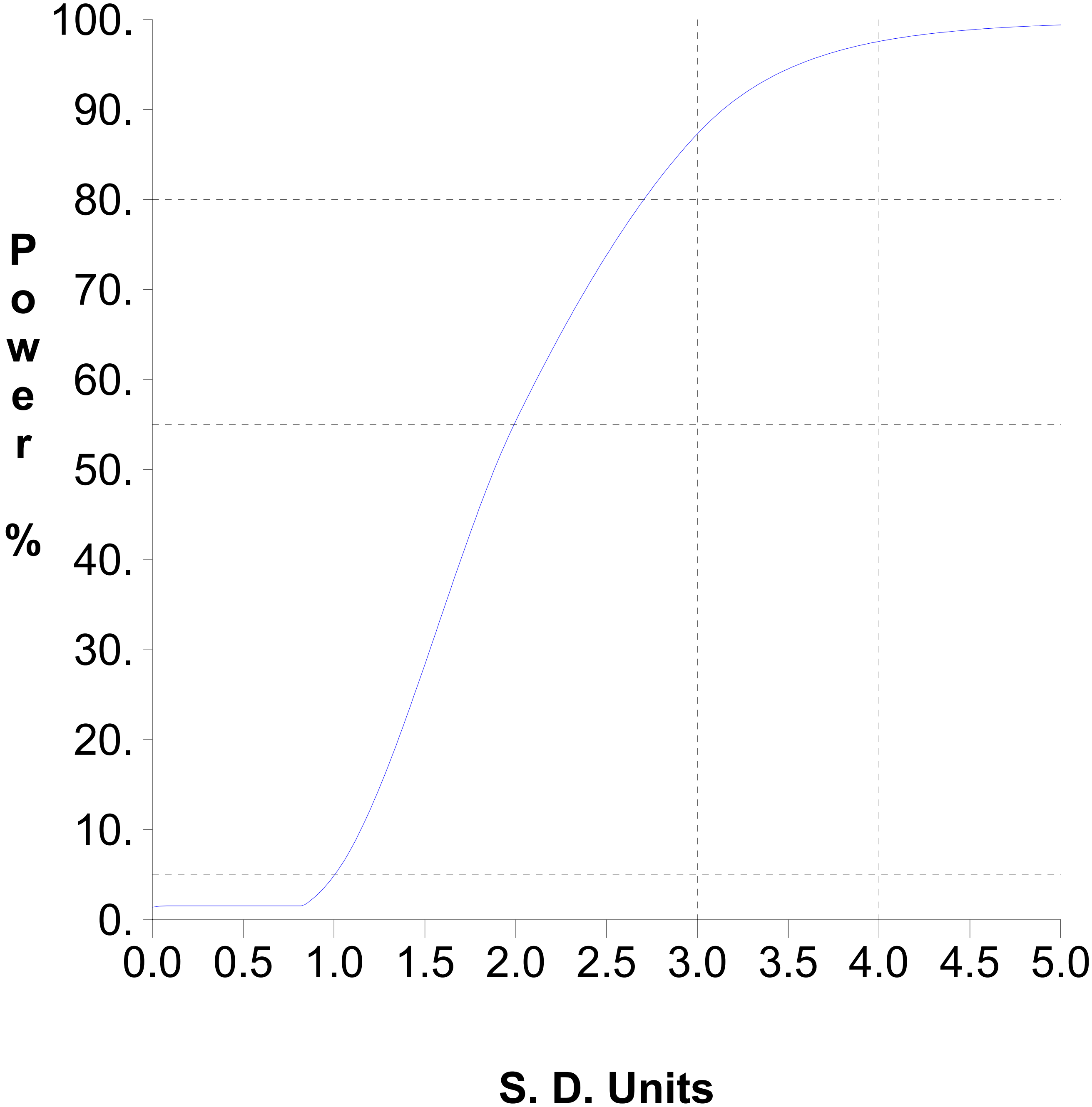


Graph 194



Graph 195

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



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

Step	Equation	Description
1	PL = max(X) = **4.4**	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
Arsenic (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **22.5**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

Step	Equation	Description
1	PL = max(X) = **49.9**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

Step	Equation	Description
1	PL = max(X) = **1.0**	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
Cadmium (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.19**	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 (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **5.51**	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 (ug/L)
Normal Prediction Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{4521.5} / \mathbf{70}$ $= \mathbf{64.593}$	Compute upgradient mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{359494.53} - \mathbf{2.04}\times\mathbf{10^7}/\mathbf{70}) / (\mathbf{70}-1))^{1/2}$ $= \mathbf{31.263}$	Compute upgradient sd.
3	alpha = $\min[(1-.95^{1/\mathbf{K}})^{1/2}, .01]$ $= \min[(1-.95^{1/\mathbf{195}})^{1/2}, .01]$ $= \mathbf{0.01}$	Adjusted per comparison false positive rate. Pass initial or 1 resample.
4	$PL = \bar{\mathbf{X}} + \mathbf{tS}(1+1/\mathbf{N})^{1/2}$ $= \mathbf{64.593}$ $+ (\mathbf{2.382}*\mathbf{31.263})(1+1/\mathbf{70})^{1/2}$ $= \mathbf{139.578}$	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
Copper (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **7.99**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

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

Step	Equation	Description
1	PL = max(X) = **4.78**	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 (ug/L)
Normal Prediction Limit

Step	Equation	Description
1	$\bar{X}_1 = \mathbf{sum[X_1]} / \mathbf{N_1}$ $= \mathbf{5497.4} / \mathbf{70}$ $= \mathbf{78.534}$	Compute mean of N_1 detected measurements.
2	$S_1 = ((\mathbf{sum[X_1{}^2]}\text{-}\mathbf{sum[X_1]}^2/\mathbf{N_1}) / (\mathbf{N_1}\text{-}1))^{½}$ $= ((\mathbf{479588.18}\text{-}\mathbf{3.02}\times\mathbf{10^7}/\mathbf{70}) / (\mathbf{70}\text{-}1))^{½}$ $= \mathbf{26.335}$	Compute sd of N_1 detected measurements.
3	$\bar{X} = (1 - \mathbf{N_0}/\mathbf{N})\ \mathbf{\bar{X}_1}$ $= (1 - \mathbf{1}/\mathbf{71})\ \mathbf{78.534}$ $= \mathbf{77.428}$	Use Aitchison's method to adjust mean for presence of nondetects.
4	$S = [(1 - \mathbf{N_0}/\mathbf{N}) * \mathbf{S_1}^2 +$ $(\mathbf{N_0}/\mathbf{N}) (1 - (\mathbf{N_0}\text{-}1)/(\mathbf{N}\text{-}1))\ \mathbf{\bar{X}_1}^2]^{½}$ $= [(1 - \mathbf{1}/\mathbf{71}) * \mathbf{26.335}^2 +$ $(\mathbf{1}/\mathbf{71}) (1 - (\mathbf{1}\text{-}1)/(\mathbf{71}\text{-}1))\ \mathbf{78.534}^2]^{½}$ $= \mathbf{27.76}$	Use Aitchison's method to adjust sd for presence of nondetects.
5	$\text{alpha} = \min[(1\text{-}.95^{1/\mathbf{K}})^{½}, .01]$ $= \min[(1\text{-}.95^{1/\mathbf{195}})^{½}, .01]$ $= \mathbf{0.01}$	Adjusted per comparison false positive rate. Pass initial or 1 resample.
6	$PL = \mathbf{\bar{X}} + \mathbf{tS}(1+1/\mathbf{N})^{½}$ $= \mathbf{77.428}$ $+ (\mathbf{2.381}*\mathbf{27.76})(1+1/\mathbf{71})^{½}$ $= \mathbf{143.983}$	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 (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **6.4**	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
Silver (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.0**	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
Thallium (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.17**	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 (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **8.91**	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 (ug/L)
Lognormal Prediction Limit

Step	Equation	Description
1	$Y = \log_e(X)$	Transform to natural logarithmic scale.
2	$\bar{Y}_1 = \mathbf{sum[Y_1] / N_1}$ $= \mathbf{266.634 / 53}$ $= \mathbf{5.031}$	Compute mean of N_1 detected log transformed measurements.
3	$S_{Y_1} = ((\mathbf{sum[Y_1^2]\text{-}sum[Y_1]^2/N_1}) / (\mathbf{N_1}\text{-}1))^{½}$ $= ((\mathbf{1407.204\text{-}71093.85/53}) / (\mathbf{53}\text{-}1))^{½}$ $= \mathbf{1.125}$	Compute sd of N_1 detected log transformed measurements.
4	$\bar{Y} = (1 - \mathbf{N_0/N})\, \mathbf{\bar{Y}_1}$ $= (1 - \mathbf{16/69})\, \mathbf{5.031}$ $= \mathbf{3.864}$	Use Aitchison's method to adjust mean for presence of nondetects (log scale).
5	$S_Y = [(1 - \mathbf{N_0/N}) * \mathbf{S_{Y_1}}^2 +$ $(\mathbf{N_0/N}) (1 - (\mathbf{N_0}\text{-}1)/(\mathbf{N}\text{-}1))\, \mathbf{\bar{Y}_1}^2]^{½}$ $= [(1 - \mathbf{16/69}) * \mathbf{1.125}^2 +$ $(\mathbf{16/69}) (1 - (\mathbf{16}\text{-}1)/(\mathbf{69}\text{-}1))\, \mathbf{5.031}^2]^{½}$ $= \mathbf{2.355}$	Use Aitchison's method to adjust sd for presence of nondetects (log scale).
6	$\text{alpha} = \min[(1\text{-}.95^{1/\mathbf{K}})^{½}, .01]$ $= \min[(1\text{-}.95^{1/\mathbf{195}})^{½}, .01]$ $= \mathbf{0.01}$	Adjusted per comparison false positive rate. Pass initial or 1 resample.
7	$PL = \exp[\mathbf{\bar{Y}} + \mathbf{tS_Y}(1+1/\mathbf{N})^{½}]$ $= \exp[\mathbf{3.864}$ $+ (\mathbf{2.382*2.355})(1+1/\mathbf{69})^{½}]$ $= \mathbf{13569.08}$	One-sided lognormal prediction limit (t is Student's t on N-1 degrees of freedom and 1-alpha confidence level).

Attachment D

Summary Tables and Graphs for the LCL Comparisons – Trace Metals

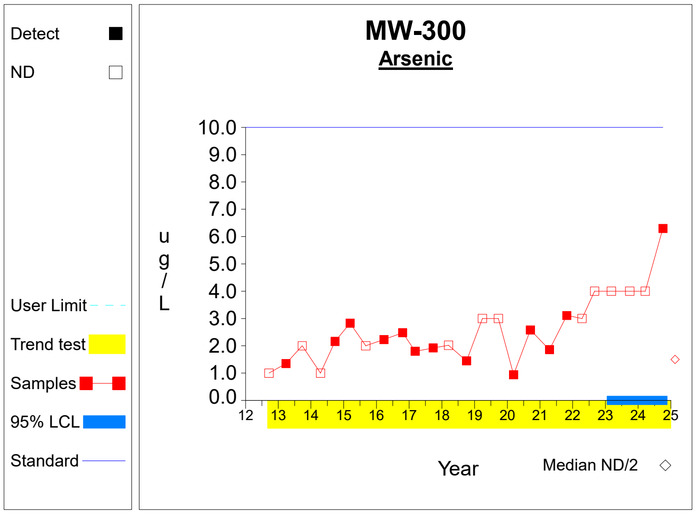
Table 1

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

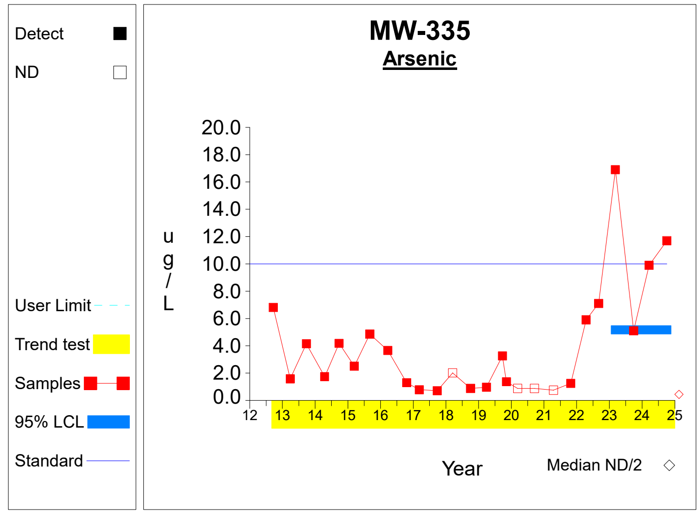
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Arsenic	ug/L	MW-300	4	2.700	2.400	1.176	0.000	5.523	10.000		
Arsenic	ug/L	MW-335	4	10.900	4.874	1.176	5.166	16.634	10.000		
Arsenic	ug/L	MW-380	4	6.375	3.250	1.176	2.552	10.198	10.000		
Arsenic	ug/L	MW-390	4	16.975	1.044	1.176	15.747	18.203	10.000		**

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

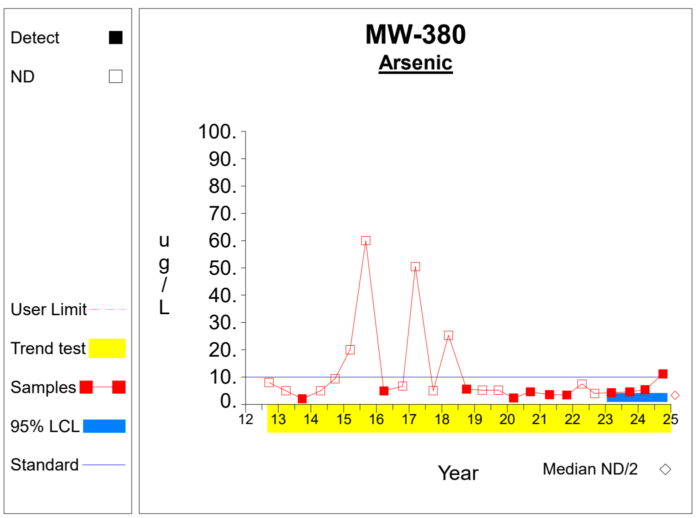
Confidence Limits (Assessment)



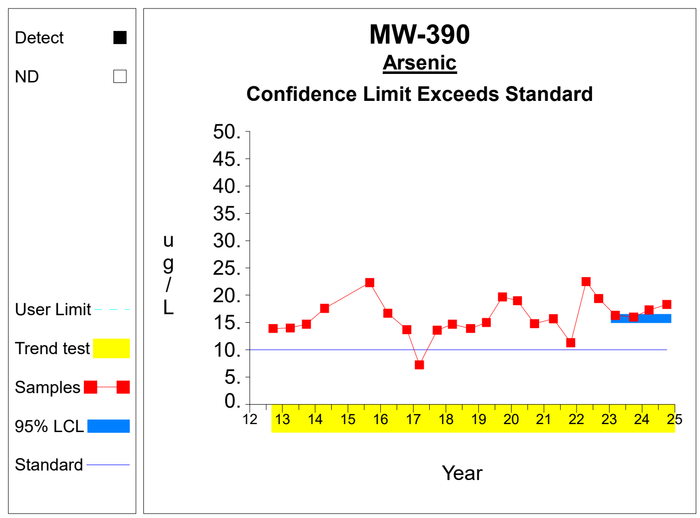
Graph 1



Graph 2



Graph 3



Graph 4

Worksheet 6 - Assessment Monitoring
Arsenic (ug/L) at MW-300

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{10.8} / \textbf{4}$ $= \textbf{2.7}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{46.44} - \textbf{116.64}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{2.4}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{2.7} - \textbf{2.353} * \textbf{2.4}/\textbf{4}^{1/2}$ $= \textbf{0.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{2.7} + \textbf{2.353} * \textbf{2.4}/\textbf{4}^{1/2}$ $= \textbf{5.523}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{25} * (\textbf{25}-1) / 2$ $= \textbf{300}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{1620.667}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{300} \pm \textbf{2.576} * \textbf{1620.667}^{1/2}) / 2$ $= [\ \textbf{98.148}, \textbf{201.852}\ ]$	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	$CL(S) = [\ \textbf{-0.058}, \textbf{0.07}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic (ug/L) at MW-335

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{43.6} / \textbf{4}$ $= \textbf{10.9}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{546.52} - \textbf{1900.96}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{4.874}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{10.9} - \textbf{2.353} * \textbf{4.874}/\textbf{4}^{1/2}$ $= \textbf{5.166}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{10.9} + \textbf{2.353} * \textbf{4.874}/\textbf{4}^{1/2}$ $= \textbf{16.634}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{26} * (\textbf{26}-1) / 2$ $= \textbf{325}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.122}$	Sen's estimator of trend.
7	$var(S) = \textbf{2049.667}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{325} \pm \textbf{2.576} * \textbf{2049.667}^{1/2}) / 2$ $= [\ \textbf{104.188}, \textbf{220.812}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{-0.252}, \textbf{0.836}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic (ug/L) at MW-380

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{25.5} / \mathbf{4}$ $= \mathbf{6.375}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{194.25} - \mathbf{650.25}/\mathbf{4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{3.25}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N}^{½}$ $= \mathbf{6.375} - \mathbf{2.353} * \mathbf{3.25/4}^{½}$ $= \mathbf{2.552}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N}^{½}$ $= \mathbf{6.375} + \mathbf{2.353} * \mathbf{3.25/4}^{½}$ $= \mathbf{10.198}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{25} * (\mathbf{25}-1) / 2$ $= \mathbf{300}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.023}$	Sen's estimator of trend.
7	$var(S) = \mathbf{1499.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{300} \pm \mathbf{2.576} * \mathbf{1499.667}^{½}) / 2$ $= [\ \mathbf{100.122}, \mathbf{199.878}\ ]$	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	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.222}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Arsenic (ug/L) at MW-390

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{67.9} / \textbf{4}$ $= \textbf{16.975}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^{2}\textbf{]} - \textbf{sum[X]}^{2}/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{1155.87} - \textbf{4610.41}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{1.044}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{X} - tS/N^{1/2}$ $= \textbf{16.975} - \textbf{2.353} * \textbf{1.044}/\textbf{4}^{1/2}$ $= \textbf{15.747}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{X} + tS/N^{1/2}$ $= \textbf{16.975} + \textbf{2.353} * \textbf{1.044}/\textbf{4}^{1/2}$ $= \textbf{18.203}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{23} * (\textbf{23}-1) / 2$ $= \textbf{253}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.289}$	Sen's estimator of trend.
7	$var(S) = \textbf{1431.667}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{253} \pm \textbf{2.576} * \textbf{1431.667}^{1/2}) / 2$ $= [\ \textbf{77.765}, \textbf{175.235}\ ]$	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	$CL(S) = [\ \textbf{-0.176}, \textbf{0.736}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

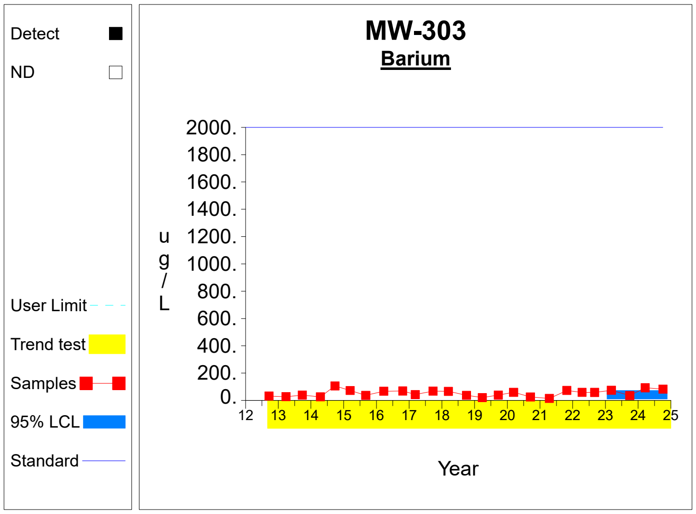
Table 1

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

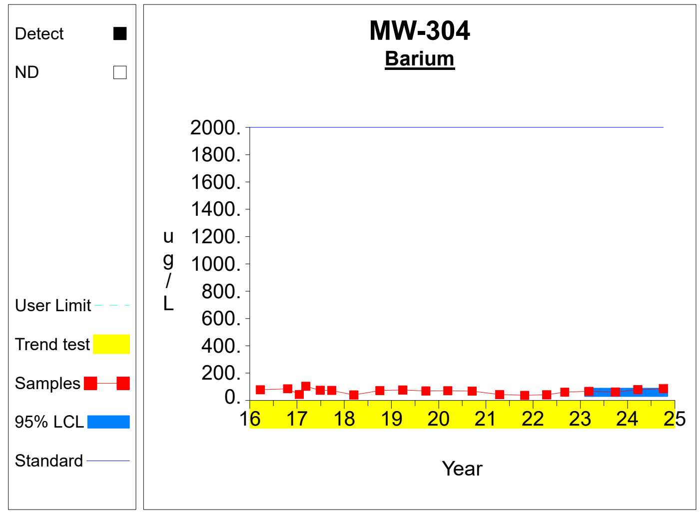
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
Barium	ug/L	MW-303	4	71.350	25.128	1.176	41.793	100.907	2000.000	
Barium	ug/L	MW-304	4	73.275	11.738	1.176	59.468	87.082	2000.000	
Barium	ug/L	MW-312	4	24.350	1.050	1.176	23.114	25.586	2000.000	

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

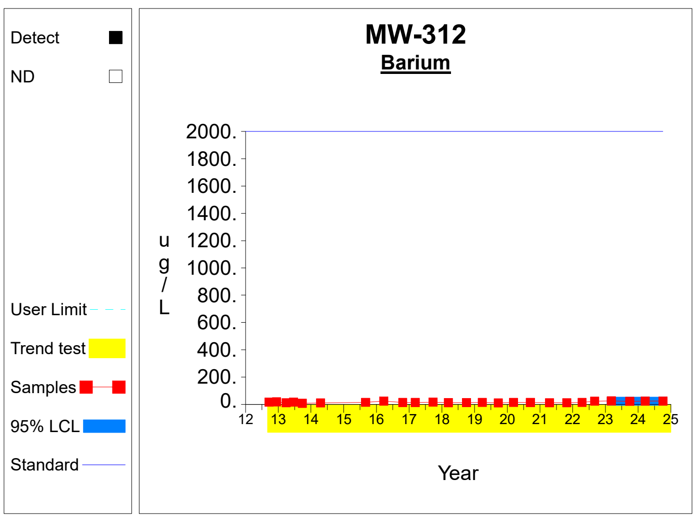
Confidence Limits (Assessment)



Graph 1



Graph 2



Graph 3

Worksheet 6 - Assessment Monitoring
Barium (ug/L) at MW-303

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{285.4} / \textbf{4}$ $= \textbf{71.35}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{22257.48} - \textbf{81453.16}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{25.128}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{X} - tS/N^{1/2}$ $= \textbf{71.35} - \textbf{2.353} * \textbf{25.128}/\textbf{4}^{1/2}$ $= \textbf{41.793}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{X} + tS/N^{1/2}$ $= \textbf{71.35} + \textbf{2.353} * \textbf{25.128}/\textbf{4}^{1/2}$ $= \textbf{100.907}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{25} * (\textbf{25}-1) / 2$ $= \textbf{300}$	Number of sample pairs during trend detection period.
6	$S = \textbf{1.665}$	Sen's estimator of trend.
7	$var(S) = \textbf{1832.333}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{300} \pm \textbf{2.576} * \textbf{1832.333}^{1/2}) / 2$ $= [\ \textbf{94.866}, \textbf{205.134}\ ]$	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	$CL(S) = [\ \textbf{-2.033}, \textbf{5.282}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium (ug/L) at MW-304

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{293.1} / \mathbf{4}$ $= \mathbf{73.275}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{21890.21} - \mathbf{85907.61}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{11.738}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{73.275} - \mathbf{2.353} * \mathbf{11.738}/\mathbf{4}^{1/2}$ $= \mathbf{59.468}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{73.275} + \mathbf{2.353} * \mathbf{11.738}/\mathbf{4}^{1/2}$ $= \mathbf{87.082}$	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	$S = \mathbf{-1.648}$	Sen's estimator of trend.
7	$var(S) = \mathbf{950.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{190} \pm \mathbf{2.576} * \mathbf{950.0}^{1/2}) / 2$ $= [\ \mathbf{55.301}, \mathbf{134.699}\ ]$	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	$CL(S) = [\ \mathbf{-5.403}, \mathbf{2.595}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium (ug/L) at MW-312

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **97.4** / **4** = **24.35**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**2375.0** - **9486.76**/**4**) / (**4**-1))$^{1/2}$ = **1.05**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$ = **24.35** - **2.353** * **1.05**/**4**$^{1/2}$ = **23.114**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$ = **24.35** + **2.353** * **1.05**/**4**$^{1/2}$ = **25.586**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
6	S = **0.44**	Sen's estimator of trend.
7	var(S) = **1831.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**300** ± **2.576** * **1831.333**$^{1/2}$) / 2 = [**94.881**, **205.119**]	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) = [**-0.365**, **1.308**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

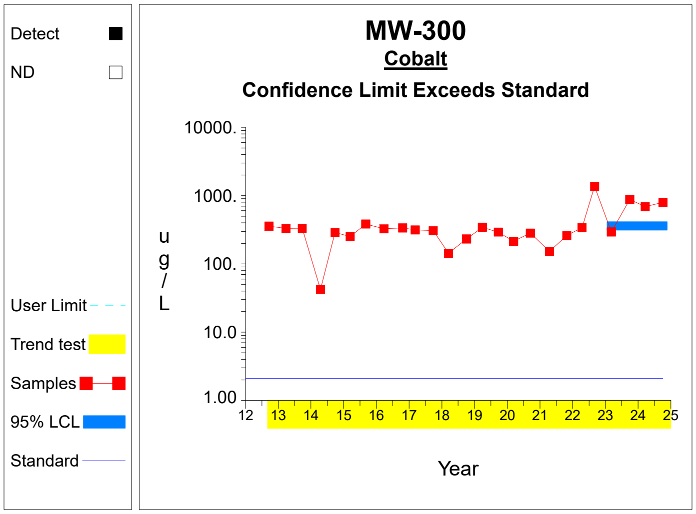
Table 1

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

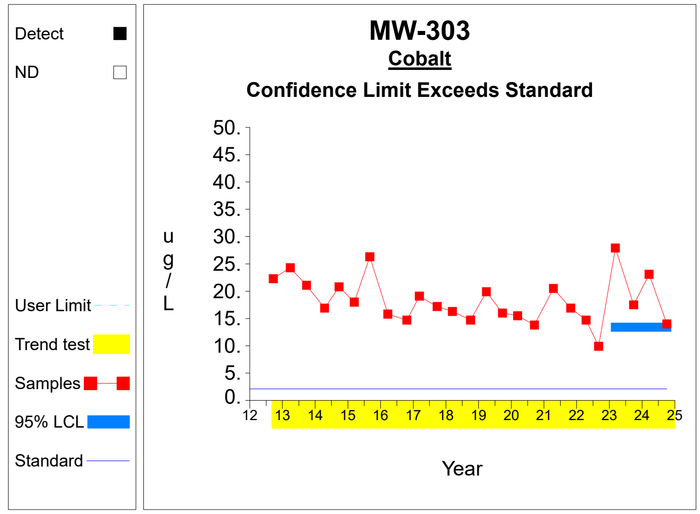
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Cobalt	ug/L	MW-300	4	666.250	260.079	1.176	360.322	972.178	2.100		**
Cobalt	ug/L	MW-303	4	20.625	6.129	1.176	13.415	27.835	2.100		**
Cobalt	ug/L	MW-304	4	5.100	1.339	1.176	3.525	6.675	2.100		**
Cobalt	ug/L	MW-307	4	41.900	5.076	1.176	35.929	47.871	2.100	dec	**
Cobalt	ug/L	MW-312	4	42.700	2.655	1.176	39.577	45.823	2.100		**
Cobalt	ug/L	MW-335	4	46.450	14.546	1.176	29.340	63.560	2.100		**
Cobalt	ug/L	MW-344	4	177.250	32.232	1.176	139.336	215.164	2.100		**
Cobalt	ug/L	MW-380	4	771.750	371.635	1.176	334.601	1208.899	2.100		**
Cobalt	ug/L	MW-382R	4	2.600	2.881	1.176	0.000	5.989	2.100		
Cobalt	ug/L	MW-390	4	106.975	7.165	1.176	98.547	115.403	2.100		**

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

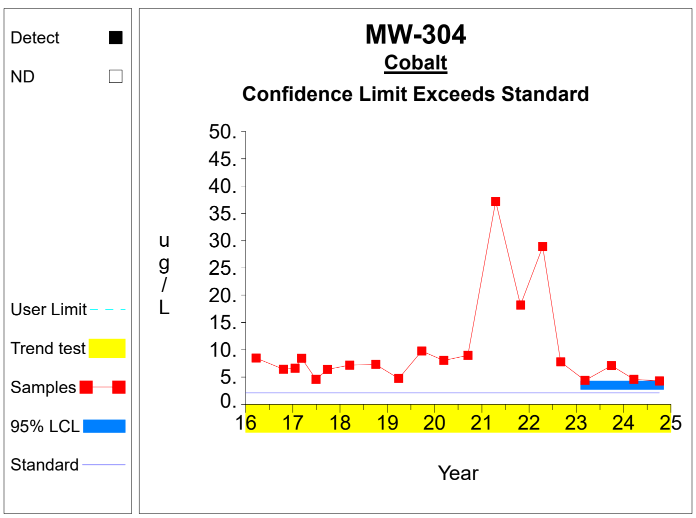
Confidence Limits (Assessment)



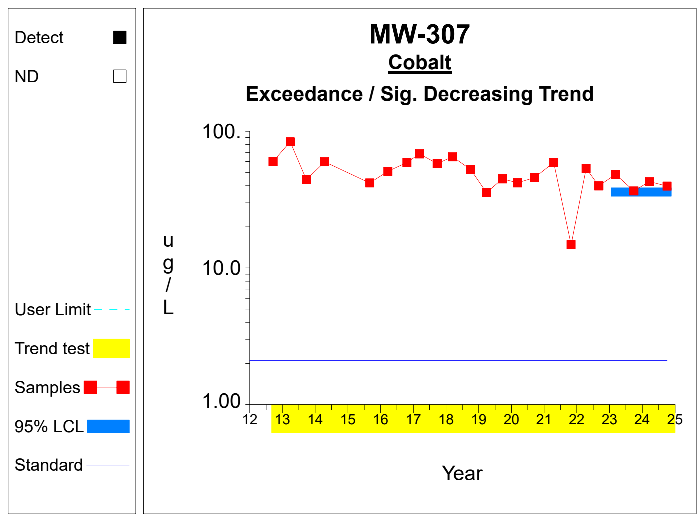
Graph 1



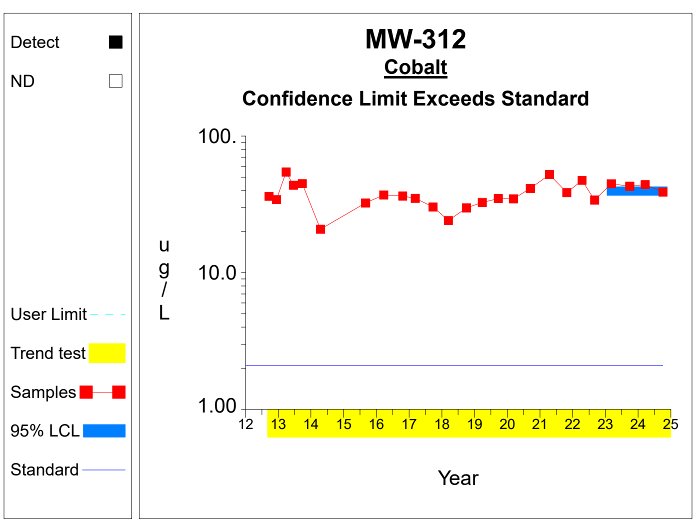
Graph 2



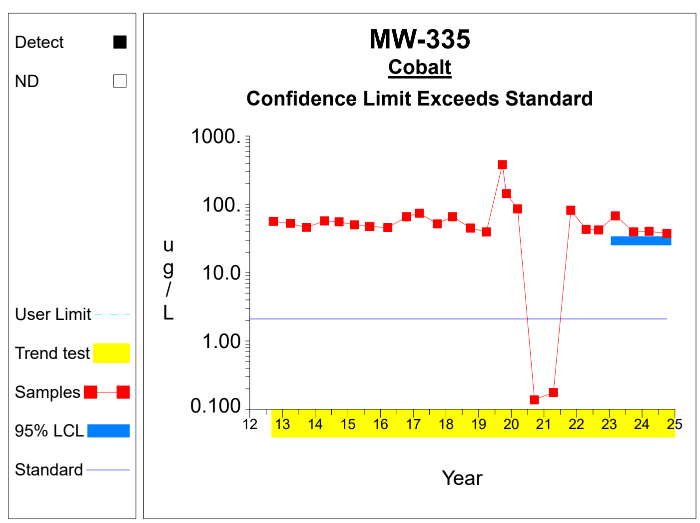
Graph 3



Graph 4

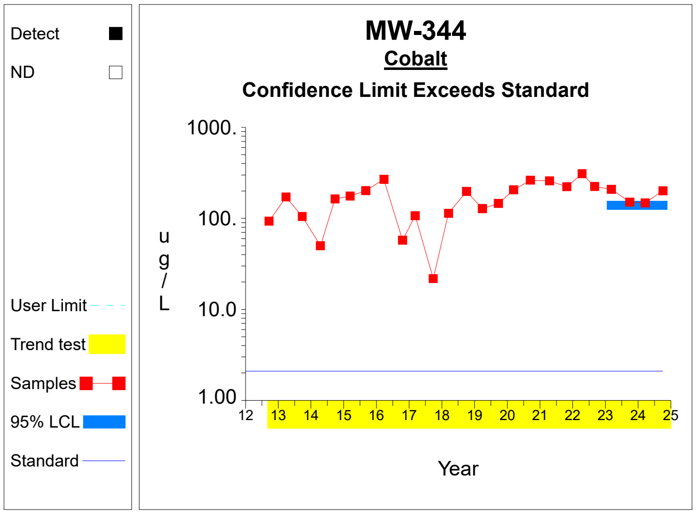


Graph 5

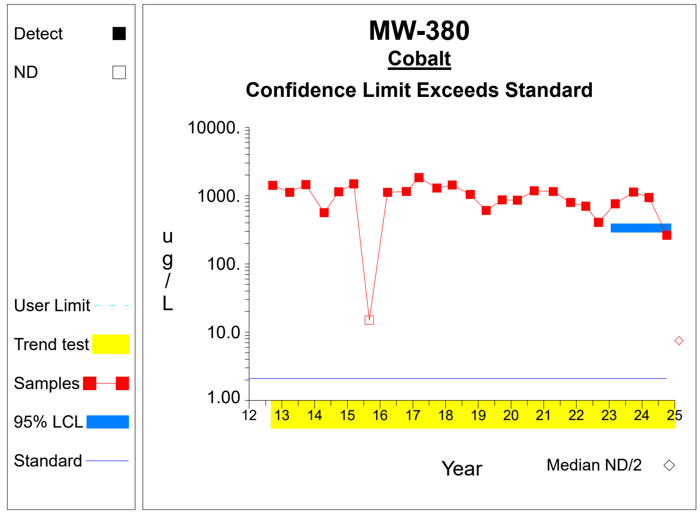


Graph 6

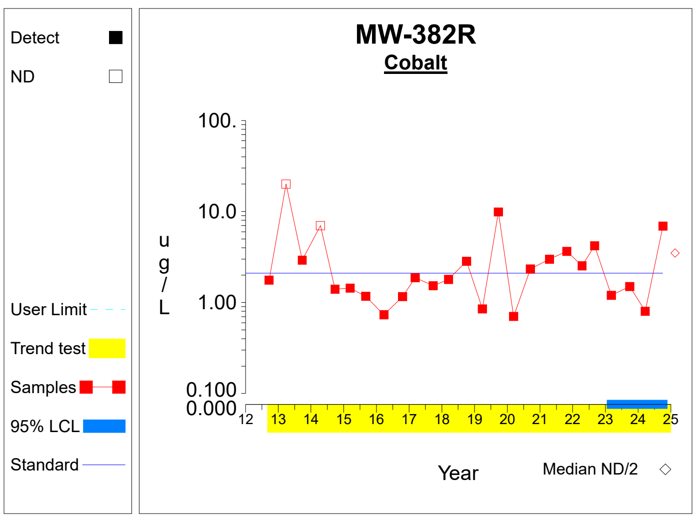
Confidence Limits (Assessment)



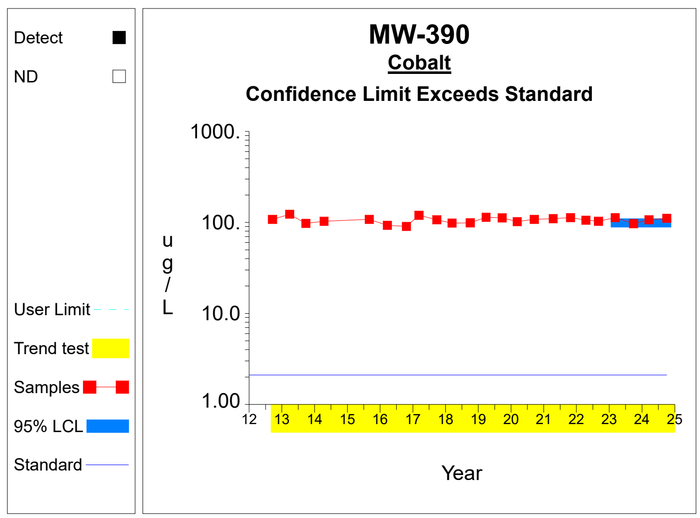
Graph 7



Graph 8



Graph 9



Graph 10

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-300

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2665.0** / **4** = **666.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**1.98**x**10^6** - **7.10**x**10^6/4**) / (**4**-1))^{½} = **260.079**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**^{½} = **666.25** - **2.353** * **260.079**/**4**^{½} = **360.322**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**^{½} = **666.25** + **2.353** * **260.079**/**4**^{½} = **972.178**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
6	S = **5.349**	Sen's estimator of trend.
7	var(S) = **1833.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**300** ± **2.576** * **1833.333**^{½}) / 2 = [**94.851**, **205.149**]	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) = [**-10.248**, **49.09**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-303

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **82.5** / **4** = **20.625**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1814.27** - **6806.25**/**4**) / (**4**-1))^{½} = **6.129**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS/N**^{½} = **20.625** - **2.353** * **6.129/4**^{½} = **13.415**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**^{½} = **20.625** + **2.353** * **6.129/4**^{½} = **27.835**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
6	S = **-0.451**	Sen's estimator of trend.
7	var(S) = **1828.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**300** ± **2.576** * **1828.667**^{½}) / 2 = [**94.921**, **205.079**]	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) = [**-1.077**, **0.217**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-304

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{20.4} / \mathbf{4}$ $= \mathbf{5.1}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{109.42} - \mathbf{416.16/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{1.339}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{X} - tS/N^{1/2}$ $= \mathbf{5.1 - 2.353 * 1.339/4}^{1/2}$ $= \mathbf{3.525}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{X} + tS/N^{1/2}$ $= \mathbf{5.1 + 2.353 * 1.339/4}^{1/2}$ $= \mathbf{6.675}$	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	$S = \mathbf{-0.032}$	Sen's estimator of trend.
7	$var(S) = \mathbf{950.0}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{190} \pm \mathbf{2.576} * \mathbf{950.0}^{1/2}) / 2$ $= [\ \mathbf{55.301}, \mathbf{134.699}\ ]$	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	$CL(S) = [\ \mathbf{-0.652}, \mathbf{1.078}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-307

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **167.6** / **4** = **41.9**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**7099.74** - **28089.76**/**4**) / (**4**-1))^{½} = **5.076**	Compute sd of the last 4 measurements.
3	LCL = $\overline{\mathbf{X}}$ - **tS**/**N**^{½} = **41.9** - **2.353** * **5.076**/**4**^{½} = **35.929**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{\mathbf{X}}$ + **tS**/**N**^{½} = **41.9** + **2.353** * **5.076**/**4**^{½} = **47.871**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
6	S = **-1.901**	Sen's estimator of trend.
7	var(S) = **1432.667**	Variance estimate for slope.
8	M(S) = (**N'** ± $\mathbf{Z}_{.995}$ * **var(S)**^{½}) / 2 = (**253** ± **2.576** * **1432.667**^{½}) / 2 = [**77.748**, **175.252**]	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) = [**-3.879**, **-0.112**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-312

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{170.8} / \mathbf{4}$ $= \mathbf{42.7}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{7314.3} - \mathbf{29172.64/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{2.655}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{42.7} - \mathbf{2.353} * \mathbf{2.655/4}^{1/2}$ $= \mathbf{39.577}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{42.7} + \mathbf{2.353} * \mathbf{2.655/4}^{1/2}$ $= \mathbf{45.823}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{25} * (\mathbf{25}-1) / 2$ $= \mathbf{300}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.512}$	Sen's estimator of trend.
7	$var(S) = \mathbf{1833.333}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{300} \pm \mathbf{2.576} * \mathbf{1833.333}^{1/2}) / 2$ $= [\ \mathbf{94.851}, \mathbf{205.149}\ ]$	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	$CL(S) = [\ \mathbf{-0.71}, \mathbf{2.009}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-335

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{185.8} / \textbf{4}$ $= \textbf{46.45}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{9265.18} - \textbf{34521.64/4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{14.546}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{X} - tS/N^{1/2}$ $= \textbf{46.45} - \textbf{2.353} * \textbf{14.546/4}^{1/2}$ $= \textbf{29.34}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{X} + tS/N^{1/2}$ $= \textbf{46.45} + \textbf{2.353} * \textbf{14.546/4}^{1/2}$ $= \textbf{63.56}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{26} * (\textbf{26}-1) / 2$ $= \textbf{325}$	Number of sample pairs during trend detection period.
6	$S = \textbf{-1.12}$	Sen's estimator of trend.
7	$var(S) = \textbf{2057.333}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{325} \pm \textbf{2.576} * \textbf{2057.333}^{1/2}) / 2$ $= [\ \textbf{104.079}, \textbf{220.921}\ ]$	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	$CL(S) = [\ \textbf{-3.774}, \textbf{2.349}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-344

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute the mean of the last 4 measurements.
	= **709.0** / **4**	
	= **177.25**	
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$	Compute sd of the last 4 measurements.
	= ((**128787.0** - **502681.0/4**) / (**4**-1))$^{1/2}$	
	= **32.232**	
3	LCL = $\overline{X}$ - **tS/N**$^{1/2}$	Compute lower confidence limit for the mean of the last 4 measurements.
	= **177.25** - **2.353** * **32.232/4**$^{1/2}$	
	= **139.336**	
4	UCL = $\overline{X}$ + **tS/N**$^{1/2}$	Compute upper confidence limit for the mean of the last 4 measurements.
	= **177.25** + **2.353** * **32.232/4**$^{1/2}$	
	= **215.164**	
5	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **25** * (**25**-1) / 2	
	= **300**	
6	S = **7.924**	Sen's estimator of trend.
7	var(S) = **1833.333**	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.
	= (**300** ± **2.576** * **1833.333**$^{1/2}$) / 2	
	= [**94.851**, **205.149**]	
9	CL(S) = [**-1.48**, **20.59**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-380

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{3087.0} / \mathbf{4}$ $= \mathbf{771.75}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{2.80}\text{x}\mathbf{10^6} - \mathbf{9.53}\text{x}\mathbf{10^6/4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{371.635}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS/N}^{½}$ $= \mathbf{771.75 - 2.353 * 371.635/4}^{½}$ $= \mathbf{334.601}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS/N}^{½}$ $= \mathbf{771.75 + 2.353 * 371.635/4}^{½}$ $= \mathbf{1208.899}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{25} * (\mathbf{25}-1) / 2$ $= \mathbf{300}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{-52.073}$	Sen's estimator of trend.
7	$var(S) = \mathbf{1831.333}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{300} \pm \mathbf{2.576} * \mathbf{1831.333}^{½}) / 2$ $= [\ \mathbf{94.881}, \mathbf{205.119}\ ]$	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	$CL(S) = [\ \mathbf{-100.628}, \mathbf{6.019}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-382R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **10.4** / **4** = **2.6**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**51.94** - **108.16**/**4**) / (**4**-1))$^{1/2}$ = **2.881**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **2.6** - **2.353** * **2.881**/**4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **2.6** + **2.353** * **2.881**/**4**$^{1/2}$ = **5.989**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
6	S = **0.022**	Sen's estimator of trend.
7	var(S) = **1832.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**300** ± **2.576** * **1832.333**$^{1/2}$) / 2 = [**94.866**, **205.134**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.153**, **0.326**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-390

Step	Equation	Description
1	$\overline{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{427.9} / \textbf{4}$ $= \textbf{106.975}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{45928.61} - \textbf{183098.41}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{7.165}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{106.975} - \textbf{2.353} * \textbf{7.165}/\textbf{4}^{1/2}$ $= \textbf{98.547}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{106.975} + \textbf{2.353} * \textbf{7.165}/\textbf{4}^{1/2}$ $= \textbf{115.403}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{23} * (\textbf{23}-1) / 2$ $= \textbf{253}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.29}$	Sen's estimator of trend.
7	$var(S) = \textbf{1427.0}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{253} \pm \textbf{2.576} * \textbf{1427.0}^{1/2}) / 2$ $= [\ \textbf{77.845}, \textbf{175.155}\ ]$	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	$CL(S) = [\ \textbf{-1.379}, \textbf{1.895}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

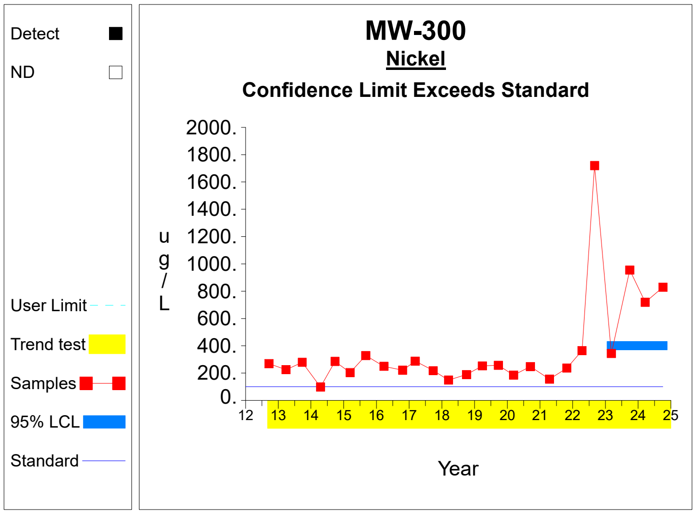
Table 1

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

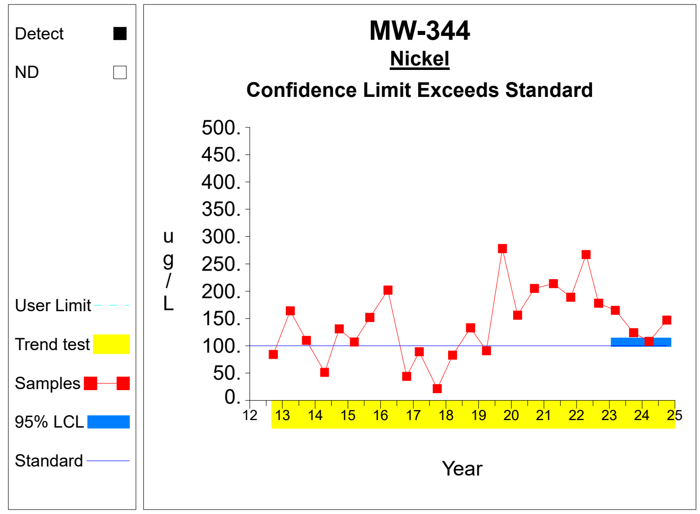
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Nickel	ug/L	MW-300	4	711.500	263.911	1.176	401.065	1021.935	100.000		**
Nickel	ug/L	MW-344	4	136.000	25.100	1.176	106.475	165.525	100.000		**
Nickel	ug/L	MW-380	4	1026.250	433.693	1.176	516.102	1536.398	100.000	dec	**
Nickel	ug/L	MW-382R	4	6.675	3.872	1.176	2.121	11.229	100.000		

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

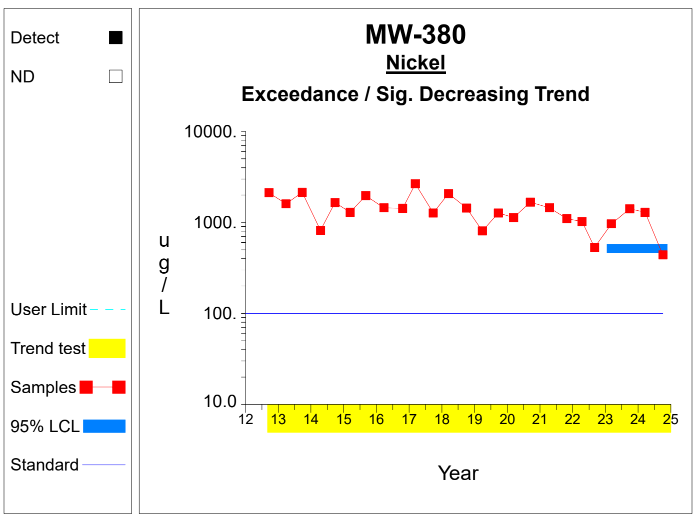
Confidence Limits (Assessment)



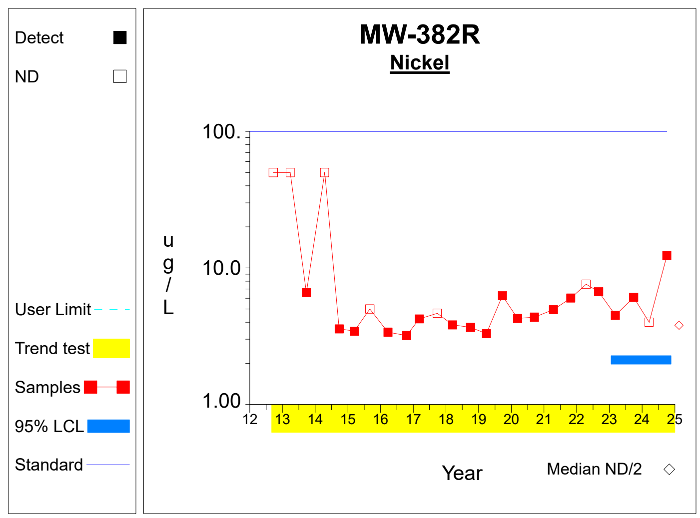
Graph 1



Graph 2



Graph 3



Graph 4

Worksheet 6 - Assessment Monitoring
Nickel (ug/L) at MW-300

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2846.0** / **4** = **711.5**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**2.23**x**10^6** - **8.10**x**10^6/4**) / (**4**-1))^{½} = **263.911**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS/N**^{½} = **711.5** - **2.353** * **263.911/4**^{½} = **401.065**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**^{½} = **711.5** + **2.353** * **263.911/4**^{½} = **1021.935**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
6	S = **14.868**	Sen's estimator of trend.
7	var(S) = **1833.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**^{½}) / 2 = (**300** ± **2.576** * **1833.333**^{½}) / 2 = [**94.851**, **205.149**]	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) = [**-4.487**, **55.338**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel (ug/L) at MW-344

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **544.0** / **4** = **136.0**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**75874.0** - **295936.0**/**4**) / (**4**-1))$^{1/2}$ = **25.1**	Compute sd of the last 4 measurements.
3	LCL = $\overline{X}$ - **tS**/**N**$^{1/2}$ = **136.0** - **2.353** * **25.1**/**4**$^{1/2}$ = **106.475**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\overline{X}$ + **tS**/**N**$^{1/2}$ = **136.0** + **2.353** * **25.1**/**4**$^{1/2}$ = **165.525**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
6	S = **7.178**	Sen's estimator of trend.
7	var(S) = **1833.333**	Variance estimate for slope.
8	M(S) = (**N'** ± $Z_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**300** ± **2.576** * **1833.333**$^{1/2}$) / 2 = [**94.851**, **205.149**]	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) = [**-4.629**, **17.741**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel (ug/L) at MW-380

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{4105.0} / \mathbf{4}$ $= \mathbf{1026.25}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{4.78}\times\mathbf{10^6} - \mathbf{1.69}\times\mathbf{10^7/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{433.693}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{1026.25 - 2.353} * \mathbf{433.693/4}^{1/2}$ $= \mathbf{516.102}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{1026.25} + \mathbf{2.353} * \mathbf{433.693/4}^{1/2}$ $= \mathbf{1536.398}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{25} * (\mathbf{25}-1) / 2$ $= \mathbf{300}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{-75.458}$	Sen's estimator of trend.
7	$var(S) = \mathbf{1830.333}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{300} \pm \mathbf{2.576} * \mathbf{1830.333}^{1/2}) / 2$ $= [\ \mathbf{94.896}, \mathbf{205.104}\ ]$	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	$CL(S) = [\ \mathbf{-145.563}, \mathbf{-14.995}\ ]$	Two-sided confidence interval for slope.
10	$UCL(S) < 0$	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Nickel (ug/L) at MW-382R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **26.7** / **4** = **6.675**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**223.19** - **712.89**/**4**) / (**4**-1))^{½} = **3.872**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **6.675** - **2.353** * **3.872**/**4**^{½} = **2.121**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **6.675** + **2.353** * **3.872**/**4**^{½} = **11.229**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
6	S = **0.11**	Sen's estimator of trend.
7	var(S) = **1789.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**300** ± **2.576** * **1789.0**^{½}) / 2 = [**95.522**, **204.478**]	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**, **0.332**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

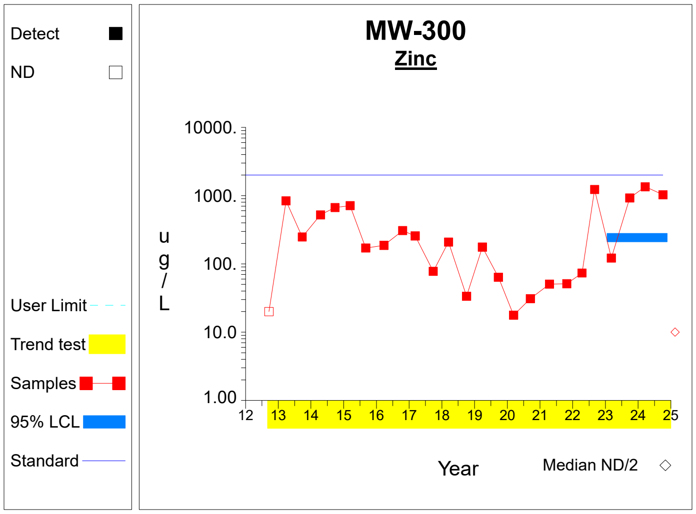
Table 1

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

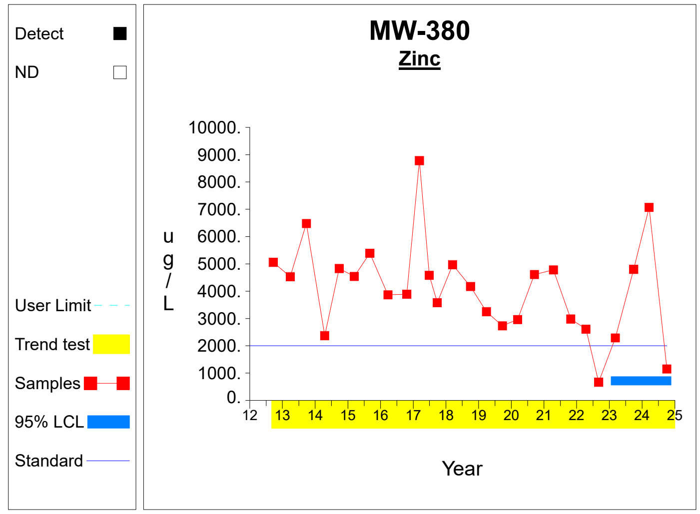
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
Zinc	ug/L	MW-300	4	856.750	522.120	1.176	242.587	1470.913	2000.000	
Zinc	ug/L	MW-380	4	3827.500	2645.277	1.176	715.891	6939.109	2000.000	

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

Confidence Limits (Assessment)



Graph 1



Graph 2

Worksheet 6 - Assessment Monitoring
Zinc (ug/L) at MW-300

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **3427.0** / **4** = **856.75**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{3.75}\times\mathbf{10^6} - \mathbf{1.17}\times\mathbf{10^7/4}) / (\mathbf{4}-1))^{1/2}$ = **522.12**	Compute sd of the last 4 measurements.
3	$LCL = \bar{X} - tS/N^{1/2}$ $= 856.75 - 2.353 * 522.12/4^{1/2}$ = **242.587**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{X} + tS/N^{1/2}$ $= 856.75 + 2.353 * 522.12/4^{1/2}$ = **1470.913**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
6	S = **-2.492**	Sen's estimator of trend.
7	var(S) = **1833.333**	Variance estimate for slope.
8	$M(S) = (N' \pm Z_{.995} * var(S)^{1/2}) / 2$ $= (300 \pm 2.576 * 1833.333^{1/2}) / 2$ = [**94.851**, **205.149**]	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) = [**-50.414**, **55.565**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Zinc (ug/L) at MW-380

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{15310.0} / \mathbf{4}$ $= \mathbf{3827.5}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]^2/N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{7.96}\times\mathbf{10^7} - \mathbf{2.34}\times\mathbf{10^8/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{2645.277}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N^{1/2}}$ $= \mathbf{3827.5 - 2.353 * 2645.277/4^{1/2}}$ $= \mathbf{715.891}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N^{1/2}}$ $= \mathbf{3827.5 + 2.353 * 2645.277/4^{1/2}}$ $= \mathbf{6939.109}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{26} * (\mathbf{26}-1) / 2$ $= \mathbf{325}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{-225.716}$	Sen's estimator of trend.
7	$var(S) = \mathbf{2058.333}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{325} \pm \mathbf{2.576} * \mathbf{2058.333}^{1/2}) / 2$ $= [\ \mathbf{104.065}, \mathbf{220.935}\ ]$	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	$CL(S) = [\ \mathbf{-412.837}, \mathbf{29.749}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

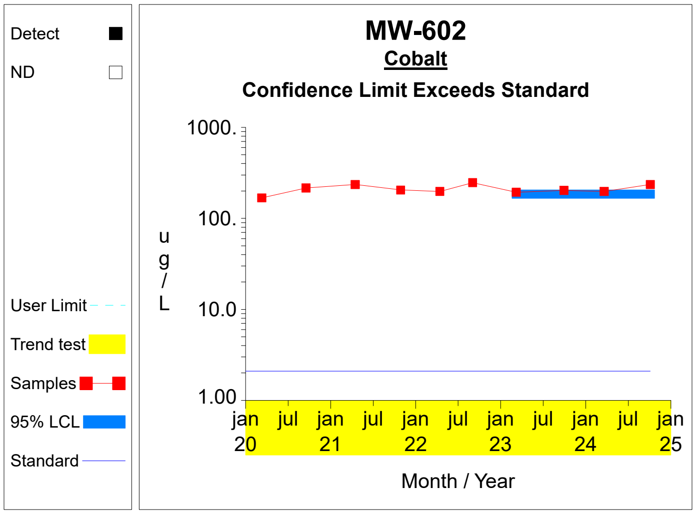
Table 1

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

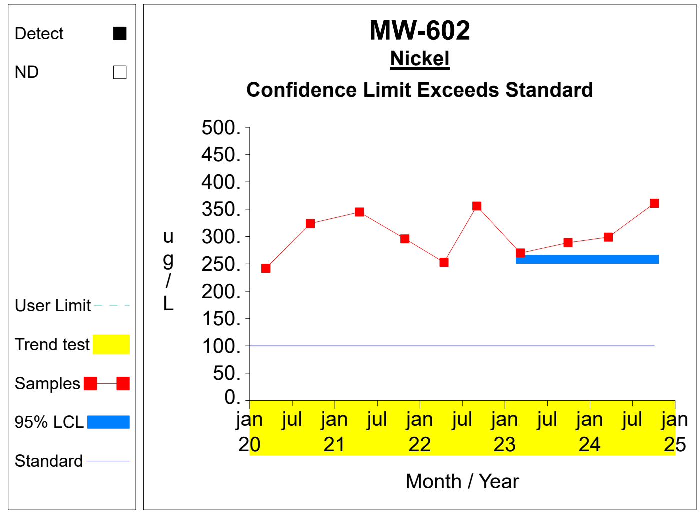
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Cobalt	ug/L	MW-602	4	207.750	19.190	1.176	185.177	230.323	2.100		**
Nickel	ug/L	MW-602	4	304.750	39.382	1.176	258.426	351.074	100.000		**

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

Confidence Limits (Assessment)



Graph 1



Graph 2

Prepared by: Otter Creek Environmental

Worksheet 6 - Assessment Monitoring
Cobalt (ug/L) at MW-602

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{831.0} / \textbf{4}$ $= \textbf{207.75}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{173745.0} - \textbf{690561.0}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{19.19}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{X} - tS/N^{1/2}$ $= \textbf{207.75} - \textbf{2.353} * \textbf{19.19}/\textbf{4}^{1/2}$ $= \textbf{185.177}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{X} + tS/N^{1/2}$ $= \textbf{207.75} + \textbf{2.353} * \textbf{19.19}/\textbf{4}^{1/2}$ $= \textbf{230.323}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{10} * (\textbf{10}-1) / 2$ $= \textbf{45}$	Number of sample pairs during trend detection period.
6	$S = \textbf{3.418}$	Sen's estimator of trend.
7	$var(S) = \textbf{123.0}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{45} \pm \textbf{2.576} * \textbf{123.0}^{1/2}) / 2$ $= [\ \textbf{8.215}, \textbf{36.785}\ ]$	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	$CL(S) = [\ \textbf{-13.331}, \textbf{25.744}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel (ug/L) at MW-602

Step	Equation	Description
1	$\overline{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{1219.0} / \textbf{4}$ $= \textbf{304.75}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{376143.0} - \textbf{1.49}\times\textbf{10}^6/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{39.382}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\textbf{X}} - \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{304.75} - \textbf{2.353} * \textbf{39.382}/\textbf{4}^{1/2}$ $= \textbf{258.426}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\textbf{X}} + \textbf{tS}/\textbf{N}^{1/2}$ $= \textbf{304.75} + \textbf{2.353} * \textbf{39.382}/\textbf{4}^{1/2}$ $= \textbf{351.074}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{10} * (\textbf{10}-1) / 2$ $= \textbf{45}$	Number of sample pairs during trend detection period.
6	$S = \textbf{9.366}$	Sen's estimator of trend.
7	$var(S) = \textbf{125.0}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{45} \pm \textbf{2.576} * \textbf{125.0}^{1/2}) / 2$ $= [\ \textbf{8.1}, \textbf{36.9}\ ]$	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	$CL(S) = [\ \textbf{-35.675}, \textbf{42.935}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Attachment E

Historical VOC Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Acetone	GU-4A	9/27/2017		3.19	1.79	ug/L
Acetone	GU-4A	3/14/2018		2.79	1.79	ug/L
Bromomethane	GU-4A	10/20/2016		.433	.220	ug/L
Methylene Chloride	GU-4A	9/25/2014		.802	.170	ug/L
Methylene Chloride	GU-4A	10/20/2016		.303	.170	ug/L
Methylene Chloride	GU-4A	9/27/2017		.335	.170	ug/L
Vinyl Chloride	GU-4A	3/14/2018		.103	.100	ug/L
Acetone	MW-300	3/17/2009		16.40	4.62	ug/L
Acetone	MW-300	3/25/2010		12.50	.00	ug/L
Acetone	MW-300	9/23/2010		12.90	.00	ug/L
Acetone	MW-300	4/16/2014		47.80	1.79	ug/L
Acetone	MW-300	9/26/2017		4.29	1.79	ug/L
Acetone	MW-300	3/14/2018		48.60	1.79	ug/L
Acetone	MW-300	3/28/2019		3.10	3.10	ug/L
Acetone	MW-300	4/15/2021		5.12	3.10	ug/L
Acetone	MW-300	10/27/2021		5.67	3.10	ug/L
Methylene Chloride	MW-300	10/20/2016		.264	.170	ug/L
Methylene Chloride	MW-300	3/07/2017		.214	.170	ug/L
Styrene	MW-300	10/27/2021		.383	.370	ug/L
Xylenes, Total	MW-300	9/25/2013		1.11	.13	ug/L
Acetone	MW-303	9/25/2017		2.21	1.79	ug/L
Carbon Disulfide	MW-303	10/21/2016		.231	.150	ug/L
Methylene Chloride	MW-303	9/25/2014		.573	.170	ug/L
Methylene Chloride	MW-303	10/21/2016		.308	.170	ug/L
Methylene Chloride	MW-303	3/13/2018		.226	.170	ug/L
Xylenes, Total	MW-303	9/26/2013		.232	.130	ug/L
Xylenes, Total	MW-303	10/21/2016		.390	.130	ug/L
Xylenes, Total	MW-303	3/08/2017		.459	.130	ug/L
Acetone	MW-304	6/28/2017		3.74	1.79	ug/L
Acetone	MW-304	9/26/2017		2.99	1.79	ug/L
Bromomethane	MW-304	9/26/2017		.372	.220	ug/L
Bromomethane	MW-304	3/14/2018		.448	.220	ug/L
Methylene Chloride	MW-304	1/18/2017		.264	.170	ug/L
Acetone	MW-307	3/08/2017		2.61	1.79	ug/L
Acetone	MW-307	9/25/2017		2.41	1.79	ug/L
Acetonitrile	MW-307	9/26/2013		739	126	ug/L
Methylene Chloride	MW-307	10/21/2016		.231	.170	ug/L
Xylenes, Total	MW-307	10/21/2016		.324	.130	ug/L
Xylenes, Total	MW-307	3/08/2017		.362	.130	ug/L
Xylenes, Total	MW-307	3/27/2019		.481	.400	ug/L
Acetone	MW-310	3/08/2017		2.61	1.79	ug/L
Acetone	MW-310	9/27/2017		3.78	1.79	ug/L
Acetone	MW-310	3/14/2018		1.96	1.79	ug/L
Acetonitrile	MW-310	9/26/2013		841	126	ug/L
Methylene Chloride	MW-310	9/25/2014		.756	.170	ug/L
Methylene Chloride	MW-310	10/20/2016		.186	.170	ug/L
Xylenes, Total	MW-310	10/20/2016		.351	.130	ug/L
Xylenes, Total	MW-310	3/08/2017		1.090	.130	ug/L
Xylenes, Total	MW-310	9/27/2017		.363	.130	ug/L
Acetone	MW-312	3/08/2017		2.39	1.79	ug/L
Bromomethane	MW-312	9/25/2017		.233	.220	ug/L
Methylene Chloride	MW-312	10/21/2016		.295	.170	ug/L
Methylene Chloride	MW-312	3/13/2018		.334	.170	ug/L
Xylenes, Total	MW-312	3/08/2017		.654	.130	ug/L
Xylenes, Total	MW-312	10/27/2021		1.050	.400	ug/L
4,4`-DDD	MW-313	9/25/2013		.00214	.00188	ug/L
4,4`-DDE	MW-313	9/25/2013		.00320	.00219	ug/L
Acetone	MW-313	9/26/2014		1.88	1.79	ug/L
Acetone	MW-313	3/08/2017		1.87	1.79	ug/L
Acetone	MW-313	9/25/2017		2.76	1.79	ug/L
Acetone	MW-313	3/27/2019		3.82	3.10	ug/L
alpha-BHC	MW-313	9/25/2013		.00451	.00177	ug/L
beta-BHC	MW-313	9/25/2013		.00598	.00500	ug/L
Bromomethane	MW-313	10/21/2016		2.660	.220	ug/L
Bromomethane	MW-313	9/25/2017		.344	.220	ug/L
Bromomethane	MW-313	10/26/2021		1.280	1.100	ug/L
Chloromethane	MW-313	10/21/2016		.701	.310	ug/L
delta-BHC	MW-313	9/25/2013		.00444	.00240	ug/L
Iodomethane	MW-313	10/21/2016		1.41	.80	ug/L
Methylene Chloride	MW-313	10/21/2016		.277	.170	ug/L
Methylene Chloride	MW-313	3/13/2018		.207	.170	ug/L
Xylenes, Total	MW-313	9/25/2013		.321	.130	ug/L
Xylenes, Total	MW-313	10/21/2016		1.890	.130	ug/L
Xylenes, Total	MW-313	3/08/2017		.786	.130	ug/L
Acetonitrile	MW-333	9/26/2013		964	126	ug/L
Acetone	MW-335	9/26/2017		2.49	1.79	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
Acetone	MW-335	3/14/2018		2.33	1.79	ug/L
Bromomethane	MW-335	9/26/2017		.402	.220	ug/L
Chloromethane	MW-335	10/19/2016		.336	.310	ug/L
Methylene Chloride	MW-335	9/25/2014		.617	.170	ug/L
Methylene Chloride	MW-335	10/19/2016		.260	.170	ug/L
Xylenes, Total	MW-335	3/07/2017		.173	.130	ug/L
1,1-Dichloroethane	MW-344	3/07/2017		.290	.210	ug/L
1,1-Dichloroethane	MW-344	9/26/2017		.475	.210	ug/L
1,1-Dichloroethane	MW-344	3/14/2018		.474	.210	ug/L
1,1-Dichloroethane	MW-344	9/15/2020		.408	.220	ug/L
1,1-Dichloroethane	MW-344	4/15/2021		.345	.220	ug/L
1,2-Dichloroethane	MW-344	9/26/2017		.207	.180	ug/L
Acetone	MW-344	3/14/2018		3.22	1.79	ug/L
Acetone	MW-344	3/28/2019		3.61	3.10	ug/L
Benzene	MW-344	9/25/2013		.215	.110	ug/L
Benzene	MW-344	4/15/2014		.268	.110	ug/L
Benzene	MW-344	9/26/2014		.198	.110	ug/L
Benzene	MW-344	3/12/2015		.281	.500	ug/L
Benzene	MW-344	10/19/2016		.594	.110	ug/L
Benzene	MW-344	3/07/2017		.543	.110	ug/L
Benzene	MW-344	9/26/2017		.894	.110	ug/L
Benzene	MW-344	3/14/2018		.715	.110	ug/L
Benzene	MW-344	10/02/2018		.732	.220	ug/L
Benzene	MW-344	9/24/2019		.541	.220	ug/L
Benzene	MW-344	9/15/2020		.836	.220	ug/L
Benzene	MW-344	4/15/2021		.722	.220	ug/L
Benzene	MW-344	10/27/2021		.918	.220	ug/L
Benzene	MW-344	4/14/2022		.390	.220	ug/L
Benzene	MW-344	9/29/2023		1.100	1.000	ug/L
Chloroethane	MW-344	9/25/2013		.514	.150	ug/L
Chloroethane	MW-344	9/26/2017		.462	.150	ug/L
cis-1,2-Dichloroethene	MW-344	3/27/2013		.301	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/25/2013		.976	.130	ug/L
cis-1,2-Dichloroethene	MW-344	4/15/2014		1.300	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/26/2014		.819	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/02/2015		1.140	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	3/23/2016		1.120	.010	ug/L
cis-1,2-Dichloroethene	MW-344	10/19/2016		2.040	.130	ug/L
cis-1,2-Dichloroethene	MW-344	3/07/2017		1.820	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/26/2017		2.480	.130	ug/L
cis-1,2-Dichloroethene	MW-344	3/14/2018		2.240	.130	ug/L
cis-1,2-Dichloroethene	MW-344	10/02/2018		1.900	.210	ug/L
cis-1,2-Dichloroethene	MW-344	3/28/2019		1.180	.210	ug/L
cis-1,2-Dichloroethene	MW-344	9/24/2019		1.820	.210	ug/L
cis-1,2-Dichloroethene	MW-344	3/10/2020		1.360	.210	ug/L
cis-1,2-Dichloroethene	MW-344	9/15/2020		2.440	.210	ug/L
cis-1,2-Dichloroethene	MW-344	4/15/2021		2.020	.210	ug/L
cis-1,2-Dichloroethene	MW-344	10/27/2021		2.180	.210	ug/L
cis-1,2-Dichloroethene	MW-344	4/14/2022		1.270	.210	ug/L
cis-1,2-Dichloroethene	MW-344	9/01/2022		1.900	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	9/29/2023		2.400	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	3/19/2024		1.100	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	10/03/2024		1.800	1.000	ug/L
delta-BHC	MW-344	10/02/2018		.0029	.0025	ug/L
Endosulfan I	MW-344	10/02/2018		.00217	.00217	ug/L
Endrin	MW-344	10/02/2018		.00264	.00207	ug/L
gamma-BHC (Lindane)	MW-344	10/02/2018		.00220	.00207	ug/L
Methylene Chloride	MW-344	10/19/2016		.251	.170	ug/L
Vinyl Chloride	MW-344	9/24/2009		1.110	.000	ug/L
Vinyl Chloride	MW-344	3/25/2010		1.030	.000	ug/L
Vinyl Chloride	MW-344	9/22/2011		1.070	.000	ug/L
Vinyl Chloride	MW-344	3/16/2012		1.270	.000	ug/L
Vinyl Chloride	MW-344	9/20/2012		1.500	.000	ug/L
Vinyl Chloride	MW-344	3/27/2013		1.320	.100	ug/L
Vinyl Chloride	MW-344	9/25/2013		.858	.100	ug/L
Vinyl Chloride	MW-344	4/15/2014		.884	.100	ug/L
Vinyl Chloride	MW-344	9/26/2014		.484	.100	ug/L
Vinyl Chloride	MW-344	3/12/2015		.428	1.000	ug/L
Vinyl Chloride	MW-344	10/19/2016		.587	.100	ug/L
Vinyl Chloride	MW-344	3/07/2017		1.050	.100	ug/L
Vinyl Chloride	MW-344	9/26/2017		.705	.100	ug/L
Vinyl Chloride	MW-344	3/14/2018		.569	.100	ug/L
Vinyl Chloride	MW-344	9/24/2019		.513	.180	ug/L
Vinyl Chloride	MW-344	9/15/2020		.903	.180	ug/L
Vinyl Chloride	MW-344	4/15/2021		.840	.180	ug/L
Vinyl Chloride	MW-344	10/27/2021		.986	.180	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
Vinyl Chloride	MW-344	4/14/2022		.383	.180	ug/L
Dichlorodifluoromethane	MW-345	9/25/2013		1.49	.20	ug/L
Methylene Chloride	MW-345	9/25/2014		.596	.170	ug/L
Acetone	MW-380	3/09/2017		12.20	1.79	ug/L
Acetone	MW-380	6/28/2017		4.52	1.79	ug/L
Acetone	MW-380	3/14/2018		2.46	1.79	ug/L
Bromomethane	MW-380	3/14/2018		.31	.22	ug/L
Methylene Chloride	MW-380	10/20/2016		.30	.17	ug/L
Xylenes, Total	MW-380	3/09/2017		.672	.130	ug/L
Acetone	MW-381	9/26/2017		2.94	1.79	ug/L
Acetone	MW-381	3/14/2018		2.87	1.79	ug/L
Bromomethane	MW-381	9/26/2017		.322	.220	ug/L
Bromomethane	MW-381	3/14/2018		.240	.220	ug/L
Methylene Chloride	MW-381	10/19/2016		.283	.170	ug/L
Xylenes, Total	MW-381	10/19/2016		.242	.130	ug/L
Xylenes, Total	MW-381	3/07/2017		.435	.130	ug/L
1,1-Dichloroethane	MW-382R	3/29/2011		2.90	.00	ug/L
1,1-Dichloroethane	MW-382R	6/25/2011		2.87	.00	ug/L
1,1-Dichloroethane	MW-382R	8/08/2011		2.74	.00	ug/L
1,1-Dichloroethane	MW-382R	9/22/2011		2.15	.00	ug/L
1,1-Dichloroethane	MW-382R	12/05/2011		2.98	.00	ug/L
1,1-Dichloroethane	MW-382R	3/16/2012		2.77	.00	ug/L
1,1-Dichloroethane	MW-382R	9/20/2012		2.10	.00	ug/L
1,1-Dichloroethane	MW-382R	3/27/2013		2.43	.21	ug/L
1,1-Dichloroethane	MW-382R	9/25/2013		2.00	.21	ug/L
1,1-Dichloroethane	MW-382R	4/15/2014		3.54	.21	ug/L
1,1-Dichloroethane	MW-382R	9/26/2014		2.00	.21	ug/L
1,1-Dichloroethane	MW-382R	3/12/2015		2.23	1.00	ug/L
1,1-Dichloroethane	MW-382R	9/02/2015		1.62	1.00	ug/L
1,1-Dichloroethane	MW-382R	3/23/2016		1.65	1.00	ug/L
1,1-Dichloroethane	MW-382R	10/19/2016		2.31	.21	ug/L
1,1-Dichloroethane	MW-382R	3/07/2017		1.81	.21	ug/L
1,1-Dichloroethane	MW-382R	9/26/2017		1.93	.21	ug/L
1,1-Dichloroethane	MW-382R	3/14/2018		2.60	.21	ug/L
1,1-Dichloroethane	MW-382R	10/02/2018		1.51	.22	ug/L
1,1-Dichloroethane	MW-382R	3/28/2019		1.60	.22	ug/L
1,1-Dichloroethane	MW-382R	9/24/2019		1.71	.22	ug/L
1,1-Dichloroethane	MW-382R	3/10/2020		1.74	.22	ug/L
1,1-Dichloroethane	MW-382R	9/16/2020		2.00	.22	ug/L
1,1-Dichloroethane	MW-382R	4/15/2021		1.41	.22	ug/L
1,1-Dichloroethane	MW-382R	10/27/2021		1.69	.22	ug/L
1,1-Dichloroethane	MW-382R	4/14/2022		1.09	.22	ug/L
1,1-Dichloroethane	MW-382R	3/06/2023		1.40	1.00	ug/L
1,1-Dichloroethane	MW-382R	10/03/2024		1.40	1.00	ug/L
Acetone	MW-382R	3/14/2018		2.06	1.79	ug/L
Bis(2-ethylhexyl)phthalate	MW-382R	9/29/2023		16	6	ug/L
Bromomethane	MW-382R	3/14/2018		.253	.220	ug/L
Chloroethane	MW-382R	9/25/2013		.433	.150	ug/L
cis-1,2-Dichloroethene	MW-382R	3/27/2013		.383	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	9/25/2013		.320	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	4/15/2014		.267	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	9/26/2014		.270	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	10/19/2016		.414	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	3/07/2017		.385	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	9/26/2017		.484	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	3/14/2018		.449	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	10/02/2018		.401	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	3/28/2019		.439	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	9/24/2019		.345	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	9/16/2020		.487	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	4/15/2021		.289	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	10/27/2021		.406	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	4/14/2022		.307	.210	ug/L
Dichlorodifluoromethane	MW-382R	3/16/2012		3.110	.000	ug/L
Dichlorodifluoromethane	MW-382R	3/27/2013		2.400	.200	ug/L
Dichlorodifluoromethane	MW-382R	9/25/2013		2.730	.200	ug/L
Dichlorodifluoromethane	MW-382R	4/15/2014		2.140	.200	ug/L
Dichlorodifluoromethane	MW-382R	9/26/2014		2.700	.200	ug/L
Dichlorodifluoromethane	MW-382R	3/12/2015		1.590	.200	ug/L
Dichlorodifluoromethane	MW-382R	10/19/2016		1.770	.200	ug/L
Dichlorodifluoromethane	MW-382R	3/07/2017		1.860	.200	ug/L
Dichlorodifluoromethane	MW-382R	9/26/2017		.898	.200	ug/L
Dichlorodifluoromethane	MW-382R	3/14/2018		1.110	.200	ug/L
Dichlorodifluoromethane	MW-382R	10/02/2018		.962	.250	ug/L
Methylene Chloride	MW-382R	3/27/2013		.193	.170	ug/L
Methylene Chloride	MW-382R	10/19/2016		.394	.170	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
Methylene Chloride	MW-382R	3/07/2017		.312	.170	ug/L
Vinyl Chloride	MW-382R	9/25/2013		.345	.100	ug/L
Vinyl Chloride	MW-382R	3/14/2018		.296	.100	ug/L
Vinyl Chloride	MW-382R	4/15/2021		.206	.180	ug/L
Vinyl Chloride	MW-382R	10/27/2021		.241	.180	ug/L
Xylenes, Total	MW-382R	9/25/2013		.134	.130	ug/L
Acetonitrile	MW-383	9/26/2013		1170	126	ug/L
Methylene Chloride	MW-383	3/27/2013		.238	.170	ug/L
Methylene Chloride	MW-383	9/25/2014		.424	.170	ug/L
1,2-Dichloroethane	MW-384	3/14/2018		.195	.180	ug/L
Acetone	MW-384	3/09/2017		2.77	1.79	ug/L
Acetone	MW-384	9/27/2017		2.49	1.79	ug/L
Bromomethane	MW-384	10/20/2016		.313	.220	ug/L
Methylene Chloride	MW-384	9/25/2014		.520	.170	ug/L
Methylene Chloride	MW-384	9/27/2017		.292	.170	ug/L
Xylenes, Total	MW-384	9/01/2015		3.000	3.000	ug/L
Xylenes, Total	MW-384	10/20/2016		.707	.130	ug/L
Xylenes, Total	MW-384	3/09/2017		.949	.130	ug/L
Acetone	MW-385	3/08/2017		3.51	1.79	ug/L
Acetone	MW-385	9/27/2017		3.14	1.79	ug/L
Bromomethane	MW-385	10/20/2016		.599	.220	ug/L
Methylene Chloride	MW-385	3/28/2013		.343	.170	ug/L
Methylene Chloride	MW-385	9/25/2014		.448	.170	ug/L
Methylene Chloride	MW-385	10/20/2016		.224	.170	ug/L
Methylene Chloride	MW-385	3/08/2017		.501	.170	ug/L
Methylene Chloride	MW-385	9/27/2017		.380	.170	ug/L
Xylenes, Total	MW-385	10/20/2016		.387	.130	ug/L
Xylenes, Total	MW-385	3/08/2017		.898	.130	ug/L
Xylenes, Total	MW-385	9/27/2017		.164	.130	ug/L
Acetone	MW-390	3/08/2017		7.42	1.79	ug/L
Acetone	MW-390	9/25/2017		2.90	1.79	ug/L
Acetone	MW-390	3/27/2019		3.35	3.10	ug/L
Acetone	MW-390	3/09/2020		5.37	3.10	ug/L
Carbon Disulfide	MW-390	9/25/2017		.177	.150	ug/L
Methylene Chloride	MW-390	10/21/2016		.397	.170	ug/L
Methylene Chloride	MW-390	3/13/2018		.209	.170	ug/L
Xylenes, Total	MW-390	10/21/2016		.464	.130	ug/L
Xylenes, Total	MW-390	3/08/2017		.566	.130	ug/L
Xylenes, Total	MW-390	3/27/2019		1.050	.400	ug/L
Benzene	MW-603	3/10/2020		.312	.220	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

Summary Tables and Graphs for the LCL Comparisons – VOCs

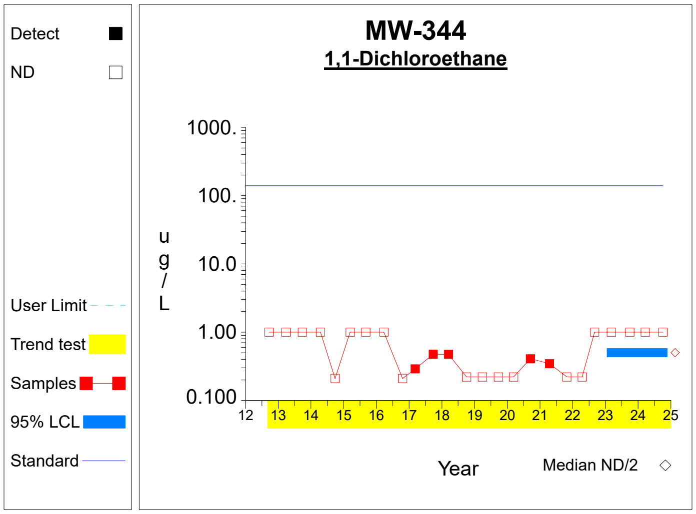
Table 1

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

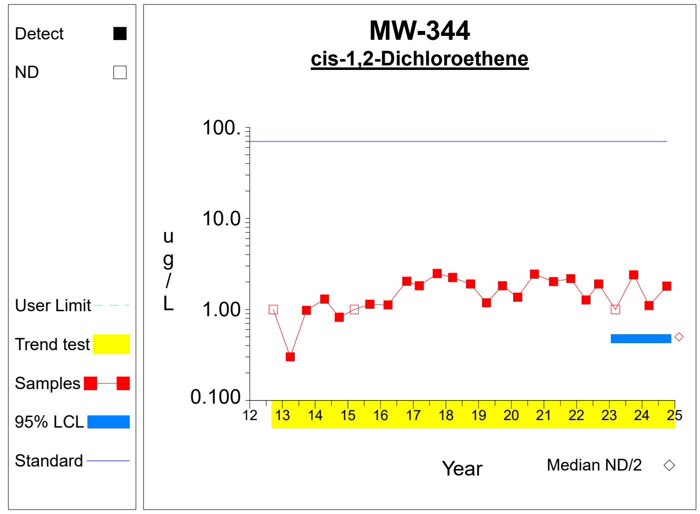
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
1,1-Dichloroethane	ug/L	MW-344	4	0.500	0.000	1.176	0.500	0.500	140.000	
cis-1,2-Dichloroethene	ug/L	MW-344	4	1.450	0.827	1.176	0.478	2.422	70.000	
1,1-Dichloroethane	ug/L	MW-382R	4	0.950	0.520	1.176	0.339	1.561	140.000	dec
cis-1,2-Dichloroethene	ug/L	MW-382R	4	0.500	0.000	1.176	0.500	0.500	70.000	

