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NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

S&ME, Inc.

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

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Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
White Street Landfill - Phase III	North end of White Street, Greensboro, NC	41-12	.1600	April 6-13, 2015

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☒ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

☒ No. No groundwater or surface water standards were exceeded.
☐ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Edmund Q.B. Henriques, L.G. — Facility Representative Name (Print)

Senior Geologist — Title

336-288-7180 — (Area Code) Telephone Number

Edmund Q.B. Henriques — Signature

8/5/2015 — Date

Affix NC Licensed/ Professional Geologist Seal

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Facility Representative Address

S&ME Engineering License # F-0176, S&ME Geology License# C-145

NC PE Firm License Number (if applicable effective May 1, 2009)

WHITE STREET LANDFILL
GREENSBORO, NORTH CAROLINA
PHASE III – PERMIT # 41-12
DETECTION MONITORING
APRIL 2015 SAMPLING EVENT

S&ME Project No.1584-98-081C

Prepared For:

The City of Greensboro

Prepared By:
S&ME, Inc.
8646 West Market Street, Suite 105
Greensboro, North Carolina 27409

August 5, 2015

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1. EXECUTIVE SUMMARY

Eleven monitoring wells and three stream locations at the lined Subtitle D White Street Landfill were sampled between April 6 and April 13, 2015. Ten wells (MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-24, MW-25, and MW-25D) comprise the groundwater monitoring system for the lined Subtitle D solid waste disposal area of the landfill, also known as Phase III. Monitoring wells MW-15 and MW-16 serve as background wells for Phase III. The collected samples were submitted to a North Carolina certified laboratory for analysis using the federal Appendix I list of volatile organic and inorganic constituents for detection monitoring. Samples from surface water locations SW-1, SW-2 and SW-3 were analyzed for federal Appendix I detection monitoring constituents. The following summarizes the findings for this event.

- Groundwater sample analyses detected no Appendix I volatile organic compounds at the sampled locations.
- Groundwater sample analyses report no Appendix I metals at concentrations which exceed the corresponding NCAC 2L groundwater quality standards. Cobalt and vanadium were detected in groundwater samples. Since there are no established NCAC 2L standards for these metals, the results were compared with the North Carolina, Interim Maximum Allowable Concentrations (IMAC). The cobalt concentration at well MW-24 and each of the reported vanadium concentrations for this event were greater than their corresponding IMAC. The vanadium concentration reported for background well MW-16 was similar to the concentrations detected in the compliance wells. Time vs concentration graphs for cobalt, and vanadium were examined and do not suggest trends of increasing concentrations for these parameters. This finding is further supported by the Mann-Kendall Trend Analysis tests, which evidenced no upward trends in the detected concentrations over time.
- The groundwater analytical results were examined for evidence of statistically significant increases (SSIs) over background values. The statistical analyses suggest that no SSIs occurred during the current groundwater monitoring event. Based on a finding of no SSIs, the current concentrations are not considered indicative of a release from the monitored unit.
- Two volatile organic compounds and several inorganic constituents were reported in one or more of the surface water samples collected. Based on the sampled locations and the reported concentrations, the compounds detected in the surface water samples originate up-stream and do not suggest a release of these constituents from the monitored unit.

It is noteworthy to mention that S&ME previously completed an Alternate Source Demonstration (ASD) for metals in the adjoining Phase II portion of the Facility. The results of the ASD suggest that cobalt and vanadium concentrations above the respective IMAC values are not likely due to a release by the Facility, but instead may be attributed to the natural occurrence of these metals in the native, residual soil at concentrations sufficient to influence the concentrations in groundwater samples. Although the ASD was undertaken in the Phase II portion of the Facility, the ASD results are likely applicable to Phase III, thus demonstrating the detected cobalt and vanadium concentrations should not indicate a release from the monitored unit.

2. INTRODUCTION

White Street Landfill is a Solid Waste Management Facility (SWMF) located at the north end of White Street in northeastern Greensboro. The City of Greensboro operates this lined Subtitle D landfill, referred to as Phase III, under Solid Waste Permit #41-12. Ten wells (MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-24, MW-25, and MW-25D) comprise the groundwater monitoring system for the lined Subtitle D solid waste disposal area of the landfill. Monitoring wells MW-15 and MW-16 serve as background wells for Phase III. The monitoring well locations are shown on **Figure 1**

S&ME, Inc. (S&ME) was contracted by the City of Greensboro to conduct this semi-annual water quality monitoring event. Groundwater samples were collected from two up-gradient and 9 down-gradient monitoring wells located along the perimeter of the Phase III disposal area. The water level in monitoring well MW-25 was below the dedicated pump during this event; therefore, it was not sampled. Surface water samples were collected at surface water location SW-1, SW-2, and SW-3. Sampling was conducted in accordance with the approved site Water Quality Monitoring Plan.

The Phase III monitoring well samples were analyzed for the RCRA Subtitle D Appendix I parameters. The surface water samples were also analyzed for the Appendix I list of constituents. This report discusses the field procedures, summarizes the field measurements and analytical results, and presents the statistical evaluation results for the April 2015 water quality monitoring event.

3. SCOPE OF WORK

S&ME completed the following tasks as part of this monitoring event:

- Sampled eleven monitoring wells and three surface water locations.
- Obtained field values for pH, temperature, conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity at each groundwater sample location.
- Collected depth to water measurements prior to sampling and during well purging to monitor drawdown.
- Had the samples analyzed for Appendix I constituents by a North Carolina certified laboratory using State approved methods.
- Determined groundwater flow rates and directions at the Phase III area monitoring well locations.
- Collected a sample of landfill leachate from the wet well for laboratory analyses.
- Prepared and submitted reports to the City of Greensboro and the North Carolina Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section (NCDENR-SWS).

4. METHODS EMPLOYED

4.1 Monitoring Well Sampling

On April 13, 2015, monitoring wells MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-24, and MW-25D were sampled. Monitoring well MW-25 was not sampled, since the water level was below the dedicated sampling pump. Prior to sampling, each well was opened and the static water level was measured from the top edge of the PVC casing. Since dedicated MicroPurge pumps were previously installed in each groundwater monitoring well as described in the monitoring well construction details reported in the "Baseline Groundwater Monitoring Report, Phase III" prepared by G.N. Richardson and Associates, dated May 1998, low-flow sampling techniques were used for groundwater sample collection. Monitoring well construction details from the same report were used to determine the volume of water in the monitoring wells. **Table 1** provides a summary of relevant well construction details.

At each well, the purge rate and the water level drawdown were monitored as an indicator of how much stress the purging placed on the aquifer. The purge rates were calculated by recording the time required to fill a graduated cylinder. The purging flow rates were approximately 100 milliliters/minute (ml/min.). During purging, the depth to water was periodically monitored and recorded on the field data sheets. For this event the measured drawdown in the sampled wells was generally less than 3 feet. It is our opinion that the observed drawdowns were generally minor during purging; therefore, the stresses placed on the aquifer should have been minor. The observed drawdown data suggests that the purging rates should have been low enough such that recharge water should not have been overly agitated, reducing the potential for colloids to be drawn into the well bore.

The purge water from the monitoring wells was monitored in the field for pH, temperature, conductivity, DO, and ORP using a flow-through cell and multi-meter. Typically, a sample was collected when three consecutive readings for each individual field parameter fluctuated by no more than 10 percent, between each equipment volume. The 10% change target stabilization goal was generally reached prior to collection of the groundwater samples. Turbidity was measured separately, with field measurements less than or equal to 10 NTUs, as a goal. Even with the use of low flow sampling methods, turbidity values at some wells remained higher than ideal during purging. Accordingly, some samples were collected based upon professional judgment without meeting the turbidity goal. The field data collected during sampling was recorded on the groundwater sampling field data sheets included in **Appendix I**. **Table 2** provides a summary of the field data collected during this event.

Groundwater samples were collected from the dedicated pump discharge Teflon tubing at the top of each well. Immediately upon collection, each sample was placed into laboratory supplied containers, placed in a cooler with ice, and placed under chain-of-custody. The sampling technician wore nitrile gloves, which were changed between wells to reduce the potential for cross contamination. The groundwater samples collected were analyzed for Appendix I volatile organic and inorganic constituents. Analyses were conducted by Environmental Conservation Laboratories, a North Carolina certified laboratory.

4.2 Statistical Analysis of Data

4.2.1 Software

The groundwater analytical data were analyzed using *ChemStat 6.2* software package. An Excel spreadsheet was used to create a data file composed of recent and historic laboratory data. The Excel file was then converted to a tab delimited file for use by the *ChemStat* software. The following procedures were used to carry out statistical analyses of the data for each constituent detected during this monitoring event.

4.2.2 Statistical Methods-Groundwater Analyses

In accordance with the NCDENR-Solid Waste Management Rules 15A NCAC 13B, Section 1632, historical up-gradient, cross-gradient, and background groundwater monitoring data collected from the monitoring wells that comprise the Subtitle D monitoring well system were pooled and the analytical results were used to create a statistical baseline for statistically significant increases in constituent concentrations. This sampling round (April 2015) will be incorporated into the database for the next round of sampling. The following procedure was used to analyze each new data set.

- A descriptive statistics were run to provide mean, standard deviation, variance, and percentage non-detects.
- Normality/Data Distribution Tests were run and used to determine the statistical distribution of the database for each quantified parameter. The data distribution test results were utilized to determine if a data set exhibits a normal, log-normal or non-normal distribution. Due to the large number of non-detects and the lack of normality in the data sets, non-parametric statistical methods were deemed appropriate for the evaluation of the current compliance data set.
- Time versus concentration graphs were prepared for each parameter detected at a quantifiable concentration and used to evaluate data trends and to identify potential data outliers. Mann-Kendall Trend analyses were performed as additional tests for indications of an upward trend of concentrations over time.
- A statistical Upper Limit was calculated for each of the detected parameter data sets utilizing Non-Parametric Upper Tolerance Limits. Then the compliance data were compared via an Inter-Well comparison to the statistical Upper Limit to determine if an SSI had occurred. For all statistical analyses, the non-detect values were converted to the respective Detection Limit for data analysis.
- If data indicated a statistically significant increases across the site, the results are examined to determine the validity of results.

4.3 Stream Sampling

Surface water sampling took place on April 6, 2015. Three stream samples (SW-1, SW-2 and SW-3) were collected in accordance with the approved site Sampling and Analysis Plan. The stream sample locations are indicated on **Figure 2**. The surface water samples were collected by immersing laboratory-supplied containers in the water to be sampled. After collection, the surface water samples were placed in a cooler with ice and managed under chain-of-custody. All stream samples were analyzed for Appendix I constituents by Environmental Conservation Laboratories.

5. RESULTS

5.1 Groundwater Analytical Results

Table 3 provides a summary of the constituent concentrations reported above the method detection limit (MDL) for the groundwater samples collected. Concentrations reported between the MDL and the Solid Waste Section Limits (SWSL) are considered estimated, thus shown as a "J" flagged concentration. **Table 4** provides a summary of the reported concentrations which exceed the 15A NCAC 2L Standards (2L Standard). For some constituents where there is no established 2L Standard, North Carolina has published Interim Maximum Allowable Concentrations (IMACs). The IMAC values are intended to help NCDENR in assessing conditions and setting health protective groundwater levels at regulated sites. As such the IMAC are only interim and not final groundwater quality standards. The following summarizes the exceedances of the corresponding 2L Standard or IMAC.

<u>Appendix I volatile organic compounds</u>

- No Appendix I volatile organic compounds were detected in the monitoring wells sampled during this event.

<u>Appendix I metals</u>

Appendix I metals antimony, barium, chromium, cobalt, copper, nickel, vanadium and zinc were detected at one or more of the wells sampled. The following lists constituents with concentrations that exceed the corresponding 2L Standards or IMAC.

- Currently, there is no established 2L Standard for cobalt; however, North Carolina has a published IMAC for cobalt set at 1 µg/L. For this event cobalt was reported at monitoring well MW-24 with an estimated concentration that exceeds the IMAC value.
- Currently, there is no established 2L Standard for vanadium; however, North Carolina has published an IMAC for vanadium set at 0.3 µg/L. During this event vanadium was reported at wells MW-16, MW-19, MW-20, and MW-25b. The estimated concentrations reported for each location exceed the IMAC.

The complete laboratory analytical reports are included in **Appendix II**.

5.2 Statistical Results

5.2.1 Overview of Database

The "Baseline Groundwater Monitoring Report, Phase III Cell, White Street Sanitary Landfill," prepared by G.N. Richardson & Associated, dated June 1998, summarizes the baseline monitoring data. The baseline monitoring samples were collected using the hand bailing procedures outlined in the approved Water Quality Monitoring Plan. Prior to the October 1998 monitoring event, but subsequent to the Baseline Groundwater Monitoring Report, the facility's approved Water Quality Monitoring Plan was modified to permit the use of dedicated MicroPurge pumps for monitoring well sample collection.

The statistical evaluations discussed herein were only performed on parameters detected during the subject monitoring event. In this statistical evaluation, non-detects are assigned values equal to their respective detection limits. This method of handling non-detects was used as part of the statistical analyses completed as part of the baseline water quality monitoring evaluations as set forth in the NCDENR-SWS memo dated January 18, 1995.

5.2.2 Statistical Analyses

5.2.2.1 Descriptive Statistics

The descriptive statistics program calculates the pooled mean, background mean, pooled standard deviation, background standard deviation, rank sum, rank mean, and variance for each constituent detected in each well. The percentages of all sample analyses for which the concentrations are below the quantitation limits (non-detects) are calculated by constituent for each well. The descriptive statistics are included in **Appendix III**.

5.2.2.2 Time vs. Concentration Graphs

The graphs display plots of the concentrations of one parameter for a single well over time. The concentration is plotted along the vertical axis and the sample dates are plotted along the horizontal axis. The graphs were used to visually examine changes in concentration over time for a parameter at a given well. The graphs are contained in **Appendix IV**.

- The time series plots of the concentration of antimony at background well MW-16 illustrate consistent non-detections of antimony prior to the promulgation of the NCDENR-SWS, Solid Waste Section Limits (SWSL) in 2006. With the lower SWSLs, estimated concentrations have been reported infrequently. No consistent trends were recognized in the data sets.
- The time series plots of the concentrations of barium at background wells and compliance wells illustrate consistent non-detections of barium prior to the promulgation of the lower SWSLs. No consistent increasing or decreasing concentration trends were recognized in the post 2006 data sets.
- The time series plots of the concentrations of chromium in wells MW-20 and MW-24 illustrate a high portion of non-detections prior to the promulgation of the lower SWSLs. The majority of the detections were estimated values. No increasing concentration trends were recognized in the post 2006 data sets.
- Time series plots of the concentrations of cobalt in well MW-24 depict fluctuations in reported concentrations coincide with the lower SWLS. The majority of the detections were estimated values. No consistent trends over time were recognized in the data sets.
- The time series plot of the concentrations of copper in background wells MW-15, MW-16, and compliance wells MW-18, MW-19, MW-23, and MW-24 illustrate consistent non-detections of copper prior to the promulgation of the revised SWSL. The majority of the detections were estimated values. No trends of increasing concentrations were recognized in the data sets.

- The time series plot of the concentrations of nickel at background well MW-16 and compliance well MW-24 generally illustrate a high portion of non-detections of nickel prior to the promulgation of the revised SWSL. The majority of the detections were estimated values exhibiting overall trends of relatively stable concentrations in the post 2006 data sets.
- The time series plot of the concentrations of vanadium at background well MW-16 and compliance wells MW-19, MW-20, and MW-25D illustrate no detections prior to the revised SWSL. The detections of vanadium coincide with the promulgation of the revised SWSL with the bulk of the detections estimated values. These plots depict relatively stable concentrations the post 2006.
- The time series plot of the concentrations of zinc at background well MW-16 and compliance wells MW-19 and MW-24 illustrate no detections prior to the revised SWSL. The detections of zinc coincide with the promulgation of the revised SWSL with the majority of the detections estimated values. These plots depict relatively stable concentrations post 2006.

To further validate the observations made of the time vs concentration trends over time, Mann-Kendall Trend analysis tests were performed to examine these detections for evidence of an upward trend over time. The Mann-Kendall Trend analysis tests evidenced no upward trends in the detected concentrations over time. The time series plots and Mann-Kendall Trend analysis test reports are included in **Appendix IV**.