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

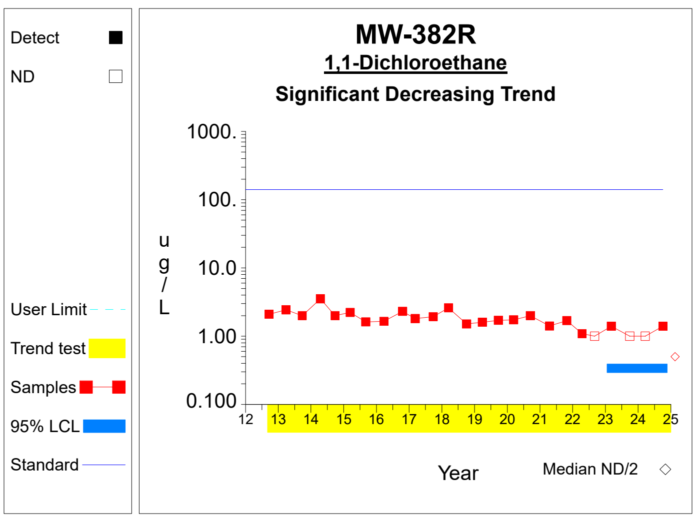
Confidence Limits (Assessment)



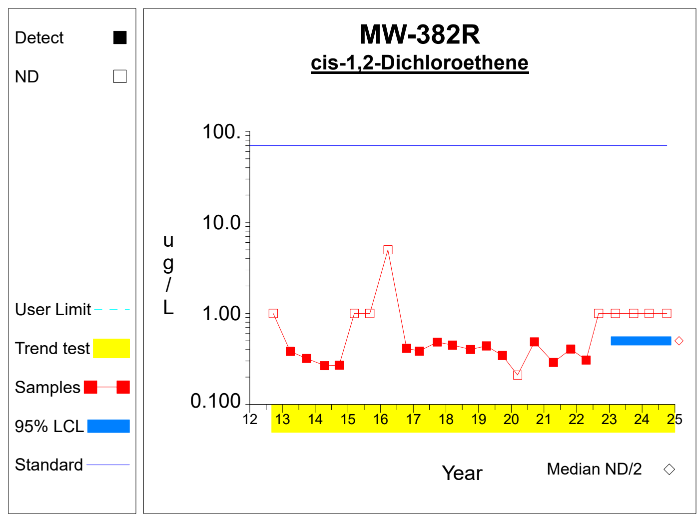
Graph 1



Graph 2



Graph 3



Graph 4

Worksheet 6 - Assessment Monitoring
1,1-Dichloroethane (ug/L) at MW-344

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 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **883.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**300** ± **2.576** * **883.333**^{½}) / 2 = [**111.719**, **188.281**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **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-Dichloroethene (ug/L) at MW-344

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{5.8} / \mathbf{4}$ $= \mathbf{1.45}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{10.46} - \mathbf{33.64/4}) / (\mathbf{4}-1))^{½}$ $= \mathbf{0.827}$	Compute sd of the last 4 measurements.
3	$LCL = \mathbf{\overline{X}} - \mathbf{tS/N}^{½}$ $= \mathbf{1.45} - \mathbf{2.353} * \mathbf{0.827/4}^{½}$ $= \mathbf{0.478}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \mathbf{\overline{X}} + \mathbf{tS/N}^{½}$ $= \mathbf{1.45} + \mathbf{2.353} * \mathbf{0.827/4}^{½}$ $= \mathbf{2.422}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{25} * (\mathbf{25}-1) / 2$ $= \mathbf{300}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.099}$	Sen's estimator of trend.
7	$var(S) = \mathbf{1827.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{300} \pm \mathbf{2.576} * \mathbf{1827.667}^{½}) / 2$ $= [\ \mathbf{94.936}, \mathbf{205.064}\ ]$	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	$CL(S) = [\ \mathbf{-0.014}, \mathbf{0.188}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
1,1-Dichloroethane (ug/L) at MW-382R

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **3.8** / **4** = **0.95**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**4.42 - 14.44/4**) / (**4**-1))$^{1/2}$ = **0.52**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$ = **0.95 - 2.353** * **0.52/4**$^{1/2}$ = **0.339**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**$^{1/2}$ = **0.95** + **2.353** * **0.52/4**$^{1/2}$ = **1.561**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
6	S = **-0.111**	Sen's estimator of trend.
7	var(S) = **1825.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**$^{1/2}$) / 2 = (**300** ± **2.576** * **1825.0**$^{1/2}$) / 2 = [**94.977**, **205.023**]	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**, **-0.048**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

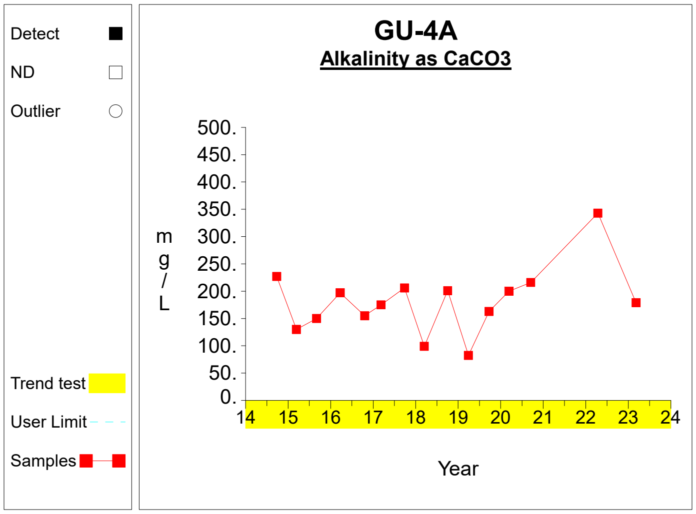
Worksheet 6 - Assessment Monitoring
cis-1,2-Dichloroethene (ug/L) at MW-382R

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	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{25} * (\textbf{25}-1) / 2$ $= \textbf{300}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.003}$	Sen's estimator of trend.
7	$var(S) = \textbf{1708.333}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{300} \pm \textbf{2.576} * \textbf{1708.333}^{1/2}) / 2$ $= [\ \textbf{96.764}, \textbf{203.236}\ ]$	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	$CL(S) = [\ \textbf{-0.002}, \textbf{0.018}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

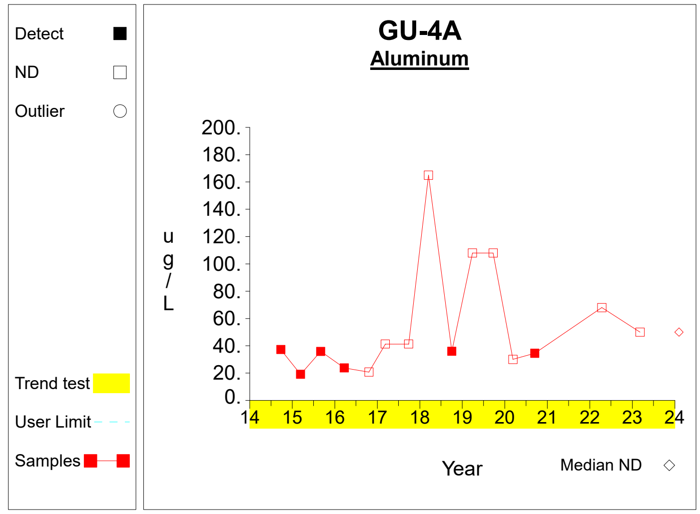
Attachment G

Time Series Plots of Inorganics

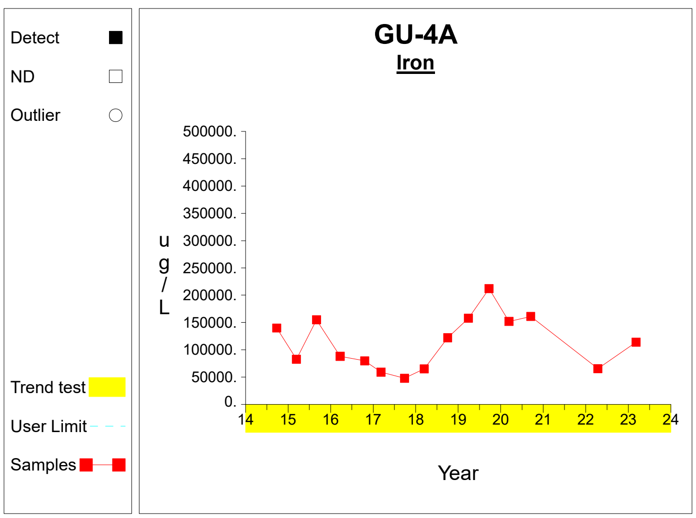
Time Series



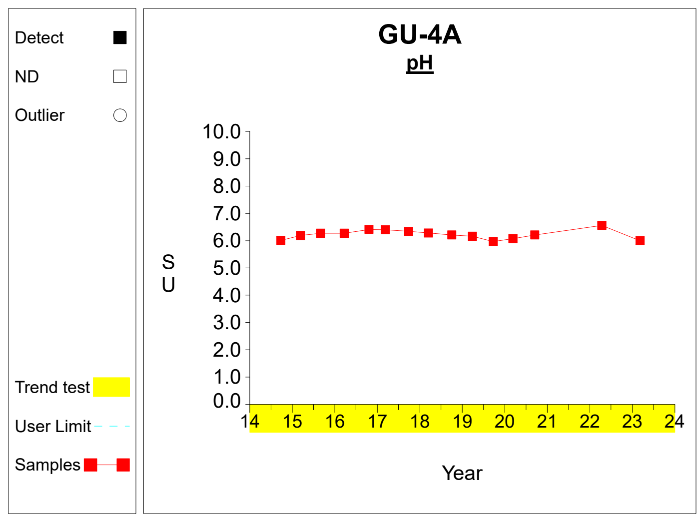
Graph 1



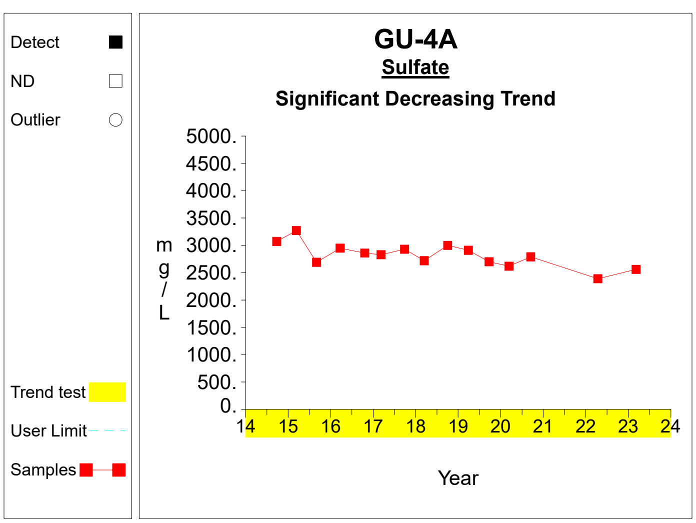
Graph 2



Graph 3

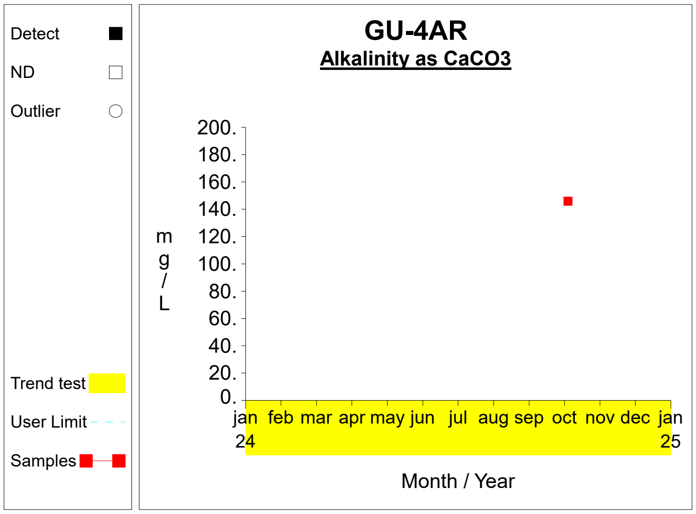


Graph 4

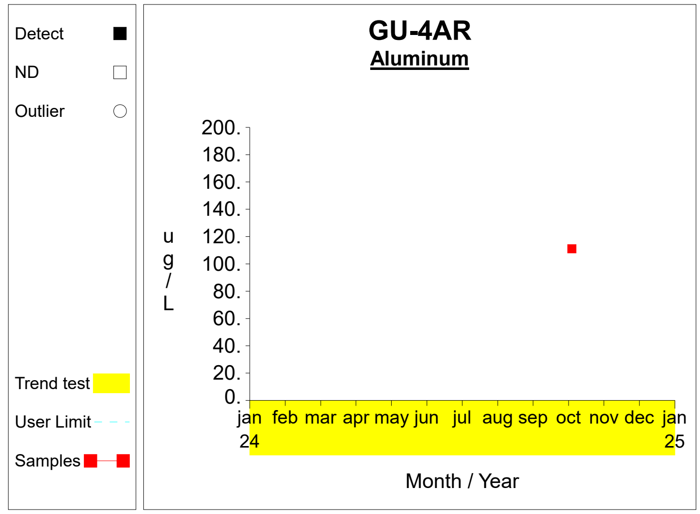


Graph 5

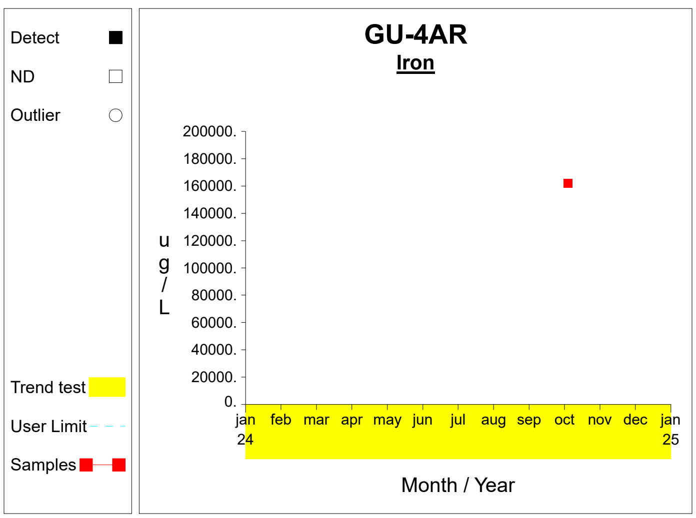
Time Series



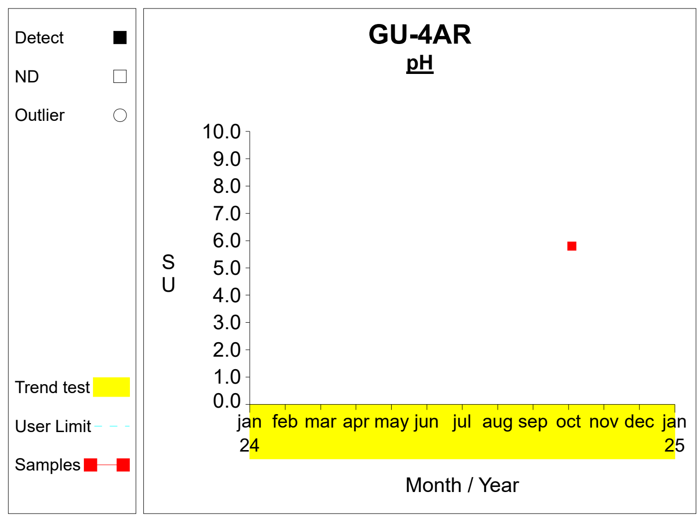
Graph 6



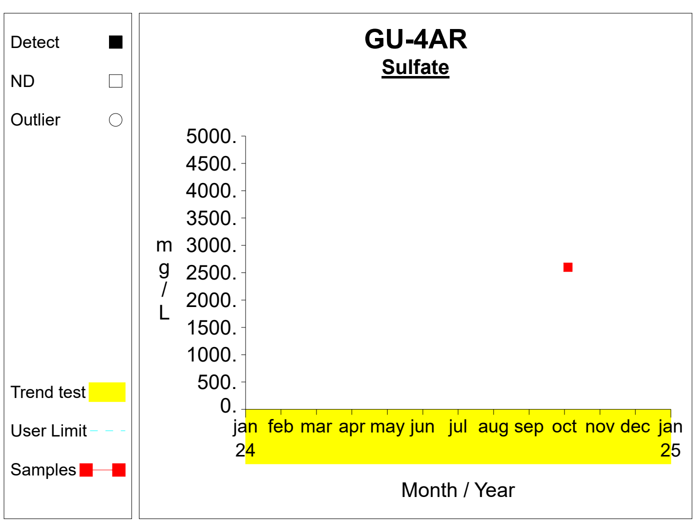
Graph 7



Graph 8

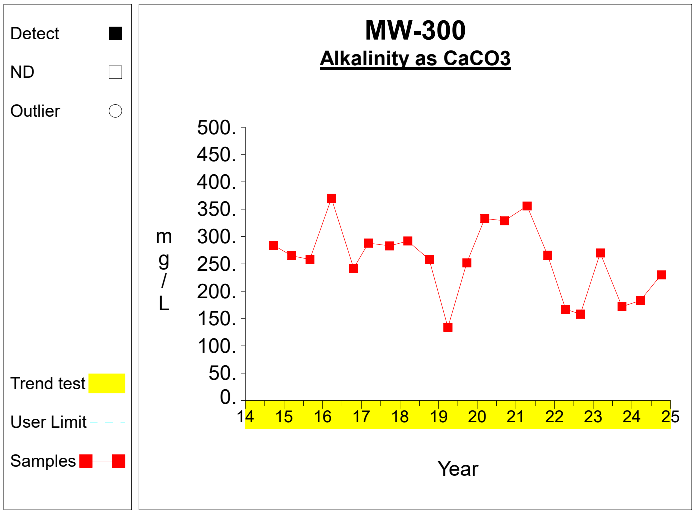


Graph 9

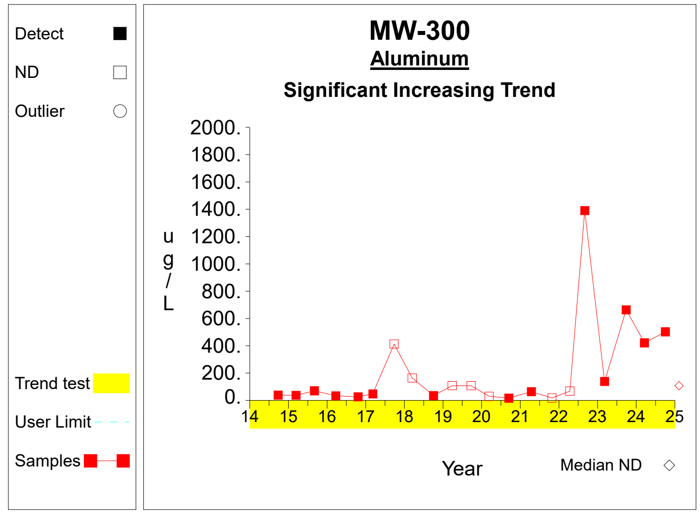


Graph 10

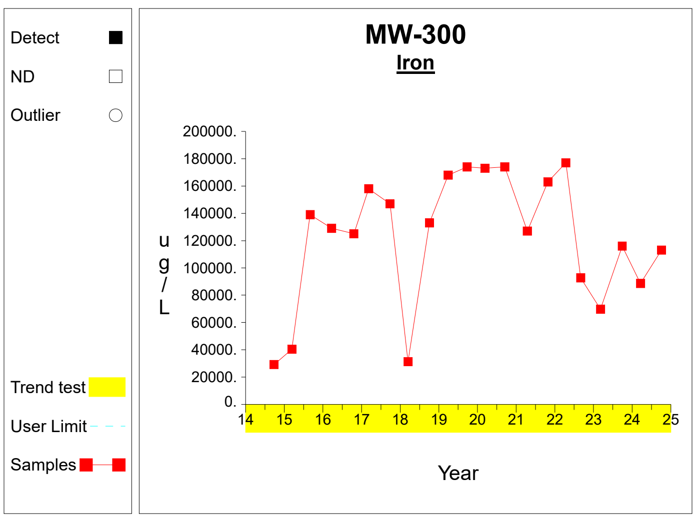
Time Series



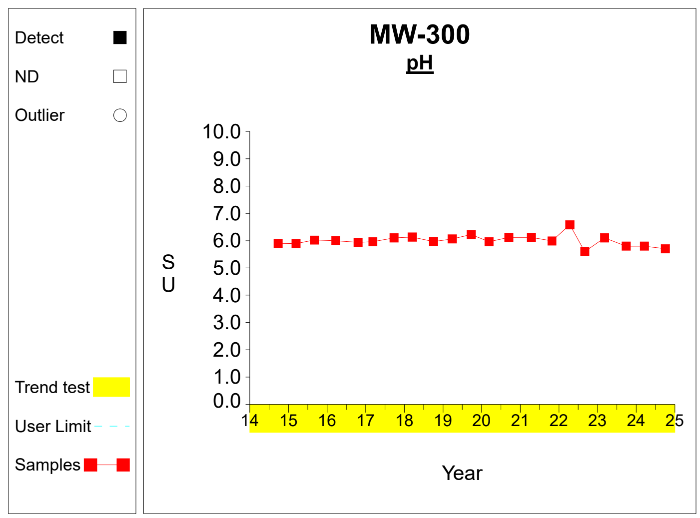
Graph 11



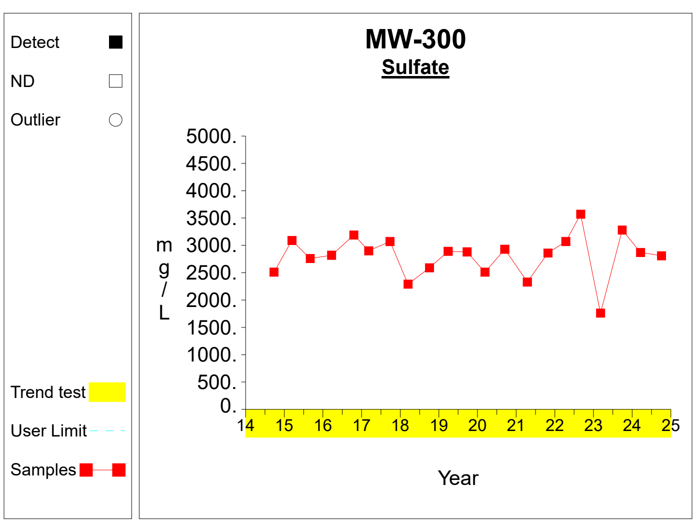
Graph 12



Graph 13

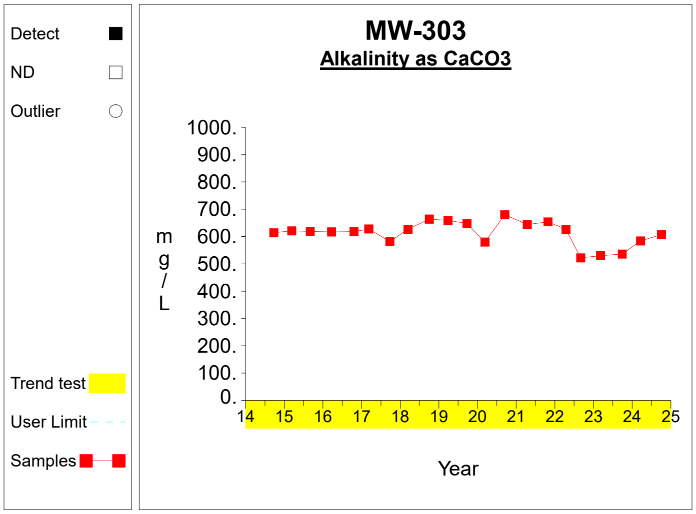


Graph 14

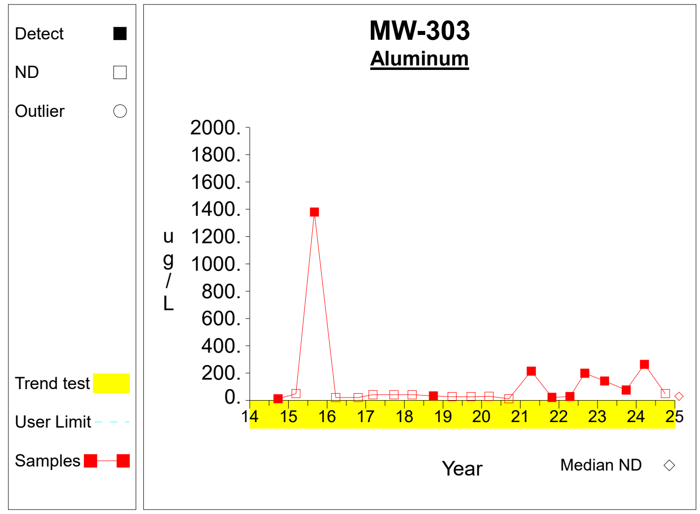


Graph 15

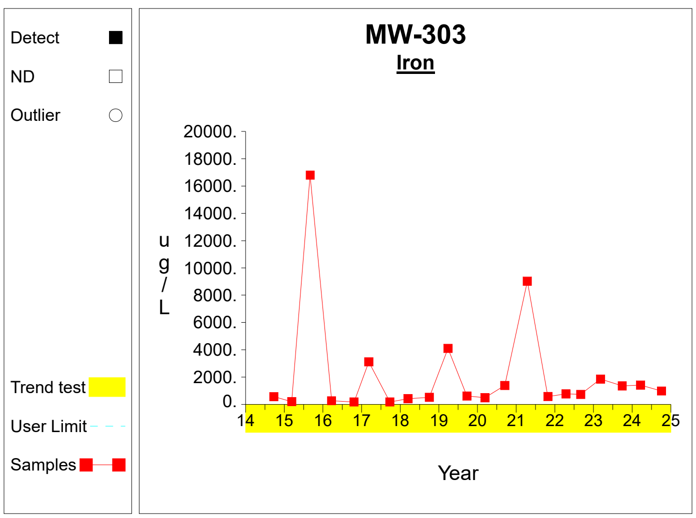
Time Series



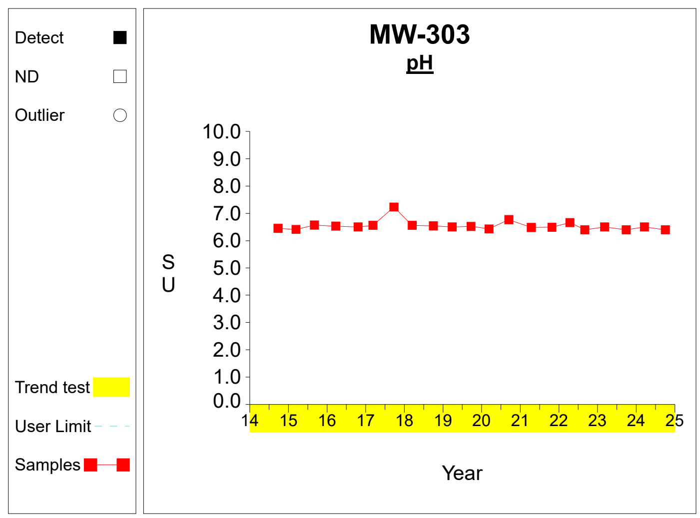
Graph 16



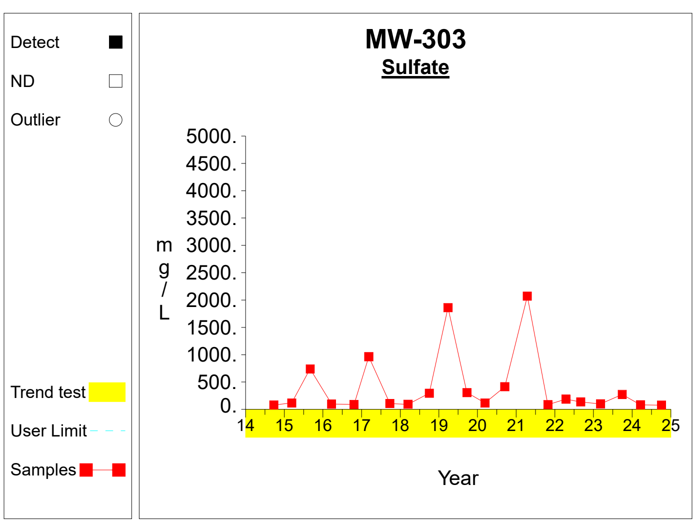
Graph 17



Graph 18

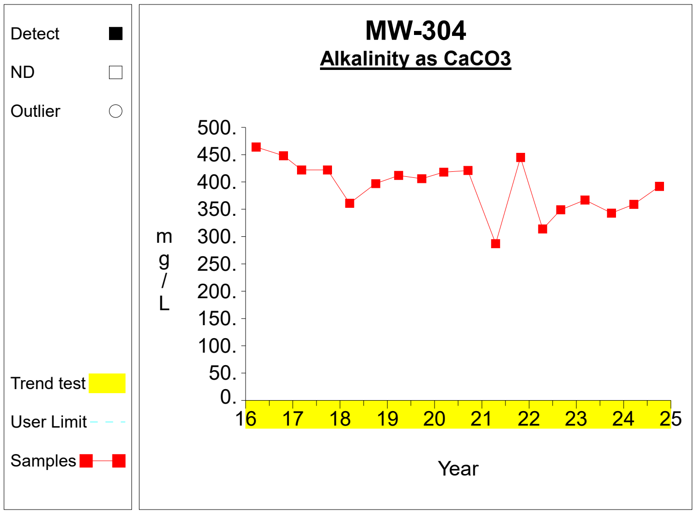


Graph 19

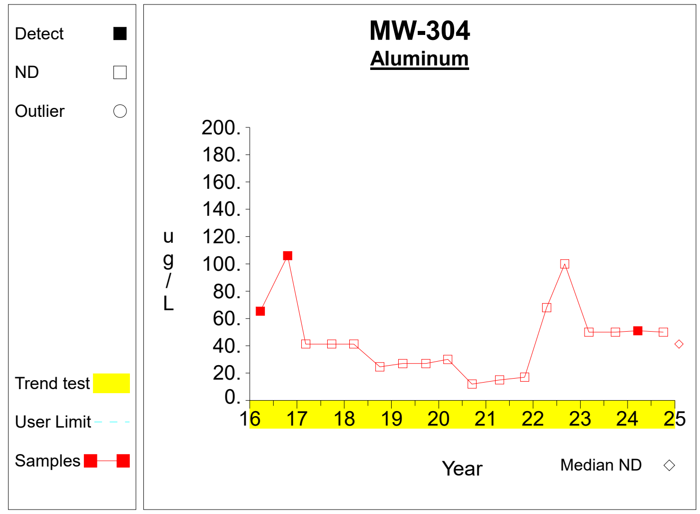


Graph 20

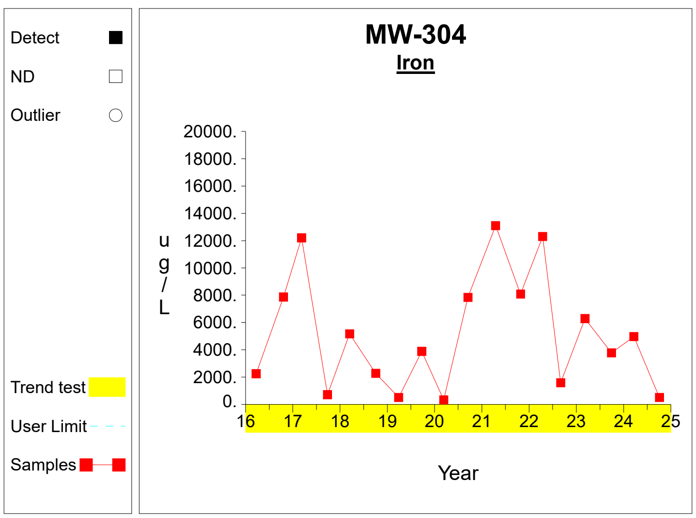
Time Series



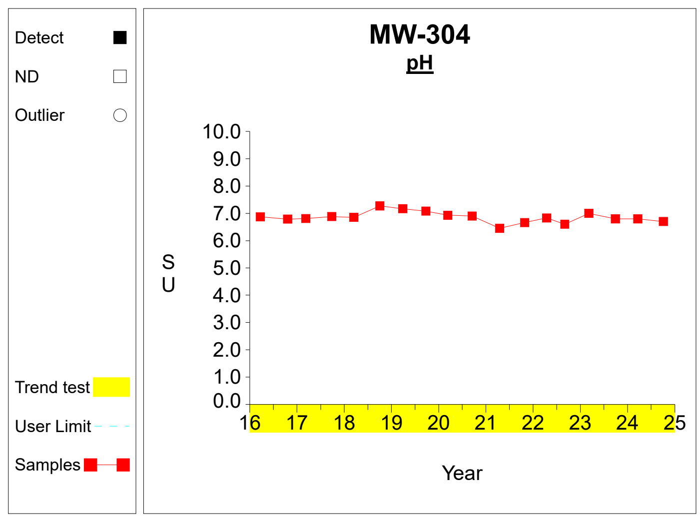
Graph 21



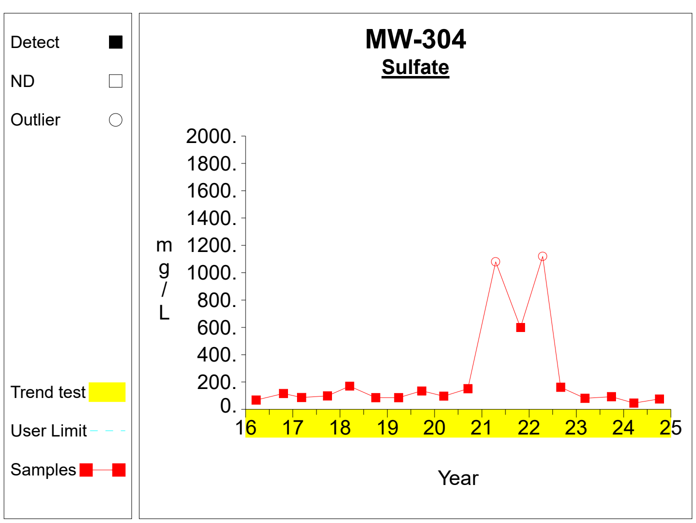
Graph 22



Graph 23

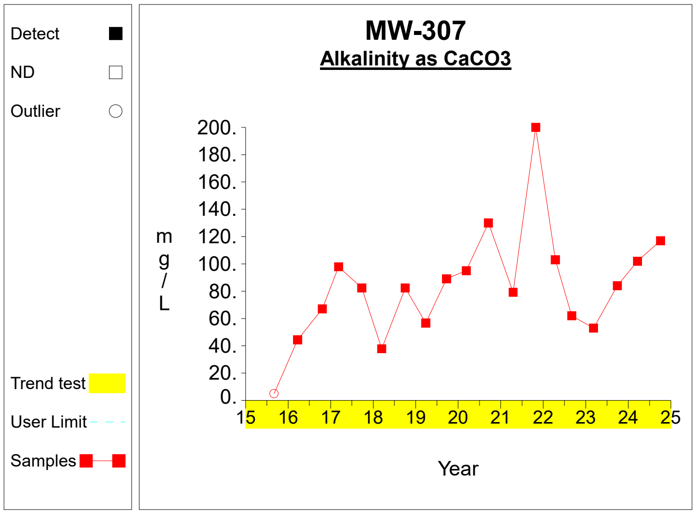


Graph 24

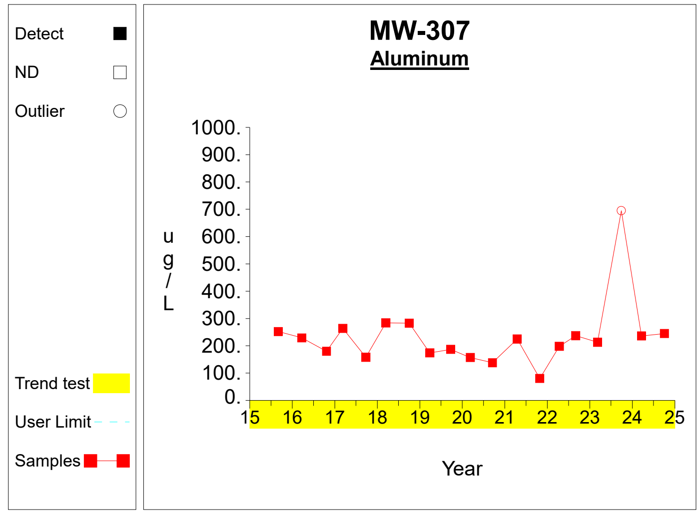


Graph 25

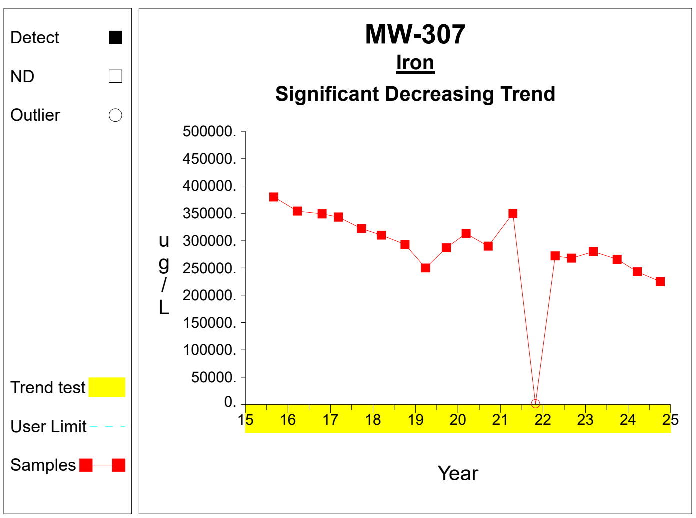
Time Series



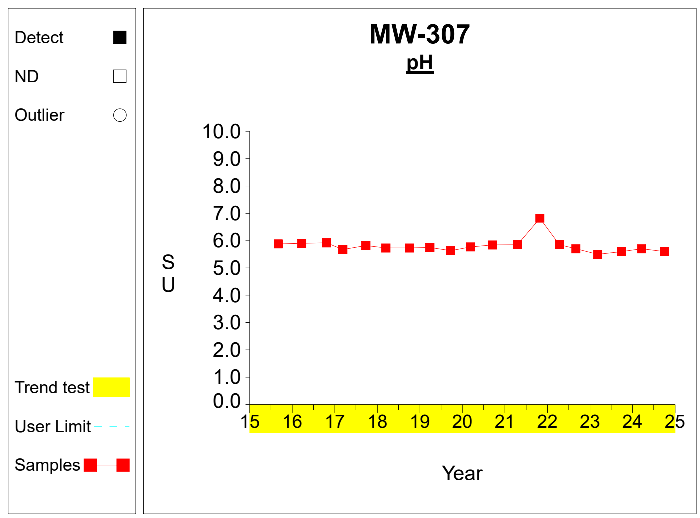
Graph 26



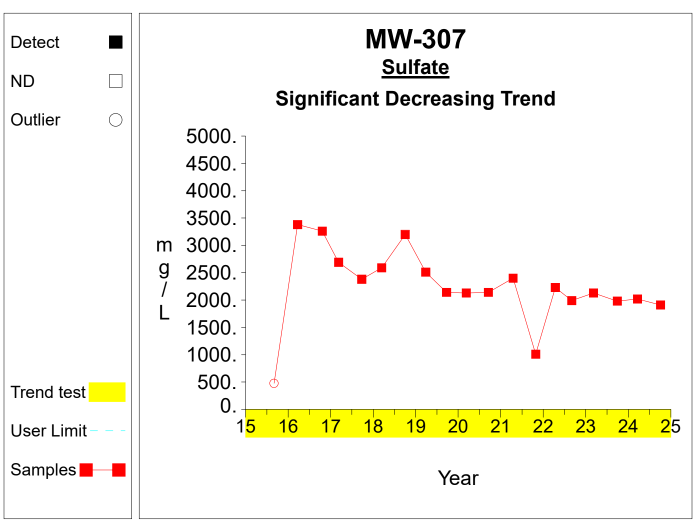
Graph 27



Graph 28

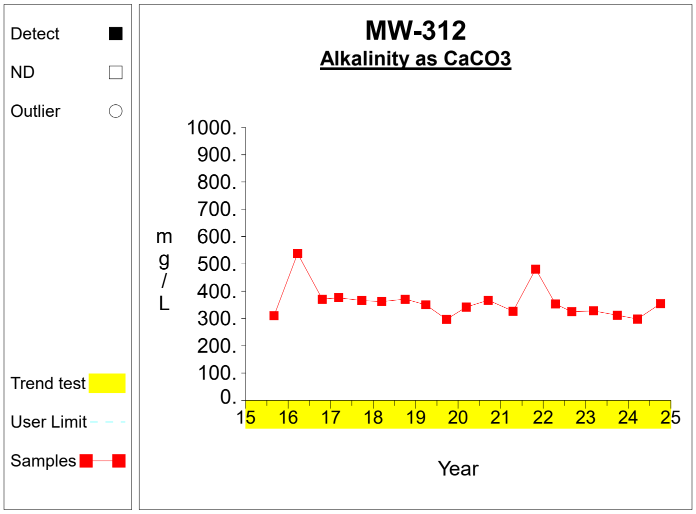


Graph 29

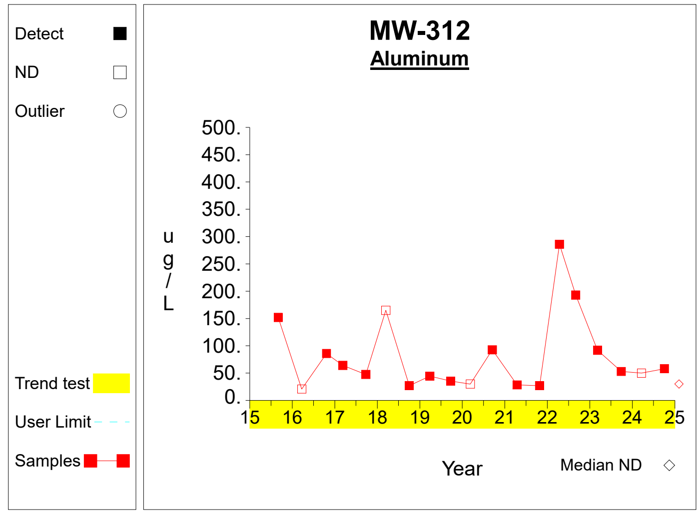


Graph 30

Time Series



Graph 31



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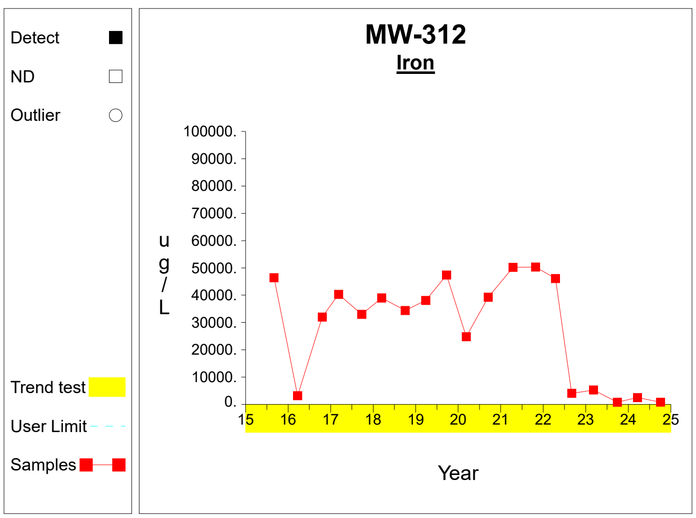
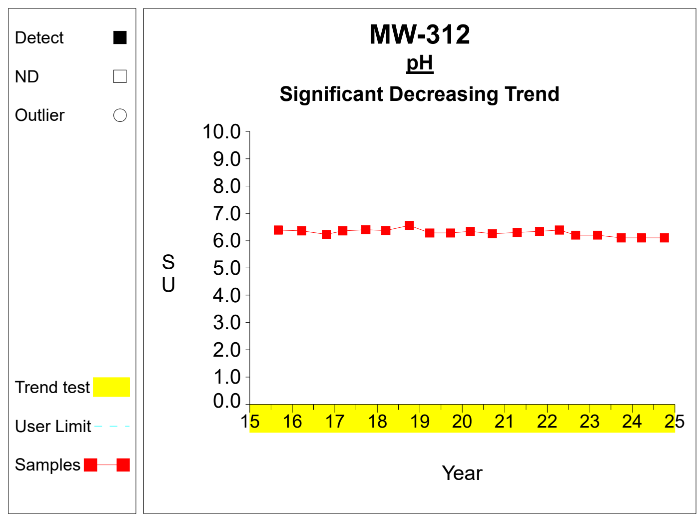
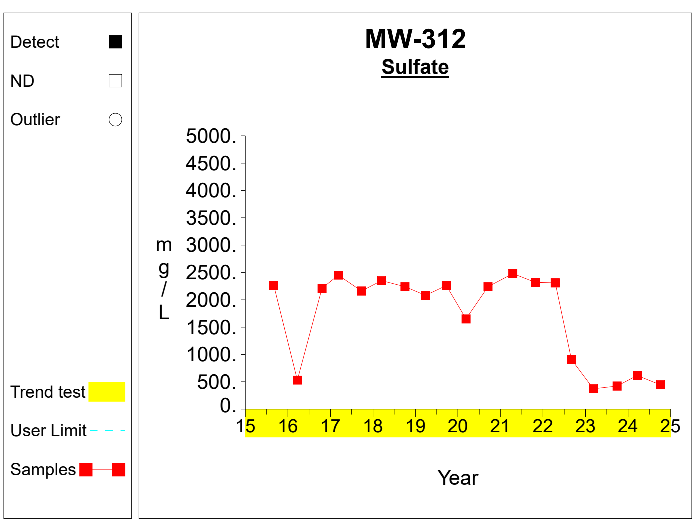


Graph 33

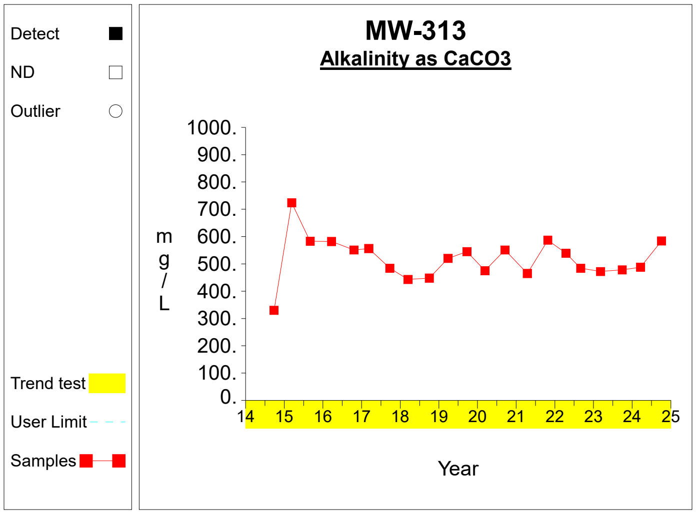


Graph 34

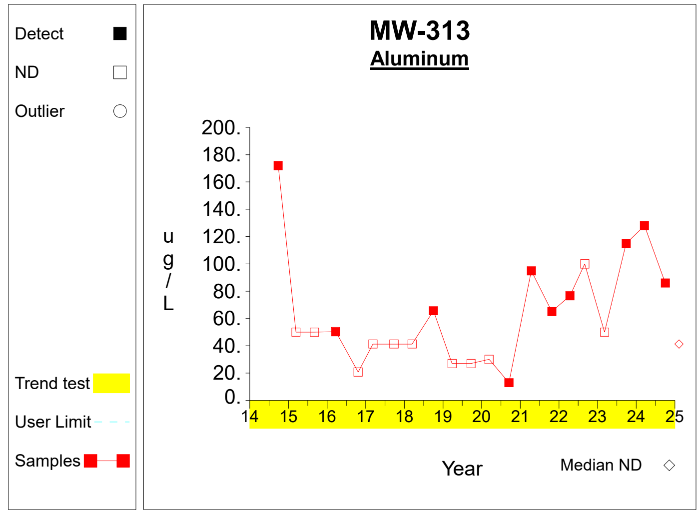


Graph 35

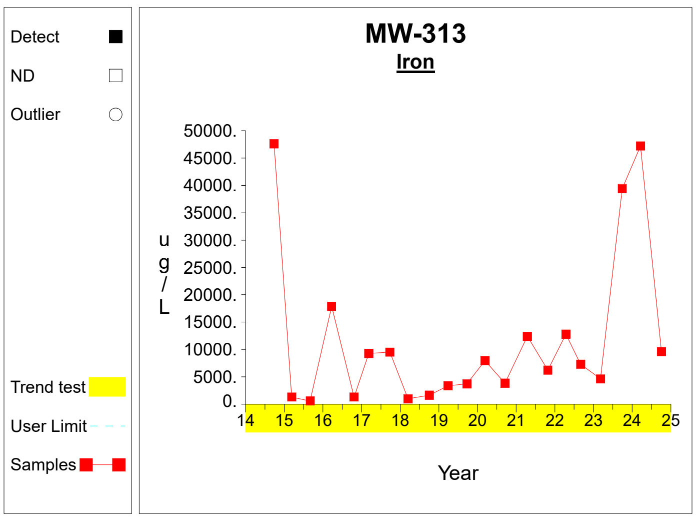
Time Series



Graph 36



Graph 37



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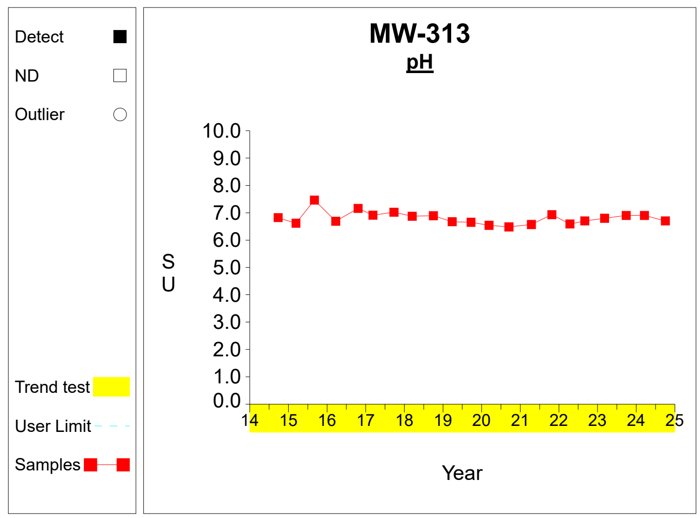

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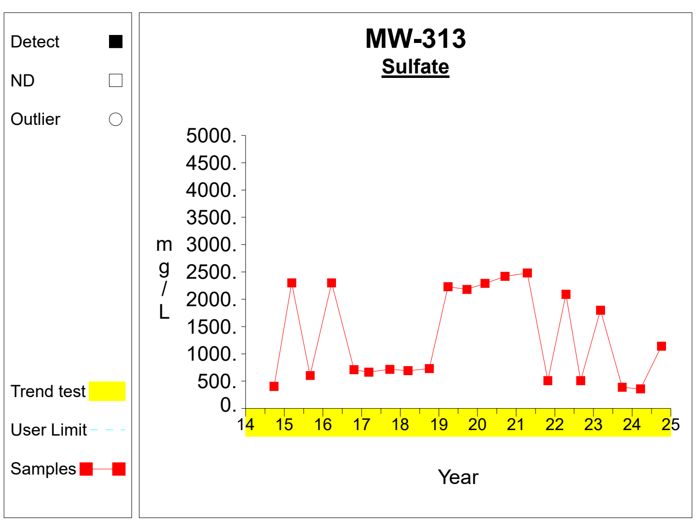
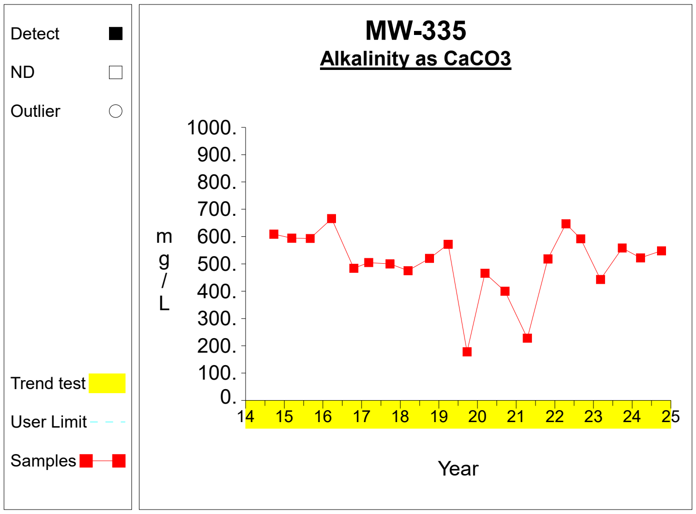
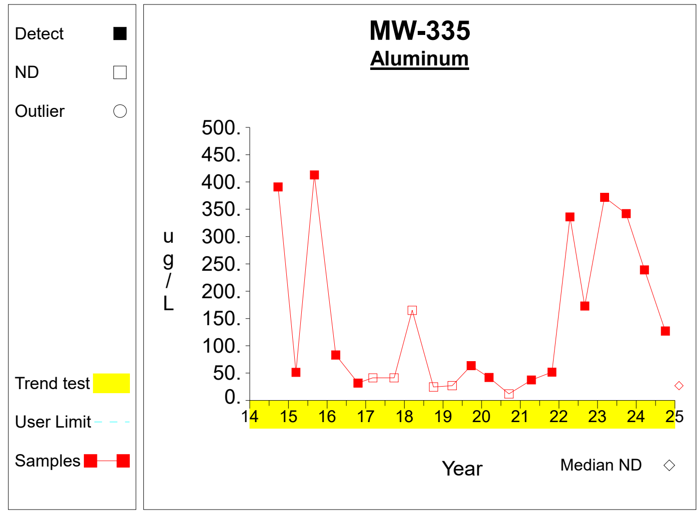


Graph 40

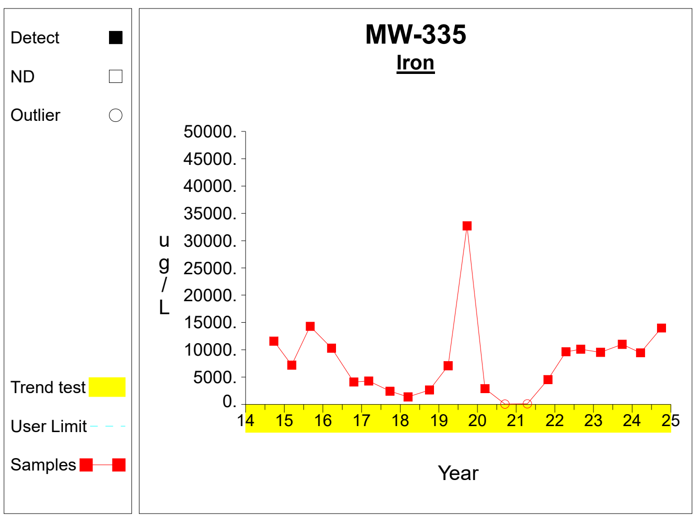
Time Series



Graph 41



Graph 42



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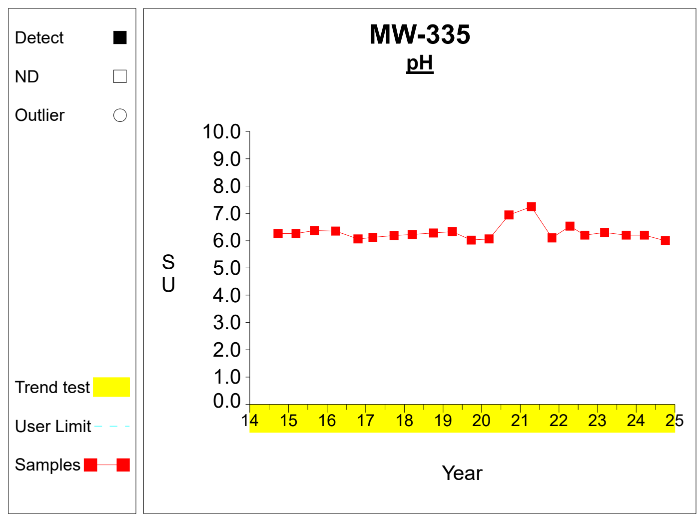
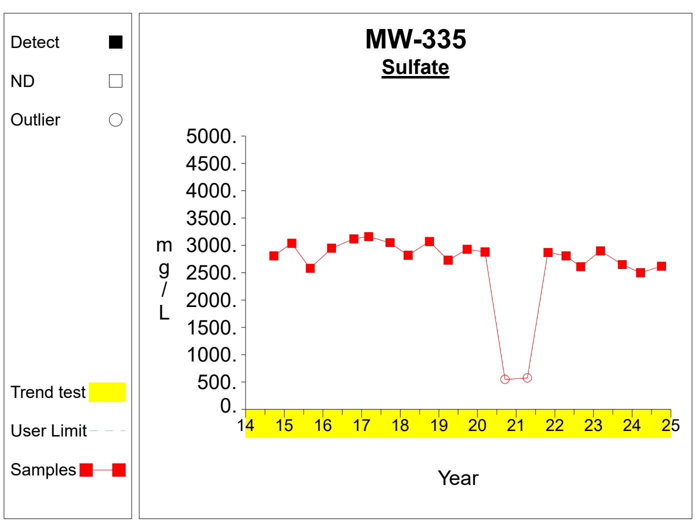


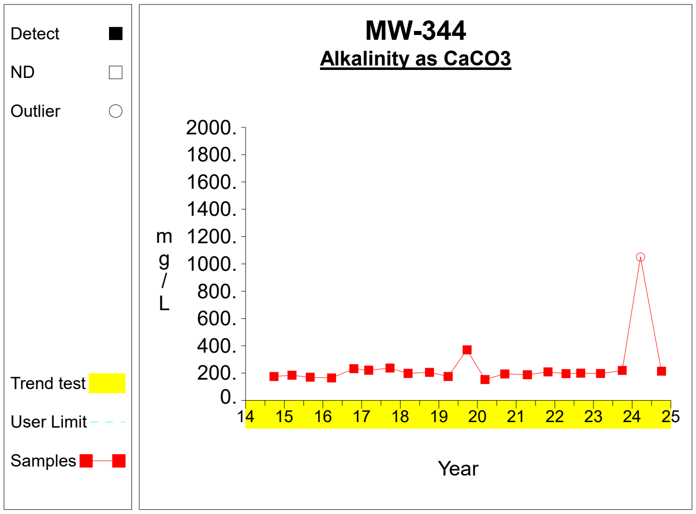
Graph 44



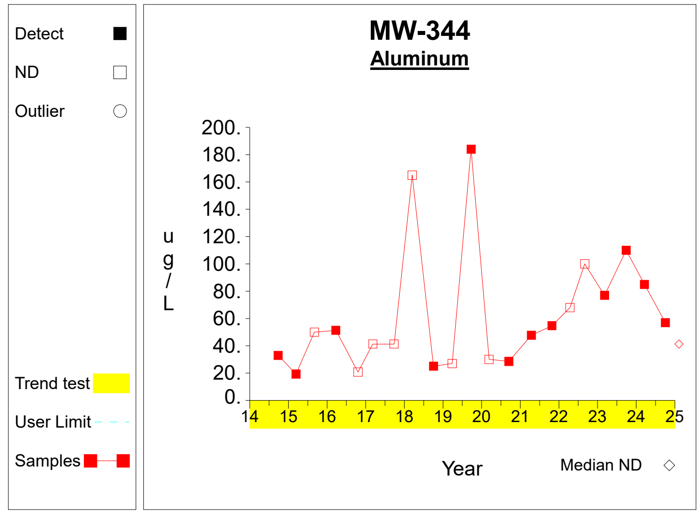
Graph 45

Prepared by: Otter Creek Environmental

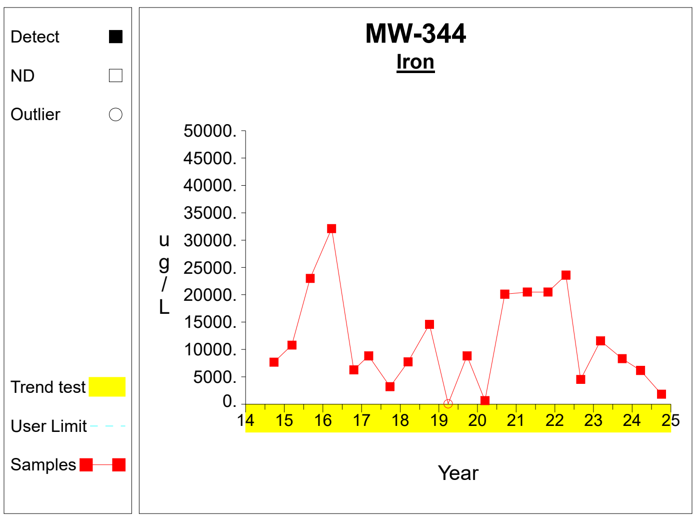
Time Series



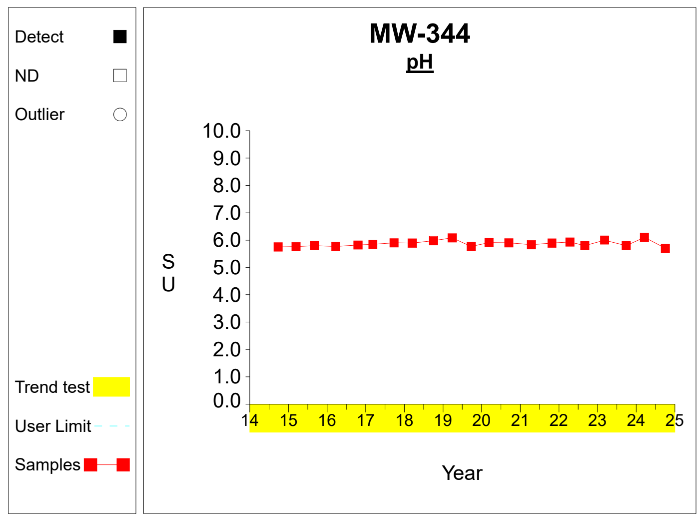
Graph 46



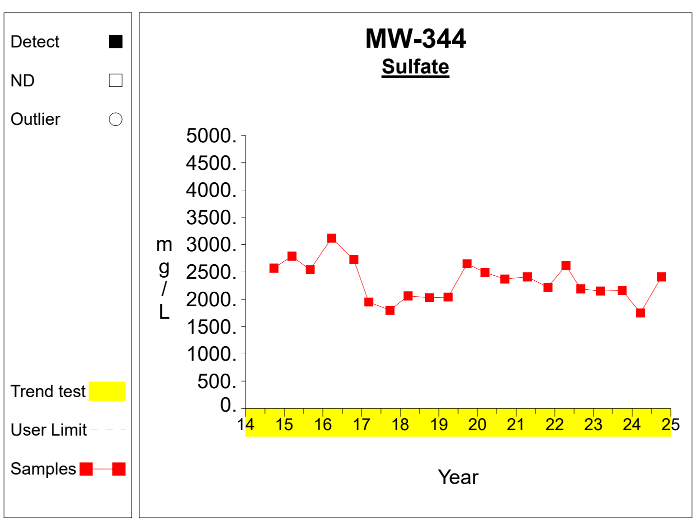
Graph 47



Graph 48

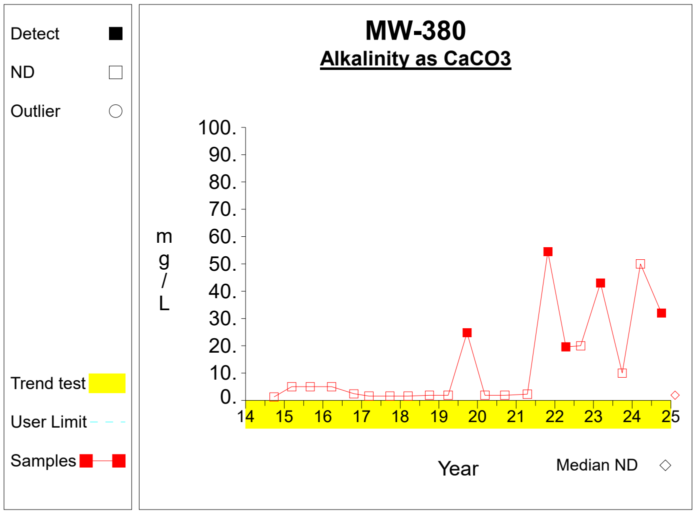


Graph 49

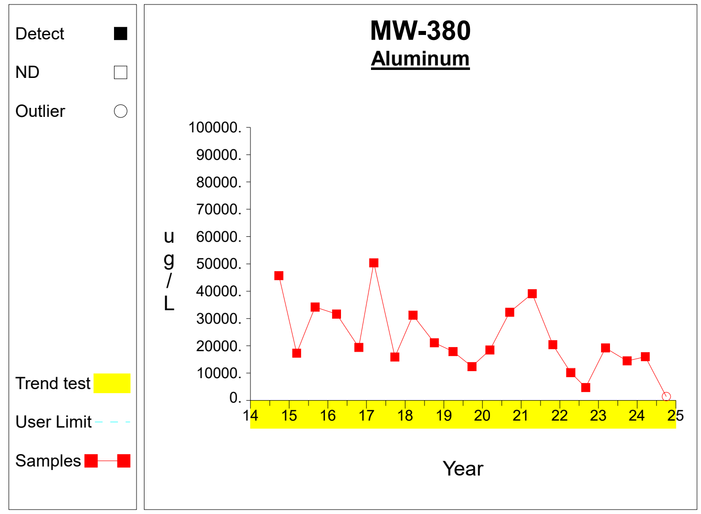


Graph 50

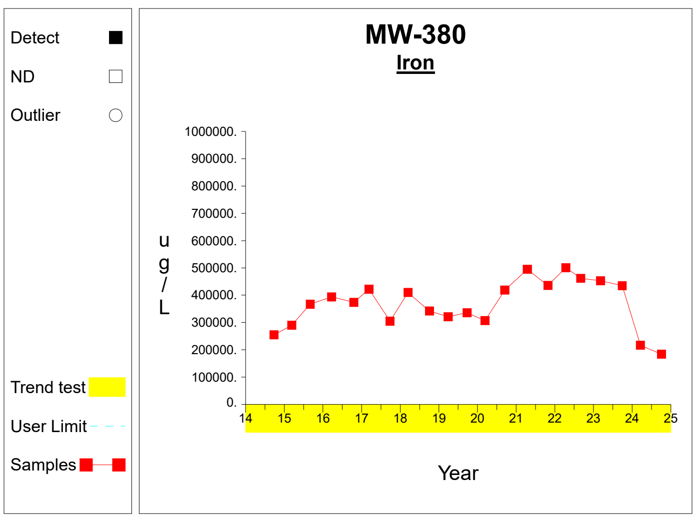
Time Series



Graph 51



Graph 52



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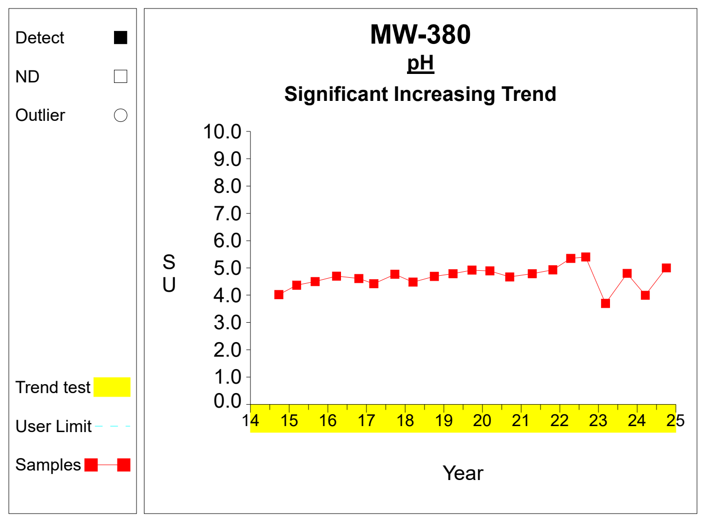
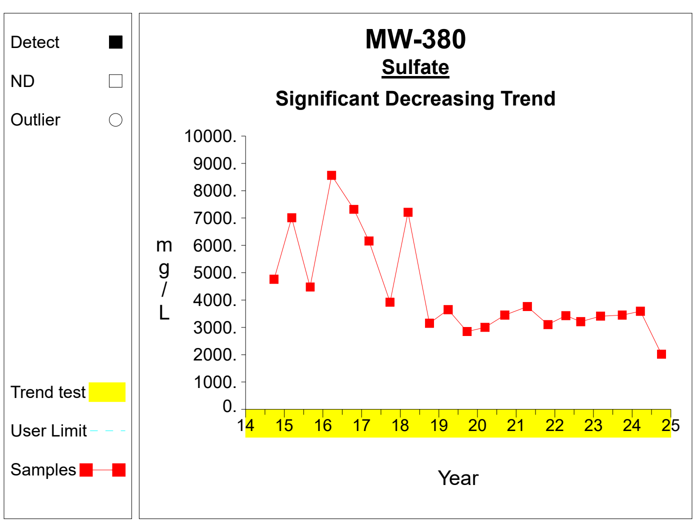
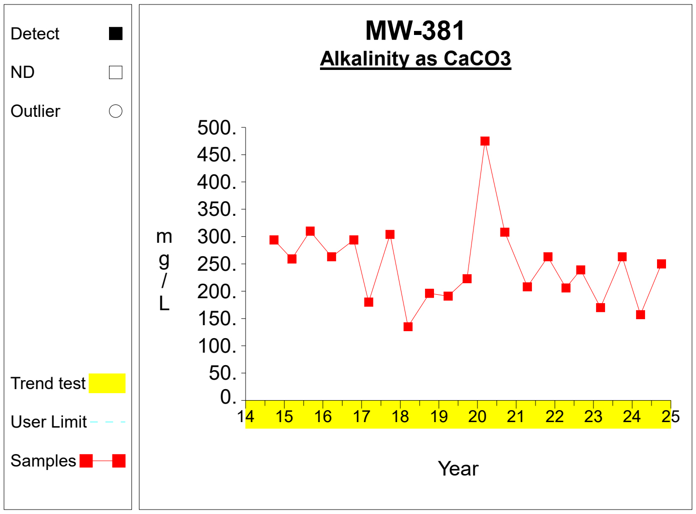


Graph 54

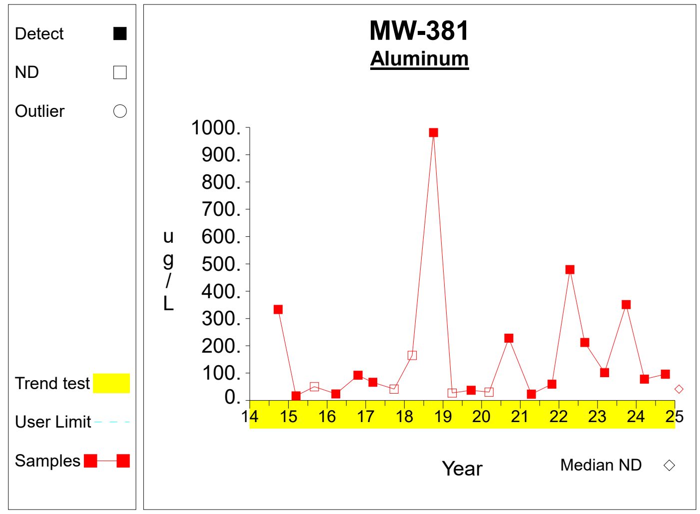


Graph 55

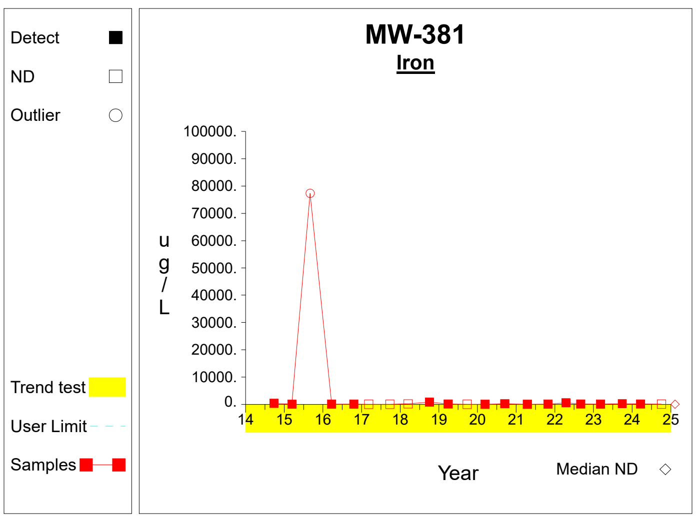
Time Series



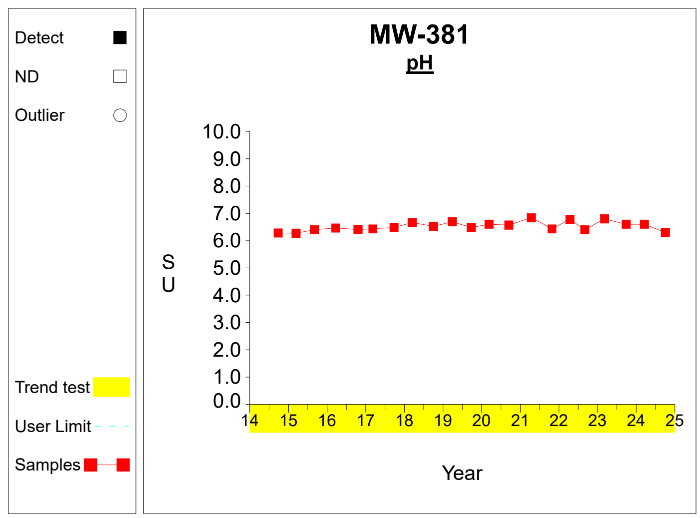
Graph 56



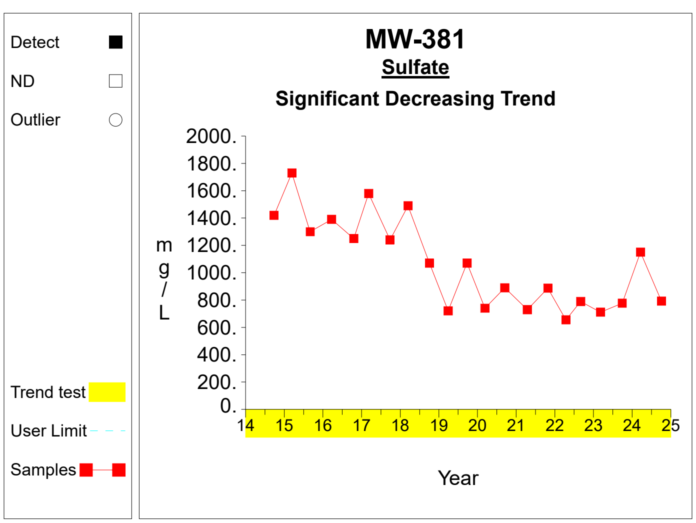
Graph 57



Graph 58

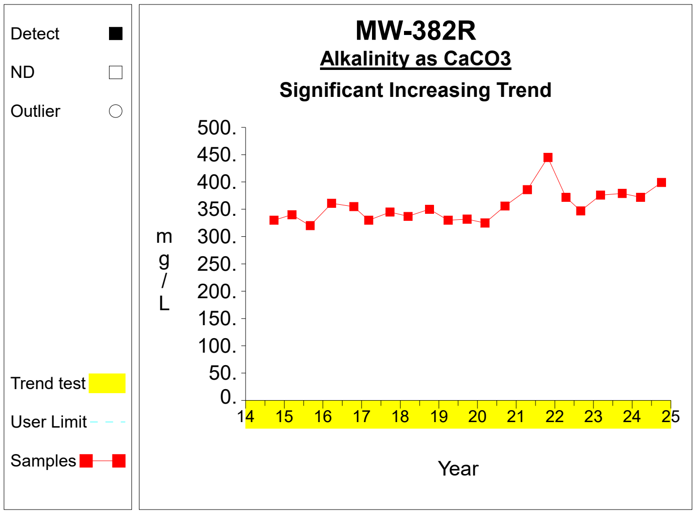


Graph 59

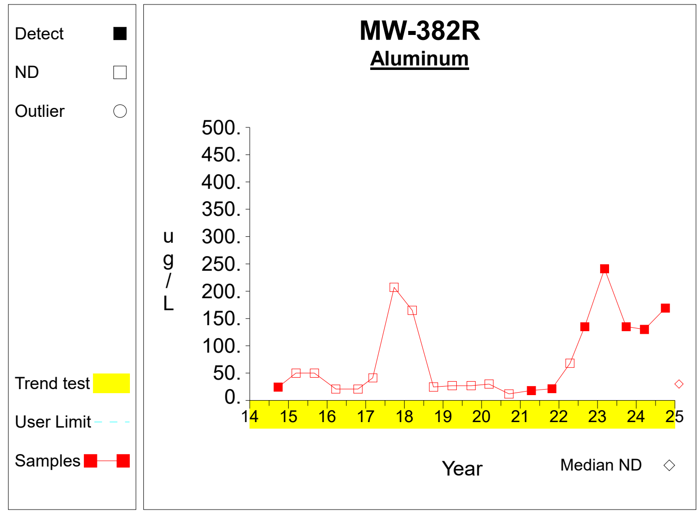


Graph 60

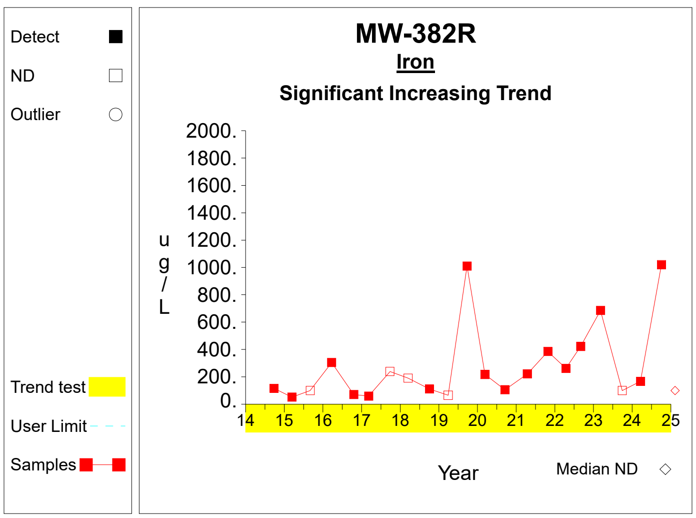
Time Series



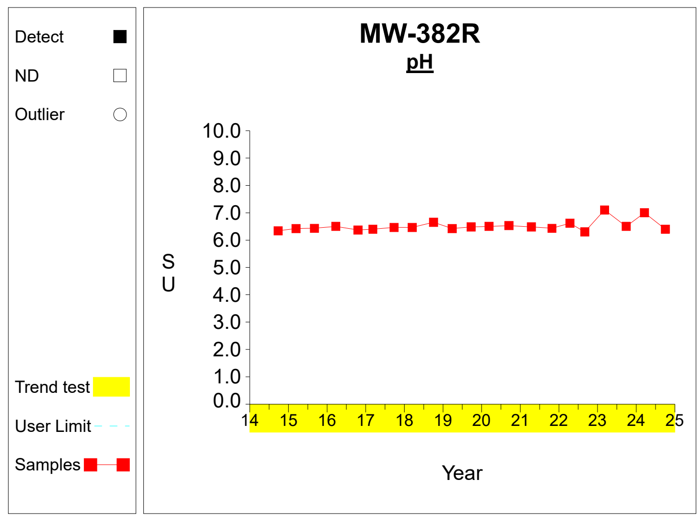
Graph 61



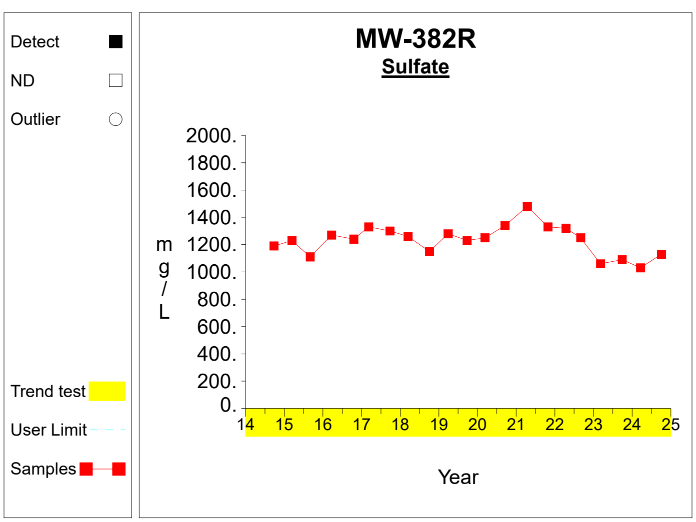
Graph 62



Graph 63

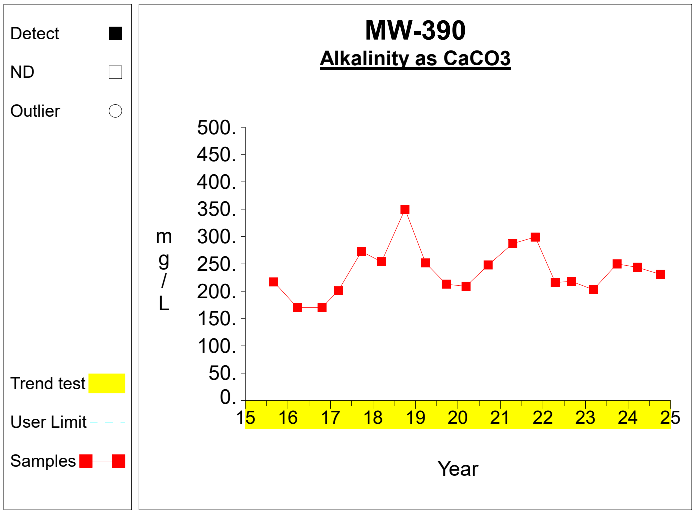


Graph 64



Graph 65

Time Series



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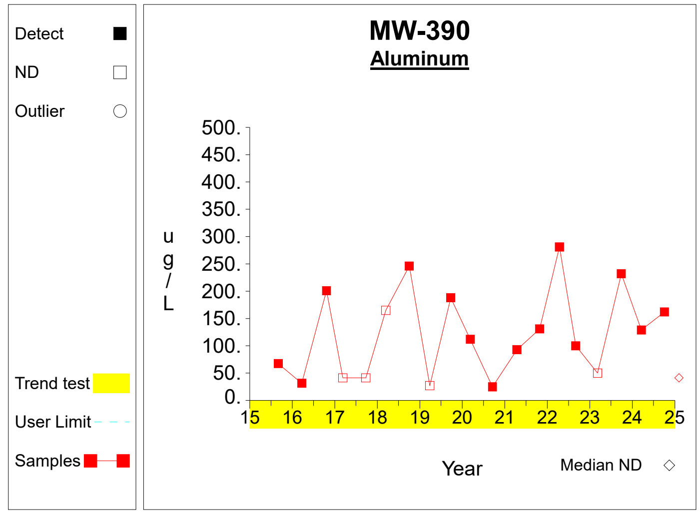
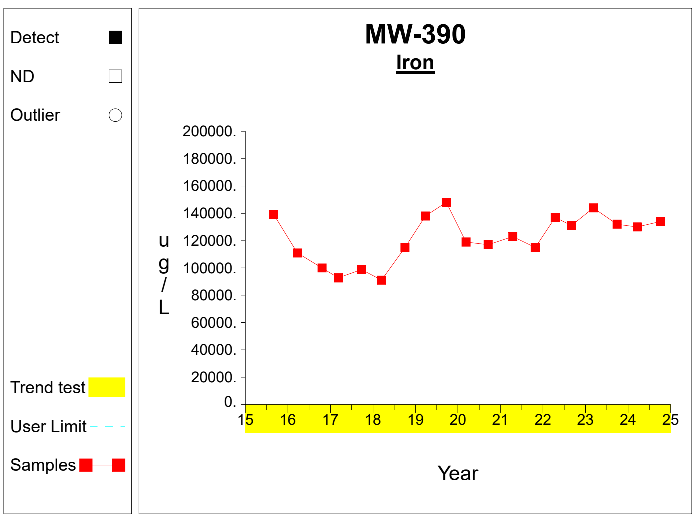


Graph 67



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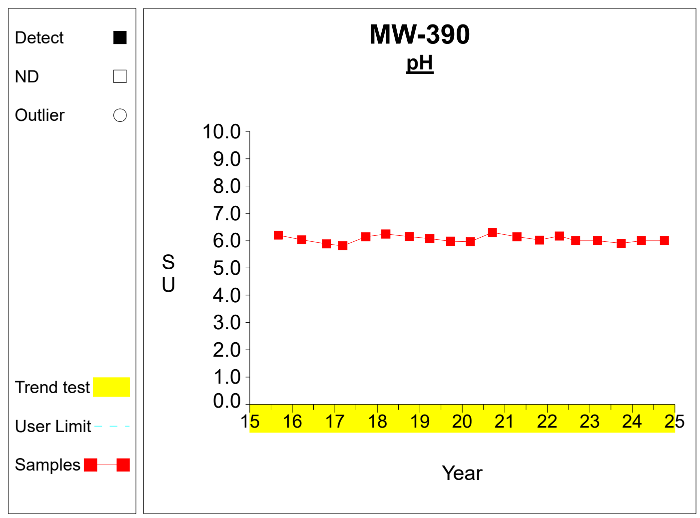
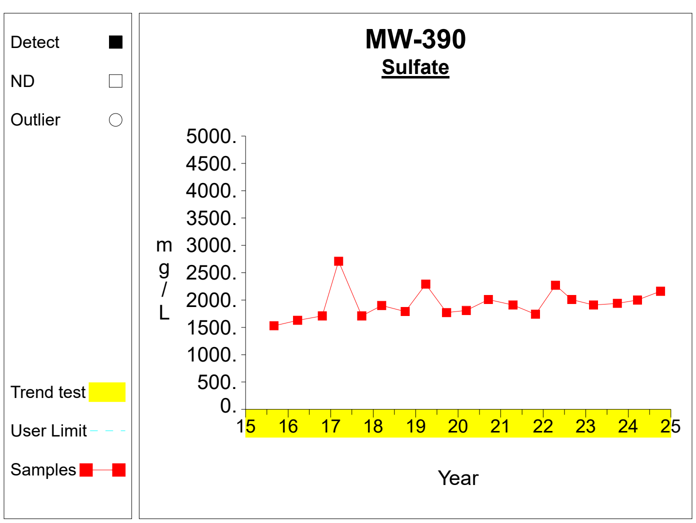
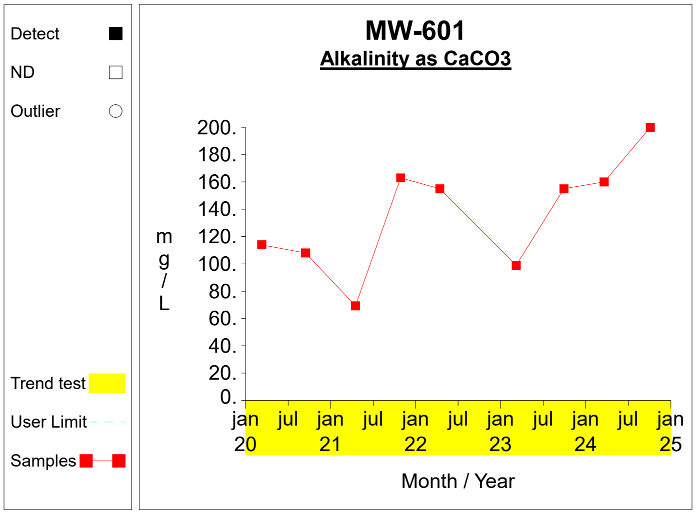