5.2.2.3 Interwell Statistical Comparisons

Non-parametric Upper Tolerance Intervals were calculated from the background data set to determine if any detected individual compliance parameter concentration represents a statistically significant increase over the historic background concentrations. This test compares the current sampling event analytical data for each compliance well to Upper Limits computed from the pooled background data set.

5.2.2.4 Non-Parametric Tolerance Limits Test

In order to analyze the laboratory analytical results for evidence of statistically significant increases (SSIs) over background values, the data distribution of all of the detected monitored constituents was first analyzed. Due to the large size of the pooled historical results database, the Shapiro-Francia Test of Normality was utilized. This statistical test of data distribution can effectively determine if large data sets are parametrically or non-parametrically distributed.

For all of the analyzed data sets, the data distribution tests indicated a non-parametric distribution likely due to a relatively high percentage of non-detects in the analyzed database even at the 95% Confidence Level. As a result, Non-Parametric Upper Limits Computations were employed in order to calculate the appropriate Statistical Upper Limit for each of the detected monitored parameters. Non-parametric Tolerance Limits were selected for use in calculation of the statistical Upper Limits. In order to determine if any individual parameter concentration detected during this monitoring event represents a SSI over the historic background concentrations, once the respective Upper Limit was obtained, the compliance data were compared via an Inter-Well Comparison to the Statistical Upper Limit to determine if an SSI may have occurred. The statistical

analyses suggest that no SSIs occurred during this monitoring event. The Non-Parametric Upper Tolerance Limits are included in **Appendix V.**

5.3 Hydraulic Conductivity

In-situ hydraulic conductivity tests were performed by G.N. Richardson and Associates, Inc. (GNRA) on wells MW-16, MW-17, MW-18, MW-20, MW-21, MW-23, MW-25, during January 1998. The in-situ hydraulic conductivity tests were performed by GNRA on monitoring wells MW-15, MW-19, MW-22, MW-24, and MW-25D during March 1998. The data from these tests yielded hydraulic conductivity values ranging from 0.090 feet/day (in MW-24) to 3.269 feet/day (in MW-18). A complete discussion of the test methods and calculations was presented in the "Baseline Groundwater Monitoring Report, Phase III" prepared by G.N. Richardson and Associates, dated May 1998. The data is summarized in **Table 5** was used to calculate groundwater flow velocities for compliance network wells located at points around the perimeter of the monitored unit.

5.4 Groundwater Flow Direction and Rate

The static water levels in the Phase III monitoring wells were measured on April 13, 2015. The depth to the water table ranged from 3.95 feet to 29.06 feet below the top of well casing. Groundwater elevation, top of well casing elevations, and the monitored aquifer unit data for each well are presented in **Table 1**. A groundwater contour map was constructed using the data collected during this event and is presented as **Figure 1**. Based on the data collected, groundwater appears to be flowing north-northwest beneath the west half of Phase III and generally to the north-northeast in the eastern half of Phase III. The groundwater gradient at each well was calculated assuming a constant groundwater gradient along the flow line between adjacent up-gradient groundwater elevation contour line and the monitoring well.

Based on a variation of Darcy's Law, the rate of groundwater movement within the regolith aquifer was calculated at each monitoring well using the following equation:

$$V = \frac{Ki}{n}$$

Where **V** = velocity (feet/day)
K = hydraulic conductivity (feet/day)
i = groundwater gradient (feet/foot)
n =effective porosity (dimensionless)

Calculated hydraulic conductivity and gradient values and estimated effective porosity values for each well were used in the velocity calculations. The 20 percent effective porosity value is based on porosity and specific yield versus grain size distribution relationships presented in Fetter (1988), and is typical of the types of soils (predominantly silts and sandy silts with some clays) comprising the regolith at the landfill. The calculated groundwater velocities ranged from 0.012 feet/day at well MW-17 to 0.452 feet/day at well MW-18 and are summarized in **Table 5**.

5.5 Surface Water

Table 6 provides a summary of the constituent concentrations reported above the method detection limit (MDL) for the surface water samples collected. Concentrations reported between the MDL and the Solid Waste Section Limits (SWSL) are considered estimated, thus shown as a "J" flagged concentration. Volatile organic compounds chloroform and toluene were detected at sample location SW-3, immediately down-stream from the discharge point for the City of Greensboro wastewater treatment plant, which is up-gradient to the facility. Several metals (totals) were detected in all three samples, with most of the concentrations reported as estimate values. **Table 7** provides a summary of the reported concentrations which exceed the corresponding 15A NCAC 2B Standard (2B Standard). The following summarizes the exceedances of the 2B Standards. The complete laboratory analytical report is included in **Appendix II**.

- Copper was detected at a concentration greater than the corresponding 2B Standard in sample SW-3
- Zinc was detected at a concentration greater than the corresponding 2B Standard in sample SW-3.

Surface water sample location SW-3 is up-stream of the facility and immediately below the discharge point for the City of Greensboro wastewater treatment plant. In view of this, the Facility including Phase III <u>are not</u> considered to be the source of this constituent, or the cause for this exceedances of the 2B Standard.

5.6 Leachate Sample Analytical Results

On April 6, 2015, a sample of leachate was collected from the leachate wet well. The collected sample was submitted for laboratory analyses for Appendix I constituents plus Nitrate, Sulfur, Sulfate, Phosphate, Biological Oxygen Demand and Chemical Oxygen Demand. **Table 8** provides a summary of the associated analytical results.

5.7 Quality Assurance

A qualitative review of the data was performed to verify that the detected concentrations in the laboratory report were of known quality. A formal, quantitative data validation was not performed. Laboratory-assigned data qualifiers were evaluated to verify that rejected or unsupportable data were not included in the dataset. Quality control data provided in the laboratory reports were also reviewed. No rejected or otherwise unacceptable quality data were reported from the laboratory.

During this event a duplicate sample was collected from monitoring well MW-19 and submitted for analysis as "Duplicate III." This sample was analyzed for Appendix I constituents. The detected barium, copper, vanadium, and zinc concentrations in well MW-19 were similar to the concentrations reported in the sample labeled "Duplicate III" suggesting a good correlation between the sample set analytical results.
Trip blank samples accompanied the sample bottles from the time they left the laboratory until they returned. These samples were analyzed for Appendix I volatile organic and inorganic constituents. No volatile organic or inorganic constituents were present in the trip blank samples at detectable levels. Laboratory QC samples were analyzed for all constituents included in this sampling event. The results of the duplicate, trip blank and laboratory QC sample analyses are included in **Appendix II**.

6. REFERENCES

Fetter, C. W., 1988, Applied Hydrogeology, New York; Macmillan Publishing Company, 1988, 592 pp.

North Carolina Administrative Code, Title 15A, Department of Environment, Health and Natural Resources, Division of Environmental Management, Subchapter 2L, Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina, Sections .0100, .0200, and .0300 (November 8, 1993); from the Environmental Management Commission Raleigh, North Carolina.

North Carolina Administrative Code, Title 15A, Department of Environment, Health and Natural Resources, Division of Environmental Management, Subchapter 2B, Classifications and Water Quality Standards Applicable to the Surface Waters of North Carolina, Section .0200 (April 1, 1991); from the Environmental Management Commission, Raleigh, North Carolina.

North Carolina Administrative Code, Title 15A, Department of Environment, Health and Natural Resources, Division of Solid Waste Management, subchapter 13B, Solid Waste Management, Section .1600 (January 1, 1997).

TABLES

TABLE 1
WELL CONSTRUCTION AND GROUNDWATER ELEVATION DATA
PHASE 3 - PERMIT # 41-12
WHITE STREET LANDFILL
GREENSBORO, NORTH CAROLINA
S&ME PROJECT NO. 1584-98-81C

Well ID	Date Installed	Total Depth (feet)	Well Diameter (inches)	Depth to Top of Screen (feet)	Well Screen Interval (feet bgs)	Geology of Screened Interval	Northing NAD 83	Easting NAD 83	Ground Elevation NAVD 88 (feet msl.)	Top of Casing Elevation NAVD 88 (feet msl.)	Depth to Groundwater[1] 4/13/2015 (feet)	Groundwater Elevation 4/13/2015 (feet msl.)
MW-15	11/18/1997	60.0	2	45.0	45 - 60	water table aquifer	1783971.29	857176.76	Not measured	794.81	29.06	765.75
MW-16	11/19/1997	28.5	2	13.5	13.5 - 28.5	water table aquifer	1785497.62	857278.58	Not measured	758.02	21.12	736.90
MW-17	11/10/1997	31.5	2	21.5	21.5 - 31.5	water table aquifer	1785250.50	857781.89	Not measured	755.05	11.34	743.71
MW-18	12/10/1997	17.5	2	7.5	7.5 - 17.5	water table aquifer	1785289.10	858310.99	Not measured	742.70	9.53	733.17
MW-19	4/28/1998	35.0	2	20.0	20 - 35	water table aquifer	1785224.00	858805.30	Not measured	740.70	13.60	727.10
MW-20	11/21/1997	25.0	2	10.0	10 - 25	water table aquifer	1784508.67	858896.54	Not measured	748.87	14.84	734.03
MW-21	11/20/1997	18.5	2	4.5	4.5 - 18.5	water table aquifer	1784125.81	858871.51	Not measured	743.32	5.54	737.78
MW-22	2/19/1998	30.0	2	15.0	15 - 30	water table aquifer	1783634.95	858820.30	Not measured	744.43	9.68	734.75
MW-23	11/18/1997	33.5	2	18.5	18.5 - 33.5	water table aquifer	1783362.23	858516.99	Not measured	744.25	10.13	734.12
MW-24	11/12/1997	12.0	2	4.0	4 - 12	water table aquifer	1783438.34	857897.71	Not measured	752.52	3.95	748.57
MW-25	12/11/1997	17.0	2	7.0	7 - 17	water table aquifer	1785043.38	858973.32	Not measured	746.47	13.77	732.70
MW-25d	12/11/1997	32.0	2	27.0	27 - 32	upper bedrock aquifer	1785039.23	858973.68	Not measured	746.19	14.08	732.11

City of Greensboro provided the top of casing elevations and ground surface elevations
Well Construction details obtained from Well Construction Records reported by HDR, Inc.
feet bgs. = feet below ground surface
feet msl. = feet mean sea level
Depth to Groundwater[1] = below top of casing

TABLE 2
SUMMARY OF GROUNDWATER SAMPLING FIELD PARAMETERS
PHASE 3 - PERMIT # 41-12
WHITE STREET LANDFILL
GREENSBORO, NORTH CAROLINA
S&ME PROJECT NO. 1584-98-81C

DATE	WELL ID	WELL DEPTH (feet)	TOP OF CASING ELEVATION (feet msl.)	DEPTH TO WATER (feet)	WATER ELEVATION (feet)	ODOR	PURGE METHOD	PUMP RATE (mL/min)	WELL VOLUME (gallons)	EVAC VOLUME (gallons)	PURGED DRY? (yes/no)	TEMP (deg C)	pH (SU)	SPECIFIC CONDUCTANCE (µs/cm)	ORP (mV-NHE)	DO (mg/L)	TURBIDITY (NTU)
4/13/2015	MW-15	60.0	794.81	29.06	765.75	None	Low Flow	100	5.0	3	No	16.22	7.26	0.216	-47	3.29	4.67
4/13/2015	MW-16	28.5	758.02	21.12	736.90	None	Low Flow	100	1.4	3.5	No	15.96	5.89	0.172	81	6.84	5.28
4/13/2015	MW-17	31.5	755.05	11.34	743.71	None	Low Flow	100	3.4	4	No	21.86	5.88	0.116	63	3.57	5.52
4/13/2015	MW-18	17.5	742.70	9.53	733.17	None	Low Flow	100	1.7	4	No	16.28	5.96	0.096	51	1.84	5.13
4/13/2015	MW-19	35.0	740.70	13.60	727.10	None	Low Flow	100	3.5	3.5	No	18.52	6.02	0.260	54.9	2.42	7.10
4/13/2015	MW-20	25.0	748.87	14.84	734.03	None	Low Flow	100	1.7	3.5	No	16.08	6.53	0.405	50	3.82	3.84
4/13/2015	MW-21	18.5	743.32	5.54	737.78	None	Low Flow	100	2.4	3.5	No	15.78	5.83	0.123	69.4	4.16	5.17
4/13/2015	MW-22	30.0	744.43	9.68	734.75	None	Low Flow	100	3.3	6	No	16.10	6.37	0.274	1.7	2.18	11.87
4/13/2015	MW-23	33.5	744.25	10.13	734.12	None	Low Flow	100	3.7	3.6	No	16.29	7.42	0.305	-32	2.99	3.97
4/13/2015	MW-24	12.0	752.52	3.95	748.57	None	Low Flow	100	1,8	4	No	16.37	6.69	0.586	56.2	5.33	4.72
4/13/2015	MW-25	17.0	746.47	13.77	732.70	None	Low Flow	100	0.9	0	No	dry	dry	dry	dry	dry	dry
4/13/2015	MW-25D	32.0	746.19	14.08	732.11	None	Low Flow	100	3.1	3.5	No	18.95	6.08	0.098	74	5.51	4.53

Notes:
1. Field sampling performed by S&ME personnel.
2. TEMP = groundwater temperature, measured in degrees Celsius
3. Pump Rate, measured in milliliters/minute
4. Specific Conductance, measured in µs/cm indicates micro Siemens per centimeter.
5. SU indicates Standard Units.
6. NTU indicates Nephelometric Turbidity Units.
7. ORP = Oxidation Reduction Potential, mV-NHE indicates millivolts-Normal Hydrogen Electrode.
8. EVAC = evacuated volume of groundwater
9. DO = dissolved oxygen, measured in milligrams per liter

TABLE 3
SUMMARY OF GROUNDWATER ANALYSES RESULTS - DETECTIONS
PHASE 31 - PERMIT # 41-12
WHITE STREET LANDFILL
GREENSBORO, NORTH CAROLINA
S&ME PROJECT NO. 1584-98-81C

Appendix I Volatile Organic Compounds

Solid Waste Section ID #		Sample Locations													MDL	NC SWSL	NCAC 2L Standard	NCDENR IMAC	Federal MCLs
	Well ID	**MW-15**	**MW-16**	**MW-17**	**MW-18**	**MW-19**	**MW-20**	**MW-21**	**MW-22**	**MW-23**	**MW-24**	**MW-25**	**MW-25b**	**DuplicateIII**					
	Sample ID	4112-MW15	4112-MW16	4112-MW17	4112-MW18	4112-MW19	4112-MW20	4112-MW21	4112-MW22	4112-MW23	4112-MW24	4112-MW25	4112-MW26	4112-DuplicateIII					
	Date Collected	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15					
	Detected Analytes	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*	*(ug/L)*
	No VOC detected	--	--	--	--	--	--	--	--	--	--	--	--	--					

Appendix I Metals

Solid Waste Section ID #		Sample Locations													MDL	NC SWSL	NCAC 2L Standards	NCDENR IMAC	Federal MCLs
	Well ID	**MW-15**	**MW-16**	**MW-17**	**MW-18**	**MW-19**	**MW-20**	**MW-21**	**MW-22**	**MW-23**	**MW-24**	**MW-25**	**MW-25b**	**DuplicateIII**					
	Sample ID	4112-MW15	4112-MW16	4112-MW17	4112-MW18	4112-MW19	4112-MW20	4112-MW21	4112-MW22	4112-MW23	4112-MW24	4112-MW25	4112-MW26	4112-DuplicateIII					
	Date Collected	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15	04/13/15					
	Detected Analytes	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
13	**Antimony**	<0.220	0.552 J	<0.220	<0.220	<0.220	<0.220	<0.220	<0.220	<0.220	<0.220	dry well	<0.220	<0.220	0.220	6	--	1	6
15	**Barium**	31.4 J	121	57.2 J	25.0 J	48.2 J	62.5	45.3 J	157	63.2 J	385	dry well	21.3 J	47.7 J	1.00	100	700	--	2,000
51	**Chromium**	<1.40	<1.40	<1.40	<1.40	<1.40	1.61 J	<1.40	<1.40	<1.40	2.07 J	dry well	1.86 J	<1.40	1.40	10	10	--	100
53	**Cobalt**	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10	<1.10	**5.20 J**	dry well	<1.10	<1.10	1.10	10	--	1	ns
54	**Copper**	2.22 J	7.66 J	<1.60	2.79 J	3.56 J	<1.60	<1.60	<1.60	1.98 J	5.63 J	dry well	<1.60	3.08 J	1.60	10	1,000	--	1,000
152	**Nickel**	<1.80	2.53 J	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	4.76 J	dry well	<1.80	<1.80	1.80	50	100	--	ns
209	**Vanadium**	<1.40	**2.54 J**	<1.40	<1.40	**2.90 J**	**4.34 J**	<1.40	<1.40	<1.40	<1.40	dry well	**1.94 J**	**3.18 J**	1.40	25	--	0.3	ns
213	**Zinc**	<3.80	6.67 J	<3.80	<3.80	5.16 J	<3.80	<3.80	<3.80	<3.80	5.88 J	dry well	<3.80	5.16 J	3.80	10	1,000	--	5,000

ug/L = concentrations reported in micrograms per liter (ug/L)
< = concentrations is less than the method detection limit shown
NC SWSL = North Carolina Solid Waste Section Limit
J = Concentration reported greater than the method detection limit but less than the SWSL, thus it is considered estimated
NCAC 2L Standards = 15A North Carolina Administrative Code 2L .0200, GW Quality Standards for Class GA groundwater. Concentrations in BOLD exceed the corresponding 2L Standard
NCDENR IMAC = Interim Maximum Allowed Concentration, NCDENR
Federal MCL = Maximum Concentration Levels, USEPA
ns = no MCL listed, USEPA
na = not analyzed

TABLE 4
SUMMARY OF 2L GROUNDWATER STANDARD EXCEEDANCES
PHASE 3 - PERMIT # 41-12
WHITE STREET LANDFILL
GREENSBORO, NORTH CAROLINA
S&ME PROJECT NO. 1584-98-81C

Solid Waste Section ID#	Well ID / Sample ID / Date Collected / Detected Analytes	MW-16 4112-MW16 04/13/15 (ug/L)	MW-19 4112-MW19 04/13/15 (ug/L)	MW-20 4112-MW20 04/13/15 (ug/L)	MW-24 4112-MW24 04/13/15 (ug/L)	MW-25b 4112-MW26 04/13/15 (ug/L)	MDL (ug/L)	NC SWSL (ug/L)	NCAC 2L Standards (ug/L)	NCDENR IMAC (ug/L)	Federal MCLs (ug/L)
53	Cobalt				**5.20 J**		1.10	10	--	1	ns
209	Vanadium	**2.54 J**	**2.9 J**	**4.34 J**		**1.94 J**	1.40	25	--	0.3	ns

ug/L = concentrations reported in micrograms per liter (ug/L)
NC SWSL = North Carolina Solid Waste Section Limit
NCAC 2L Standards = 15A North Carolina Administrative Code 2L .0200, GW Quality Standards for Class GA groundwater.
NCDENR IMAC = Interim Maximum Allowed Concentration, NCDENR
Concentration greater than the NCAC 2L Standards or NCDENR IMAC are shown in bold
Federal MCL = Maximum Concentration Levels, USEPA
ns = no MCL listed, USEPA

TABLE 5
GROUNDWATER VELOCITY DATA - APRIL 2015
PHASE 3 - PERMIT #41-12
WHITE STREET LANDFILL
GREENSBORO, NORTH CAROLINA
S&ME PROJECT NO. 1584-98-081C

Well No.	Hydraulic Conductivity (K = feet/day)	Porosity (n = %)	Gradient (I = feet/foot)	Groundwater Velocity (V= feet/day)
MW-15	0.265	0.20	0.018	0.023
MW-16	0.331	0.20	0.018	0.030
MW-17	0.160	0.20	0.015	0.012
MW-18	3.269	0.20	0.028	0.452
MW-19	0.716	0.20	0.018	0.064
MW-20	1.336	0.20	0.018	0.120
MW-21	0.681	0.20	0.017	0.058
MW-22	0.325	0.20	0.019	0.031
MW-23	0.173	0.20	0.031	0.027
MW-24	0.090	0.20	0.026	0.012
MW-25	2.088	0.20	dry well	dry well
MW-25D	0.827	0.20	NA	NA

Notes: Hydraulic Conductivity's from slug test data: G.N. Richardson & Associates
Porosity values from published literature, based on soil types
Velocity calculated using V = KI/n
NA = Not Applicable, deeper aquifer monitoring well
WD = Well Dry at time of sampling

TABLE 6
SUMMARY OF SURFACE WATER ANALYSES RESULTS - DETECTIONS
PHASE 3 - PERMIT # 41-12
WHITE STREET LANDFILL
GREENSBORO, NORTH CAROLINA
S&ME PROJECT NO. 1584-98-81C

Appendix I Volatile Organic Compounds						
		Sample Locations			**NC SWSL**	**NCAC 2B Standards**
	Sample Location	**SW-1**	**SW-2**	**SW-3**		
Solid Waste Section ID #	Sample ID	4103-SW1	4103-SW2	4103-SW3		
	Date Collected	04/06/15	04/06/15	04/06/15		
	Detected Analytes	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
44	**Chloroform**	<0.18	<0.18	0.49 J	5	5.6
196	**Toluene**	<0.14	<0.14	1.8	1	11

8-RCRA Metals						
		Sample Locations			**NC SWSL**	**NCAC 2B Standards***
	Sample Location	**SW-1**	**SW-2**	**SW-3**		
	Sample ID	4103-SW1	4103-SW2	4103-SW3		
Solid Waste	Date Collected	04/06/15	04/06/15	04/06/15		
Section ID #	**Detected Analytes**	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
13	**Antimony**	0.312 J	<0.220	0.232 J	6	5.6
15	**Barium**	59.3 J	44.3 J	42.2 J	100	1000
51	**Chromium**	3.66 J	<1.40	3.36 J	10	50
53	**Cobalt**	1.73 J	<1.10	2.44 J	10	3
54	**Copper**	4.3 J	3.71 J	**11.1**	10	7
152	**Nickel**	2.02 J	<1.80	3.03 J	50	25
209	**Vanadium**	2.34 J	<1.40	33.3 J	25	ns
213	**Zinc**	16.4	5.33 J	**57.3 J**	10	50**

ug/L = concentrations reported in micrograms per liter (ug/L)
< = concentrations is less than the method detection limit shown
NC SWSL = North Carolina Solid Waste Section Limit
J = Concentration reported greater than the method detection limit but less than the SWSL, thus it is considered estimated

TABLE 7
SUMMARY OF 2B SURFACE STANDARD EXCEEDANCES
PHASE 3 - PERMIT # 41-12
WHITE STREET LANDFILL
GREENSBORO, NORTH CAROLINA
S&ME PROJECT NO. 1584-98-81C

8-RCRA Metals				
	Sample Location	**SW-3**	**NC SWSL**	**NCAC 2B**
	Sample ID	4103-SW3		**Standards***
Solid Waste	Date Collected	04/06/15		
Section ID	**Detected Analytes**	(ug/L)	(ug/L)	(ug/L)
54	**Copper**	**11.1**	10	7
213	**Zinc**	**57.3 J**	10	50**

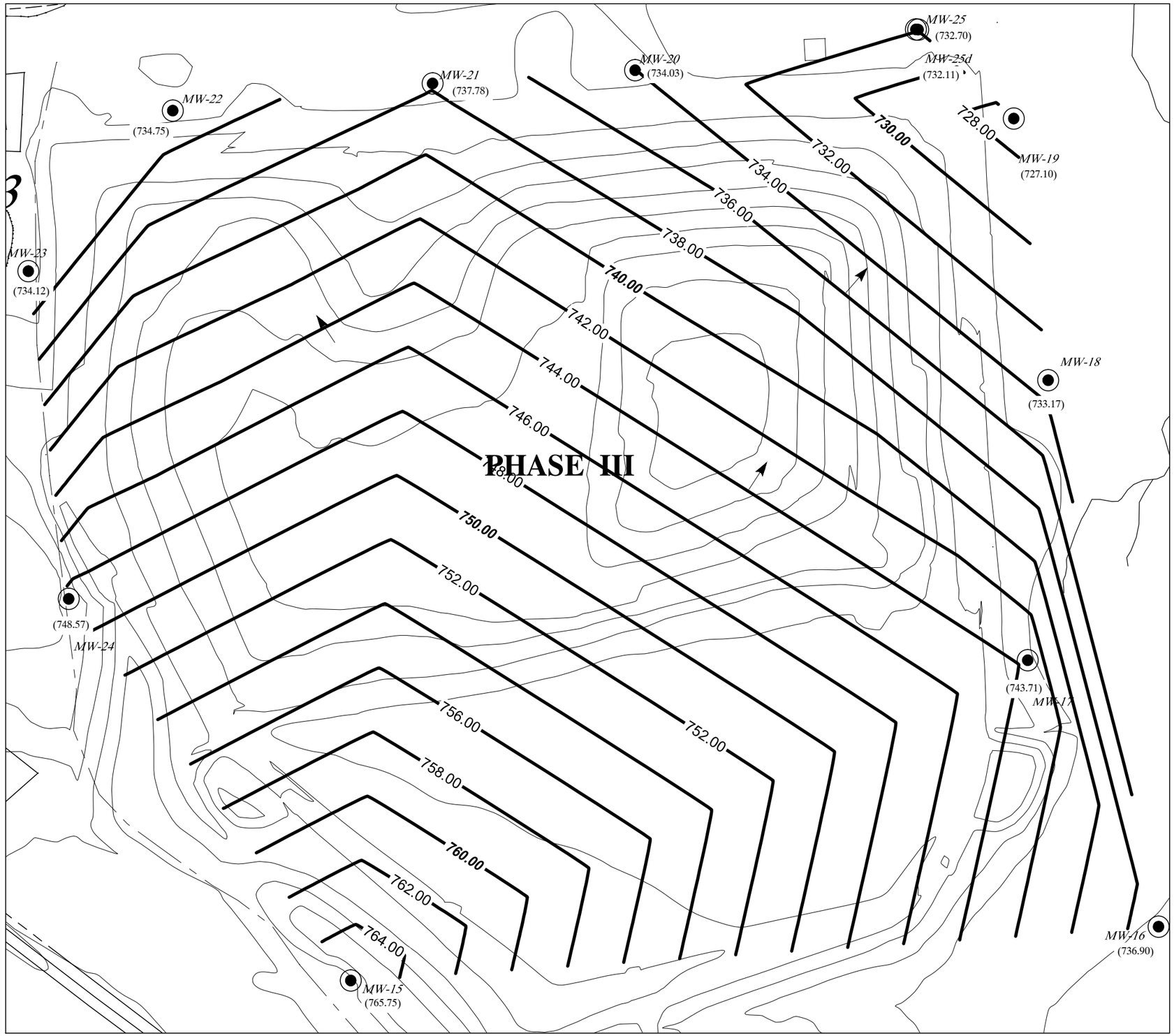
ug/L = concentrations reported in micrograms per liter (ug/L)
NC SWSL = North Carolina Solid Waste Section Limit

TABLE 8
SUMMARY OF LEACHATE SAMPLE ANALYSES
PHASE 3 - PERMIT # 41-12
GREENSBORO, NORTH CAROLINA
S&ME PROJECT NO. 1584-98-081C

Sample ID = Leachate Sample Collected 5/5/2015					
Appendix I Volatile Organic Compounds					
Parameter	**SWS ID**	**Units**	**Result**	**MDL**	**SWSL**
1,4-Dichlorobenzene	71	µg/L	7.7 JD	1.9	10
2-Butanone	141	µg/L	320	13	100
Acetone	3	µg/L	440	12	100
Total Xylenes	346	µg/L	31 D	4.5	5
Appendix I Metals					
Parameter	**SWS ID**	**Units**	**Result**	**MDL**	**SWSL**
Antimony	13	µg/L	3.16 JD	2.20	6
Barium	15	µg/L	472	1.00	100
Chromium	51	µg/L	20.2	1.40	10
Cobalt	53	µg/L	14.8	1.10	10
Copper	54	µg/L	3.68 J	1.60	10
Nickel	152	µg/L	66.8	1.80	50
Vanadium	209	µg/L	23.2	1.40	25
Zinc	213	µg/L	7.17 J	3.80	10
Miscellaneous Parameters					
Parameter	**SWS ID**	**Units**	**Result**	**MDL**	**SWSL**
Sulfate	315	mg/L	3.0 J	2.9	250
Phosphorous	none	µg/L	2.1 D	0.050	NE
pH	321	s.u.	7.0	1.0	NE
BOD	316	mg/L	45	2.0	NE
COD	317	mg/L	470	40	NE

J = Analyte detected; value is between the Method Detection Limit (MDL) and PQL
NE = Not Established
D = Analyte Value Determined with sample dilution
B = The analyte was detected in the associated method blank.
NC SWSL = North Carolina Solid Waste Section Limit
MDL = Method Detection Limit
Target compounds not detected are not listed

FIGURES



LEGEND

- MONITOR WELL LOCATION
- ESTIMATED GROUNDWATER ELEVATION (SEPTEMBER 2013)
- PROPERTY LINE
- CELL LIMITS
- APROXIMATE GROUNDWATER FLOW DIRECTION
- (736.90) GROUNDWATER ELEVATION AS CALCULATED FOR THE 10/13 EVENT

NOTES:

1. TOPOGRAPHY PROVIDED BY BRADY SURVEYING CO. FROM AERIAL PHOTOGRAPHY DATED NOVEMBER 9, 1994 FACILITY AREA UPDATED MAY 18, 1996.
2. PLANIMETRIC FEATURES PROVIDED BY GUILFORD COUNTY MAPS DATED 1991.
3. BOUNDARY SURVEY PROVIDED BY CITY OF GREENSBORO DATED DECEMBER 27, 1994

−100 0 50 100 200

SCALE: 1"=200'

GROUNDWATER FLOW MAP
PHASE III
WHITE STREET LANDFILL
GREENSBORO, NORTH CAROLINA

SCALE: AS SHOWN	DRAWN BY: RDM	CHECKED BY: EQBH	
JOB NO. 1584-98-081C	DATE: JUNE 2015	FIGURE NO. 1	

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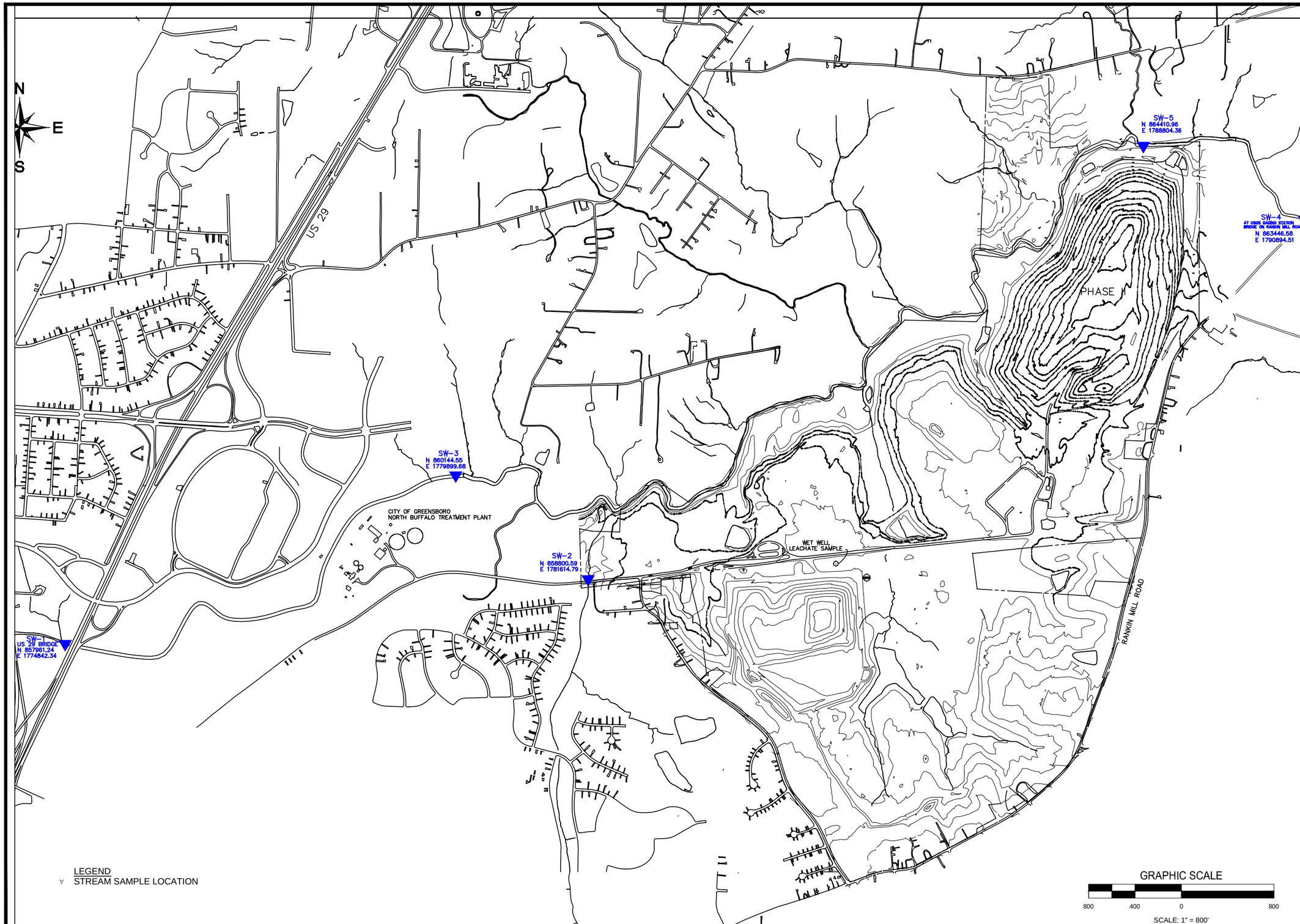