Graph 69



Graph 70

Time Series



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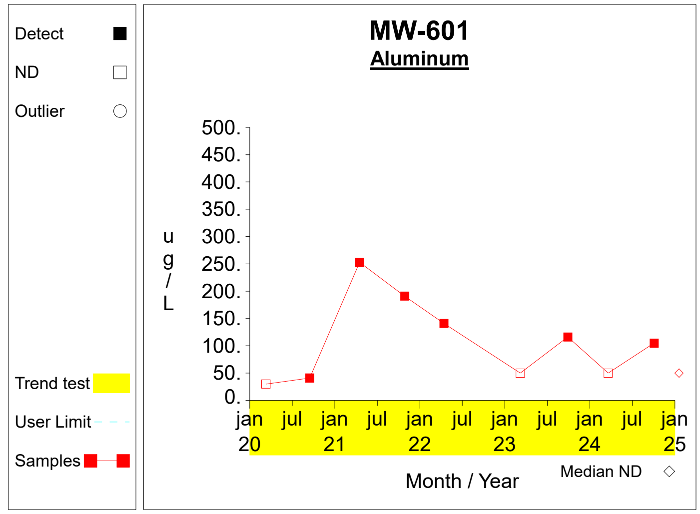
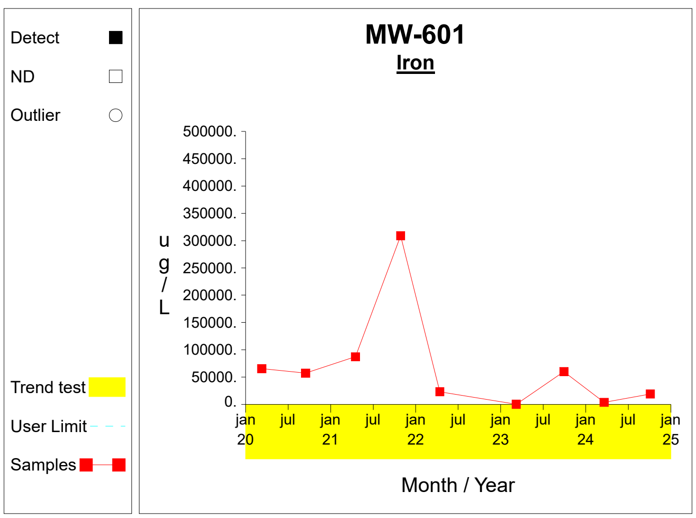
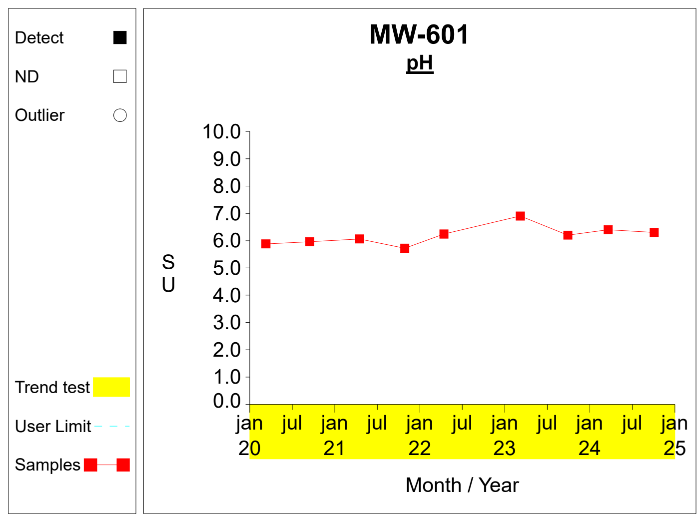


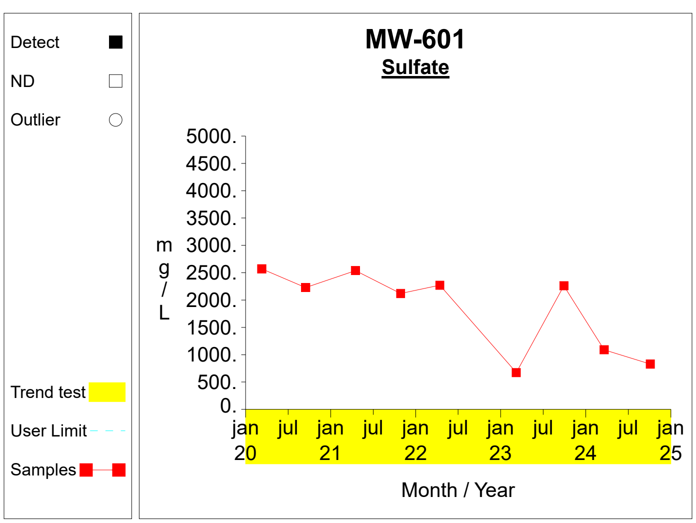
Graph 72



Graph 73

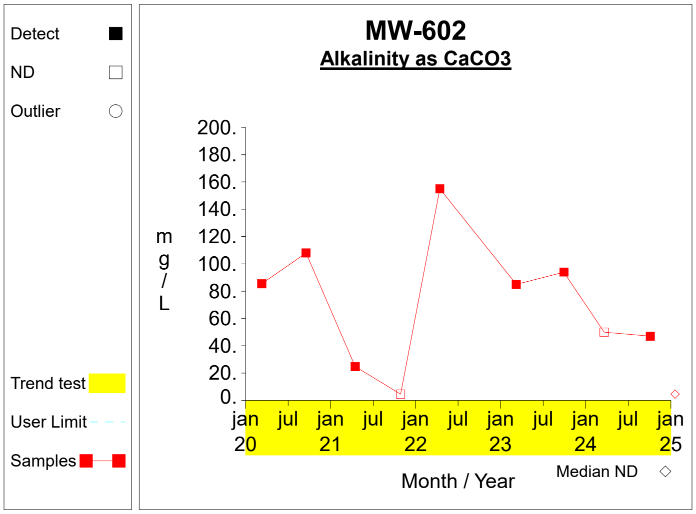


Graph 74



Graph 75

Time Series



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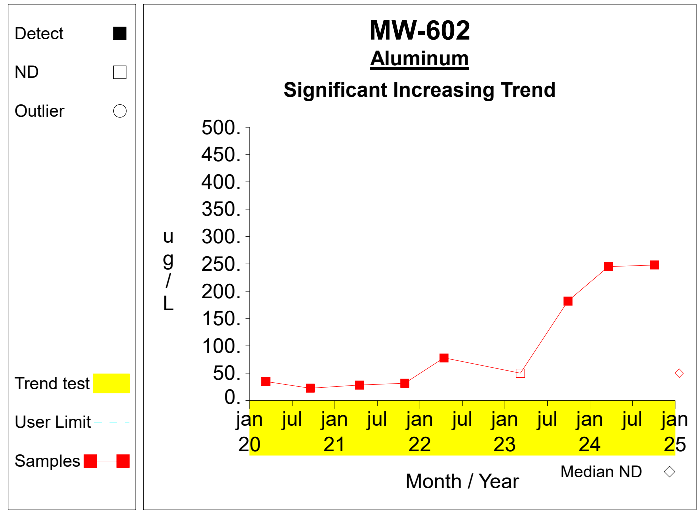
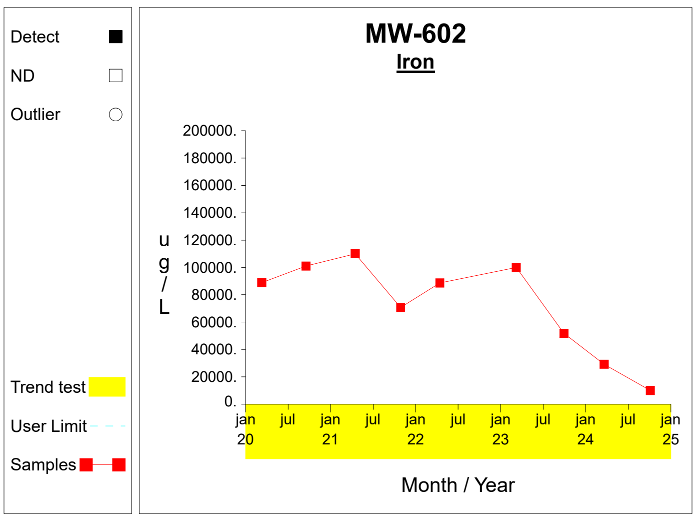
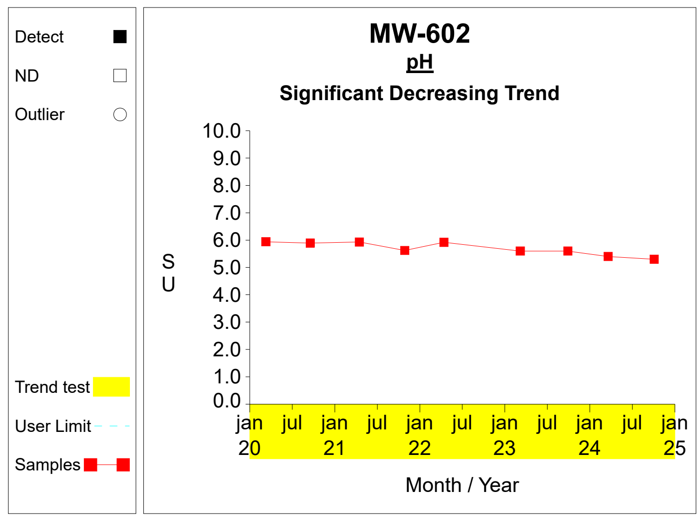


Graph 77



Graph 78



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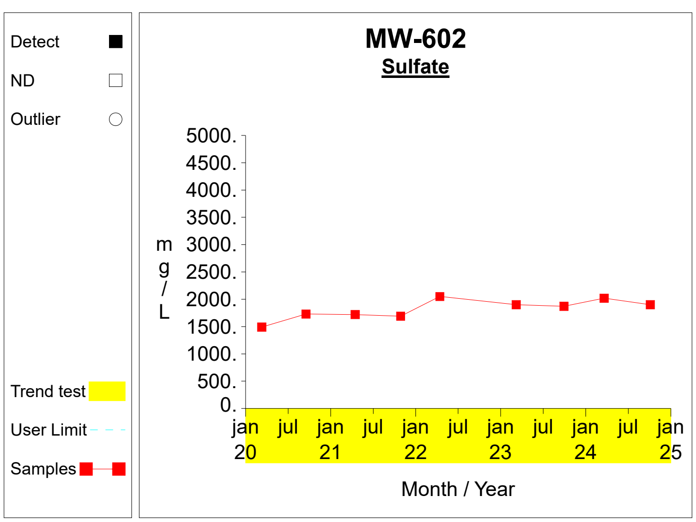
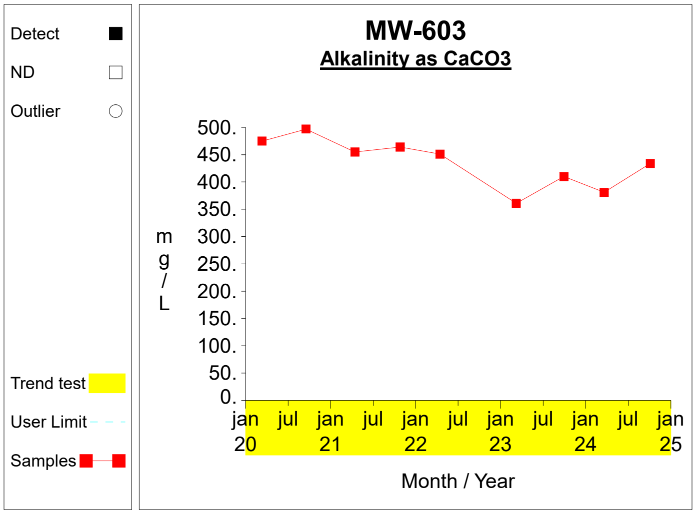
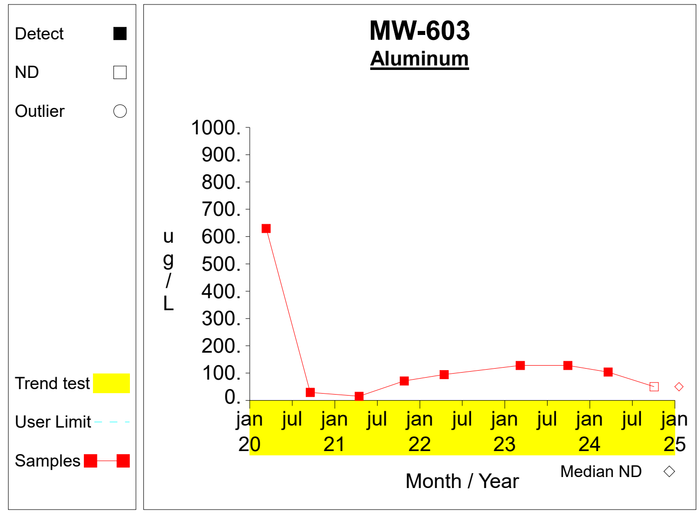


Graph 80

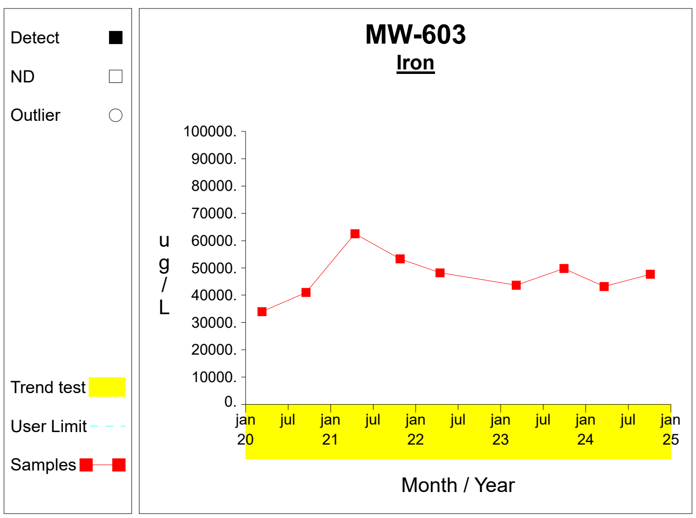
Time Series



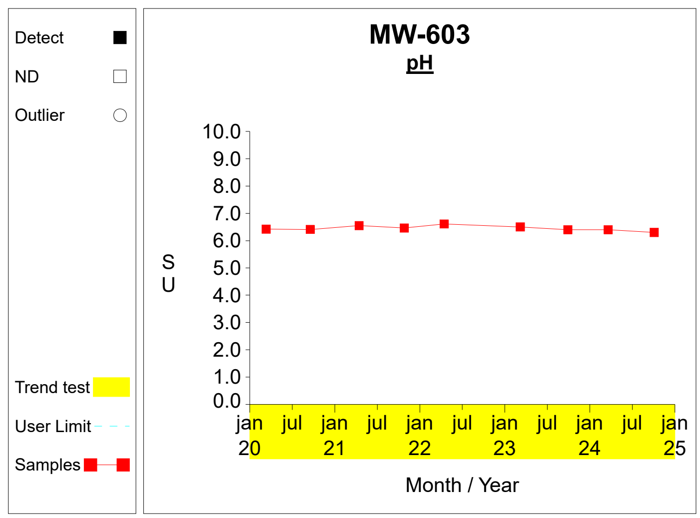
Graph 81



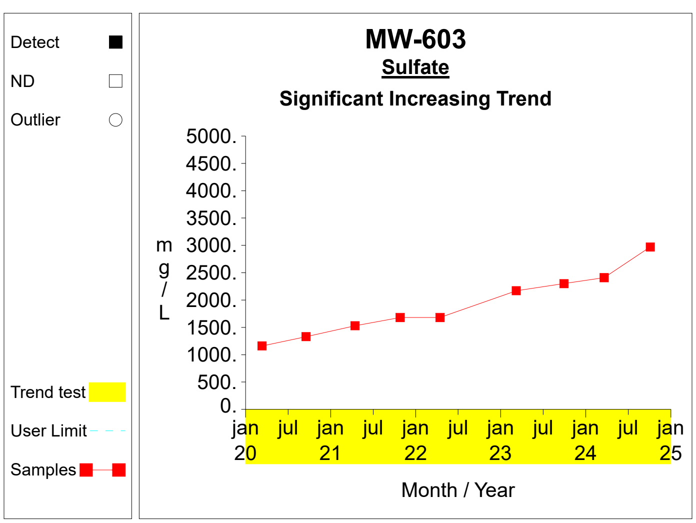
Graph 82



Graph 83

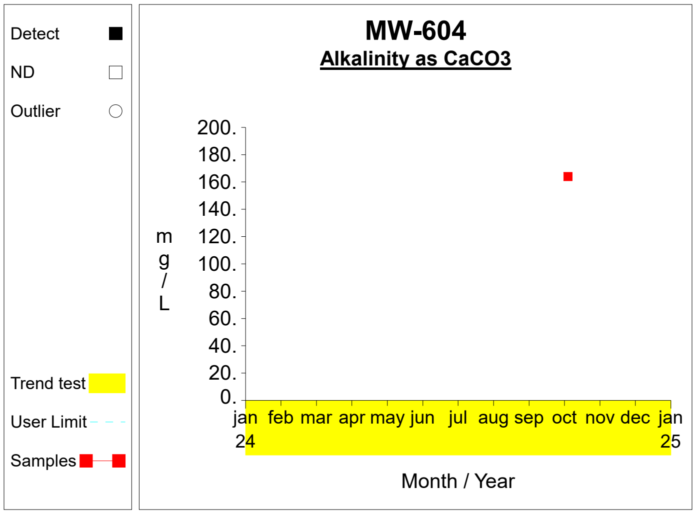


Graph 84

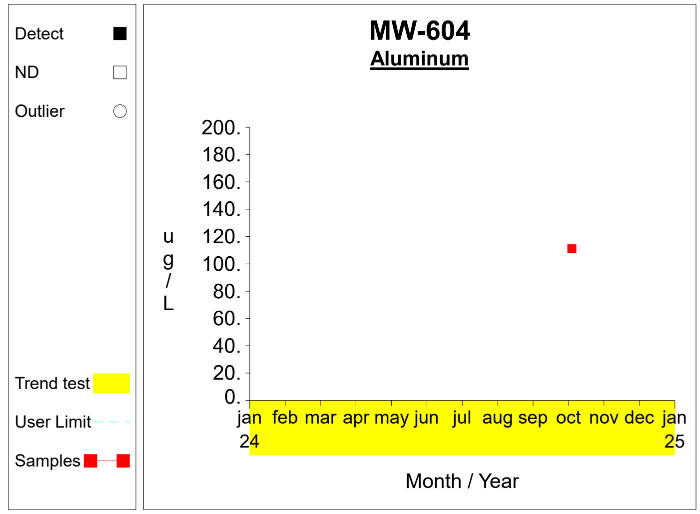


Graph 85

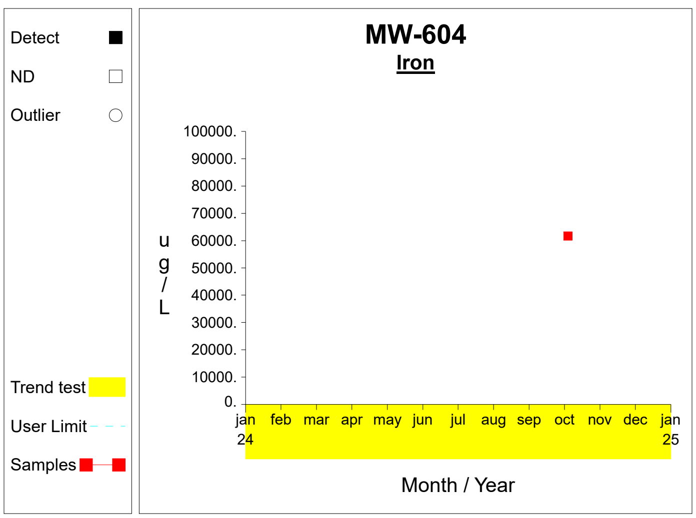
Time Series



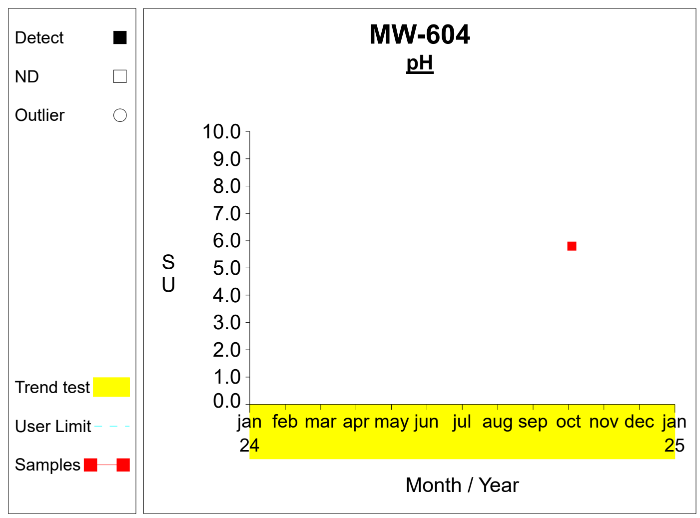
Graph 86



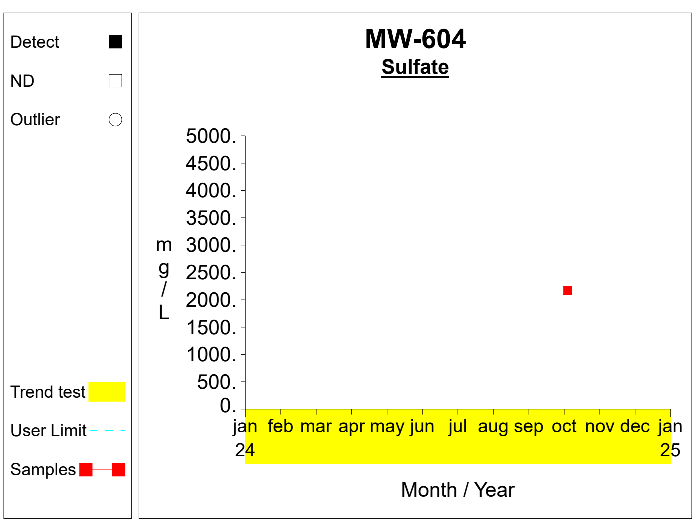
Graph 87



Graph 88

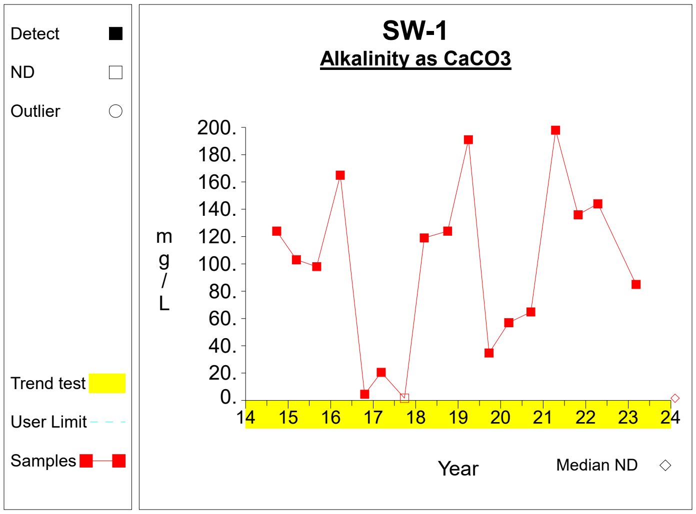


Graph 89

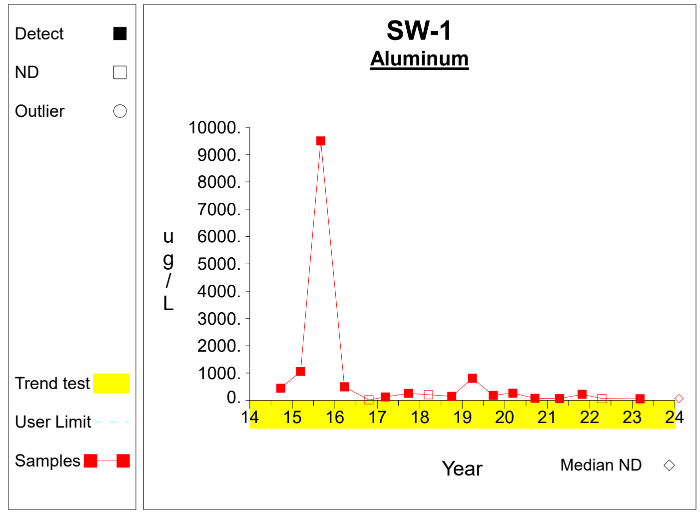


Graph 90

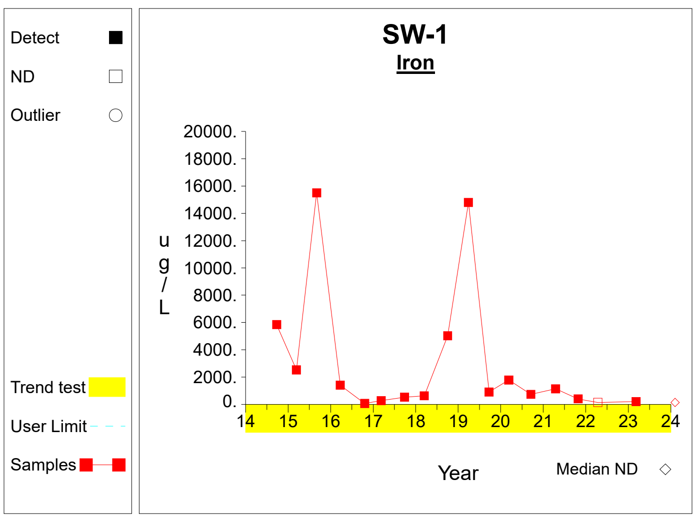
Time Series



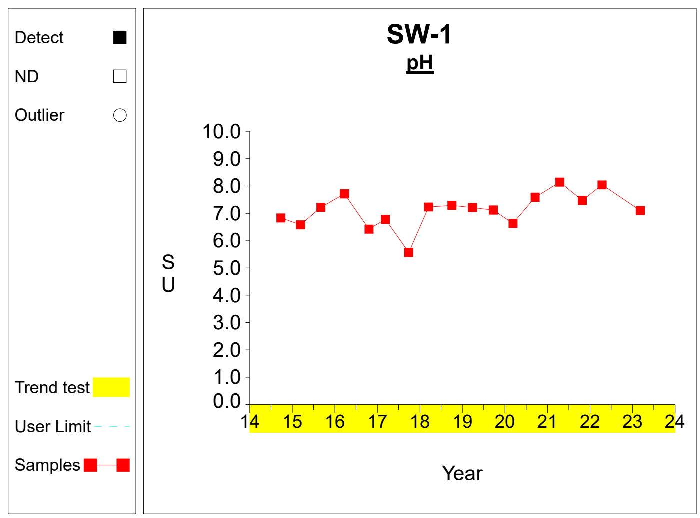
Graph 91



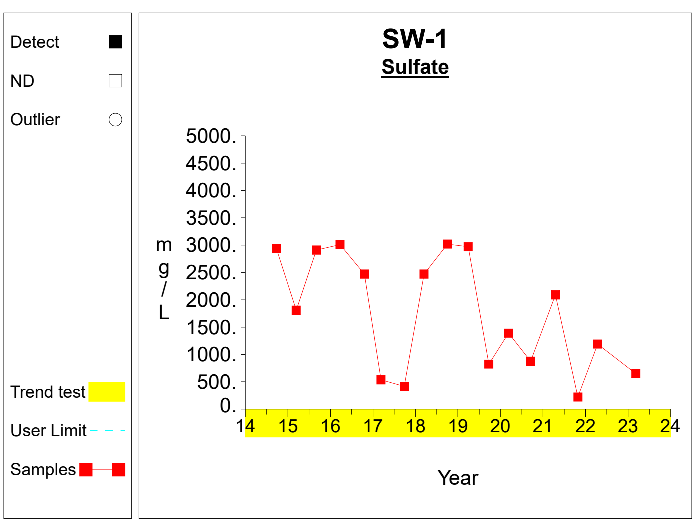
Graph 92



Graph 93

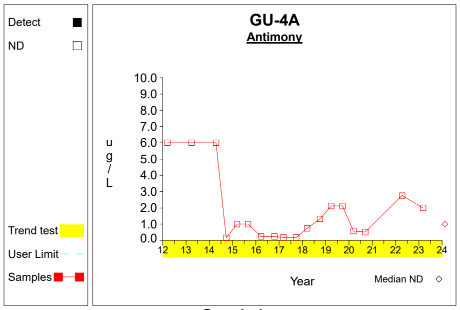


Graph 94

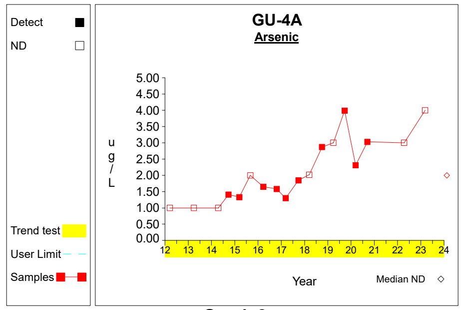


Graph 95

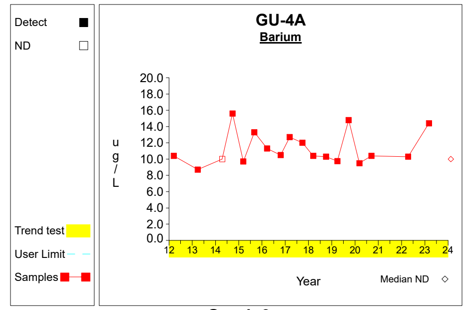
Time Series



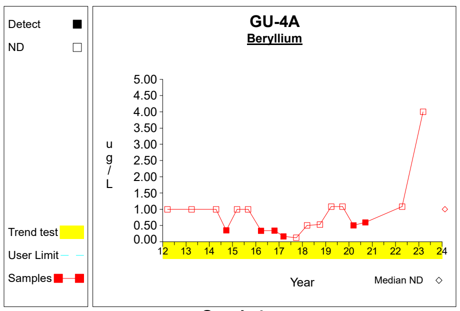
Graph 1



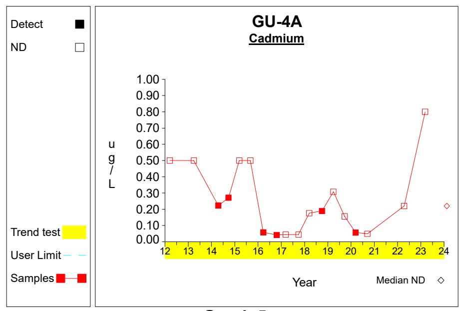
Graph 2



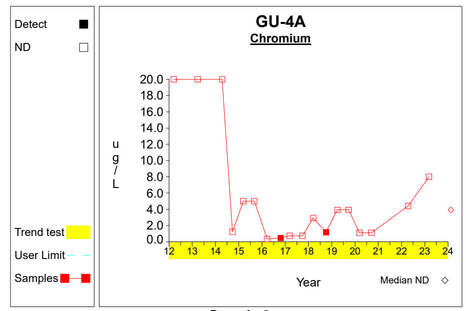
Graph 3



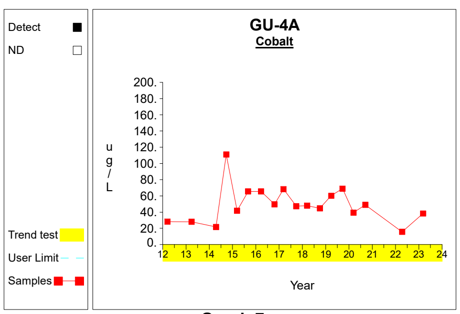
Graph 4



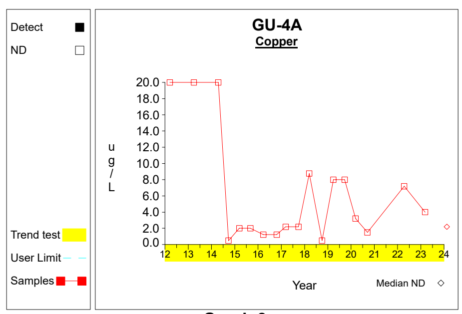
Graph 5



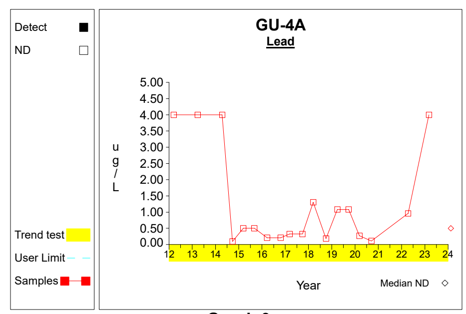
Graph 6



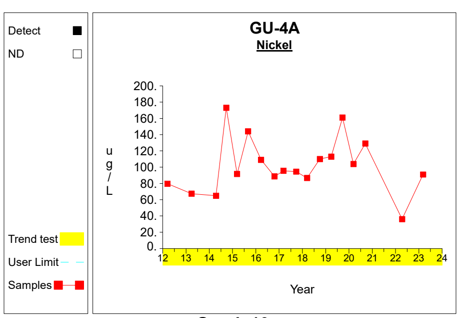
Graph 7



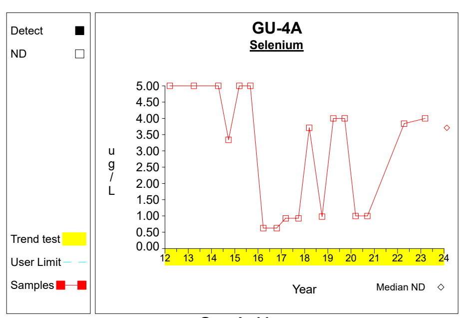
Graph 8



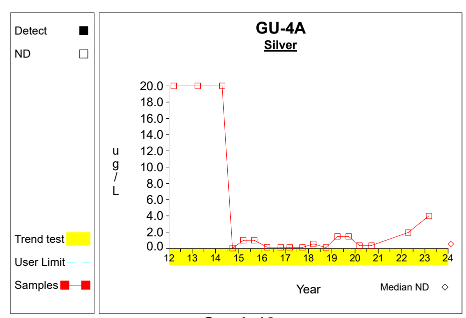
Graph 9



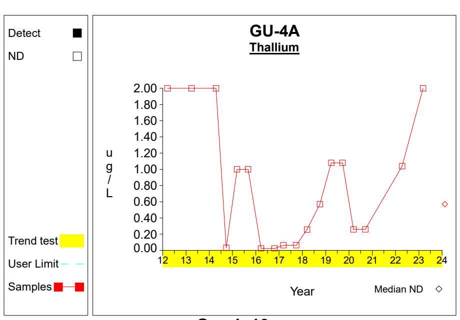
Graph 10



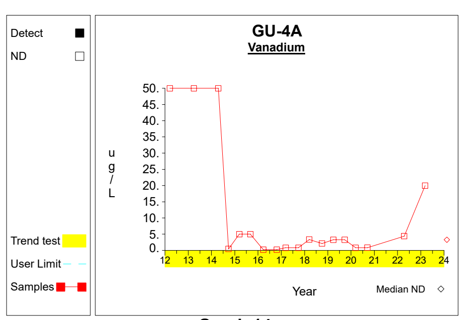
Graph 11



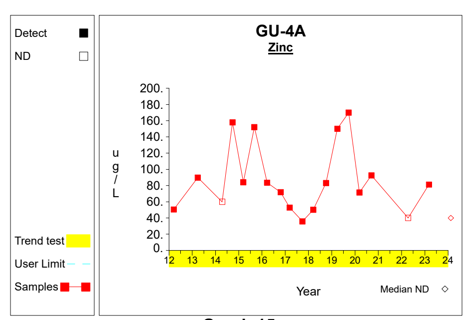
Graph 12



Graph 13



Graph 14

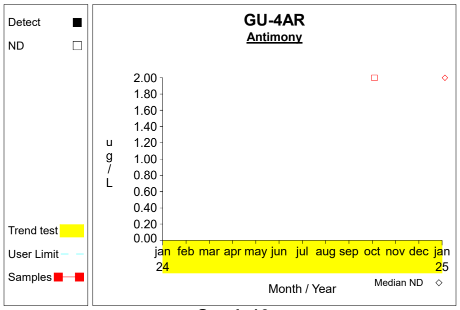


Graph 15

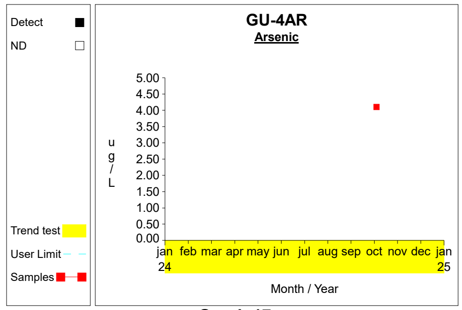
Prepared by: Otter Creek Environmental

South Central Iowa SWA October 2024

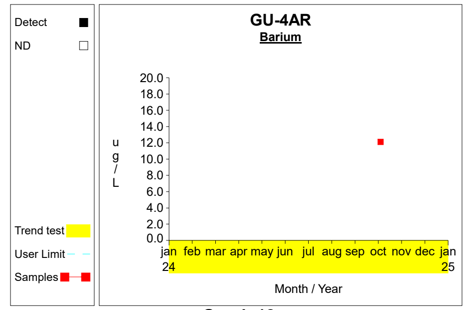
Time Series



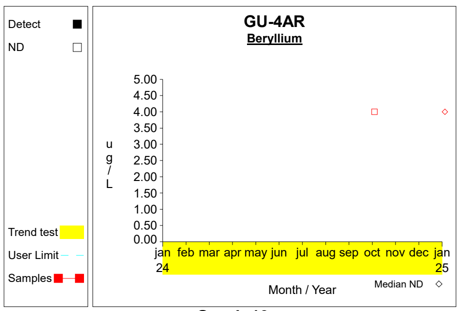
Graph 16



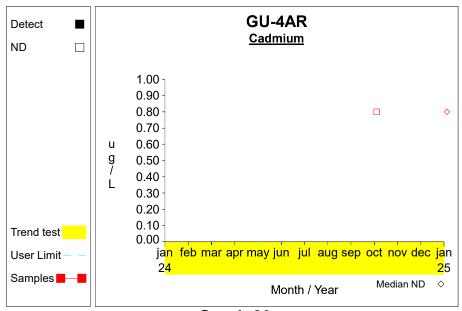
Graph 17



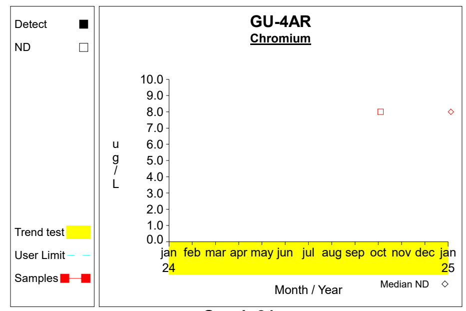
Graph 18



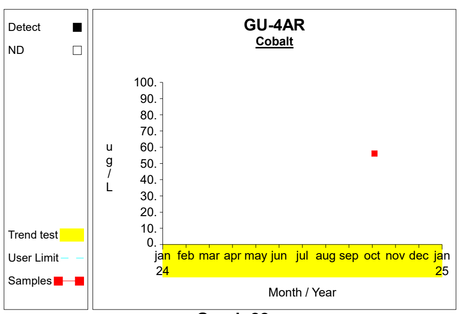
Graph 19



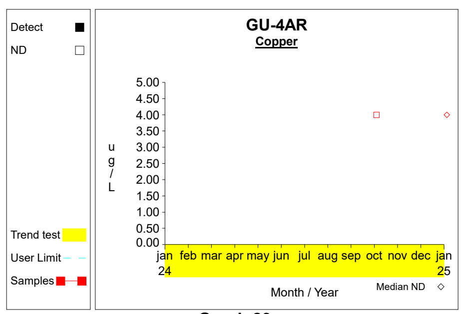
Graph 20



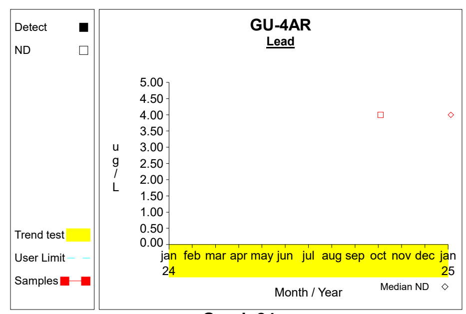
Graph 21



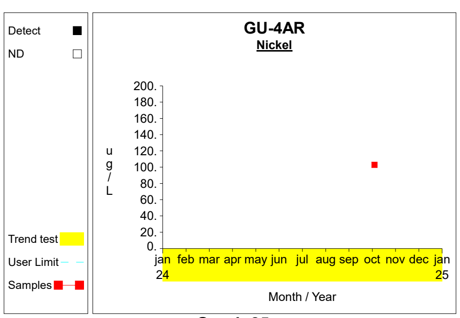
Graph 22



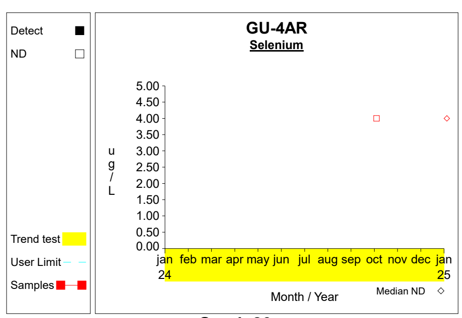
Graph 23



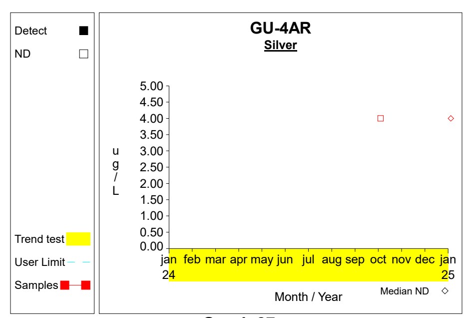
Graph 24



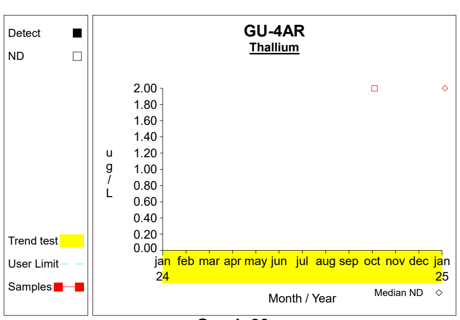
Graph 25



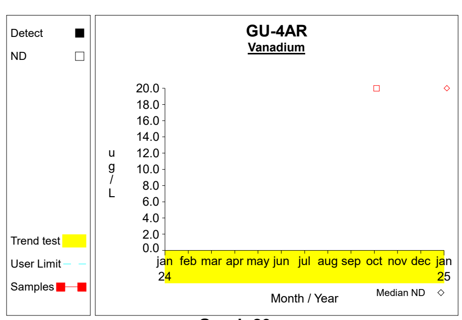
Graph 26



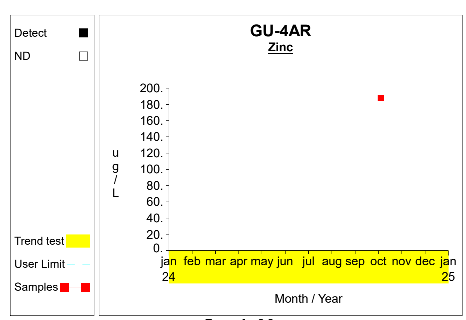
Graph 27



Graph 28

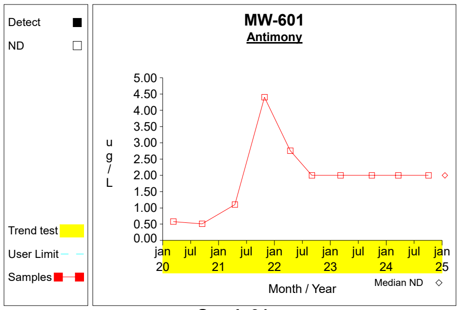


Graph 29

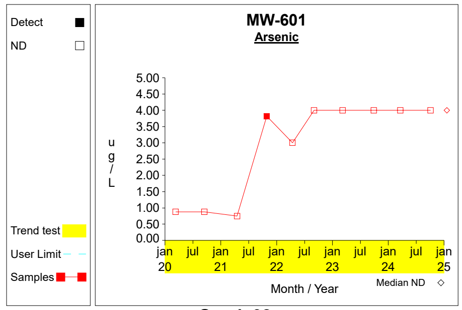


Graph 30

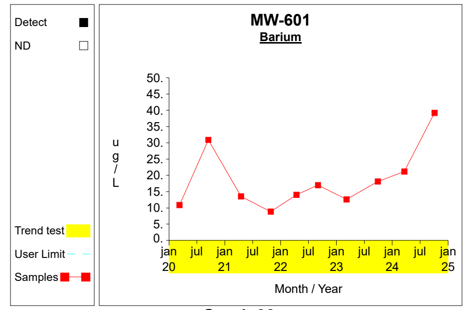
Time Series



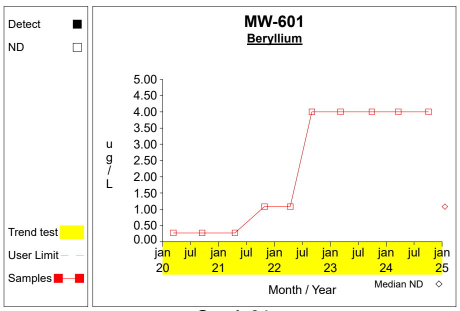
Graph 31



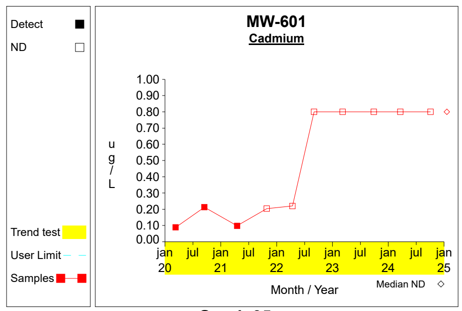
Graph 32



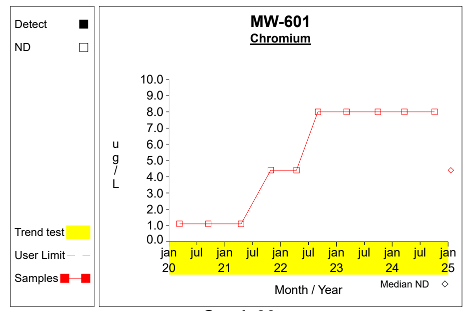
Graph 33



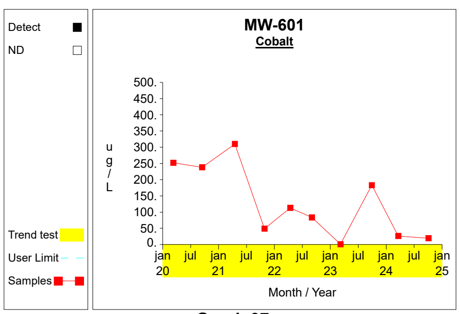
Graph 34



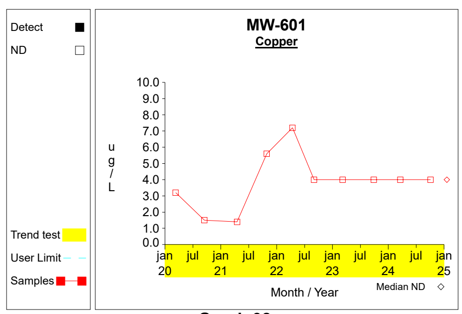
Graph 35



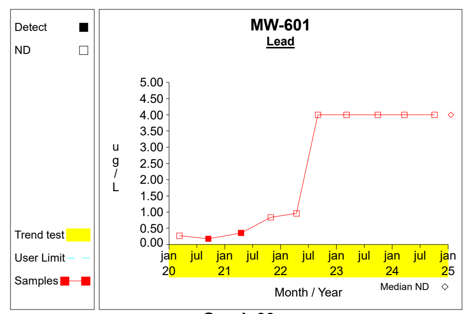
Graph 36



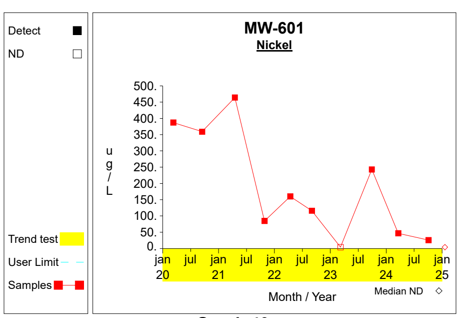
Graph 37



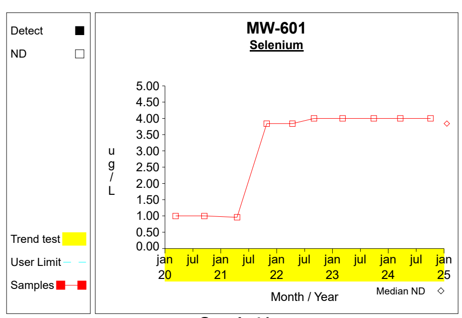
Graph 38



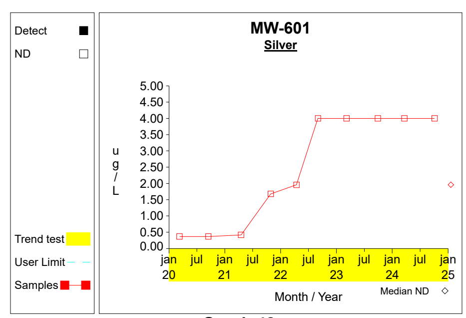
Graph 39



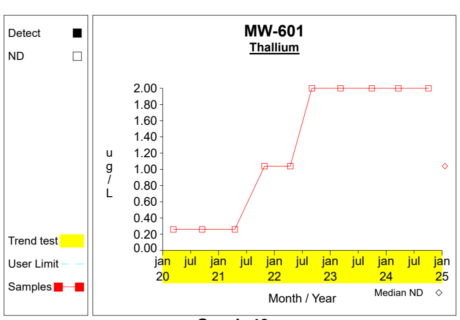
Graph 40



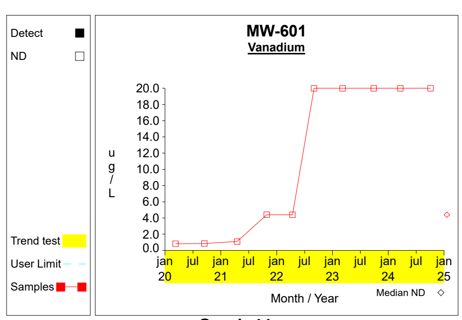
Graph 41



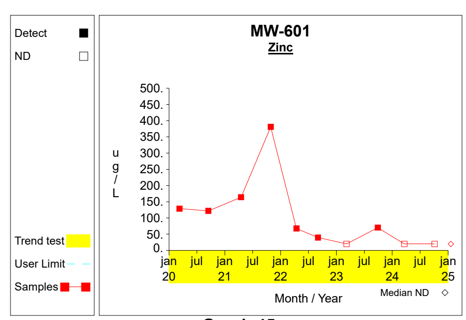
Graph 42



Graph 43

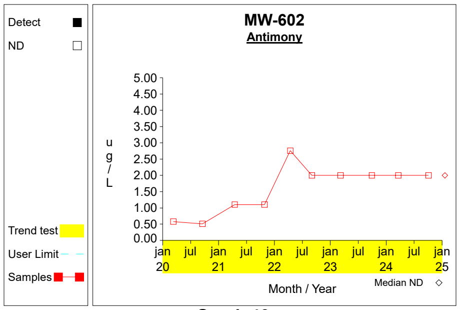


Graph 44

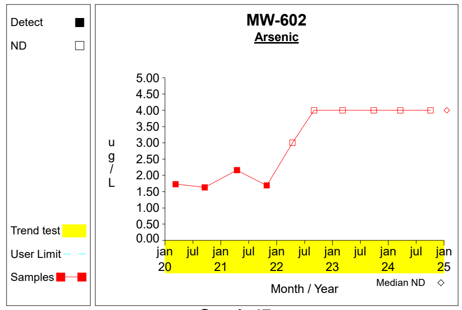


Graph 45

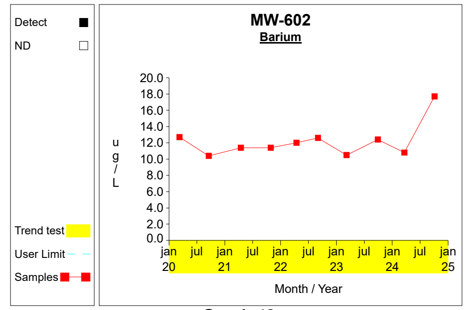
Time Series



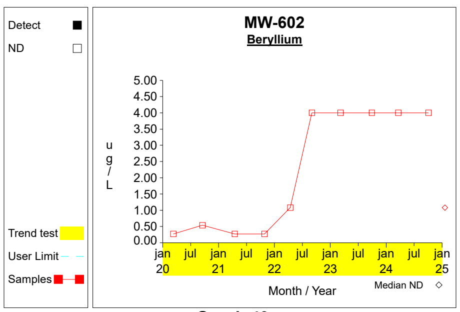
Graph 46



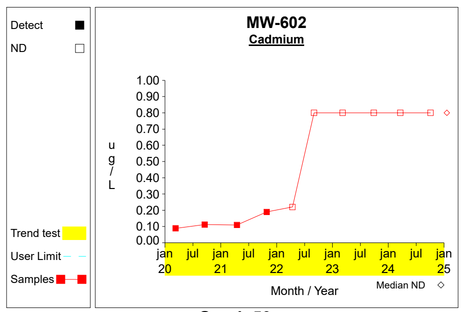
Graph 47



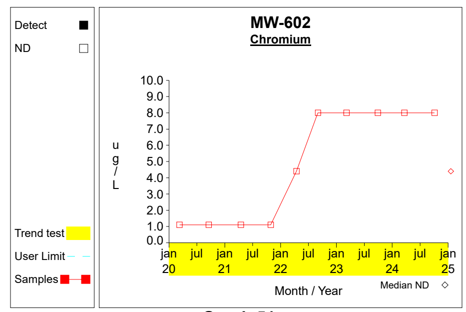
Graph 48



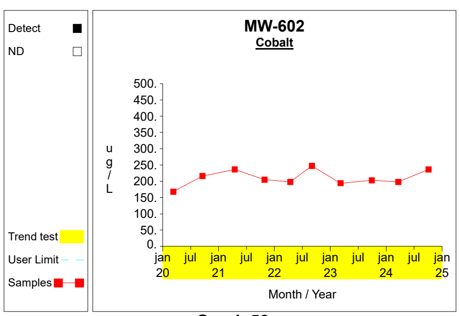
Graph 49



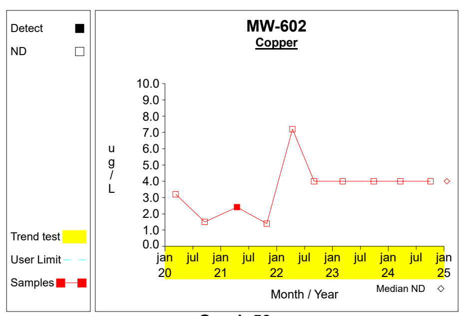
Graph 50



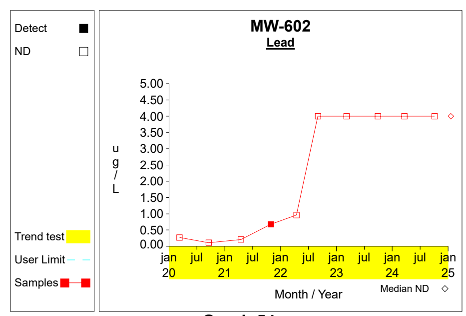
Graph 51



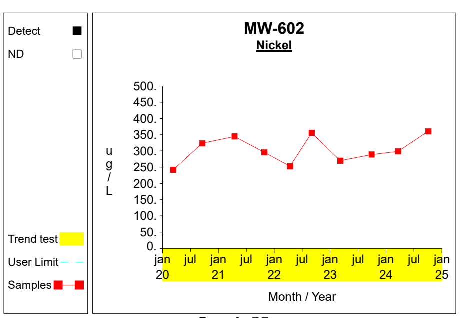
Graph 52



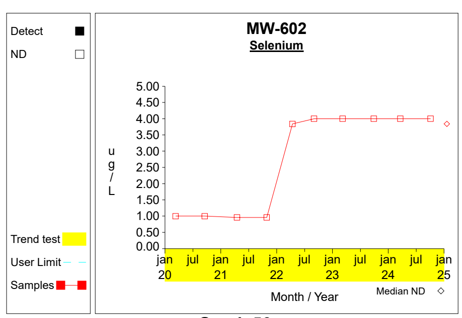
Graph 53



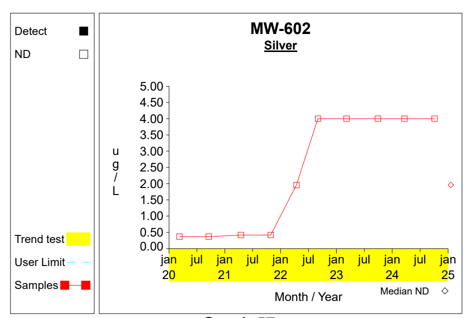
Graph 54



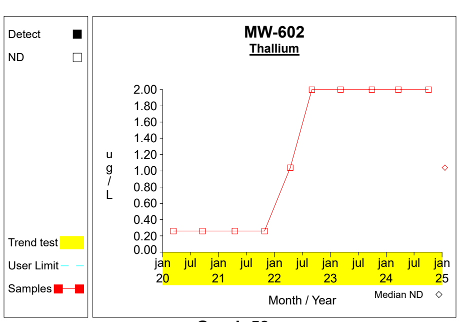
Graph 55



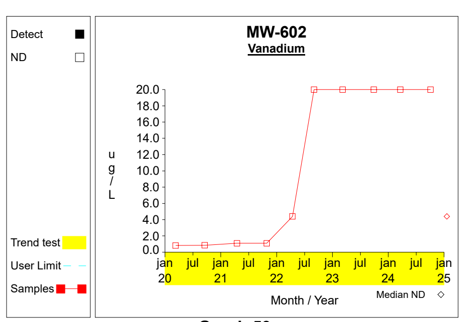
Graph 56



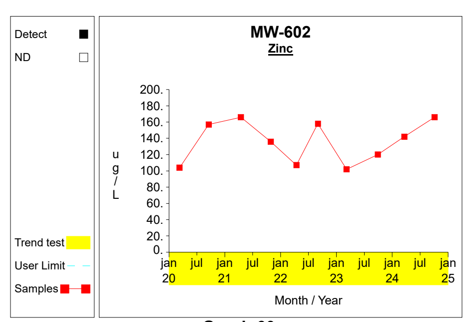
Graph 57



Graph 58

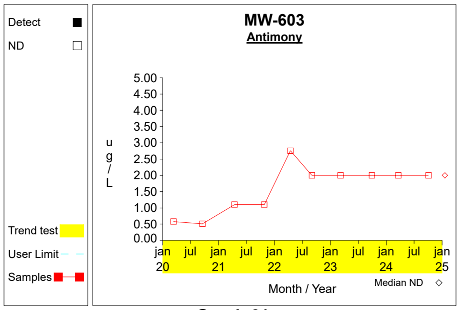


Graph 59

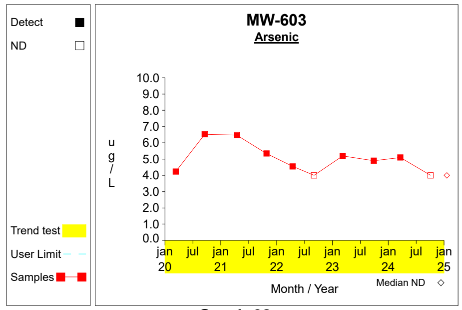


Graph 60

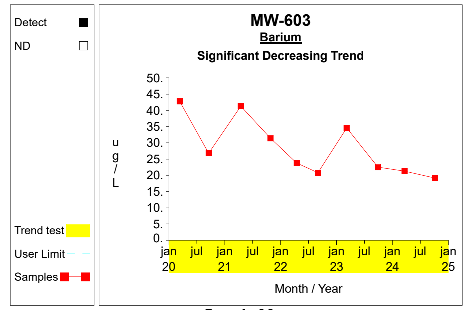
Time Series



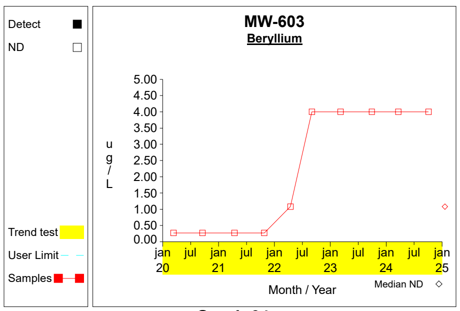
Graph 61



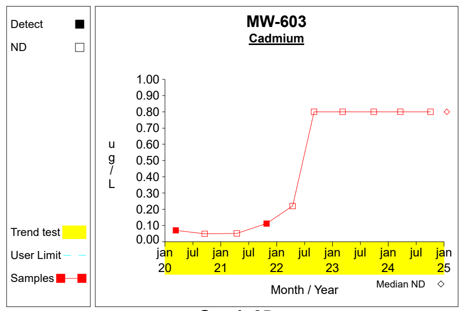
Graph 62



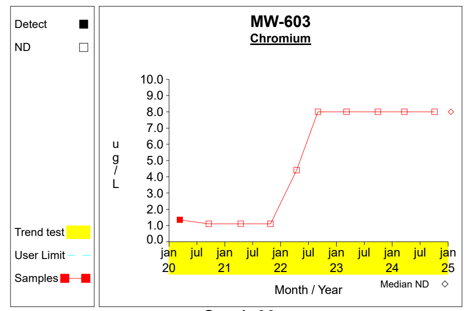
Graph 63



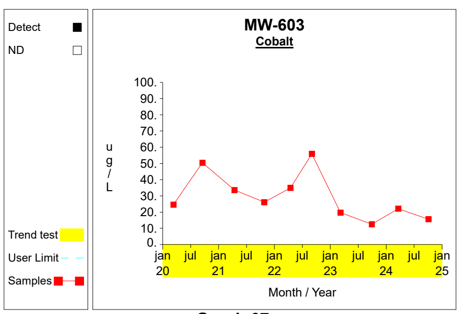
Graph 64



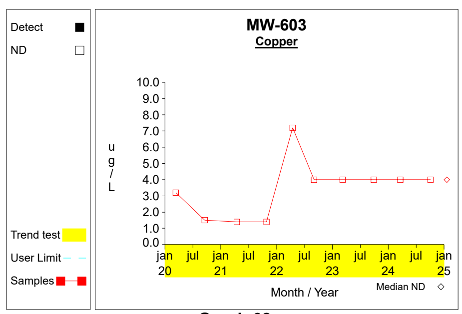
Graph 65



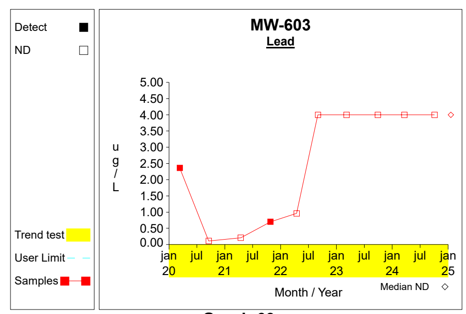
Graph 66



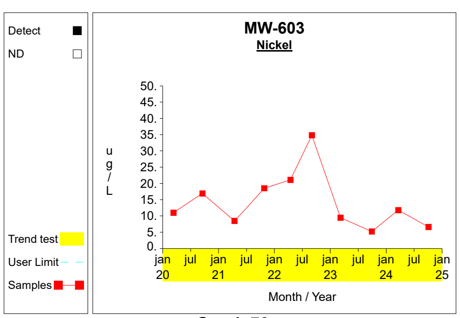
Graph 67



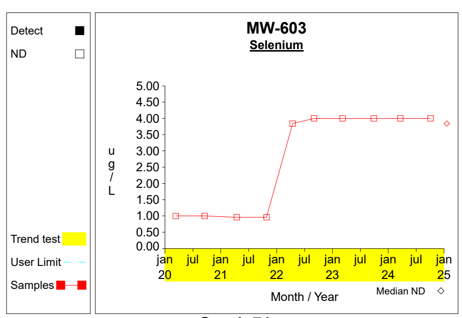
Graph 68



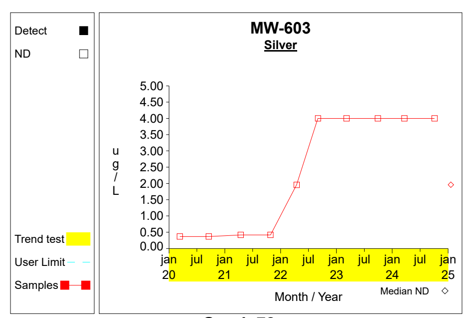
Graph 69



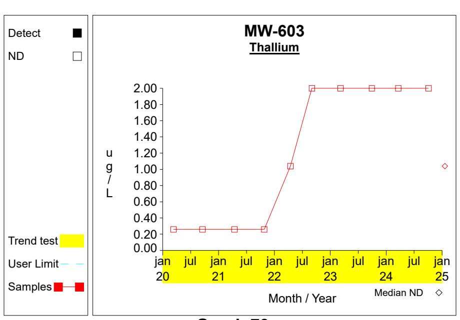
Graph 70



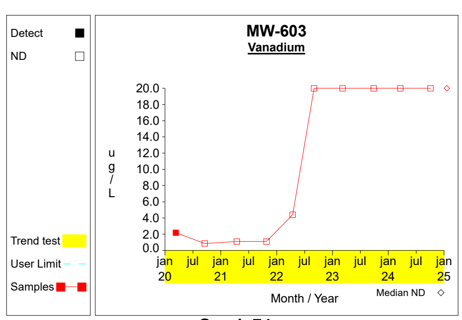
Graph 71



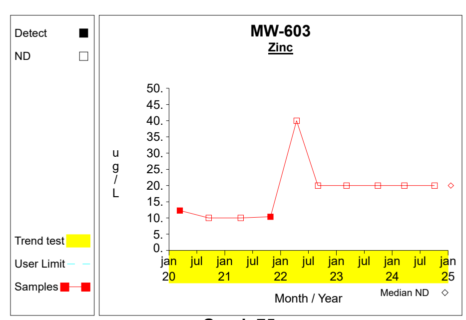
Graph 72



Graph 73

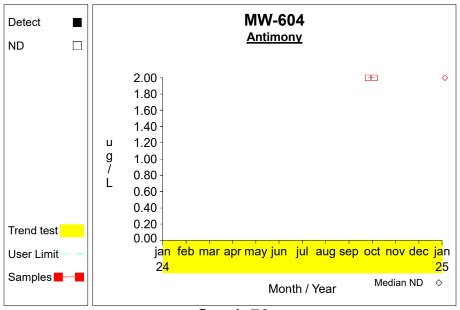


Graph 74

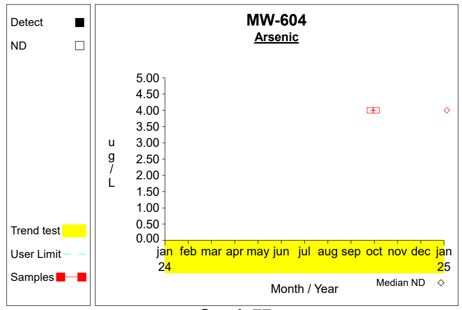


Graph 75

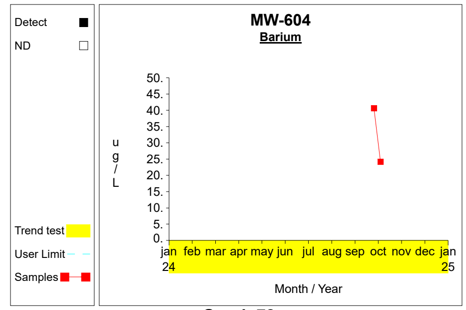
Time Series



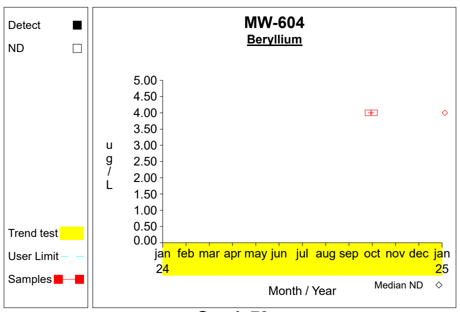
Graph 76



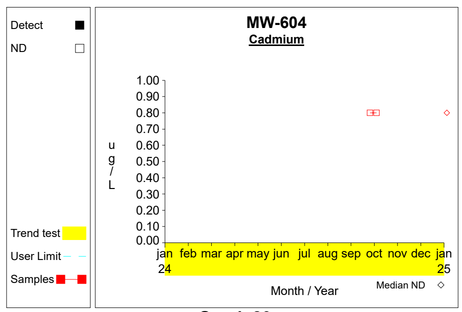
Graph 77



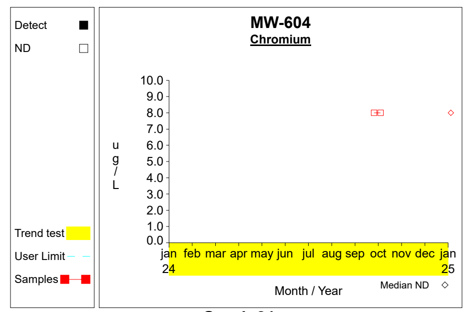
Graph 78



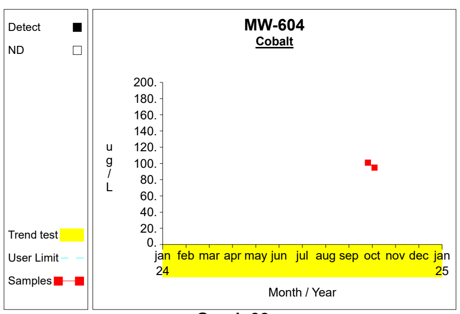
Graph 79



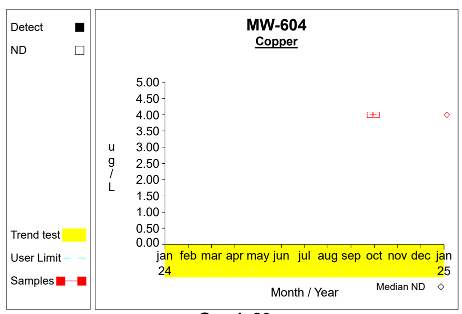
Graph 80



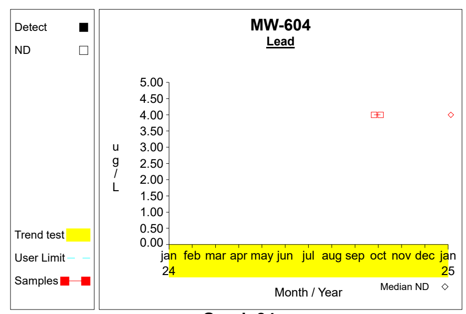
Graph 81



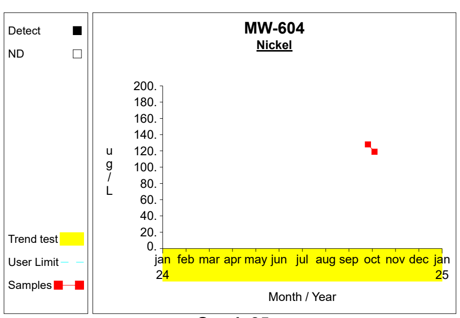
Graph 82



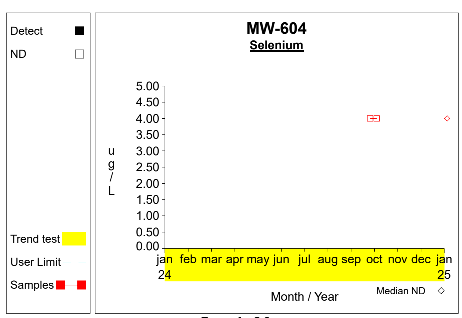
Graph 83



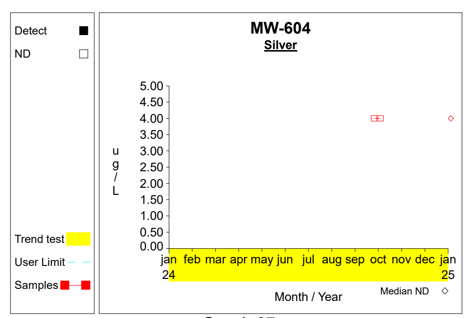
Graph 84



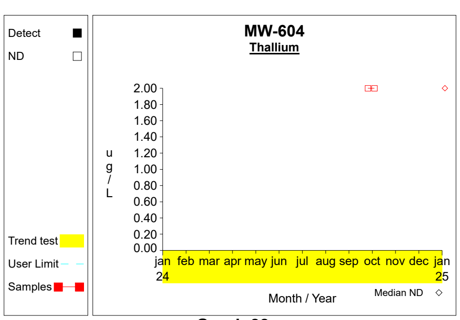
Graph 85



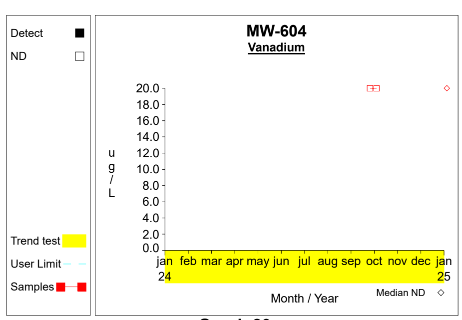
Graph 86



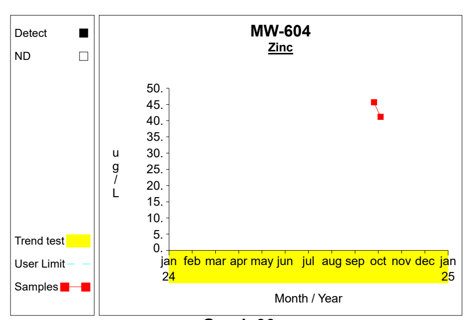
Graph 87



Graph 88

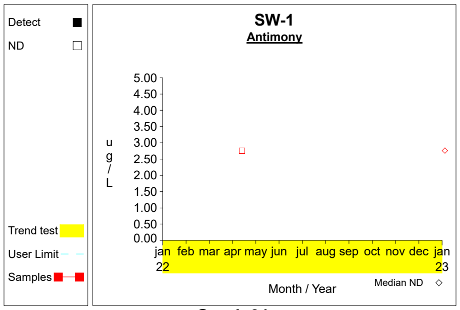


Graph 89

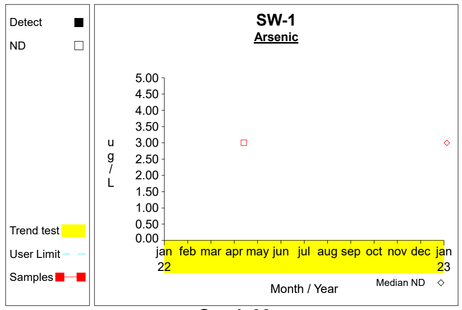


Graph 90

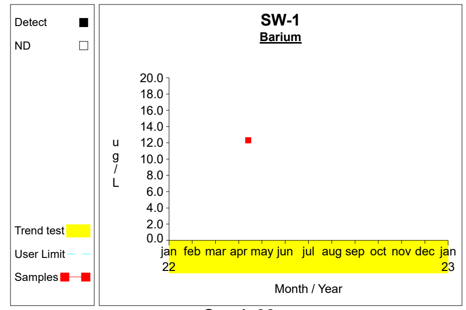
Time Series



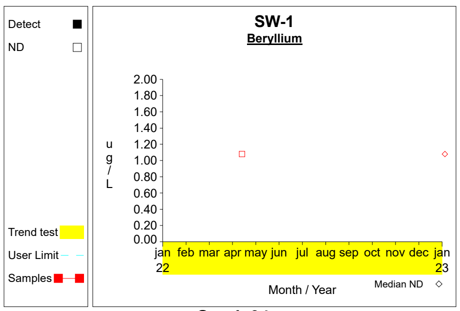
Graph 91



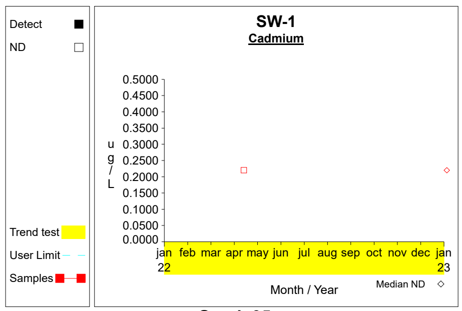
Graph 92



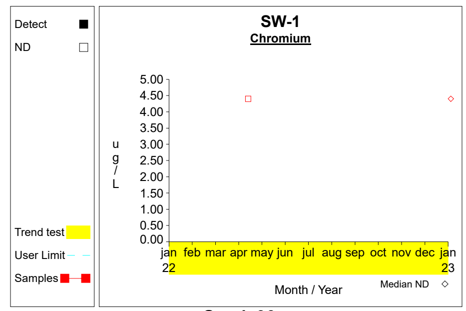
Graph 93



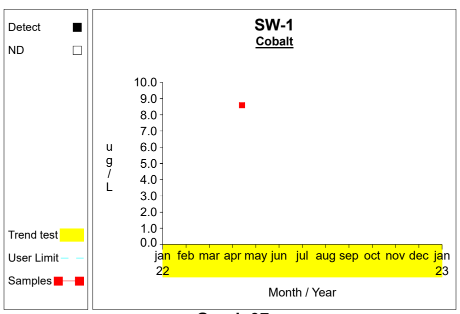
Graph 94



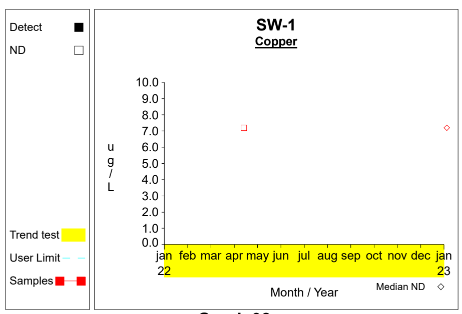
Graph 95



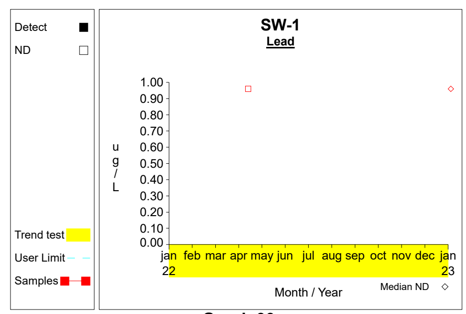
Graph 96



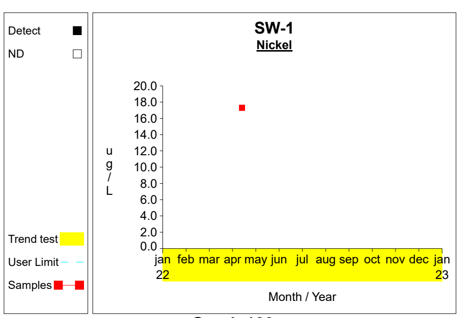
Graph 97



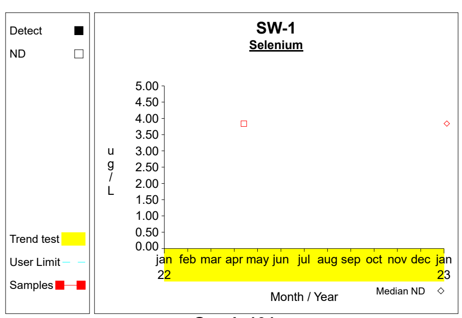
Graph 98



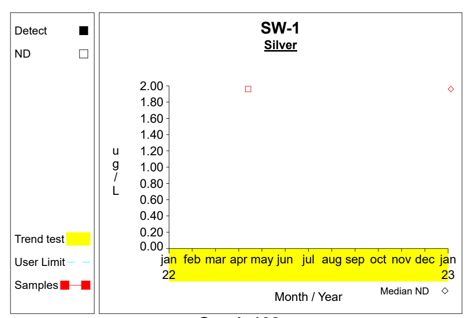
Graph 99



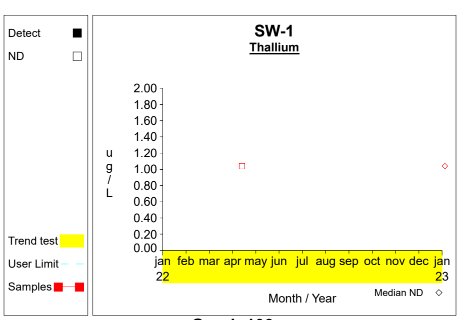
Graph 100



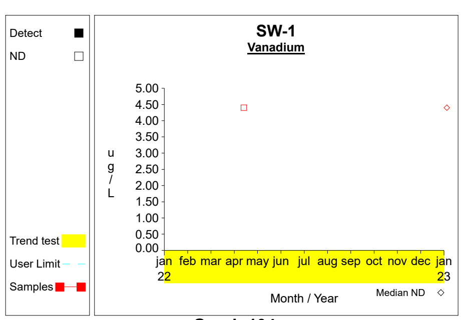
Graph 101



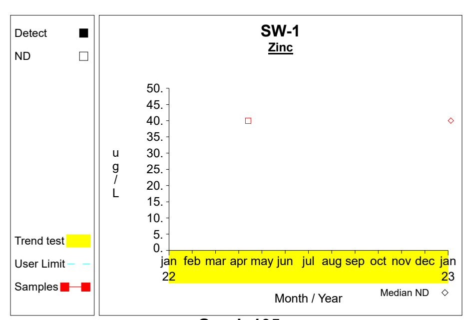
Graph 102



Graph 103



Graph 104



Graph 105

Appendix D

Laboratory Reports for Reporting Period

With Chain of Custody

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1335

Project Description

6009

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., Newton

CERTIFICATE OF ANALYSIS

1HC1335

HLW Engineering

Todd Whipple
PO Box 314
Story City, IA 50248

Project Name: 6009

Project / PO Number: N/A
Received: 03/20/2024
Reported: 04/04/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-307	1HC1335-01	Water	GRAB		03/19/24 13:00	03/20/24 10:05
MW-312	1HC1335-02	Water	GRAB		03/19/24 10:08	03/20/24 10:05
MW-390	1HC1335-03	Water	GRAB		03/18/24 08:24	03/20/24 10:05
MW-300	1HC1335-04	Water	GRAB		03/19/24 10:50	03/20/24 10:05
MW-303	1HC1335-05	Water	GRAB		03/19/24 12:06	03/20/24 10:05
MW-304	1HC1335-06	Water	GRAB		03/19/24 12:27	03/20/24 10:05
MW-313	1HC1335-07	Water	GRAB		03/19/24 11:22	03/20/24 10:05
MW-335	1HC1335-08	Water	GRAB		03/19/24 11:43	03/20/24 10:05
MW-344	1HC1335-09	Water	GRAB		03/19/24 09:42	03/20/24 10:05
MW-380	1HC1335-10	Water	GRAB		03/18/24 09:04	03/20/24 10:05
MW-381	1HC1335-11	Water	GRAB		03/19/24 08:38	03/20/24 10:05
MW-382R	1HC1335-12	Water	GRAB		03/19/24 09:08	03/20/24 10:05
MW-384	1HC1335-13	Water	GRAB		03/19/24 14:30	03/20/24 10:05
MW-385	1HC1335-14	Water	GRAB		03/19/24 14:49	03/20/24 10:05
MW-601	1HC1335-15	Water	GRAB		03/19/24 14:08	03/20/24 10:05
MW-602	1HC1335-16	Water	GRAB		03/19/24 13:49	03/20/24 10:05
MW-603	1HC1335-17	Water	GRAB		03/19/24 13:25	03/20/24 10:05

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1335

Analytical Testing Parameters

Client Sample ID:	MW-307		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-01	**Collection Date:**	03/19/2024 13:00

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**102**	10	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**5.7**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2020**	50.0	mg/L	50		04/02/24 0000	04/03/24 0238	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.236**	0.050	mg/L	1		03/22/24 0800	03/25/24 2137	JAR
Iron, total	**243**	0.100	mg/L	1		03/22/24 0800	03/25/24 2137	JAR