STREAM SAMPLE LOCATION
PHASE III
WHITE STREET LANDFILL
GREENSBORO, NORTH CAROLINA

SCALE: AS SHOWN	DRAWN BY: DSB/RDM	CHECKED BY: LE	
JOB NO. 1584-98-081	DATE: NOVEMBER 2007	FIGURE NO. 2	

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APPENDIX I

Field Sampling Data Sheets

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW15	Sample Date:	Monday, April 13, 2015
		Sample Time:	1040
Locked?:	Yes: x No:	Weather:	Sunny
Sampled By:	Bradley Keyse	Air Temp:	55 *F

Water Level & Well Data

Depth to water from measuring point:	29.06	feet
Depth to well bottom from measuring point:	60.00	feet
Height of water column:	30.94	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Bladder Pump

Sample Method: Bladder Pump

Purge Rate: 100 ml/min

Control Settings: On: 3 sec.; Off: 27 sec.; Pressure: 40 psi

Purge Time

Start 1005 Stop 1035

Sample Collection Time

Start 1035 Stop 1040

Volume of water in well

2" well:

height: 30.94 x .163 = 5.04322

Volume of water removed: 3.0 gallons ____ liters x

Was well purged dry: Yes ____ No x

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
1005	4/13/2015							
1010	4/13/2015	17.29	6.21	0.188	77	55.64	6.18	30.10
1015	4/13/2015	16.24	6.78	0.198	43	7.92	5.78	30.52
1020	4/13/2015	15.98	7.04	0.205	3	5.03	4.99	30.95
1025	4/13/2015	15.95	7.20	0.213	-33	3.77	4.56	31.51
1030	4/13/2015	16.04	7.24	0.214	-41	3.46	4.55	31.92
1035	4/13/2015	16.22	7.26	0.216	-47	3.29	4.67	32.51

Final Readings	1035	4/13/2015	16.22	7.26	0.216	-47	3.29	4.67	32.51
			* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW16	Sample Date:	Monday, April 13, 2015
		Sample Time:	940
Locked?:	Yes: x No:	Weather:	Sunny
Sampled By:	Bradley Keyse	Air Temp:	80 *F

Water Level & Well Data

Depth to water from measuring point:	21.12	feet
Depth to well bottom from measuring point:	30.00	feet
Height of water column:	8.88	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Bladder Pump

Sample Method: Bladder Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.0 sec.

Off: 27.0 sec.

Pressure: _____ psi

Purge Time

Start 900 Stop 935

Sample Collection Time

Start 940 Stop 945

Volume of water in well

2" well:

height: 8.88 x .163 = 1.44744

Volume of water removed: 3.5 gallons _____ liters x

Was well purged dry: Yes _____ No x

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW	
900	4/13/2015								
905	4/13/2015	15.40	5.93	0.169	66	18.36	6.52		**Note: Wate**
910	4/13/2015	15.47	5.93	0.165	69	9.51	7.07		
915	4/13/2015	15.51	5.93	0.164	73	7.43	6.86		
920	4/13/2015	15.67	5.92	0.165	75	6.95	6.34		
925	4/13/2015	15.73	5.91	0.167	77	6.51	5.36		
930	4/13/2015	15.86	5.90	0.169	79	6.34	5.31		
935	4/13/2015	15.96	5.89	0.172	81	6.84	5.28		
Final Readings	935	4/13/2015	15.96	5.89	0.172	81	6.84	5.28	
			* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW17	Sample Date:	Monday, April 13, 2015
		Sample Time:	1240
Locked?:	Yes: x No:	Weather:	Sunny
Sampled By:	Bradley Keyse	Air Temp:	71 *F

Water Level & Well Data

Depth to water from measuring point:	11.34	feet
Depth to well bottom from measuring point:	32.00	feet
Height of water column:	20.66	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Bladder Pump

Sample Method: Bladder Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.0 sec.

Off: 27.0 sec.

Pressure: 20 psi

Purge Time

Start 1155 Stop 1235

Sample Collection Time

Start 1235 Stop 1240

Volume of water in well

2" well:

height: 20.66 x .163 = 3.36758

Volume of water removed: 4.0 gallons _____ liters x

Was well purged dry: Yes _____ No x

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
1155	4/13/2015							11.16
1200	4/13/2015	24.44	6.96	0.244	-11	267.33	4.98	11.80
1205	4/13/2015	22.72	6.31	0.189	28	7.56	6.21	12.04
1210	4/13/2015	22.44	6.08	0.141	52	5.46	5.43	12.22
1215	4/13/2015	22.27	5.98	0.133	60	4.9	4.59	12.38
1220	4/13/2015	22.20	5.92	0.122	62	4.31	4.24	12.51
1225	4/13/2015	22.27	5.91	0.119	64	3.84	5.00	12.64
1230	4/13/2015	22.22	5.88	0.118	65	3.66	5.36	12.74
1235	4/13/2015	21.86	5.88	0.116	63	3.57	5.52	12.78

Final Readings	1235	4/13/2015	21.86	5.88	0.116	63	3,57	5.52	12.78
			* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW18	Sample Date:	Monday, April 13, 2015
		Sample Time:	1340
Locked?:	Yes: x No:	Weather:	Partly Cloudy
Sampled By:	Bradley Keyse	Air Temp:	71

Water Level & Well Data

Depth to water from measuring point:	9.53	feet
Depth to well bottom from measuring point:	20.00	feet
Height of water column:	10.47	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Bladder Pump

Sample Method: Bladder Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.0 sec.; Off: 27.0 sec.; Pressure: 18 psi

Purge Time

Start 1255 Stop 1335

Sample Collection Time

Start 1335 Stop 1340

Volume of water in well

2" well:

height: 10.47 x .163 = 1.70661

Volume of water removed: 4.0 gallons _____ liters x

Was well purged dry: Yes _____ No x

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
1255	4/13/2015							
1300	4/13/2015	25.42	5.97	0.126	88	8.15	5.50	9.79
1305	4/13/2015	19.37	6.40	0.150	61	5.18	6.66	9.86
1310	4/13/2015	17.85	6.43	0.149	48	3.23	5.71	9.88
1315	4/13/2015	17.27	6.26	0.133	46	2.56	5.44	9.90
1320	4/13/2015	16.61	6.13	0.117	48	2.14	5.07	9.90
1325	4/13/2015	16.24	6.05	0.107	49	1.96	4.86	9.91
1330	4/13/2015	16.17	5.99	0.099	51	1.94	5.20	9.96
1335	4/13/2015	16.28	5.96	0.096	51	1.84	5.13	9.96

Final Readings	1335	4/13/2015	16.28	5.96	0.096	51	1.84	5.13	9.96
			* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW19	Sample Date:	Monday, April 13, 2015
		Sample Time:	910
Locked?:	Yes: x No:	Weather:	Cloudy
Sampled By:	Bradley Keyse	Air Temp:	73

Water Level & Well Data

Depth to water from measuring point:	13.60	feet
Depth to well bottom from measuring point:	35.00	feet
Height of water column:	21.40	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Bladder Pump

Sample Method: Bladder Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.0 sec.

Off: 27.0 sec.

Pressure: 26 psi

Purge Time

Start 1355 Stop 1425

Sample Collection Time

Start 1425 Stop 1430

Note: Duplicate III taken at this location. (0900 hrs)

Volume of water in well

2" well:

height: 21.4 x .163 = 3.4882

Volume of water removed: 3.5 gallons _____ liters x

Was well purged dry: Yes _____ No x

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
1355	4/13/2015							
1400	4/13/2015	20.62	5.98	0.136	62	2.90	5.10	13.71
1405	4/13/2015	19.62	6.02	0.231	60	3.73	6.08	13.81
1410	4/13/2015	19.15	6.03	0.256	58	3.28	6.61	13.88
1415	4/13/2015	18.68	6.03	0.261	57	2.97	6.30	13.88
1420	4/13/2015	18.59	6.03	0.262	56	2.69	6.62	13.91
1425	4/13/2015	18.52	6.02	0.26	54.9	2.42	7.10	13.91

Final Readings	1430	4/13/2015	18.52	6.02	0.260	55	2.42	7.10	13.91
			* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW20	Sample Date:	Monday, April 13, 2015
		Sample Time:	2025
Locked?:	Yes: x No:	Weather:	Overcast
Sampled By:	Bradley Keyse	Air Temp:	69 *F

Water Level & Well Data

Depth to water from measuring point:	14.84	feet
Depth to well bottom from measuring point:	25.00	feet
Height of water column:	10.16	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Bladder Pump

Sample Method: Bladder Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.0 sec.; Off: 27.0 sec.; Pressure: 20 psi

Purge Time

Start 1900 Stop 2020

Sample Collection Time

Start 2020 Stop 2025

Volume of water in well

2" well:

height: 10.16 x .163 = 1.65608

Volume of water removed: 3.5 gallons _____ liters x

Was well purged dry: Yes _____ No x

Field Analyses

*Stabilization Parameters

	Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
	1900	4/13/2015							
	1955	4/13/2015	16.35	6.23	0.212	62	6.21	4.96	15.05
	2000	4/13/2015	16.21	6.47	0.317	59	5.01	4.86	15.16
	2005	4/13/2015	15.97	6.53	0.379	56	4.55	4.45	15.22
	2010	4/13/2015	15.85	6.54	0.402	54	4.27	4.38	15.23
	2015	4/13/2015	15.96	6.54	0.406	52	3.68	3.76	15.24
	2020	4/13/2015	16.08	6.53	0.405	50	3.82	3.84	15.23
Final Readings	2020	4/13/2015	16.08	6.53	0.405	50	3.82	3.84	15.23
			* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW21	Sample Date:	Monday, April 13, 2015
		Sample Time:	1945
Locked?:	Yes: x No:	Weather:	Overcast
Sampled By:	Bradley Keyse	Air Temp:	70 *F

Water Level & Well Data

Depth to water from measuring point:	5.54	feet
Depth to well bottom from measuring point:	20.00	feet
Height of water column:	14.46	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Bladder Pump

Sample Method: Bladder Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.0 sec.; Off: 27.0 sec.; Pressure: 20 psi

Purge Time

Start 1905 Stop 1940

Sample Collection Time

Start 1940 Stop 1945

Volume of water in well

2" well:

height: 14.46 x .163 = 2.35698

Volume of water removed: 3.5 gallons _____ liters x

Was well purged dry: Yes _____ No x

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
1905	4/13/2015							
1910	4/13/2015	15.55	5.89	0.125	48	7.79	5.08	6.04
1915	4/13/2015	15.63	5.88	0.125	54	5.80	5.25	6.03
1920	4/13/2015	15.60	5.87	0.123	60	5.36	5.94	6.03
1925	4/13/2015	15.75	5.86	0.124	63	4.84	7.70	6.03
1930	4/13/2015	15.53	5.84	0.123	66	4.39	5.51	6.02
1935	4/13/2015	15.86	5.83	0.124	68	3.99	5.29	6.02
1940	4/13/2015	15.78	5.83	0.123	69.4	4.16	5.17	6.02

Final Readings	1940	4/13/2015	15.78	5.83	0.123	69	4.16	5.17	6.02
			* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW22	Sample Date:	Monday, April 13, 2015
		Sample Time:	1855
Locked?:	Yes: x No:	Weather:	Overcast
Sampled By:	Bradley Keyse	Air Temp:	71

Water Level & Well Data

Depth to water from measuring point:	9.68	feet
Depth to well bottom from measuring point:	30.00	feet
Height of water column:	20.32	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Blader Pump

Sample Method: Blader Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.0 sec.; Off: 27.0 sec.; Pressure: 25 psi

Purge Time

Start 1750 Stop 1850

Sample Collection Time

Start 1850 Stop 1855

Volume of water in well

2" well:

height: 20.32 x .163 = 3.31216

Volume of water removed: 6.0 gallons ____ liters x

Was well purged dry: Yes ____ No x

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
1750	4/13/2015							
1755	4/13/2015	18.00	6.94	0.315	-12	10.72	4.07	10.10
1800	4/13/2015	17.14	6.59	0.310	-25	7.34	6.85	10.40
1805	4/13/2015	26.55	6.43	0.298	-28	2.80	45.0	11.14
1810	4/13/2015	16.33	6.43	0.295	-28	2.32	50.8	11.48
1815	4/13/2015	16.25	6.42	0.293	-28.5	2.13	47.9	11.69
1820	4/13/2015	16.51	6.4	0.284	-14.4	2.17	29.6	12.20
1825	4/13/2015	16.24	6.39	0.282	-14.2	1.43	25.8	12.53
1830	4/13/2015	16.10	6.38	0.281	-10.3	1.64	21.7	12.90
1835	4/13/2015	16.10	6.38	0.279	-6.8	1.75	21.20	13.15
1840	4/13/2015	16.03	6.37	0.275	-2	1.77	14.66	13.48
1845	4/13/2015	16.17	6.37	0.275	0	2.03	13.23	13.85
1850	4/13/2015	16.10	6.37	0.274	1.7	2.18	11.87	14.23

Final Readings	1850	4/13/2015	16.10	6.37	0.274	1.7	2.18	11.87	14.23
			* C	units	mS/cm	mV	mg/L	NTU	

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GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW23	Sample Date:	Monday, April 13, 2015
		Sample Time:	1740
Locked?:	Yes: x No:	Weather:	Overcast
Sampled By:	Bradley Keyse	Air Temp:	72

Water Level & Well Data

Depth to water from measuring point:	10.13	feet
Depth to well bottom from measuring point:	33.00	feet
Height of water column:	22.87	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Blader Pump

Sample Method: Blader Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.5 sec.

Off: 26.5 sec.

Pressure: 28 psi

Purge Time

Start 1700 Stop 1735

Sample Collection Time

Start 1735 Stop 1740

Volume of water in well

2" well:

height: 22.87 x .163 = 3.72781

Volume of water removed 3.5 gallons _____ liters x

Was well purged dry Yes _____ No x

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
1700	4/13/2015							
1705	4/13/2015	17.94	6.94	0.475	48	19.82	4.08	11.14
1710	4/13/2015	17.01	7.07	0.425	21	5.21	3.95	11.76
1715	4/13/2015	16.65	7.17	0.393	-5	4.13	3.71	12.28
1720	4/13/2015	16.46	8.75	0.315	-22	3.39	4.16	13.06
1725	4/13/2015	16.36	7.32	0.309	-26	3.22	4.21	13.51
1730	4/13/2015	16.24	7.36	0.307	-30	3.07	4.07	14.10
1735	4/13/2015	16.29	7.42	0.305	-32	2.99	3.97	14.87

Final Readings	1735	4/13/2015	16.29	7.42	0.305	-32	7.00	3.97	14.87
			* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW24	Sample Date:	Monday, April 13, 2015
		Sample Time:	1640
Locked?:	Yes: ____ No: x	Weather:	Overcast
Sampled By:	Bradley Keyse	Air Temp:	72 *F

Water Level & Well Data

Depth to water from measuring point:	3.95	feet
Depth to well bottom from measuring point:	15.00	feet
Height of water column:	11.05	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Blader Pump

Sample Method: Blader Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.0 sec.; Off: 27.0 sec.; Pressure: 15 psi

Purge Time

Start 1555 Stop 1635

Sample Collection Time

Start 1635 Stop 1640

Volume of water in well

2" well:

height: 11.05 x .163 = 1.80115

Volume of water removed: 4.0 gallons ____ liters x

Was well purged dry: Yes ____ No x

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
1555	4/13/2015							
1600	4/13/2015	18.23	6.72	0.460	64	8.79	4.18	4.85
1605	4/13/2015	17.22	6.60	0.553	61	4.64	5.57	5.27
1610	4/13/2015	16.81	6.64	0.574	58	4.02	5.46	5.88
1615	4/13/2015	16.62	6.72	0.586	56	4.60	5.38	6.34
1620	4/13/2015	16.47	6.75	0.586	60	4.65	5.34	6.58
1625	4/13/2015	16.43	6.77	0.586	60.2	4.74	4.76	6.65
1630	4/13/2015	16.50	6.79	0.587	58	5.23	4.73	6.68
1635	4/13/2015	16.37	6.69	0.586	56.2	5.33	4.72	6.60

Final Readings	1635	4/13/2015	16.37	6.69	0.586	56	5.33	4.72	6.60
			* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 13, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW25	Sample Date:	Monday, April 13, 2015
		Sample Time:	
Locked?:	Yes: x No:	Weather:	Overcast
Sampled By:	Bradley Keyse	Air Temp:	72

Water Level & Well Data

Depth to water from measuring point:	13.77	feet
Depth to well bottom from measuring point:	19.80	feet
Height of water column:	6.03	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Bladder Pump

Sample Method: Bladder Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.0 sec.

Off: 27.0 sec.

Pressure: _____ psi

Purge Time

Start _____ Stop _____

Sample Collection Time

Start _____ Stop _____

Notes: Water level is below the pump. The bottom of the pump is set at approx. 14' below TOC.

Volume of water in well

2" well:

height: 6.03 x .163 = 0.98289

Volume of water removed: 0.0 gallons _____ liters x

Was well purged dry: Yes x No _____

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
Final Readings								
		* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Tuesday, September 30, 2014
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-MW25b	Sample Date:	Tuesday, September 30, 2014
		Sample Time:	1530
Locked?:	Yes: x No:	Weather:	Overcast
Sampled By:	Bradley Keyse	Air Temp:	73 *F

Water Level & Well Data

Depth to water from measuring point:	14.08	feet
Depth to well bottom from measuring point:	33.00	feet
Height of water column:	18.92	feet
Measuring point:	Top of Casing	

Well Purging & Sample Collection

Purge Method: Bladder Pump

Sample Method: Bladder Pump

Purge Rate: 100 ml/min

Control Settings: On: 3.0 sec.; Off: 27.0 sec.; Pressure: 28 psi

Purge Time

Start 1455 Stop 1530

Sample Collection Time

Start 1530 Stop 1535

Volume of water in well

2" well:

height: 18.92 x .163 = 3.08396

Volume of water removed: 3.5 gallons _____ liters x

Was well purged dry: Yes _____ No x

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
1455	4/13/15							
1500	4/13/15	21.03	7.21	0.190	66	6.62	7.41	14.49
1505	4/13/15	19.66	6.14	0.142	68	6.49	5.54	14.57
1510	4/13/15	19.44	6.14	0.109	69	6.63	4.82	14.59
1515	4/13/15	19.31	6.12	0.101	71	6.43	4.33	14.59
1520	4/13/15	19.07	6.11	0.099	72	6.25	5.16	14.57
1525	4/13/15	18.93	6.10	0.098	73	5.91	4.86	14.57
1530	4/13/15	18.95	6.08	0.098	74	5.51	4.53	14.61
Final Readings	1530	4/13/15	18.95	6.08	0.098	74	5.51	4.53	14.61
			* C	units	mS/cm	mV	mg/L	NTU	

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 06, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-SW1	Sample Date:	Monday, April 06, 2015
	Summit Avenue Bridge	Sample Time:	1445
Locked?:	Yes: x No:	Weather:	Sunny
Sampled By:	Gary Simcox	Air Temp:	65 *F

Water Level & Well Data

Depth to water from measuring point: _____ feet

Depth to well bottom from measuring point: _____ feet

Height of water column: 0.00 feet

Measuring point: _____

Well Purging & Sample Collection

Purge Method _____

Sample Method _____

Purge Rate _____ ml/min

Control Settings On: _____ sec.

Off: _____ sec.

Pressure: _____ psi

Purge Time

Start _____ Stop _____

Sample Collection Time

Start _____ Stop _____

Volume of water in well

2" well:

height: 0 x .163 = 0

Volume of water removed _____ gallons _____ liters _____

Was well purged dry Yes _____ No _____

Field Analyses

*Stabilization Parameters

Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
Final Readings	1445	4/6/2015	175.00	8.13	318.000			
			* C	units	mS/cm			

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 06, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-SW2	Sample Date:	Monday, April 06, 2015
	White Street and Nealtown Road	Sample Time:	1215
Locked?:	Yes: x No:	Weather:	Sunny
Sampled By:	Gary Simcox	Air Temp:	65 *F

Water Level & Well Data

Depth to water from measuring point: _____ feet

Depth to well bottom from measuring point: _____ feet

Height of water column: 0.00 feet

Measuring point: _____

Well Purging & Sample Collection

Purge Method _____

Sample Method _____

Purge Rate _____ ml/min

Control Settings On: _____ sec.

Off: _____ sec.

Pressure: _____ psi

Purge Time

Start _____ Stop _____

Sample Collection Time

Start _____ Stop _____

Volume of water in well

2" well:

height: 0 x .163 = 0

Volume of water removed _____ gallons _____ liters x

Was well purged dry Yes _____ No x

Field Analyses

*Stabilization Parameters

	Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
Final Readings	1215	4/6/2015	16.70	7.77	255.000				
			* C	units	mS/cm				

GROUNDWATER SAMPLING FIELD DATA

Location:	White Street Landfill	Purge Date:	Monday, April 06, 2015
Project No.:	1584-98-081	Purge Time:	
Source Well:	4112-SW3	Sample Date:	Monday, April 06, 2015
	Waste Water Treatment Plant	Sample Time:	1340
Locked?:	Yes: _____ No: _____	Weather:	Sunny
Sampled By:	Gary Simcox	Air Temp:	65 *F

Water Level & Well Data

Depth to water from measuring point: _____ feet

Depth to well bottom from measuring point: _____ feet

Height of water column: 0.00 feet

Measuring point: _____

Well Purging & Sample Collection

Purge Method _____

Sample Method _____

Purge Rate _____ ml/min

Control Settings On: _____ sec.

Off: _____ sec.

Pressure: _____ psi

Purge Time

Start _____ Stop _____

Sample Collection Time

Start _____ Stop _____

Volume of water in well

2" well:

height: 0 x .163 = 0

Volume of water removed _____ gallons _____ liters _____

Was well purged dry Yes _____ No x

Field Analyses

*Stabilization Parameters

	Time	Date	Temp	pH	Conductivity	*ORP	*D.O.	*Turbidity	DTW
Final Readings	1340	4/6/2015	18.50	7.59	400.00				
			* C	units	mS/cm				

APPENDIX II
Laboratory Analytical Report

Environmental Conservation Laboratories, Inc.
102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515
www.encolabs.com

Tuesday, April 28, 2015

City of Greensboro (CI034)

Attn: Lewis Walker

2503 White Street

Greensboro, NC 27405

RE: Laboratory Results for
Project Number: [none], Project Name/Desc: White Street Landfill AppI (Phase III)
ENCO Workorder(s): C503938

Dear Lewis Walker,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, April 14, 2015.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Chuck Smith

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 50.

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 4112-MW15 **Lab ID: C503938-01** **Sampled: 04/13/15 10:40** **Received: 04/14/15 11:05**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 09:52
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:04
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 03:28

Client ID: 4112-MW16 **Lab ID: C503938-02** **Sampled: 04/13/15 09:40** **Received: 04/14/15 11:05**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:04
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 12:37
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 03:57

Client ID: 4112-MW17 **Lab ID: C503938-03** **Sampled: 04/13/15 12:40** **Received: 04/14/15 11:05**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:07
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:08
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 04:26

Client ID: 4112-MW18 **Lab ID: C503938-04** **Sampled: 04/13/15 13:40** **Received: 04/14/15 11:05**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:09
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:11
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 04:55

Client ID: 4112-MW19 **Lab ID: C503938-05** **Sampled: 04/13/15 14:30** **Received: 04/14/15 11:05**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:24
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:15
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 05:25

Client ID: 4112-MW20 **Lab ID: C503938-06** **Sampled: 04/13/15 20:25** **Received: 04/14/15 11:05**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:26
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:19
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 05:53

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Client ID: 4112-MW21	Lab ID: C503938-07	Sampled: 04/13/15 19:45	Received: 04/14/15 11:05
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:29
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:22
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 06:23

Client ID: 4112-MW22	Lab ID: C503938-08	Sampled: 04/13/15 18:55	Received: 04/14/15 11:05
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:31
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:26
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 06:52

Client ID: 4112-MW23	Lab ID: C503938-09	Sampled: 04/13/15 17:40	Received: 04/14/15 11:05
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:34
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:30
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 07:21

Client ID: 4112-MW24	Lab ID: C503938-10	Sampled: 04/13/15 16:40	Received: 04/14/15 11:05
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:37
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:33
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 07:50

Client ID: 4112-MW25b	Lab ID: C503938-11	Sampled: 04/13/15 15:30	Received: 04/14/15 11:05
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:39
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:44
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 08:19

Client ID: 4112-DUPLICATEIII	Lab ID: C503938-12	Sampled: 04/13/15 09:40	Received: 04/14/15 11:05
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	10/10/15	04/15/15 10:17	4/23/2015 10:42
EPA 6020A	10/10/15	04/22/15 09:53	4/24/2015 13:48
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 08:48

Client ID: 4112-TripBlank#3	Lab ID: C503938-13	Sampled: 04/13/15 09:40	Received: 04/14/15 11:05
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260B	04/27/15	04/22/15 14:17	4/23/2015 01:31

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 4112-MW15 **Lab ID: C503938-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	31.4	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total	2.22	J	1	1.60	10.0	10	ug/L	EPA 6010C	

Client ID: 4112-MW16 **Lab ID: C503938-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.552	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	121		1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total	7.66	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	2.53	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	2.54	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	6.67	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 4112-MW17 **Lab ID: C503938-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	57.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	

Client ID: 4112-MW18 **Lab ID: C503938-04**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	25.0	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total	2.79	J	1	1.60	10.0	10	ug/L	EPA 6010C	

Client ID: 4112-MW19 **Lab ID: C503938-05**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	48.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total	3.56	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	2.90	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	5.16	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 4112-MW20 **Lab ID: C503938-06**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	62.5	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	1.61	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	4.34	J	1	1.40	10.0	25	ug/L	EPA 6010C	

Client ID: 4112-MW21 **Lab ID: C503938-07**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	45.3	J	1	1.00	10.0	100	ug/L	EPA 6010C	

Client ID: 4112-MW22 **Lab ID: C503938-08**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	157		1	1.00	10.0	100	ug/L	EPA 6010C	

Client ID: 4112-MW23 **Lab ID: C503938-09**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	63.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total	1.98	J	1	1.60	10.0	10	ug/L	EPA 6010C	

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Client ID: 4112-MW24								Lab ID: C503938-10	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	385		1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	2.07	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	5.20	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	5.63	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	4.76	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Zinc - Total	5.88	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 4112-MW25b								Lab ID: C503938-11	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	21.3	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	1.86	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	1.94	J	1	1.40	10.0	25	ug/L	EPA 6010C	

Client ID: 4112-DUPLICATEIII								Lab ID: C503938-12	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	47.7	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total	3.08	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	3.18	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	5.16	J	1	3.80	10.0	10	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 4112-MW15 | **Lab Sample ID:** C503938-01 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 10:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 03:28	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 03:28	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 03:28	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 03:28	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 03:28	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 03:28	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 03:28	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 03:28	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 03:28	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 03:28	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 03:28	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 03:28	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 03:28	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 03:28	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 03:28	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 03:28	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 03:28	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 03:28	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 03:28	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 03:28	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 03:28	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 03:28	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 03:28	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 03:28	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 03:28	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 03:28	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 03:28	MSZ	

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Description:	4112-MW15	**Lab Sample ID:**	C503938-01	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 10:40	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 03:28*	*MSZ*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 03:28*	*MSZ*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*59-134*	*5D22030*	*EPA 8260B*	*04/23/15 03:28*	*MSZ*	

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Description: 4112-MW15 | **Lab Sample ID:** C503938-01 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 10:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:04	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 09:52	JDH	
Barium [7440-39-3] ^	**31.4**	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 09:52	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 09:52	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 09:52	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 09:52	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 09:52	JDH	
Copper [7440-50-8] ^	**2.22**	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 09:52	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 09:52	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 09:52	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:04	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 09:52	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:04	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 09:52	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 09:52	JDH	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 4112-MW16 | **Lab Sample ID:** C503938-02 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 09:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 03:57	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 03:57	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 03:57	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 03:57	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 03:57	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 03:57	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 03:57	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 03:57	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 03:57	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 03:57	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 03:57	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 03:57	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 03:57	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 03:57	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 03:57	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 03:57	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 03:57	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 03:57	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 03:57	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 03:57	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 03:57	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 03:57	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 03:57	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 03:57	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 03:57	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 03:57	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 03:57	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 03:57*	*MSZ*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 03:57*	*MSZ*	

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Description:	4112-MW16	**Lab Sample ID:**	C503938-02	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 09:40	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*59-134*		*5D22030*	*EPA 8260B*	*04/23/15 03:57*	*MSZ*	

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Description: 4112-MW16 | **Lab Sample ID:** C503938-02 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 09:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**0.552**	J	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 12:37	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:04	JDH	
Barium [7440-39-3] ^	**121**		ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:04	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:04	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:04	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:04	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:04	JDH	
Copper [7440-50-8] ^	**7.66**	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:04	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:04	JDH	
Nickel [7440-02-0] ^	**2.53**	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:04	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 12:37	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:04	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 12:37	VLO	
Vanadium [7440-62-2] ^	**2.54**	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:04	JDH	
Zinc [7440-66-6] ^	**6.67**	J	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:04	JDH	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 4112-MW17 | **Lab Sample ID:** C503938-03 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 12:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 04:26	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 04:26	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 04:26	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 04:26	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 04:26	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 04:26	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 04:26	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 04:26	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 04:26	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 04:26	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 04:26	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 04:26	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 04:26	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 04:26	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 04:26	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 04:26	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 04:26	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 04:26	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 04:26	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 04:26	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 04:26	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 04:26	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 04:26	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 04:26	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 04:26	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 04:26	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 04:26	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 04:26*	*MSZ*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 04:26*	*MSZ*	

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Description:	4112-MW17	**Lab Sample ID:**	C503938-03	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 12:40	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*56*	*1*	*50.0*	*112 %*	*59-134*		*5D22030*	*EPA 8260B*	*04/23/15 04:26*	*MSZ*	

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Description: 4112-MW17 | **Lab Sample ID:** C503938-03 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 12:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:08	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:07	JDH	
Barium [7440-39-3] ^	**57.2**	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:07	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:07	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:07	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:07	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:07	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:07	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:07	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:07	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:08	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:07	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:08	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:07	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:07	JDH	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 4112-MW18 | **Lab Sample ID:** C503938-04 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 13:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 04:55	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 04:55	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 04:55	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 04:55	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 04:55	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 04:55	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 04:55	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 04:55	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 04:55	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 04:55	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 04:55	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 04:55	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 04:55	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 04:55	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 04:55	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 04:55	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 04:55	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 04:55	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 04:55	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 04:55	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 04:55	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 04:55	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 04:55	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 04:55	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 04:55	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 04:55	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 04:55	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 04:55*	*MSZ*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 04:55*	*MSZ*	

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Description:	4112-MW18	**Lab Sample ID:**	C503938-04	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 13:40	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*55*	*1*	*50.0*	*111 %*	*59-134*		*5D22030*	*EPA 8260B*	*04/23/15 04:55*	*MSZ*	