Client Sample ID:	MW-312		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-02	**Collection Date:**	03/19/2024 10:08

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**298**	10	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.1**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**614**	10.0	mg/L	10		04/01/24 0000	04/01/24 2153	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	<0.050	0.050	mg/L	1		03/22/24 0800	03/25/24 2211	JAR
Iron, total	**2.48**	0.100	mg/L	1		03/22/24 0800	03/25/24 2211	JAR

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1335

Client Sample ID:	MW-390		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-03	**Collection Date:**	03/18/2024 8:24

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**244**	10	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.0**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2000**	50.0	mg/L	50		04/02/24 0000	04/03/24 0256	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.129**	0.050	mg/L	1		03/22/24 0800	03/25/24 2222	JAR
Iron, total	**130**	0.100	mg/L	1		03/22/24 0800	03/25/24 2222	JAR

Client Sample ID:	MW-300		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-04	**Collection Date:**	03/19/2024 10:50

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**183**	10	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**5.8**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2870**	50.0	mg/L	50		04/02/24 0000	04/03/24 0125	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.421**	0.050	mg/L	1		03/22/24 0800	03/25/24 2232	JAR
Iron, total	**88.6**	0.100	mg/L	1		03/22/24 0800	03/25/24 2232	JAR

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1335

Client Sample ID:	MW-303		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-05	**Collection Date:**	03/19/2024 12:06

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**584**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.5**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**82.7**	10.0	mg/L	10		04/01/24 0000	04/01/24 2229	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.264**	0.050	mg/L	1		03/22/24 0800	03/25/24 2242	JAR
Iron, total	**1.42**	0.100	mg/L	1		03/22/24 0800	03/25/24 2242	JAR

Client Sample ID:	MW-304		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-06	**Collection Date:**	03/19/2024 12:27

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**359**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.8**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**45.5**	10.0	mg/L	10		04/01/24 0000	04/01/24 2324	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.051**	0.050	mg/L	1		03/22/24 0800	03/25/24 2303	JAR
Iron, total	**4.97**	0.100	mg/L	1		03/22/24 0800	03/25/24 2303	JAR

Client Sample ID:	MW-313		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-07	**Collection Date:**	03/19/2024 11:22

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**488**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.9**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**359**	10.0	mg/L	10		04/01/24 0000	04/01/24 2342	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.128**	0.050	mg/L	1		03/22/24 0800	03/25/24 2308	JAR
Iron, total	**47.2**	0.100	mg/L	1		03/22/24 0800	03/25/24 2308	JAR

Client Sample ID:	MW-335		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-08	**Collection Date:**	03/19/2024 11:43

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**522**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.2**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2500**	50.0	mg/L	50		04/02/24 0000	04/03/24 0143	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.239**	0.050	mg/L	1		03/22/24 0800	03/25/24 2318	JAR
Iron, total	**9.46**	0.100	mg/L	1		03/22/24 0800	03/25/24 2318	JAR

Client Sample ID:	MW-344		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-09	**Collection Date:**	03/19/2024 9:42

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**1050**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.1**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**1750**	50.0	mg/L	50		04/02/24 0000	04/03/24 0202	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.085**	0.050	mg/L	1		03/22/24 0800	03/25/24 2329	JAR
Iron, total	**6.17**	0.100	mg/L	1		03/22/24 0800	03/25/24 2329	JAR

Client Sample ID:	MW-380		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-10	**Collection Date:**	03/18/2024 9:04

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	<50	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**4.0**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**3590**	50.0	mg/L	50		04/02/24 0000	04/03/24 0314	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**16.0**	0.050	mg/L	1		03/22/24 0800	03/25/24 2338	JAR
Iron, total	**217**	0.100	mg/L	1		03/22/24 0800	03/25/24 2338	JAR

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1HC1335

Client Sample ID:	MW-381		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-11	**Collection Date:**	03/19/2024 8:38

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**157**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.6**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**1150**	50.0	mg/L	50		04/02/24 0000	04/03/24 0220	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.078**	0.050	mg/L	1		03/22/24 0800	03/25/24 2348	JAR
Iron, total	**0.138**	0.100	mg/L	1		03/22/24 0800	03/25/24 2348	JAR

Client Sample ID:	MW-382R		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-12	**Collection Date:**	03/19/2024 9:08

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**372**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**7.0**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**1030**	10.0	mg/L	10		04/01/24 0000	04/02/24 0055	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.130**	0.050	mg/L	1		03/22/24 0800	03/25/24 2358	JAR
Iron, total	**0.167**	0.100	mg/L	1		03/22/24 0800	03/25/24 2358	JAR

Client Sample ID:	MW-384		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-13	**Collection Date:**	03/19/2024 14:30

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**164**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**5.9**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2590**	50.0	mg/L	50		04/02/24 0000	04/03/24 0332	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.087**	0.050	mg/L	1		03/22/24 0800	03/26/24 0007	JAR
Iron, total	**91.3**	0.100	mg/L	1		03/22/24 0800	03/26/24 0007	JAR

Client Sample ID:	MW-385		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-14	**Collection Date:**	03/19/2024 14:49

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**494**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.5**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2100**	50.0	mg/L	50		04/02/24 0000	04/03/24 0351	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.065**	0.050	mg/L	1		03/22/24 0800	03/26/24 0016	JAR
Iron, total	**52.2**	0.100	mg/L	1		03/22/24 0800	03/26/24 0016	JAR

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1HC1335

Client Sample ID:	MW-601		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-15	**Collection Date:**	03/19/2024 14:08

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**160**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.4**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**1090**	10.0	mg/L	10		04/01/24 0000	04/02/24 0113	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	<0.050	0.050	mg/L	1		03/22/24 0800	03/26/24 0026	JAR
Iron, total	**3.84**	0.100	mg/L	1		03/22/24 0800	03/26/24 0026	JAR

Client Sample ID:	MW-602		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-16	**Collection Date:**	03/19/2024 13:49

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	<50	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**5.4**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2020**	50.0	mg/L	50		04/02/24 0000	04/03/24 0409	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.245**	0.050	mg/L	1		03/22/24 0800	03/26/24 0048	JAR
Iron, total	**29.2**	0.100	mg/L	1		03/22/24 0800	03/26/24 0048	JAR

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1HC1335

Client Sample ID:	MW-603		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1335-17	**Collection Date:**	03/19/2024 13:25

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**381**	50	mg/L	1		03/21/24 0919	03/21/24 1628	BSS
SM 4500 H+ B								
pH	**6.4**	0.5	pH	1	**I-03**		03/21/24 0922	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2410**	50.0	mg/L	50		04/02/24 0000	04/03/24 0503	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.104**	0.050	mg/L	1		03/22/24 0800	03/26/24 0058	JAR
Iron, total	**43.2**	0.100	mg/L	1		03/22/24 0800	03/26/24 0058	JAR

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
2320B	1HC1177	1HC1335-06	MW-304
		1HC1335-17	MW-603
		1HC1177-BS1	
		1HC1177-MS1	1HC1335-06
		1HC1177-MSD1	1HC1335-06
		1HC1335-05	MW-303
		1HC1177-BLK1	
		1HC1335-01	MW-307
		1HC1335-02	MW-312
		1HC1335-07	MW-313
		1HC1335-15	MW-601
		1HC1335-09	MW-344
		1HC1335-10	MW-380
		1HC1335-11	MW-381
		1HC1335-12	MW-382R
		1HC1335-13	MW-384
		1HC1335-14	MW-385
		1HC1335-03	MW-390
		1HC1335-08	MW-335
		1HC1335-04	MW-300
		1HC1335-16	MW-602

Method	Batch	Laboratory ID	Client / Source ID
SM 4500 H+ B	1HC1178	1HC1178-SRM3	
		1HC1178-SRM4	
		1HC1178-DUP1	1HC1315-01
		1HC1335-08	MW-335
		1HC1335-07	MW-313
		1HC1335-02	MW-312
		1HC1335-09	MW-344
		1HC1335-04	MW-300
		1HC1178-SRM2	
		1HC1335-06	MW-304
		1HC1178-SRM1	
		1HC1335-17	MW-603
		1HC1335-16	MW-602
		1HC1335-15	MW-601
		1HC1335-03	MW-390
		1HC1335-14	MW-385
		1HC1335-13	MW-384

SM 4500 H+ B	1HC1178	1HC1335-12	MW-382R
		1HC1178-DUP2	1HC1335-09
		1HC1335-10	MW-380
		1HC1335-05	MW-303
		1HC1335-11	MW-381
		1HC1335-01	MW-307

Method	Batch	Laboratory ID	Client / Source ID
EPA 6010B	1HC1251	1HC1251-BLK1	
		1HC1251-BS1	
		1HC1335-01	MW-307
		1HC1251-MS1	1HC1335-01
		1HC1251-MSD1	1HC1335-01
		1HC1251-PS1	1HC1335-01
		1HC1335-02	MW-312
		1HC1335-03	MW-390
		1HC1335-04	MW-300
		1HC1335-05	MW-303
		1HC1335-06	MW-304
		1HC1335-07	MW-313
		1HC1335-08	MW-335
		1HC1335-09	MW-344
		1HC1335-10	MW-380
		1HC1335-11	MW-381
		1HC1335-12	MW-382R
		1HC1335-13	MW-384
		1HC1335-14	MW-385
		1HC1335-15	MW-601
		1HC1335-16	MW-602
		1HC1335-17	MW-603

Method	Batch	Laboratory ID	Client / Source ID
EPA 9056	1HD0127	1HD0127-BLK1	
		1HD0127-MRL1	
		1HD0127-BS1	
		1HD0127-BSD1	
		1HD0127-MS1	1HC1466-01
		1HD0127-MSD1	1HC1466-01
		1HD0127-BLK2	
		1HC1335-02	MW-312
		1HC1335-05	MW-303
		1HC1335-06	MW-304
		1HC1335-07	MW-313

Method	Batch	Laboratory ID	Client / Source ID
EPA 9056	1HD0127	1HC1335-12	MW-382R
		1HC1335-15	MW-601

Method	Batch	Laboratory ID	Client / Source ID
EPA 9056	1HD0226	1HD0226-BLK1	
		1HD0226-MRL1	
		1HD0226-BS1	
		1HD0226-BSD1	
		1HD0226-BLK2	
		1HD0226-MS1	1HC1878-02
		1HD0226-MSD1	1HC1878-02
		1HD0226-BLK3	
		1HD0226-BS2	
		1HD0226-BSD2	
		1HD0226-MS2	1HC1394-02
		1HD0226-MSD2	1HC1394-02
		1HC1335-04	MW-300
		1HC1335-08	MW-335
		1HC1335-09	MW-344
		1HC1335-11	MW-381
		1HC1335-01	MW-307
		1HC1335-03	MW-390
		1HC1335-10	MW-380
		1HC1335-13	MW-384
		1HC1335-14	MW-385
		1HC1335-16	MW-602
		1HC1335-17	MW-603

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

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1177 - Wet Chem Preparation - 2320B										
Blank (1HC1177-BLK1)			Prepared: 03/21/24 09:19 Analyzed: 03/21/24 16:28							
Alkalinity, as CaCO3	<10	10	mg/L							
LCS (1HC1177-BS1)			Prepared: 03/21/24 09:19 Analyzed: 03/21/24 16:28							
Alkalinity, as CaCO3	46.0	10	mg/L	50.0		92.1	88-114			
Matrix Spike (1HC1177-MS1)		**Source: 1HC1335-06**	Prepared: 03/21/24 09:19 Analyzed: 03/21/24 16:28							
Alkalinity, as CaCO3	577	50	mg/L	250	359	87.3	74-122			
Matrix Spike Dup (1HC1177-MSD1)		**Source: 1HC1335-06**	Prepared: 03/21/24 09:19 Analyzed: 03/21/24 16:28							
Alkalinity, as CaCO3	576	50	mg/L	250	359	86.7	74-122	0.260	10	

Batch 1HC1178 - Wet Chem Preparation - SM 4500 H+ B

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Duplicate (1HC1178-DUP1)	**Source: 1HC1315-01**		Prepared & Analyzed: 03/21/24 09:22							
pH	7.5	0.5	pH		7.5			0.0535	10	
Duplicate (1HC1178-DUP2)	**Source: 1HC1335-09**		Prepared & Analyzed: 03/21/24 09:22							
pH	6.1	0.5	pH		6.1			0.0653	10	
Reference (1HC1178-SRM1)			Prepared & Analyzed: 03/21/24 09:22							
pH	7.0	0.5	pH	7.00		99.8	90-110			
Reference (1HC1178-SRM2)			Prepared & Analyzed: 03/21/24 09:22							
pH	7.0	0.5	pH	7.00		99.8	90-110			
Reference (1HC1178-SRM3)			Prepared & Analyzed: 03/21/24 09:22							
pH	7.0	0.5	pH	7.00		99.8	90-110			
Reference (1HC1178-SRM4)			Prepared & Analyzed: 03/21/24 09:22							
pH	1.6	0.5	pH	1.68		95.8	90-110			

Determination of Inorganic Anions	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0127 - General Prep HPLC/IC - EPA 9056										
Blank (1HD0127-BLK1)			Prepared: 04/01/24 00:00 Analyzed: 04/01/24 10:59							
Sulfate	<1.0	1.0	mg/L							
Blank (1HD0127-BLK2)			Prepared: 04/01/24 00:00 Analyzed: 04/01/24 16:26							
Sulfate	<1.0	1.0	mg/L							
LCS (1HD0127-BS1)			Prepared: 04/01/24 00:00 Analyzed: 04/01/24 11:36							
Sulfate	33.02	1.0	mg/L	33.8		97.6	80-120			
LCS Dup (1HD0127-BSD1)			Prepared: 04/01/24 00:00 Analyzed: 04/01/24 11:54							
Sulfate	33.13	1.0	mg/L	33.8		97.9	80-120	0.323	10	
Matrix Spike (1HD0127-MS1)	**Source: 1HC1466-01**		Prepared: 04/01/24 00:00 Analyzed: 04/01/24 14:19							
Sulfate	820.1	10.0	mg/L	338	461.7	106	87-113			
Matrix Spike Dup (1HD0127-MSD1)	**Source: 1HC1466-01**		Prepared: 04/01/24 00:00 Analyzed: 04/01/24 14:37							
Sulfate	823.3	10.0	mg/L	338	461.7	107	87-113	0.391	10	
Batch 1HD0226 - General Prep HPLC/IC - EPA 9056										
Blank (1HD0226-BLK1)			Prepared: 04/02/24 00:00 Analyzed: 04/02/24 09:59							
Sulfate	<1.0	1.0	mg/L							
Blank (1HD0226-BLK2)			Prepared: 04/02/24 00:00 Analyzed: 04/02/24 14:14							
Sulfate	<1.0	1.0	mg/L							
Blank (1HD0226-BLK3)			Prepared: 04/02/24 00:00 Analyzed: 04/02/24 19:22							
Sulfate	<1.0	1.0	mg/L							
LCS (1HD0226-BS1)			Prepared: 04/02/24 00:00 Analyzed: 04/02/24 10:36							
Sulfate	33.47	1.0	mg/L	33.8		98.9	80-120			

Determination of Inorganic Anions	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD0226 - General Prep HPLC/IC - EPA 9056										
LCS (1HD0226-BS2)			Prepared: 04/02/24 00:00 Analyzed: 04/02/24 20:17							
Sulfate	33.27	1.0	mg/L	33.8		98.3	80-120			
LCS Dup (1HD0226-BSD1)			Prepared: 04/02/24 00:00 Analyzed: 04/02/24 10:54							
Sulfate	33.40	1.0	mg/L	33.8		98.7	80-120	0.206	10	
LCS Dup (1HD0226-BSD2)			Prepared: 04/02/24 00:00 Analyzed: 04/02/24 20:35							
Sulfate	33.57	1.0	mg/L	33.8		99.2	80-120	0.895	10	
Matrix Spike (1HD0226-MS1)	**Source: 1HC1878-02**		Prepared: 04/02/24 00:00 Analyzed: 04/02/24 17:15							
Sulfate	406.9	10.0	mg/L	338	48.39	106	87-113			
Matrix Spike (1HD0226-MS2)	**Source: 1HC1394-02**		Prepared: 04/02/24 00:00 Analyzed: 04/02/24 23:55							
Sulfate	736.6	10.0	mg/L	338	389.4	103	87-113			
Matrix Spike Dup (1HD0226-MSD1)	**Source: 1HC1878-02**		Prepared: 04/02/24 00:00 Analyzed: 04/02/24 17:33							
Sulfate	408.1	10.0	mg/L	338	48.39	106	87-113	0.297	10	
Matrix Spike Dup (1HD0226-MSD2)	**Source: 1HC1394-02**		Prepared: 04/02/24 00:00 Analyzed: 04/03/24 00:13							
Sulfate	738.7	10.0	mg/L	338	389.4	103	87-113	0.293	10	

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1251 - EPA 3010A Digestion (Water) - EPA 6010B										
Blank (1HC1251-BLK1)			Prepared: 03/22/24 08:00 Analyzed: 03/25/24 21:25							
Aluminum, total	<0.050	0.050	mg/L							
Iron, total	<0.100	0.100	mg/L							
LCS (1HC1251-BS1)			Prepared: 03/22/24 08:00 Analyzed: 03/25/24 21:31							
Aluminum, total	2.23	0.050	mg/L	2.20		102	80-120			
Iron, total	2.30	0.100	mg/L	2.20		104	80-120			
Matrix Spike (1HC1251-MS1)	**Source: 1HC1335-01**		Prepared: 03/22/24 08:00 Analyzed: 03/25/24 21:46							
Aluminum, total	2.52	0.050	mg/L	2.20	0.236	104	75-125			
Iron, total	251	0.100	mg/L	2.20	243	372	75-125			QM-4X
Matrix Spike Dup (1HC1251-MSD1)	**Source: 1HC1335-01**		Prepared: 03/22/24 08:00 Analyzed: 03/25/24 21:56							
Aluminum, total	2.53	0.050	mg/L	2.20	0.236	104	75-125	0.391	20	
Iron, total	248	0.100	mg/L	2.20	243	246	75-125	1.11	20	QM-4X
Post Spike (1HC1251-PS1)	**Source: 1HC1335-01**		Prepared: 03/22/24 08:00 Analyzed: 03/25/24 22:05							
Aluminum, total	9.24		mg/L	8.80	0.236	102	80-120			
Iron, total	280		mg/L	8.80	243	418	80-120			PS-4X

Definitions

I-03:	Analyte required to be analyzed within 15 minutes of sampling. Analysis performed upon receipt of sample at laboratory.
PS-4X:	The spike recovery was outside of QC acceptance limits for the Post Spike due to analyte concentration at 4 times or greater the spike concentration.
QM-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

Cooler Receipt Log

Cooler ID: Default Cooler   Temp: 0.8ºC

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
04/04/24 10:11

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES A Microbac Company

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

Printed: 2/21/2024 2:04:04P

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: SCISWA - AMD

0009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

Turn Around Time

☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HC1335

Temperature .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-307	Water	GRAB	3/19/24	13:00 ~~12:47~~	2	alk-caco3-2320 fe-t-6010 so4-9056-w	al-t-6010 ph-4500	01
-001	MW-312	Water	GRAB	3/19/24	10:08	2	alk-caco3-2320 fe-t-6010 so4-9056-w	al-t-6010 ph-4500	02
-001	MW-390	Water	GRAB	3/18/24	8:24	2	alk-caco3-2320 fe-t-6010 so4-9056-w	al-t-6010 ph-4500	03
-001	MW-300	Water	GRAB	3/19/24	10:50	2	alk-caco3-2320 fe-t-6010 so4-9056-w	al-t-6010 ph-4500	04
-001	MW-303	Water	GRAB	3/19/24	12:06	2	alk-caco3-2320 fe-t-6010 so4-9056-w	al-t-6010 ph-4500	05

Todd Whipple 3/20/24
Relinquished By Date/Time

Relinquished By Date/Time

Received By Date/Time

Mahu 3/20/24 10:05
Received for Lab By Date/Time

Remarks:

1 H C 1 3 3 5
HLW Engineering
PM: Heather Murphy

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CHAIN OF CUSTODY RECORD

Keystone LABORATORIES
A Microbac Company

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

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: SCISWA - AMD

6009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HC1335
Temperature .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-304	Water	GRAB	3/19/24	12:27	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	06
-001	MW-313	Water	GRAB	3/19/24	11:22	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	07
-001	MW-335	Water	GRAB	3/19/24	11:43	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	08
-001	MW-344	Water	GRAB	3/19/24	9:42	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	09
-001	MW-380	Water	GRAB	3/18/24	9:04	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	10

Relinquished By: Todd Whipple Date/Time: 3/20/24

Relinquished By Date/Time

Received By Date/Time

Received for Lab By: Maher Date/Time: 3/20/24 10:05

Remarks

1HC1335
HLW Engineering
PM: Heather Murphy

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Keystone LABORATORIES
A Microbac Company

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

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: SCISWA - AMD

6009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

Turn Around Time

☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HC1335

Temperature .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-381	Water	GRAB	3/19/24	8:38	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	11
-001	MW-382R	Water	GRAB	3/19/24	9:08	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	12
-001	MW-384	Water	GRAB	3/19/24	14:30	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	13
-001	MW-385	Water	GRAB	3/19/24	14:49	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	14
-001	GU-4A DRY	Water	GRAB	3/19/24	—	0	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	—

Todd Whipple 3/20/24
Relinquished By Date/Time

Relinquished By Date/Time

Received By Date/Time

Maher 3/20/24 10:05
Received for Lab By Date/Time

Remarks:

1HC1335
HLW Engineering
PM: Heather Murphy

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES
A Microbac Company

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

www.keystonelabs.com

Printed: 2/21/2024 2:04:04P

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: SCISWA - AMD

6009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

LAB USE ONLY

Work Order: 1HC1335

Temperature: .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	SW-1 DRY	Water	GRAB	3/19/24	—	0	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	—
-001	MW-601	Water	GRAB	3/19/24	14:08	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	15
-001	MW-602	Water	GRAB	3/19/24	13:49	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	16
-001	MW-603	Water	GRAB	3/19/24	13:25	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	17

Relinquished By: Todd Whipple Date/Time: 3/20/24

Received By: Date/Time:

Relinquished By: Date/Time:

Received for Lab By: Mahn Date/Time: 3/20/24 10:05

Remarks:

1HC1335
HLW Engineering
PM: Heather Murphy

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1336

Project Description

6009

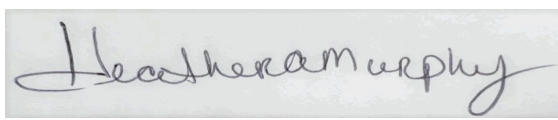
For:

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

1HC1336

HLW Engineering

Todd Whipple
PO Box 314
Story City, IA 50248

Project Name: 6009

Project / PO Number: N/A
Received: 03/20/2024
Reported: 04/10/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-307	1HC1336-01	Water	GRAB		03/19/24 12:47	03/20/24 10:05
MW-312	1HC1336-02	Water	GRAB		03/19/24 10:00	03/20/24 10:05
MW-390	1HC1336-03	Water	GRAB		03/18/24 08:07	03/20/24 10:05
MW-300	1HC1336-04	Water	GRAB		03/19/24 10:33	03/20/24 10:05
MW-303	1HC1336-05	Water	GRAB		03/19/24 11:57	03/20/24 10:05
MW-304	1HC1336-06	Water	GRAB		03/19/24 12:18	03/20/24 10:05
MW-313	1HC1336-07	Water	GRAB		03/19/24 11:14	03/20/24 10:05
MW-335	1HC1336-08	Water	GRAB		03/19/24 11:34	03/20/24 10:05
MW-344	1HC1336-09	Water	GRAB		03/19/24 09:32	03/20/24 10:05
MW-380	1HC1336-10	Water	GRAB		03/18/24 08:52	03/20/24 10:05
MW-381	1HC1336-11	Water	GRAB		03/19/24 08:26	03/20/24 10:05
MW-382R	1HC1336-12	Water	GRAB		03/19/24 08:55	03/20/24 10:05
MW-384	1HC1336-13	Water	GRAB		03/19/24 14:30	03/20/24 10:05
MW-385	1HC1336-14	Water	GRAB		03/19/24 14:49	03/20/24 10:05
Field Duplicate	1HC1336-15	Water	GRAB		03/19/24 00:00	03/20/24 10:05
MW-601	1HC1336-16	Water	GRAB		03/19/24 14:01	03/20/24 10:05
MW-602	1HC1336-17	Water	GRAB		03/19/24 13:40	03/20/24 10:05
MW-603	1HC1336-18	Water	GRAB		03/19/24 13:14	03/20/24 10:05

CERTIFICATE OF ANALYSIS

1HC1336

Analytical Testing Parameters

Client Sample ID:	MW-307			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-01		**Collection Date:**	03/19/2024 12:47

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		03/21/24 0000	03/21/24 1923	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS

Client Sample ID:	MW-307			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-01		**Collection Date:**	03/19/2024 12:47

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1923	LJS
Surrogate: Dibromofluoromethane	71.8	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 1923	LJS
Surrogate: Dibromofluoromethane	71.8	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 1923	LJS
Surrogate: 1,2-Dichloroethane-d4	69.8	Limit: 61-142	% Rec	1		03/21/24 0000	03/21/24 1923	LJS
Surrogate: 1,2-Dichloroethane-d4	69.8	Limit: 63-138	% Rec	1		03/21/24 0000	03/21/24 1923	LJS
Surrogate: Toluene-d8	106	Limit: 82-121	% Rec	1		03/21/24 0000	03/21/24 1923	LJS
Surrogate: Toluene-d8	106	Limit: 87-116	% Rec	1		03/21/24 0000	03/21/24 1923	LJS
Surrogate: 4-Bromofluorobenzene	86.0	Limit: 80-116	% Rec	1		03/21/24 0000	03/21/24 1923	LJS
Surrogate: 4-Bromofluorobenzene	86.0	Limit: 85-111	% Rec	1		03/21/24 0000	03/21/24 1923	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Arsenic, total	**0.0040**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Barium, total	**0.0090**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Cobalt, total	**0.0428**	0.0004	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Nickel, total	**0.0742**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2245	RVV
Zinc, total	**0.304**	0.0200	mg/L	4		03/25/24 0855	03/25/24 2245	RVV

Client Sample ID:	MW-312		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-02	**Collection Date:**	03/19/2024 10:00

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		03/21/24 0000	03/21/24 1950	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS

Client Sample ID:	MW-312		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-02	**Collection Date:**	03/19/2024 10:00

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		03/21/24 0000	03/21/24 1950	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 1950	LJS
Surrogate: Dibromofluoromethane	73.9	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 1950	LJS
Surrogate: Dibromofluoromethane	73.9	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 1950	LJS
Surrogate: 1,2-Dichloroethane-d4	71.6	Limit: 61-142	% Rec	1		03/21/24 0000	03/21/24 1950	LJS
Surrogate: 1,2-Dichloroethane-d4	71.6	Limit: 63-138	% Rec	1		03/21/24 0000	03/21/24 1950	LJS
Surrogate: Toluene-d8	105	Limit: 87-116	% Rec	1		03/21/24 0000	03/21/24 1950	LJS
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec	1		03/21/24 0000	03/21/24 1950	LJS
Surrogate: 4-Bromofluorobenzene	84.9	Limit: 80-116	% Rec	1		03/21/24 0000	03/21/24 1950	LJS
Surrogate: 4-Bromofluorobenzene	84.9	Limit: 85-111	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 1950	LJS

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Barium, total	**0.0243**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Cobalt, total	**0.0442**	0.0004	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Nickel, total	**0.0584**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2309	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2309	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-390		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-03	**Collection Date:**	03/18/2024 8:07

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		03/21/24 0000	03/21/24 2016	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-390		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-03	**Collection Date:**	03/18/2024 8:07

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		03/21/24 0000	03/21/24 2016	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2016	LJS
Surrogate: Dibromofluoromethane	80.0	Limit: 75-136	% Rec	1		03/21/24 0000	03/21/24 2016	LJS
Surrogate: Dibromofluoromethane	80.0	Limit: 80-126	% Rec	1		03/21/24 0000	03/21/24 2016	LJS
Surrogate: 1,2-Dichloroethane-d4	74.8	Limit: 63-138	% Rec	1		03/21/24 0000	03/21/24 2016	LJS
Surrogate: 1,2-Dichloroethane-d4	74.8	Limit: 61-142	% Rec	1		03/21/24 0000	03/21/24 2016	LJS
Surrogate: Toluene-d8	106	Limit: 82-121	% Rec	1		03/21/24 0000	03/21/24 2016	LJS
Surrogate: Toluene-d8	106	Limit: 87-116	% Rec	1		03/21/24 0000	03/21/24 2016	LJS
Surrogate: 4-Bromofluorobenzene	85.4	Limit: 80-116	% Rec	1		03/21/24 0000	03/21/24 2016	LJS
Surrogate: 4-Bromofluorobenzene	85.4	Limit: 85-111	% Rec	1		03/21/24 0000	03/21/24 2016	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Arsenic, total	**0.0173**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Barium, total	**0.0170**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Cobalt, total	**0.107**	0.0004	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Nickel, total	**0.0541**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2315	RVV
Zinc, total	**0.184**	0.0200	mg/L	4		03/25/24 0855	03/25/24 2315	RVV

Client Sample ID:	MW-300			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-04		**Collection Date:**	03/19/2024 10:33

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		03/21/24 0000	03/21/24 2042	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS

Client Sample ID:	MW-300		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-04	**Collection Date:**	03/19/2024 10:33

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		03/21/24 0000	03/21/24 2042	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2042	LJS
Surrogate: Dibromofluoromethane	86.7	Limit: 75-136	% Rec	1		03/21/24 0000	03/21/24 2042	LJS
Surrogate: Dibromofluoromethane	86.7	Limit: 80-126	% Rec	1		03/21/24 0000	03/21/24 2042	LJS
Surrogate: 1,2-Dichloroethane-d4	82.0	Limit: 63-138	% Rec	1		03/21/24 0000	03/21/24 2042	LJS
Surrogate: 1,2-Dichloroethane-d4	82.0	Limit: 61-142	% Rec	1		03/21/24 0000	03/21/24 2042	LJS
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec	1		03/21/24 0000	03/21/24 2042	LJS
Surrogate: Toluene-d8	105	Limit: 87-116	% Rec	1		03/21/24 0000	03/21/24 2042	LJS
Surrogate: 4-Bromofluorobenzene	85.1	Limit: 85-111	% Rec	1		03/21/24 0000	03/21/24 2042	LJS
Surrogate: 4-Bromofluorobenzene	85.1	Limit: 80-116	% Rec	1		03/21/24 0000	03/21/24 2042	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Barium, total	**0.0119**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Cobalt, total	**0.691**	0.0004	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Nickel, total	**0.719**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2321	RVV
Zinc, total	**1.35**	0.0200	mg/L	4		03/25/24 0855	03/25/24 2321	RVV

Client Sample ID:	MW-303			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-05		**Collection Date:**	03/19/2024 11:57

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		03/21/24 0000	03/21/24 2108	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS

Client Sample ID:	MW-303		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-05	**Collection Date:**	03/19/2024 11:57

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		03/21/24 0000	03/21/24 2108	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2108	LJS
Surrogate: Dibromofluoromethane	70.8	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 2108	LJS
Surrogate: Dibromofluoromethane	70.8	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 2108	LJS
Surrogate: 1,2-Dichloroethane-d4	68.3	Limit: 63-138	% Rec	1		03/21/24 0000	03/21/24 2108	LJS
Surrogate: 1,2-Dichloroethane-d4	68.3	Limit: 61-142	% Rec	1		03/21/24 0000	03/21/24 2108	LJS
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec	1		03/21/24 0000	03/21/24 2108	LJS
Surrogate: Toluene-d8	105	Limit: 87-116	% Rec	1		03/21/24 0000	03/21/24 2108	LJS
Surrogate: 4-Bromofluorobenzene	82.9	Limit: 85-111	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 2108	LJS
Surrogate: 4-Bromofluorobenzene	82.9	Limit: 80-116	% Rec	1		03/21/24 0000	03/21/24 2108	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Barium, total	**0.0929**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Cobalt, total	**0.0231**	0.0004	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Nickel, total	**0.0281**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2340	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2340	RVV

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CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-304			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-06		**Collection Date:**	03/19/2024 12:18

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		03/21/24 0000	03/21/24 2135	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS

Client Sample ID:	MW-304		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-06	**Collection Date:**	03/19/2024 12:18

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		03/21/24 0000	03/21/24 2135	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/21/24 2135	LJS
Surrogate: Dibromofluoromethane	73.4	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 2135	LJS
Surrogate: Dibromofluoromethane	73.4	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 2135	LJS
Surrogate: 1,2-Dichloroethane-d4	70.7	Limit: 63-138	% Rec	1		03/21/24 0000	03/21/24 2135	LJS
Surrogate: 1,2-Dichloroethane-d4	70.7	Limit: 61-142	% Rec	1		03/21/24 0000	03/21/24 2135	LJS
Surrogate: Toluene-d8	107	Limit: 82-121	% Rec	1		03/21/24 0000	03/21/24 2135	LJS
Surrogate: Toluene-d8	107	Limit: 87-116	% Rec	1		03/21/24 0000	03/21/24 2135	LJS
Surrogate: 4-Bromofluorobenzene	84.0	Limit: 80-116	% Rec	1		03/21/24 0000	03/21/24 2135	LJS
Surrogate: 4-Bromofluorobenzene	84.0	Limit: 85-111	% Rec	1	**S-GC**	03/21/24 0000	03/21/24 2135	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Barium, total	**0.0786**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Cobalt, total	**0.0046**	0.0004	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Nickel, total	**0.0040**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2346	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2346	RVV

Client Sample ID:	MW-313		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-07	**Collection Date:**	03/19/2024 11:14

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS

Client Sample ID:	MW-313			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-07		**Collection Date:**	03/19/2024 11:14

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0039	LJS
Surrogate: Dibromofluoromethane	72.6	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0039	LJS
Surrogate: Dibromofluoromethane	72.6	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0039	LJS
Surrogate: 1,2-Dichloroethane-d4	69.9	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0039	LJS
Surrogate: 1,2-Dichloroethane-d4	69.9	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0039	LJS
Surrogate: Toluene-d8	103	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0039	LJS
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0039	LJS
Surrogate: 4-Bromofluorobenzene	86.6	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0039	LJS
Surrogate: 4-Bromofluorobenzene	86.6	Limit: 85-111	% Rec	1		03/21/24 0000	03/22/24 0039	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Arsenic, total	**0.0290**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Barium, total	**0.0420**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Cobalt, total	**0.0009**	0.0004	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2352	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2352	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-335		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-08	**Collection Date:**	03/19/2024 11:34

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		03/21/24 0000	03/22/24 0105	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS

Client Sample ID:	MW-335		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-08	**Collection Date:**	03/19/2024 11:34

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		03/21/24 0000	03/22/24 0105	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0105	LJS
Surrogate: Dibromofluoromethane	71.5	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0105	LJS
Surrogate: Dibromofluoromethane	71.5	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0105	LJS
Surrogate: 1,2-Dichloroethane-d4	68.4	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0105	LJS
Surrogate: 1,2-Dichloroethane-d4	68.4	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0105	LJS
Surrogate: Toluene-d8	105	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0105	LJS
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0105	LJS
Surrogate: 4-Bromofluorobenzene	86.2	Limit: 85-111	% Rec	1		03/21/24 0000	03/22/24 0105	LJS
Surrogate: 4-Bromofluorobenzene	86.2	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0105	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Arsenic, total	**0.0099**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Barium, total	**0.0132**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Cobalt, total	**0.0403**	0.0004	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Nickel, total	**0.0394**	0.0040	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/25/24 2358	RVV
Zinc, total	**0.0424**	0.0200	mg/L	4		03/25/24 0855	03/25/24 2358	RVV

Client Sample ID:	MW-344		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-09	**Collection Date:**	03/19/2024 9:32

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		03/21/24 0000	03/22/24 0131	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
cis-1,2-Dichloroethylene	**1.1**	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS

Client Sample ID:	MW-344		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-09	**Collection Date:**	03/19/2024 9:32

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		03/21/24 0000	03/22/24 0131	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0131	LJS
Surrogate: Dibromofluoromethane	73.6	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0131	LJS
Surrogate: Dibromofluoromethane	73.6	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0131	LJS
Surrogate: 1,2-Dichloroethane-d4	70.4	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0131	LJS
Surrogate: 1,2-Dichloroethane-d4	70.4	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0131	LJS
Surrogate: Toluene-d8	105	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0131	LJS
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0131	LJS
Surrogate: 4-Bromofluorobenzene	85.7	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0131	LJS
Surrogate: 4-Bromofluorobenzene	85.7	Limit: 85-111	% Rec	1		03/21/24 0000	03/22/24 0131	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Barium, total	**0.0106**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Cobalt, total	**0.148**	0.0004	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Nickel, total	**0.108**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0004	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0004	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-380		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-10	**Collection Date:**	03/18/2024 8:52

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		03/21/24 0000	03/22/24 0158	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS

Client Sample ID:	MW-380			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-10		**Collection Date:**	03/18/2024 8:52

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		03/21/24 0000	03/22/24 0158	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0158	LJS
Surrogate: Dibromofluoromethane	79.3	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0158	LJS
Surrogate: Dibromofluoromethane	79.3	Limit: 75-136	% Rec	1		03/21/24 0000	03/22/24 0158	LJS
Surrogate: 1,2-Dichloroethane-d4	77.6	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0158	LJS
Surrogate: 1,2-Dichloroethane-d4	77.6	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0158	LJS
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0158	LJS
Surrogate: Toluene-d8	103	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0158	LJS
Surrogate: 4-Bromofluorobenzene	84.8	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0158	LJS
Surrogate: 4-Bromofluorobenzene	84.8	Limit: 85-111	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0158	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Arsenic, total	**0.0054**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Barium, total	**0.0093**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Beryllium, total	**0.0049**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Cadmium, total	**0.0365**	0.0008	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Cobalt, total	**0.936**	0.0004	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Copper, total	**0.0718**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Nickel, total	**1.29**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Selenium, total	**0.0085**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0011	RVV
Zinc, total	**7.07**	0.500	mg/L	100		03/25/24 0855	03/26/24 1121	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-381		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-11	**Collection Date:**	03/19/2024 8:26

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		03/21/24 0000	03/22/24 0224	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS

Client Sample ID:	MW-381		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-11	**Collection Date:**	03/19/2024 8:26

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		03/21/24 0000	03/22/24 0224	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0224	LJS
Surrogate: Dibromofluoromethane	70.6	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0224	LJS
Surrogate: Dibromofluoromethane	70.6	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0224	LJS
Surrogate: 1,2-Dichloroethane-d4	67.0	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0224	LJS
Surrogate: 1,2-Dichloroethane-d4	67.0	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0224	LJS
Surrogate: Toluene-d8	104	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0224	LJS
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0224	LJS
Surrogate: 4-Bromofluorobenzene	85.2	Limit: 85-111	% Rec	1		03/21/24 0000	03/22/24 0224	LJS
Surrogate: 4-Bromofluorobenzene	85.2	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0224	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Barium, total	**0.0123**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/25/24 0855	04/09/24 0947	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0017	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0017	RVV

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CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-382R		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-12	**Collection Date:**	03/19/2024 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		03/21/24 0000	03/22/24 0250	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS

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CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-382R			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-12		**Collection Date:**	03/19/2024 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		03/21/24 0000	03/22/24 0250	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0250	LJS
Surrogate: Dibromofluoromethane	77.3	Limit: 75-136	% Rec	1		03/21/24 0000	03/22/24 0250	LJS
Surrogate: Dibromofluoromethane	77.3	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0250	LJS
Surrogate: 1,2-Dichloroethane-d4	74.5	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0250	LJS
Surrogate: 1,2-Dichloroethane-d4	74.5	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0250	LJS
Surrogate: Toluene-d8	105	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0250	LJS
Surrogate: Toluene-d8	105	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0250	LJS
Surrogate: 4-Bromofluorobenzene	85.8	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0250	LJS
Surrogate: 4-Bromofluorobenzene	85.8	Limit: 85-111	% Rec	1		03/21/24 0000	03/22/24 0250	LJS

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8270C								
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		03/25/24 1217	03/29/24 2029	EPP
Surrogate: Nitrobenzene-d5	58.2	Limit: 29-130	% Rec	1		03/25/24 1217	03/29/24 2029	EPP
Surrogate: 2-Fluorobiphenyl	59.4	Limit: 23-113	% Rec	1		03/25/24 1217	03/29/24 2029	EPP
Surrogate: Terphenyl-dl4	86.2	Limit: 27-141	% Rec	1		03/25/24 1217	03/29/24 2029	EPP

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Barium, total	**0.0238**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Cobalt, total	**0.0008**	0.0004	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0023	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0023	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-384			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-13		**Collection Date:**	03/19/2024 14:30

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		03/21/24 0000	03/22/24 0317	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-384		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-13	**Collection Date:**	03/19/2024 14:30

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		03/21/24 0000	03/22/24 0317	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0317	LJS
Surrogate: Dibromofluoromethane	78.7	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0317	LJS
Surrogate: Dibromofluoromethane	78.7	Limit: 75-136	% Rec	1		03/21/24 0000	03/22/24 0317	LJS
Surrogate: 1,2-Dichloroethane-d4	77.1	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0317	LJS
Surrogate: 1,2-Dichloroethane-d4	77.1	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0317	LJS
Surrogate: Toluene-d8	103	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0317	LJS
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0317	LJS
Surrogate: 4-Bromofluorobenzene	84.6	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0317	LJS
Surrogate: 4-Bromofluorobenzene	84.6	Limit: 85-111	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0317	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Barium, total	**0.0101**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Cobalt, total	**0.0158**	0.0004	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Nickel, total	**0.0577**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0029	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0029	RVV

Client Sample ID:	MW-385			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-14		**Collection Date:**	03/19/2024 14:49

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		03/21/24 0000	03/22/24 0343	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS

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CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-385		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-14	**Collection Date:**	03/19/2024 14:49

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		03/21/24 0000	03/22/24 0343	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0343	LJS
Surrogate: Dibromofluoromethane	77.3	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0343	LJS
Surrogate: Dibromofluoromethane	77.3	Limit: 75-136	% Rec	1		03/21/24 0000	03/22/24 0343	LJS
Surrogate: 1,2-Dichloroethane-d4	74.8	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0343	LJS
Surrogate: 1,2-Dichloroethane-d4	74.8	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0343	LJS
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0343	LJS
Surrogate: Toluene-d8	104	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0343	LJS
Surrogate: 4-Bromofluorobenzene	84.0	Limit: 85-111	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0343	LJS
Surrogate: 4-Bromofluorobenzene	84.0	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0343	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Barium, total	**0.0124**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Cobalt, total	**0.0047**	0.0004	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Nickel, total	**0.0326**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0035	RVV
Zinc, total	**0.0334**	0.0200	mg/L	4		03/25/24 0855	03/26/24 0035	RVV

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CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	Field Duplicate		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-15	**Collection Date:**	03/19/2024

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		03/25/24 0855	03/26/24 0054	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Barium, total	**0.0119**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0054	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0054	RVV

Client Sample ID:	MW-601			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-16		**Collection Date:**	03/19/2024 14:01

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		03/21/24 0000	03/22/24 0409	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS

Client Sample ID:	MW-601		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-16	**Collection Date:**	03/19/2024 14:01

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		03/21/24 0000	03/22/24 0409	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0409	LJS
Surrogate: Dibromofluoromethane	73.5	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0409	LJS
Surrogate: Dibromofluoromethane	73.5	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0409	LJS
Surrogate: 1,2-Dichloroethane-d4	70.6	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0409	LJS
Surrogate: 1,2-Dichloroethane-d4	70.6	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0409	LJS
Surrogate: Toluene-d8	103	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0409	LJS
Surrogate: Toluene-d8	103	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0409	LJS
Surrogate: 4-Bromofluorobenzene	82.1	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0409	LJS
Surrogate: 4-Bromofluorobenzene	82.1	Limit: 85-111	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0409	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Barium, total	**0.0212**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Cobalt, total	**0.0265**	0.0004	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Nickel, total	**0.0468**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0100	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0100	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-602			
Sample Matrix:	Water		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-17		**Collection Date:**	03/19/2024 13:40

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		03/21/24 0000	03/22/24 0436	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS

Client Sample ID:	MW-602		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-17	**Collection Date:**	03/19/2024 13:40

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		03/21/24 0000	03/22/24 0436	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0436	LJS
Surrogate: Dibromofluoromethane	74.0	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0436	LJS
Surrogate: Dibromofluoromethane	74.0	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0436	LJS
Surrogate: 1,2-Dichloroethane-d4	71.4	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0436	LJS
Surrogate: 1,2-Dichloroethane-d4	71.4	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0436	LJS
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0436	LJS
Surrogate: Toluene-d8	104	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0436	LJS
Surrogate: 4-Bromofluorobenzene	82.0	Limit: 85-111	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0436	LJS
Surrogate: 4-Bromofluorobenzene	82.0	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0436	LJS

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Barium, total	**0.0108**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Cobalt, total	**0.198**	0.0004	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Nickel, total	**0.299**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0106	RVV
Zinc, total	**0.142**	0.0200	mg/L	4		03/25/24 0855	03/26/24 0106	RVV

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HC1336

Client Sample ID:	MW-603		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-18	**Collection Date:**	03/19/2024 13:14

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Bromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Chloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Acetone	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Chloroform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Benzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Dibromomethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Toluene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Xylenes, total	<2.0	2.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Styrene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Bromoform	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS

Client Sample ID:	MW-603		
Sample Matrix:	Water	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HC1336-18	**Collection Date:**	03/19/2024 13:14

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		03/21/24 0000	03/22/24 0502	LJS
Surrogate: Dibromofluoromethane	73.6	Limit: 80-126	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0502	LJS
Surrogate: Dibromofluoromethane	73.6	Limit: 75-136	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0502	LJS
Surrogate: 1,2-Dichloroethane-d4	70.7	Limit: 61-142	% Rec	1		03/21/24 0000	03/22/24 0502	LJS
Surrogate: 1,2-Dichloroethane-d4	70.7	Limit: 63-138	% Rec	1		03/21/24 0000	03/22/24 0502	LJS
Surrogate: Toluene-d8	104	Limit: 87-116	% Rec	1		03/21/24 0000	03/22/24 0502	LJS
Surrogate: Toluene-d8	104	Limit: 82-121	% Rec	1		03/21/24 0000	03/22/24 0502	LJS
Surrogate: 4-Bromofluorobenzene	82.0	Limit: 80-116	% Rec	1		03/21/24 0000	03/22/24 0502	LJS
Surrogate: 4-Bromofluorobenzene	82.0	Limit: 85-111	% Rec	1	**S-GC**	03/21/24 0000	03/22/24 0502	LJS

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Arsenic, total	**0.0051**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Barium, total	**0.0213**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Cobalt, total	**0.0221**	0.0004	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Copper, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Lead, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Nickel, total	**0.0118**	0.0040	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Silver, total	<0.0040	0.0040	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0112	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		03/25/24 0855	03/26/24 0112	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HC1242	1HC1242-BS1	
		1HC1242-BSD1	
		1HC1242-BLK1	
		1HC1336-01	MW-307
		1HC1336-02	MW-312
		1HC1336-03	MW-390
		1HC1336-04	MW-300
		1HC1336-05	MW-303
		1HC1336-06	MW-304
		1HC1242-BS2	
		1HC1242-BSD2	
		1HC1242-BLK2	
		1HC1336-07	MW-313
		1HC1336-08	MW-335
		1HC1336-09	MW-344
		1HC1336-10	MW-380
		1HC1336-11	MW-381
		1HC1336-12	MW-382R
		1HC1336-13	MW-384
		1HC1336-14	MW-385
		1HC1336-16	MW-601
		1HC1336-17	MW-602
		1HC1336-18	MW-603
		1HC1242-MS1	1HC1337-04
		1HC1242-MSD1	1HC1337-04
		1HC1242-MS2	1HC1336-11
		1HC1242-MSD2	1HC1336-11

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HC1321	1HC1321-BLK1	
		1HC1321-BS1	
		1HC1336-01	MW-307
		1HC1321-MS1	1HC1336-01
		1HC1321-MSD1	1HC1336-01
		1HC1321-PS1	1HC1336-01
		1HC1336-02	MW-312
		1HC1336-03	MW-390
		1HC1336-04	MW-300
		1HC1336-05	MW-303
		1HC1336-06	MW-304

EPA 6020A	1HC1321	1HC1336-07	MW-313
		1HC1336-08	MW-335
		1HC1336-09	MW-344
		1HC1336-10	MW-380
		1HC1336-11	MW-381
		1HC1336-12	MW-382R
		1HC1336-13	MW-384
		1HC1336-14	MW-385
		1HC1336-15	Field Duplicate
		1HC1336-16	MW-601
		1HC1336-17	MW-602
		1HC1336-18	MW-603
		1HC1336-10RE1	MW-380
		1HC1336-11RE1	MW-381

Method	**Batch**	**Laboratory ID**	**Client / Source ID**
EPA 8270C	1HC1348	1HC1348-BLK1	
		1HC1348-BS1	
		1HC1348-BSD1	
		1HC1336-12	MW-382R

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 1HC1242 - EPA 5030B - EPA 8260B										
Blank (1HC1242-BLK1)			Prepared: 03/21/24 00:00 Analyzed: 03/21/24 11:20							
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							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
Blank (1HC1242-BLK1)			Prepared: 03/21/24 00:00 Analyzed: 03/21/24 11:20							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*34.1*		ug/L	*50.2*		*68.0*	*80-126*			*S-GC*
Surrogate: Dibromofluoromethane	*34.1*		ug/L	*50.2*		*68.0*	*75-136*			*S-GC*
Surrogate: 1,2-Dichloroethane-d4	*31.6*		ug/L	*50.1*		*63.1*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*31.6*		ug/L	*50.1*		*63.1*	*61-142*			
Surrogate: Toluene-d8	*53.6*		ug/L	*50.4*		*106*	*87-116*			
Surrogate: Toluene-d8	*53.6*		ug/L	*50.4*		*106*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*46.5*		ug/L	*50.1*		*92.8*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*46.5*		ug/L	*50.1*		*92.8*	*80-116*			
Blank (1HC1242-BLK2)			Prepared: 03/21/24 00:00 Analyzed: 03/22/24 00:13							
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
Blank (1HC1242-BLK2)			Prepared: 03/21/24 00:00 Analyzed: 03/22/24 00:13							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Methyl Iodide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
Vinyl Acetate	<5.0	5.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<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 1HC1242 - EPA 5030B - EPA 8260B										
Blank (1HC1242-BLK2)			Prepared: 03/21/24 00:00 Analyzed: 03/22/24 00:13							
Surrogate: Dibromofluoromethane	*37.2*		ug/L	*50.2*		*74.2*	*80-126*			S-GC
Surrogate: Dibromofluoromethane	*37.2*		ug/L	*50.2*		*74.2*	*75-136*			S-GC
Surrogate: 1,2-Dichloroethane-d4	*35.8*		ug/L	*50.1*		*71.6*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*35.8*		ug/L	*50.1*		*71.6*	*61-142*			
Surrogate: Toluene-d8	*51.2*		ug/L	*50.4*		*102*	*87-116*			
Surrogate: Toluene-d8	*51.2*		ug/L	*50.4*		*102*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*43.8*		ug/L	*50.1*		*87.2*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*43.8*		ug/L	*50.1*		*87.2*	*80-116*			
LCS (1HC1242-BS1)			Prepared: 03/21/24 00:00 Analyzed: 03/21/24 10:01							
Chloromethane	31.57	1.0	ug/L	30.6		103	63-155			
Vinyl Chloride	28.37	1.0	ug/L	30.2		93.9	70-154			
Bromomethane	29.77	1.0	ug/L	28.8		103	52-176			
Chloroethane	32.42	1.0	ug/L	31.6		102	72-148			
Trichlorofluoromethane	28.32	1.0	ug/L	32.6		86.8	70-152			
1,1-Dichloroethylene	49.29	1.0	ug/L	50.0		98.6	70-148			
Acetone	90.76	10.0	ug/L	102		89.0	43-172			
Methyl Iodide	103.2	1.0	ug/L	99.7		103	69-170			
Carbon Disulfide	93.18	1.0	ug/L	101		92.3	72-162			
Methylene Chloride	47.29	5.0	ug/L	50.0		94.6	68-142			
Acrylonitrile	78.86	5.0	ug/L	100		78.6	67-144			
trans-1,2-Dichloroethylene	49.30	1.0	ug/L	50.0		98.6	66-148			
1,1-Dichloroethane	48.34	1.0	ug/L	50.0		96.7	66-143			
Vinyl Acetate	100.6	5.0	ug/L	102		98.8	43-153			
cis-1,2-Dichloroethylene	48.49	1.0	ug/L	49.5		98.0	71-149			
2-Butanone (MEK)	82.75	10.0	ug/L	103		80.1	52-159			
Bromochloromethane	50.24	1.0	ug/L	50.0		100	69-143			
Chloroform	48.07	1.0	ug/L	50.0		96.1	69-144			
1,1,1-Trichloroethane	43.50	1.0	ug/L	50.0		87.0	62-129			
Carbon Tetrachloride	46.38	1.0	ug/L	50.0		92.8	63-141			
Benzene	52.54	1.0	ug/L	50.0		105	71-134			
1,2-Dichloroethane	49.13	1.0	ug/L	50.0		98.3	72-132			
Trichloroethylene	49.19	1.0	ug/L	50.0		98.4	71-135			
1,2-Dichloropropane	50.38	1.0	ug/L	50.0		101	69-136			
Dibromomethane	51.47	1.0	ug/L	50.0		103	73-147			
Bromodichloromethane	47.84	1.0	ug/L	50.0		95.7	68-129			
cis-1,3-Dichloropropene	47.50	1.0	ug/L	50.3		94.4	65-134			
4-Methyl-2-pentanone (MIBK)	94.61	5.0	ug/L	101		93.3	58-147			
Toluene	51.33	1.0	ug/L	50.0		103	72-133			
trans-1,3-Dichloropropene	46.33	1.0	ug/L	50.4		91.9	67-130			
1,1,2-Trichloroethane	49.24	1.0	ug/L	50.0		98.5	69-135			
Tetrachloroethylene	49.78	1.0	ug/L	50.0		99.6	69-130			
2-Hexanone (MBK)	94.69	5.0	ug/L	103		91.7	55-144			
Dibromochloromethane	49.54	1.0	ug/L	49.5		100	73-127			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
LCS (1HC1242-BS1)				Prepared: 03/21/24 00:00 Analyzed: 03/21/24 10:01						
1,2-Dibromoethane	48.63	1.0	ug/L	50.0		97.3	67-132			
Chlorobenzene	51.85	1.0	ug/L	50.0		104	72-123			
1,1,1,2-Tetrachloroethane	51.16	1.0	ug/L	50.0		102	73-127			
Ethylbenzene	49.11	1.0	ug/L	50.0		98.2	71-127			
Xylenes, total	150.4	2.0	ug/L	150		100	74-127			
Styrene	50.05	1.0	ug/L	50.0		100	66-126			
Bromoform	54.03	1.0	ug/L	50.0		108	68-130			
1,2,3-Trichloropropane	50.13	1.0	ug/L	50.0		100	63-136			
trans-1,4-Dichloro-2-butene	92.01	5.0	ug/L	104		88.6	54-134			
1,1,2,2-Tetrachloroethane	47.49	1.0	ug/L	49.8		95.3	61-131			
1,4-Dichlorobenzene	48.71	1.0	ug/L	50.0		97.4	70-129			
1,2-Dichlorobenzene	48.83	1.0	ug/L	50.0		97.7	69-126			
1,2-Dibromo-3-chloropropane	47.30	5.0	ug/L	50.0		94.6	50-143			
Surrogate: Dibromofluoromethane	*50.7*		ug/L	*50.2*		*101*	*80-126*			
Surrogate: Dibromofluoromethane	*50.7*		ug/L	*50.2*		*101*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*50.9*		ug/L	*50.1*		*102*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*50.9*		ug/L	*50.1*		*102*	*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	*53.2*		ug/L	*50.1*		*106*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*53.2*		ug/L	*50.1*		*106*	*80-116*			
LCS (1HC1242-BS2)				Prepared: 03/21/24 00:00 Analyzed: 03/21/24 22:54						
Chloromethane	30.12	1.0	ug/L	30.6		98.3	63-155			
Vinyl Chloride	27.67	1.0	ug/L	30.2		91.5	70-154			
Bromomethane	27.16	1.0	ug/L	28.8		94.3	52-176			
Chloroethane	31.15	1.0	ug/L	31.6		98.5	72-148			
Trichlorofluoromethane	26.82	1.0	ug/L	32.6		82.2	70-152			
1,1-Dichloroethylene	46.33	1.0	ug/L	50.0		92.7	70-148			
Acetone	91.23	10.0	ug/L	102		89.4	43-172			
Methyl Iodide	100.5	1.0	ug/L	99.7		101	69-170			
Carbon Disulfide	89.11	1.0	ug/L	101		88.2	72-162			
Methylene Chloride	43.02	5.0	ug/L	50.0		86.0	68-142			
Acrylonitrile	71.61	5.0	ug/L	100		71.4	67-144			
trans-1,2-Dichloroethylene	46.84	1.0	ug/L	50.0		93.7	66-148			
1,1-Dichloroethane	45.56	1.0	ug/L	50.0		91.1	66-143			
Vinyl Acetate	51.16	5.0	ug/L	102		50.2	43-153			
cis-1,2-Dichloroethylene	44.34	1.0	ug/L	49.5		89.6	71-149			
2-Butanone (MEK)	90.44	10.0	ug/L	103		87.6	52-159			
Bromochloromethane	44.80	1.0	ug/L	50.0		89.6	69-143			
Chloroform	45.76	1.0	ug/L	50.0		91.5	69-144			
1,1,1-Trichloroethane	42.73	1.0	ug/L	50.0		85.5	62-129			
Carbon Tetrachloride	45.78	1.0	ug/L	50.0		91.6	63-141			
Benzene	51.70	1.0	ug/L	50.0		103	71-134			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
LCS (1HC1242-BS2)	Prepared: 03/21/24 00:00 Analyzed: 03/21/24 22:54									
1,2-Dichloroethane	45.63	1.0	ug/L	50.0		91.3	72-132			
Trichloroethylene	53.83	1.0	ug/L	50.0		108	71-135			
1,2-Dichloropropane	47.90	1.0	ug/L	50.0		95.8	69-136			
Dibromomethane	47.15	1.0	ug/L	50.0		94.3	73-147			
Bromodichloromethane	44.96	1.0	ug/L	50.0		89.9	68-129			
cis-1,3-Dichloropropene	42.75	1.0	ug/L	50.3		84.9	65-134			
4-Methyl-2-pentanone (MIBK)	85.43	5.0	ug/L	101		84.3	58-147			
Toluene	50.06	1.0	ug/L	50.0		100	72-133			
trans-1,3-Dichloropropene	40.81	1.0	ug/L	50.4		80.9	67-130			
1,1,2-Trichloroethane	45.63	1.0	ug/L	50.0		91.3	69-135			
Tetrachloroethylene	51.22	1.0	ug/L	50.0		102	69-130			
2-Hexanone (MBK)	96.01	5.0	ug/L	103		92.9	55-144			
Dibromochloromethane	46.69	1.0	ug/L	49.5		94.3	73-127			
1,2-Dibromoethane	45.42	1.0	ug/L	50.0		90.8	67-132			
Chlorobenzene	50.58	1.0	ug/L	50.0		101	72-123			
1,1,1,2-Tetrachloroethane	50.62	1.0	ug/L	50.0		101	73-127			
Ethylbenzene	48.60	1.0	ug/L	50.0		97.2	71-127			
Xylenes, total	147.2	2.0	ug/L	150		98.1	74-127			
Styrene	47.94	1.0	ug/L	50.0		95.9	66-126			
Bromoform	49.08	1.0	ug/L	50.0		98.2	68-130			
1,2,3-Trichloropropane	45.88	1.0	ug/L	50.0		91.8	63-136			
trans-1,4-Dichloro-2-butene	76.35	5.0	ug/L	104		73.5	54-134			
1,1,2,2-Tetrachloroethane	38.64	1.0	ug/L	49.8		77.5	61-131			
1,4-Dichlorobenzene	45.37	1.0	ug/L	50.0		90.7	70-129			
1,2-Dichlorobenzene	45.26	1.0	ug/L	50.0		90.5	69-126			
1,2-Dibromo-3-chloropropane	40.62	5.0	ug/L	50.0		81.2	50-143			
Surrogate: Dibromofluoromethane	*48.7*		ug/L	*50.2*		*97.0*	*80-126*			
Surrogate: Dibromofluoromethane	*48.7*		ug/L	*50.2*		*97.0*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*48.6*		ug/L	*50.1*		*97.0*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*48.6*		ug/L	*50.1*		*97.0*	*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	*51.8*		ug/L	*50.1*		*103*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*51.8*		ug/L	*50.1*		*103*	*80-116*			
LCS Dup (1HC1242-BSD1)	Prepared: 03/21/24 00:00 Analyzed: 03/21/24 10:27									
Chloromethane	28.57	1.0	ug/L	30.6		93.2	63-155	9.98	24	
Vinyl Chloride	25.33	1.0	ug/L	30.2		83.8	70-154	11.3	25	
Bromomethane	27.71	1.0	ug/L	28.8		96.2	52-176	7.17	27	
Chloroethane	29.65	1.0	ug/L	31.6		93.7	72-148	8.93	25	
Trichlorofluoromethane	25.91	1.0	ug/L	32.6		79.5	70-152	8.89	26	
1,1-Dichloroethylene	45.45	1.0	ug/L	50.0		90.9	70-148	8.11	24	
Acetone	87.47	10.0	ug/L	102		85.8	43-172	3.69	30	
Methyl Iodide	93.25	1.0	ug/L	99.7		93.5	69-170	10.1	30	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
LCS Dup (1HC1242-BSD1)				Prepared: 03/21/24 00:00 Analyzed: 03/21/24 10:27						
Carbon Disulfide	84.52	1.0	ug/L	101		83.7	72-162	9.75	24	
Methylene Chloride	43.72	5.0	ug/L	50.0		87.4	68-142	7.85	21	
Acrylonitrile	74.90	5.0	ug/L	100		74.6	67-144	5.15	24	
trans-1,2-Dichloroethylene	45.35	1.0	ug/L	50.0		90.7	66-148	8.35	27	
1,1-Dichloroethane	44.74	1.0	ug/L	50.0		89.5	66-143	7.74	24	
Vinyl Acetate	104.4	5.0	ug/L	102		102	43-153	3.71	30	
cis-1,2-Dichloroethylene	45.33	1.0	ug/L	49.5		91.6	71-149	6.74	26	
2-Butanone (MEK)	97.78	10.0	ug/L	103		94.7	52-159	16.7	27	
Bromochloromethane	47.32	1.0	ug/L	50.0		94.6	69-143	5.99	23	
Chloroform	44.79	1.0	ug/L	50.0		89.6	69-144	7.06	23	
1,1,1-Trichloroethane	40.00	1.0	ug/L	50.0		80.0	62-129	8.38	24	
Carbon Tetrachloride	42.70	1.0	ug/L	50.0		85.4	63-141	8.26	25	
Benzene	48.42	1.0	ug/L	50.0		96.8	71-134	8.16	24	
1,2-Dichloroethane	45.95	1.0	ug/L	50.0		91.9	72-132	6.69	24	
Trichloroethylene	45.28	1.0	ug/L	50.0		90.6	71-135	8.28	24	
1,2-Dichloropropane	46.72	1.0	ug/L	50.0		93.4	69-136	7.54	24	
Dibromomethane	48.39	1.0	ug/L	50.0		96.8	73-147	6.17	25	
Bromodichloromethane	44.43	1.0	ug/L	50.0		88.9	68-129	7.39	22	
cis-1,3-Dichloropropene	44.62	1.0	ug/L	50.3		88.7	65-134	6.25	23	
4-Methyl-2-pentanone (MIBK)	90.41	5.0	ug/L	101		89.2	58-147	4.54	27	
Toluene	47.52	1.0	ug/L	50.0		95.0	72-133	7.71	24	
trans-1,3-Dichloropropene	43.91	1.0	ug/L	50.4		87.1	67-130	5.36	24	
1,1,2-Trichloroethane	45.91	1.0	ug/L	50.0		91.8	69-135	7.00	23	
Tetrachloroethylene	45.90	1.0	ug/L	50.0		91.8	69-130	8.11	25	
2-Hexanone (MBK)	90.61	5.0	ug/L	103		87.7	55-144	4.40	25	
Dibromochloromethane	45.79	1.0	ug/L	49.5		92.5	73-127	7.87	22	
1,2-Dibromoethane	44.92	1.0	ug/L	50.0		89.8	67-132	7.93	24	
Chlorobenzene	48.12	1.0	ug/L	50.0		96.2	72-123	7.46	23	
1,1,1,2-Tetrachloroethane	47.77	1.0	ug/L	50.0		95.5	73-127	6.85	24	
Ethylbenzene	45.52	1.0	ug/L	50.0		91.0	71-127	7.59	26	
Xylenes, total	139.6	2.0	ug/L	150		93.1	74-127	7.46	25	
Styrene	46.28	1.0	ug/L	50.0		92.6	66-126	7.83	23	
Bromoform	50.06	1.0	ug/L	50.0		100	68-130	7.63	23	
1,2,3-Trichloropropane	46.72	1.0	ug/L	50.0		93.4	63-136	7.04	24	
trans-1,4-Dichloro-2-butene	86.26	5.0	ug/L	104		83.0	54-134	6.45	27	
1,1,2,2-Tetrachloroethane	45.12	1.0	ug/L	49.8		90.5	61-131	5.12	29	
1,4-Dichlorobenzene	45.26	1.0	ug/L	50.0		90.5	70-129	7.34	24	
1,2-Dichlorobenzene	45.92	1.0	ug/L	50.0		91.8	69-126	6.14	26	
1,2-Dibromo-3-chloropropane	44.14	5.0	ug/L	50.0		88.3	50-143	6.91	30	
Surrogate: Dibromofluoromethane	*50.0*		ug/L	*50.2*		*99.6*	*80-126*			
Surrogate: Dibromofluoromethane	*50.0*		ug/L	*50.2*		*99.6*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*50.0*		ug/L	*50.1*		*99.9*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*50.0*		ug/L	*50.1*		*99.9*	*61-142*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
LCS Dup (1HC1242-BSD1)			Prepared: 03/21/24 00:00 Analyzed: 03/21/24 10:27							
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	*52.6*		ug/L	*50.1*		*105*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*52.6*		ug/L	*50.1*		*105*	*80-116*			
LCS Dup (1HC1242-BSD2)			Prepared: 03/21/24 00:00 Analyzed: 03/21/24 23:20							
Chloromethane	27.98	1.0	ug/L	30.6		91.3	63-155	7.37	24	
Vinyl Chloride	25.58	1.0	ug/L	30.2		84.6	70-154	7.85	25	
Bromomethane	26.07	1.0	ug/L	28.8		90.5	52-176	4.10	27	
Chloroethane	29.26	1.0	ug/L	31.6		92.5	72-148	6.26	25	
Trichlorofluoromethane	24.56	1.0	ug/L	32.6		75.3	70-152	8.80	26	
1,1-Dichloroethylene	43.80	1.0	ug/L	50.0		87.6	70-148	5.61	24	
Acetone	87.31	10.0	ug/L	102		85.6	43-172	4.39	30	
Methyl Iodide	95.32	1.0	ug/L	99.7		95.6	69-170	5.29	30	
Carbon Disulfide	83.20	1.0	ug/L	101		82.4	72-162	6.86	24	
Methylene Chloride	41.81	5.0	ug/L	50.0		83.6	68-142	2.85	21	
Acrylonitrile	72.43	5.0	ug/L	100		72.2	67-144	1.14	24	
trans-1,2-Dichloroethylene	44.58	1.0	ug/L	50.0		89.2	66-148	4.94	27	
1,1-Dichloroethane	43.81	1.0	ug/L	50.0		87.6	66-143	3.92	24	
Vinyl Acetate	50.25	5.0	ug/L	102		49.3	43-153	1.79	30	
cis-1,2-Dichloroethylene	42.67	1.0	ug/L	49.5		86.2	71-149	3.84	26	
2-Butanone (MEK)	91.28	10.0	ug/L	103		88.4	52-159	0.924	27	
Bromochloromethane	43.92	1.0	ug/L	50.0		87.8	69-143	1.98	23	
Chloroform	43.68	1.0	ug/L	50.0		87.4	69-144	4.65	23	
1,1,1-Trichloroethane	40.28	1.0	ug/L	50.0		80.6	62-129	5.90	24	
Carbon Tetrachloride	42.85	1.0	ug/L	50.0		85.7	63-141	6.61	25	
Benzene	49.15	1.0	ug/L	50.0		98.3	71-134	5.06	24	
1,2-Dichloroethane	43.53	1.0	ug/L	50.0		87.1	72-132	4.71	24	
Trichloroethylene	50.49	1.0	ug/L	50.0		101	71-135	6.40	24	
1,2-Dichloropropane	46.12	1.0	ug/L	50.0		92.2	69-136	3.79	24	
Dibromomethane	45.98	1.0	ug/L	50.0		92.0	73-147	2.51	25	
Bromodichloromethane	43.26	1.0	ug/L	50.0		86.5	68-129	3.85	22	
cis-1,3-Dichloropropene	41.37	1.0	ug/L	50.3		82.2	65-134	3.28	23	
4-Methyl-2-pentanone (MIBK)	84.20	5.0	ug/L	101		83.0	58-147	1.45	27	
Toluene	47.54	1.0	ug/L	50.0		95.1	72-133	5.16	24	
trans-1,3-Dichloropropene	40.06	1.0	ug/L	50.4		79.4	67-130	1.85	24	
1,1,2-Trichloroethane	44.18	1.0	ug/L	50.0		88.4	69-135	3.23	23	
Tetrachloroethylene	48.69	1.0	ug/L	50.0		97.4	69-130	5.06	25	
2-Hexanone (MBK)	95.02	5.0	ug/L	103		92.0	55-144	1.04	25	
Dibromochloromethane	45.20	1.0	ug/L	49.5		91.3	73-127	3.24	22	
1,2-Dibromoethane	44.48	1.0	ug/L	50.0		89.0	67-132	2.09	24	
Chlorobenzene	48.36	1.0	ug/L	50.0		96.7	72-123	4.49	23	
1,1,1,2-Tetrachloroethane	48.74	1.0	ug/L	50.0		97.5	73-127	3.78	24	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
LCS Dup (1HC1242-BSD2)			Prepared: 03/21/24 00:00 Analyzed: 03/21/24 23:20							
Ethylbenzene	46.34	1.0	ug/L	50.0		92.7	71-127	4.76	26	
Xylenes, total	141.0	2.0	ug/L	150		94.0	74-127	4.28	25	
Styrene	45.88	1.0	ug/L	50.0		91.8	66-126	4.39	23	
Bromoform	48.13	1.0	ug/L	50.0		96.3	68-130	1.95	23	
1,2,3-Trichloropropane	45.09	1.0	ug/L	50.0		90.2	63-136	1.74	24	
trans-1,4-Dichloro-2-butene	74.68	5.0	ug/L	104		71.9	54-134	2.21	27	
1,1,2,2-Tetrachloroethane	39.59	1.0	ug/L	49.8		79.4	61-131	2.43	29	
1,4-Dichlorobenzene	45.14	1.0	ug/L	50.0		90.3	70-129	0.508	24	
1,2-Dichlorobenzene	44.92	1.0	ug/L	50.0		89.8	69-126	0.754	26	
1,2-Dibromo-3-chloropropane	40.67	5.0	ug/L	50.0		81.3	50-143	0.123	30	
Surrogate: Dibromofluoromethane	*48.0*		ug/L	*50.2*		*95.6*	*80-126*			
Surrogate: Dibromofluoromethane	*48.0*		ug/L	*50.2*		*95.6*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*48.3*		ug/L	*50.1*		*96.5*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*48.3*		ug/L	*50.1*		*96.5*	*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	*51.5*		ug/L	*50.1*		*103*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*51.5*		ug/L	*50.1*		*103*	*80-116*			
Matrix Spike (1HC1242-MS1)	**Source: 1HC1337-04**		Prepared: 03/21/24 00:00 Analyzed: 03/22/24 05:28							
Chloromethane	291.9	10.0	ug/L	306	ND	95.3	61-152			
Vinyl Chloride	263.9	10.0	ug/L	302	ND	87.3	66-149			
Bromomethane	258.9	10.0	ug/L	288	ND	89.9	43-171			
Chloroethane	306.1	10.0	ug/L	316	ND	96.8	69-148			
Trichlorofluoromethane	254.2	10.0	ug/L	326	ND	78.0	62-163			
1,1-Dichloroethylene	463.1	10.0	ug/L	500	ND	92.6	70-148			
Acetone	886.3	100	ug/L	1020	ND	86.9	45-173			
Methyl Iodide	980.1	10.0	ug/L	997	ND	98.3	62-167			
Carbon Disulfide	891.0	10.0	ug/L	1010	ND	88.2	71-163			
Methylene Chloride	422.8	50.0	ug/L	500	ND	84.6	69-140			
Acrylonitrile	703.7	50.0	ug/L	1000	ND	70.1	58-151			
trans-1,2-Dichloroethylene	476.4	10.0	ug/L	500	ND	95.3	69-144			
1,1-Dichloroethane	460.3	10.0	ug/L	500	ND	92.1	70-138			
Vinyl Acetate	1005	50.0	ug/L	1020	ND	98.7	58-142			
cis-1,2-Dichloroethylene	439.3	10.0	ug/L	495	ND	88.8	68-151			
2-Butanone (MEK)	837.2	100	ug/L	1030	ND	81.0	50-160			
Bromochloromethane	444.9	10.0	ug/L	500	ND	89.0	65-143			
Chloroform	461.7	10.0	ug/L	500	ND	92.3	71-143			
1,1,1-Trichloroethane	430.4	10.0	ug/L	500	ND	86.1	63-133			
Carbon Tetrachloride	458.3	10.0	ug/L	500	ND	91.7	63-142			
Benzene	526.1	10.0	ug/L	500	ND	105	69-133			
1,2-Dichloroethane	463.8	10.0	ug/L	500	ND	92.8	63-138			
Trichloroethylene	495.3	10.0	ug/L	500	ND	99.1	71-133			
1,2-Dichloropropane	476.6	10.0	ug/L	500	ND	95.3	69-132			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
Matrix Spike (1HC1242-MS1)	**Source: 1HC1337-04**		Prepared: 03/21/24 00:00 Analyzed: 03/22/24 05:28							
Dibromomethane	478.3	10.0	ug/L	500	ND	95.7	70-147			
Bromodichloromethane	452.3	10.0	ug/L	500	ND	90.5	67-130			
cis-1,3-Dichloropropene	381.6	10.0	ug/L	503	ND	75.8	61-126			
4-Methyl-2-pentanone (MIBK)	803.8	50.0	ug/L	1010	ND	79.3	55-147			
Toluene	500.1	10.0	ug/L	500	ND	100	71-133			
trans-1,3-Dichloropropene	389.4	10.0	ug/L	504	ND	77.2	63-124			
1,1,2-Trichloroethane	458.3	10.0	ug/L	500	ND	91.7	69-133			
Tetrachloroethylene	524.5	10.0	ug/L	500	ND	105	70-124			
2-Hexanone (MBK)	866.3	50.0	ug/L	1030	ND	83.9	53-141			
Dibromochloromethane	473.2	10.0	ug/L	495	ND	95.6	74-122			
1,2-Dibromoethane	460.4	10.0	ug/L	500	ND	92.1	66-127			
Chlorobenzene	513.1	10.0	ug/L	500	ND	103	76-116			
1,1,1,2-Tetrachloroethane	520.3	10.0	ug/L	500	ND	104	77-121			
Ethylbenzene	495.1	10.0	ug/L	500	ND	99.0	73-124			
Xylenes, total	1488	20.0	ug/L	1500	ND	99.2	75-123			
Styrene	479.7	10.0	ug/L	500	ND	95.9	70-120			
Bromoform	487.9	10.0	ug/L	500	ND	97.6	70-124			
1,2,3-Trichloropropane	467.4	10.0	ug/L	500	ND	93.5	62-135			
trans-1,4-Dichloro-2-butene	690.2	50.0	ug/L	1040	ND	66.4	50-120			
1,1,2,2-Tetrachloroethane	456.3	10.0	ug/L	498	ND	91.5	63-126			
1,4-Dichlorobenzene	461.0	10.0	ug/L	500	ND	92.2	72-119			
1,2-Dichlorobenzene	456.2	10.0	ug/L	500	ND	91.2	71-117			
1,2-Dibromo-3-chloropropane	389.2	50.0	ug/L	500	ND	77.8	49-134			
Surrogate: Dibromofluoromethane	*484*		ug/L	*502*		*96.5*	*80-126*			
Surrogate: Dibromofluoromethane	*484*		ug/L	*502*		*96.5*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*497*		ug/L	*501*		*99.3*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*497*		ug/L	*501*		*99.3*	*61-142*			
Surrogate: Toluene-d8	*499*		ug/L	*504*		*99.0*	*87-116*			
Surrogate: Toluene-d8	*499*		ug/L	*504*		*99.0*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*511*		ug/L	*501*		*102*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*511*		ug/L	*501*		*102*	*80-116*			
Matrix Spike (1HC1242-MS2)	**Source: 1HC1336-11**		Prepared: 03/21/24 00:00 Analyzed: 03/22/24 06:21							
Chloromethane	278.6	10.0	ug/L	306	ND	90.9	61-152			
Vinyl Chloride	258.8	10.0	ug/L	302	ND	85.6	66-149			
Bromomethane	256.5	10.0	ug/L	288	ND	89.1	43-171			
Chloroethane	293.9	10.0	ug/L	316	ND	92.9	69-148			
Trichlorofluoromethane	255.4	10.0	ug/L	326	ND	78.3	62-163			
1,1-Dichloroethylene	445.5	10.0	ug/L	500	ND	89.1	70-148			
Acetone	840.1	100	ug/L	1020	ND	82.4	45-173			
Methyl Iodide	926.4	10.0	ug/L	997	ND	92.9	62-167			
Carbon Disulfide	843.0	10.0	ug/L	1010	ND	83.5	71-163			
Methylene Chloride	394.8	50.0	ug/L	500	ND	79.0	69-140			
Acrylonitrile	661.3	50.0	ug/L	1000	ND	65.9	58-151			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
Matrix Spike (1HC1242-MS2)	**Source: 1HC1336-11**		Prepared: 03/21/24 00:00 Analyzed: 03/22/24 06:21							
trans-1,2-Dichloroethylene	444.3	10.0	ug/L	500	ND	88.9	69-144			
1,1-Dichloroethane	429.7	10.0	ug/L	500	ND	85.9	70-138			
Vinyl Acetate	965.3	50.0	ug/L	1020	ND	94.7	58-142			
cis-1,2-Dichloroethylene	413.0	10.0	ug/L	495	ND	83.5	68-151			
2-Butanone (MEK)	824.4	100	ug/L	1030	ND	79.8	50-160			
Bromochloromethane	414.6	10.0	ug/L	500	ND	82.9	65-143			
Chloroform	425.3	10.0	ug/L	500	ND	85.1	71-143			
1,1,1-Trichloroethane	409.2	10.0	ug/L	500	ND	81.9	63-133			
Carbon Tetrachloride	437.5	10.0	ug/L	500	ND	87.5	63-142			
Benzene	495.6	10.0	ug/L	500	ND	99.1	69-133			
1,2-Dichloroethane	430.3	10.0	ug/L	500	ND	86.1	63-138			
Trichloroethylene	471.9	10.0	ug/L	500	ND	94.4	71-133			
1,2-Dichloropropane	457.4	10.0	ug/L	500	ND	91.5	69-132			
Dibromomethane	444.4	10.0	ug/L	500	ND	88.9	70-147			
Bromodichloromethane	424.0	10.0	ug/L	500	ND	84.8	67-130			
cis-1,3-Dichloropropene	400.4	10.0	ug/L	503	ND	79.6	61-126			
4-Methyl-2-pentanone (MIBK)	822.3	50.0	ug/L	1010	ND	81.1	55-147			
Toluene	477.5	10.0	ug/L	500	ND	95.5	71-133			
trans-1,3-Dichloropropene	377.2	10.0	ug/L	504	ND	74.8	63-124			
1,1,2-Trichloroethane	425.9	10.0	ug/L	500	ND	85.2	69-133			
Tetrachloroethylene	490.1	10.0	ug/L	500	ND	98.0	70-124			
2-Hexanone (MBK)	852.1	50.0	ug/L	1030	ND	82.5	53-141			
Dibromochloromethane	443.5	10.0	ug/L	495	ND	89.6	74-122			
1,2-Dibromoethane	429.4	10.0	ug/L	500	ND	85.9	66-127			
Chlorobenzene	484.5	10.0	ug/L	500	ND	96.9	76-116			
1,1,1,2-Tetrachloroethane	491.3	10.0	ug/L	500	ND	98.3	77-121			
Ethylbenzene	472.9	10.0	ug/L	500	ND	94.6	73-124			
Xylenes, total	1423	20.0	ug/L	1500	ND	94.8	75-123			
Styrene	453.6	10.0	ug/L	500	ND	90.7	70-120			
Bromoform	462.6	10.0	ug/L	500	ND	92.5	70-124			
1,2,3-Trichloropropane	437.8	10.0	ug/L	500	ND	87.6	62-135			
trans-1,4-Dichloro-2-butene	691.2	50.0	ug/L	1040	ND	66.5	50-120			
1,1,2,2-Tetrachloroethane	434.5	10.0	ug/L	498	ND	87.2	63-126			
1,4-Dichlorobenzene	442.2	10.0	ug/L	500	ND	88.4	72-119			
1,2-Dichlorobenzene	444.7	10.0	ug/L	500	ND	88.9	71-117			
1,2-Dibromo-3-chloropropane	402.6	50.0	ug/L	500	ND	80.5	49-134			
Surrogate: Dibromofluoromethane	*460*		ug/L	*502*		*91.7*	*80-126*			
Surrogate: Dibromofluoromethane	*460*		ug/L	*502*		*91.7*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*468*		ug/L	*501*		*93.5*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*468*		ug/L	*501*		*93.5*	*61-142*			
Surrogate: Toluene-d8	*497*		ug/L	*504*		*98.6*	*87-116*			
Surrogate: Toluene-d8	*497*		ug/L	*504*		*98.6*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*514*		ug/L	*501*		*103*	*85-111*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
Matrix Spike (1HC1242-MS2)	**Source: 1HC1336-11**	Prepared: 03/21/24 00:00 Analyzed: 03/22/24 06:21								
Surrogate: 4-Bromofluorobenzene	*514*		ug/L	*501*		*103*	*80-116*			
Matrix Spike Dup (1HC1242-MSD1)	**Source: 1HC1337-04**	Prepared: 03/21/24 00:00 Analyzed: 03/22/24 05:54								
Chloromethane	279.3	10.0	ug/L	306	ND	91.1	61-152	4.41	26	
Vinyl Chloride	251.0	10.0	ug/L	302	ND	83.0	66-149	5.01	23	
Bromomethane	260.2	10.0	ug/L	288	ND	90.3	43-171	0.501	29	
Chloroethane	291.1	10.0	ug/L	316	ND	92.0	69-148	5.02	25	
Trichlorofluoromethane	236.7	10.0	ug/L	326	ND	72.6	62-163	7.13	25	
1,1-Dichloroethylene	444.6	10.0	ug/L	500	ND	88.9	70-148	4.08	22	
Acetone	907.8	100	ug/L	1020	ND	89.0	45-173	2.40	30	
Methyl Iodide	943.9	10.0	ug/L	997	ND	94.7	62-167	3.76	24	
Carbon Disulfide	839.9	10.0	ug/L	1010	ND	83.2	71-163	5.90	22	
Methylene Chloride	418.1	50.0	ug/L	500	ND	83.6	69-140	1.12	19	
Acrylonitrile	734.4	50.0	ug/L	1000	ND	73.2	58-151	4.27	15	
trans-1,2-Dichloroethylene	458.3	10.0	ug/L	500	ND	91.7	69-144	3.87	22	
1,1-Dichloroethane	446.0	10.0	ug/L	500	ND	89.2	70-138	3.16	20	
Vinyl Acetate	1014	50.0	ug/L	1020	ND	99.5	58-142	0.871	24	
cis-1,2-Dichloroethylene	432.4	10.0	ug/L	495	ND	87.4	68-151	1.58	22	
2-Butanone (MEK)	833.9	100	ug/L	1030	ND	80.7	50-160	0.395	23	
Bromochloromethane	445.6	10.0	ug/L	500	ND	89.1	65-143	0.157	22	
Chloroform	447.7	10.0	ug/L	500	ND	89.5	71-143	3.08	21	
1,1,1-Trichloroethane	413.2	10.0	ug/L	500	ND	82.7	63-133	4.08	23	
Carbon Tetrachloride	437.6	10.0	ug/L	500	ND	87.5	63-142	4.62	22	
Benzene	499.8	10.0	ug/L	500	ND	100	69-133	5.13	18	
1,2-Dichloroethane	452.1	10.0	ug/L	500	ND	90.4	63-138	2.55	20	
Trichloroethylene	469.2	10.0	ug/L	500	ND	93.8	71-133	5.41	23	
1,2-Dichloropropane	470.0	10.0	ug/L	500	ND	94.0	69-132	1.39	20	
Dibromomethane	475.9	10.0	ug/L	500	ND	95.2	70-147	0.503	22	
Bromodichloromethane	440.5	10.0	ug/L	500	ND	88.1	67-130	2.64	21	
cis-1,3-Dichloropropene	384.0	10.0	ug/L	503	ND	76.3	61-126	0.627	21	
4-Methyl-2-pentanone (MIBK)	824.3	50.0	ug/L	1010	ND	81.3	55-147	2.52	23	
Toluene	478.3	10.0	ug/L	500	ND	95.7	71-133	4.46	19	
trans-1,3-Dichloropropene	395.2	10.0	ug/L	504	ND	78.4	63-124	1.48	21	
1,1,2-Trichloroethane	451.9	10.0	ug/L	500	ND	90.4	69-133	1.41	19	
Tetrachloroethylene	485.1	10.0	ug/L	500	ND	97.0	70-124	7.81	24	
2-Hexanone (MBK)	909.4	50.0	ug/L	1030	ND	88.0	53-141	4.85	24	
Dibromochloromethane	468.0	10.0	ug/L	495	ND	94.5	74-122	1.10	21	
1,2-Dibromoethane	463.3	10.0	ug/L	500	ND	92.7	66-127	0.628	23	
Chlorobenzene	494.9	10.0	ug/L	500	ND	99.0	76-116	3.61	21	
1,1,1,2-Tetrachloroethane	504.6	10.0	ug/L	500	ND	101	77-121	3.06	25	
Ethylbenzene	471.2	10.0	ug/L	500	ND	94.2	73-124	4.95	20	
Xylenes, total	1426	20.0	ug/L	1500	ND	95.1	75-123	4.27	20	
Styrene	462.8	10.0	ug/L	500	ND	92.6	70-120	3.59	23	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HC1242-MSD1)	**Source: 1HC1337-04**	Prepared: 03/21/24 00:00 Analyzed: 03/22/24 05:54								
Bromoform	484.9	10.0	ug/L	500	ND	97.0	70-124	0.617	22	
1,2,3-Trichloropropane	460.6	10.0	ug/L	500	ND	92.1	62-135	1.47	28	
trans-1,4-Dichloro-2-butene	715.9	50.0	ug/L	1040	ND	68.9	50-120	3.66	26	
1,1,2,2-Tetrachloroethane	450.3	10.0	ug/L	498	ND	90.3	63-126	1.32	24	
1,4-Dichlorobenzene	442.4	10.0	ug/L	500	ND	88.5	72-119	4.12	24	
1,2-Dichlorobenzene	447.3	10.0	ug/L	500	ND	89.5	71-117	1.97	24	
1,2-Dibromo-3-chloropropane	401.1	50.0	ug/L	500	ND	80.2	49-134	3.01	28	
Surrogate: Dibromofluoromethane	*487*		ug/L	*502*		*97.1*	*80-126*			
Surrogate: Dibromofluoromethane	*487*		ug/L	*502*		*97.1*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*502*		ug/L	*501*		*100*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*502*		ug/L	*501*		*100*	*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	*520*		ug/L	*501*		*104*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*520*		ug/L	*501*		*104*	*80-116*			
Matrix Spike Dup (1HC1242-MSD2)	**Source: 1HC1336-11**	Prepared: 03/21/24 00:00 Analyzed: 03/22/24 06:47								
Chloromethane	266.0	10.0	ug/L	306	ND	86.8	61-152	4.63	26	
Vinyl Chloride	245.5	10.0	ug/L	302	ND	81.2	66-149	5.27	23	
Bromomethane	246.1	10.0	ug/L	288	ND	85.5	43-171	4.14	29	
Chloroethane	277.3	10.0	ug/L	316	ND	87.7	69-148	5.81	25	
Trichlorofluoromethane	246.5	10.0	ug/L	326	ND	75.6	62-163	3.55	25	
1,1-Dichloroethylene	437.8	10.0	ug/L	500	ND	87.6	70-148	1.74	22	
Acetone	860.1	100	ug/L	1020	ND	84.3	45-173	2.35	30	
Methyl Iodide	897.0	10.0	ug/L	997	ND	90.0	62-167	3.22	24	
Carbon Disulfide	807.5	10.0	ug/L	1010	ND	80.0	71-163	4.30	22	
Methylene Chloride	389.5	50.0	ug/L	500	ND	77.9	69-140	1.35	19	
Acrylonitrile	685.1	50.0	ug/L	1000	ND	68.3	58-151	3.54	15	
trans-1,2-Dichloroethylene	437.5	10.0	ug/L	500	ND	87.5	69-144	1.54	22	
1,1-Dichloroethane	422.7	10.0	ug/L	500	ND	84.5	70-138	1.64	20	
Vinyl Acetate	939.8	50.0	ug/L	1020	ND	92.2	58-142	2.68	24	
cis-1,2-Dichloroethylene	410.6	10.0	ug/L	495	ND	83.0	68-151	0.583	22	
2-Butanone (MEK)	802.9	100	ug/L	1030	ND	77.7	50-160	2.64	23	
Bromochloromethane	417.1	10.0	ug/L	500	ND	83.4	65-143	0.601	22	
Chloroform	424.2	10.0	ug/L	500	ND	84.8	71-143	0.259	21	
1,1,1-Trichloroethane	399.8	10.0	ug/L	500	ND	80.0	63-133	2.32	23	
Carbon Tetrachloride	426.8	10.0	ug/L	500	ND	85.4	63-142	2.48	22	
Benzene	474.7	10.0	ug/L	500	ND	94.9	69-133	4.31	18	
1,2-Dichloroethane	430.6	10.0	ug/L	500	ND	86.1	63-138	0.0697	20	
Trichloroethylene	455.9	10.0	ug/L	500	ND	91.2	71-133	3.45	23	
1,2-Dichloropropane	451.4	10.0	ug/L	500	ND	90.3	69-132	1.32	20	
Dibromomethane	442.3	10.0	ug/L	500	ND	88.5	70-147	0.474	22	
Bromodichloromethane	421.5	10.0	ug/L	500	ND	84.3	67-130	0.591	21	
cis-1,3-Dichloropropene	398.7	10.0	ug/L	503	ND	79.2	61-126	0.425	21	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1242 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HC1242-MSD2)	**Source: 1HC1336-11**		Prepared: 03/21/24 00:00 Analyzed: 03/22/24 06:47							
4-Methyl-2-pentanone (MIBK)	833.1	50.0	ug/L	1010	ND	82.2	55-147	1.30	23	
Toluene	458.5	10.0	ug/L	500	ND	91.7	71-133	4.06	19	
trans-1,3-Dichloropropene	380.5	10.0	ug/L	504	ND	75.5	63-124	0.871	21	
1,1,2-Trichloroethane	427.2	10.0	ug/L	500	ND	85.4	69-133	0.305	19	
Tetrachloroethylene	475.1	10.0	ug/L	500	ND	95.0	70-124	3.11	24	
2-Hexanone (MBK)	866.6	50.0	ug/L	1030	ND	83.9	53-141	1.69	24	
Dibromochloromethane	444.5	10.0	ug/L	495	ND	89.8	74-122	0.225	21	
1,2-Dibromoethane	435.7	10.0	ug/L	500	ND	87.1	66-127	1.46	23	
Chlorobenzene	472.2	10.0	ug/L	500	ND	94.4	76-116	2.57	21	
1,1,1,2-Tetrachloroethane	476.2	10.0	ug/L	500	ND	95.2	77-121	3.12	25	
Ethylbenzene	458.0	10.0	ug/L	500	ND	91.6	73-124	3.20	20	
Xylenes, total	1380	20.0	ug/L	1500	ND	92.0	75-123	3.08	20	
Styrene	441.9	10.0	ug/L	500	ND	88.4	70-120	2.61	23	
Bromoform	454.9	10.0	ug/L	500	ND	91.0	70-124	1.68	22	
1,2,3-Trichloropropane	425.6	10.0	ug/L	500	ND	85.1	62-135	2.83	28	
trans-1,4-Dichloro-2-butene	692.8	50.0	ug/L	1040	ND	66.7	50-120	0.231	26	
1,1,2,2-Tetrachloroethane	442.9	10.0	ug/L	498	ND	88.8	63-126	1.91	24	
1,4-Dichlorobenzene	446.1	10.0	ug/L	500	ND	89.2	72-119	0.878	24	
1,2-Dichlorobenzene	442.1	10.0	ug/L	500	ND	88.4	71-117	0.586	24	
1,2-Dibromo-3-chloropropane	391.2	50.0	ug/L	500	ND	78.2	49-134	2.87	28	
Surrogate: Dibromofluoromethane	*465*		ug/L	*502*		*92.6*	*80-126*			
Surrogate: Dibromofluoromethane	*465*		ug/L	*502*		*92.6*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*472*		ug/L	*501*		*94.3*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*472*		ug/L	*501*		*94.3*	*61-142*			
Surrogate: Toluene-d8	*492*		ug/L	*504*		*97.7*	*87-116*			
Surrogate: Toluene-d8	*492*		ug/L	*504*		*97.7*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*509*		ug/L	*501*		*102*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*509*		ug/L	*501*		*102*	*80-116*			