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Description: 4112-MW18 | **Lab Sample ID:** C503938-04 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 13:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:11	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:09	JDH	
Barium [7440-39-3] ^	**25.0**	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:09	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:09	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:09	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:09	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:09	JDH	
Copper [7440-50-8] ^	**2.79**	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:09	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:09	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:09	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:11	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:09	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:11	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:09	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:09	JDH	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 4112-MW19 | **Lab Sample ID:** C503938-05 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 14:30 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 05:25	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 05:25	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 05:25	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 05:25	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 05:25	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 05:25	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 05:25	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 05:25	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 05:25	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 05:25	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 05:25	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 05:25	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 05:25	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 05:25	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 05:25	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 05:25	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 05:25	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 05:25	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 05:25	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 05:25	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 05:25	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 05:25	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 05:25	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 05:25	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 05:25	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 05:25	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 05:25	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 05:25*	*MSZ*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 05:25*	*MSZ*	

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Description:	4112-MW19	**Lab Sample ID:**	C503938-05	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 14:30	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*59-134*		*5D22030*	*EPA 8260B*	*04/23/15 05:25*	*MSZ*	

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Description: 4112-MW19 | **Lab Sample ID:** C503938-05 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 14:30 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:15	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:24	JDH	
Barium [7440-39-3] ^	**48.2**	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:24	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:24	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:24	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:24	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:24	JDH	
Copper [7440-50-8] ^	**3.56**	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:24	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:24	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:24	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:15	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:24	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:15	VLO	
Vanadium [7440-62-2] ^	**2.90**	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:24	JDH	
Zinc [7440-66-6] ^	**5.16**	J	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:24	JDH	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 4112-MW20 | **Lab Sample ID:** C503938-06 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 20:25 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 05:53	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 05:53	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 05:53	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 05:53	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 05:53	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 05:53	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 05:53	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 05:53	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 05:53	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 05:53	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 05:53	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 05:53	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 05:53	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 05:53	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 05:53	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 05:53	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 05:53	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 05:53	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 05:53	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 05:53	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 05:53	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 05:53	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 05:53	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 05:53	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 05:53	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 05:53	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 05:53	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*101 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 05:53*	*MSZ*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 05:53*	*MSZ*	

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Description:	4112-MW20	**Lab Sample ID:**	C503938-06	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 20:25	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*59-134*		*5D22030*	*EPA 8260B*	*04/23/15 05:53*	*MSZ*	

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Description: 4112-MW20 | **Lab Sample ID:** C503938-06 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 20:25 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:19	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:26	JDH	
Barium [7440-39-3] ^	**62.5**	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:26	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:26	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:26	JDH	
Chromium [7440-47-3] ^	**1.61**	J	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:26	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:26	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:26	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:26	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:26	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:19	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:26	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:19	VLO	
Vanadium [7440-62-2] ^	**4.34**	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:26	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:26	JDH	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 4112-MW21 | **Lab Sample ID:** C503938-07 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 19:45 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 06:23	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 06:23	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 06:23	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 06:23	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 06:23	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 06:23	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 06:23	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 06:23	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 06:23	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 06:23	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 06:23	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 06:23	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 06:23	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 06:23	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 06:23	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 06:23	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 06:23	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 06:23	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 06:23	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 06:23	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 06:23	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 06:23	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 06:23	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 06:23	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 06:23	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 06:23	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 06:23	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 06:23*	*MSZ*	
Dibromofluoromethane	*49*	*1*	*50.0*	*99 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 06:23*	*MSZ*	

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Description:	4112-MW21	**Lab Sample ID:**	C503938-07	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 19:45	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*59-134*		*5D22030*	*EPA 8260B*	*04/23/15 06:23*	*MSZ*	

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Description: 4112-MW21 | **Lab Sample ID:** C503938-07 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 19:45 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:22	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:29	JDH	
Barium [7440-39-3] ^	**45.3**	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:29	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:29	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:29	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:29	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:29	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:29	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:29	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:29	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:22	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:29	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:22	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:29	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:29	JDH	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 4112-MW22 | **Lab Sample ID:** C503938-08 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 18:55 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 06:52	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 06:52	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 06:52	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 06:52	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 06:52	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 06:52	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 06:52	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 06:52	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 06:52	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 06:52	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 06:52	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 06:52	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 06:52	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 06:52	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 06:52	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 06:52	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 06:52	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 06:52	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 06:52	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 06:52	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 06:52	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 06:52	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 06:52	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 06:52	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 06:52	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 06:52	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 06:52	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 06:52*	*MSZ*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 06:52*	*MSZ*	

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Description:	4112-MW22	**Lab Sample ID:**	C503938-08	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 18:55	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*59-134*		*5D22030*	*EPA 8260B*	*04/23/15 06:52*	*MSZ*	

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Description: 4112-MW22 | **Lab Sample ID:** C503938-08 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 18:55 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:26	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:31	JDH	
Barium [7440-39-3] ^	**157**		ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:31	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:31	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:31	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:31	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:31	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:31	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:31	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:31	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:26	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:31	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:26	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:31	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:31	JDH	

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Description: 4112-MW23 | **Lab Sample ID:** C503938-09 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 17:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 07:21	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 07:21	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 07:21	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 07:21	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 07:21	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 07:21	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 07:21	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 07:21	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 07:21	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 07:21	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 07:21	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 07:21	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 07:21	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 07:21	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 07:21	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 07:21	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 07:21	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 07:21	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 07:21	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 07:21	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 07:21	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 07:21	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 07:21	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 07:21	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 07:21	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 07:21	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 07:21	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 07:21*	*MSZ*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 07:21*	*MSZ*	

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Description:	4112-MW23	**Lab Sample ID:**	C503938-09	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 17:40	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*59-134*		*5D22030*	*EPA 8260B*	*04/23/15 07:21*	*MSZ*	

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Description: 4112-MW23 | **Lab Sample ID:** C503938-09 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 17:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:30	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:34	JDH	
Barium [7440-39-3] ^	**63.2**	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:34	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:34	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:34	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:34	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:34	JDH	
Copper [7440-50-8] ^	**1.98**	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:34	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:34	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:34	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:30	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:34	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:30	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:34	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:34	JDH	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 4112-MW24 | **Lab Sample ID:** C503938-10 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 16:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 07:50	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 07:50	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 07:50	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 07:50	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 07:50	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 07:50	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 07:50	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 07:50	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 07:50	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 07:50	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 07:50	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 07:50	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 07:50	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 07:50	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 07:50	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 07:50	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 07:50	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 07:50	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 07:50	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 07:50	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 07:50	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 07:50	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 07:50	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 07:50	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 07:50	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 07:50	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 07:50	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*109 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 07:50*	*MSZ*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 07:50*	*MSZ*	

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Description:	4112-MW24	**Lab Sample ID:**	C503938-10	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 16:40	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*59-134*		*5D22030*	*EPA 8260B*	*04/23/15 07:50*	*MSZ*	

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Description: 4112-MW24 | **Lab Sample ID:** C503938-10 | **Received:** 04/14/15 11:05

Matrix: Ground Water | **Sampled:** 04/13/15 16:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** Bradley Keise

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:33	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:37	JDH	
Barium [7440-39-3] ^	**385**		ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:37	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:37	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:37	JDH	
Chromium [7440-47-3] ^	**2.07**	J	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:37	JDH	
Cobalt [7440-48-4] ^	**5.20**	J	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:37	JDH	
Copper [7440-50-8] ^	**5.63**	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:37	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:37	JDH	
Nickel [7440-02-0] ^	**4.76**	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:37	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:33	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:37	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:33	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:37	JDH	
Zinc [7440-66-6] ^	**5.88**	J	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:37	JDH	

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Description: 4112-MW25b
Matrix: Ground Water
Project: White Street Landfill AppI (Phase III)

Lab Sample ID: C503938-11
Sampled: 04/13/15 15:30
Sampled By: Bradley Keise

Received: 04/14/15 11:05
Work Order: C503938

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 08:19	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 08:19	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 08:19	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 08:19	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 08:19	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 08:19	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 08:19	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 08:19	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 08:19	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 08:19	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 08:19	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 08:19	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 08:19	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 08:19	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 08:19	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 08:19	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 08:19	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 08:19	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 08:19	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 08:19	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 08:19	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 08:19	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 08:19	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 08:19	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 08:19	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 08:19	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 08:19	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 08:19*	*MSZ*	
Dibromofluoromethane	*52*	*1*	*50.0*	*105 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 08:19*	*MSZ*	

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Description:	4112-MW25b	**Lab Sample ID:**	C503938-11	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 15:30	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*55*	*1*	*50.0*	*111 %*	*59-134*		*5D22030*	*EPA 8260B*	*04/23/15 08:19*	*MSZ*	

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Description: 4112-MW25b
Matrix: Ground Water
Project: White Street Landfill AppI (Phase III)

Lab Sample ID: C503938-11
Sampled: 04/13/15 15:30
Sampled By: Bradley Keise

Received: 04/14/15 11:05
Work Order: C503938

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:44	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:39	JDH	
Barium [7440-39-3] ^	**21.3**	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:39	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:39	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:39	JDH	
Chromium [7440-47-3] ^	**1.86**	J	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:39	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:39	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:39	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:39	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:39	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:44	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:39	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:44	VLO	
Vanadium [7440-62-2] ^	**1.94**	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:39	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:39	JDH	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 4112-DUPLICATEIII
Matrix: Ground Water
Project: White Street Landfill AppI (Phase III)

Lab Sample ID: C503938-12
Sampled: 04/13/15 09:40
Sampled By: Bradley Keise

Received: 04/14/15 11:05
Work Order: C503938

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 08:48	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 08:48	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 08:48	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 08:48	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 08:48	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 08:48	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 08:48	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 08:48	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 08:48	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 08:48	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 08:48	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 08:48	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 08:48	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 08:48	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 08:48	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 08:48	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 08:48	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 08:48	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 08:48	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 08:48	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 08:48	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 08:48	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 08:48	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 08:48	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 08:48	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 08:48	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 08:48	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 08:48*	*MSZ*	
Dibromofluoromethane	*50*	*1*	*50.0*	*101 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 08:48*	*MSZ*	

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Description:	4112-DUPLICATEIII	**Lab Sample ID:**	C503938-12	**Received:**	04/14/15 11:05
Matrix:	Ground Water	**Sampled:**	04/13/15 09:40	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	Bradley Keise		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*59-134*	*5D22030*	*EPA 8260B*	*04/23/15 08:48*	*MSZ*	

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Description: 4112-DUPLICATEIII
Matrix: Ground Water
Project: White Street Landfill AppI (Phase III)

Lab Sample ID: C503938-12
Sampled: 04/13/15 09:40
Sampled By: Bradley Keise

Received: 04/14/15 11:05
Work Order: C503938

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/15 13:48	VLO	
Arsenic [7440-38-2] ^	6.80	U	ug/L	1	6.80	10.0	10	EPA 6010C	04/23/15 10:42	JDH	
Barium [7440-39-3] ^	**47.7**	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/15 10:42	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/15 10:42	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/15 10:42	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	04/23/15 10:42	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/15 10:42	JDH	
Copper [7440-50-8] ^	**3.08**	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/15 10:42	JDH	
Lead [7439-92-1] ^	3.10	U	ug/L	1	3.10	10.0	10	EPA 6010C	04/23/15 10:42	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/15 10:42	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	3.00	10	EPA 6020A	04/24/15 13:48	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/15 10:42	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/15 13:48	VLO	
Vanadium [7440-62-2] ^	**3.18**	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/15 10:42	JDH	
Zinc [7440-66-6] ^	**5.16**	J	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/15 10:42	JDH	

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Description: 4112-TripBlank#3 | **Lab Sample ID:** C503938-13 | **Received:** 04/14/15 11:05

Matrix: Water | **Sampled:** 04/13/15 09:40 | **Work Order:** C503938

Project: White Street Landfill AppI (Phase III) | **Sampled By:** ENCO

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/23/15 01:31	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/23/15 01:31	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/23/15 01:31	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 01:31	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/23/15 01:31	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/23/15 01:31	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/23/15 01:31	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/23/15 01:31	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/23/15 01:31	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/23/15 01:31	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/23/15 01:31	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/23/15 01:31	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/23/15 01:31	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/23/15 01:31	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/23/15 01:31	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 01:31	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/23/15 01:31	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/23/15 01:31	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/23/15 01:31	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/23/15 01:31	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/23/15 01:31	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/23/15 01:31	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/23/15 01:31	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/23/15 01:31	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/23/15 01:31	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/23/15 01:31	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/23/15 01:31	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*53-136*	*5D22030*	*EPA 8260B*	*04/23/15 01:31*	*MSZ*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*67-129*	*5D22030*	*EPA 8260B*	*04/23/15 01:31*	*MSZ*	

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Description:	4112-TripBlank#3	**Lab Sample ID:**	C503938-13	**Received:**	04/14/15 11:05
Matrix:	Water	**Sampled:**	04/13/15 09:40	**Work Order:**	C503938
Project:	White Street Landfill AppI (Phase III)	**Sampled By:**	ENCO		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
Toluene-d8	*56*	*1*	*50.0*	*112 %*	*59-134*	*5D22030*	*EPA 8260B*	*04/23/15 01:31*	*MSZ*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 5D22030 - EPA 5030B_MS

Blank (5D22030-BLK1) Prepared: 04/22/2015 14:17 Analyzed: 04/22/2015 23:06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*109*	*53-136*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 5D22030 - EPA 5030B_MS

Blank (5D22030-BLK1) Continued Prepared: 04/22/2015 14:17 Analyzed: 04/22/2015 23:06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*67-129*			
Surrogate: Toluene-d8	*54*			*ug/L*	*50.0*		*109*	*59-134*			

LCS (5D22030-BS1) Prepared: 04/22/2015 14:17 Analyzed: 04/22/2015 23:35

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		88	75-133			
Benzene	17		1.0	ug/L	20.0		86	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		99	83-117			
Toluene	17		1.0	ug/L	20.0		87	71-118			
Trichloroethene	20		1.0	ug/L	20.0		100	74-119			

Matrix Spike (5D22030-MS1) Prepared: 04/22/2015 14:17 Analyzed: 04/23/2015 00:04

Source: C504649-10

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0	0.21 U	97	75-133			
Benzene	19		1.0	ug/L	20.0	0.15 U	97	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	103	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118			
Trichloroethene	22		1.0	ug/L	20.0	0.15 U	109	74-119			

Matrix Spike Dup (5D22030-MSD1) Prepared: 04/22/2015 14:17 Analyzed: 04/23/2015 00:33

Source: C504649-10

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.21 U	92	75-133	5	20	
Benzene	19		1.0	ug/L	20.0	0.15 U	93	81-134	4	17	
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	101	83-117	2	16	
Toluene	19		1.0	ug/L	20.0	0.14 U	94	71-118	1	17	
Trichloroethene	22		1.0	ug/L	20.0	0.15 U	111	74-119	2	22	

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 5D15008 - EPA 3005A

Blank (5D15008-BLK1) Prepared: 04/15/2015 10:17 Analyzed: 04/23/2015 09:46

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	6.80	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.40	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Lead	3.10	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 5D15008 - EPA 3005A

Blank (5D15008-BLK1) Continued Prepared: 04/15/2015 10:17 Analyzed: 04/23/2015 09:46

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

LCS (5D15008-BS1) Prepared: 04/15/2015 10:17 Analyzed: 04/23/2015 09:49

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	224		10.0	ug/L	200		112	80-120			
Barium	225		10.0	ug/L	200		112	80-120			
Beryllium	22.1		1.00	ug/L	20.0		111	80-120			
Cadmium	22.5		1.00	ug/L	20.0		112	80-120			
Chromium	222		10.0	ug/L	200		111	80-120			
Cobalt	228		10.0	ug/L	200		114	80-120			
Copper	216		10.0	ug/L	200		108	80-120			
Lead	224		10.0	ug/L	200		112	80-120			
Nickel	224		10.0	ug/L	200		112	80-120			
Silver	215		10.0	ug/L	200		107	80-120			
Vanadium	214		10.0	ug/L	200		107	80-120			
Zinc	226		10.0	ug/L	200		113	80-120			