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1348 - EPA 625 BNA - EPA 8270C										
Blank (1HC1348-BLK1)			Prepared: 03/25/24 12:17 Analyzed: 03/29/24 16:48							
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L							
Surrogate: Nitrobenzene-d5	*20.9*		ug/L	*30.0*		*69.6*	*29-130*			
Surrogate: 2-Fluorobiphenyl	*19.7*		ug/L	*28.8*		*68.4*	*23-113*			
Surrogate: Terphenyl-dl4	*27.0*		ug/L	*28.8*		*93.8*	*27-141*			
LCS (1HC1348-BS1)			Prepared: 03/25/24 12:17 Analyzed: 03/29/24 17:13							
Bis(2-Ethylhexyl) Phthalate	23.9	6	ug/L	25.0		95.4	33-184			

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1348 - EPA 625 BNA - EPA 8270C										
LCS (1HC1348-BS1)				Prepared: 03/25/24 12:17 Analyzed: 03/29/24 17:13						
Surrogate: Nitrobenzene-d5	*24.3*		ug/L	*30.0*		*80.9*	*38-115*			
Surrogate: 2-Fluorobiphenyl	*23.0*		ug/L	*28.8*		*79.8*	*33-110*			
Surrogate: Terphenyl-dl4	*27.3*		ug/L	*28.8*		*94.6*	*30-142*			
LCS Dup (1HC1348-BSD1)				Prepared: 03/25/24 12:17 Analyzed: 03/29/24 17:37						
Bis(2-Ethylhexyl) Phthalate	29.4	6	ug/L	25.0		118	33-184	20.8	30	
Surrogate: Nitrobenzene-d5	*21.9*		ug/L	*30.0*		*72.8*	*38-115*			
Surrogate: 2-Fluorobiphenyl	*23.7*		ug/L	*28.8*		*82.2*	*33-110*			
Surrogate: Terphenyl-dl4	*30.2*		ug/L	*28.8*		*105*	*30-142*			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1321 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HC1321-BLK1)				Prepared: 03/25/24 08:55 Analyzed: 03/25/24 22:32						
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 (1HC1321-BS1)				Prepared: 03/25/24 08:55 Analyzed: 03/25/24 22:38						
Antimony, total	0.0931	0.0020	mg/L	0.100		93.1	80-120			
Arsenic, total	0.0938	0.0040	mg/L	0.100		93.8	80-120			
Barium, total	0.0996	0.0040	mg/L	0.100		99.6	80-120			
Beryllium, total	0.0897	0.0040	mg/L	0.100		89.7	80-120			
Cadmium, total	0.0969	0.0008	mg/L	0.100		96.9	80-120			
Chromium, total	0.0884	0.0080	mg/L	0.100		88.4	80-120			
Cobalt, total	0.103	0.0004	mg/L	0.100		103	80-120			
Copper, total	0.100	0.0040	mg/L	0.100		100	80-120			
Lead, total	0.0946	0.0040	mg/L	0.100		94.6	80-120			
Nickel, total	0.0961	0.0040	mg/L	0.100		96.1	80-120			
Selenium, total	0.0963	0.0040	mg/L	0.100		96.3	80-120			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1321 - EPA 3005A Total Recoverable Metals - EPA 6020A										
LCS (1HC1321-BS1)			Prepared: 03/25/24 08:55 Analyzed: 03/25/24 22:38							
Silver, total	0.0979	0.0040	mg/L	0.100		97.9	80-120			
Thallium, total	0.0944	0.0020	mg/L	0.100		94.4	80-120			
Vanadium, total	0.0903	0.0200	mg/L	0.100		90.3	80-120			
Zinc, total	0.102	0.0200	mg/L	0.100		102	80-120			
Matrix Spike (1HC1321-MS1)	**Source: 1HC1336-01**		Prepared: 03/25/24 08:55 Analyzed: 03/25/24 22:51							
Antimony, total	0.0922	0.0020	mg/L	0.100	ND	92.2	75-125			
Arsenic, total	0.0961	0.0040	mg/L	0.100	0.0040	92.1	75-125			
Barium, total	0.113	0.0040	mg/L	0.100	0.0090	104	75-125			
Beryllium, total	0.0737	0.0040	mg/L	0.100	0.0003	73.4	75-125			QM-07
Cadmium, total	0.0881	0.0008	mg/L	0.100	ND	88.1	75-125			
Chromium, total	0.0876	0.0080	mg/L	0.100	ND	87.6	75-125			
Cobalt, total	0.143	0.0004	mg/L	0.100	0.0428	101	75-125			
Copper, total	0.0862	0.0040	mg/L	0.100	ND	86.2	75-125			
Lead, total	0.0879	0.0040	mg/L	0.100	ND	87.9	75-125			
Nickel, total	0.168	0.0040	mg/L	0.100	0.0742	93.4	75-125			
Selenium, total	0.0931	0.0040	mg/L	0.100	ND	93.1	75-125			
Silver, total	0.0921	0.0040	mg/L	0.100	ND	92.1	75-125			
Thallium, total	0.0916	0.0020	mg/L	0.100	ND	91.6	75-125			
Vanadium, total	0.0847	0.0200	mg/L	0.100	ND	84.7	75-125			
Zinc, total	0.409	0.0200	mg/L	0.100	0.304	105	75-125			
Matrix Spike Dup (1HC1321-MSD1)	**Source: 1HC1336-01**		Prepared: 03/25/24 08:55 Analyzed: 03/25/24 22:57							
Antimony, total	0.0949	0.0020	mg/L	0.100	ND	94.9	75-125	2.92	20	
Arsenic, total	0.0992	0.0040	mg/L	0.100	0.0040	95.3	75-125	3.22	20	
Barium, total	0.118	0.0040	mg/L	0.100	0.0090	109	75-125	4.45	20	
Beryllium, total	0.0753	0.0040	mg/L	0.100	0.0003	75.0	75-125	2.18	20	
Cadmium, total	0.0908	0.0008	mg/L	0.100	ND	90.8	75-125	3.01	20	
Chromium, total	0.0887	0.0080	mg/L	0.100	ND	88.7	75-125	1.33	20	
Cobalt, total	0.145	0.0004	mg/L	0.100	0.0428	103	75-125	1.33	20	
Copper, total	0.0866	0.0040	mg/L	0.100	ND	86.6	75-125	0.492	20	
Lead, total	0.0913	0.0040	mg/L	0.100	ND	91.3	75-125	3.82	20	
Nickel, total	0.169	0.0040	mg/L	0.100	0.0742	95.3	75-125	1.14	20	
Selenium, total	0.0960	0.0040	mg/L	0.100	ND	96.0	75-125	3.11	20	
Silver, total	0.0940	0.0040	mg/L	0.100	ND	94.0	75-125	2.06	20	
Thallium, total	0.0948	0.0020	mg/L	0.100	ND	94.8	75-125	3.40	20	
Vanadium, total	0.0866	0.0200	mg/L	0.100	ND	86.6	75-125	2.25	20	
Zinc, total	0.410	0.0200	mg/L	0.100	0.304	106	75-125	0.439	20	
Post Spike (1HC1321-PS1)	**Source: 1HC1336-01**		Prepared: 03/25/24 08:55 Analyzed: 03/25/24 23:03							
Antimony, total	0.0789		mg/L	0.0800	0.00004	98.5	80-120			
Arsenic, total	0.0817		mg/L	0.0800	0.0039	97.3	80-120			
Barium, total	0.0894		mg/L	0.0800	0.0088	101	80-120			
Beryllium, total	0.0659		mg/L	0.0800	0.0003	82.0	80-120			
Cadmium, total	0.0723		mg/L	0.0800	0.00005	90.3	80-120			
Chromium, total	0.0729		mg/L	0.0800	0.0004	90.6	80-120			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HC1321 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Post Spike (1HC1321-PS1)	**Source: 1HC1336-01**		Prepared: 03/25/24 08:55 Analyzed: 03/25/24 23:03							
Cobalt, total	0.120		mg/L	0.0800	0.0420	97.8	80-120			
Copper, total	0.0708		mg/L	0.0800	0.0008	87.5	80-120			
Lead, total	0.0734		mg/L	0.0800	0.00003	91.7	80-120			
Nickel, total	0.143		mg/L	0.0800	0.0727	87.2	80-120			
Selenium, total	0.0779		mg/L	0.0800	0.0010	96.1	80-120			
Silver, total	0.0756		mg/L	0.0800	0.00004	94.4	80-120			
Thallium, total	0.0747		mg/L	0.0800	0.0001	93.3	80-120			
Vanadium, total	0.0726		mg/L	0.0800	-0.0017	90.8	80-120			
Zinc, total	0.350		mg/L	0.0800	0.298	65.4	80-120			PS-01

Definitions

PS-01: The post spike recovery was below acceptance limits. However, all other QC was acceptable.

QM-07: The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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

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 16:50

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES A Microbac Company

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

Page 1 of

Printed: 2/21/2024 2:03:57P

www.keystonelabs.com

SITE INFORMATION

Sampler: Todd Whipple

Project: SCISWA - New Regs
6009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

Turn Around Time

☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order: 1HC1336

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-307	Water	GRAB	3/19/24	12:47	7	lndfill-app1-voc-group, lndfll-app1-metals-6020, ~~lndfll-app1-voc~~	01
-001	MW-312	Water	GRAB	3/19/24	10:00	7	lndfill-app1-voc-group, lndfll-app1-metals-6020, ~~lndfll-app1-voc~~	02
-001	MW-390	Water	GRAB	3/18/24	8:07	7	lndfill-app1-voc-group, lndfll-app1-metals-6020, ~~lndfll-app1-voc~~	03
-001	MW-300	Water	GRAB	3/19/24	10:33	7	lndfill-app1-voc-group, lndfll-app1-metals-6020, ~~lndfll-app1-voc~~	04
-001	MW-303	Water	GRAB	3/19/24	11:57	7	lndfill-app1-voc-group, lndfll-app1-metals-6020, ~~lndfll-app1-voc~~	05
-001	MW-304	Water	GRAB	3/19/24	12:18	7	lndfill-app1-voc-group, lndfll-app1-metals-6020, ~~lndfll-app1-voc~~	06
-001	MW-313	Water	GRAB	3/19/24	11:14	7	lndfill-app1-voc-group, lndfll-app1-metals-6020, ~~lndfll-app1-voc~~	07

Relinquished By: Todd Whipple Date/Time: 3/20/24

Received By Date/Time

Relinquished By Date/Time

Received for Lab By: Maher Date/Time: 3/20/24 10:05

Remarks:

1HC1336
HLW Engineering
PM: Heather Murphy

Original - Lab Copy Yellow - Sampler Copy

Keystone LABORATORIES A Microbac Company

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

Printed: 2/21/2024 2:03:57P

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: SCISWA - New Regs

6009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

Turn Around Time

☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order: 1HC1336

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-335	Water	GRAB	3/19/24	11:34	7	lndfill-app1-voc-group lndfll-app1-metals-6020 ~~lndfll-app1-voc~~	08
-001	MW-344	Water	GRAB	3/19/24	9:32	7	lndfill-app1-voc-group lndfll-app1-metals-6020	09
-001	MW-380	Water	GRAB	3/18/24	8:52	7	lndfill-app1-voc-group lndfll-app1-metals-6020	10
-001	MW-381	Water	GRAB	3/19/24	8:26	7	lndfill-app1-voc-group lndfll-app1-metals-6020	11
-001	MW-382R	Water	GRAB	3/19/24	8:55	8	8270-110 lndfill-app1-voc-group lndfll-app1-metals-6020	12
-001	MW-384	Water	GRAB	3/19/24	14:30	7	lndfill-app1-voc-group lndfll-app1-metals-6020	13
-001	MW-385	Water	GRAB	3/19/24	14:49	7	lndfill-app1-voc-group lndfll-app1-metals-6020	14

Relinquished By: Todd Whipple Date/Time: 3/20/24

Received By Date/Time

Relinquished By Date/Time

Received for Lab By: Maher Date/Time: 3/20/24 10:05

Remarks

1HC1336
HLW Engineering
PM: Heather Murphy

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES A Microbac Company

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

Printed: 2/21/2024 2:03:57P

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: SCISWA - New Regs
6009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HC1336
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	GU-4A DRY	Water	GRAB	3/19/24	—	0	lndfill-app1-voc-group	lndfl-app1-metals-6020	—
-001	Field Duplicate	Water	GRAB	3/19/24	✓	1	~~lndfill-app1-voc-group~~	lndfl-app1-metals-6020	15
-001	MW-601	Water	GRAB	3/19/24	14:01	7	lndfill-app1-voc-group	lndfl-app1-metals-6020	16
-001	MW-602	Water	GRAB	3/19/24	13:40	7	lndfill-app1-voc-group	lndfl-app1-metals-6020	17
-001	MW-603	Water	GRAB	3/19/24	13:14	7	lndfill-app1-voc-group	lndfl-app1-metals-6020	18

Relinquished By: Todd Whipple Date/Time: 3/20/24

Relinquished By Date/Time

Received By Date/Time

Received for Lab By: MARN Date/Time: 3/20/24 10:05

Remarks:

1HC1336
HLW Engineering
PM: Heather Murphy

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI1853

Project Description

6009

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.

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI1853

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6009

Project / PO Number: N/A
Received: 09/26/2024
Reported: 10/07/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-604	1HI1853-01	Aqueous	GRAB		09/26/24 07:51	09/26/24 10:03

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HI1853

Analytical Testing Parameters

Client Sample ID:	MW-604		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI1853-01	**Collection Date:**	09/26/2024 7:51

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Vinyl Chloride	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Bromomethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Chloroethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Trichlorofluoromethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,1-Dichloroethylene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Acetone	<10.0	10.0	ug/L	1			10/01/24 1445	BDF
Methyl Iodide	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Carbon Disulfide	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Methylene Chloride	<5.0	5.0	ug/L	1			10/01/24 1445	BDF
Acrylonitrile	<5.0	5.0	ug/L	1			10/01/24 1445	BDF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,1-Dichloroethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Vinyl Acetate	<5.0	5.0	ug/L	1			10/01/24 1445	BDF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
2-Butanone (MEK)	<10.0	10.0	ug/L	1			10/01/24 1445	BDF
Bromochloromethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Chloroform	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Carbon Tetrachloride	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Benzene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,2-Dichloroethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Trichloroethylene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,2-Dichloropropane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Dibromomethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Bromodichloromethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1			10/01/24 1445	BDF
Toluene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Tetrachloroethylene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
2-Hexanone (MBK)	<5.0	5.0	ug/L	1			10/01/24 1445	BDF
Dibromochloromethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,2-Dibromoethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Chlorobenzene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Ethylbenzene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
Xylenes, total	<2.0	2.0	ug/L	1			10/01/24 1445	BDF
Styrene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF

Client Sample ID:	MW-604		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HI1853-01	**Collection Date:**	09/26/2024 7:51

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1			10/01/24 1445	BDF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1			10/01/24 1445	BDF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1			10/01/24 1445	BDF
Surrogate: Dibromofluoromethane	98.1	Limit: 57-134	% Rec	1			10/01/24 1445	BDF
Surrogate: Dibromofluoromethane	98.1	Limit: 75-136	% Rec	1			10/01/24 1445	BDF
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1			10/01/24 1445	BDF
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 53-140	% Rec	1			10/01/24 1445	BDF
Surrogate: Toluene-d8	98.5	Limit: 86-114	% Rec	1			10/01/24 1445	BDF
Surrogate: Toluene-d8	98.5	Limit: 82-121	% Rec	1			10/01/24 1445	BDF
Surrogate: 4-Bromofluorobenzene	101	Limit: 78-121	% Rec	1			10/01/24 1445	BDF
Surrogate: 4-Bromofluorobenzene	101	Limit: 80-116	% Rec	1			10/01/24 1445	BDF

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Barium, total	**0.0406**	0.0040	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Cobalt, total	**0.101**	0.0004	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Nickel, total	**0.128**	0.0040	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/01/24 0825	10/02/24 1929	RVV
Zinc, total	**0.0457**	0.0200	mg/L	4		10/01/24 0825	10/02/24 1929	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HJ0009	1HJ0009-BLK1	
		1HJ0009-BS1	
		1HI1853-01	MW-604
		1HJ0009-MS1	1HI1863-01
		1HJ0009-MSD1	1HI1863-01
		1HJ0009-PS1	1HI1863-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ0118	1HJ0118-BS1	
		1HJ0118-BLK1	
		1HI1853-01	MW-604
		1HJ0118-MS1	1HI1863-09
		1HJ0118-MSD1	1HI1863-09

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 1HJ0118 - EPA 5030B - EPA 8260B										
Blank (1HJ0118-BLK1)			Prepared & Analyzed: 10/01/24 09:50							
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							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0118 - EPA 5030B - EPA 8260B										
Blank (1HJ0118-BLK1)			Prepared & Analyzed: 10/01/24 09:50							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*50.2*		ug/L	*50.2*		*100*	*57-134*			
Surrogate: Dibromofluoromethane	*50.2*		ug/L	*50.2*		*100*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*53.4*		ug/L	*50.4*		*106*	*61-142*			
Surrogate: 1,2-Dichloroethane-d4	*53.4*		ug/L	*50.4*		*106*	*53-140*			
Surrogate: Toluene-d8	*58.5*		ug/L	*50.5*		*116*	*86-114*			*S1*
Surrogate: Toluene-d8	*58.5*		ug/L	*50.5*		*116*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*52.4*		ug/L	*50.2*		*104*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*52.4*		ug/L	*50.2*		*104*	*80-116*			
LCS (1HJ0118-BS1)			Prepared & Analyzed: 10/01/24 08:43							
Chloromethane	35.45	1.0	ug/L	30.0		118	63-155			
Vinyl Chloride	34.15	1.0	ug/L	30.0		114	70-154			
Bromomethane	26.59	1.0	ug/L	30.0		88.6	52-176			
Chloroethane	42.35	1.0	ug/L	30.0		141	72-148			
Trichlorofluoromethane	36.28	1.0	ug/L	30.0		121	70-152			
1,1-Dichloroethylene	109.8	1.0	ug/L	100		110	70-148			
Acetone	113.9	10.0	ug/L	101		113	43-172			
Methyl Iodide	111.9	1.0	ug/L	102		110	69-170			
Carbon Disulfide	111.5	1.0	ug/L	103		109	72-162			
Methylene Chloride	104.3	5.0	ug/L	100		104	68-142			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0118 - EPA 5030B - EPA 8260B										
LCS (1HJ0118-BS1)			Prepared & Analyzed: 10/01/24 08:43							
Acrylonitrile	102.6	5.0	ug/L	100		102	56-135			
trans-1,2-Dichloroethylene	107.7	1.0	ug/L	100		108	66-148			
1,1-Dichloroethane	107.8	1.0	ug/L	100		108	66-143			
Vinyl Acetate	109.9	5.0	ug/L	100		110	43-153			
cis-1,2-Dichloroethylene	100.4	1.0	ug/L	100		100	71-149			
2-Butanone (MEK)	106.3	10.0	ug/L	102		104	52-159			
Bromochloromethane	107.7	1.0	ug/L	100		108	69-143			
Chloroform	100.5	1.0	ug/L	100		101	69-144			
1,1,1-Trichloroethane	96.61	1.0	ug/L	100		96.6	62-129			
Carbon Tetrachloride	102.4	1.0	ug/L	100		102	63-141			
Benzene	97.99	1.0	ug/L	100		98.0	71-134			
1,2-Dichloroethane	101.2	1.0	ug/L	100		101	72-132			
Trichloroethylene	98.43	1.0	ug/L	100		98.4	71-135			
1,2-Dichloropropane	88.64	1.0	ug/L	100		88.6	69-136			
Dibromomethane	94.24	1.0	ug/L	100		94.2	73-147			
Bromodichloromethane	91.97	1.0	ug/L	100		92.0	68-129			
cis-1,3-Dichloropropene	92.02	1.0	ug/L	100		92.0	65-134			
4-Methyl-2-pentanone (MIBK)	104.6	5.0	ug/L	100		105	58-147			
Toluene	92.25	1.0	ug/L	100		92.2	72-133			
trans-1,3-Dichloropropene	94.18	1.0	ug/L	100		94.2	67-130			
1,1,2-Trichloroethane	93.09	1.0	ug/L	100		93.1	69-135			
Tetrachloroethylene	103.1	1.0	ug/L	100		103	69-130			
2-Hexanone (MBK)	109.0	5.0	ug/L	99.3		110	55-144			
Dibromochloromethane	109.2	1.0	ug/L	100		109	73-127			
1,2-Dibromoethane	109.0	1.0	ug/L	100		109	67-132			
Chlorobenzene	99.38	1.0	ug/L	100		99.4	72-123			
1,1,1,2-Tetrachloroethane	98.24	1.0	ug/L	100		98.2	73-127			
Ethylbenzene	98.02	1.0	ug/L	100		98.0	71-127			
Xylenes, total	306.7	2.0	ug/L	300		102	74-127			
Styrene	100.4	1.0	ug/L	100		100	66-126			
Bromoform	97.39	1.0	ug/L	100		97.4	68-130			
1,2,3-Trichloropropane	104.2	1.0	ug/L	100		104	63-136			
trans-1,4-Dichloro-2-butene	97.18	5.0	ug/L	103		94.5	54-134			
1,1,2,2-Tetrachloroethane	121.3	1.0	ug/L	100		121	61-131			
1,4-Dichlorobenzene	98.93	1.0	ug/L	100		98.9	70-129			
1,2-Dichlorobenzene	97.42	1.0	ug/L	100		97.4	69-126			
1,2-Dibromo-3-chloropropane	96.60	5.0	ug/L	100		96.6	50-143			
Surrogate: Dibromofluoromethane	*51.2*		ug/L	*50.2*		*102*	*57-134*			
Surrogate: Dibromofluoromethane	*51.2*		ug/L	*50.2*		*102*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*52.8*		ug/L	*50.4*		*105*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*52.8*		ug/L	*50.4*		*105*	*61-142*			
Surrogate: Toluene-d8	*48.4*		ug/L	*50.5*		*95.8*	*86-114*			
Surrogate: Toluene-d8	*48.4*		ug/L	*50.5*		*95.8*	*82-121*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0118 - EPA 5030B - EPA 8260B										
LCS (1HJ0118-BS1)			Prepared & Analyzed: 10/01/24 08:43							
Surrogate: 4-Bromofluorobenzene	*50.8*		ug/L	*50.2*		*101*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*50.8*		ug/L	*50.2*		*101*	*80-116*			
Matrix Spike (1HJ0118-MS1)	**Source: 1HI1863-09**		Prepared & Analyzed: 10/01/24 20:23							
Chloromethane	333.0	10.0	ug/L	300	ND	111	61-152			
Vinyl Chloride	321.9	10.0	ug/L	300	ND	107	66-149			
Bromomethane	258.6	10.0	ug/L	300	ND	86.2	43-171			
Chloroethane	336.1	10.0	ug/L	300	ND	112	69-148			
Trichlorofluoromethane	327.7	10.0	ug/L	300	ND	109	62-163			
1,1-Dichloroethylene	1032	10.0	ug/L	1000	ND	103	70-148			
Acetone	1179	100	ug/L	1010	ND	116	45-173			
Methyl Iodide	906.5	10.0	ug/L	1020	ND	89.0	62-167			
Carbon Disulfide	1012	10.0	ug/L	1030	ND	98.5	71-163			
Methylene Chloride	979.0	50.0	ug/L	1000	ND	97.9	69-140			
Acrylonitrile	1000	50.0	ug/L	1000	ND	99.7	38-147			
trans-1,2-Dichloroethylene	1008	10.0	ug/L	1000	ND	101	69-144			
1,1-Dichloroethane	1006	10.0	ug/L	1000	ND	101	70-138			
Vinyl Acetate	994.0	50.0	ug/L	1000	ND	99.4	58-142			
cis-1,2-Dichloroethylene	916.2	10.0	ug/L	1000	ND	91.6	68-151			
2-Butanone (MEK)	1067	100	ug/L	1020	ND	105	50-160			
Bromochloromethane	1002	10.0	ug/L	1000	ND	100	65-143			
Chloroform	930.4	10.0	ug/L	1000	ND	93.0	71-143			
1,1,1-Trichloroethane	881.5	10.0	ug/L	1000	ND	88.2	63-133			
Carbon Tetrachloride	931.7	10.0	ug/L	1000	ND	93.2	63-142			
Benzene	968.5	10.0	ug/L	1000	ND	96.8	69-133			
1,2-Dichloroethane	991.6	10.0	ug/L	1000	ND	99.2	63-138			
Trichloroethylene	1018	10.0	ug/L	1000	ND	102	71-133			
1,2-Dichloropropane	979.6	10.0	ug/L	1000	ND	98.0	69-132			
Dibromomethane	931.9	10.0	ug/L	1000	ND	93.2	70-147			
Bromodichloromethane	901.0	10.0	ug/L	1000	ND	90.1	67-130			
cis-1,3-Dichloropropene	891.5	10.0	ug/L	1000	ND	89.2	61-126			
4-Methyl-2-pentanone (MIBK)	1042	50.0	ug/L	1000	ND	104	55-147			
Toluene	922.3	10.0	ug/L	1000	ND	92.2	71-133			
trans-1,3-Dichloropropene	905.5	10.0	ug/L	1000	ND	90.6	63-124			
1,1,2-Trichloroethane	915.3	10.0	ug/L	1000	ND	91.5	69-133			
Tetrachloroethylene	1023	10.0	ug/L	1000	ND	102	70-124			
2-Hexanone (MBK)	1129	50.0	ug/L	993	ND	114	53-141			
Dibromochloromethane	994.0	10.0	ug/L	1000	ND	99.4	74-122			
1,2-Dibromoethane	988.7	10.0	ug/L	1000	ND	98.9	66-127			
Chlorobenzene	998.0	10.0	ug/L	1000	ND	99.8	76-116			
1,1,1,2-Tetrachloroethane	981.2	10.0	ug/L	1000	ND	98.1	77-121			
Ethylbenzene	1000	10.0	ug/L	1000	ND	100	73-124			
Xylenes, total	3273	20.0	ug/L	3000	ND	109	75-123			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0118 - EPA 5030B - EPA 8260B										
Matrix Spike (1HJ0118-MS1)	**Source: 1HI1863-09**	Prepared & Analyzed: 10/01/24 20:23								
Styrene	1091	10.0	ug/L	1000	ND	109	70-120			
Bromoform	1020	10.0	ug/L	1000	ND	102	70-124			
1,2,3-Trichloropropane	1129	10.0	ug/L	1000	ND	113	62-135			
trans-1,4-Dichloro-2-butene	981.7	50.0	ug/L	1030	ND	95.5	50-120			
1,1,2,2-Tetrachloroethane	1439	10.0	ug/L	1000	ND	144	63-126			M1
1,4-Dichlorobenzene	991.4	10.0	ug/L	1000	ND	99.1	72-119			
1,2-Dichlorobenzene	986.2	10.0	ug/L	1000	ND	98.6	71-117			
1,2-Dibromo-3-chloropropane	981.4	50.0	ug/L	1000	ND	98.1	49-134			
Surrogate: Dibromofluoromethane	*464*		ug/L	*502*		*92.4*	*57-134*			
Surrogate: Dibromofluoromethane	*464*		ug/L	*502*		*92.4*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*488*		ug/L	*504*		*97.0*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*488*		ug/L	*504*		*97.0*	*61-142*			
Surrogate: Toluene-d8	*477*		ug/L	*505*		*94.5*	*86-114*			
Surrogate: Toluene-d8	*477*		ug/L	*505*		*94.5*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*545*		ug/L	*502*		*109*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*545*		ug/L	*502*		*109*	*80-116*			
Matrix Spike Dup (1HJ0118-MSD1)	**Source: 1HI1863-09**	Prepared & Analyzed: 10/01/24 20:45								
Chloromethane	301.7	10.0	ug/L	300	ND	101	61-152	9.86	26	
Vinyl Chloride	294.3	10.0	ug/L	300	ND	98.1	66-149	8.96	23	
Bromomethane	236.9	10.0	ug/L	300	ND	79.0	43-171	8.76	29	
Chloroethane	308.9	10.0	ug/L	300	ND	103	69-148	8.43	25	
Trichlorofluoromethane	310.4	10.0	ug/L	300	ND	103	62-163	5.42	25	
1,1-Dichloroethylene	960.4	10.0	ug/L	1000	ND	96.0	70-148	7.15	22	
Acetone	1113	100	ug/L	1010	ND	110	45-173	5.74	30	
Methyl Iodide	915.9	10.0	ug/L	1020	ND	89.9	62-167	1.03	24	
Carbon Disulfide	945.9	10.0	ug/L	1030	ND	92.1	71-163	6.73	22	
Methylene Chloride	927.3	50.0	ug/L	1000	ND	92.7	69-140	5.42	19	
Acrylonitrile	969.0	50.0	ug/L	1000	ND	96.5	38-147	3.20	30	
trans-1,2-Dichloroethylene	954.2	10.0	ug/L	1000	ND	95.4	69-144	5.53	22	
1,1-Dichloroethane	956.7	10.0	ug/L	1000	ND	95.7	70-138	4.99	20	
Vinyl Acetate	963.2	50.0	ug/L	1000	ND	96.3	58-142	3.15	24	
cis-1,2-Dichloroethylene	881.9	10.0	ug/L	1000	ND	88.2	68-151	3.82	22	
2-Butanone (MEK)	1027	100	ug/L	1020	ND	101	50-160	3.76	23	
Bromochloromethane	981.0	10.0	ug/L	1000	ND	98.1	65-143	2.16	22	
Chloroform	900.4	10.0	ug/L	1000	ND	90.0	71-143	3.28	21	
1,1,1-Trichloroethane	862.9	10.0	ug/L	1000	ND	86.3	63-133	2.13	23	
Carbon Tetrachloride	921.0	10.0	ug/L	1000	ND	92.1	63-142	1.16	22	
Benzene	933.4	10.0	ug/L	1000	ND	93.3	69-133	3.69	18	
1,2-Dichloroethane	964.1	10.0	ug/L	1000	ND	96.4	63-138	2.81	20	
Trichloroethylene	941.9	10.0	ug/L	1000	ND	94.2	71-133	7.80	23	
1,2-Dichloropropane	962.8	10.0	ug/L	1000	ND	96.3	69-132	1.73	20	
Dibromomethane	969.0	10.0	ug/L	1000	ND	96.9	70-147	3.90	22	
Bromodichloromethane	869.0	10.0	ug/L	1000	ND	86.9	67-130	3.62	21	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0118 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HJ0118-MSD1)	**Source: 1HI1863-09**		Prepared & Analyzed: 10/01/24 20:45							
cis-1,3-Dichloropropene	866.0	10.0	ug/L	1000	ND	86.6	61-126	2.90	21	
4-Methyl-2-pentanone (MIBK)	1042	50.0	ug/L	1000	ND	104	55-147	0.0384	23	
Toluene	887.6	10.0	ug/L	1000	ND	88.8	71-133	3.83	19	
trans-1,3-Dichloropropene	892.1	10.0	ug/L	1000	ND	89.2	63-124	1.49	21	
1,1,2-Trichloroethane	896.3	10.0	ug/L	1000	ND	89.6	69-133	2.10	19	
Tetrachloroethylene	1007	10.0	ug/L	1000	ND	101	70-124	1.62	24	
2-Hexanone (MBK)	1123	50.0	ug/L	993	ND	113	53-141	0.471	24	
Dibromochloromethane	977.6	10.0	ug/L	1000	ND	97.8	74-122	1.66	21	
1,2-Dibromoethane	970.3	10.0	ug/L	1000	ND	97.0	66-127	1.88	23	
Chlorobenzene	981.2	10.0	ug/L	1000	ND	98.1	76-116	1.70	21	
1,1,1,2-Tetrachloroethane	962.0	10.0	ug/L	1000	ND	96.2	77-121	1.98	25	
Ethylbenzene	969.7	10.0	ug/L	1000	ND	97.0	73-124	3.08	20	
Xylenes, total	3036	20.0	ug/L	3000	ND	101	75-123	7.52	20	
Styrene	1006	10.0	ug/L	1000	ND	101	70-120	8.16	23	
Bromoform	1025	10.0	ug/L	1000	ND	103	70-124	0.538	22	
1,2,3-Trichloropropane	1079	10.0	ug/L	1000	ND	108	62-135	4.52	28	
trans-1,4-Dichloro-2-butene	913.3	50.0	ug/L	1030	ND	88.8	50-120	7.22	26	
1,1,2,2-Tetrachloroethane	1242	10.0	ug/L	1000	ND	124	63-126	14.7	24	
1,4-Dichlorobenzene	972.1	10.0	ug/L	1000	ND	97.2	72-119	1.97	24	
1,2-Dichlorobenzene	967.1	10.0	ug/L	1000	ND	96.7	71-117	1.96	24	
1,2-Dibromo-3-chloropropane	1035	50.0	ug/L	1000	ND	103	49-134	5.28	28	
Surrogate: Dibromofluoromethane	*467*		ug/L	*502*		*93.0*	*57-134*			
Surrogate: Dibromofluoromethane	*467*		ug/L	*502*		*93.0*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*493*		ug/L	*504*		*97.9*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*493*		ug/L	*504*		*97.9*	*61-142*			
Surrogate: Toluene-d8	*472*		ug/L	*505*		*93.5*	*86-114*			
Surrogate: Toluene-d8	*472*		ug/L	*505*		*93.5*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*532*		ug/L	*502*		*106*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*532*		ug/L	*502*		*106*	*80-116*			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0009 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HJ0009-BLK1)			Prepared: 10/01/24 08:25 Analyzed: 10/02/24 19:17							
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							

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0009 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HJ0009-BLK1)			Prepared: 10/01/24 08:25 Analyzed: 10/02/24 19:17							
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 (1HJ0009-BS1)			Prepared: 10/01/24 08:25 Analyzed: 10/02/24 19:23							
Antimony, total	0.0943	0.0020	mg/L	0.100		94.3	80-120			
Arsenic, total	0.0935	0.0040	mg/L	0.100		93.5	80-120			
Barium, total	0.105	0.0040	mg/L	0.100		105	80-120			
Beryllium, total	0.0994	0.0040	mg/L	0.100		99.4	80-120			
Cadmium, total	0.0986	0.0008	mg/L	0.100		98.6	80-120			
Chromium, total	0.0940	0.0080	mg/L	0.100		94.0	80-120			
Cobalt, total	0.0990	0.0004	mg/L	0.100		99.0	80-120			
Copper, total	0.0998	0.0040	mg/L	0.100		99.8	80-120			
Lead, total	0.0970	0.0040	mg/L	0.100		97.0	80-120			
Nickel, total	0.100	0.0040	mg/L	0.100		100	80-120			
Selenium, total	0.0932	0.0040	mg/L	0.100		93.2	80-120			
Silver, total	0.0978	0.0040	mg/L	0.100		97.8	80-120			
Thallium, total	0.0934	0.0020	mg/L	0.100		93.4	80-120			
Vanadium, total	0.0968	0.0200	mg/L	0.100		96.8	80-120			
Zinc, total	0.100	0.0200	mg/L	0.100		100	80-120			
Matrix Spike (1HJ0009-MS1)	**Source: 1HI1863-01**		Prepared: 10/01/24 08:25 Analyzed: 10/02/24 19:41							
Antimony, total	0.0975	0.0020	mg/L	0.100	0.0011	96.4	75-125			
Arsenic, total	0.0974	0.0040	mg/L	0.100	0.0011	96.3	75-125			
Barium, total	0.275	0.0040	mg/L	0.100	0.179	96.1	75-125			
Beryllium, total	0.0988	0.0040	mg/L	0.100	ND	98.8	75-125			
Cadmium, total	0.0964	0.0008	mg/L	0.100	0.0006	95.8	75-125			
Chromium, total	0.0973	0.0080	mg/L	0.100	0.0036	93.7	75-125			
Cobalt, total	0.100	0.0004	mg/L	0.100	ND	100	75-125			
Copper, total	0.0971	0.0040	mg/L	0.100	0.0018	95.3	75-125			
Lead, total	0.0957	0.0040	mg/L	0.100	ND	95.7	75-125			
Nickel, total	0.102	0.0040	mg/L	0.100	0.0033	98.2	75-125			
Selenium, total	0.0972	0.0040	mg/L	0.100	0.0017	97.2	75-125			
Silver, total	0.0965	0.0040	mg/L	0.100	ND	96.5	75-125			
Thallium, total	0.0937	0.0020	mg/L	0.100	ND	93.7	75-125			
Vanadium, total	0.100	0.0200	mg/L	0.100	ND	100	75-125			
Zinc, total	0.109	0.0200	mg/L	0.100	ND	109	75-125			
Matrix Spike Dup (1HJ0009-MSD1)	**Source: 1HI1863-01**		Prepared: 10/01/24 08:25 Analyzed: 10/02/24 19:47							
Antimony, total	0.0981	0.0020	mg/L	0.100	0.0011	97.0	75-125	0.652	20	
Arsenic, total	0.0968	0.0040	mg/L	0.100	0.0011	95.7	75-125	0.579	20	
Barium, total	0.294	0.0040	mg/L	0.100	0.179	115	75-125	6.63	20	
Beryllium, total	0.0968	0.0040	mg/L	0.100	ND	96.8	75-125	2.09	20	

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0009 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Matrix Spike Dup (1HJ0009-MSD1)	**Source: 1HI1863-01**	Prepared: 10/01/24 08:25 Analyzed: 10/02/24 19:47								
Cadmium, total	0.0969	0.0008	mg/L	0.100	0.0006	96.3	75-125	0.495	20	
Chromium, total	0.0984	0.0080	mg/L	0.100	0.0036	94.8	75-125	1.12	20	
Cobalt, total	0.102	0.0004	mg/L	0.100	ND	102	75-125	1.44	20	
Copper, total	0.0977	0.0040	mg/L	0.100	0.0018	95.8	75-125	0.600	20	
Lead, total	0.0975	0.0040	mg/L	0.100	ND	97.5	75-125	1.94	20	
Nickel, total	0.104	0.0040	mg/L	0.100	0.0033	100	75-125	2.05	20	
Selenium, total	0.0943	0.0040	mg/L	0.100	0.0017	94.3	75-125	3.08	20	
Silver, total	0.0993	0.0040	mg/L	0.100	ND	99.3	75-125	2.89	20	
Thallium, total	0.0954	0.0020	mg/L	0.100	ND	95.4	75-125	1.84	20	
Vanadium, total	0.102	0.0200	mg/L	0.100	ND	102	75-125	1.79	20	
Zinc, total	0.111	0.0200	mg/L	0.100	ND	111	75-125	1.63	20	
Post Spike (1HJ0009-PS1)	**Source: 1HI1863-01**	Prepared: 10/01/24 08:25 Analyzed: 10/02/24 19:54								
Antimony, total	0.0760		mg/L	0.0800	0.0011	93.6	80-120			
Arsenic, total	0.0768		mg/L	0.0800	0.0011	94.7	80-120			
Barium, total	0.265		mg/L	0.0800	0.176	111	80-120			
Beryllium, total	0.0731		mg/L	0.0800	0.000002	91.3	80-120			
Cadmium, total	0.0746		mg/L	0.0800	0.0006	92.5	80-120			
Chromium, total	0.0750		mg/L	0.0800	0.0035	89.3	80-120			
Cobalt, total	0.0794		mg/L	0.0800	0.0002	99.0	80-120			
Copper, total	0.0762		mg/L	0.0800	0.0018	93.0	80-120			
Lead, total	0.0734		mg/L	0.0800	0.00004	91.7	80-120			
Nickel, total	0.0797		mg/L	0.0800	0.0033	95.5	80-120			
Selenium, total	0.0738		mg/L	0.0800	0.0017	90.1	80-120			
Silver, total	0.0751		mg/L	0.0800	-0.00003	93.9	80-120			
Thallium, total	0.0717		mg/L	0.0800	0.00008	89.5	80-120			
Vanadium, total	0.0795		mg/L	0.0800	0.0046	93.6	80-120			
Zinc, total	0.0863		mg/L	0.0800	0.0150	89.1	80-120			

Definitions

M1:	Matrix spike recovery is above acceptance limits.
RL:	Reporting Limit
RPD:	Relative Percent Difference
S1:	Surrogate recovery is above 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		

Microbac Laboratories, Inc., Newton

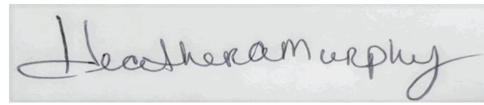
CERTIFICATE OF ANALYSIS

1HI1853

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 11:12

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES, INC.

☐ 600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

☐ 3012 Ansborough
Waterloo, IA 5
Phone: 319-2
Fax: 319-2

☐ VanBuren St
Centerville, IA 52544
Phone: 641-437-7023
Fax: 641-437-7040

1HI1853
HLW Engineering
PM: Heather Murphy

PAGE 1 OF 1

PRINT OR TYPE INFORMATION BELOW	REPORT TO:	BILL TO:
SAMPLER: JGH	NAME: TODD WHIPPLE	NAME: RICK HURT
SITE NAME: SCISWA	COMPANY NAME: HLW ENGINEERING	COMPANY NAME: SCISWA
ADDRESS:	ADDRESS: PO BOX 314	ADDRESS: 1736 HWY T17
CITY/ST/ZIP:	CITY/ST/ZIP: STORY CITY IA 50256	CITY/ST/ZIP: TRACY, IA 50256
PHONE:	PHONE: 515-733-4144	PHONE:
	FAX: 515-733-4145	Keystone Quote No: (If Applicable)

LAB USE ONLY

LABORATORY WORK ORDER NO. 1HI1853

SAMPLE TEMPERATURE UPON RECEIPT: 0.0 ice ✓ °C

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED: APP. I								SAMPLE CONDITION/COMMENTS	LABORATORY SAMPLE NUMBER
MW 604	9/26/24	7:51		7	WATER	G	X									

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Turn-Around:
J. C[illegible]	Date 9/26/24 Time		Date Time	☐ Standard ☐ Rush ______ Contact Lab Prior to Submission
Relinquished by: (Signature)	Date Time	Received for Lab by: (Signature) [signature]	Date 9-26-24 Time 1020?	Remarks:

Original - Lab Copy • Yellow - Sampler Copy

FORM: CCR 7-97

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0522

Project Description

6009

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Tisdale

Customer Relationship Specialist

Friday, October 25, 2024

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

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

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0522

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6009

Project / PO Number: N/A
Received: 10/04/2024
Reported: 10/25/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-307	1HJ0522-01	Aqueous	GRAB		10/03/24 07:35	10/04/24 11:28
MW-312	1HJ0522-02	Aqueous	GRAB		10/03/24 10:02	10/04/24 11:28
MW-390	1HJ0522-03	Aqueous	GRAB		10/03/24 07:55	10/04/24 11:28
MW-300	1HJ0522-04	Aqueous	GRAB		10/03/24 11:35	10/04/24 11:28
MW-303	1HJ0522-05	Aqueous	GRAB		10/03/24 12:42	10/04/24 11:28
MW-304	1HJ0522-06	Aqueous	GRAB		10/03/24 12:59	10/04/24 11:28
MW-313	1HJ0522-07	Aqueous	GRAB		10/03/24 12:12	10/04/24 11:28
MW-335	1HJ0522-08	Aqueous	GRAB		10/03/24 12:29	10/04/24 11:28
MW-344	1HJ0522-09	Aqueous	GRAB		10/03/24 10:39	10/04/24 11:28
MW-380	1HJ0522-10	Aqueous	GRAB		10/03/24 11:20	10/04/24 11:28
MW-381	1HJ0522-11	Aqueous	GRAB		10/03/24 11:53	10/04/24 11:28
MW-382R	1HJ0522-12	Aqueous	GRAB		10/03/24 10:22	10/04/24 11:28
GU-4AR	1HJ0522-13	Aqueous	GRAB		10/03/24 08:17	10/04/24 11:28
MW-601	1HJ0522-14	Aqueous	GRAB		10/03/24 08:30	10/04/24 11:28
MW-602	1HJ0522-15	Aqueous	GRAB		10/03/24 08:50	10/04/24 11:28
MW-603	1HJ0522-16	Aqueous	GRAB		10/03/24 09:08	10/04/24 11:28
MW-604	1HJ0522-17	Aqueous	GRAB		10/03/24 09:33	10/04/24 11:28

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CERTIFICATE OF ANALYSIS

1HJ0522

Analytical Testing Parameters

Client Sample ID:	MW-307		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-01	**Collection Date:**	10/03/2024 7:35

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**117**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**5.6**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**1910**	50.0	mg/L	50		10/15/24 0000	10/15/24 2202	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.245**	0.050	mg/L	1		10/11/24 1527	10/15/24 0615	JAR
Iron, total	**225**	0.100	mg/L	1	**M6**	10/11/24 1527	10/15/24 0615	JAR

Client Sample ID:	MW-312		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-02	**Collection Date:**	10/03/2024 10:02

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**354**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**6.1**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**445**	5.0	mg/L	5		10/15/24 0000	10/16/24 0315	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.058**	0.050	mg/L	1		10/11/24 1527	10/15/24 0651	JAR
Iron, total	**0.815**	0.100	mg/L	1		10/11/24 1527	10/15/24 0651	JAR

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CERTIFICATE OF ANALYSIS

1HJ0522

Client Sample ID:	MW-390			
Sample Matrix:	Aqueous		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-03		**Collection Date:**	10/03/2024 7:55

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**231**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**6.0**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2160**	50.0	mg/L	50		10/15/24 0000	10/15/24 2224	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.162**	0.050	mg/L	1		10/11/24 1527	10/15/24 0700	JAR
Iron, total	**134**	0.100	mg/L	1		10/11/24 1527	10/15/24 0700	JAR

Client Sample ID:	MW-300			
Sample Matrix:	Aqueous		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-04		**Collection Date:**	10/03/2024 11:35

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**230**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**5.7**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2810**	50.0	mg/L	50		10/15/24 0000	10/15/24 2246	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.502**	0.050	mg/L	1		10/11/24 1527	10/15/24 0722	JAR
Iron, total	**113**	0.100	mg/L	1		10/11/24 1527	10/15/24 0722	JAR

Client Sample ID:	MW-303		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-05	**Collection Date:**	10/03/2024 12:42

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**608**	50	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**6.4**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**76.6**	5.0	mg/L	5		10/15/24 0000	10/16/24 0338	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	<0.050	0.050	mg/L	1		10/11/24 1527	10/15/24 0731	JAR
Iron, total	**0.984**	0.100	mg/L	1		10/11/24 1527	10/15/24 0731	JAR

Client Sample ID:	MW-304		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-06	**Collection Date:**	10/03/2024 12:59

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**392**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**6.7**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**75.7**	10.0	mg/L	10		10/15/24 0000	10/16/24 1126	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	<0.050	0.050	mg/L	1		10/11/24 1527	10/15/24 0743	JAR
Iron, total	**0.513**	0.100	mg/L	1		10/11/24 1527	10/15/24 0743	JAR

Client Sample ID:	MW-313			
Sample Matrix:	Aqueous		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-07		**Collection Date:**	10/03/2024 12:12

Determination of Conventional Chemistry Parameters	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
2320B								
Alkalinity, as CaCO3	**584**	50	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**6.7**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 9056								
Sulfate	**1140**	50.0	mg/L	50		10/15/24 0000	10/16/24 0038	MID

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3010A/EPA 6010B								
Aluminum, total	**0.086**	0.050	mg/L	1		10/11/24 1527	10/15/24 0748	JAR
Iron, total	**9.62**	0.100	mg/L	1		10/11/24 1527	10/15/24 0748	JAR

Client Sample ID:	MW-335			
Sample Matrix:	Aqueous		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-08		**Collection Date:**	10/03/2024 12:29

Determination of Conventional Chemistry Parameters	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
2320B								
Alkalinity, as CaCO3	**548**	50	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**6.0**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 9056								
Sulfate	**2620**	50.0	mg/L	50		10/15/24 0000	10/16/24 0101	MID

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3010A/EPA 6010B								
Aluminum, total	**0.127**	0.050	mg/L	1		10/11/24 1527	10/15/24 0758	JAR
Iron, total	**14.0**	0.100	mg/L	1		10/11/24 1527	10/15/24 0758	JAR

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CERTIFICATE OF ANALYSIS

1HJ0522

Client Sample ID:	MW-344		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-09	**Collection Date:**	10/03/2024 10:39

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**214**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**5.7**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2410**	50.0	mg/L	50		10/15/24 0000	10/16/24 1149	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.057**	0.050	mg/L	1		10/11/24 1527	10/15/24 0921	JAR
Iron, total	**1.84**	0.100	mg/L	1		10/11/24 1527	10/15/24 0921	JAR

Client Sample ID:	MW-380		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-10	**Collection Date:**	10/03/2024 11:20

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**32**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**5.0**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2020**	50.0	mg/L	50		10/15/24 0000	10/16/24 0123	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**1.42**	0.050	mg/L	1		10/11/24 1527	10/15/24 0930	JAR
Iron, total	**184**	0.100	mg/L	1		10/11/24 1527	10/15/24 0930	JAR

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CERTIFICATE OF ANALYSIS

1HJ0522

Client Sample ID:	MW-381		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-11	**Collection Date:**	10/03/2024 11:53

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**250**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**6.3**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**792**	50.0	mg/L	50		10/15/24 0000	10/16/24 1211	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.096**	0.050	mg/L	1		10/11/24 1527	10/15/24 0940	JAR
Iron, total	<0.100	0.100	mg/L	1		10/11/24 1527	10/15/24 0940	JAR

Client Sample ID:	MW-382R		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-12	**Collection Date:**	10/03/2024 10:22

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**399**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**6.4**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**1130**	50.0	mg/L	50		10/15/24 0000	10/16/24 1234	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.169**	0.050	mg/L	1		10/11/24 1527	10/15/24 0946	JAR
Iron, total	**1.02**	0.100	mg/L	1		10/11/24 1527	10/15/24 0946	JAR

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CERTIFICATE OF ANALYSIS

1HJ0522

Client Sample ID:	GU-4AR		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-13	**Collection Date:**	10/03/2024 8:17

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**146**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**5.8**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2600**	50.0	mg/L	50		10/15/24 0000	10/16/24 0146	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.111**	0.050	mg/L	1		10/11/24 1527	10/15/24 0955	JAR
Iron, total	**162**	0.100	mg/L	1		10/11/24 1527	10/15/24 0955	JAR

Client Sample ID:	MW-601		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-14	**Collection Date:**	10/03/2024 8:30

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**200**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**6.3**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**829**	50.0	mg/L	50		10/15/24 0000	10/16/24 1256	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.105**	0.050	mg/L	1		10/11/24 1527	10/15/24 1016	JAR
Iron, total	**19.1**	0.100	mg/L	1		10/11/24 1527	10/15/24 1016	JAR

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CERTIFICATE OF ANALYSIS

1HJ0522

Client Sample ID:	MW-602		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-15	**Collection Date:**	10/03/2024 8:50

Determination of Conventional Chemistry Parameters	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
2320B								
Alkalinity, as CaCO3	**47**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**5.3**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 9056								
Sulfate	**1900**	50.0	mg/L	50		10/15/24 0000	10/16/24 0208	MID

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3010A/EPA 6010B								
Aluminum, total	**0.248**	0.050	mg/L	1		10/11/24 1527	10/15/24 1027	JAR
Iron, total	**10.1**	0.100	mg/L	1		10/11/24 1527	10/15/24 1027	JAR

Client Sample ID:	MW-603		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-16	**Collection Date:**	10/03/2024 9:08

Determination of Conventional Chemistry Parameters	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
2320B								
Alkalinity, as CaCO3	**434**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**6.3**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 9056								
Sulfate	**2970**	50.0	mg/L	50		10/15/24 0000	10/16/24 0231	MID

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3010A/EPA 6010B								
Aluminum, total	<0.050	0.050	mg/L	1		10/11/24 1527	10/15/24 1037	JAR
Iron, total	**47.7**	0.100	mg/L	1		10/11/24 1527	10/15/24 1037	JAR

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CERTIFICATE OF ANALYSIS

1HJ0522

Client Sample ID:	MW-604		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HJ0522-17	**Collection Date:**	10/03/2024 9:33

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2320B								
Alkalinity, as CaCO3	**164**	10	mg/L	1		10/07/24 1506	10/08/24 1104	BSS
SM 4500 H+ B								
pH	**5.8**	0.5	pH	1	**H4**		10/07/24 1503	BSS

Determination of Inorganic Anions	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 9056								
Sulfate	**2170**	50.0	mg/L	50		10/15/24 0000	10/16/24 0253	MID

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3010A/EPA 6010B								
Aluminum, total	**0.111**	0.050	mg/L	1		10/11/24 1527	10/15/24 1047	JAR
Iron, total	**61.7**	0.100	mg/L	1		10/11/24 1527	10/15/24 1047	JAR

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500 H+ B	1HJ0411	1HJ0522-07	MW-313
		1HJ0411-DUP1	1HJ0522-01
		1HJ0522-03	MW-390
		1HJ0522-14	MW-601
		1HJ0522-15	MW-602
		1HJ0522-16	MW-603
		1HJ0522-17	MW-604
		1HJ0411-SRM1	
		1HJ0411-SRM2	
		1HJ0522-11	MW-381
		1HJ0411-SRM4	
		1HJ0522-10	MW-380
		1HJ0522-02	MW-312
		1HJ0522-01	MW-307
		1HJ0522-06	MW-304
		1HJ0522-05	MW-303
		1HJ0522-04	MW-300
		1HJ0522-08	MW-335
		1HJ0411-DUP2	1HJ0522-10
		1HJ0522-13	GU-4AR
		1HJ0411-SRM3	
		1HJ0522-12	MW-382R
		1HJ0522-09	MW-344

Method	Batch	Laboratory ID	Client / Source ID
2320B	1HJ0414	1HJ0522-07	MW-313
		1HJ0522-16	MW-603
		1HJ0522-17	MW-604
		1HJ0522-15	MW-602
		1HJ0522-14	MW-601
		1HJ0522-03	MW-390
		1HJ0522-12	MW-382R
		1HJ0522-11	MW-381
		1HJ0522-10	MW-380
		1HJ0522-09	MW-344
		1HJ0522-08	MW-335
		1HJ0522-02	MW-312
		1HJ0522-01	MW-307
		1HJ0522-06	MW-304
		1HJ0522-05	MW-303

Method	Batch	Laboratory ID	Client / Source ID
2320B	1HJ0414	1HJ0522-04	MW-300
		1HJ0414-MSD1	1HJ0522-17
		1HJ0414-MS1	1HJ0522-17
		1HJ0414-BS1	
		1HJ0522-13	GU-4AR
		1HJ0414-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 6010B	1HJ0749	1HJ0749-BLK1	
		1HJ0749-BS1	
		1HJ0522-01	MW-307
		1HJ0749-MS1	1HJ0522-01
		1HJ0749-MSD1	1HJ0522-01
		1HJ0749-PS1	1HJ0522-01
		1HJ0522-02	MW-312
		1HJ0522-03	MW-390
		1HJ0522-04	MW-300
		1HJ0522-05	MW-303
		1HJ0522-06	MW-304
		1HJ0522-07	MW-313
		1HJ0522-08	MW-335
		1HJ0522-09	MW-344
		1HJ0522-10	MW-380
		1HJ0522-11	MW-381
		1HJ0522-12	MW-382R
		1HJ0522-13	GU-4AR
		1HJ0522-14	MW-601
		1HJ0522-15	MW-602
		1HJ0522-16	MW-603
		1HJ0522-17	MW-604

Method	Batch	Laboratory ID	Client / Source ID
EPA 9056	1HJ0990	1HJ0990-BLK1	
		1HJ0990-MRL1	
		1HJ0990-BS1	
		1HJ0990-BSD1	
		1HJ0990-MS1	1HJ0159-02
		1HJ0990-MSD1	1HJ0159-02
		1HJ0990-BLK2	
		1HJ0522-01	MW-307
		1HJ0522-03	MW-390
		1HJ0522-04	MW-300
		1HJ0522-07	MW-313

EPA 9056	1HJ0990	1HJ0522-08	MW-335
		1HJ0522-10	MW-380
		1HJ0522-13	GU-4AR
		1HJ0522-15	MW-602
		1HJ0522-16	MW-603
		1HJ0522-17	MW-604
		1HJ0522-02	MW-312
		1HJ0522-05	MW-303
		1HJ0522-06	MW-304
		1HJ0522-09	MW-344
		1HJ0522-11	MW-381
		1HJ0522-12	MW-382R
		1HJ0522-14	MW-601

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

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0411 - Wet Chem Preparation - SM 4500 H+ B										
Duplicate (1HJ0411-DUP1)	**Source: 1HJ0522-01**		Prepared & Analyzed: 10/07/24 15:03							
pH	5.6	0.5	pH		5.6			0.658	10	
Duplicate (1HJ0411-DUP2)	**Source: 1HJ0522-10**		Prepared & Analyzed: 10/07/24 15:03							
pH	5.0	0.5	pH		5.0			0.0594	10	
Reference (1HJ0411-SRM1)			Prepared & Analyzed: 10/07/24 15:03							
pH	6.9	0.5	pH	7.00		98.5	90-110			
Reference (1HJ0411-SRM2)			Prepared & Analyzed: 10/07/24 15:03							
pH	6.9	0.5	pH	7.00		98.6	90-110			
Reference (1HJ0411-SRM3)			Prepared & Analyzed: 10/07/24 15:03							
pH	6.9	0.5	pH	7.00		98.7	90-110			
Reference (1HJ0411-SRM4)			Prepared & Analyzed: 10/07/24 15:03							
pH	1.6	0.5	pH	1.68		98.0	90-110			
Batch 1HJ0414 - Wet Chem Preparation - 2320B										
Blank (1HJ0414-BLK1)			Prepared: 10/07/24 15:06 Analyzed: 10/08/24 11:04							
Alkalinity, as CaCO3	<10	10	mg/L							
LCS (1HJ0414-BS1)			Prepared: 10/07/24 15:06 Analyzed: 10/08/24 11:04							
Alkalinity, as CaCO3	51.2	10	mg/L	50.0		102	82-112			
Matrix Spike (1HJ0414-MS1)	**Source: 1HJ0522-17**		Prepared: 10/07/24 15:06 Analyzed: 10/08/24 11:04							
Alkalinity, as CaCO3	214	10	mg/L	50.0	164	99.4	70-113			
Matrix Spike Dup (1HJ0414-MSD1)	**Source: 1HJ0522-17**		Prepared: 10/07/24 15:06 Analyzed: 10/08/24 11:04							
Alkalinity, as CaCO3	214	10	mg/L	50.0	164	100	70-113	0.187	10	

Determination of Inorganic Anions	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0990 - General Prep HPLC/IC - EPA 9056										
Blank (1HJ0990-BLK1)			Prepared: 10/15/24 00:00 Analyzed: 10/15/24 11:12							
Sulfate	<1.0	1.0	mg/L							
Blank (1HJ0990-BLK2)			Prepared: 10/15/24 00:00 Analyzed: 10/15/24 18:40							
Sulfate	<1.0	1.0	mg/L							
LCS (1HJ0990-BS1)			Prepared: 10/15/24 00:00 Analyzed: 10/15/24 11:57							
Sulfate	33.22	1.0	mg/L	33.8		98.2	80-120			
LCS Dup (1HJ0990-BSD1)			Prepared: 10/15/24 00:00 Analyzed: 10/15/24 12:19							
Sulfate	33.30	1.0	mg/L	33.8		98.4	80-120	0.238	10	
Matrix Spike (1HJ0990-MS1)	**Source: 1HJ0159-02**		Prepared: 10/15/24 00:00 Analyzed: 10/15/24 14:34							
Sulfate	869.9	10.0	mg/L	338	498.4	110	87-113			
Matrix Spike Dup (1HJ0990-MSD1)	**Source: 1HJ0159-02**		Prepared: 10/15/24 00:00 Analyzed: 10/15/24 14:56							
Sulfate	870.7	10.0	mg/L	338	498.4	110	87-113	0.0908	10	

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0749 - EPA 3010A Digestion (Water) - EPA 6010B										
Blank (1HJ0749-BLK1)			Prepared: 10/11/24 15:27 Analyzed: 10/15/24 06:03							
Aluminum, total	<0.050	0.050	mg/L							
Iron, total	<0.100	0.100	mg/L							
LCS (1HJ0749-BS1)			Prepared: 10/11/24 15:27 Analyzed: 10/15/24 06:09							
Aluminum, total	2.17	0.050	mg/L	2.20		98.6	80-120			
Iron, total	2.23	0.100	mg/L	2.20		101	80-120			
Matrix Spike (1HJ0749-MS1)	**Source: 1HJ0522-01**		Prepared: 10/11/24 15:27 Analyzed: 10/15/24 06:24							
Aluminum, total	2.41	0.050	mg/L	2.20	0.245	98.4	75-125			
Iron, total	232	0.100	mg/L	2.20	225	311	75-125			M6
Matrix Spike Dup (1HJ0749-MSD1)	**Source: 1HJ0522-01**		Prepared: 10/11/24 15:27 Analyzed: 10/15/24 06:36							
Aluminum, total	2.39	0.050	mg/L	2.20	0.245	97.6	75-125	0.793	20	
Iron, total	227	0.100	mg/L	2.20	225	87.7	75-125	2.15	20	
Post Spike (1HJ0749-PS1)	**Source: 1HJ0522-01**		Prepared: 10/11/24 15:27 Analyzed: 10/15/24 06:45							
Aluminum, total	9.44		mg/L	8.80	0.245	105	80-120			
Iron, total	250		mg/L	8.80	225	282	80-120			M6

Definitions

H4:	The test was performed outside of the EPA recommended holding time of 15 minutes.
M6:	Matrix spike recovery is outside of acceptance limits. The analyte concentration is greater than 4X the spiking level.
RL:	Reporting Limit
RPD:	Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler   Temp: 0.0°C

Cooler Inspection Checklist

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

Report Comments

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

Reviewed and Approved By:

Heather Tisdale

Heather Tisdale
Customer Relationship Specialist
10/25/24 12:30

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600 East
Newton, I
641-792-

1HJ0522
HLW Engineering
PM: Heather Murphy

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: SCISWA - AMD

0009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

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

LAB USE ONLY EE EDF

Work Order ~~1HJ055~~ 1HJ0522

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-307	Aqueous	GRAB	10/3/24	7:35	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	01
-001	MW-312	Aqueous	GRAB	10/3/24	10:02	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	02
-001	MW-390	Aqueous	GRAB	10/3/24	7:55	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	03
-001	MW-300	Aqueous	GRAB	10/3/24	11:35	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	04
-001	MW-303	Aqueous	GRAB	10/3/24	12:42	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	05

Relinquished By: Todd Whipple Date/Time: 10/4/24

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Received for Lab By: [signature] Date/Time: 10/4/24 11:28

Remarks:

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641-792-

1HJ0522
HLW Engineering
PM: Heather Murphy

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SITE INFORMATION

Sampler: TODD WHIPPLE

Project: SCISWA - AMD

0009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

Turn Around Time

☐ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1HJ0522

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-304	Aqueous	GRAB	10/3/24	12:59	2	alk-caco3-2320 fe-t-6010 so4-9056-w	al-t-6010 ph-4500	06
-001	MW-313	Aqueous	GRAB	10/3/24	12:12	2	alk-caco3-2320 fe-t-6010 so4-9056-w	al-t-6010 ph-4500	07
-001	MW-335	Aqueous	GRAB	10/3/24	12:29	2	alk-caco3-2320 fe-t-6010 so4-9056-w	al-t-6010 ph-4500	08
-001	MW-344	Aqueous	GRAB	10/3/24	10:39	2	alk-caco3-2320 fe-t-6010 so4-9056-w	al-t-6010 ph-4500	09
-001	MW-380	Aqueous	GRAB	10/3/24	11:20	2	alk-caco3-2320 fe-t-6010 so4-9056-w	al-t-6010 ph-4500	10

Todd Whipple 10/4/24

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Remarks:

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Newton, IA 50
641-792-8451

1HJ0522
HLW Engineering
PM: Heather Murphy

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www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: SCISWA - AMD

0009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

Turn Around Time

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

LAB USE ONLY

Work Order 1HJ0522

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-381	Aqueous	GRAB	10/3/24	11:53	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	11
-001	MW-382R	Aqueous	GRAB	10/3/24	10:22	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	12
-001	GU-4AR	Aqueous	GRAB	10/3/24	8:17	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	13
-001	SW-1 DRY	Aqueous	GRAB	10/3/24	—	0	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	EE ~~BAF14~~
-001	MW-601	Aqueous	GRAB	10/3/24	8:30	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	14 15

Relinquished By: Todd Whipple Date/Time: 10/4/24

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Remarks:

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641[illegible]

1HJ0522
HLW Engineering
PM: Heather Murphy

Printed: 8/12/2024 2:37:23P
www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: SCISWA - AMD
0009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HJ0522
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-602	Aqueous	GRAB	10/3/24	8:50	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	15 ~~16~~ EE EDF
-001	MW-603	Aqueous	GRAB	10/3/24	9:08	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	16 ~~17~~ EE EDF
-001	MW-604	Aqueous	GRAB	10/3/24	9:33	2	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	17 ~~18~~ EE EDF
-001	MW-605 DRY	Aqueous	GRAB	10/3/24	—	0	alk-caco3-2320, al-t-6010, fe-t-6010, ph-4500, so4-9056-w	~~19~~ EE EDF

Relinquished By: Todd Whipple Date/Time: 10/4/24

Relinquished By ___ Date/Time ___

Received By ___ Date/Time ___

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Remarks:

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0520

Project Description

6009

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Thursday, October 17, 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

1HJ0520

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6009

Project / PO Number: N/A
Received: 10/04/2024
Reported: 10/17/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-307	1HJ0520-01	Aqueous	GRAB		10/03/24 07:35	10/04/24 11:28
MW-312	1HJ0520-02	Aqueous	GRAB		10/03/24 10:02	10/04/24 11:28
MW-390	1HJ0520-03	Aqueous	GRAB		10/03/24 07:55	10/04/24 11:28
MW-300	1HJ0520-04	Aqueous	GRAB		10/03/24 11:35	10/04/24 11:28
MW-303	1HJ0520-05	Aqueous	GRAB		10/03/24 12:42	10/04/24 11:28
MW-304	1HJ0520-06	Aqueous	GRAB		10/03/24 12:59	10/04/24 11:28
MW-313	1HJ0520-07	Aqueous	GRAB		10/03/24 12:12	10/04/24 11:28
MW-335	1HJ0520-08	Aqueous	GRAB		10/03/24 12:29	10/04/24 11:28
MW-344	1HJ0520-09	Aqueous	GRAB		10/03/24 10:39	10/04/24 11:28
MW-380	1HJ0520-10	Aqueous	GRAB		10/03/24 11:20	10/04/24 11:28
MW-381	1HJ0520-11	Aqueous	GRAB		10/03/24 11:53	10/04/24 11:28
MW-382R	1HJ0520-12	Aqueous	GRAB		10/03/24 10:22	10/04/24 11:28
GU-4AR	1HJ0520-13	Aqueous	GRAB		10/03/24 08:17	10/04/24 11:28
Field Duplicate	1HJ0520-14	Aqueous	GRAB		10/03/24 00:00	10/04/24 11:28
MW-601	1HJ0520-15	Aqueous	GRAB		10/03/24 08:30	10/04/24 11:28
MW-602	1HJ0520-16	Aqueous	GRAB		10/03/24 08:50	10/04/24 11:28
MW-604	1HJ0520-17	Aqueous	GRAB		10/03/24 09:33	10/04/24 11:28
MW-603	1HJ0520-18	Aqueous	GRAB		10/03/24 09:08	10/04/24 11:28

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CERTIFICATE OF ANALYSIS

1HJ0520

Analytical Testing Parameters

Client Sample ID:	MW-307		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-01	**Collection Date:**	10/03/2024 7:35

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM

Client Sample ID:	MW-307		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-01	**Collection Date:**	10/03/2024 7:35

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2123	CSM
Surrogate: Dibromofluoromethane	104	Limit: 57-134	% Rec	1		10/07/24 0000	10/07/24 2123	CSM
Surrogate: Dibromofluoromethane	104	Limit: 75-136	% Rec	1		10/07/24 0000	10/07/24 2123	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 61-142	% Rec	1		10/07/24 0000	10/07/24 2123	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 53-140	% Rec	1		10/07/24 0000	10/07/24 2123	CSM
Surrogate: Toluene-d8	99.5	Limit: 86-114	% Rec	1		10/07/24 0000	10/07/24 2123	CSM
Surrogate: Toluene-d8	99.5	Limit: 82-121	% Rec	1		10/07/24 0000	10/07/24 2123	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 78-121	% Rec	1		10/07/24 0000	10/07/24 2123	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 80-116	% Rec	1		10/07/24 0000	10/07/24 2123	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Arsenic, total	**0.0045**	0.0040	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Barium, total	**0.0128**	0.0040	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Cobalt, total	**0.0397**	0.0004	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Nickel, total	**0.0698**	0.0040	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 1959	RVV
Zinc, total	**0.253**	0.0200	mg/L	4		10/10/24 1557	10/11/24 1959	RVV

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-312		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-02	**Collection Date:**	10/03/2024 10:02

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM

Client Sample ID:	MW-312		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-02	**Collection Date:**	10/03/2024 10:02

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2146	CSM
Surrogate: Dibromofluoromethane	103	Limit: 57-134	% Rec	1		10/07/24 0000	10/07/24 2146	CSM
Surrogate: Dibromofluoromethane	103	Limit: 75-136	% Rec	1		10/07/24 0000	10/07/24 2146	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 53-140	% Rec	1		10/07/24 0000	10/07/24 2146	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 61-142	% Rec	1		10/07/24 0000	10/07/24 2146	CSM
Surrogate: Toluene-d8	100	Limit: 82-121	% Rec	1		10/07/24 0000	10/07/24 2146	CSM
Surrogate: Toluene-d8	100	Limit: 86-114	% Rec	1		10/07/24 0000	10/07/24 2146	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 78-121	% Rec	1		10/07/24 0000	10/07/24 2146	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 80-116	% Rec	1		10/07/24 0000	10/07/24 2146	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Barium, total	**0.0249**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Cobalt, total	**0.0389**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Nickel, total	**0.0576**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2035	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2035	RVV

Client Sample ID:	MW-390		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-03	**Collection Date:**	10/03/2024 7:55

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		10/07/24 0000	10/07/24 2208	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-390		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-03	**Collection Date:**	10/03/2024 7:55

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		10/07/24 0000	10/07/24 2208	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2208	CSM
Surrogate: Dibromofluoromethane	104	Limit: 57-134	% Rec	1		10/07/24 0000	10/07/24 2208	CSM
Surrogate: Dibromofluoromethane	104	Limit: 75-136	% Rec	1		10/07/24 0000	10/07/24 2208	CSM
Surrogate: 1,2-Dichloroethane-d4	110	Limit: 53-140	% Rec	1		10/07/24 0000	10/07/24 2208	CSM
Surrogate: 1,2-Dichloroethane-d4	110	Limit: 61-142	% Rec	1		10/07/24 0000	10/07/24 2208	CSM
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		10/07/24 0000	10/07/24 2208	CSM
Surrogate: Toluene-d8	101	Limit: 86-114	% Rec	1		10/07/24 0000	10/07/24 2208	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 78-121	% Rec	1		10/07/24 0000	10/07/24 2208	CSM
Surrogate: 4-Bromofluorobenzene	103	Limit: 80-116	% Rec	1		10/07/24 0000	10/07/24 2208	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Arsenic, total	**0.0183**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Barium, total	**0.0163**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Cobalt, total	**0.111**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Nickel, total	**0.0567**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2041	RVV
Zinc, total	**0.170**	0.0200	mg/L	4		10/10/24 1557	10/11/24 2041	RVV

Client Sample ID:	MW-300		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-04	**Collection Date:**	10/03/2024 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		10/07/24 0000	10/07/24 2231	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM

Client Sample ID:	MW-300		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-04	**Collection Date:**	10/03/2024 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		10/07/24 0000	10/07/24 2231	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2231	CSM
Surrogate: Dibromofluoromethane	105	Limit: 57-134	% Rec	1		10/07/24 0000	10/07/24 2231	CSM
Surrogate: Dibromofluoromethane	105	Limit: 75-136	% Rec	1		10/07/24 0000	10/07/24 2231	CSM
Surrogate: 1,2-Dichloroethane-d4	110	Limit: 53-140	% Rec	1		10/07/24 0000	10/07/24 2231	CSM
Surrogate: 1,2-Dichloroethane-d4	110	Limit: 61-142	% Rec	1		10/07/24 0000	10/07/24 2231	CSM
Surrogate: Toluene-d8	102	Limit: 86-114	% Rec	1		10/07/24 0000	10/07/24 2231	CSM
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		10/07/24 0000	10/07/24 2231	CSM
Surrogate: 4-Bromofluorobenzene	104	Limit: 78-121	% Rec	1		10/07/24 0000	10/07/24 2231	CSM
Surrogate: 4-Bromofluorobenzene	104	Limit: 80-116	% Rec	1		10/07/24 0000	10/07/24 2231	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Arsenic, total	**0.0063**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Barium, total	**0.0141**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Cobalt, total	**0.799**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Nickel, total	**0.829**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2048	RVV
Zinc, total	**1.03**	0.0200	mg/L	4		10/10/24 1557	10/11/24 2048	RVV

Client Sample ID:	MW-303		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-05	**Collection Date:**	10/03/2024 12:42

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		10/07/24 0000	10/07/24 2253	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM

Client Sample ID:	MW-303		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-05	**Collection Date:**	10/03/2024 12:42

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		10/07/24 0000	10/07/24 2253	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2253	CSM
Surrogate: Dibromofluoromethane	106	Limit: 75-136	% Rec	1		10/07/24 0000	10/07/24 2253	CSM
Surrogate: Dibromofluoromethane	106	Limit: 57-134	% Rec	1		10/07/24 0000	10/07/24 2253	CSM
Surrogate: 1,2-Dichloroethane-d4	111	Limit: 53-140	% Rec	1		10/07/24 0000	10/07/24 2253	CSM
Surrogate: 1,2-Dichloroethane-d4	111	Limit: 61-142	% Rec	1		10/07/24 0000	10/07/24 2253	CSM
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		10/07/24 0000	10/07/24 2253	CSM
Surrogate: Toluene-d8	102	Limit: 86-114	% Rec	1		10/07/24 0000	10/07/24 2253	CSM
Surrogate: 4-Bromofluorobenzene	117	Limit: 78-121	% Rec	1		10/07/24 0000	10/07/24 2253	CSM
Surrogate: 4-Bromofluorobenzene	117	Limit: 80-116	% Rec	1	**S1**	10/07/24 0000	10/07/24 2253	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Barium, total	**0.0831**	0.0040	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Cobalt, total	**0.0140**	0.0004	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Nickel, total	**0.0135**	0.0040	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/14/24 1144	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/14/24 1144	RVV

Client Sample ID:	MW-304		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-06	**Collection Date:**	10/03/2024 12:59

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		10/07/24 0000	10/07/24 2316	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM

Client Sample ID:	MW-304		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-06	**Collection Date:**	10/03/2024 12:59

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		10/07/24 0000	10/07/24 2316	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2316	CSM
Surrogate: Dibromofluoromethane	107	Limit: 75-136	% Rec	1		10/07/24 0000	10/07/24 2316	CSM
Surrogate: Dibromofluoromethane	107	Limit: 57-134	% Rec	1		10/07/24 0000	10/07/24 2316	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 61-142	% Rec	1		10/07/24 0000	10/07/24 2316	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 53-140	% Rec	1		10/07/24 0000	10/07/24 2316	CSM
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		10/07/24 0000	10/07/24 2316	CSM
Surrogate: Toluene-d8	101	Limit: 86-114	% Rec	1		10/07/24 0000	10/07/24 2316	CSM
Surrogate: 4-Bromofluorobenzene	102	Limit: 80-116	% Rec	1		10/07/24 0000	10/07/24 2316	CSM
Surrogate: 4-Bromofluorobenzene	102	Limit: 78-121	% Rec	1		10/07/24 0000	10/07/24 2316	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Barium, total	**0.0870**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Cobalt, total	**0.0043**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Nickel, total	**0.0065**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2100	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2100	RVV

Client Sample ID:	MW-313		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-07	**Collection Date:**	10/03/2024 12:12

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		10/07/24 0000	10/07/24 2338	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM

CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-313			
Sample Matrix:	Aqueous		**Collected By:**	unknown
Lab Sample ID:	1HJ0520-07		**Collection Date:**	10/03/2024 12:12

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/07/24 2338	CSM
Surrogate: Dibromofluoromethane	106	Limit: 75-136	% Rec	1		10/07/24 0000	10/07/24 2338	CSM
Surrogate: Dibromofluoromethane	106	Limit: 57-134	% Rec	1		10/07/24 0000	10/07/24 2338	CSM
Surrogate: 1,2-Dichloroethane-d4	111	Limit: 53-140	% Rec	1		10/07/24 0000	10/07/24 2338	CSM
Surrogate: 1,2-Dichloroethane-d4	111	Limit: 61-142	% Rec	1		10/07/24 0000	10/07/24 2338	CSM
Surrogate: Toluene-d8	101	Limit: 86-114	% Rec	1		10/07/24 0000	10/07/24 2338	CSM
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		10/07/24 0000	10/07/24 2338	CSM
Surrogate: 4-Bromofluorobenzene	92.2	Limit: 78-121	% Rec	1		10/07/24 0000	10/07/24 2338	CSM
Surrogate: 4-Bromofluorobenzene	92.2	Limit: 80-116	% Rec	1		10/07/24 0000	10/07/24 2338	CSM

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Arsenic, total	**0.0046**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Barium, total	**0.0298**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Cobalt, total	**0.0007**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2106	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2106	RVV

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-335		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-08	**Collection Date:**	10/03/2024 12:29