Matrix Spike (5D15008-MS1) Prepared: 04/15/2015 10:17 Analyzed: 04/23/2015 09:54

Source: C503938-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	216		10.0	ug/L	200	6.80 U	108	75-125			
Barium	265		10.0	ug/L	200	31.4	117	75-125			
Beryllium	22.8		1.00	ug/L	20.0	0.100 U	114	75-125			
Cadmium	23.2		1.00	ug/L	20.0	0.360 U	116	75-125			
Chromium	224		10.0	ug/L	200	1.40 U	112	75-125			
Cobalt	229		10.0	ug/L	200	1.10 U	114	75-125			
Copper	222		10.0	ug/L	200	2.22	110	75-125			
Lead	223		10.0	ug/L	200	3.10 U	112	75-125			
Nickel	231		10.0	ug/L	200	1.80 U	115	75-125			
Silver	218		10.0	ug/L	200	1.90 U	109	75-125			
Vanadium	218		10.0	ug/L	200	1.40 U	109	75-125			
Zinc	235		10.0	ug/L	200	3.80 U	118	75-125			

Matrix Spike Dup (5D15008-MSD1) Prepared: 04/15/2015 10:17 Analyzed: 04/23/2015 09:57

Source: C503938-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	215		10.0	ug/L	200	6.80 U	107	75-125	0.5	20	
Barium	261		10.0	ug/L	200	31.4	115	75-125	1	20	
Beryllium	22.7		1.00	ug/L	20.0	0.100 U	113	75-125	0.4	20	
Cadmium	23.0		1.00	ug/L	20.0	0.360 U	115	75-125	1	20	
Chromium	224		10.0	ug/L	200	1.40 U	112	75-125	0.1	20	
Cobalt	226		10.0	ug/L	200	1.10 U	113	75-125	1	20	

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 5D15008 - EPA 3005A

Matrix Spike Dup (5D15008-MSD1) Continued Prepared: 04/15/2015 10:17 Analyzed: 04/23/2015 09:57

Source: C503938-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Copper	221		10.0	ug/L	200	2.22	110	75-125	0.3	20	
Lead	221		10.0	ug/L	200	3.10 U	111	75-125	0.8	20	
Nickel	229		10.0	ug/L	200	1.80 U	115	75-125	0.7	20	
Silver	218		10.0	ug/L	200	1.90 U	109	75-125	0.1	20	
Vanadium	218		10.0	ug/L	200	1.40 U	109	75-125	0.02	20	
Zinc	233		10.0	ug/L	200	3.80 U	116	75-125	1	20	

Post Spike (5D15008-PS1) Prepared: 04/15/2015 10:17 Analyzed: 04/23/2015 09:59

Source: C503938-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.191		0.0100	mg/L	0.200	-0.00512	96	80-120			
Barium	0.242		0.0100	mg/L	0.200	0.0314	105	80-120			
Beryllium	0.0204		0.00100	mg/L	0.0200	-5.39E-5	102	80-120			
Cadmium	0.0210		0.00100	mg/L	0.0200	0.000136	105	80-120			
Chromium	0.205		0.0100	mg/L	0.200	0.000239	102	80-120			
Cobalt	0.206		0.0100	mg/L	0.200	9.01E-5	103	80-120			
Copper	0.203		0.0100	mg/L	0.200	0.00222	100	80-120			
Lead	0.203		0.0100	mg/L	0.200	-0.00157	101	80-120			
Nickel	0.210		0.0100	mg/L	0.200	-0.000302	105	80-120			
Silver	0.200		0.0100	mg/L	0.200	0.000985	99	80-120			
Vanadium	0.198		0.0100	mg/L	0.200	-0.000409	99	80-120			
Zinc	0.212		0.0100	mg/L	0.200	0.00169	105	80-120			

Batch 5D22007 - EPA 3005A

Blank (5D22007-BLK1) Prepared: 04/22/2015 09:53 Analyzed: 04/24/2015 12:30

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.910	U	3.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (5D22007-BS1) Prepared: 04/22/2015 09:53 Analyzed: 04/24/2015 12:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	200		2.00	ug/L	200		100	80-120			
Selenium	204		3.00	ug/L	200		102	80-120			
Thallium	207		1.00	ug/L	200		104	80-120			

Matrix Spike (5D22007-MS1) Prepared: 04/22/2015 09:53 Analyzed: 04/24/2015 12:41

Source: C503938-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	199		2.00	ug/L	200	0.552	99	75-125			
Selenium	215		3.00	ug/L	200	0.910 U	107	75-125			

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 5D22007 - EPA 3005A

Matrix Spike (5D22007-MS1) Continued Prepared: 04/22/2015 09:53 Analyzed: 04/24/2015 12:41

Source: C503938-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Thallium	189		1.00	ug/L	200	0.110 U	94	75-125			

Matrix Spike Dup (5D22007-MSD1) Prepared: 04/22/2015 09:53 Analyzed: 04/24/2015 12:45

Source: C503938-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	204		2.00	ug/L	200	0.552	102	75-125	2	20	
Selenium	205		3.00	ug/L	200	0.910 U	102	75-125	5	20	
Thallium	192		1.00	ug/L	200	0.110 U	96	75-125	2	20	

Post Spike (5D22007-PS1) Prepared: 04/22/2015 09:53 Analyzed: 04/24/2015 12:48

Source: C503938-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	205		2.00	ug/L	200	0.552	102	80-120			
Selenium	204		3.00	ug/L	200	0.326	102	80-120			
Thallium	192		1.00	ug/L	200	0.0173	96	80-120			

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

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Client Name: City of Greensboro (CI034)	Project Number: [none]
Address: 2503 White Street	Project Name/Desc: White Street Landfill Appl (Phase III)
City/ST/Zip: Greensboro, NC 27405	PO # / Billing Info:
Tel: (336) 373-4188 Fax:	Reporting Contact: Lewis Walker
Sampler(s) Name, Affiliation (Print): BRADLEY KEISE, S&ME	Billing Contact: Angie Wade
Sampler(s) Signature: [signature]	Site Location / Time Zone: GREENSBORO, NC / EASTERN

Requested Analyses: 8260B Appendix 1; Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn; Hg

Requested Turnaround Times
Note : Rush requests subject to acceptance by the facility
☒ Standard
___ Expedited
Due ___/___/___

Lab Workorder: C503938

Preservation (See Codes) (Combine as necessary): 4/15/15 CS

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn	Hg	Sample Comments
	4112-MW15	4-13-15	1040	G	GW	4	X	X	X	
	4112-MW16	4-13-15	940	G	GW	4	X	X	X	
	4112-MW17	4-13-15	1240	G	GW	4	X	X	X	
	4112-MW18	4-13-15	1340	G	GW	4	X	X		
	4112-MW19	4-13-15	1430	G	GW	4	X	X		
	4112-MW20	4-13-15	2025	G	GW	4	X	X		
	4112-MW21	4-13-15	1945	G	GW	4	X	X		
	4112-MW22	4-13-15	1855	G	GW	4	X	X		
	4112-MW23	4-13-15	1740	G	GW	4	X	X		
	4112-MW24	4-13-15	1640	G	GW	4	X	X		
	~~4112-MW25~~				GW	4	X	X		Be
	4112-MW25b	4-13-15	1530	G	GW	4	X	X		

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
		[signature]	4-14-15 / 916	[signature]	4/14/15 9:00
Comments/Special Reporting Requirements		Relinquished By: R.W.	4/14/15 11:05	Received By: [signature]	4-14-15 11:05
		Relinquished By		Received By	

Cooler #'s & Temps on Receipt: 3.0°C

Condition Upon Receipt: ✓ Acceptable ___ Unacceptable

Matrix : GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments)

Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr.
Orlando, FL 32824
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4810 Executive Park Court, Suite 111
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102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

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Client Name: City of Greensboro (CI034)	Project Number: [none]
Address: 2503 White Street	Project Name/Desc: White Street Landfill Appl (Phase III)
City/ST/Zip: Greensboro, NC 27405	PO # / Billing Info
Tel: (336) 373-4188 Fax:	Reporting Contact: Lewis Walker
Sampler(s) Name, Affiliation (Print): BRADLEY KLUSE / SSI ME	Billing Contact: Angie Wade
Sampler(s) Signature:	Site Location / Time Zone: GREENSBORO, NC / EASTERN

Requested Analyses: 8260B Appendix 1; Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn; Hg

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C503938

Preservation (See Codes) (Combine as necessary): CS 4/15/15

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn	Hg	Sample Comments
	4112-DUPLICATEIII				WA	4	X	X	X	
	4112-TripBlank#3				WA	2	X		X	
						4				
						4				
						4				
						4				
						4				
						4				
						4				
						4				
						4				
						4				

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time 4-14-15 / 916	Received By B.W.	Date/Time 4/14/15 9:20
Comments/Special Reporting Requirements		Relinquished By B.W.	Date/Time 4/14/15 11:00	Received By	Date/Time 4-14-15 11:05
		Relinquished By	Date/Time	Received By	Date/Time

Cooler #'s & Temps on Receipt

Condition Upon Receipt: ✓ Acceptable ___ Unacceptable

Matrix : GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments)

Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515

Tuesday, April 21, 2015
City of Greensboro (CI034)
Attn: Lewis Walker
2503 White Street
Greensboro, NC 27405

RE: Laboratory Results for
Project Number: [none], Project Name/Desc: White Street Landfill Leachate
ENCO Workorder(s): C503939

Dear Lewis Walker,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, April 7, 2015.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Chuck Smith

Project Manager

Enclosure(s)

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 4112-Leachate **Lab ID:** C503939-01 **Sampled:** 04/06/15 11:40 **Received:** 04/07/15 12:25

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 300.0	05/04/15		04/09/15	09:53	04/10/15	16:00
EPA 353.2	12/30/17		04/20/15	11:01	04/20/15	11:36
EPA 365.4	05/04/15		04/17/15	11:00	04/20/15	12:39
EPA 6010C	10/03/15		04/14/15	10:43	04/15/15	11:39
EPA 6020A	10/03/15		04/08/15	13:34	04/14/15	13:24
EPA 8260B	04/20/15		04/13/15	14:31	04/14/15	10:26
SM 4500H+B-2000	04/06/15	11:54	04/08/15	14:45	04/08/15	14:45
SM 5210B-2001	04/08/15	11:40	04/07/15	16:26	04/07/15	16:26
SM 5220D-1997	05/04/15		04/10/15	11:28	04/10/15	16:25

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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SAMPLE DETECTION SUMMARY

Client ID: 4112-Leachate **Lab ID:** C503939-01

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
1,4-Dichlorobenzene	7.7	JD	1.9	10	ug/L	EPA 8260B	R-04
2-Butanone	320	D	13	50	ug/L	EPA 8260B	R-04
Acetone	440	D	12	50	ug/L	EPA 8260B	R-04
Antimony - Total	3.16	JD	2.20	20.0	ug/L	EPA 6020A	R-01
Barium - Total	472		1.00	10.0	ug/L	EPA 6010C	
Biochemical Oxygen Demand	45		2.0	2.0	mg/L	SM 5210B-2001	
Chemical Oxygen Demand	470		40	40	mg/L	SM 5220D-1997	
Chromium - Total	20.2		1.40	10.0	ug/L	EPA 6010C	
Cobalt - Total	14.8		1.10	10.0	ug/L	EPA 6010C	
Copper - Total	3.68	J	1.60	10.0	ug/L	EPA 6010C	
Nickel - Total	66.8		1.80	10.0	ug/L	EPA 6010C	
pH	7.0		1.0	1.0	pH	SM 4500H+B-2000	Q
Phosphorus	2.1	D	0.050	0.20	mg/L	EPA 365.4	
Sulfate as SO4	3.0	J	2.9	5.0	mg/L	EPA 300.0	
Vanadium - Total	23.2		1.40	10.0	ug/L	EPA 6010C	
Xylenes (Total)	31	D	4.5	30	ug/L	EPA 8260B	R-04
Zinc - Total	7.17	J	3.80	10.0	ug/L	EPA 6010C	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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ANALYTICAL RESULTS

Description: 4112-Leachate | **Lab Sample ID:** C503939-01 | **Received:** 04/07/15 12:25

Matrix: Ground Water | **Sampled:** 04/06/15 11:40 | **Work Order:** C503939

Project: White Street Landfill Leachate | **Sampled By:** Gary Simcox

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	1.7	UD	ug/L	10	1.7	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,1,1-Trichloroethane [71-55-6]^	1.2	UD	ug/L	10	1.2	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,1,2,2-Tetrachloroethane [79-34-5]^	2.8	UD	ug/L	10	2.8	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,1,2-Trichloroethane [79-00-5]^	1.4	UD	ug/L	10	1.4	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,1-Dichloroethane [75-34-3]^	1.3	UD	ug/L	10	1.3	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,1-Dichloroethene [75-35-4]^	2.1	UD	ug/L	10	2.1	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,2,3-Trichloropropane [96-18-4]^	2.3	UD	ug/L	10	2.3	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	UD	ug/L	10	4.8	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,2-Dibromoethane [106-93-4]^	6.6	UD	ug/L	10	6.6	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,2-Dichlorobenzene [95-50-1]^	1.9	UD	ug/L	10	1.9	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,2-Dichloroethane [107-06-2]^	2.1	UD	ug/L	10	2.1	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,2-Dichloropropane [78-87-5]^	1.0	UD	ug/L	10	1.0	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
1,4-Dichlorobenzene [106-46-7]^	**7.7**	JD	ug/L	10	1.9	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
2-Butanone [78-93-3]^	**320**	D	ug/L	10	13	50	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
2-Hexanone [591-78-6]^	8.8	UD	ug/L	10	8.8	50	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
4-Methyl-2-pentanone [108-10-1]^	11	UD	ug/L	10	11	50	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Acetone [67-64-1]^	**440**	D	ug/L	10	12	50	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Acrylonitrile [107-13-1]^	35	UD	ug/L	10	35	100	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Benzene [71-43-2]^	1.5	UD	ug/L	10	1.5	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Bromochloromethane [74-97-5]^	4.8	UD	ug/L	10	4.8	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Bromodichloromethane [75-27-4]^	1.7	UD	ug/L	10	1.7	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Bromoform [75-25-2]^	2.2	UD	ug/L	10	2.2	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Bromomethane [74-83-9]^	1.4	UD	ug/L	10	1.4	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Carbon disulfide [75-15-0]^	15	UD	ug/L	10	15	50	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Carbon tetrachloride [56-23-5]^	1.7	UD	ug/L	10	1.7	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Chlorobenzene [108-90-7]^	1.7	UD	ug/L	10	1.7	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Chloroethane [75-00-3]^	2.3	UD	ug/L	10	2.3	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Chloroform [67-66-3]^	1.8	UD	ug/L	10	1.8	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Chloromethane [74-87-3]^	1.3	UD	ug/L	10	1.3	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
cis-1,2-Dichloroethene [156-59-2]^	1.5	UD	ug/L	10	1.5	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
cis-1,3-Dichloropropene [10061-01-5]^	2.0	UD	ug/L	10	2.0	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Dibromochloromethane [124-48-1]^	1.7	UD	ug/L	10	1.7	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Dibromomethane [74-95-3]^	2.7	UD	ug/L	10	2.7	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Ethylbenzene [100-41-4]^	1.3	UD	ug/L	10	1.3	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Iodomethane [74-88-4]^	17	UD	ug/L	10	17	50	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Methylene chloride [75-09-2]^	2.3	UD	ug/L	10	2.3	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Styrene [100-42-5]^	1.1	UD	ug/L	10	1.1	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Tetrachloroethene [127-18-4]^	1.7	UD	ug/L	10	1.7	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Toluene [108-88-3]^	1.4	UD	ug/L	10	1.4	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
trans-1,2-Dichloroethene [156-60-5]^	2.1	UD	ug/L	10	2.1	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
trans-1,3-Dichloropropene [10061-02-6]^	1.5	UD	ug/L	10	1.5	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
trans-1,4-Dichloro-2-butene [110-57-6]^	7.0	UD	ug/L	10	7.0	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Trichloroethene [79-01-6]^	1.5	UD	ug/L	10	1.5	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Trichlorofluoromethane [75-69-4]^	2.4	UD	ug/L	10	2.4	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Vinyl acetate [108-05-4]^	9.5	UD	ug/L	10	9.5	50	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Vinyl chloride [75-01-4]^	3.2	UD	ug/L	10	3.2	10	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04
Xylenes (Total) [1330-20-7]^	**31**	D	ug/L	10	4.5	30	5D13034	EPA 8260B	04/14/15 10:26	MSZ	R-04