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM

Client Sample ID:	MW-335		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-08	**Collection Date:**	10/03/2024 12:29

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0001	CSM
Surrogate: Dibromofluoromethane	106	Limit: 75-136	% Rec	1		10/07/24 0000	10/08/24 0001	CSM
Surrogate: Dibromofluoromethane	106	Limit: 57-134	% Rec	1		10/07/24 0000	10/08/24 0001	CSM
Surrogate: 1,2-Dichloroethane-d4	111	Limit: 61-142	% Rec	1		10/07/24 0000	10/08/24 0001	CSM
Surrogate: 1,2-Dichloroethane-d4	111	Limit: 53-140	% Rec	1		10/07/24 0000	10/08/24 0001	CSM
Surrogate: Toluene-d8	101	Limit: 86-114	% Rec	1		10/07/24 0000	10/08/24 0001	CSM
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		10/07/24 0000	10/08/24 0001	CSM
Surrogate: 4-Bromofluorobenzene	92.0	Limit: 80-116	% Rec	1		10/07/24 0000	10/08/24 0001	CSM
Surrogate: 4-Bromofluorobenzene	92.0	Limit: 78-121	% Rec	1		10/07/24 0000	10/08/24 0001	CSM

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Arsenic, total	**0.0117**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Barium, total	**0.0125**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Cobalt, total	**0.0376**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Nickel, total	**0.0557**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2112	RVV
Zinc, total	**0.0264**	0.0200	mg/L	4		10/10/24 1557	10/11/24 2112	RVV

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-344		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-09	**Collection Date:**	10/03/2024 10:39

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
cis-1,2-Dichloroethylene	**1.8**	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-344		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-09	**Collection Date:**	10/03/2024 10:39

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0023	CSM
Surrogate: Dibromofluoromethane	107	Limit: 75-136	% Rec	1		10/07/24 0000	10/08/24 0023	CSM
Surrogate: Dibromofluoromethane	107	Limit: 57-134	% Rec	1		10/07/24 0000	10/08/24 0023	CSM
Surrogate: 1,2-Dichloroethane-d4	113	Limit: 53-140	% Rec	1		10/07/24 0000	10/08/24 0023	CSM
Surrogate: 1,2-Dichloroethane-d4	113	Limit: 61-142	% Rec	1		10/07/24 0000	10/08/24 0023	CSM
Surrogate: Toluene-d8	100	Limit: 82-121	% Rec	1		10/07/24 0000	10/08/24 0023	CSM
Surrogate: Toluene-d8	100	Limit: 86-114	% Rec	1		10/07/24 0000	10/08/24 0023	CSM
Surrogate: 4-Bromofluorobenzene	92.4	Limit: 80-116	% Rec	1		10/07/24 0000	10/08/24 0023	CSM
Surrogate: 4-Bromofluorobenzene	92.4	Limit: 78-121	% Rec	1		10/07/24 0000	10/08/24 0023	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Barium, total	**0.0120**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Cobalt, total	**0.201**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Nickel, total	**0.147**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2118	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2118	RVV

Client Sample ID:	MW-380		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-10	**Collection Date:**	10/03/2024 11:20

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-380			
Sample Matrix:	Aqueous		**Collected By:**	unknown
Lab Sample ID:	1HJ0520-10		**Collection Date:**	10/03/2024 11:20

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0046	CSM
Surrogate: Dibromofluoromethane	106	Limit: 75-136	% Rec	1		10/07/24 0000	10/08/24 0046	CSM
Surrogate: Dibromofluoromethane	106	Limit: 57-134	% Rec	1		10/07/24 0000	10/08/24 0046	CSM
Surrogate: 1,2-Dichloroethane-d4	111	Limit: 61-142	% Rec	1		10/07/24 0000	10/08/24 0046	CSM
Surrogate: 1,2-Dichloroethane-d4	111	Limit: 53-140	% Rec	1		10/07/24 0000	10/08/24 0046	CSM
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		10/07/24 0000	10/08/24 0046	CSM
Surrogate: Toluene-d8	101	Limit: 86-114	% Rec	1		10/07/24 0000	10/08/24 0046	CSM
Surrogate: 4-Bromofluorobenzene	91.9	Limit: 80-116	% Rec	1		10/07/24 0000	10/08/24 0046	CSM
Surrogate: 4-Bromofluorobenzene	91.9	Limit: 78-121	% Rec	1		10/07/24 0000	10/08/24 0046	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Arsenic, total	**0.0112**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Barium, total	**0.0127**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Cobalt, total	**0.263**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Nickel, total	**0.440**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2137	RVV
Zinc, total	**1.15**	0.0200	mg/L	4		10/10/24 1557	10/11/24 2137	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-381		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-11	**Collection Date:**	10/03/2024 11:53

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM

Client Sample ID:	MW-381		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-11	**Collection Date:**	10/03/2024 11:53

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0108	CSM
Surrogate: Dibromofluoromethane	106	Limit: 75-136	% Rec	1		10/07/24 0000	10/08/24 0108	CSM
Surrogate: Dibromofluoromethane	106	Limit: 57-134	% Rec	1		10/07/24 0000	10/08/24 0108	CSM
Surrogate: 1,2-Dichloroethane-d4	113	Limit: 61-142	% Rec	1		10/07/24 0000	10/08/24 0108	CSM
Surrogate: 1,2-Dichloroethane-d4	113	Limit: 53-140	% Rec	1		10/07/24 0000	10/08/24 0108	CSM
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		10/07/24 0000	10/08/24 0108	CSM
Surrogate: Toluene-d8	102	Limit: 86-114	% Rec	1		10/07/24 0000	10/08/24 0108	CSM
Surrogate: 4-Bromofluorobenzene	118	Limit: 78-121	% Rec	1		10/07/24 0000	10/08/24 0108	CSM
Surrogate: 4-Bromofluorobenzene	118	Limit: 80-116	% Rec	1	**S1**	10/07/24 0000	10/08/24 0108	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Barium, total	**0.0121**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Cobalt, total	**0.0008**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2143	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2143	RVV

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-382R		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-12	**Collection Date:**	10/03/2024 10:22

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,1-Dichloroethane	**1.4**	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-382R		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-12	**Collection Date:**	10/03/2024 10:22

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0131	CSM
Surrogate: Dibromofluoromethane	105	Limit: 75-136	% Rec	1		10/07/24 0000	10/08/24 0131	CSM
Surrogate: Dibromofluoromethane	105	Limit: 57-134	% Rec	1		10/07/24 0000	10/08/24 0131	CSM
Surrogate: 1,2-Dichloroethane-d4	109	Limit: 61-142	% Rec	1		10/07/24 0000	10/08/24 0131	CSM
Surrogate: 1,2-Dichloroethane-d4	109	Limit: 53-140	% Rec	1		10/07/24 0000	10/08/24 0131	CSM
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		10/07/24 0000	10/08/24 0131	CSM
Surrogate: Toluene-d8	102	Limit: 86-114	% Rec	1		10/07/24 0000	10/08/24 0131	CSM
Surrogate: 4-Bromofluorobenzene	101	Limit: 80-116	% Rec	1		10/07/24 0000	10/08/24 0131	CSM
Surrogate: 4-Bromofluorobenzene	101	Limit: 78-121	% Rec	1		10/07/24 0000	10/08/24 0131	CSM

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3520C/EPA 8270C								
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		10/07/24 1112	10/15/24 1733	EPP
Surrogate: Nitrobenzene-d5	84.0	Limit: 20-149	% Rec	1		10/07/24 1112	10/15/24 1733	EPP
Surrogate: 2-Fluorobiphenyl	113	Limit: 11-146	% Rec	1		10/07/24 1112	10/15/24 1733	EPP
Surrogate: Terphenyl-dl4	112	Limit: 27-155	% Rec	1		10/07/24 1112	10/15/24 1733	EPP

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Barium, total	**0.0251**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Cobalt, total	**0.0069**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Nickel, total	**0.0123**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2149	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2149	RVV

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	GU-4AR		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-13	**Collection Date:**	10/03/2024 8:17

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	GU-4AR		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-13	**Collection Date:**	10/03/2024 8:17

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0153	CSM
Surrogate: Dibromofluoromethane	105	Limit: 57-134	% Rec	1		10/07/24 0000	10/08/24 0153	CSM
Surrogate: Dibromofluoromethane	105	Limit: 75-136	% Rec	1		10/07/24 0000	10/08/24 0153	CSM
Surrogate: 1,2-Dichloroethane-d4	111	Limit: 53-140	% Rec	1		10/07/24 0000	10/08/24 0153	CSM
Surrogate: 1,2-Dichloroethane-d4	111	Limit: 61-142	% Rec	1		10/07/24 0000	10/08/24 0153	CSM
Surrogate: Toluene-d8	101	Limit: 86-114	% Rec	1		10/07/24 0000	10/08/24 0153	CSM
Surrogate: Toluene-d8	101	Limit: 82-121	% Rec	1		10/07/24 0000	10/08/24 0153	CSM
Surrogate: 4-Bromofluorobenzene	106	Limit: 78-121	% Rec	1		10/07/24 0000	10/08/24 0153	CSM
Surrogate: 4-Bromofluorobenzene	106	Limit: 80-116	% Rec	1		10/07/24 0000	10/08/24 0153	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Arsenic, total	**0.0041**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Barium, total	**0.0121**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Cobalt, total	**0.0562**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Nickel, total	**0.103**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2155	RVV
Zinc, total	**0.188**	0.0200	mg/L	4		10/10/24 1557	10/11/24 2155	RVV

CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	Field Duplicate		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-14	**Collection Date:**	10/03/2024

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		10/10/24 1557	10/11/24 2201	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Barium, total	**0.0382**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Cobalt, total	**0.0179**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Nickel, total	**0.0246**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2201	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2201	RVV

Client Sample ID:	MW-601		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-15	**Collection Date:**	10/03/2024 8:30

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		10/07/24 0000	10/08/24 0216	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM

Client Sample ID:	MW-601		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-15	**Collection Date:**	10/03/2024 8:30

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		10/07/24 0000	10/08/24 0216	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0216	CSM
Surrogate: Dibromofluoromethane	107	Limit: 57-134	% Rec	1		10/07/24 0000	10/08/24 0216	CSM
Surrogate: Dibromofluoromethane	107	Limit: 75-136	% Rec	1		10/07/24 0000	10/08/24 0216	CSM
Surrogate: 1,2-Dichloroethane-d4	113	Limit: 61-142	% Rec	1		10/07/24 0000	10/08/24 0216	CSM
Surrogate: 1,2-Dichloroethane-d4	113	Limit: 53-140	% Rec	1		10/07/24 0000	10/08/24 0216	CSM
Surrogate: Toluene-d8	102	Limit: 86-114	% Rec	1		10/07/24 0000	10/08/24 0216	CSM
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		10/07/24 0000	10/08/24 0216	CSM
Surrogate: 4-Bromofluorobenzene	101	Limit: 80-116	% Rec	1		10/07/24 0000	10/08/24 0216	CSM
Surrogate: 4-Bromofluorobenzene	101	Limit: 78-121	% Rec	1		10/07/24 0000	10/08/24 0216	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Barium, total	**0.0392**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Cobalt, total	**0.0193**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Nickel, total	**0.0258**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2207	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2207	RVV

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-602		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-16	**Collection Date:**	10/03/2024 8:50

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM

Client Sample ID:	MW-602		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-16	**Collection Date:**	10/03/2024 8:50

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0238	CSM
Surrogate: Dibromofluoromethane	106	Limit: 75-136	% Rec	1		10/07/24 0000	10/08/24 0238	CSM
Surrogate: Dibromofluoromethane	106	Limit: 57-134	% Rec	1		10/07/24 0000	10/08/24 0238	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 53-140	% Rec	1		10/07/24 0000	10/08/24 0238	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 61-142	% Rec	1		10/07/24 0000	10/08/24 0238	CSM
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		10/07/24 0000	10/08/24 0238	CSM
Surrogate: Toluene-d8	102	Limit: 86-114	% Rec	1		10/07/24 0000	10/08/24 0238	CSM
Surrogate: 4-Bromofluorobenzene	93.2	Limit: 78-121	% Rec	1		10/07/24 0000	10/08/24 0238	CSM
Surrogate: 4-Bromofluorobenzene	93.2	Limit: 80-116	% Rec	1		10/07/24 0000	10/08/24 0238	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Barium, total	**0.0177**	0.0040	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Cobalt, total	**0.236**	0.0004	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Nickel, total	**0.361**	0.0040	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/14/24 1150	RVV
Zinc, total	**0.166**	0.0200	mg/L	4		10/10/24 1557	10/14/24 1150	RVV

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-604		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-17	**Collection Date:**	10/03/2024 9:33

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM

Client Sample ID:	MW-604		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-17	**Collection Date:**	10/03/2024 9:33

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0301	CSM
Surrogate: Dibromofluoromethane	105	Limit: 75-136	% Rec	1		10/07/24 0000	10/08/24 0301	CSM
Surrogate: Dibromofluoromethane	105	Limit: 57-134	% Rec	1		10/07/24 0000	10/08/24 0301	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 61-142	% Rec	1		10/07/24 0000	10/08/24 0301	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 53-140	% Rec	1		10/07/24 0000	10/08/24 0301	CSM
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		10/07/24 0000	10/08/24 0301	CSM
Surrogate: Toluene-d8	102	Limit: 86-114	% Rec	1		10/07/24 0000	10/08/24 0301	CSM
Surrogate: 4-Bromofluorobenzene	89.2	Limit: 78-121	% Rec	1		10/07/24 0000	10/08/24 0301	CSM
Surrogate: 4-Bromofluorobenzene	89.2	Limit: 80-116	% Rec	1		10/07/24 0000	10/08/24 0301	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Barium, total	**0.0242**	0.0040	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Cobalt, total	**0.0950**	0.0004	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Nickel, total	**0.119**	0.0040	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/14/24 1156	RVV
Zinc, total	**0.0412**	0.0200	mg/L	4		10/10/24 1557	10/14/24 1156	RVV

Client Sample ID:	MW-603		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-18	**Collection Date:**	10/03/2024 9:08

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		10/07/24 0000	10/08/24 0346	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
Acetone	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
Chloroform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Benzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Toluene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Styrene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Bromoform	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM

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CERTIFICATE OF ANALYSIS

1HJ0520

Client Sample ID:	MW-603		
Sample Matrix:	Aqueous	**Collected By:**	unknown
Lab Sample ID:	1HJ0520-18	**Collection Date:**	10/03/2024 9:08

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0346	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/07/24 0000	10/08/24 0323	CSM
Surrogate: Dibromofluoromethane	106	Limit: 75-136	% Rec	1		10/07/24 0000	10/08/24 0323	CSM
Surrogate: Dibromofluoromethane	106	Limit: 57-134	% Rec	1		10/07/24 0000	10/08/24 0323	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 53-140	% Rec	1		10/07/24 0000	10/08/24 0323	CSM
Surrogate: 1,2-Dichloroethane-d4	112	Limit: 61-142	% Rec	1		10/07/24 0000	10/08/24 0323	CSM
Surrogate: Toluene-d8	102	Limit: 86-114	% Rec	1		10/07/24 0000	10/08/24 0323	CSM
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec	1		10/07/24 0000	10/08/24 0323	CSM
Surrogate: 4-Bromofluorobenzene	116	Limit: 78-121	% Rec	1		10/07/24 0000	10/08/24 0346	CSM
Surrogate: 4-Bromofluorobenzene	116	Limit: 80-116	% Rec	1		10/07/24 0000	10/08/24 0346	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Barium, total	**0.0192**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Cobalt, total	**0.0156**	0.0004	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Nickel, total	**0.0066**	0.0040	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2226	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/10/24 1557	10/11/24 2226	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8270C	1HJ0377	1HJ0377-BLK1	
		1HJ0377-BS1	
		1HJ0377-BSD1	
		1HJ0520-12	MW-382R

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ0486	1HJ0486-BS1	
		1HJ0486-BSD1	
		1HJ0486-BLK1	
		1HJ0486-BLK1	
		1HJ0486-MS1	1HJ0520-03
		1HJ0486-MSD1	1HJ0520-03
		1HJ0520-01	MW-307
		1HJ0520-02	MW-312
		1HJ0520-03	MW-390
		1HJ0520-04	MW-300
		1HJ0520-05	MW-303
		1HJ0520-06	MW-304
		1HJ0520-07	MW-313
		1HJ0520-08	MW-335
		1HJ0520-09	MW-344
		1HJ0520-10	MW-380
		1HJ0520-11	MW-381
		1HJ0520-12	MW-382R
		1HJ0520-13	GU-4AR
		1HJ0520-15	MW-601
		1HJ0520-16	MW-602
		1HJ0520-17	MW-604
		1HJ0520-18	MW-603
		1HJ0520-18	MW-603

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HJ0694	1HJ0694-BLK1	
		1HJ0694-BS1	
		1HJ0520-01	MW-307
		1HJ0694-MS1	1HJ0520-01
		1HJ0694-MSD1	1HJ0520-01
		1HJ0520-02	MW-312
		1HJ0520-03	MW-390
		1HJ0520-04	MW-300

EPA 6020A	1HJ0694	1HJ0520-06	MW-304
		1HJ0520-07	MW-313
		1HJ0520-08	MW-335
		1HJ0520-09	MW-344
		1HJ0520-10	MW-380
		1HJ0520-11	MW-381
		1HJ0520-12	MW-382R
		1HJ0520-13	GU-4AR
		1HJ0520-14	Field Duplicate
		1HJ0520-15	MW-601
		1HJ0520-18	MW-603
		1HJ0694-PS1	1HJ0520-01
		1HJ0520-05	MW-303
		1HJ0520-16	MW-602
		1HJ0520-17	MW-604

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 1HJ0486 - EPA 5030B - EPA 8260B										
Blank (1HJ0486-BLK1)				Prepared: 10/07/24 00:00 Analyzed: 10/07/24 19:53						
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
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 1HJ0486 - EPA 5030B - EPA 8260B										
Blank (1HJ0486-BLK1)			Prepared: 10/07/24 00:00 Analyzed: 10/07/24 11:52							
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	*49.8*		ug/L	*50.2*		*99.2*	*57-134*			
Surrogate: Dibromofluoromethane	*49.8*		ug/L	*50.2*		*99.2*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*52.3*		ug/L	*50.4*		*104*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*52.3*		ug/L	*50.4*		*104*	*61-142*			
Surrogate: Toluene-d8	*50.6*		ug/L	*50.5*		*100*	*86-114*			
Surrogate: Toluene-d8	*50.6*		ug/L	*50.5*		*100*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*53.2*		ug/L	*50.2*		*106*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*53.2*		ug/L	*50.2*		*106*	*80-116*			
LCS (1HJ0486-BS1)			Prepared: 10/07/24 00:00 Analyzed: 10/07/24 10:45							
Chloromethane	31.94	1.0	ug/L	30.0		106	63-155			
Vinyl Chloride	29.77	1.0	ug/L	30.0		99.2	70-154			
Bromomethane	24.97	1.0	ug/L	30.0		83.2	52-176			
Chloroethane	31.84	1.0	ug/L	30.0		106	72-148			
Trichlorofluoromethane	31.60	1.0	ug/L	30.0		105	70-152			
1,1-Dichloroethylene	97.58	1.0	ug/L	100		97.6	70-148			
Acetone	102.0	10.0	ug/L	101		101	43-172			
Methyl Iodide	98.21	1.0	ug/L	102		96.4	69-170			
Carbon Disulfide	98.29	1.0	ug/L	103		95.7	72-162			
Methylene Chloride	95.42	5.0	ug/L	100		95.4	68-142			
Acrylonitrile	97.40	5.0	ug/L	100		97.0	56-135			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
LCS (1HJ0486-BS1)				Prepared: 10/07/24 00:00 Analyzed: 10/07/24 10:45						
trans-1,2-Dichloroethylene	97.95	1.0	ug/L	100		98.0	66-148			
1,1-Dichloroethane	98.23	1.0	ug/L	100		98.2	66-143			
Vinyl Acetate	97.52	5.0	ug/L	100		97.5	43-153			
cis-1,2-Dichloroethylene	91.14	1.0	ug/L	100		91.1	71-149			
2-Butanone (MEK)	103.2	10.0	ug/L	102		101	52-159			
Bromochloromethane	98.33	1.0	ug/L	100		98.3	69-143			
Chloroform	91.93	1.0	ug/L	100		91.9	69-144			
1,1,1-Trichloroethane	86.69	1.0	ug/L	100		86.7	62-129			
Carbon Tetrachloride	92.01	1.0	ug/L	100		92.0	63-141			
Benzene	105.6	1.0	ug/L	100		106	71-134			
1,2-Dichloroethane	107.1	1.0	ug/L	100		107	72-132			
Trichloroethylene	99.33	1.0	ug/L	100		99.3	71-135			
1,2-Dichloropropane	95.58	1.0	ug/L	100		95.6	69-136			
Dibromomethane	100.4	1.0	ug/L	100		100	73-147			
Bromodichloromethane	98.49	1.0	ug/L	100		98.5	68-129			
cis-1,3-Dichloropropene	99.22	1.0	ug/L	100		99.2	65-134			
4-Methyl-2-pentanone (MIBK)	114.0	5.0	ug/L	100		114	58-147			
Toluene	100.7	1.0	ug/L	100		101	72-133			
trans-1,3-Dichloropropene	101.2	1.0	ug/L	100		101	67-130			
1,1,2-Trichloroethane	99.57	1.0	ug/L	100		99.6	69-135			
Tetrachloroethylene	101.7	1.0	ug/L	100		102	69-130			
2-Hexanone (MBK)	112.3	5.0	ug/L	99.3		113	55-144			
Dibromochloromethane	100.6	1.0	ug/L	100		101	73-127			
1,2-Dibromoethane	98.00	1.0	ug/L	100		98.0	67-132			
Chlorobenzene	100.5	1.0	ug/L	100		101	72-123			
1,1,1,2-Tetrachloroethane	97.89	1.0	ug/L	100		97.9	73-127			
Ethylbenzene	98.42	1.0	ug/L	100		98.4	71-127			
Xylenes, total	307.9	2.0	ug/L	300		103	74-127			
Styrene	100.7	1.0	ug/L	100		101	66-126			
Bromoform	98.73	1.0	ug/L	100		98.7	68-130			
1,2,3-Trichloropropane	104.4	1.0	ug/L	100		104	63-136			
trans-1,4-Dichloro-2-butene	98.56	5.0	ug/L	103		95.9	54-134			
1,1,2,2-Tetrachloroethane	123.6	1.0	ug/L	100		124	61-131			
1,4-Dichlorobenzene	97.02	1.0	ug/L	100		97.0	70-129			
1,2-Dichlorobenzene	95.70	1.0	ug/L	100		95.7	69-126			
1,2-Dibromo-3-chloropropane	96.90	5.0	ug/L	100		96.9	50-143			
Surrogate: Dibromofluoromethane	*45.8*		ug/L	*50.2*		*91.3*	*57-134*			
Surrogate: Dibromofluoromethane	*45.8*		ug/L	*50.2*		*91.3*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*47.8*		ug/L	*50.4*		*95.0*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*47.8*		ug/L	*50.4*		*95.0*	*61-142*			
Surrogate: Toluene-d8	*52.2*		ug/L	*50.5*		*103*	*86-114*			
Surrogate: Toluene-d8	*52.2*		ug/L	*50.5*		*103*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.7*		ug/L	*50.2*		*99.0*	*78-121*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
LCS (1HJ0486-BS1)				Prepared: 10/07/24 00:00 Analyzed: 10/07/24 10:45						
Surrogate: 4-Bromofluorobenzene	*49.7*		ug/L	*50.2*		*99.0*	*80-116*			
LCS Dup (1HJ0486-BSD1)				Prepared: 10/07/24 00:00 Analyzed: 10/07/24 11:07						
Chloromethane	29.57	1.0	ug/L	30.0		98.6	63-155	7.71	24	
Vinyl Chloride	27.40	1.0	ug/L	30.0		91.3	70-154	8.29	25	
Bromomethane	24.81	1.0	ug/L	30.0		82.7	52-176	0.643	27	
Chloroethane	30.46	1.0	ug/L	30.0		102	72-148	4.43	25	
Trichlorofluoromethane	29.30	1.0	ug/L	30.0		97.7	70-152	7.55	26	
1,1-Dichloroethylene	92.26	1.0	ug/L	100		92.3	70-148	5.60	24	
Acetone	103.0	10.0	ug/L	101		102	43-172	0.947	30	
Methyl Iodide	94.18	1.0	ug/L	102		92.5	69-170	4.19	30	
Carbon Disulfide	92.56	1.0	ug/L	103		90.1	72-162	6.00	24	
Methylene Chloride	92.88	5.0	ug/L	100		92.9	68-142	2.70	21	
Acrylonitrile	97.14	5.0	ug/L	100		96.8	56-135	0.267	16	
trans-1,2-Dichloroethylene	93.06	1.0	ug/L	100		93.1	66-148	5.12	27	
1,1-Dichloroethane	95.09	1.0	ug/L	100		95.1	66-143	3.25	24	
Vinyl Acetate	96.39	5.0	ug/L	100		96.4	43-153	1.17	30	
cis-1,2-Dichloroethylene	87.64	1.0	ug/L	100		87.6	71-149	3.92	26	
2-Butanone (MEK)	102.9	10.0	ug/L	102		101	52-159	0.320	27	
Bromochloromethane	97.23	1.0	ug/L	100		97.2	69-143	1.12	23	
Chloroform	89.21	1.0	ug/L	100		89.2	69-144	3.00	23	
1,1,1-Trichloroethane	82.90	1.0	ug/L	100		82.9	62-129	4.47	24	
Carbon Tetrachloride	88.19	1.0	ug/L	100		88.2	63-141	4.24	25	
Benzene	102.6	1.0	ug/L	100		103	71-134	2.93	24	
1,2-Dichloroethane	105.5	1.0	ug/L	100		105	72-132	1.50	24	
Trichloroethylene	96.24	1.0	ug/L	100		96.2	71-135	3.16	24	
1,2-Dichloropropane	95.18	1.0	ug/L	100		95.2	69-136	0.419	24	
Dibromomethane	101.0	1.0	ug/L	100		101	73-147	0.665	25	
Bromodichloromethane	98.05	1.0	ug/L	100		98.0	68-129	0.448	22	
cis-1,3-Dichloropropene	106.1	1.0	ug/L	100		106	65-134	6.69	23	
4-Methyl-2-pentanone (MIBK)	116.3	5.0	ug/L	100		116	58-147	2.01	27	
Toluene	98.29	1.0	ug/L	100		98.3	72-133	2.38	24	
trans-1,3-Dichloropropene	101.0	1.0	ug/L	100		101	67-130	0.158	24	
1,1,2-Trichloroethane	99.82	1.0	ug/L	100		99.8	69-135	0.251	23	
Tetrachloroethylene	98.06	1.0	ug/L	100		98.1	69-130	3.64	25	
2-Hexanone (MBK)	116.3	5.0	ug/L	99.3		117	55-144	3.49	25	
Dibromochloromethane	100.6	1.0	ug/L	100		101	73-127	0.0298	22	
1,2-Dibromoethane	98.65	1.0	ug/L	100		98.6	67-132	0.661	24	
Chlorobenzene	98.36	1.0	ug/L	100		98.4	72-123	2.16	23	
1,1,1,2-Tetrachloroethane	96.45	1.0	ug/L	100		96.4	73-127	1.48	24	
Ethylbenzene	95.94	1.0	ug/L	100		95.9	71-127	2.55	26	
Xylenes, total	306.4	2.0	ug/L	300		102	74-127	0.472	25	
Styrene	103.1	1.0	ug/L	100		103	66-126	2.41	23	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
LCS Dup (1HJ0486-BSD1)				Prepared: 10/07/24 00:00 Analyzed: 10/07/24 11:07						
Bromoform	101.7	1.0	ug/L	100		102	68-130	2.99	23	
1,2,3-Trichloropropane	109.6	1.0	ug/L	100		110	63-136	4.91	24	
trans-1,4-Dichloro-2-butene	101.3	5.0	ug/L	103		98.6	54-134	2.78	27	
1,1,2,2-Tetrachloroethane	145.0	1.0	ug/L	100		145	61-131	16.0	29	Q2
1,4-Dichlorobenzene	99.21	1.0	ug/L	100		99.2	70-129	2.23	24	
1,2-Dichlorobenzene	98.04	1.0	ug/L	100		98.0	69-126	2.42	26	
1,2-Dibromo-3-chloropropane	101.0	5.0	ug/L	100		101	50-143	4.12	30	
Surrogate: Dibromofluoromethane	*45.6*		ug/L	*50.2*		*90.8*	*57-134*			
Surrogate: Dibromofluoromethane	*45.6*		ug/L	*50.2*		*90.8*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*47.3*		ug/L	*50.4*		*93.9*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*47.3*		ug/L	*50.4*		*93.9*	*61-142*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.5*		*104*	*86-114*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.5*		*104*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*53.7*		ug/L	*50.2*		*107*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*53.7*		ug/L	*50.2*		*107*	*80-116*			
Matrix Spike (1HJ0486-MS1)	**Source: 1HJ0520-03**			Prepared: 10/07/24 00:00 Analyzed: 10/07/24 18:46						
Chloromethane	31.58	1.0	ug/L	30.0	ND	105	61-152			
Vinyl Chloride	28.52	1.0	ug/L	30.0	ND	95.1	66-149			
Bromomethane	22.11	1.0	ug/L	30.0	ND	73.7	43-171			
Chloroethane	34.05	1.0	ug/L	30.0	ND	114	69-148			
Trichlorofluoromethane	32.24	1.0	ug/L	30.0	ND	107	62-163			
1,1-Dichloroethylene	101.5	1.0	ug/L	100	ND	102	70-148			
Acetone	115.3	10.0	ug/L	101	ND	114	45-173			
Methyl Iodide	99.68	1.0	ug/L	102	ND	97.8	62-167			
Carbon Disulfide	101.6	1.0	ug/L	103	ND	99.0	71-163			
Methylene Chloride	98.97	5.0	ug/L	100	ND	99.0	69-140			
Acrylonitrile	105.9	5.0	ug/L	100	ND	105	38-147			
trans-1,2-Dichloroethylene	100.3	1.0	ug/L	100	ND	100	69-144			
1,1-Dichloroethane	99.23	1.0	ug/L	100	ND	99.2	70-138			
Vinyl Acetate	101.2	5.0	ug/L	100	ND	101	58-142			
cis-1,2-Dichloroethylene	92.99	1.0	ug/L	100	ND	93.0	68-151			
2-Butanone (MEK)	108.9	10.0	ug/L	102	ND	107	50-160			
Bromochloromethane	103.6	1.0	ug/L	100	ND	104	65-143			
Chloroform	92.53	1.0	ug/L	100	ND	92.5	71-143			
1,1,1-Trichloroethane	86.87	1.0	ug/L	100	ND	86.9	63-133			
Carbon Tetrachloride	88.20	1.0	ug/L	100	ND	88.2	63-142			
Benzene	95.45	1.0	ug/L	100	ND	95.4	69-133			
1,2-Dichloroethane	99.60	1.0	ug/L	100	ND	99.6	63-138			
Trichloroethylene	90.15	1.0	ug/L	100	ND	90.2	71-133			
1,2-Dichloropropane	87.36	1.0	ug/L	100	ND	87.4	69-132			
Dibromomethane	92.91	1.0	ug/L	100	ND	92.9	70-147			
Bromodichloromethane	93.53	1.0	ug/L	100	ND	93.5	67-130			
cis-1,3-Dichloropropene	90.70	1.0	ug/L	100	ND	90.7	61-126			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
Matrix Spike (1HJ0486-MS1)	**Source: 1HJ0520-03**		Prepared: 10/07/24 00:00 Analyzed: 10/07/24 18:46							
4-Methyl-2-pentanone (MIBK)	106.1	5.0	ug/L	100	ND	106	55-147			
Toluene	91.95	1.0	ug/L	100	ND	92.0	71-133			
trans-1,3-Dichloropropene	93.56	1.0	ug/L	100	ND	93.6	63-124			
1,1,2-Trichloroethane	92.18	1.0	ug/L	100	ND	92.2	69-133			
Tetrachloroethylene	87.49	1.0	ug/L	100	ND	87.5	70-124			
2-Hexanone (MBK)	107.7	5.0	ug/L	99.3	ND	108	53-141			
Dibromochloromethane	92.01	1.0	ug/L	100	ND	92.0	74-122			
1,2-Dibromoethane	92.67	1.0	ug/L	100	ND	92.7	66-127			
Chlorobenzene	90.20	1.0	ug/L	100	ND	90.2	76-116			
1,1,1,2-Tetrachloroethane	87.47	1.0	ug/L	100	ND	87.5	77-121			
Ethylbenzene	88.59	1.0	ug/L	100	ND	88.6	73-124			
Xylenes, total	271.2	2.0	ug/L	300	ND	90.4	75-123			
Styrene	85.93	1.0	ug/L	100	ND	85.9	70-120			
Bromoform	85.24	1.0	ug/L	100	ND	85.2	70-124			
1,2,3-Trichloropropane	91.76	1.0	ug/L	100	ND	91.8	62-135			
trans-1,4-Dichloro-2-butene	85.58	5.0	ug/L	103	ND	83.2	50-120			
1,1,2,2-Tetrachloroethane	114.1	1.0	ug/L	100	ND	114	63-126			
1,4-Dichlorobenzene	89.92	1.0	ug/L	100	ND	89.9	72-119			
1,2-Dichlorobenzene	89.70	1.0	ug/L	100	ND	89.7	71-117			
1,2-Dibromo-3-chloropropane	92.09	5.0	ug/L	100	ND	92.1	49-134			
Surrogate: Dibromofluoromethane	*50.1*		ug/L	*50.2*		*99.7*	*57-134*			
Surrogate: Dibromofluoromethane	*50.1*		ug/L	*50.2*		*99.7*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*50.2*		ug/L	*50.4*		*99.7*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*50.2*		ug/L	*50.4*		*99.7*	*61-142*			
Surrogate: Toluene-d8	*52.2*		ug/L	*50.5*		*103*	*86-114*			
Surrogate: Toluene-d8	*52.2*		ug/L	*50.5*		*103*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*47.3*		ug/L	*50.2*		*94.3*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*47.3*		ug/L	*50.2*		*94.3*	*80-116*			
Matrix Spike Dup (1HJ0486-MSD1)	**Source: 1HJ0520-03**		Prepared: 10/07/24 00:00 Analyzed: 10/07/24 19:09							
Chloromethane	30.05	1.0	ug/L	30.0	ND	100	61-152	4.97	26	
Vinyl Chloride	29.57	1.0	ug/L	30.0	ND	98.6	66-149	3.62	23	
Bromomethane	23.35	1.0	ug/L	30.0	ND	77.8	43-171	5.46	29	
Chloroethane	32.09	1.0	ug/L	30.0	ND	107	69-148	5.93	25	
Trichlorofluoromethane	32.28	1.0	ug/L	30.0	ND	108	62-163	0.124	25	
1,1-Dichloroethylene	99.15	1.0	ug/L	100	ND	99.2	70-148	2.35	22	
Acetone	107.4	10.0	ug/L	101	ND	106	45-173	7.12	30	
Methyl Iodide	98.73	1.0	ug/L	102	ND	96.9	62-167	0.958	24	
Carbon Disulfide	97.88	1.0	ug/L	103	ND	95.3	71-163	3.76	22	
Methylene Chloride	94.06	5.0	ug/L	100	ND	94.1	69-140	5.09	19	
Acrylonitrile	95.96	5.0	ug/L	100	ND	95.6	38-147	9.85	30	
trans-1,2-Dichloroethylene	97.69	1.0	ug/L	100	ND	97.7	69-144	2.66	22	
1,1-Dichloroethane	98.48	1.0	ug/L	100	ND	98.5	70-138	0.759	20	
Vinyl Acetate	97.81	5.0	ug/L	100	ND	97.8	58-142	3.37	24	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0486 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HJ0486-MSD1)	**Source: 1HJ0520-03**	Prepared: 10/07/24 00:00 Analyzed: 10/07/24 19:09								
cis-1,2-Dichloroethylene	90.86	1.0	ug/L	100	ND	90.9	68-151	2.32	22	
2-Butanone (MEK)	99.87	10.0	ug/L	102	ND	98.1	50-160	8.66	23	
Bromochloromethane	98.52	1.0	ug/L	100	ND	98.5	65-143	5.01	22	
Chloroform	91.96	1.0	ug/L	100	ND	92.0	71-143	0.618	21	
1,1,1-Trichloroethane	88.36	1.0	ug/L	100	ND	88.4	63-133	1.70	23	
Carbon Tetrachloride	94.38	1.0	ug/L	100	ND	94.4	63-142	6.77	22	
Benzene	94.12	1.0	ug/L	100	ND	94.1	69-133	1.40	18	
1,2-Dichloroethane	96.77	1.0	ug/L	100	ND	96.8	63-138	2.88	20	
Trichloroethylene	89.29	1.0	ug/L	100	ND	89.3	71-133	0.959	23	
1,2-Dichloropropane	85.34	1.0	ug/L	100	ND	85.3	69-132	2.34	20	
Dibromomethane	95.29	1.0	ug/L	100	ND	95.3	70-147	2.53	22	
Bromodichloromethane	93.16	1.0	ug/L	100	ND	93.2	67-130	0.396	21	
cis-1,3-Dichloropropene	88.72	1.0	ug/L	100	ND	88.7	61-126	2.21	21	
4-Methyl-2-pentanone (MIBK)	102.8	5.0	ug/L	100	ND	103	55-147	3.18	23	
Toluene	90.11	1.0	ug/L	100	ND	90.1	71-133	2.02	19	
trans-1,3-Dichloropropene	89.78	1.0	ug/L	100	ND	89.8	63-124	4.12	21	
1,1,2-Trichloroethane	89.81	1.0	ug/L	100	ND	89.8	69-133	2.60	19	
Tetrachloroethylene	99.81	1.0	ug/L	100	ND	99.8	70-124	13.2	24	
2-Hexanone (MBK)	107.9	5.0	ug/L	99.3	ND	109	53-141	0.213	24	
Dibromochloromethane	102.8	1.0	ug/L	100	ND	103	74-122	11.1	21	
1,2-Dibromoethane	102.3	1.0	ug/L	100	ND	102	66-127	9.88	23	
Chlorobenzene	95.01	1.0	ug/L	100	ND	95.0	76-116	5.19	21	
1,1,1,2-Tetrachloroethane	93.38	1.0	ug/L	100	ND	93.4	77-121	6.54	25	
Ethylbenzene	95.07	1.0	ug/L	100	ND	95.1	73-124	7.06	20	
Xylenes, total	294.5	2.0	ug/L	300	ND	98.2	75-123	8.27	20	
Styrene	96.42	1.0	ug/L	100	ND	96.4	70-120	11.5	23	
Bromoform	95.11	1.0	ug/L	100	ND	95.1	70-124	10.9	22	
1,2,3-Trichloropropane	100.7	1.0	ug/L	100	ND	101	62-135	9.28	28	
trans-1,4-Dichloro-2-butene	94.52	5.0	ug/L	103	ND	91.9	50-120	9.93	26	
1,1,2,2-Tetrachloroethane	116.5	1.0	ug/L	100	ND	117	63-126	2.12	24	
1,4-Dichlorobenzene	93.64	1.0	ug/L	100	ND	93.6	72-119	4.05	24	
1,2-Dichlorobenzene	93.24	1.0	ug/L	100	ND	93.2	71-117	3.87	24	
1,2-Dibromo-3-chloropropane	94.15	5.0	ug/L	100	ND	94.2	49-134	2.21	28	
Surrogate: Dibromofluoromethane	*48.7*		ug/L	*50.2*		*96.9*	*57-134*			
Surrogate: Dibromofluoromethane	*48.7*		ug/L	*50.2*		*96.9*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*50.3*		ug/L	*50.4*		*100*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*50.3*		ug/L	*50.4*		*100*	*61-142*			
Surrogate: Toluene-d8	*49.2*		ug/L	*50.5*		*97.5*	*86-114*			
Surrogate: Toluene-d8	*49.2*		ug/L	*50.5*		*97.5*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*50.6*		ug/L	*50.2*		*101*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*50.6*		ug/L	*50.2*		*101*	*80-116*			

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0377 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HJ0377-BLK1)			Prepared: 10/07/24 11:12 Analyzed: 10/15/24 13:28							
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L							
Surrogate: Nitrobenzene-d5	*23.0*		ug/L	*30.8*		*74.4*	*20-149*			
Surrogate: 2-Fluorobiphenyl	*21.8*		ug/L	*29.3*		*74.5*	*11-146*			
Surrogate: Terphenyl-dl4	*28.5*		ug/L	*30.9*		*92.2*	*27-155*			
LCS (1HJ0377-BS1)			Prepared: 10/07/24 11:12 Analyzed: 10/15/24 13:52							
Bis(2-Ethylhexyl) Phthalate	27.9	6	ug/L	24.0		116	27-186			
Surrogate: Nitrobenzene-d5	*23.5*		ug/L	*30.8*		*76.3*	*31-137*			
Surrogate: 2-Fluorobiphenyl	*22.1*		ug/L	*29.3*		*75.5*	*29-131*			
Surrogate: Terphenyl-dl4	*28.7*		ug/L	*30.9*		*92.9*	*30-142*			
LCS Dup (1HJ0377-BSD1)			Prepared: 10/07/24 11:12 Analyzed: 10/15/24 14:17							
Bis(2-Ethylhexyl) Phthalate	29.4	6	ug/L	24.0		122	27-186	5.31	30	
Surrogate: Nitrobenzene-d5	*23.2*		ug/L	*30.8*		*75.2*	*31-137*			
Surrogate: 2-Fluorobiphenyl	*22.3*		ug/L	*29.3*		*76.0*	*29-131*			
Surrogate: Terphenyl-dl4	*30.3*		ug/L	*30.9*		*98.0*	*30-142*			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0694 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HJ0694-BLK1)			Prepared: 10/10/24 15:57 Analyzed: 10/11/24 19:46							
Antimony, total	<0.0020	0.0020	mg/L							
Arsenic, total	<0.0040	0.0040	mg/L							
Barium, total	<0.0040	0.0040	mg/L							
Beryllium, total	<0.0040	0.0040	mg/L							
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 (1HJ0694-BS1)			Prepared: 10/10/24 15:57 Analyzed: 10/11/24 19:53							
Antimony, total	0.0955	0.0020	mg/L	0.100		95.5	80-120			
Arsenic, total	0.0953	0.0040	mg/L	0.100		95.3	80-120			
Barium, total	0.108	0.0040	mg/L	0.100		108	80-120			
Beryllium, total	0.0990	0.0040	mg/L	0.100		99.0	80-120			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0694 - EPA 3005A Total Recoverable Metals - EPA 6020A										
LCS (1HJ0694-BS1)			Prepared: 10/10/24 15:57 Analyzed: 10/11/24 19:53							
Cadmium, total	0.0956	0.0008	mg/L	0.100		95.6	80-120			
Chromium, total	0.0929	0.0080	mg/L	0.100		92.9	80-120			
Cobalt, total	0.0997	0.0004	mg/L	0.100		99.7	80-120			
Copper, total	0.0996	0.0040	mg/L	0.100		99.6	80-120			
Lead, total	0.0960	0.0040	mg/L	0.100		96.0	80-120			
Nickel, total	0.0997	0.0040	mg/L	0.100		99.7	80-120			
Selenium, total	0.0915	0.0040	mg/L	0.100		91.5	80-120			
Silver, total	0.0984	0.0040	mg/L	0.100		98.4	80-120			
Thallium, total	0.0922	0.0020	mg/L	0.100		92.2	80-120			
Vanadium, total	0.0971	0.0200	mg/L	0.100		97.1	80-120			
Zinc, total	0.0949	0.0200	mg/L	0.100		94.9	80-120			
Matrix Spike (1HJ0694-MS1)	**Source: 1HJ0520-01**		Prepared: 10/10/24 15:57 Analyzed: 10/11/24 20:05							
Antimony, total	0.0929	0.0020	mg/L	0.100	ND	92.9	75-125			
Arsenic, total	0.0993	0.0040	mg/L	0.100	0.0045	94.8	75-125			
Barium, total	0.122	0.0040	mg/L	0.100	0.0128	109	75-125			
Beryllium, total	0.0782	0.0040	mg/L	0.100	0.0003	77.9	75-125			
Cadmium, total	0.0886	0.0008	mg/L	0.100	ND	88.6	75-125			
Chromium, total	0.0884	0.0080	mg/L	0.100	ND	88.4	75-125			
Cobalt, total	0.139	0.0004	mg/L	0.100	0.0397	99.1	75-125			
Copper, total	0.0833	0.0040	mg/L	0.100	ND	83.3	75-125			
Lead, total	0.0891	0.0040	mg/L	0.100	ND	89.1	75-125			
Nickel, total	0.164	0.0040	mg/L	0.100	0.0698	94.5	75-125			
Selenium, total	0.0936	0.0040	mg/L	0.100	ND	93.6	75-125			
Silver, total	0.0911	0.0040	mg/L	0.100	ND	91.1	75-125			
Thallium, total	0.0879	0.0020	mg/L	0.100	0.0002	87.9	75-125			
Vanadium, total	0.0931	0.0200	mg/L	0.100	ND	93.1	75-125			
Zinc, total	0.331	0.0200	mg/L	0.100	0.253	78.1	75-125			
Matrix Spike Dup (1HJ0694-MSD1)	**Source: 1HJ0520-01**		Prepared: 10/10/24 15:57 Analyzed: 10/11/24 20:23							
Antimony, total	0.0934	0.0020	mg/L	0.100	ND	93.4	75-125	0.522	20	
Arsenic, total	0.101	0.0040	mg/L	0.100	0.0045	96.7	75-125	1.97	20	
Barium, total	0.122	0.0040	mg/L	0.100	0.0128	109	75-125	0.0917	20	
Beryllium, total	0.0794	0.0040	mg/L	0.100	0.0003	79.0	75-125	1.50	20	
Cadmium, total	0.0891	0.0008	mg/L	0.100	ND	89.1	75-125	0.551	20	
Chromium, total	0.0891	0.0080	mg/L	0.100	ND	89.1	75-125	0.819	20	
Cobalt, total	0.139	0.0004	mg/L	0.100	0.0397	98.9	75-125	0.191	20	
Copper, total	0.0855	0.0040	mg/L	0.100	ND	85.5	75-125	2.57	20	
Lead, total	0.0909	0.0040	mg/L	0.100	ND	90.9	75-125	2.03	20	
Nickel, total	0.166	0.0040	mg/L	0.100	0.0698	96.2	75-125	1.08	20	
Selenium, total	0.0929	0.0040	mg/L	0.100	ND	92.9	75-125	0.791	20	
Silver, total	0.0923	0.0040	mg/L	0.100	ND	92.3	75-125	1.30	20	
Thallium, total	0.0891	0.0020	mg/L	0.100	0.0002	89.1	75-125	1.37	20	
Vanadium, total	0.0933	0.0200	mg/L	0.100	ND	93.3	75-125	0.215	20	
Zinc, total	0.343	0.0200	mg/L	0.100	0.253	89.5	75-125	3.39	20	

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ0694 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Post Spike (1HJ0694-PS1)	**Source: 1HJ0520-01**		Prepared: 10/10/24 15:57 Analyzed: 10/14/24 11:37							
Antimony, total	0.0768		mg/L	0.0800	0.00008	95.9	80-120			
Arsenic, total	0.0828		mg/L	0.0800	0.0044	97.9	80-120			
Barium, total	0.0945		mg/L	0.0800	0.0126	102	80-120			
Beryllium, total	0.0641		mg/L	0.0800	0.0003	79.8	80-120			Q
Cadmium, total	0.0740		mg/L	0.0800	0.00008	92.4	80-120			
Chromium, total	0.0754		mg/L	0.0800	0.0003	93.9	80-120			
Cobalt, total	0.122		mg/L	0.0800	0.0389	103	80-120			
Copper, total	0.0739		mg/L	0.0800	0.0001	92.2	80-120			
Lead, total	0.0769		mg/L	0.0800	0.0005	95.6	80-120			
Nickel, total	0.150		mg/L	0.0800	0.0684	101	80-120			
Selenium, total	0.0733		mg/L	0.0800	0.0007	90.7	80-120			
Silver, total	0.0751		mg/L	0.0800	0.0001	93.8	80-120			
Thallium, total	0.0750		mg/L	0.0800	0.0002	93.5	80-120			
Vanadium, total	0.0801		mg/L	0.0800	0.0007	99.3	80-120			
Zinc, total	0.320		mg/L	0.0800	0.248	89.3	80-120			

Definitions

Q:	One or more quality control criteria failed.
Q2:	LCS recovery is above acceptance limits.
RL:	Reporting Limit
RPD:	Relative Percent Difference
S1:	Surrogate recovery is above 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

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
10/17/24 10:49

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CHAIN OF CU[STODY RECORD]

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Newton, IA 50208
641-792-8451

1 H J 0 5 2 0
HLW Engineering
PM: Heather Murphy

Printed: 8/12/2024 2:28:40P
www.keystonelabs.com

SITE INFORMATION

Sampler:

Project: SCISWA - New Regs
6009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

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

LAB USE ONLY

Work Order: 1HJ0520
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-307	Aqueous	GRAB	10/3/24	7:35	7	lndfill-app1-voc-group	lndfil-app1-metals-6020	01
-001	MW-312	Aqueous	GRAB	10/3/24	10:02	7	lndfill-app1-voc-group	lndfil-app1-metals-6020	02
-001	MW-390	Aqueous	GRAB	10/3/24	7:55	7	lndfill-app1-voc-group	lndfil-app1-metals-6020	03
-001	MW-300	Aqueous	GRAB	10/3/24	11:35	7	lndfill-app1-voc-group	lndfil-app1-metals-6020	04
-001	MW-303	Aqueous	GRAB	10/3/24	12:42	7	lndfill-app1-voc-group	lndfil-app1-metals-6020	05
-001	MW-304	Aqueous	GRAB	10/3/24	12:59	7	lndfill-app1-voc-group	lndfil-app1-metals-6020	06
-001	MW-313	Aqueous	GRAB	10/3/24	12:12	7	lndfill-app1-voc-group	lndfil-app1-metals-6020	07

Relinquished By: [signature] Date/Time: 10/4/24

Relinquished By: Date/Time:

Received By: Date/Time:

Received for Lab By: [signature] Date/Time: 10/4/24 11:28

Remarks:

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF CUSTODY RECORD

MICROBAC®

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

1HJ0520
HLW Engineering
PM: Heather Murphy

Page 2 of
...ted: 8/12/2024 2:28:40P
www.keystonelabs.com

SITE INFORMATION

Sampler:

Project: SCISWA - New Regs

6009

REPORT TO

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

INVOICE TO

Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

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

LAB USE ONLY

Work Order 1HJ0520
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-335	Aqueous	GRAB	10/3/24	12:29	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	08
-001	MW-344	Aqueous	GRAB	10/3/24	10:39	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	09
-001	MW-380	Aqueous	GRAB	10/3/24	11:20	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	10
-001	MW-381	Aqueous	GRAB	10/3/24	11:53	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	11
-001	MW-382R	Aqueous	GRAB	10/3/24	10:22	8	8270-110 lndfll-app1-metals-6020	lndfill-app1-voc-group	12
-001	GU-4AR	Aqueous	GRAB	10/3/24	8:17	7	lndfill-app1-voc-group	lndfll-app1-metals-6020	13
-001	Field Duplicate	Aqueous	GRAB	10/3/24	✓	1	~~lndfill-app1-voc-group~~	lndfll-app1-metals-6020	14

Relinquished By: Todd Whipple Date/Time: 10/4/24

Relinquished By Date/Time

Received By Date/Time

Received for Lab By: [signature] Date/Time: 10/4/24 11:28

Remarks:

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF CUSTODY RECORD

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600 East 17th Street South
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SITE INFORMATION

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Story City, IA 50248

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Rick Hurt
South Central IA Solid Waste Agency
1736 Highway T17
Tracy, IA 50256

SPECIAL INSTRUCTIONS

None

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

LAB USE ONLY

Work Order: 1HJ0520
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-601	Aqueous	GRAB	10/3/24	8:30	7	lndfill-app1-voc-group lndfil-app1-metals-6020	15
-001	MW-602	Aqueous	GRAB	10/3/24	8:50	7	lndfill-app1-voc-group lndfil-app1-metals-6020	16
-001	MW-604	Aqueous	GRAB	10/3/24	9:33	7	lndfill-app1-voc-group lndfil-app1-metals-6020	17
-001	MW-605	Aqueous	GRAB	10/3/24	—	0	lndfill-app1-voc-group lndfil-app1-metals-6020	—
-001	MW-603	Aqueous	GRAB	10/3/24	9:08	7	lndfill-app1-voc-group lndfil-app1-metals-6020	18

Relinquished By: Todd Whipple Date/Time: 10/4/24

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Received By: Date/Time:

Received for Lab By: [signature] Date/Time: 10/4/24 11:28

Remarks:

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Appendix E

Field Turbidity (NTU) Summary

SCISWA Sanitary Landfill

Field Turbidity Over Time

No-Purge Sampling

	6/16/22	9/1/22	11/15/22	3/6/23	9/29/23	3/19/24	9/26/24	10/3/24	Max	Min	Ave	Std Dev
Well	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**	**NTU**				
300		1.8	6.46	2.3	5.47	3.67		3.67	6.46	1.80	3.90	1.79
303		9.73		21.66	22.6	41.19		2.44	41.19	2.44	19.52	14.76
304		8.45		23.6	25.62	2.60		3.27	25.62	2.60	12.71	11.12
307	1.06	1.72		2.61	5.2	2.50		3.59	5.20	1.06	2.78	1.46
312		8.52		43.81	9.35	2.00		2.42	43.81	2.00	13.22	17.43
313		23.75		16.43	9.94	21.82		28.39	28.39	9.94	20.07	7.10
335		9.06		146.8	22.03	21.04		6.19	146.80	6.19	41.02	59.55
344	2.18	6.87		147.2	10.14	5.59		4.67	147.20	2.18	29.44	57.75
380		26.56		9.77	10.74	22.41		4.38	26.56	4.38	14.77	9.31
381		1.4		24.84	8.36	2.17		2.20	24.84	1.40	7.79	9.93
382R		3		47.34	9.64	13.86		8.42	47.34	3.00	16.45	17.70
390		6.67		10.35	21.13	4.20		7.14	21.13	4.20	9.90	6.65
GU-4AR								2.04	2.04	2.04	2.04	
SW-1				2.61					2.61	2.61	2.61	
601		1.47		2.25	17.62	2.23		3.94	17.62	1.47	5.50	6.83
602		25.11		109.9	53.02	42.15		23.71	109.90	23.71	50.78	35.24
603		29.96		39.96	15.94	4.48		2.13	39.96	2.13	18.49	16.30
604							12.10	2.81	12.10	2.81	7.46	6.57
605									0.00	0.00	#DIV/0!	#DIV/0!
Max	2.18	215.80	6.46	147.20	53.02	42.15	12.10	28.39				
Min	1.06	1.40	6.46	1.01	5.20	2.00	12.10	2.04				
Median	1.62	8.45	6.46	23.60	10.74	5.59	12.10	3.67				
Average	1.62	22.54	6.46	39.67	17.30	12.59	12.10	6.55				

Appendix F

Summary of VOC Quantification Limit Exceedances

Spring 2020		**Fall 2020**	
MW-344*	cis-1,2-dichloroethylene	MW-344*	cis-1,2-dichloroethylene
MW-382R*	1,1-dichloroethane	MW-382R*	1,1-dichloroethane

Spring 2021		**Fall 2021**	
MW-344*	cis-1,2-dichloroethylene	MW-344*	cis-1,2-dichloroethylene
MW-382R*	1,1-dichloroethane	MW-382R*	1,1-dichloroethane

Spring 2022		**Fall 2022**	
MW-344*	cis-1,2-dichloroethylene	MW-344*	cis-1,2-dichloroethylene
MW-382R*	1,1-dichloroethane	MW-382R*	None

Spring 2023		**Fall 2023**	
MW-344*	None	MW-344*	benzene
MW-344*	None	MW-344*	cis-1,2-dichloroethylene
MW-382R*	1,1-dichloroethane	MW-382R*	bis(2ethylhexyl)phthalate

Spring 2024		**Fall 2024**	
MW-344*	cis-1,2-dichloroethylene	MW-344*	cis-1,2-dichloroethylene
MW-382R*	None	MW-382R*	1,1-dichloroethane

**Assessment Monitoring Well.*

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Acetone	GU-4A	9/27/2017		3.19	1.79	ug/L
Acetone	GU-4A	3/14/2018		2.79	1.79	ug/L
Bromomethane	GU-4A	10/20/2016		.433	.220	ug/L
Methylene Chloride	GU-4A	9/25/2014		.802	.170	ug/L
Methylene Chloride	GU-4A	10/20/2016		.303	.170	ug/L
Methylene Chloride	GU-4A	9/27/2017		.335	.170	ug/L
Vinyl Chloride	GU-4A	3/14/2018		.103	.100	ug/L
Acetone	MW-300	3/17/2009		16.40	4.62	ug/L
Acetone	MW-300	3/25/2010		12.50	.00	ug/L
Acetone	MW-300	9/23/2010		12.90	.00	ug/L
Acetone	MW-300	4/16/2014		47.80	1.79	ug/L
Acetone	MW-300	9/26/2017		4.29	1.79	ug/L
Acetone	MW-300	3/14/2018		48.60	1.79	ug/L
Acetone	MW-300	3/28/2019		3.10	3.10	ug/L
Acetone	MW-300	4/15/2021		5.12	3.10	ug/L
Acetone	MW-300	10/27/2021		5.67	3.10	ug/L
Methylene Chloride	MW-300	10/20/2016		.264	.170	ug/L
Methylene Chloride	MW-300	3/07/2017		.214	.170	ug/L
Styrene	MW-300	10/27/2021		.383	.370	ug/L
Xylenes, Total	MW-300	9/25/2013		1.11	.13	ug/L
Acetone	MW-303	9/25/2017		2.21	1.79	ug/L
Carbon Disulfide	MW-303	10/21/2016		.231	.150	ug/L
Methylene Chloride	MW-303	9/25/2014		.573	.170	ug/L
Methylene Chloride	MW-303	10/21/2016		.308	.170	ug/L
Methylene Chloride	MW-303	3/13/2018		.226	.170	ug/L
Xylenes, Total	MW-303	9/26/2013		.232	.130	ug/L
Xylenes, Total	MW-303	10/21/2016		.390	.130	ug/L
Xylenes, Total	MW-303	3/08/2017		.459	.130	ug/L
Acetone	MW-304	6/28/2017		3.74	1.79	ug/L
Acetone	MW-304	9/26/2017		2.99	1.79	ug/L
Bromomethane	MW-304	9/26/2017		.372	.220	ug/L
Bromomethane	MW-304	3/14/2018		.448	.220	ug/L
Methylene Chloride	MW-304	1/18/2017		.264	.170	ug/L
Acetone	MW-307	3/08/2017		2.61	1.79	ug/L
Acetone	MW-307	9/25/2017		2.41	1.79	ug/L
Acetonitrile	MW-307	9/26/2013		739	126	ug/L
Methylene Chloride	MW-307	10/21/2016		.231	.170	ug/L
Xylenes, Total	MW-307	10/21/2016		.324	.130	ug/L
Xylenes, Total	MW-307	3/08/2017		.362	.130	ug/L
Xylenes, Total	MW-307	3/27/2019		.481	.400	ug/L
Acetone	MW-310	3/08/2017		2.61	1.79	ug/L
Acetone	MW-310	9/27/2017		3.78	1.79	ug/L
Acetone	MW-310	3/14/2018		1.96	1.79	ug/L
Acetonitrile	MW-310	9/26/2013		841	126	ug/L
Methylene Chloride	MW-310	9/25/2014		.756	.170	ug/L
Methylene Chloride	MW-310	10/20/2016		.186	.170	ug/L
Xylenes, Total	MW-310	10/20/2016		.351	.130	ug/L
Xylenes, Total	MW-310	3/08/2017		1.090	.130	ug/L
Xylenes, Total	MW-310	9/27/2017		.363	.130	ug/L
Acetone	MW-312	3/08/2017		2.39	1.79	ug/L
Bromomethane	MW-312	9/25/2017		.233	.220	ug/L
Methylene Chloride	MW-312	10/21/2016		.295	.170	ug/L
Methylene Chloride	MW-312	3/13/2018		.334	.170	ug/L
Xylenes, Total	MW-312	3/08/2017		.654	.130	ug/L
Xylenes, Total	MW-312	10/27/2021		1.050	.400	ug/L
4,4`-DDD	MW-313	9/25/2013		.00214	.00188	ug/L
4,4`-DDE	MW-313	9/25/2013		.00320	.00219	ug/L
Acetone	MW-313	9/26/2014		1.88	1.79	ug/L
Acetone	MW-313	3/08/2017		1.87	1.79	ug/L
Acetone	MW-313	9/25/2017		2.76	1.79	ug/L
Acetone	MW-313	3/27/2019		3.82	3.10	ug/L
alpha-BHC	MW-313	9/25/2013		.00451	.00177	ug/L
beta-BHC	MW-313	9/25/2013		.00598	.00500	ug/L
Bromomethane	MW-313	10/21/2016		2.660	.220	ug/L
Bromomethane	MW-313	9/25/2017		.344	.220	ug/L
Bromomethane	MW-313	10/26/2021		1.280	1.100	ug/L
Chloromethane	MW-313	10/21/2016		.701	.310	ug/L
delta-BHC	MW-313	9/25/2013		.00444	.00240	ug/L
Iodomethane	MW-313	10/21/2016		1.41	.80	ug/L
Methylene Chloride	MW-313	10/21/2016		.277	.170	ug/L
Methylene Chloride	MW-313	3/13/2018		.207	.170	ug/L
Xylenes, Total	MW-313	9/25/2013		.321	.130	ug/L
Xylenes, Total	MW-313	10/21/2016		1.890	.130	ug/L
Xylenes, Total	MW-313	3/08/2017		.786	.130	ug/L
Acetonitrile	MW-333	9/26/2013		964	126	ug/L
Acetone	MW-335	9/26/2017		2.49	1.79	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
Acetone	MW-335	3/14/2018		2.33	1.79	ug/L
Bromomethane	MW-335	9/26/2017		.402	.220	ug/L
Chloromethane	MW-335	10/19/2016		.336	.310	ug/L
Methylene Chloride	MW-335	9/25/2014		.617	.170	ug/L
Methylene Chloride	MW-335	10/19/2016		.260	.170	ug/L
Xylenes, Total	MW-335	3/07/2017		.173	.130	ug/L
1,1-Dichloroethane	MW-344	3/07/2017		.290	.210	ug/L
1,1-Dichloroethane	MW-344	9/26/2017		.475	.210	ug/L
1,1-Dichloroethane	MW-344	3/14/2018		.474	.210	ug/L
1,1-Dichloroethane	MW-344	9/15/2020		.408	.220	ug/L
1,1-Dichloroethane	MW-344	4/15/2021		.345	.220	ug/L
1,2-Dichloroethane	MW-344	9/26/2017		.207	.180	ug/L
Acetone	MW-344	3/14/2018		3.22	1.79	ug/L
Acetone	MW-344	3/28/2019		3.61	3.10	ug/L
Benzene	MW-344	9/25/2013		.215	.110	ug/L
Benzene	MW-344	4/15/2014		.268	.110	ug/L
Benzene	MW-344	9/26/2014		.198	.110	ug/L
Benzene	MW-344	3/12/2015		.281	.500	ug/L
Benzene	MW-344	10/19/2016		.594	.110	ug/L
Benzene	MW-344	3/07/2017		.543	.110	ug/L
Benzene	MW-344	9/26/2017		.894	.110	ug/L
Benzene	MW-344	3/14/2018		.715	.110	ug/L
Benzene	MW-344	10/02/2018		.732	.220	ug/L
Benzene	MW-344	9/24/2019		.541	.220	ug/L
Benzene	MW-344	9/15/2020		.836	.220	ug/L
Benzene	MW-344	4/15/2021		.722	.220	ug/L
Benzene	MW-344	10/27/2021		.918	.220	ug/L
Benzene	MW-344	4/14/2022		.390	.220	ug/L
Benzene	MW-344	9/29/2023		1.100	1.000	ug/L
Chloroethane	MW-344	9/25/2013		.514	.150	ug/L
Chloroethane	MW-344	9/26/2017		.462	.150	ug/L
cis-1,2-Dichloroethene	MW-344	3/27/2013		.301	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/25/2013		.976	.130	ug/L
cis-1,2-Dichloroethene	MW-344	4/15/2014		1.300	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/26/2014		.819	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/02/2015		1.140	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	3/23/2016		1.120	.010	ug/L
cis-1,2-Dichloroethene	MW-344	10/19/2016		2.040	.130	ug/L
cis-1,2-Dichloroethene	MW-344	3/07/2017		1.820	.130	ug/L
cis-1,2-Dichloroethene	MW-344	9/26/2017		2.480	.130	ug/L
cis-1,2-Dichloroethene	MW-344	3/14/2018		2.240	.130	ug/L
cis-1,2-Dichloroethene	MW-344	10/02/2018		1.900	.210	ug/L
cis-1,2-Dichloroethene	MW-344	3/28/2019		1.180	.210	ug/L
cis-1,2-Dichloroethene	MW-344	9/24/2019		1.820	.210	ug/L
cis-1,2-Dichloroethene	MW-344	3/10/2020		1.360	.210	ug/L
cis-1,2-Dichloroethene	MW-344	9/15/2020		2.440	.210	ug/L
cis-1,2-Dichloroethene	MW-344	4/15/2021		2.020	.210	ug/L
cis-1,2-Dichloroethene	MW-344	10/27/2021		2.180	.210	ug/L
cis-1,2-Dichloroethene	MW-344	4/14/2022		1.270	.210	ug/L
cis-1,2-Dichloroethene	MW-344	9/01/2022		1.900	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	9/29/2023		2.400	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	3/19/2024		1.100	1.000	ug/L
cis-1,2-Dichloroethene	MW-344	10/03/2024		1.800	1.000	ug/L
delta-BHC	MW-344	10/02/2018		.0029	.0025	ug/L
Endosulfan I	MW-344	10/02/2018		.00217	.00217	ug/L
Endrin	MW-344	10/02/2018		.00264	.00207	ug/L
gamma-BHC (Lindane)	MW-344	10/02/2018		.00220	.00207	ug/L
Methylene Chloride	MW-344	10/19/2016		.251	.170	ug/L
Vinyl Chloride	MW-344	9/24/2009		1.110	.000	ug/L
Vinyl Chloride	MW-344	3/25/2010		1.030	.000	ug/L
Vinyl Chloride	MW-344	9/22/2011		1.070	.000	ug/L
Vinyl Chloride	MW-344	3/16/2012		1.270	.000	ug/L
Vinyl Chloride	MW-344	9/20/2012		1.500	.000	ug/L
Vinyl Chloride	MW-344	3/27/2013		1.320	.100	ug/L
Vinyl Chloride	MW-344	9/25/2013		.858	.100	ug/L
Vinyl Chloride	MW-344	4/15/2014		.884	.100	ug/L
Vinyl Chloride	MW-344	9/26/2014		.484	.100	ug/L
Vinyl Chloride	MW-344	3/12/2015		.428	1.000	ug/L
Vinyl Chloride	MW-344	10/19/2016		.587	.100	ug/L
Vinyl Chloride	MW-344	3/07/2017		1.050	.100	ug/L
Vinyl Chloride	MW-344	9/26/2017		.705	.100	ug/L
Vinyl Chloride	MW-344	3/14/2018		.569	.100	ug/L
Vinyl Chloride	MW-344	9/24/2019		.513	.180	ug/L
Vinyl Chloride	MW-344	9/15/2020		.903	.180	ug/L
Vinyl Chloride	MW-344	4/15/2021		.840	.180	ug/L
Vinyl Chloride	MW-344	10/27/2021		.986	.180	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
Vinyl Chloride	MW-344	4/14/2022		.383	.180	ug/L
Dichlorodifluoromethane	MW-345	9/25/2013		1.49	.20	ug/L
Methylene Chloride	MW-345	9/25/2014		.596	.170	ug/L
Acetone	MW-380	3/09/2017		12.20	1.79	ug/L
Acetone	MW-380	6/28/2017		4.52	1.79	ug/L
Acetone	MW-380	3/14/2018		2.46	1.79	ug/L
Bromomethane	MW-380	3/14/2018		.31	.22	ug/L
Methylene Chloride	MW-380	10/20/2016		.30	.17	ug/L
Xylenes, Total	MW-380	3/09/2017		.672	.130	ug/L
Acetone	MW-381	9/26/2017		2.94	1.79	ug/L
Acetone	MW-381	3/14/2018		2.87	1.79	ug/L
Bromomethane	MW-381	9/26/2017		.322	.220	ug/L
Bromomethane	MW-381	3/14/2018		.240	.220	ug/L
Methylene Chloride	MW-381	10/19/2016		.283	.170	ug/L
Xylenes, Total	MW-381	10/19/2016		.242	.130	ug/L
Xylenes, Total	MW-381	3/07/2017		.435	.130	ug/L
1,1-Dichloroethane	MW-382R	3/29/2011		2.90	.00	ug/L
1,1-Dichloroethane	MW-382R	6/25/2011		2.87	.00	ug/L
1,1-Dichloroethane	MW-382R	8/08/2011		2.74	.00	ug/L
1,1-Dichloroethane	MW-382R	9/22/2011		2.15	.00	ug/L
1,1-Dichloroethane	MW-382R	12/05/2011		2.98	.00	ug/L
1,1-Dichloroethane	MW-382R	3/16/2012		2.77	.00	ug/L
1,1-Dichloroethane	MW-382R	9/20/2012		2.10	.00	ug/L
1,1-Dichloroethane	MW-382R	3/27/2013		2.43	.21	ug/L
1,1-Dichloroethane	MW-382R	9/25/2013		2.00	.21	ug/L
1,1-Dichloroethane	MW-382R	4/15/2014		3.54	.21	ug/L
1,1-Dichloroethane	MW-382R	9/26/2014		2.00	.21	ug/L
1,1-Dichloroethane	MW-382R	3/12/2015		2.23	1.00	ug/L
1,1-Dichloroethane	MW-382R	9/02/2015		1.62	1.00	ug/L
1,1-Dichloroethane	MW-382R	3/23/2016		1.65	1.00	ug/L
1,1-Dichloroethane	MW-382R	10/19/2016		2.31	.21	ug/L
1,1-Dichloroethane	MW-382R	3/07/2017		1.81	.21	ug/L
1,1-Dichloroethane	MW-382R	9/26/2017		1.93	.21	ug/L
1,1-Dichloroethane	MW-382R	3/14/2018		2.60	.21	ug/L
1,1-Dichloroethane	MW-382R	10/02/2018		1.51	.22	ug/L
1,1-Dichloroethane	MW-382R	3/28/2019		1.60	.22	ug/L
1,1-Dichloroethane	MW-382R	9/24/2019		1.71	.22	ug/L
1,1-Dichloroethane	MW-382R	3/10/2020		1.74	.22	ug/L
1,1-Dichloroethane	MW-382R	9/16/2020		2.00	.22	ug/L
1,1-Dichloroethane	MW-382R	4/15/2021		1.41	.22	ug/L
1,1-Dichloroethane	MW-382R	10/27/2021		1.69	.22	ug/L
1,1-Dichloroethane	MW-382R	4/14/2022		1.09	.22	ug/L
1,1-Dichloroethane	MW-382R	3/06/2023		1.40	1.00	ug/L
1,1-Dichloroethane	MW-382R	10/03/2024		1.40	1.00	ug/L
Acetone	MW-382R	3/14/2018		2.06	1.79	ug/L
Bis(2-ethylhexyl)phthalate	MW-382R	9/29/2023		16	6	ug/L
Bromomethane	MW-382R	3/14/2018		.253	.220	ug/L
Chloroethane	MW-382R	9/25/2013		.433	.150	ug/L
cis-1,2-Dichloroethene	MW-382R	3/27/2013		.383	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	9/25/2013		.320	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	4/15/2014		.267	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	9/26/2014		.270	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	10/19/2016		.414	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	3/07/2017		.385	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	9/26/2017		.484	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	3/14/2018		.449	.130	ug/L
cis-1,2-Dichloroethene	MW-382R	10/02/2018		.401	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	3/28/2019		.439	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	9/24/2019		.345	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	9/16/2020		.487	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	4/15/2021		.289	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	10/27/2021		.406	.210	ug/L
cis-1,2-Dichloroethene	MW-382R	4/14/2022		.307	.210	ug/L
Dichlorodifluoromethane	MW-382R	3/16/2012		3.110	.000	ug/L
Dichlorodifluoromethane	MW-382R	3/27/2013		2.400	.200	ug/L
Dichlorodifluoromethane	MW-382R	9/25/2013		2.730	.200	ug/L
Dichlorodifluoromethane	MW-382R	4/15/2014		2.140	.200	ug/L
Dichlorodifluoromethane	MW-382R	9/26/2014		2.700	.200	ug/L
Dichlorodifluoromethane	MW-382R	3/12/2015		1.590	.200	ug/L
Dichlorodifluoromethane	MW-382R	10/19/2016		1.770	.200	ug/L
Dichlorodifluoromethane	MW-382R	3/07/2017		1.860	.200	ug/L
Dichlorodifluoromethane	MW-382R	9/26/2017		.898	.200	ug/L
Dichlorodifluoromethane	MW-382R	3/14/2018		1.110	.200	ug/L
Dichlorodifluoromethane	MW-382R	10/02/2018		.962	.250	ug/L
Methylene Chloride	MW-382R	3/27/2013		.193	.170	ug/L
Methylene Chloride	MW-382R	10/19/2016		.394	.170	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

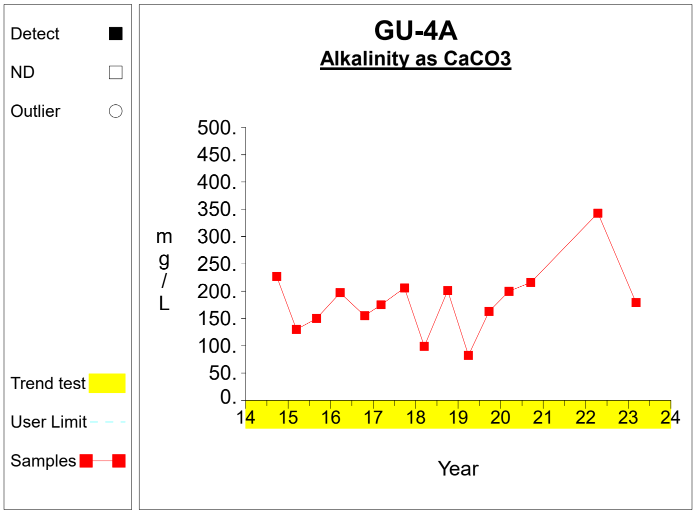
Constituent	Well	Date	Identifier	Result	Limit	Units
Methylene Chloride	MW-382R	3/07/2017		.312	.170	ug/L
Vinyl Chloride	MW-382R	9/25/2013		.345	.100	ug/L
Vinyl Chloride	MW-382R	3/14/2018		.296	.100	ug/L
Vinyl Chloride	MW-382R	4/15/2021		.206	.180	ug/L
Vinyl Chloride	MW-382R	10/27/2021		.241	.180	ug/L
Xylenes, Total	MW-382R	9/25/2013		.134	.130	ug/L
Acetonitrile	MW-383	9/26/2013		1170	126	ug/L
Methylene Chloride	MW-383	3/27/2013		.238	.170	ug/L
Methylene Chloride	MW-383	9/25/2014		.424	.170	ug/L
1,2-Dichloroethane	MW-384	3/14/2018		.195	.180	ug/L
Acetone	MW-384	3/09/2017		2.77	1.79	ug/L
Acetone	MW-384	9/27/2017		2.49	1.79	ug/L
Bromomethane	MW-384	10/20/2016		.313	.220	ug/L
Methylene Chloride	MW-384	9/25/2014		.520	.170	ug/L
Methylene Chloride	MW-384	9/27/2017		.292	.170	ug/L
Xylenes, Total	MW-384	9/01/2015		3.000	3.000	ug/L
Xylenes, Total	MW-384	10/20/2016		.707	.130	ug/L
Xylenes, Total	MW-384	3/09/2017		.949	.130	ug/L
Acetone	MW-385	3/08/2017		3.51	1.79	ug/L
Acetone	MW-385	9/27/2017		3.14	1.79	ug/L
Bromomethane	MW-385	10/20/2016		.599	.220	ug/L
Methylene Chloride	MW-385	3/28/2013		.343	.170	ug/L
Methylene Chloride	MW-385	9/25/2014		.448	.170	ug/L
Methylene Chloride	MW-385	10/20/2016		.224	.170	ug/L
Methylene Chloride	MW-385	3/08/2017		.501	.170	ug/L
Methylene Chloride	MW-385	9/27/2017		.380	.170	ug/L
Xylenes, Total	MW-385	10/20/2016		.387	.130	ug/L
Xylenes, Total	MW-385	3/08/2017		.898	.130	ug/L
Xylenes, Total	MW-385	9/27/2017		.164	.130	ug/L
Acetone	MW-390	3/08/2017		7.42	1.79	ug/L
Acetone	MW-390	9/25/2017		2.90	1.79	ug/L
Acetone	MW-390	3/27/2019		3.35	3.10	ug/L
Acetone	MW-390	3/09/2020		5.37	3.10	ug/L
Carbon Disulfide	MW-390	9/25/2017		.177	.150	ug/L
Methylene Chloride	MW-390	10/21/2016		.397	.170	ug/L
Methylene Chloride	MW-390	3/13/2018		.209	.170	ug/L
Xylenes, Total	MW-390	10/21/2016		.464	.130	ug/L
Xylenes, Total	MW-390	3/08/2017		.566	.130	ug/L
Xylenes, Total	MW-390	3/27/2019		1.050	.400	ug/L
Benzene	MW-603	3/10/2020		.312	.220	ug/L

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

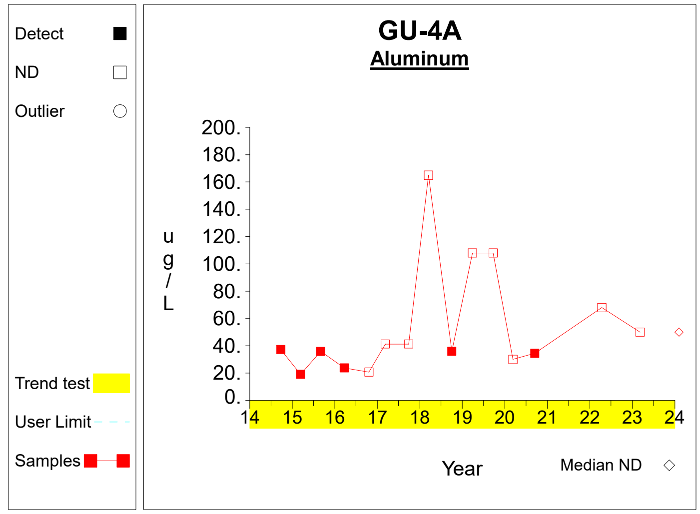
Appendix G

Time Series Graphs – Inorganic Compounds
Site Monitoring Points

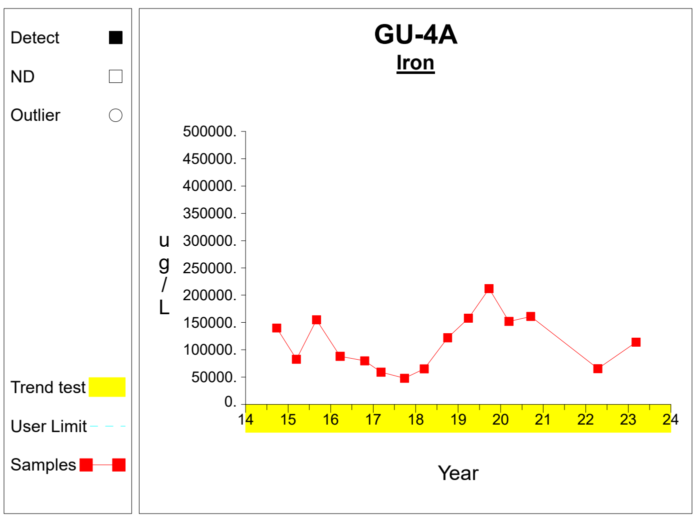
Time Series



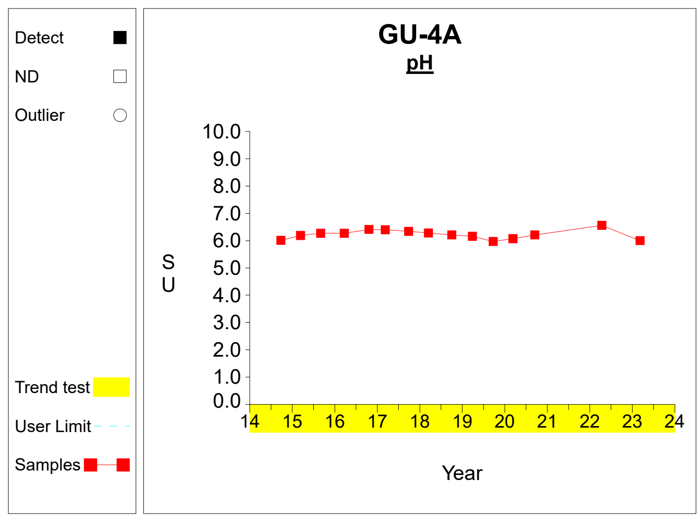
Graph 1



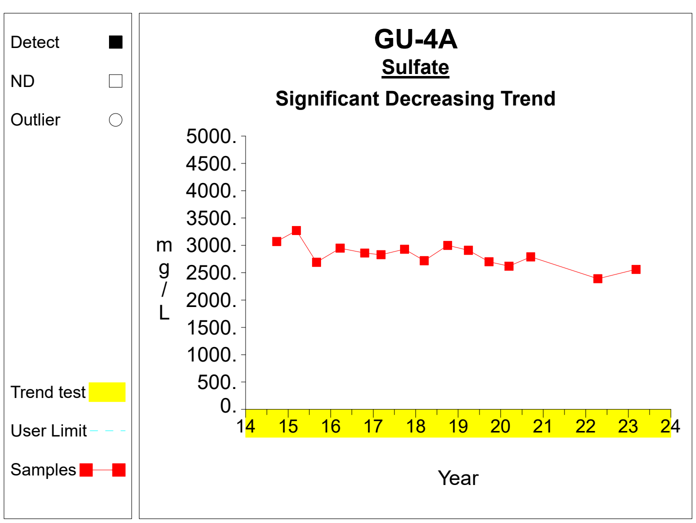
Graph 2



Graph 3



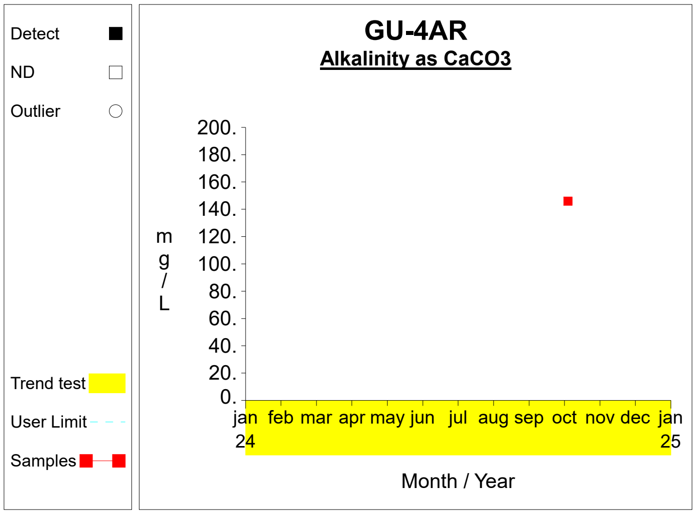
Graph 4



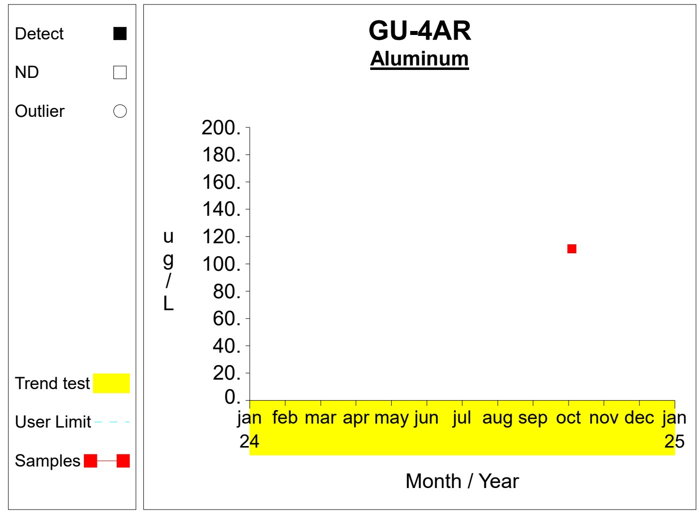
Graph 5

Prepared by: Otter Creek Environmental

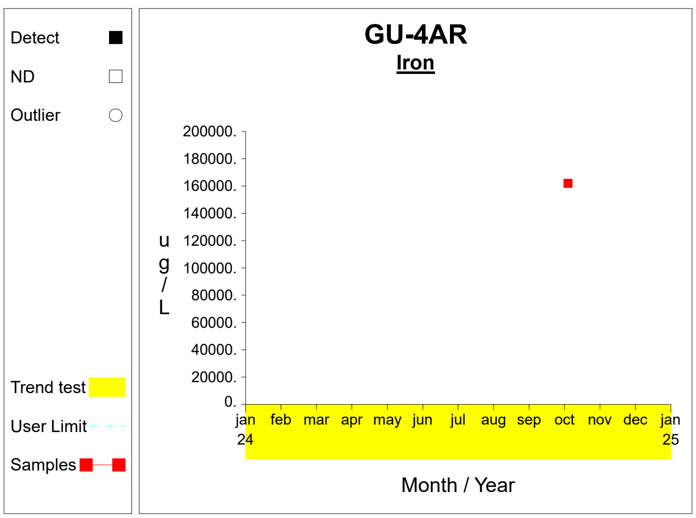
Time Series



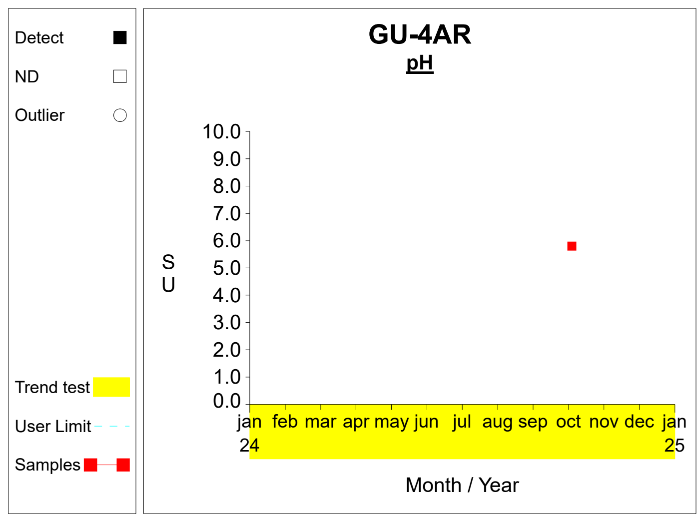
Graph 6



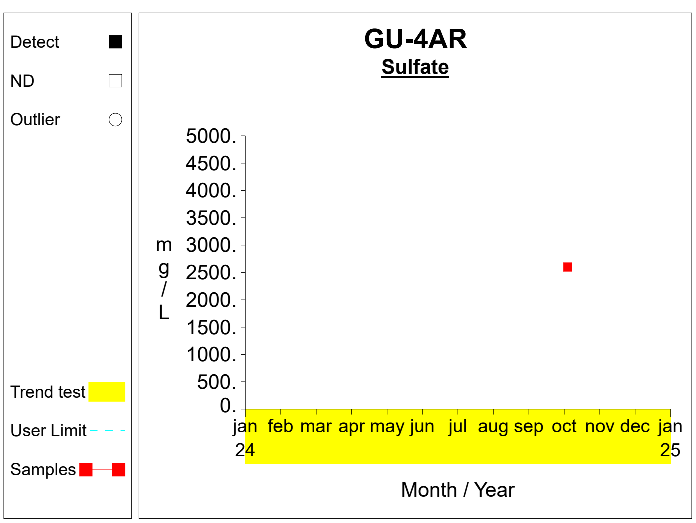
Graph 7



Graph 8

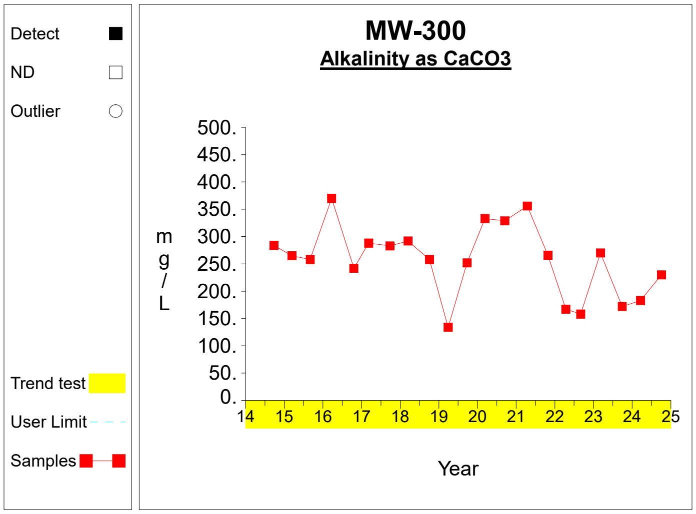


Graph 9

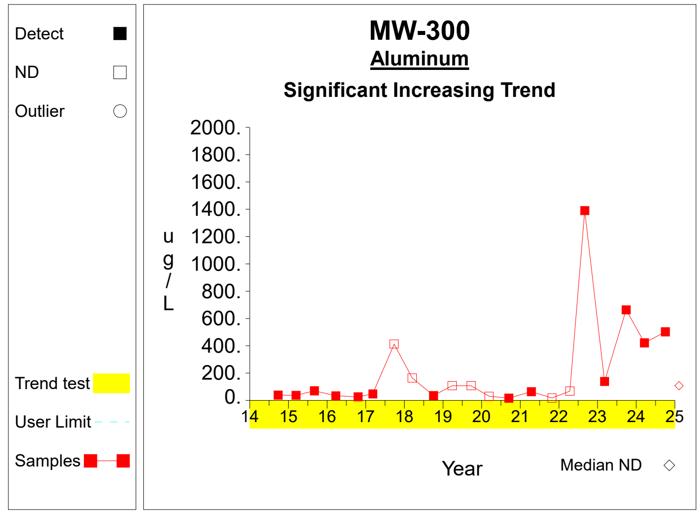


Graph 10

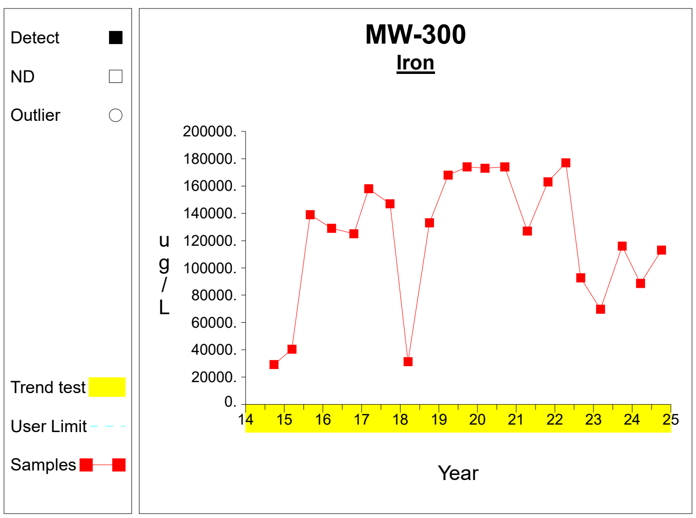
Time Series



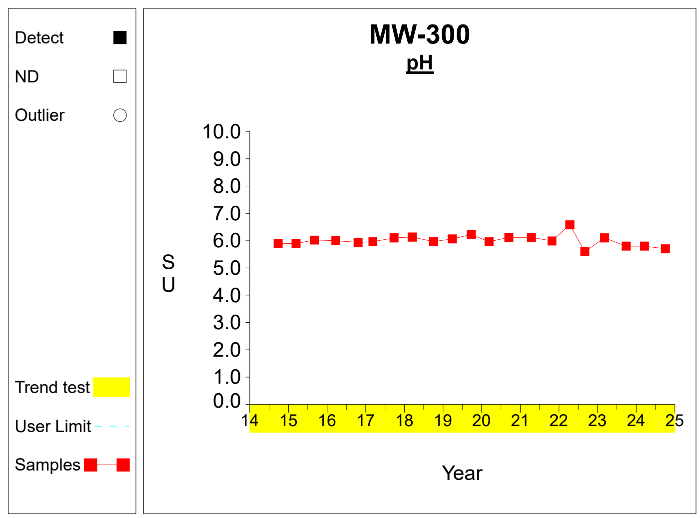
Graph 11



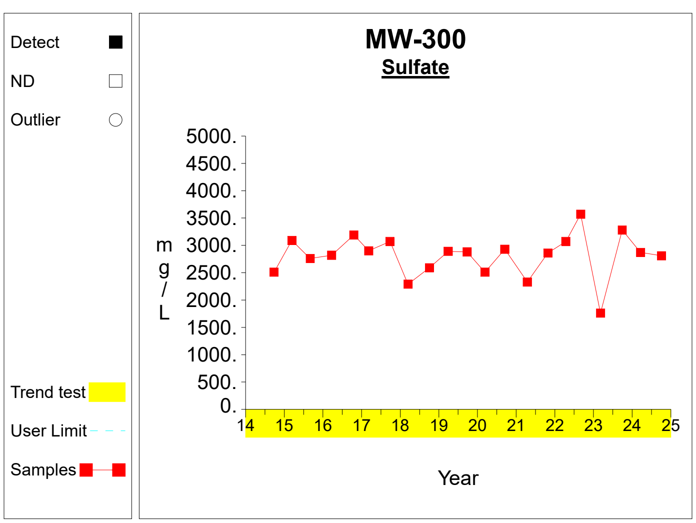
Graph 12



Graph 13

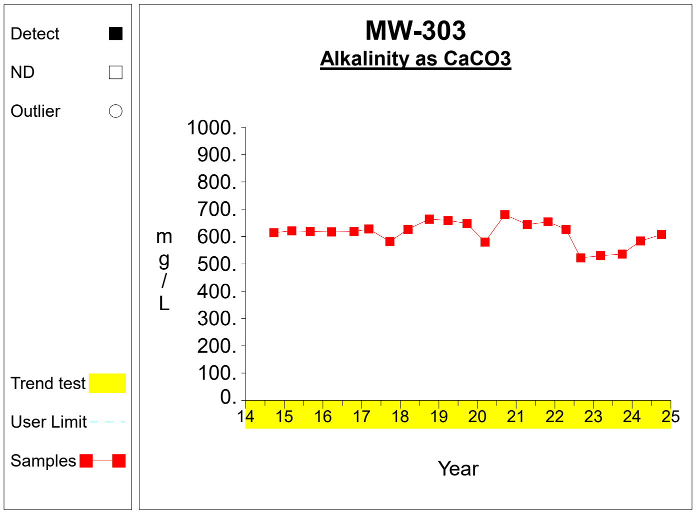


Graph 14

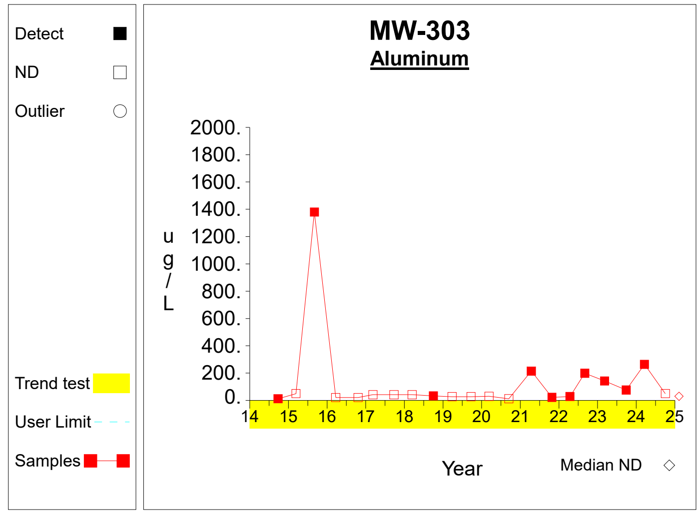


Graph 15

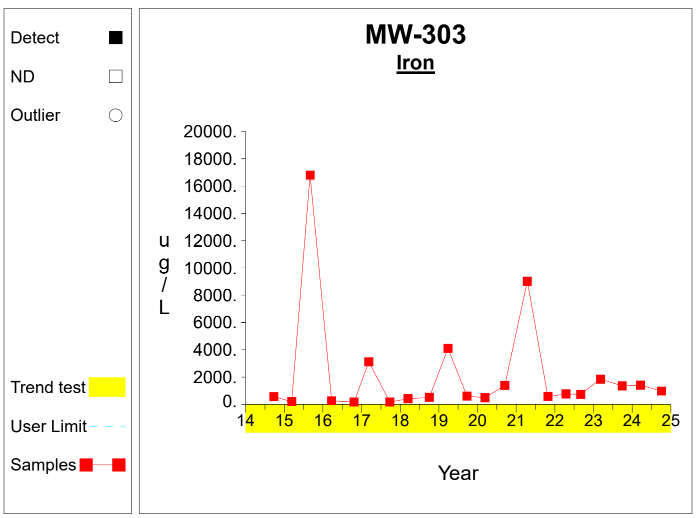
Time Series



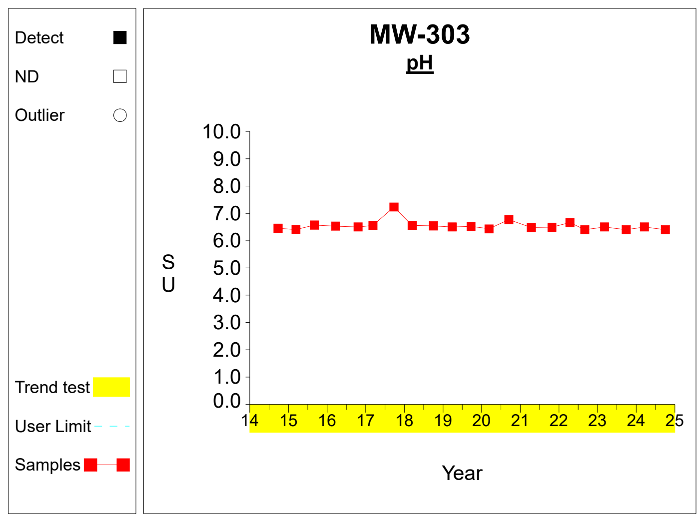
Graph 16



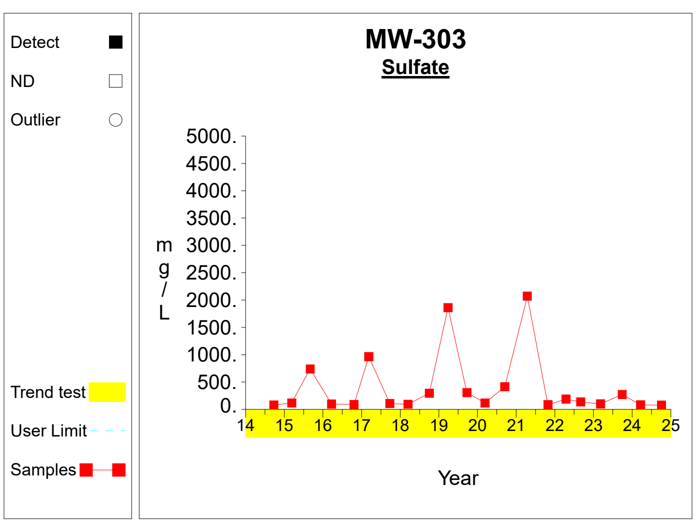
Graph 17



Graph 18

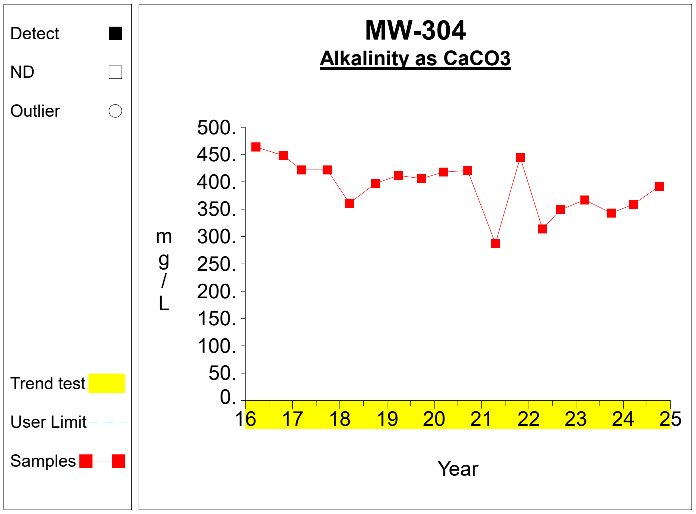


Graph 19

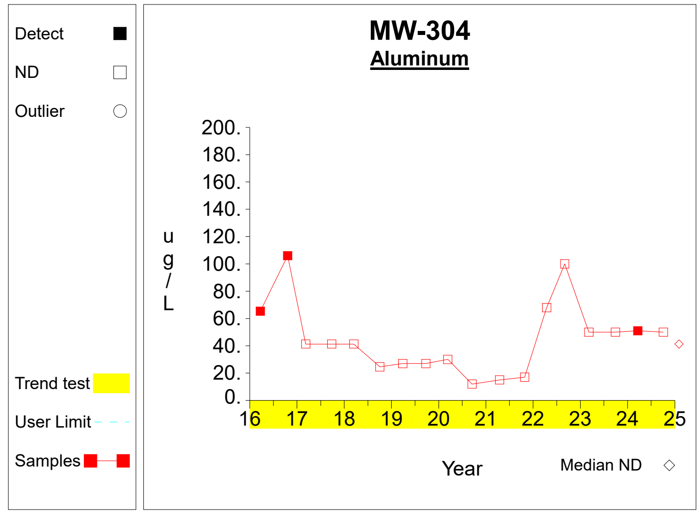


Graph 20

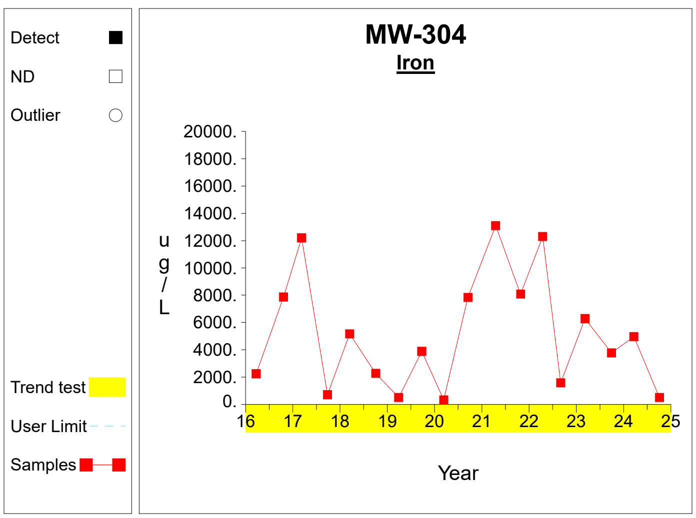
Time Series



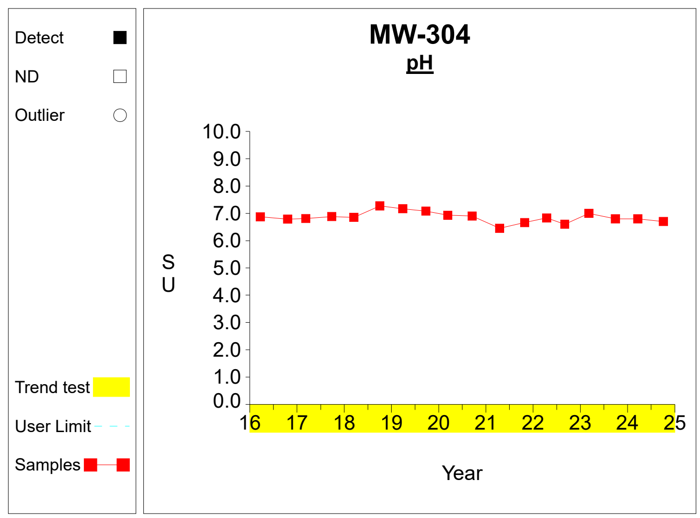
Graph 21



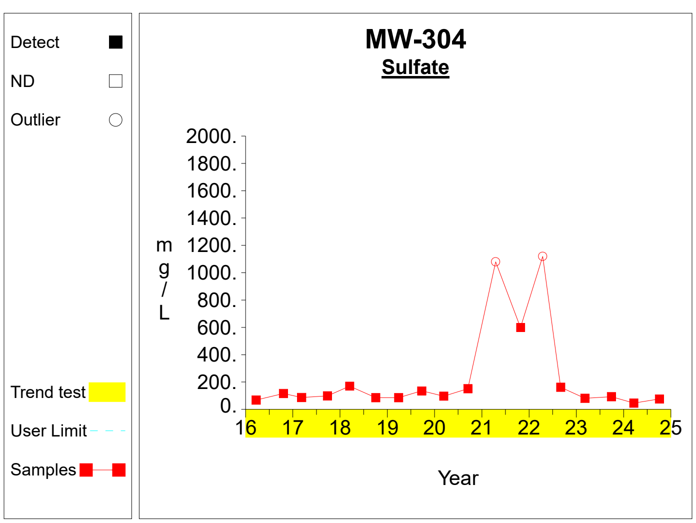
Graph 22



Graph 23

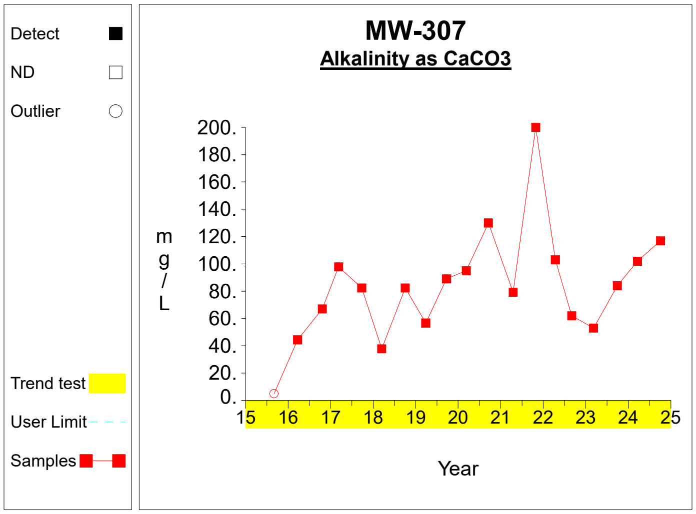


Graph 24

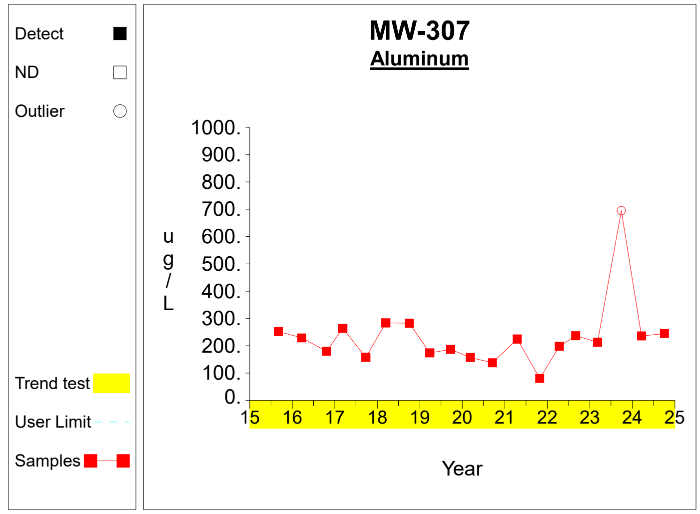


Graph 25

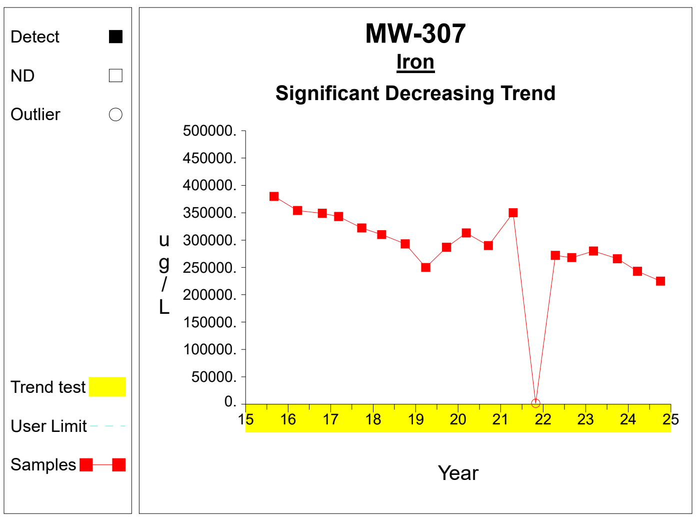
Time Series



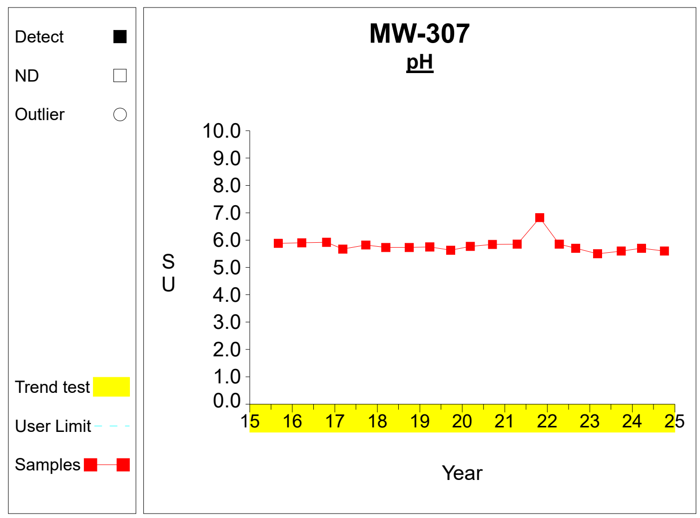
Graph 26



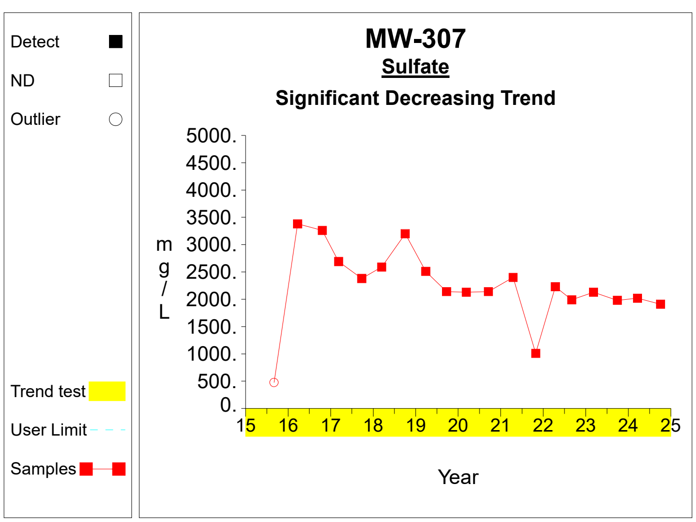
Graph 27



Graph 28

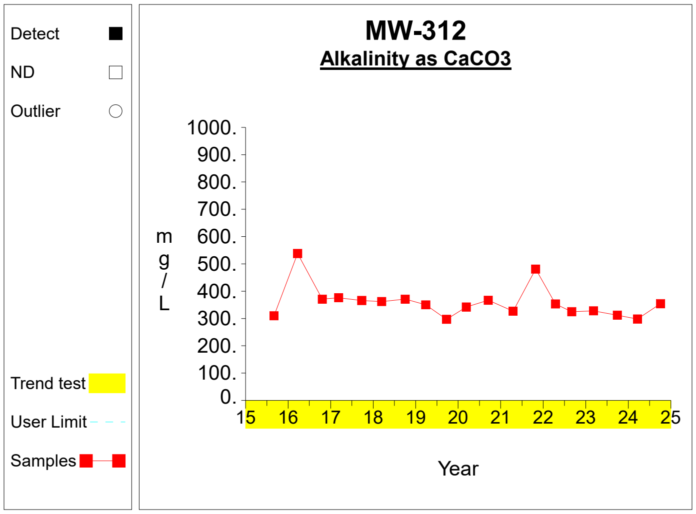


Graph 29

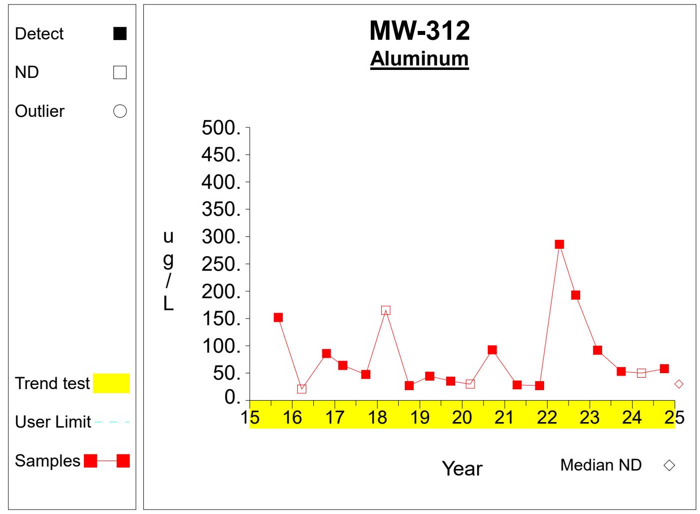


Graph 30

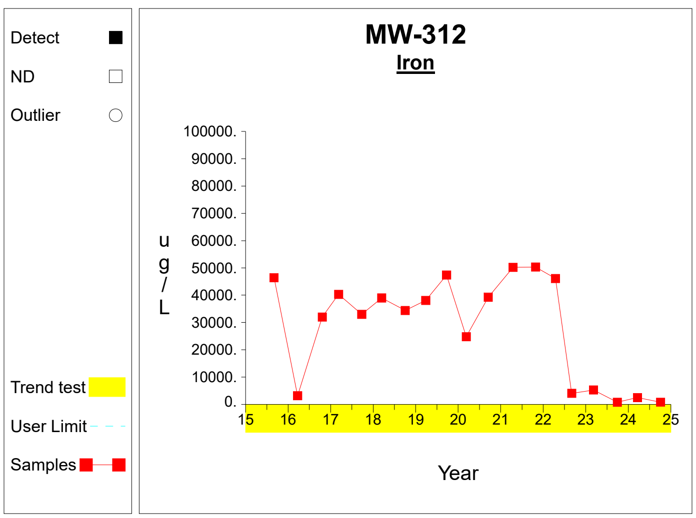
Time Series



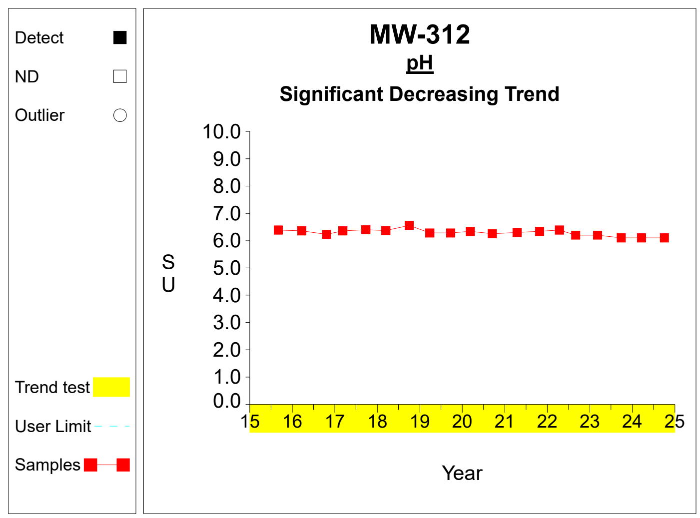
Graph 31



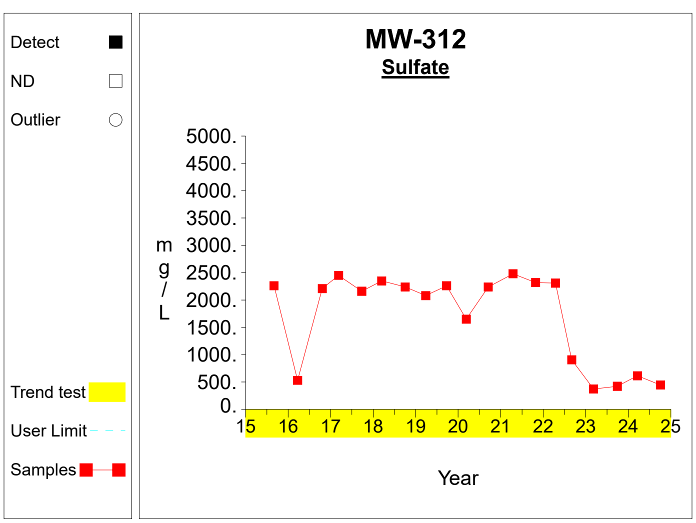
Graph 32



Graph 33

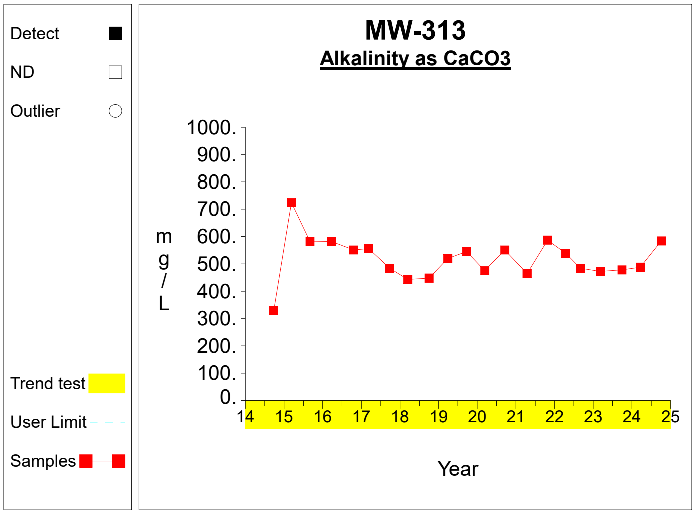


Graph 34

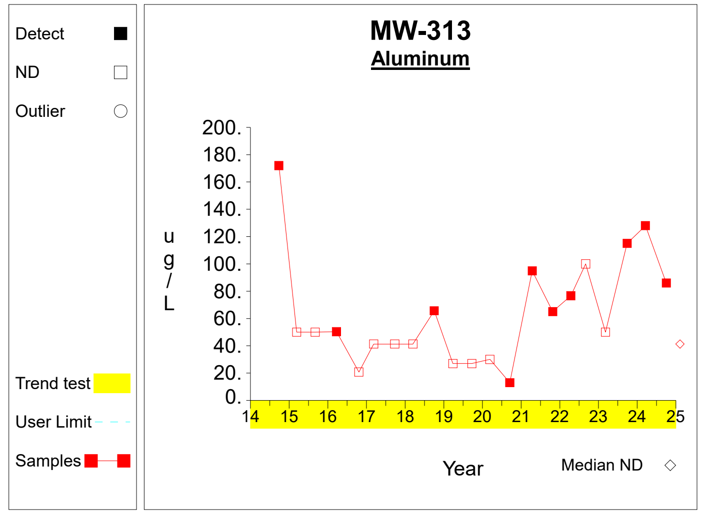


Graph 35

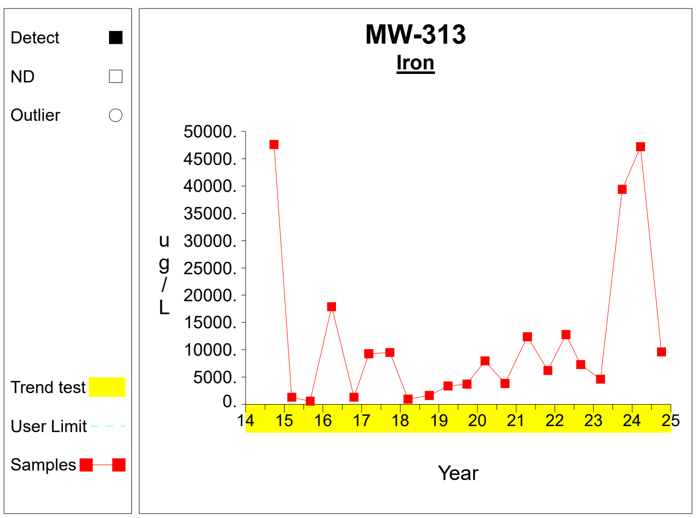
Time Series



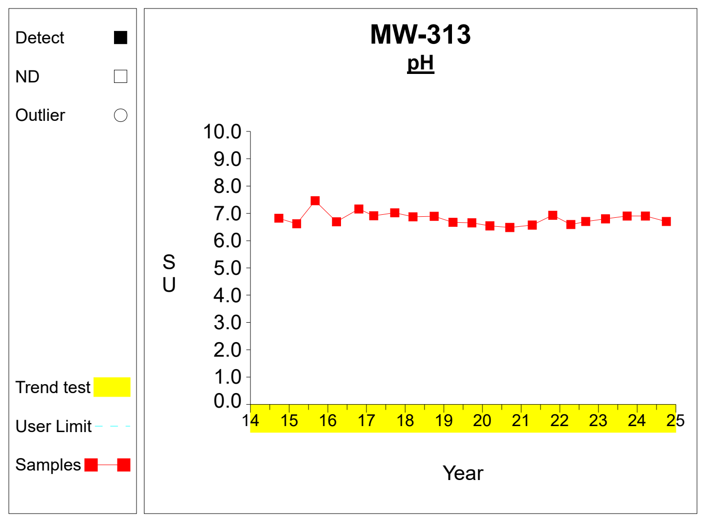
Graph 36



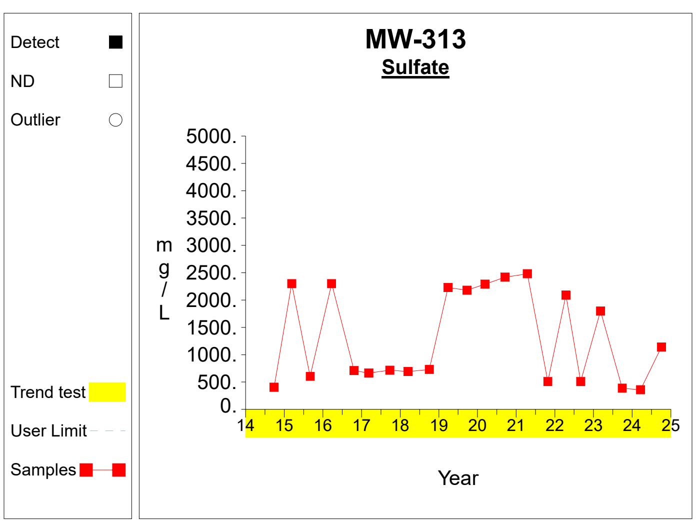
Graph 37



Graph 38

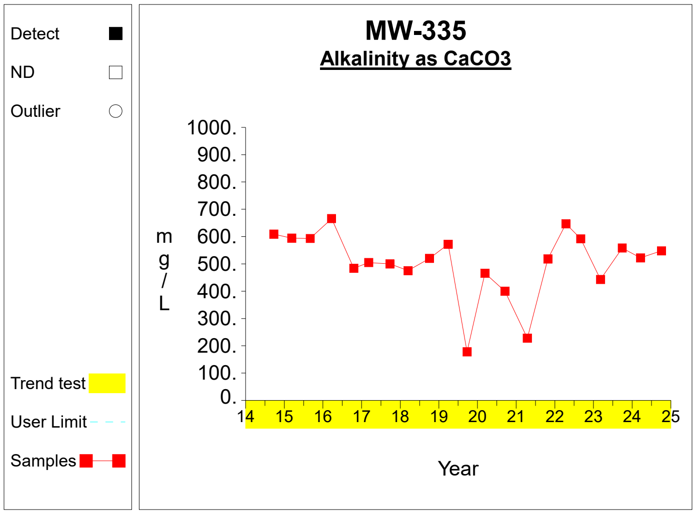


Graph 39

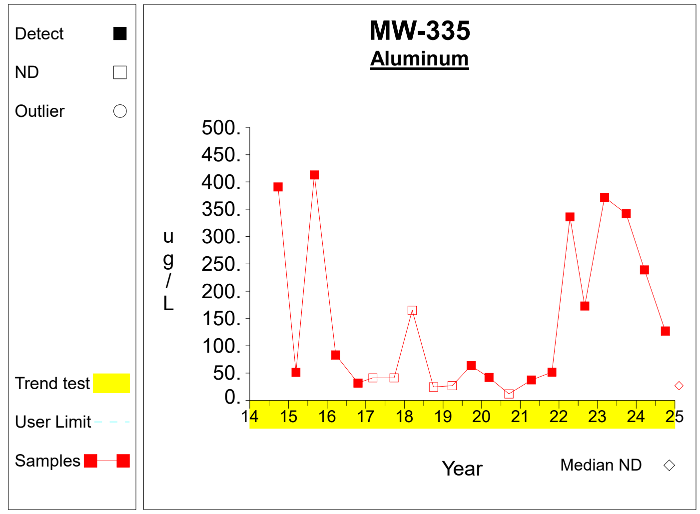


Graph 40

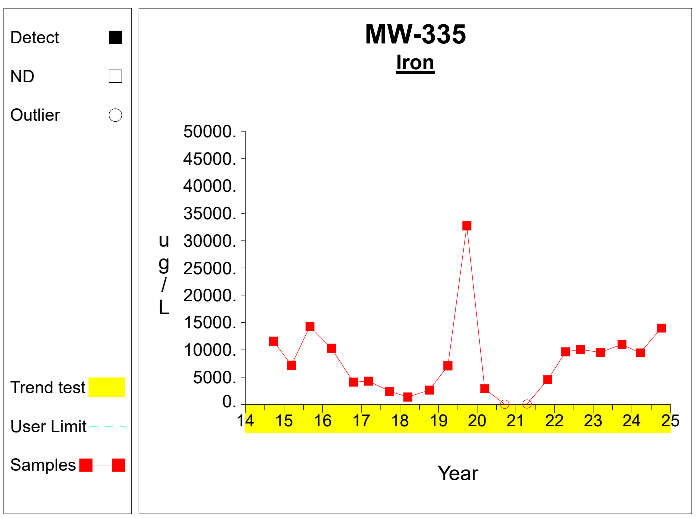
Time Series



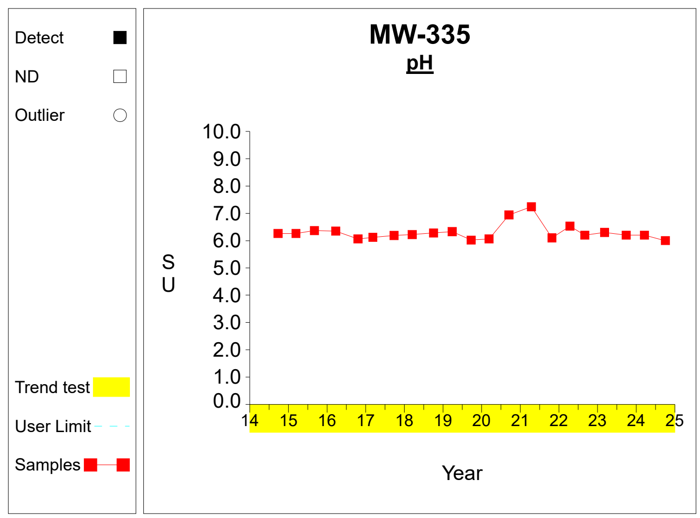
Graph 41



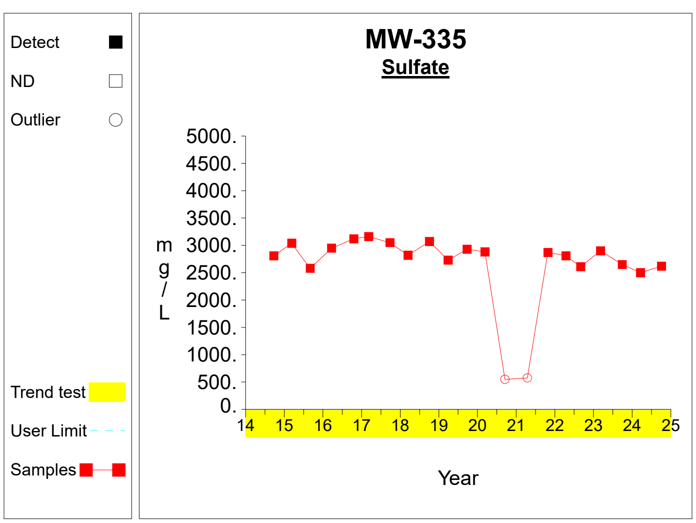
Graph 42



Graph 43

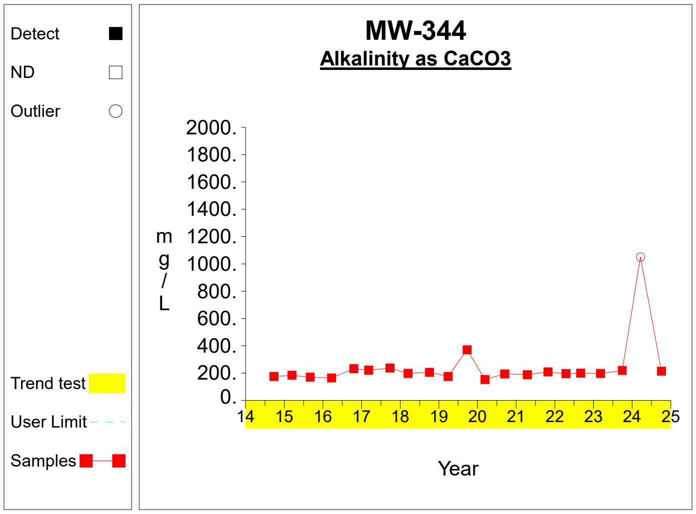


Graph 44



Graph 45

Time Series



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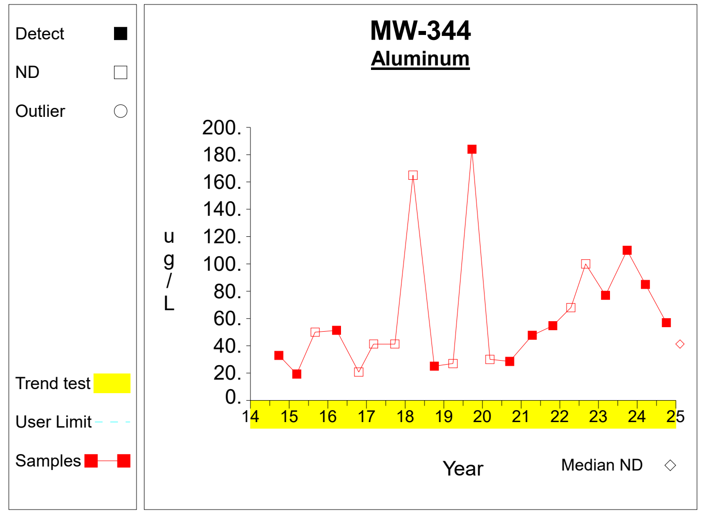
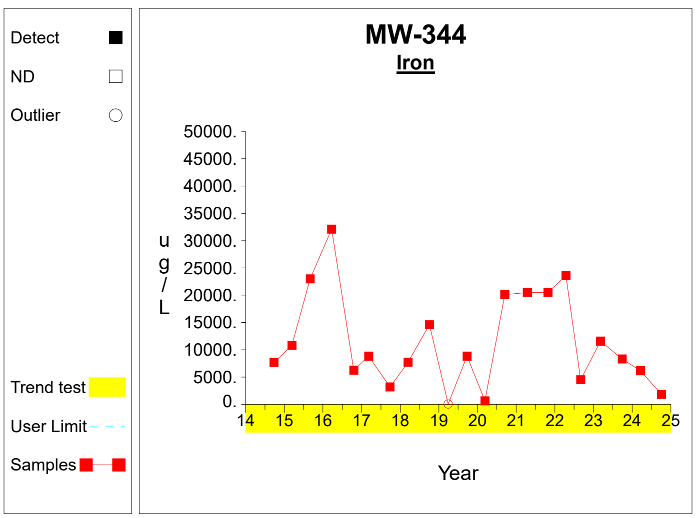
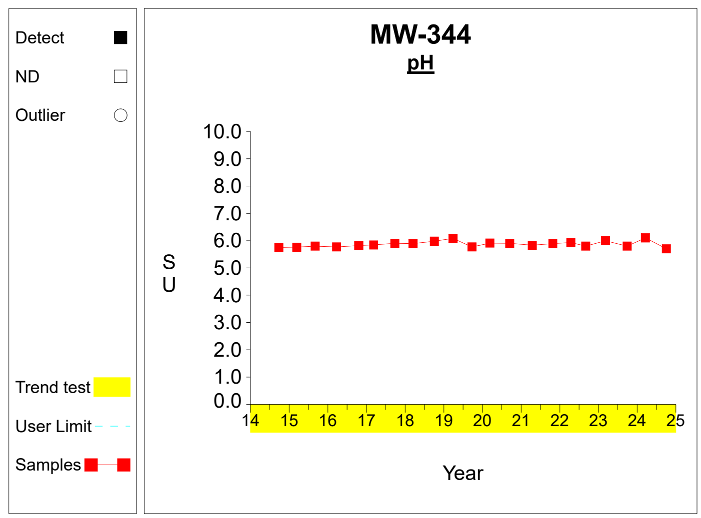


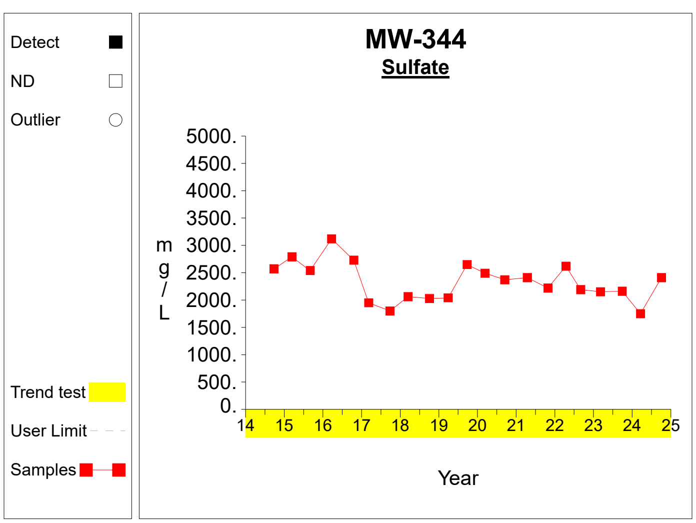
Graph 47



Graph 48

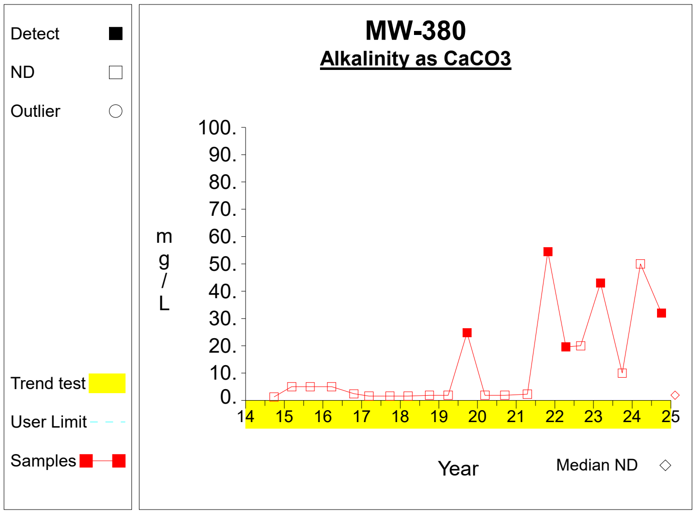


Graph 49

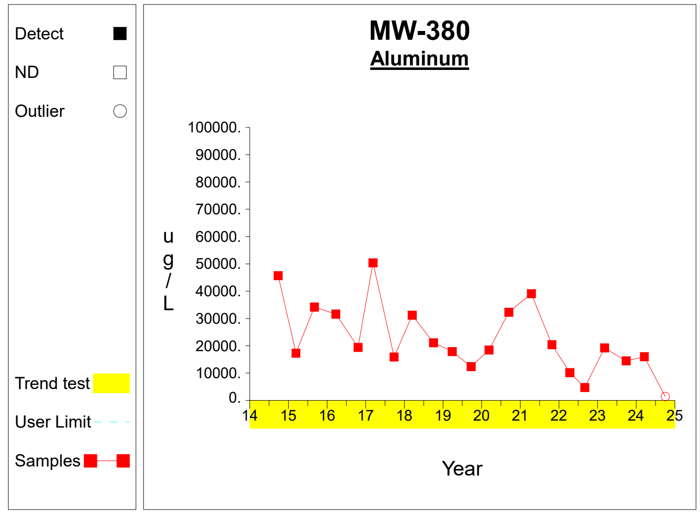


Graph 50

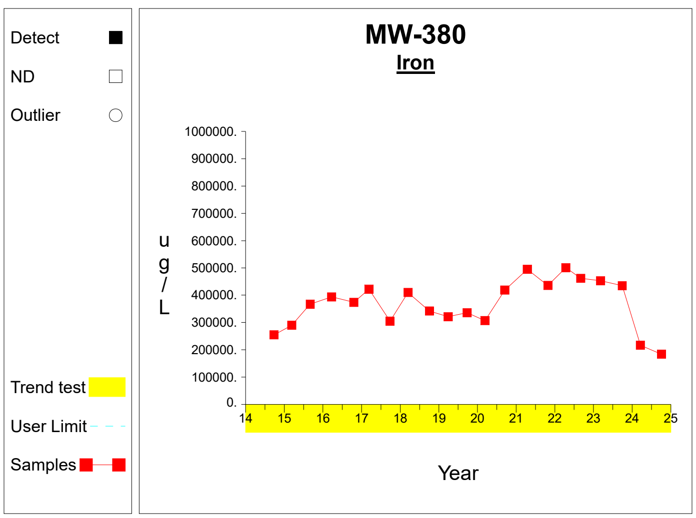
Time Series



Graph 51



Graph 52



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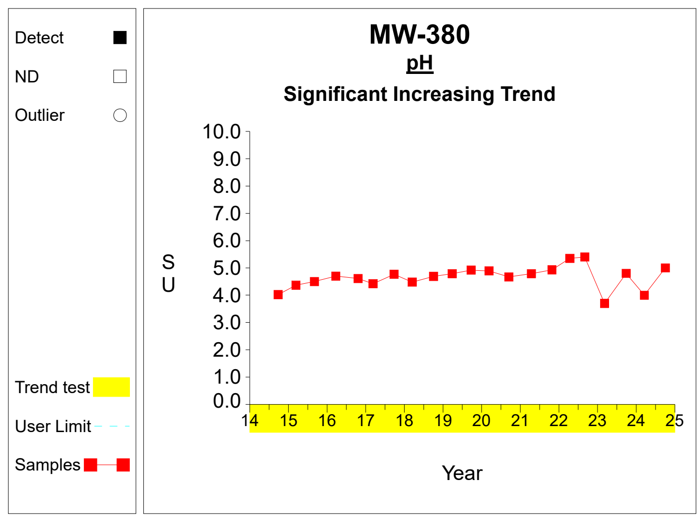
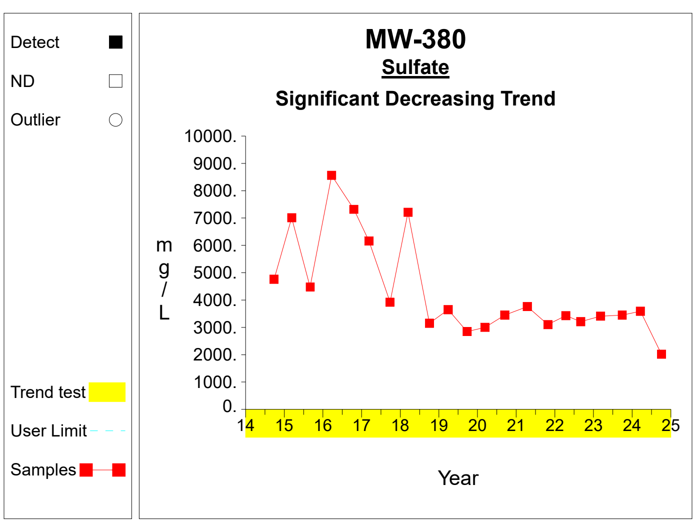
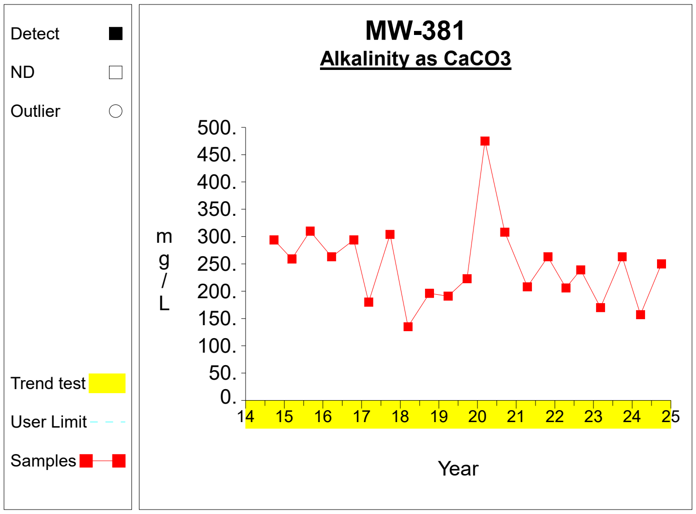


Graph 54

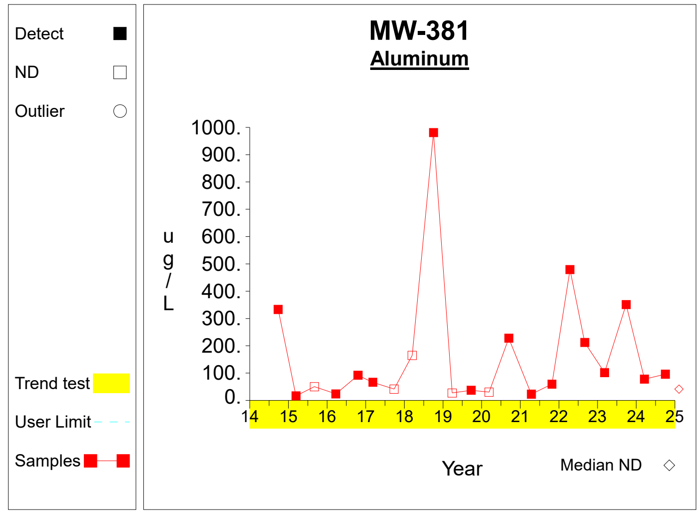


Graph 55

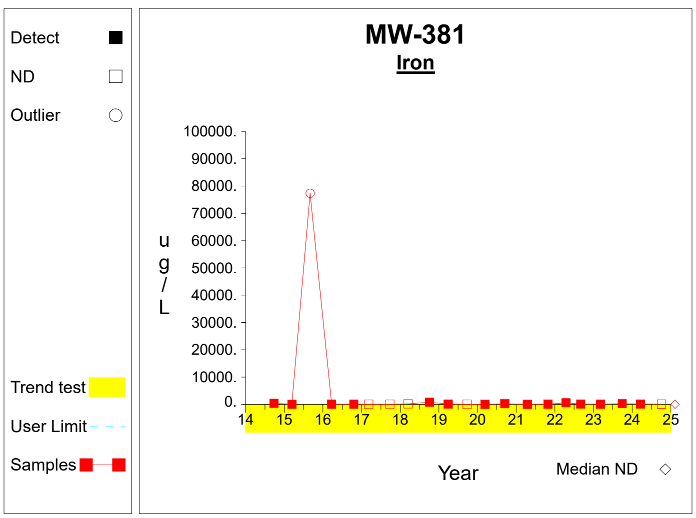
Time Series



Graph 56



Graph 57



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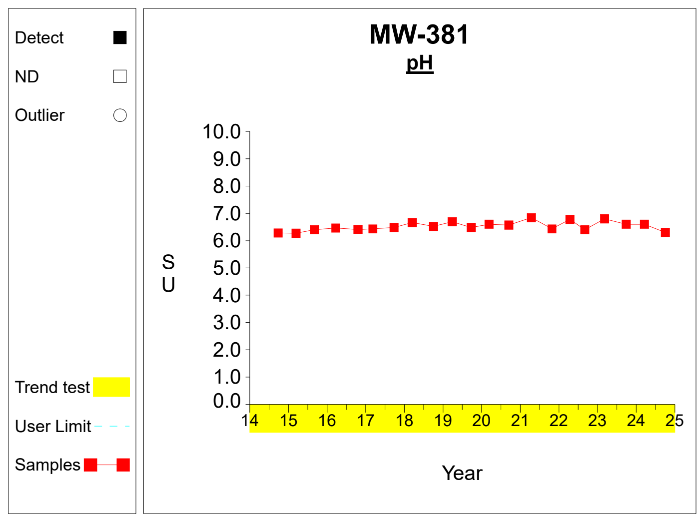
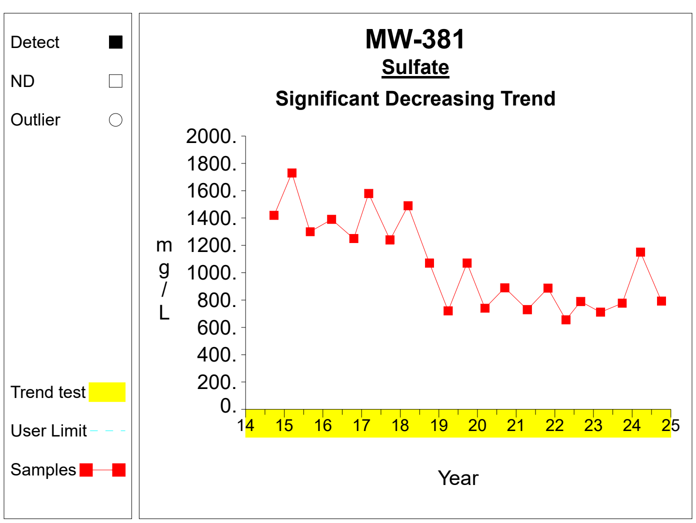
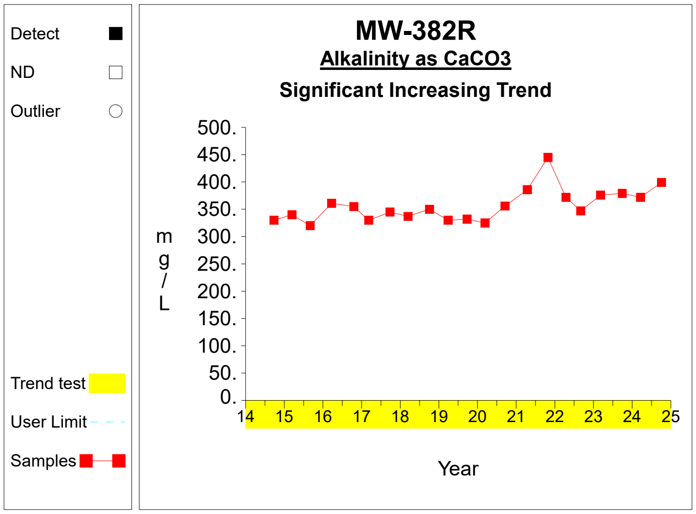


Graph 59

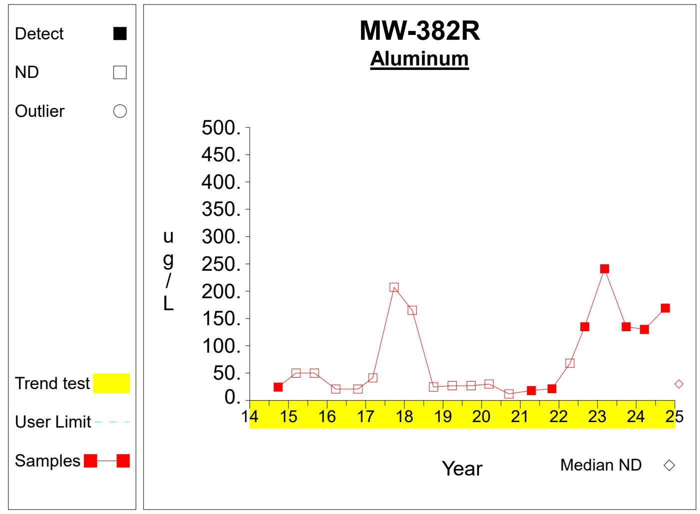


Graph 60

Time Series



Graph 61



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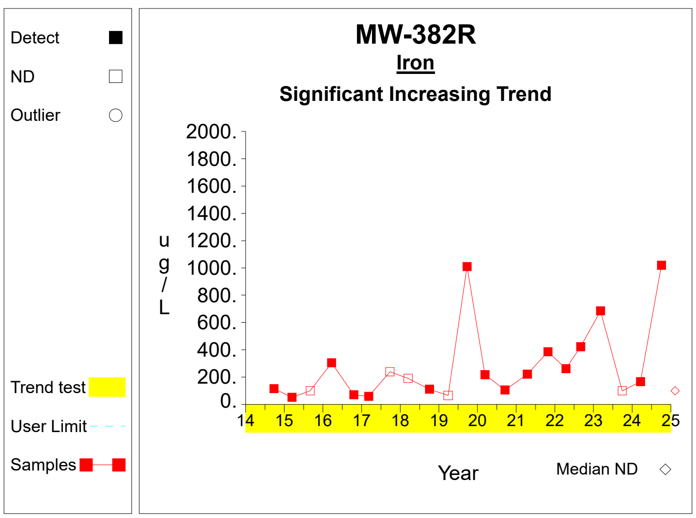
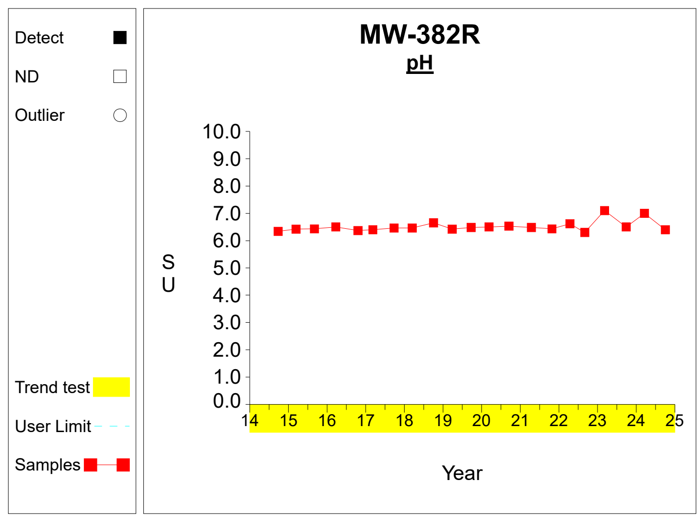
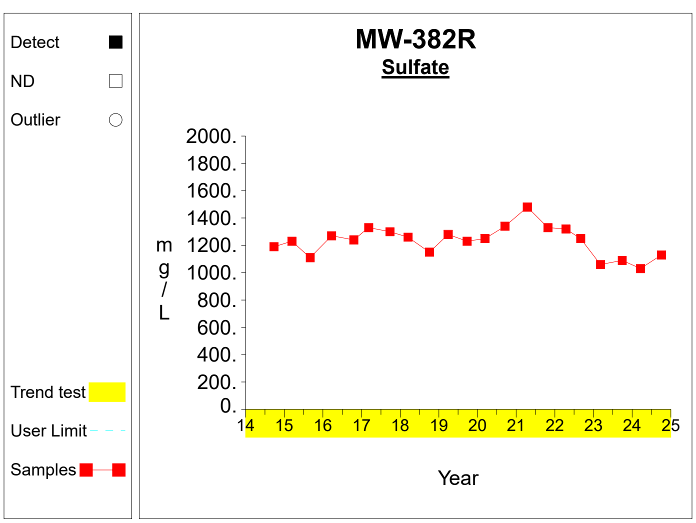


Graph 63

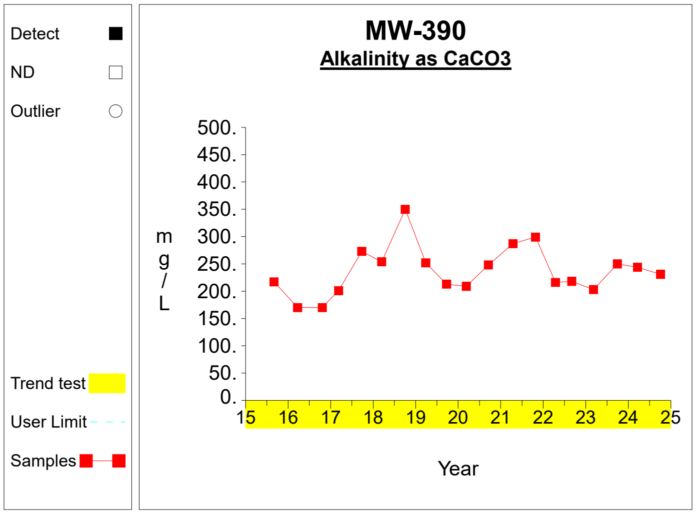


Graph 64



Graph 65

Time Series



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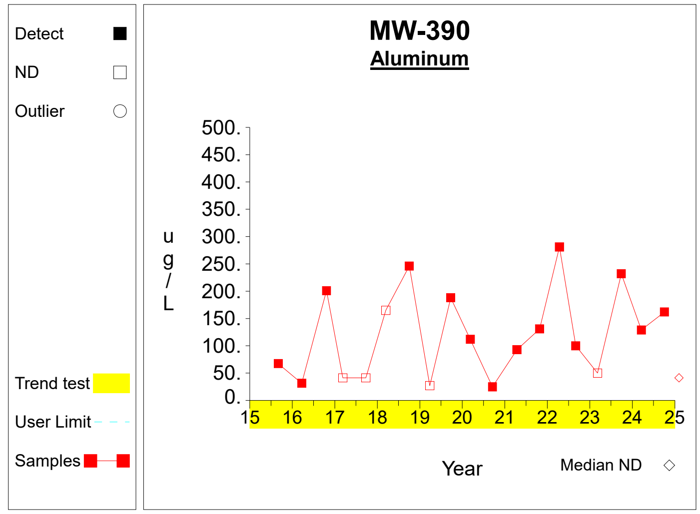

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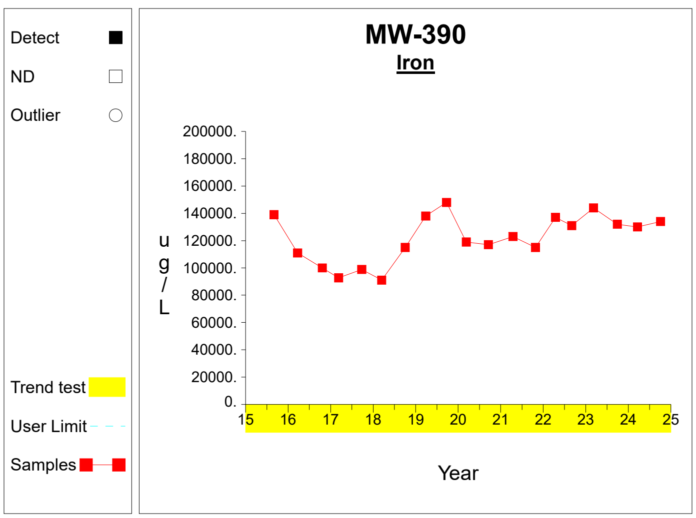
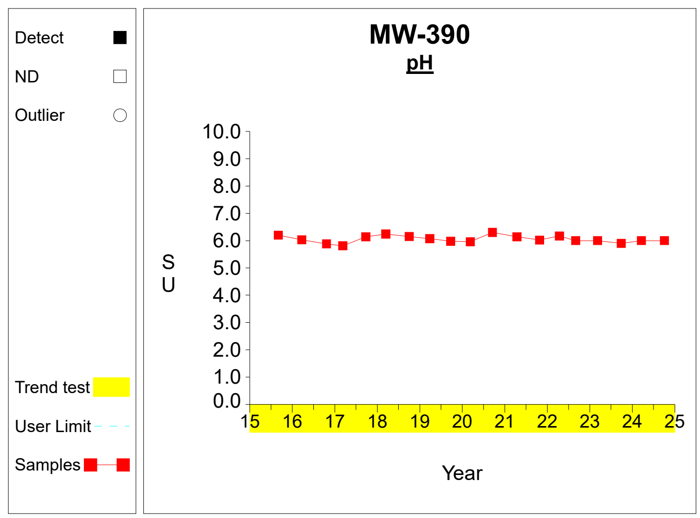


Graph 68



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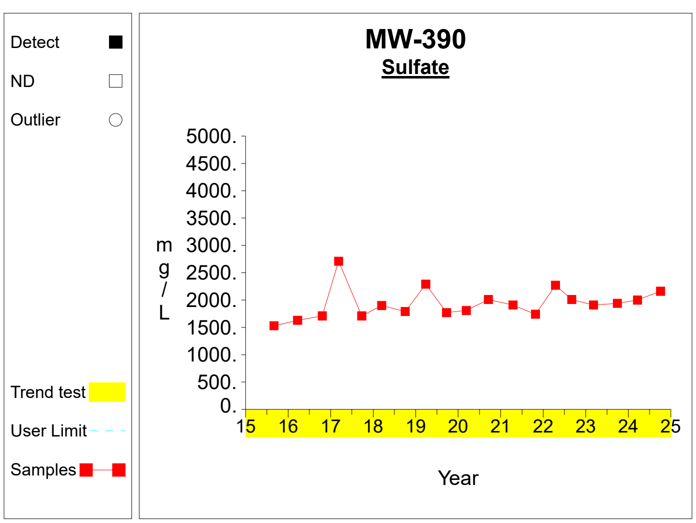
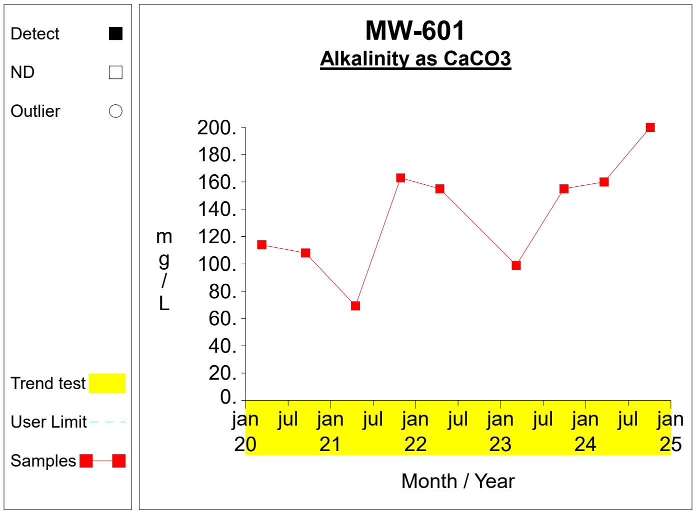


Graph 70

Time Series



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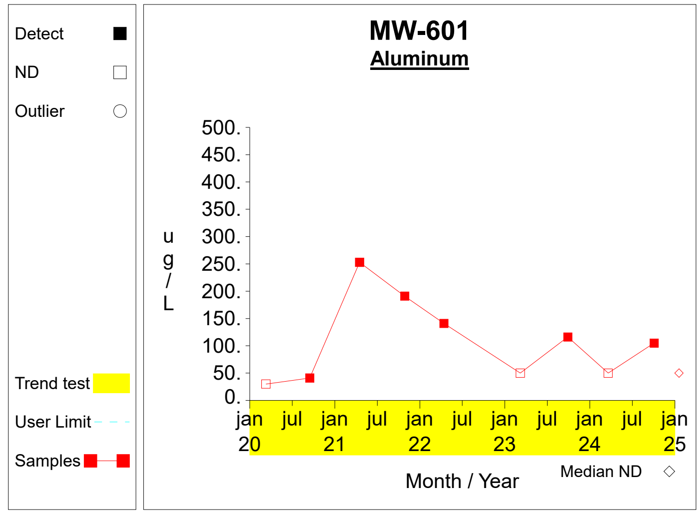

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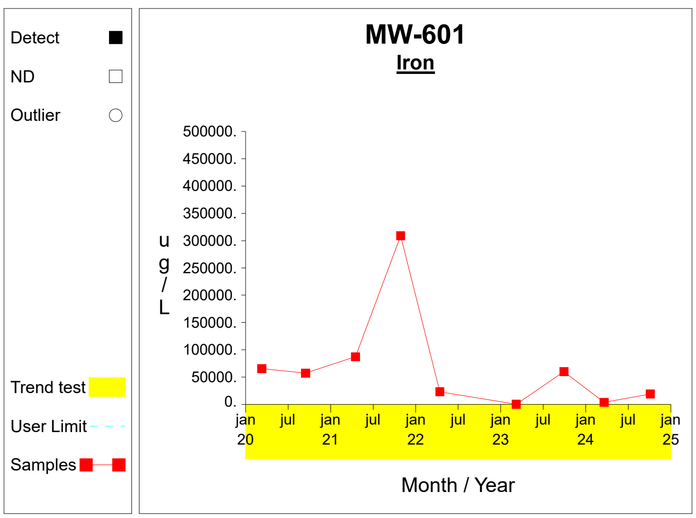

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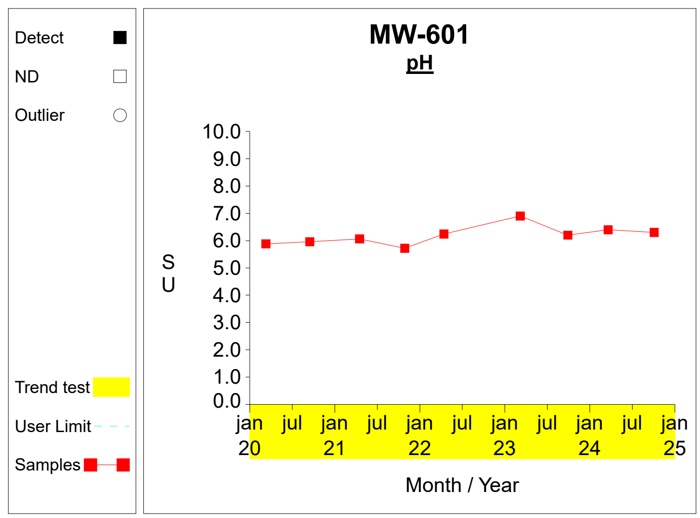

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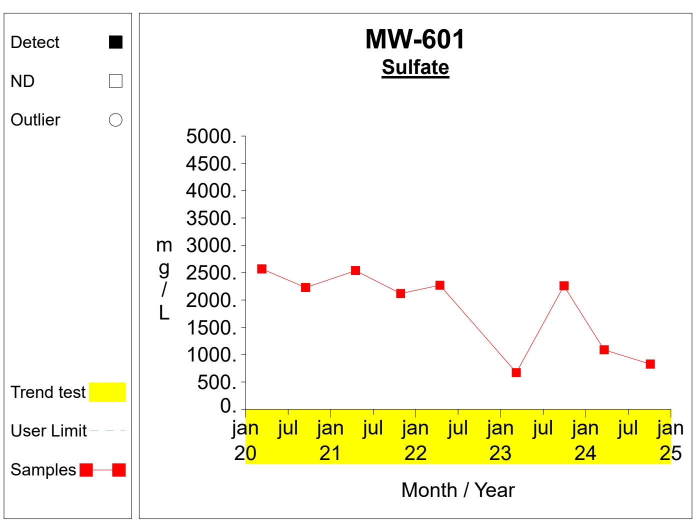
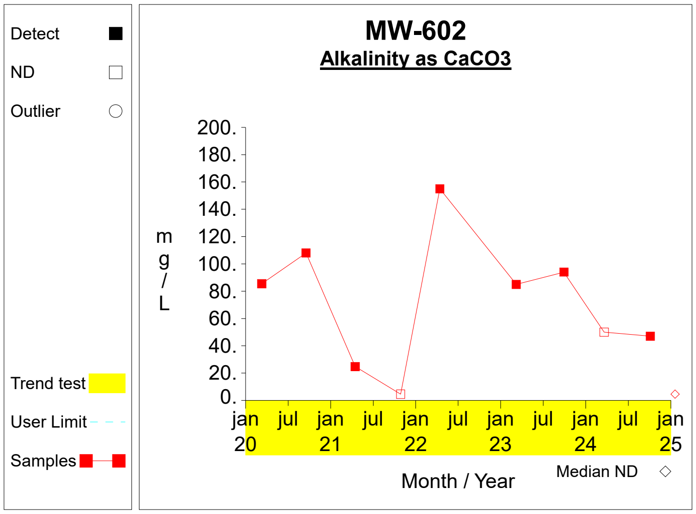


Graph 75

Time Series



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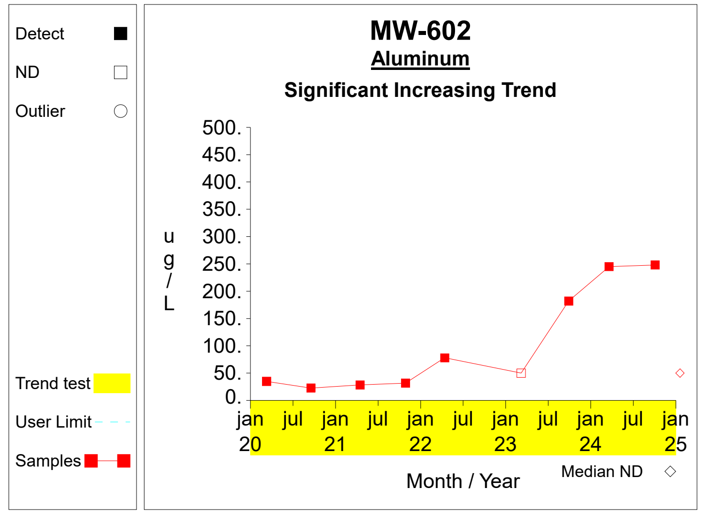

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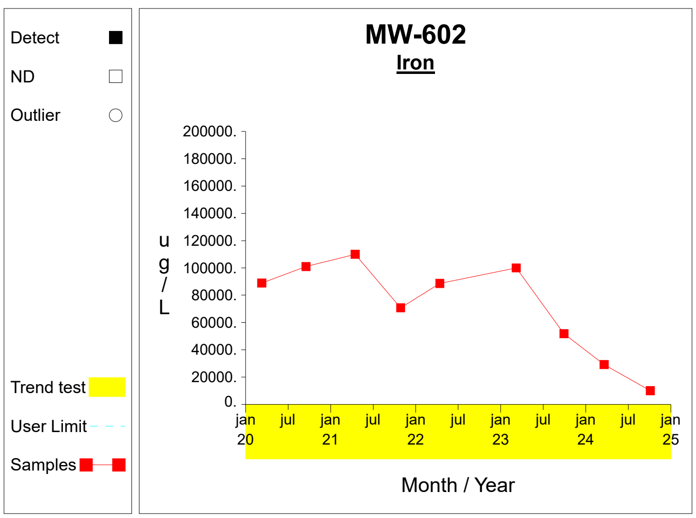

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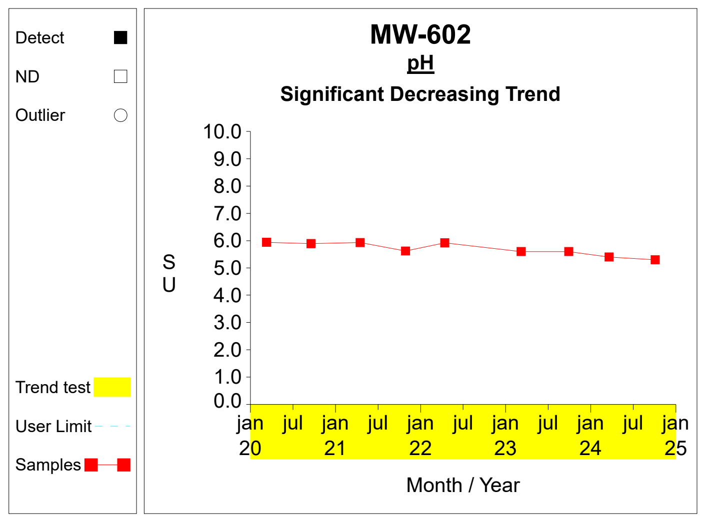

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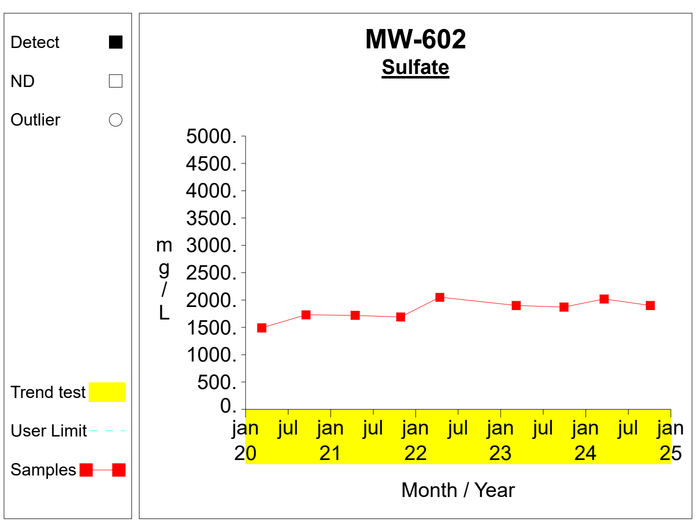
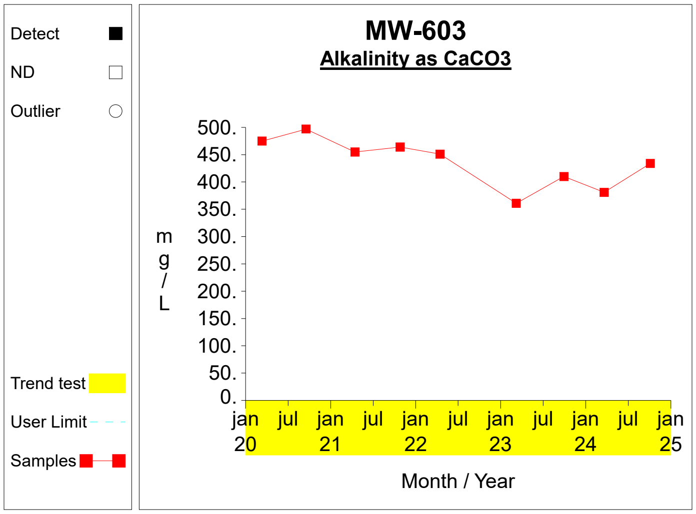


Graph 80

Time Series



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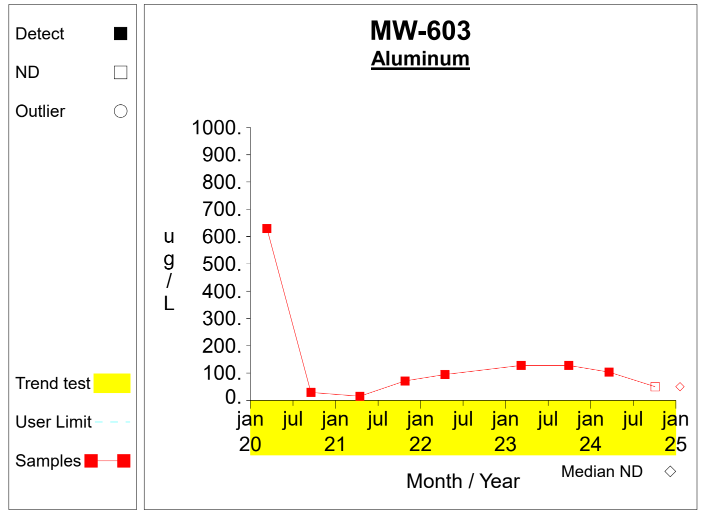

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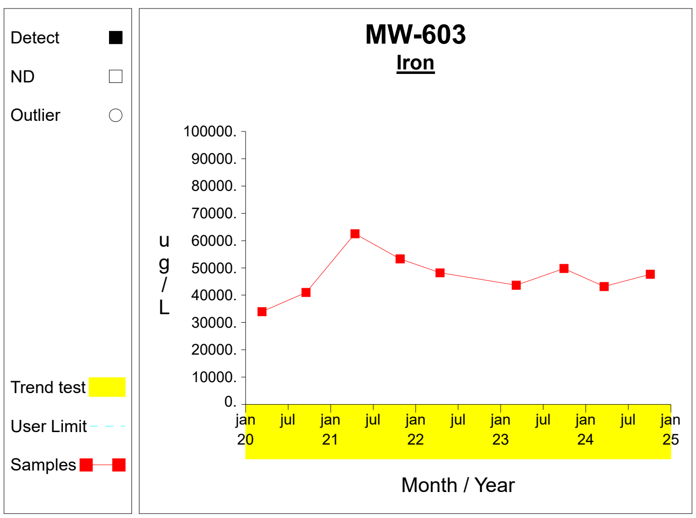

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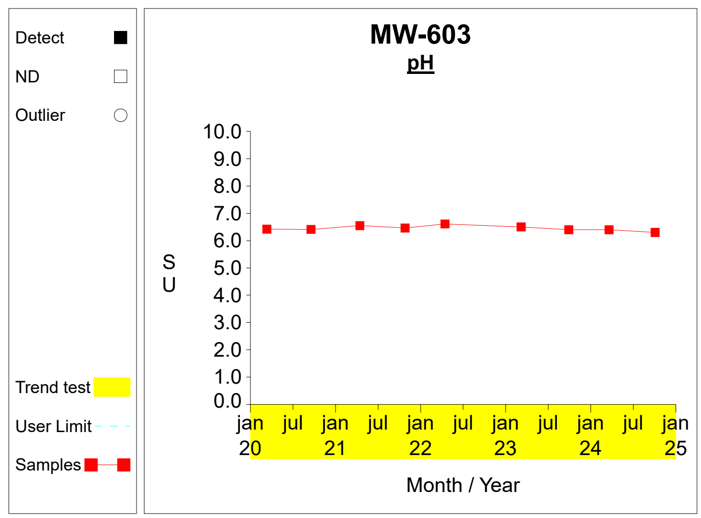

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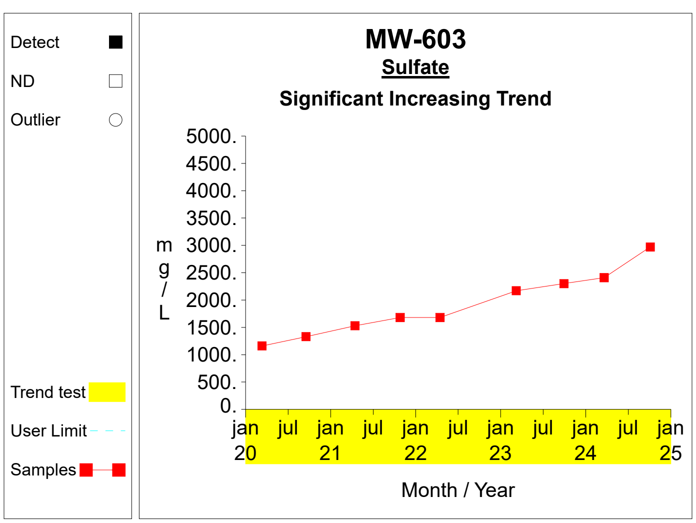
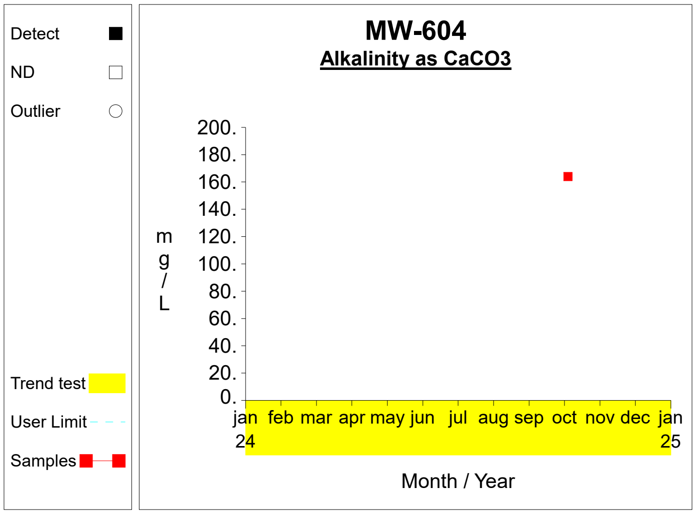
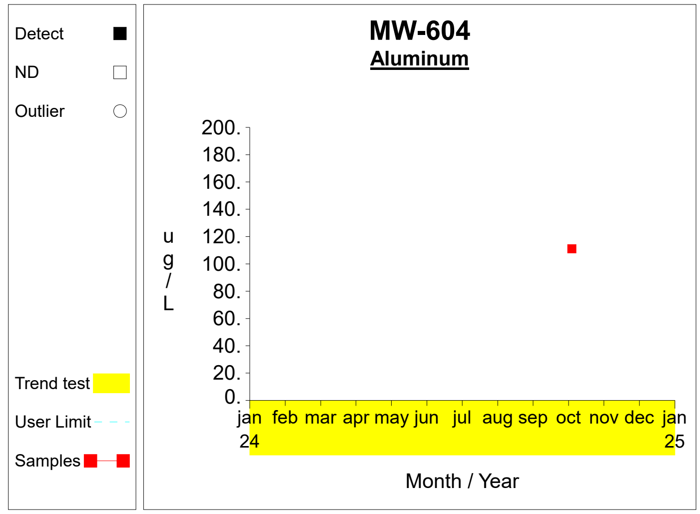


Graph 85

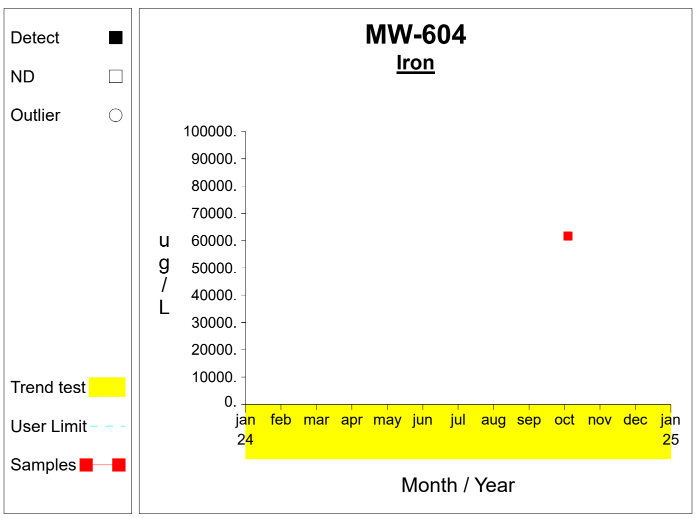
Time Series



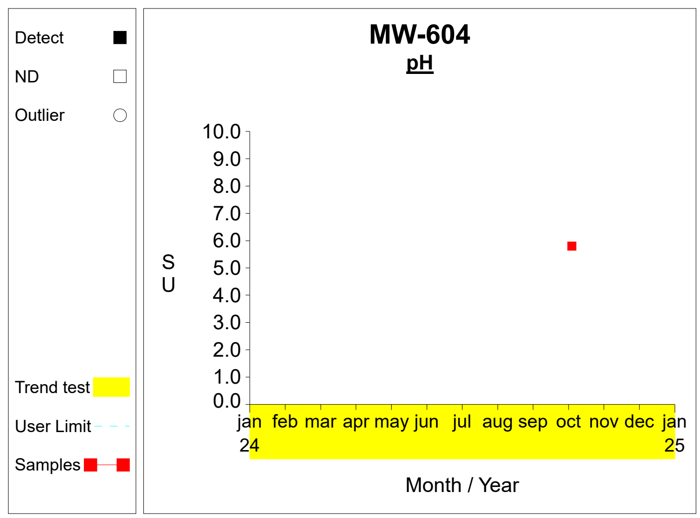
Graph 86



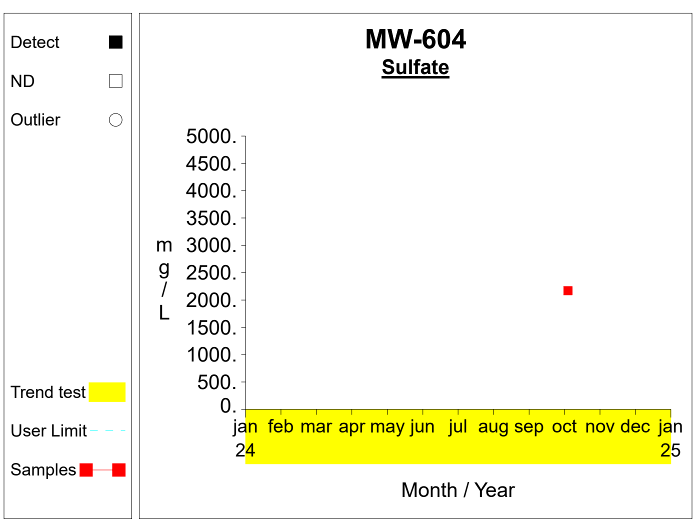
Graph 87



Graph 88

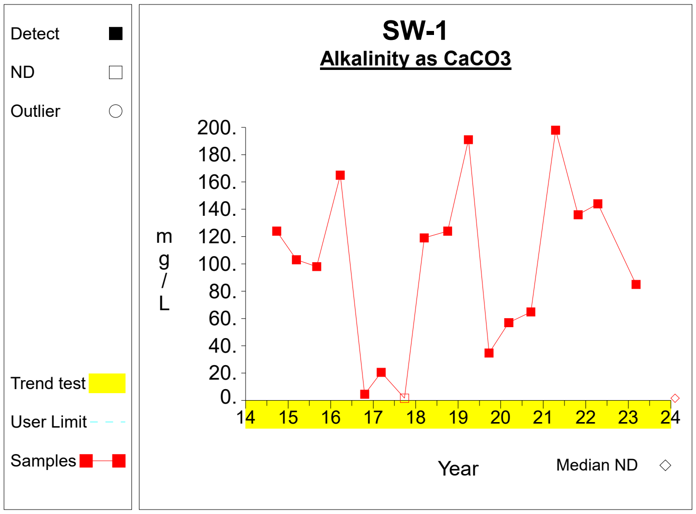


Graph 89

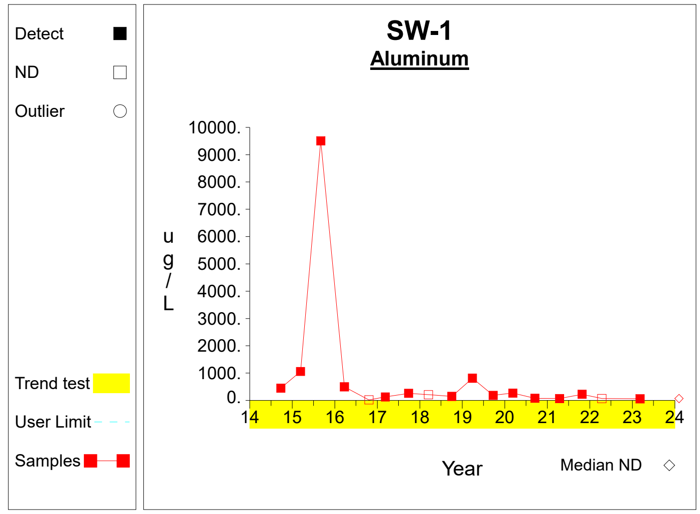


Graph 90

Time Series



Graph 91



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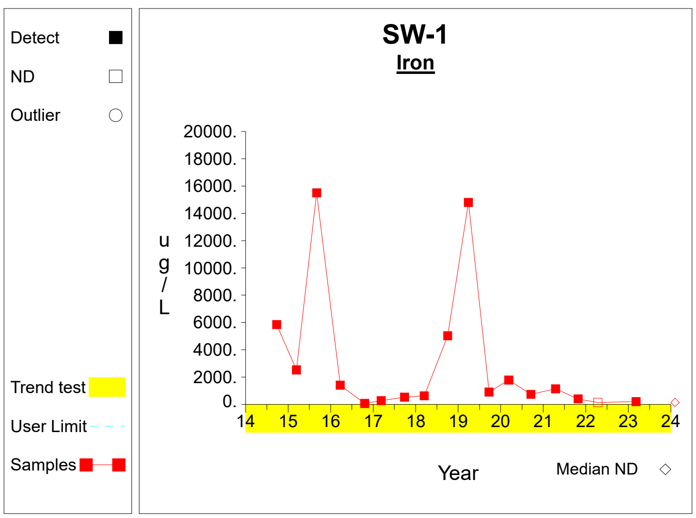
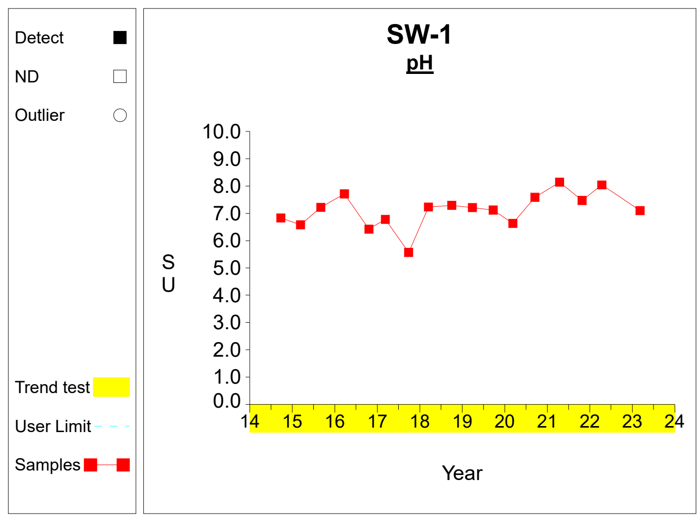
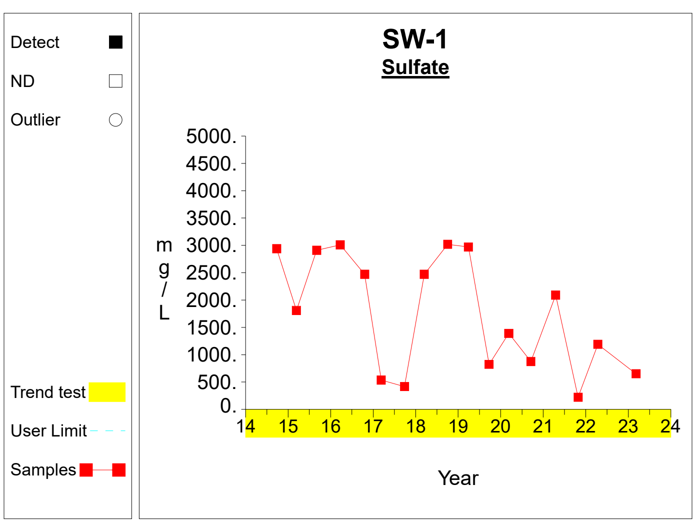


Graph 93



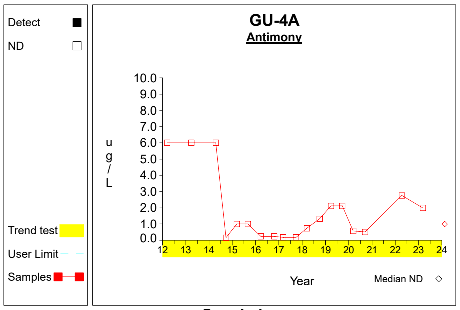
Graph 94



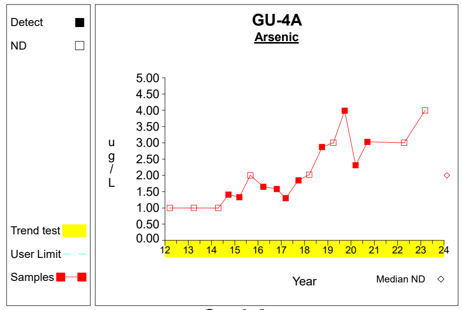
Graph 95

South Central Iowa SWA October 2024

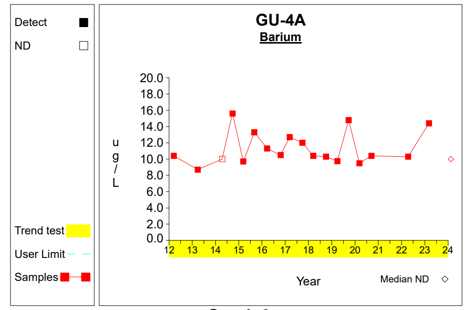
Time Series



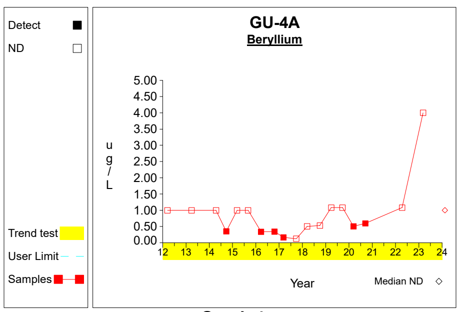
Graph 1



Graph 2



Graph 3



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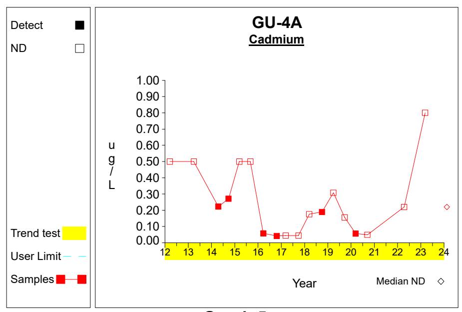
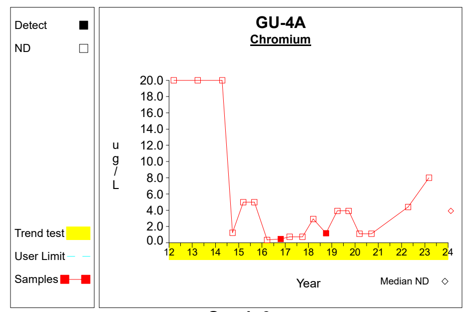
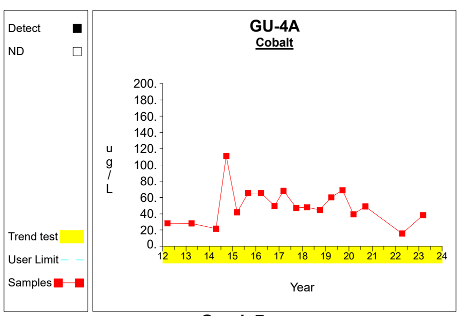


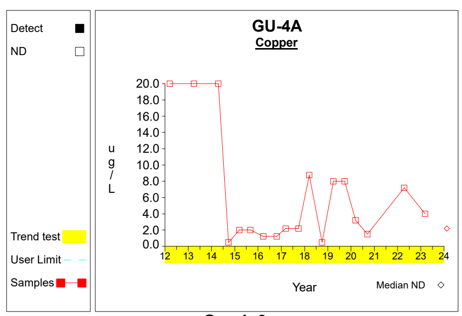
Graph 5



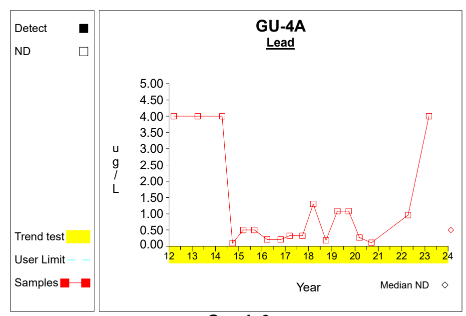
Graph 6



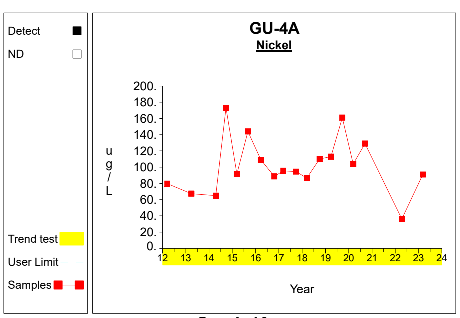
Graph 7



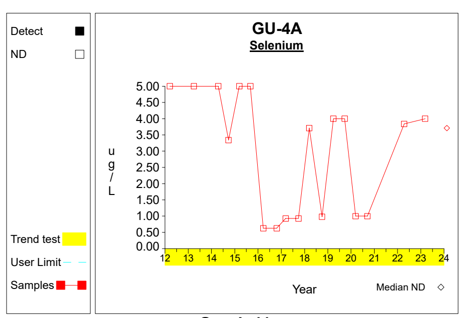
Graph 8



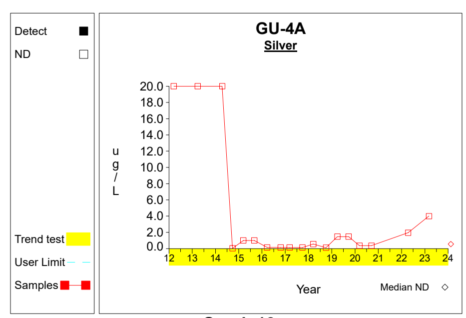
Graph 9



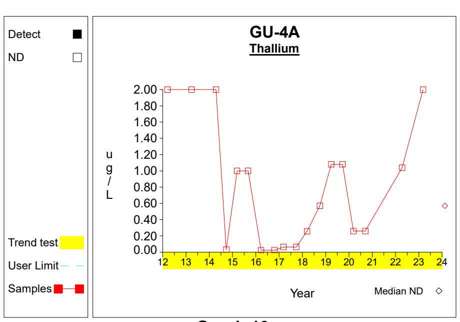
Graph 10



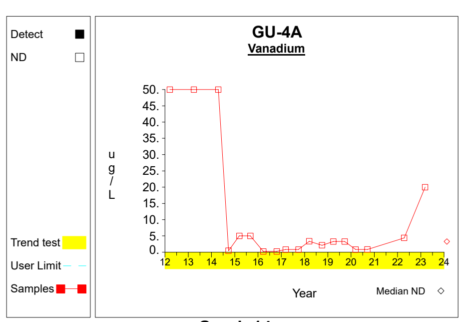
Graph 11



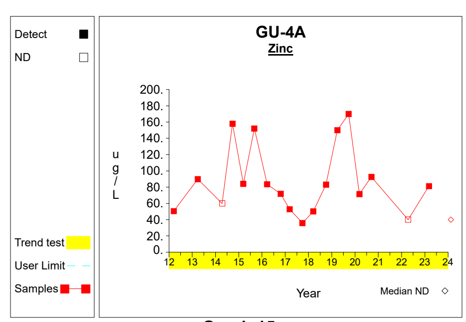
Graph 12



Graph 13



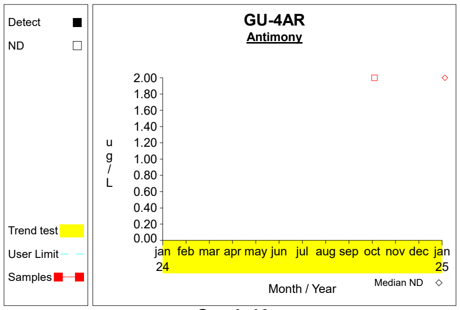
Graph 14



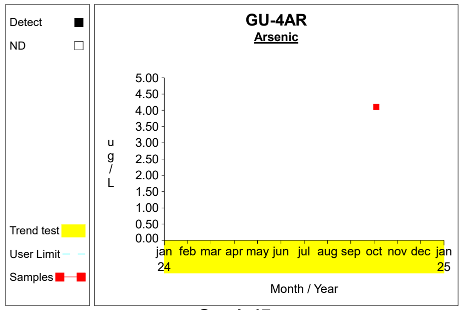
Graph 15

Prepared by: Otter Creek Environmental

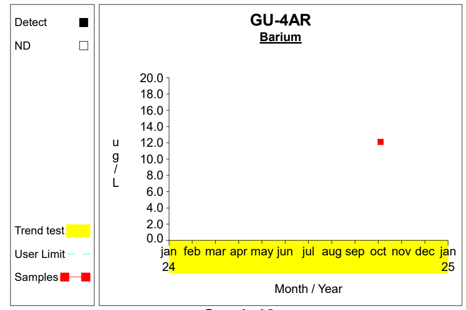
Time Series



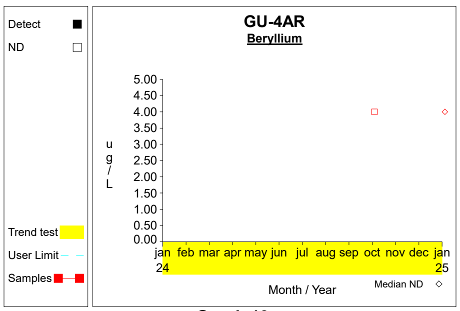
Graph 16



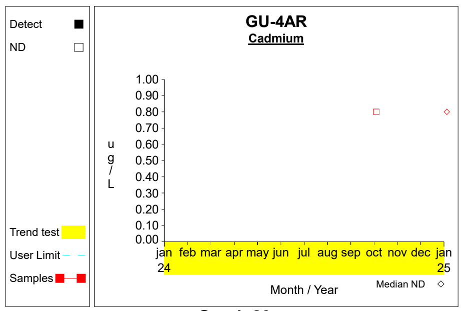
Graph 17



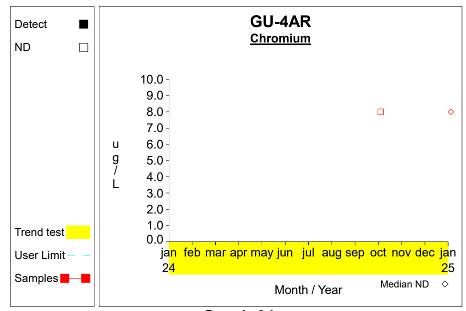
Graph 18



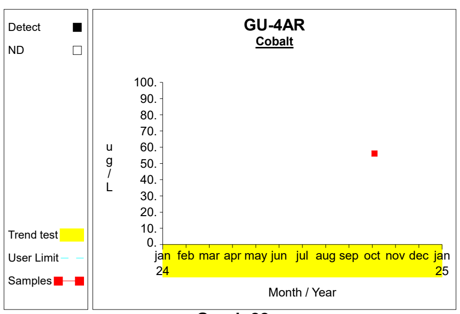
Graph 19



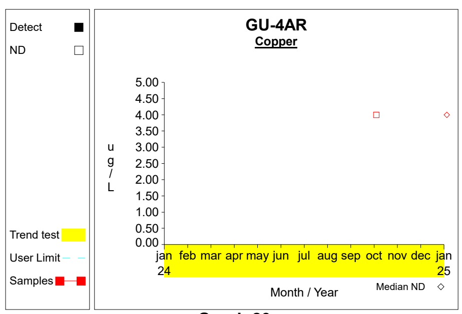
Graph 20



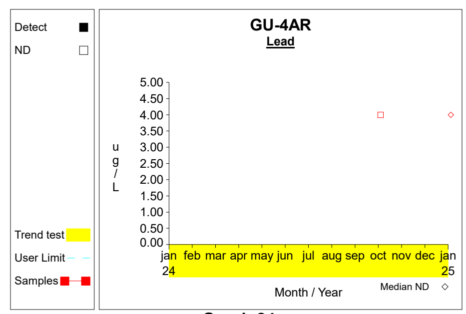
Graph 21



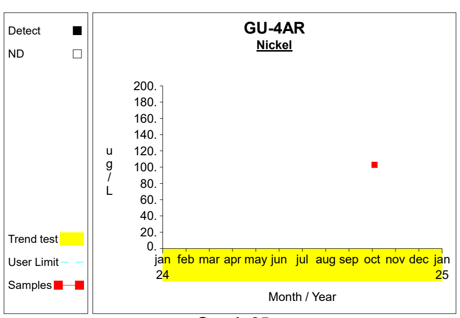
Graph 22



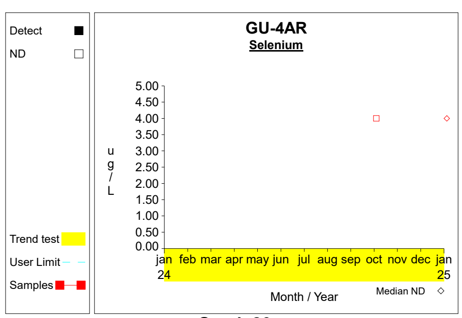
Graph 23



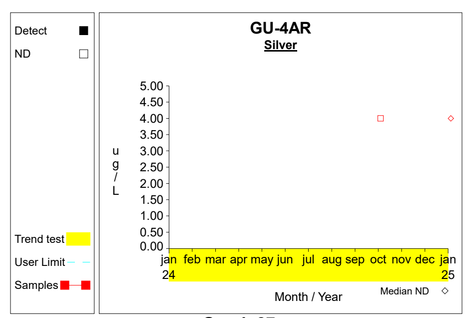
Graph 24



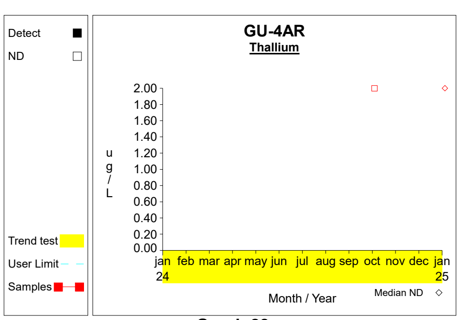
Graph 25



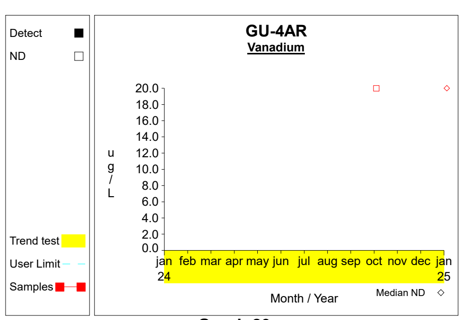
Graph 26



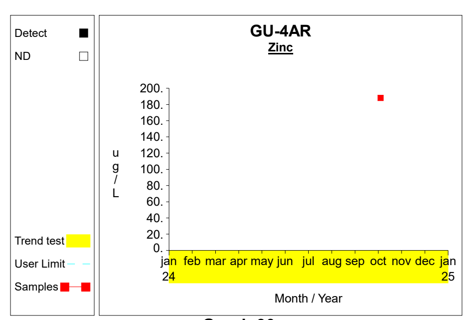
Graph 27



Graph 28

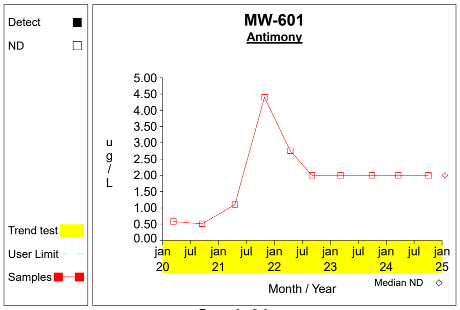


Graph 29

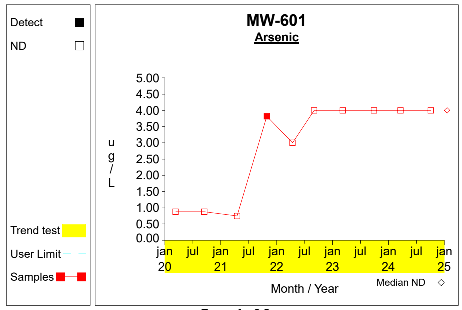


Graph 30

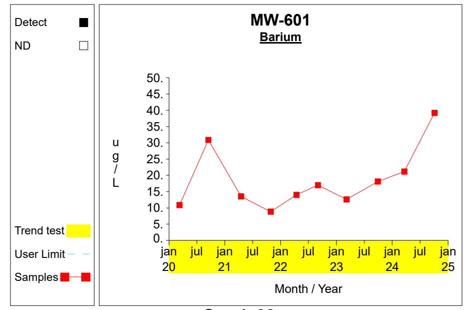
Time Series



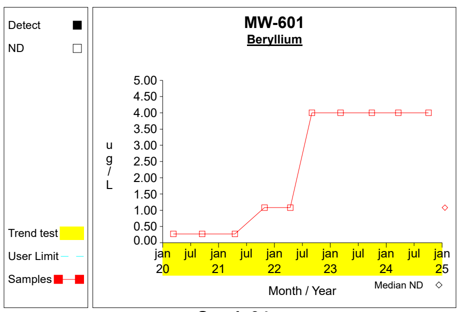
Graph 31



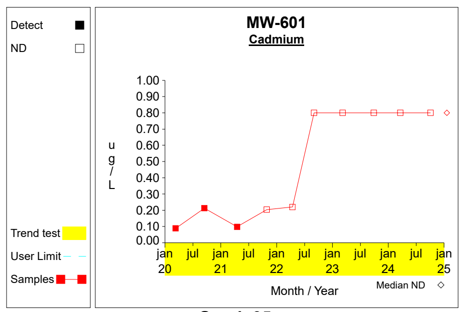
Graph 32



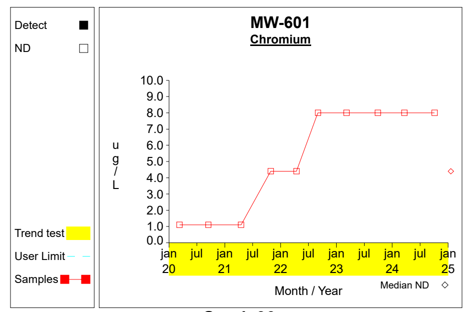
Graph 33



Graph 34



Graph 35



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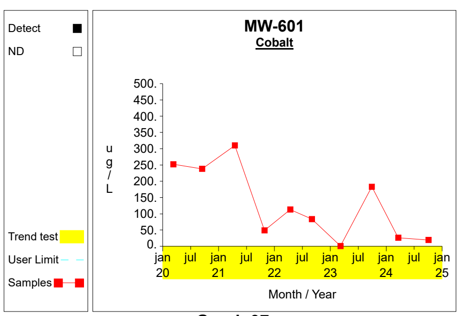
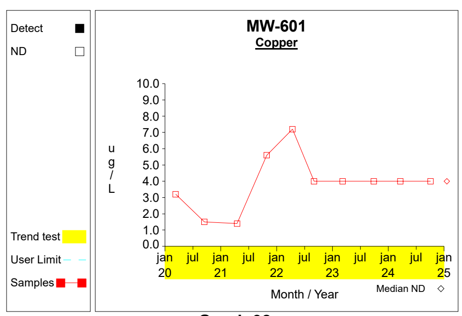


Graph 37



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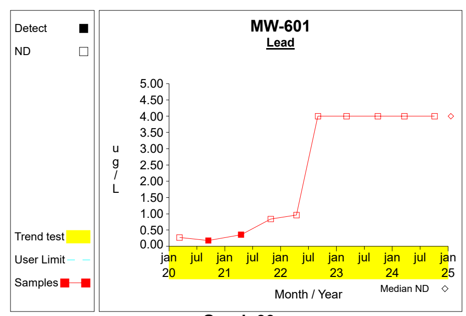

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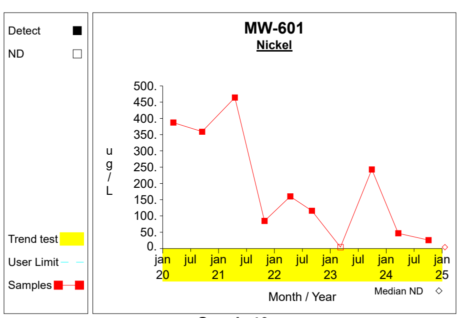

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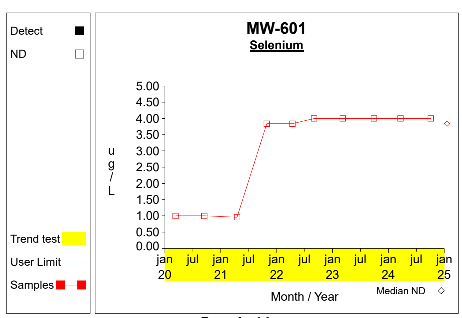

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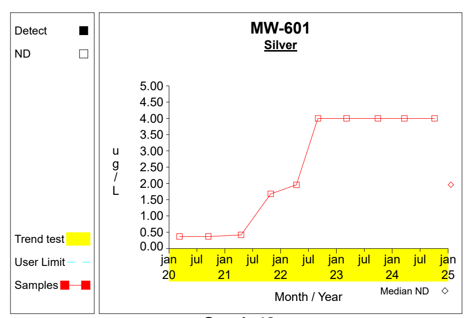
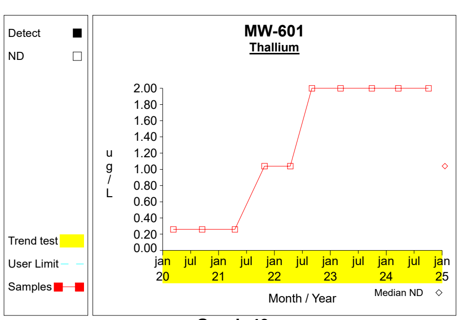
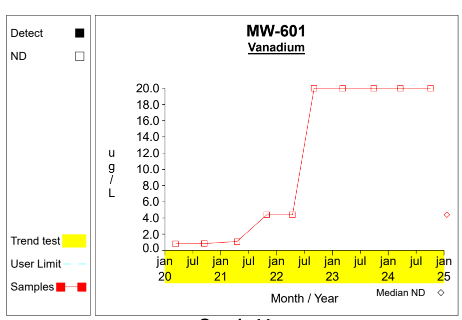


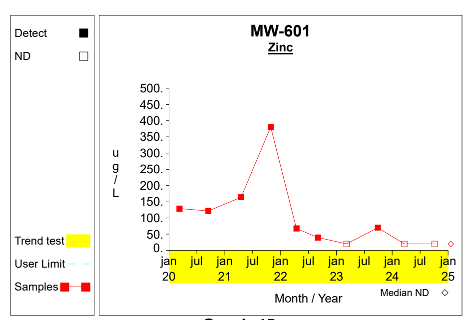
Graph 42



Graph 43



Graph 44



Graph 45

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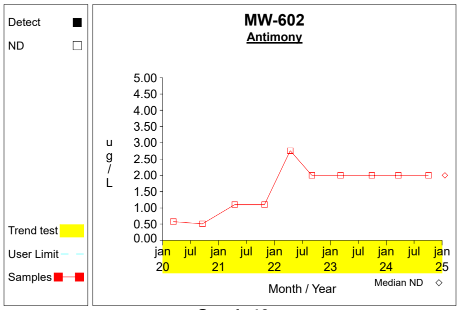
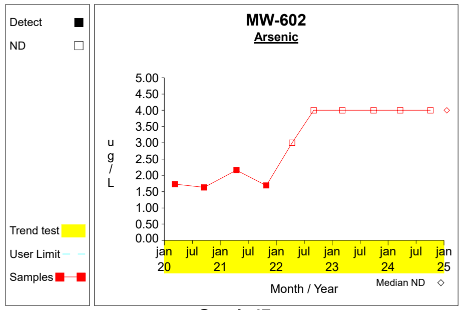
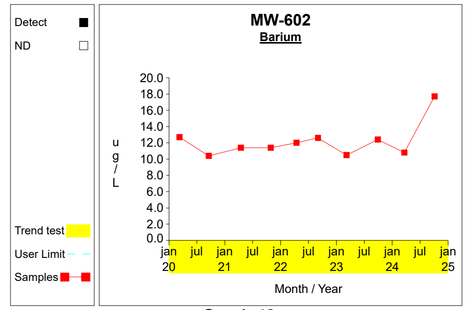
Time Series



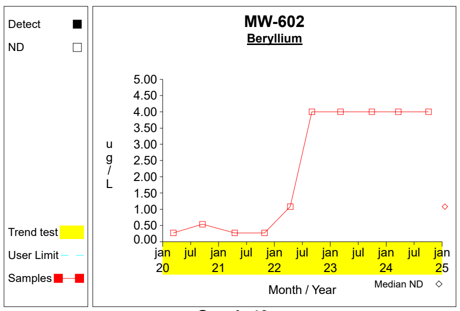
Graph 46



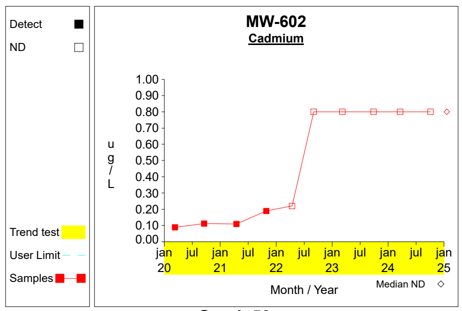
Graph 47



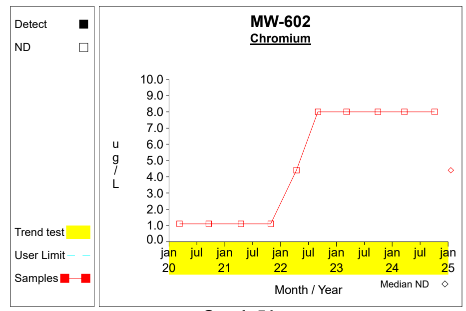
Graph 48



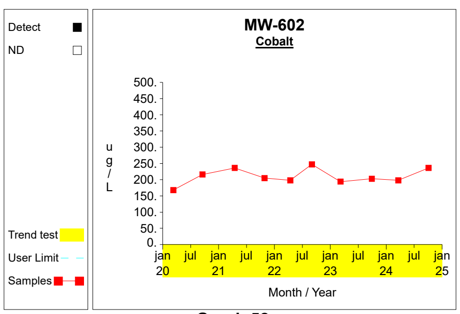
Graph 49



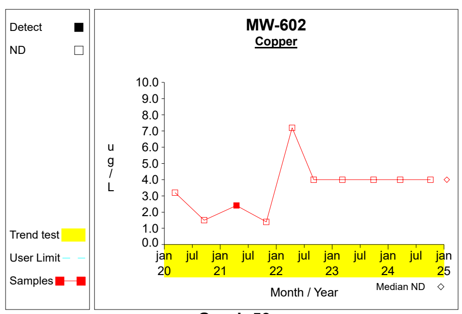
Graph 50



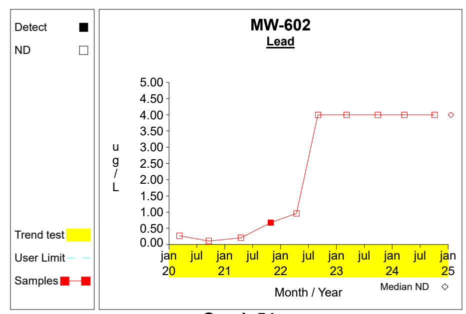
Graph 51



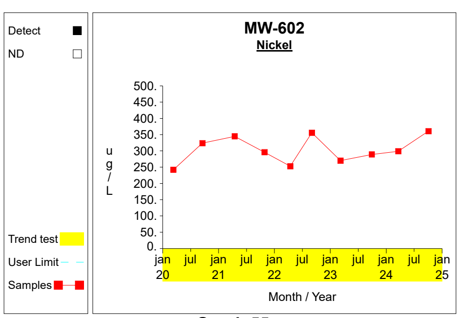
Graph 52



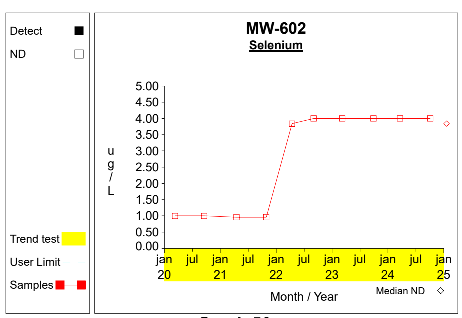
Graph 53



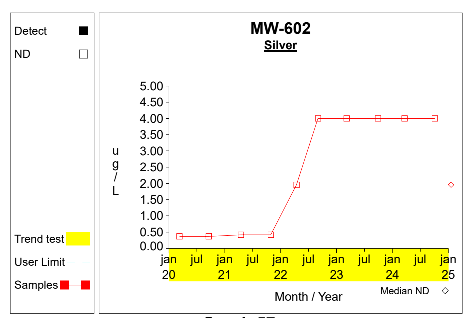
Graph 54



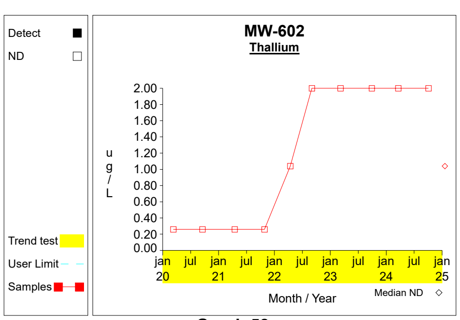
Graph 55



Graph 56



Graph 57



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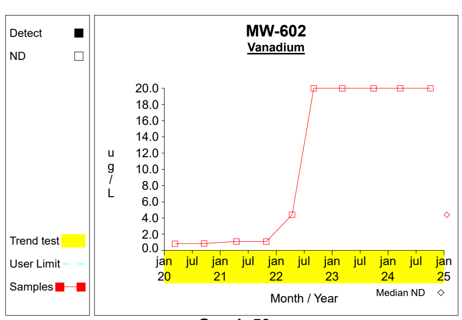
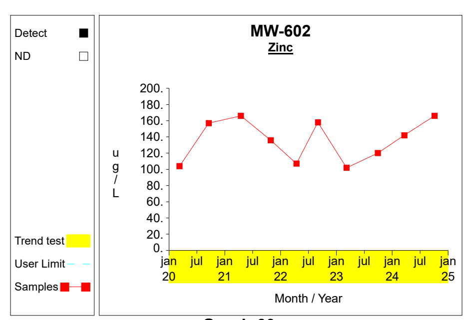


Graph 59



Graph 60

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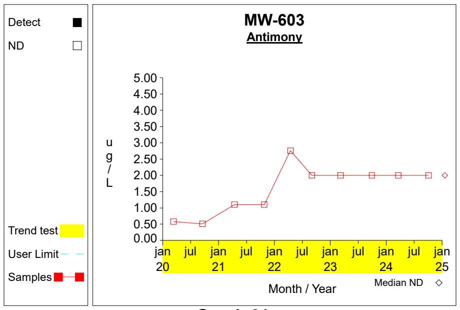
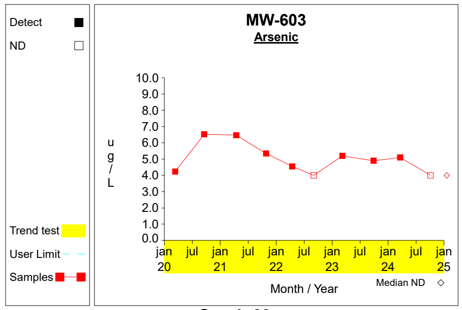
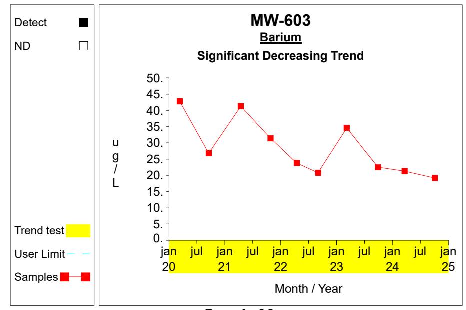
Time Series



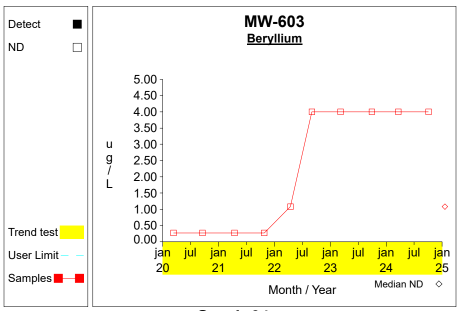
Graph 61



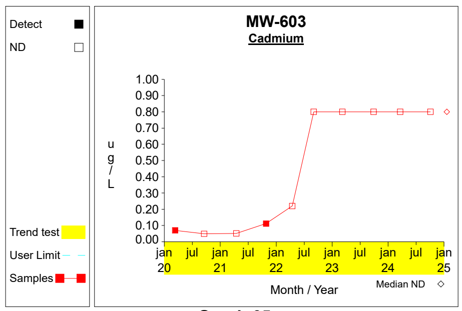
Graph 62



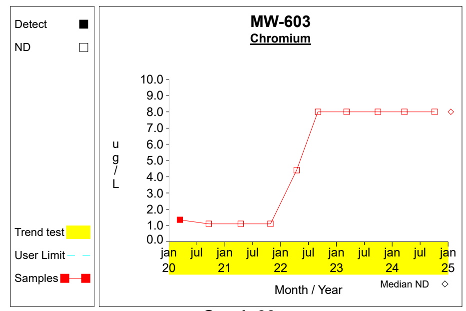
Graph 63



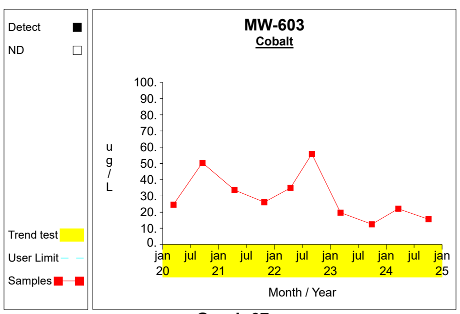
Graph 64



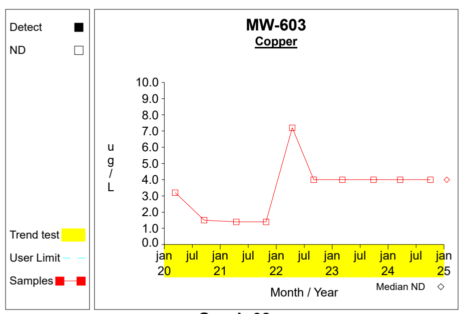
Graph 65



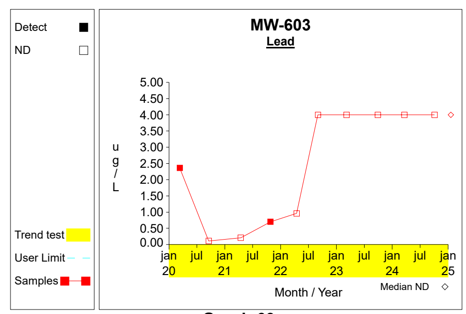
Graph 66



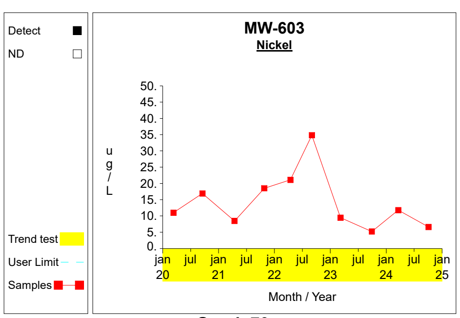
Graph 67



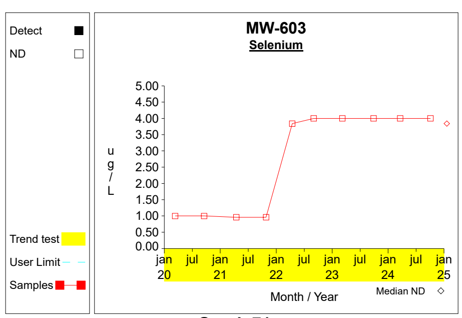
Graph 68



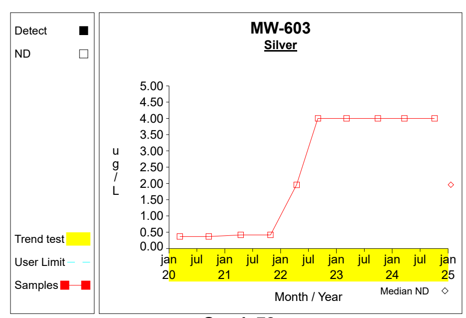
Graph 69



Graph 70



Graph 71



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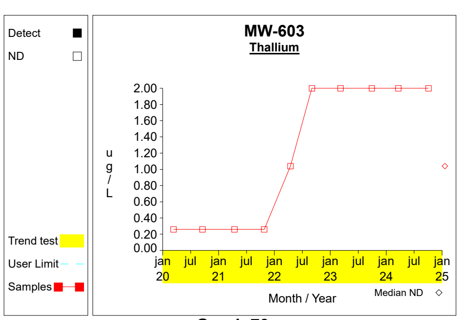
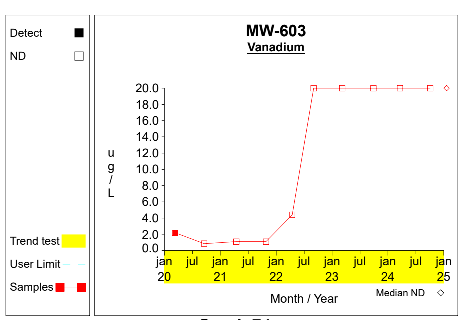
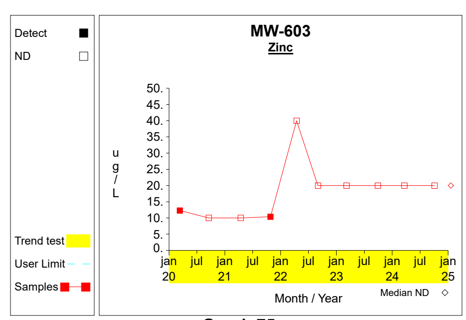


Graph 73



Graph 74



Graph 75

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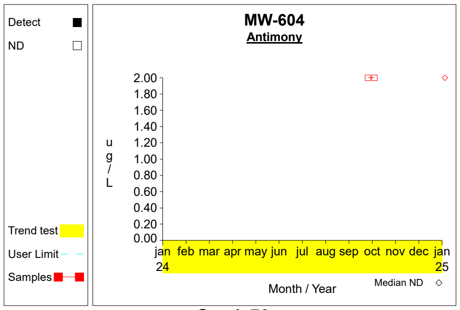
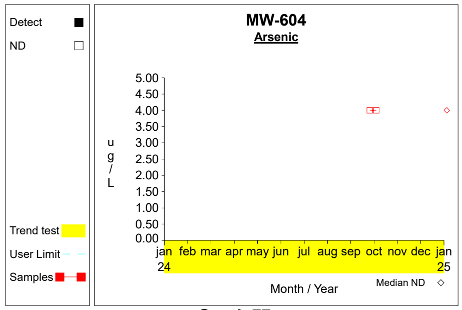
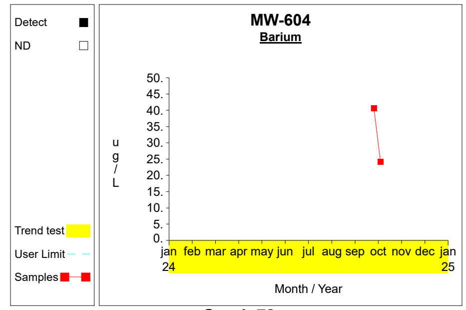
Time Series



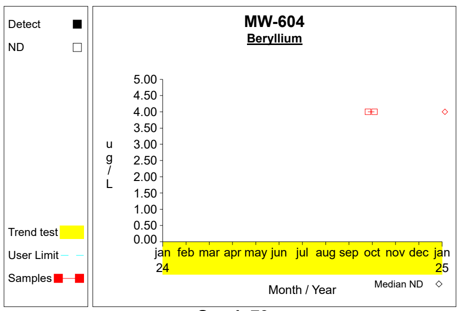
Graph 76



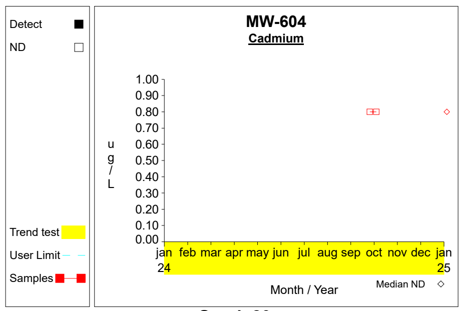
Graph 77



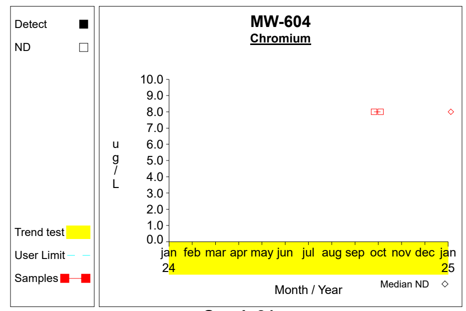
Graph 78



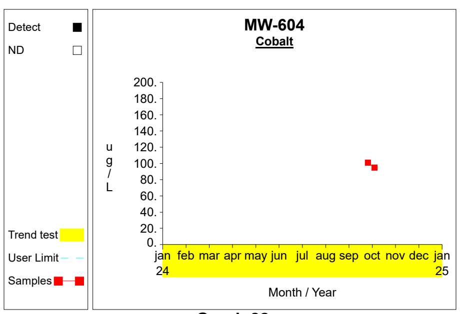
Graph 79



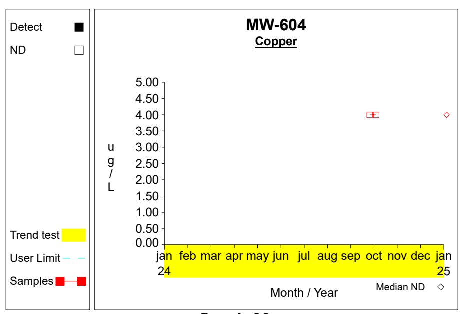
Graph 80



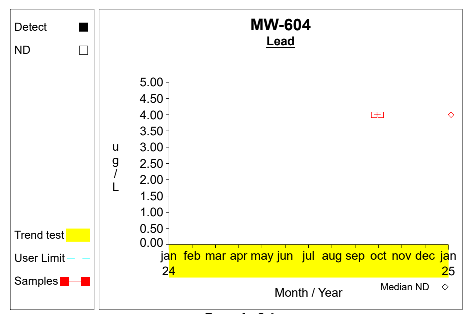
Graph 81



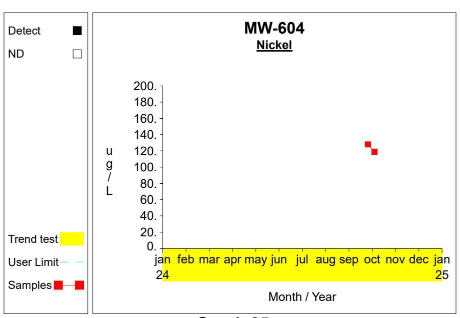
Graph 82



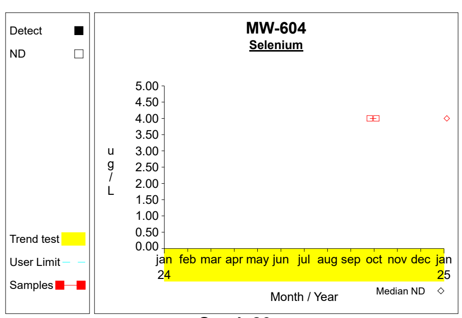
Graph 83



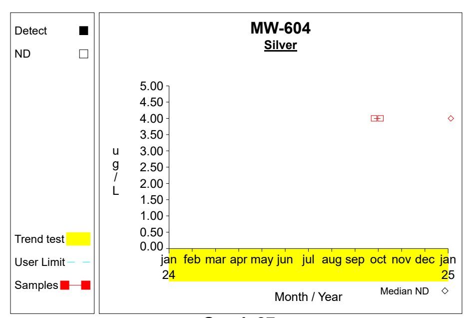
Graph 84



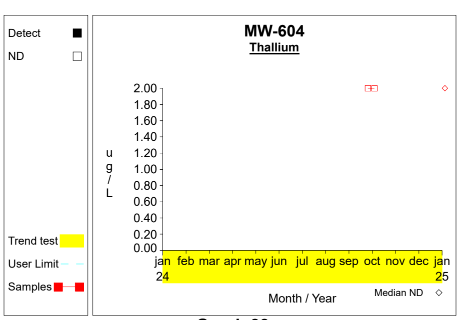
Graph 85



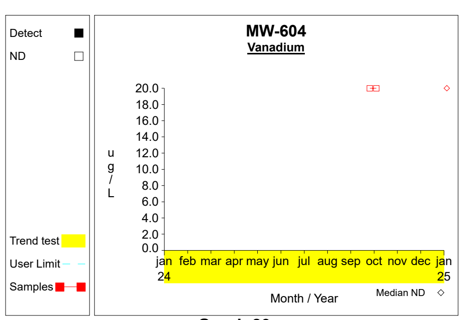
Graph 86



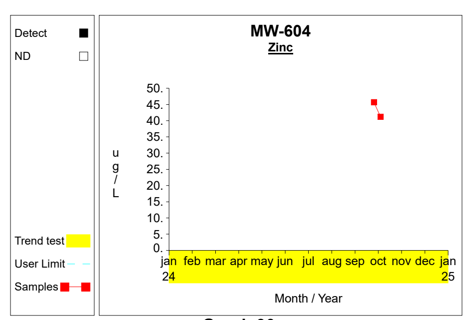
Graph 87



Graph 88



Graph 89



Graph 90

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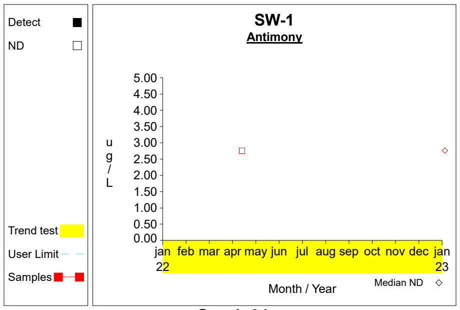
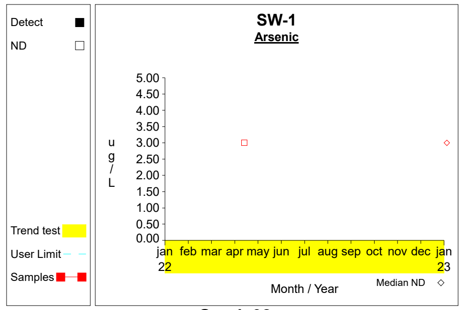
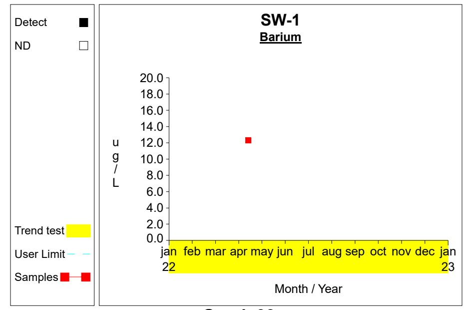
Time Series



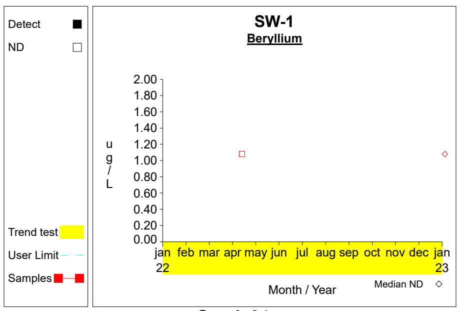
Graph 91



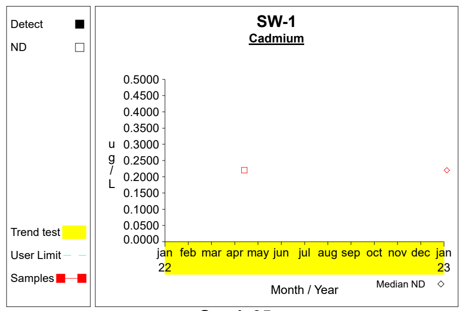
Graph 92



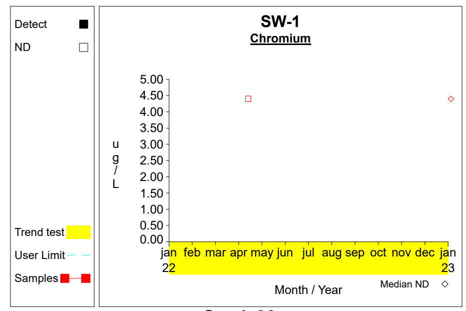
Graph 93



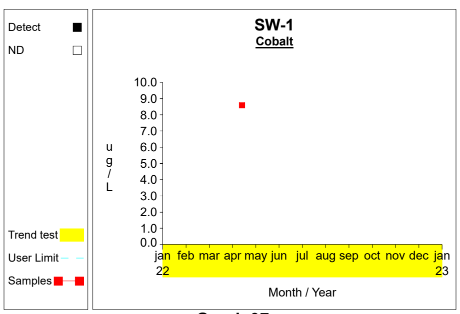
Graph 94



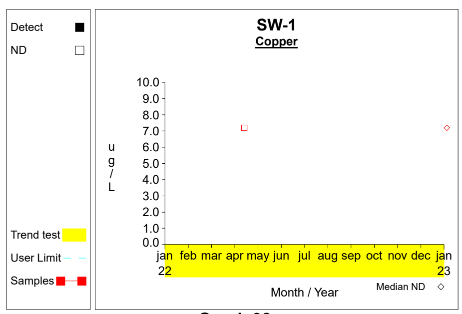
Graph 95



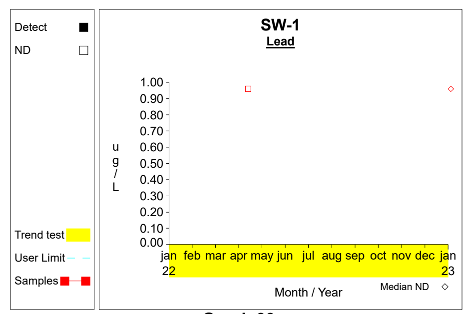
Graph 96



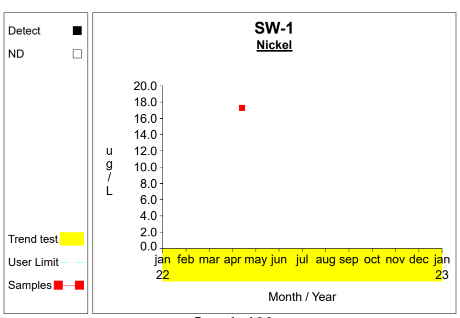
Graph 97



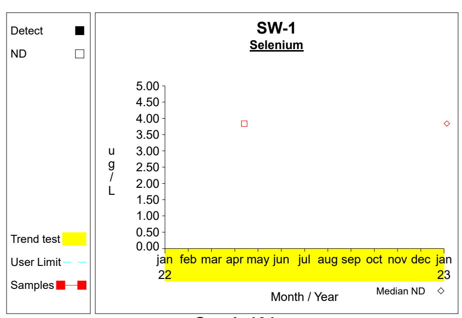
Graph 98



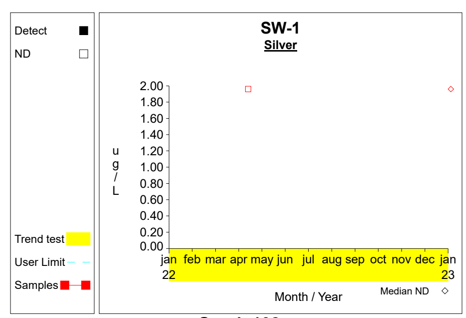
Graph 99



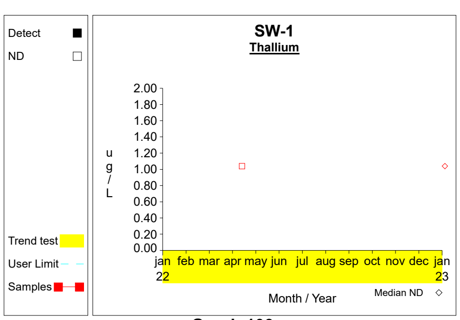
Graph 100



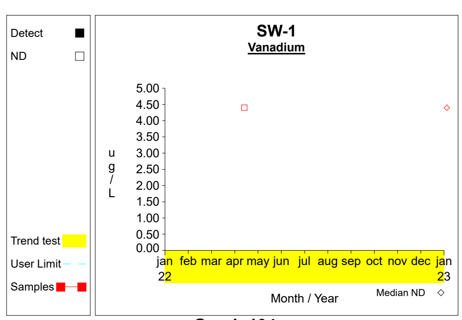
Graph 101



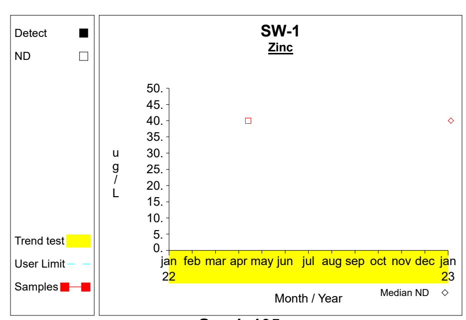
Graph 102



Graph 103



Graph 104



Graph 105

Appendix H

Assessment Testing Results Summary

Dichlorodifluoromethane (ug/L)

(*green highlights =a full Appendix II sample*)

Date	MW-344	MW-382R
Mar-2012	<3	**3.11**
Sep-2012	<3	<5
Mar-2013	NT	**2.4J**
Sep-2013	<3	**2.73J**
Apr-2014	NT	**2.14J**
Sep-2014	NT	**2.7J**
Mar-2015	NT	**1.59J**
Sep-2016	NT	<3
Mar-2016	NT	<1
Oct-2016	NT	**1.77J**
Mar-2017	NT	**1.86J**
Sep-2017	NT	**0.898J**
Mar-2018	NT	**1.11J**
Oct-2018	<3	**0.962J**
Mar-2019	NT	NT
Sep-2019	NT	NT
Mar-2020	NT	NT
Sep-2020	NT	NT
Apr-2021	NT	NT
Oct-2021	NT	NT
Apr-2022	NT	NT
9/1/2022	NT	NT
3/6/2023	NT	NT
9/29/23	<1	<1
3/19/24	NT	NT
10/3/24	NT	NT

Bis(2-ethylhexyl)phthalate (ug/L)
(*green highlights* =*a full Appendix II sample*)

Date	MW-344	MW-382R
Mar-2012	<10	<10
Sep-2012	<10	<10
Mar-2013	NT	NT
Sep-2013	<10	<10
Apr-2014	NT	NT
Sep-2014	NT	NT
Mar-2015	NT	NT
Sep-2016	NT	NT
Mar-2016	NT	NT
Oct-2016	NT	NT
Mar-2017	NT	NT
Sep-2017	NT	NT
Mar-2018	NT	NT
Oct-2018	<6	<6
Mar-2019	NT	NT
Sep-2019	NT	NT
Mar-2020	NT	NT
Sep-2020	NT	NT
Apr-2021	NT	NT
Oct-2021	NT	NT
Apr-2022	NT	NT
9/1/2022	NT	NT
3/6/2023	NT	NT
9/29/23	<6	**16.0**
3/19/24	NT	<6
10/3/24	NT	<6

Tin (mg/L)
(*green highlights =a full Appendix II sample*)

Date	MW-344	MW-382R
Mar-2012	<0.1	<0.1
Sep-2012	<0.1	<0.1
Mar-2013	NT	NT
Sep-2013	**0.605**	**0.606**
Apr-2014	<0.1	<0.1
Sep-2014	**0.0935J**	**0.153**
Mar-2015	**0.0815**	**0.0377**
Sep-2016	<0.2	<0.1
Mar-2016	<0.000255	<0.00255
Oct-2016	<0.000832	<0.00832
Mar-2017	NT	<0.00162
Sep-2017	<0.00162	<0.00162
Mar-2018	<0.00648	**0.015J**
Oct-2018	<0.00130	<0.00130
Mar-2019	<0.00180	NT
Sep-2019	NT	NT
Mar-2020	NT	NT
Sep-2020	NT	NT
Apr-2021	NT	NT
Oct-2021	NT	NT
Apr-2022	NT	NT
9/1/2022	NT	NT
3/6/2023	NT	NT
9/29/23	<0.020	<0.020
3/19/24	NT	NT
10/3/24	NT	NT

Appendix I

Leachate Collection System Performance Evaluation Report

Appendix I.1 - Leachate Recirculation Volumes

SCISWA LANDFILL LEACHATE VOLUMES 2024

Leachate Recirculation Log - with Tanker

Date	Time	Location	Volume	Driver
None				
2022 Annual Recirculated w/tanker			0	gallons

Leachate Off Site -Loads

Date	DMWW Ticket #	Net Lbs	Ticket # ?	Gallons
None				
2022 Leachate gallons hauled off-site to Des MoinesMetro				0

Maintenance and changes to leachate equipment in CY 2024:
No changes to leachate pond and recirculation pump
10K Tank and pump removed & NW! pump added during construction of NW1/2 apx. 9/1/24

Total gallons recirculated in 2024:

2,635,000

LEACHATE PUMPED FROM 4A AND NW1 PUMPS TO POND CY 2024

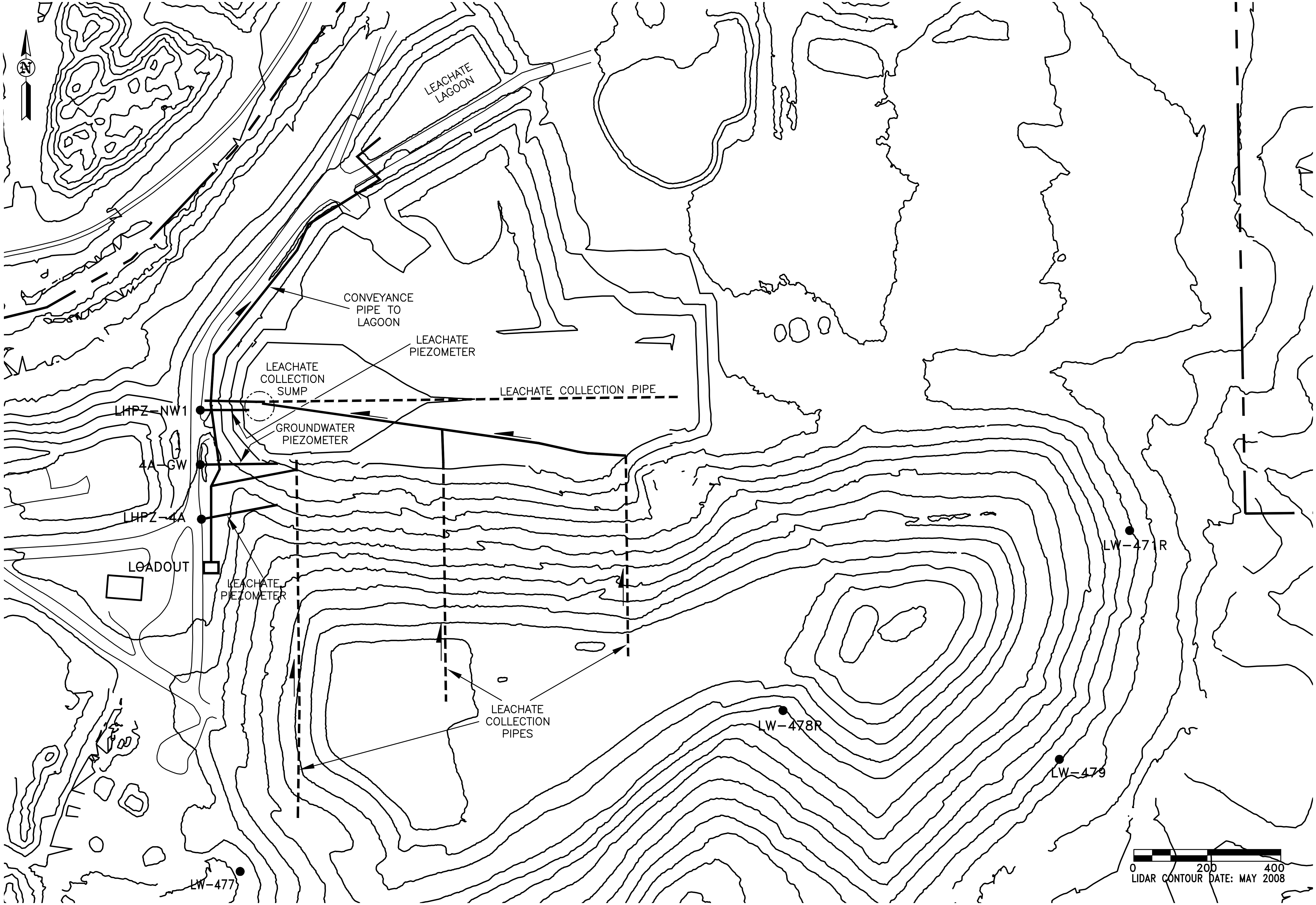
PUMP	START READING	FINISH READING	TOTAL GALLONS	
4A	47,764,883	48,247,738	482,855	
NW1	0	1,617,351	1,617,351	
10K Tank	23,829,406	24,132,016	302,610	tank pulled June 2024
COMBINED			2,402,816	GALLONS
			(NOT RECIRCULATED)	

Leachate Recirculation Log -with Pond pump (metered)

Date	Gallons	Location	Date	Gallons	Location	Date	Gallons	Location
5/22/2024	80,000	4A-F	10/24/2024	60,000	4A-F			
5/24/2024	60,000	4A-F	10/28/2024	60,000	4A-F			
5/31/2024	50,000	4A-F	10/29/2024	60,000	4A-F			
6/4/2024	100,000	4A-F	11/5/2024	60,000	4A-F			
6/14/2024	40,000	4A-F	11/8/2024	30,000	4A-F			
6/18/2024	40,000	4A-F	11/9/2024	40,000	4A-F			
6/26/2024	40,000	4A-F	11/11/2024	60,000	4A-F			
6/27/2024	40,000	4A-F	11/13/2024	60,000	4A-F			
7/3/2024	40,000	4A-F	11/15/2024	60,000	4A-F			
7/7/2024	40,000	4A-F	11/20/2024	60,000	4A-F			
7/11/2024	80,000	4A-F	11/22/2024	40,000	4A-F			
7/16/2024	45,000	4A-F	11/23/2024	40,000	4A-F			
7/18/2024	40,000	4A-F	11/25/2024	50,000	4A-F			
7/19/2024	40,000	4A-F	11/26/2024	50,000	4A-F			
7/22/2024	40,000	4A-F	11/27.24	10,000	4A-F			
7/26/2024	40,000	4A-F	12/3/2024	60,000	4A-F			
8/5/2024	50,000	4A-F	12/6./24	50,000	4A-F			
8/7/2024	20,000	4A-F	12/9/2024	60,000	4A-F			
8/9/2024	20,000	4A-F	12/17/2024	60,000	4A-F			
8/11/2024	40,000	4A-F	12/18/2024	60,000	4A-F			
8/17/2024	40,000	4A-F	12/23/2024	60,000	4A-F			
8/20/2024	40,000	4A-F	12/24/2024	40,000	4A-F			
9/13/2024	20,000	4A-F	12/27/2024	60,000	4A-F			
9/19/2024	40,000	4A-F	12/30/2024	60,000	4A-F			
9/25/2024	50,000	4A-F	12/31/2024	20,000	4A-F			
9/27/2024	50,000	4A-F						
10/10/2024	50000	4A-F						
10/15/2024	50000	4A-F						
10/16/2024	50000	4A-F						
10/18/2024	30000	4A-F						

2024 Leachate gallons recirculated with pump (TO 4A-F)
2,635,000

Appendix I.2 - Leachate Collection, Conveyance, Storage, and Monitoring Map



LEACHATE COLLECTION, CONVEYANCE, STORAGE AND MONITORING MAP

SOUTH CENTRAL IOWA SOLID WASTE AGENCY SLF
TRACY, IOWA

FIGURE: 1

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6009	DATE 1-6-25

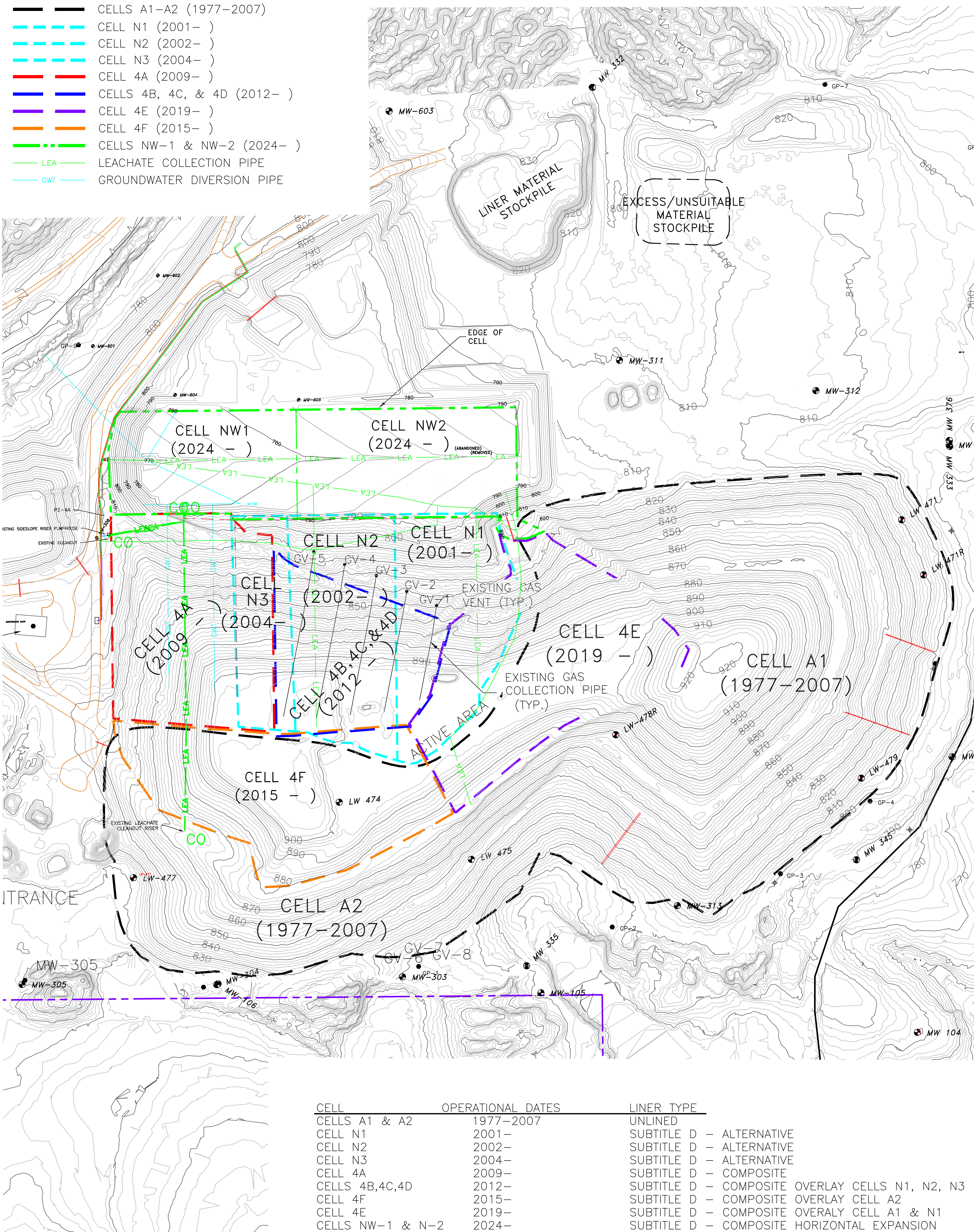
HLW Engineering Group
204 West Broad Street, P.O. Box 314
Story City, Iowa 50248
Phone: (515) 733-4144
FAX: (515) 733-4146

SCALE

0 150 300

CONTOURS FROM DRONE SURVEY COMPLETED JUNE 27, 2023 AND RECORD SURVEY COMPLETED SEPTEMBER 23, 2024.

CELLS A1–A2 (1977–2007)
CELL N1 (2001–)
CELL N2 (2002–)
CELL N3 (2004–)
CELL 4A (2009–)
CELLS 4B, 4C, & 4D (2012–)
CELL 4E (2019–)
CELL 4F (2015–)
CELLS NW–1 & NW–2 (2024–)
LEA LEACHATE COLLECTION PIPE
GWT GROUNDWATER DIVERSION PIPE



CELL	OPERATIONAL DATES	LINER TYPE
CELLS A1 & A2	1977–2007	UNLINED
CELL N1	2001–	SUBTITLE D – ALTERNATIVE
CELL N2	2002–	SUBTITLE D – ALTERNATIVE
CELL N3	2004–	SUBTITLE D – ALTERNATIVE
CELL 4A	2009–	SUBTITLE D – COMPOSITE
CELLS 4B,4C,4D	2012–	SUBTITLE D – COMPOSITE OVERLAY CELLS N1, N2, N3
CELL 4F	2015–	SUBTITLE D – COMPOSITE OVERLAY CELL A2
CELL 4E	2019–	SUBTITLE D – COMPOSITE OVERALY CELL A1 & N1
CELLS NW–1 & N–2	2024–	SUBTITLE D – COMPOSITE HORIZONTAL EXPANSION

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

SITE PLAN
LANDFILL CELL DEVELOPMENT

SOUTH CENTRAL IOWA SOLID WASTE AGENCY SLF
MARION COUNTY, IOWA

FIGURE: 1		
REVISION	NO.	DATE
DRAWN JGH	PROJECT NO. 6009–23A	DATE 1/10/25