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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ANALYTICAL RESULTS

Description: 4112-Leachate	**Lab Sample ID:** C503939-01	**Received:** 04/07/15 12:25
Matrix: Ground Water	**Sampled:** 04/06/15 11:40	**Work Order:** C503939
Project: White Street Landfill Leachate	**Sampled By:** Gary Simcox	

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*53-136*	*5D13034*	*EPA 8260B*	*04/14/15 10:26*	*MSZ*	*R-04*
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*67-129*	*5D13034*	*EPA 8260B*	*04/14/15 10:26*	*MSZ*	*R-04*
Toluene-d8	*55*	*1*	*50.0*	*111 %*	*59-134*	*5D13034*	*EPA 8260B*	*04/14/15 10:26*	*MSZ*	*R-04*

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	**3.16**	JD	ug/L	10	2.20	20.0	5D08032	EPA 6020A	04/14/15 13:24	VLO	R-01
Arsenic [7440-38-2]^	6.80	U	ug/L	1	6.80	10.0	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Barium [7440-39-3]^	**472**		ug/L	1	1.00	10.0	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Beryllium [7440-41-7]^	0.100	U	ug/L	1	0.100	1.00	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Chromium [7440-47-3]^	**20.2**		ug/L	1	1.40	10.0	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Cobalt [7440-48-4]^	**14.8**		ug/L	1	1.10	10.0	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Copper [7440-50-8]^	**3.68**	J	ug/L	1	1.60	10.0	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Lead [7439-92-1]^	3.10	U	ug/L	1	3.10	10.0	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Nickel [7440-02-0]^	**66.8**		ug/L	1	1.80	10.0	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Selenium [7782-49-2]^	9.10	UD	ug/L	10	9.10	30.0	5D08032	EPA 6020A	04/14/15 13:24	VLO	R-01
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Thallium [7440-28-0]^	1.10	UD	ug/L	10	1.10	10.0	5D08032	EPA 6020A	04/14/15 13:24	VLO	R-01
Vanadium [7440-62-2]^	**23.2**		ug/L	1	1.40	10.0	5D14022	EPA 6010C	04/15/15 11:39	JDH	
Zinc [7440-66-6]^	**7.17**	J	ug/L	1	3.80	10.0	5D14022	EPA 6010C	04/15/15 11:39	JDH	

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Biochemical Oxygen Demand^	**45**		mg/L	1	2.0	2.0	5D07026	SM 5210B-2001	04/07/15 16:26	JOC	
Chemical Oxygen Demand^	**470**		mg/L	1	40	40	5D10008	SM 5220D-1997	04/10/15 16:25	JOC	
Nitrate as N [14797-55-8]^	0.025	U	mg/L	1	0.025	0.10	5D20026	EPA 353.2	04/20/15 11:36	SHA	
pH^	**7.0**		pH	1	1.0	1.0	5D08036	SM 4500H+B-2000	04/08/15 14:45	MKS	Q
Phosphorus [7723-14-0]^	**2.1**	D	mg/L	2	0.050	0.20	5D17008	EPA 365.4	04/20/15 12:39	SHA	
Sulfate as SO4 [14808-79-8]^	**3.0**	J	mg/L	1	2.9	5.0	5D09010	EPA 300.0	04/10/15 16:00	SHA	

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QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 5D13034 - EPA 5030B_MS

Blank (5D13034-BLK1) Prepared: 04/13/2015 14:31 Analyzed: 04/14/2015 05:36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*111*	*53-136*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*67-129*			

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QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 5D13034 - EPA 5030B_MS - Continued

Blank (5D13034-BLK1) Continued Prepared: 04/13/2015 14:31 Analyzed: 04/14/2015 05:36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*56*			*ug/L*	*50.0*		*112*	*59-134*			

LCS (5D13034-BS1) Prepared: 04/13/2015 14:31 Analyzed: 04/14/2015 07:03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0		95	75-133			
Benzene	19		1.0	ug/L	20.0		93	81-134			
Chlorobenzene	19		1.0	ug/L	20.0		96	83-117			
Toluene	17		1.0	ug/L	20.0		84	71-118			
Trichloroethene	22		1.0	ug/L	20.0		110	74-119			

Matrix Spike (5D13034-MS1) Prepared: 04/13/2015 14:31 Analyzed: 04/14/2015 06:05

Source: C504470-04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.21 U	90	75-133			
Benzene	17		1.0	ug/L	20.0	0.15 U	85	81-134			
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	94	83-117			
Toluene	17		1.0	ug/L	20.0	0.14 U	85	71-118			
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	97	74-119			

Matrix Spike Dup (5D13034-MSD1) Prepared: 04/13/2015 14:31 Analyzed: 04/14/2015 06:34

Source: C504470-04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.21 U	88	75-133	2	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	88	81-134	4	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	94	83-117	0.2	16	
Toluene	17		1.0	ug/L	20.0	0.14 U	87	71-118	2	17	
Trichloroethene	22		1.0	ug/L	20.0	0.15 U	110	74-119	13	22	

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 5D08032 - EPA 3005A

Blank (5D08032-BLK1) Prepared: 04/08/2015 13:34 Analyzed: 04/14/2015 12:08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.910	U	3.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (5D08032-BS1) Prepared: 04/08/2015 13:34 Analyzed: 04/14/2015 12:12

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	203		2.00	ug/L	200		101	80-120			
Selenium	209		3.00	ug/L	200		104	80-120			
Thallium	219		1.00	ug/L	200		109	80-120			

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QUALITY CONTROL DATA

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 5D08032 - EPA 3005A - Continued

Matrix Spike (5D08032-MS1) Prepared: 04/08/2015 13:34 Analyzed: 04/14/2015 12:19

Source: C503941-05

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	203		2.00	ug/L	200	0.754	101	75-125			
Selenium	219		3.00	ug/L	200	0.910 U	109	75-125			
Thallium	203		1.00	ug/L	200	0.110 U	102	75-125			

Matrix Spike Dup (5D08032-MSD1) Prepared: 04/08/2015 13:34 Analyzed: 04/14/2015 12:47

Source: C503941-05

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	202		2.00	ug/L	200	0.754	101	75-125	0.3	20	
Selenium	207		3.00	ug/L	200	0.910 U	104	75-125	5	20	
Thallium	204		1.00	ug/L	200	0.110 U	102	75-125	0.06	20	

Post Spike (5D08032-PS1) Prepared: 04/08/2015 13:34 Analyzed: 04/14/2015 12:51

Source: C503941-05

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	201		2.00	ug/L	200	0.754	100	80-120			
Selenium	209		3.00	ug/L	200	0.353	104	80-120			
Thallium	193		1.00	ug/L	200	0.0881	97	80-120			

Batch 5D14022 - EPA 3005A

Blank (5D14022-BLK1) Prepared: 04/14/2015 10:43 Analyzed: 04/15/2015 10:45

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	6.80	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.40	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Lead	3.10	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

LCS (5D14022-BS1) Prepared: 04/14/2015 10:43 Analyzed: 04/15/2015 10:51

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	216		10.0	ug/L	200		108	80-120			
Barium	220		10.0	ug/L	200		110	80-120			
Beryllium	21.5		1.00	ug/L	20.0		108	80-120			
Cadmium	21.8		1.00	ug/L	20.0		109	80-120			
Chromium	216		10.0	ug/L	200		108	80-120			
Cobalt	217		10.0	ug/L	200		108	80-120			
Copper	210		10.0	ug/L	200		105	80-120			
Lead	218		10.0	ug/L	200		109	80-120			
Nickel	214		10.0	ug/L	200		107	80-120			

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QUALITY CONTROL DATA

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 5D14022 - EPA 3005A - Continued

LCS (5D14022-BS1) Continued Prepared: 04/14/2015 10:43 Analyzed: 04/15/2015 10:51

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	212		10.0	ug/L	200		106	80-120			
Vanadium	208		10.0	ug/L	200		104	80-120			
Zinc	218		10.0	ug/L	200		109	80-120			

Matrix Spike (5D14022-MS1) Prepared: 04/14/2015 10:43 Analyzed: 04/15/2015 10:56

Source: C503894-06

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	211		10.0	ug/L	200	6.80 U	106	75-125			
Barium	231		10.0	ug/L	200	18.7	106	75-125			
Beryllium	21.8		1.00	ug/L	20.0	0.493	106	75-125			
Cadmium	21.3		1.00	ug/L	20.0	0.360 U	106	75-125			
Chromium	216		10.0	ug/L	200	4.23	106	75-125			
Cobalt	213		10.0	ug/L	200	1.21	106	75-125			
Copper	207		10.0	ug/L	200	1.60 U	103	75-125			
Lead	213		10.0	ug/L	200	3.10 U	106	75-125			
Nickel	210		10.0	ug/L	200	1.80 U	105	75-125			
Silver	206		10.0	ug/L	200	1.90 U	103	75-125			
Vanadium	209		10.0	ug/L	200	4.10	102	75-125			
Zinc	217		10.0	ug/L	200	5.66	105	75-125			

Matrix Spike Dup (5D14022-MSD1) Prepared: 04/14/2015 10:43 Analyzed: 04/15/2015 10:59

Source: C503894-06

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	208		10.0	ug/L	200	6.80 U	104	75-125	1	20	
Barium	232		10.0	ug/L	200	18.7	107	75-125	0.4	20	
Beryllium	21.9		1.00	ug/L	20.0	0.493	107	75-125	0.6	20	
Cadmium	21.3		1.00	ug/L	20.0	0.360 U	106	75-125	0.2	20	
Chromium	217		10.0	ug/L	200	4.23	106	75-125	0.7	20	
Cobalt	213		10.0	ug/L	200	1.21	106	75-125	0.006	20	
Copper	208		10.0	ug/L	200	1.60 U	104	75-125	0.5	20	
Lead	213		10.0	ug/L	200	3.10 U	106	75-125	0.06	20	
Nickel	212		10.0	ug/L	200	1.80 U	106	75-125	0.9	20	
Silver	208		10.0	ug/L	200	1.90 U	104	75-125	0.6	20	
Vanadium	210		10.0	ug/L	200	4.10	103	75-125	0.5	20	
Zinc	218		10.0	ug/L	200	5.66	106	75-125	0.7	20	

Post Spike (5D14022-PS1) Prepared: 04/14/2015 10:43 Analyzed: 04/15/2015 11:02

Source: C503894-06

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.204		0.0100	mg/L	0.200	7.42E-5	102	80-120			
Barium	0.221		0.0100	mg/L	0.200	0.0187	101	80-120			
Beryllium	0.0211		0.00100	mg/L	0.0200	0.000493	103	80-120			
Cadmium	0.0207		0.00100	mg/L	0.0200	-5.99E-6	103	80-120			
Chromium	0.209		0.0100	mg/L	0.200	0.00423	102	80-120			
Cobalt	0.204		0.0100	mg/L	0.200	0.00121	102	80-120			
Copper	0.199		0.0100	mg/L	0.200	0.000870	99	80-120			
Lead	0.204		0.0100	mg/L	0.200	0.000556	102	80-120			
Nickel	0.204		0.0100	mg/L	0.200	0.000893	101	80-120			

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QUALITY CONTROL DATA

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 5D14022 - EPA 3005A - Continued

Post Spike (5D14022-PS1) Continued Prepared: 04/14/2015 10:43 Analyzed: 04/15/2015 11:02

Source: C503894-06

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	0.198		0.0100	mg/L	0.200	0.000403	99	80-120			
Vanadium	0.201		0.0100	mg/L	0.200	0.00410	99	80-120			
Zinc	0.212		0.0100	mg/L	0.200	0.00566	103	80-120			

Classical Chemistry Parameters - Quality Control

Batch 5D07025 - NO PREP

LCS (5D07025-BS1) Prepared: 04/07/2015 14:34 Analyzed: 04/07/2015 15:40

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.98		0.10	mg/L	1.00		98	90-110			

LCS (5D07025-BS2) Prepared: 04/07/2015 14:34 Analyzed: 04/07/2015 16:16

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.98		0.10	mg/L	1.00		98	90-110			

LCS (5D07025-BS3) Prepared: 04/07/2015 14:34 Analyzed: 04/07/2015 16:25

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.98		0.10	mg/L	1.00		98	90-110			

Matrix Spike (5D07025-MS1) Prepared: 04/07/2015 14:34 Analyzed: 04/07/2015 16:09

Source: C502698-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.89		0.10	mg/L	1.00	0.017 U	89	90-110			QM-05

Matrix Spike Dup (5D07025-MSD1) Prepared: 04/07/2015 14:34 Analyzed: 04/07/2015 16:10

Source: C502698-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.92		0.10	mg/L	1.00	0.017 U	92	90-110	3	10	

Batch 5D07026 - NO PREP

Blank (5D07026-BLK1) Prepared & Analyzed: 04/07/2015 16:26

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	2.0	U	2.0	mg/L							

LCS (5D07026-BS1) Prepared & Analyzed: 04/07/2015 16:26

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	200		2.0	mg/L	198		103	85-115			

Duplicate (5D07026-DUP1) Prepared & Analyzed: 04/07/2015 16:26

Source: C501962-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

QUALITY CONTROL DATA

Classical Chemistry Parameters - Quality Control

Batch 5D07026 - NO PREP - Continued

Duplicate (5D07026-DUP1) Continued Prepared & Analyzed: 04/07/2015 16:26

Source: C501962-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	320	D	20	mg/L		310			2	30	

Duplicate (5D07026-DUP2) Prepared & Analyzed: 04/07/2015 16:26

Source: C503818-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	16		2.0	mg/L		15			2	30	

Batch 5D08036 - NO PREP

LCS (5D08036-BS1) Prepared & Analyzed: 04/08/2015 14:45

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
pH	7.1		1.0	pH	6.99		101	99-101			

Duplicate (5D08036-DUP1) Prepared & Analyzed: 04/08/2015 14:45

Source: C502698-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
pH	7.6		1.0	pH		7.6			0.9	25	

Batch 5D09010 - NO PREP

Blank (5D09010-BLK1) Prepared: 04/09/2015 09:53 Analyzed: 04/10/2015 10:08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	2.9	U	5.0	mg/L							

LCS (5D09010-BS1) Prepared: 04/09/2015 09:53 Analyzed: 04/10/2015 12:00

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	50		5.0	mg/L	50.0		101	90-110			

Matrix Spike (5D09010-MS1) Prepared: 04/09/2015 09:53 Analyzed: 04/10/2015 12:18

Source: C502700-04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	340		50	mg/L	200	140	100	90-110			

Matrix Spike (5D09010-MS2) Prepared: 04/09/2015 09:53 Analyzed: 04/10/2015 13:14

Source: C502701-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	330		50	mg/L	200	130	97	90-110			

Matrix Spike Dup (5D09010-MSD1) Prepared: 04/09/2015 09:53 Analyzed: 04/10/2015 12:37

Source: C502700-04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	180		50	mg/L	200	140	19	90-110	62	10	QM-07, QM-11

Batch 5D10008 - Same

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Classical Chemistry Parameters - Quality Control

Batch 5D10008 - Same - Continued

Blank (5D10008-BLK1) Prepared: 04/10/2015 11:28 Analyzed: 04/10/2015 16:25

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	10	U	10	mg/L							

LCS (5D10008-BS1) Prepared: 04/10/2015 11:28 Analyzed: 04/10/2015 16:25

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	490		10	mg/L	500		98	90-110			

Matrix Spike (5D10008-MS1) Prepared: 04/10/2015 11:28 Analyzed: 04/10/2015 16:25

Source: C501962-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	2600		40	mg/L	2000	730	94	90-110			

Matrix Spike Dup (5D10008-MSD1) Prepared: 04/10/2015 11:28 Analyzed: 04/10/2015 16:25

Source: C501962-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	2600		40	mg/L	2000	730	96	90-110	1	10	

Batch 5D17003 - NO PREP

LCS (5D17003-BS1) Prepared: 04/17/2015 07:51 Analyzed: 04/17/2015 10:08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.2		0.10	mg/L	1.25		99	90-110			

Matrix Spike (5D17003-MS1) Prepared: 04/17/2015 07:51 Analyzed: 04/17/2015 10:13

Source: C416902-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	43		5.0	mg/L	25.0	19	96	90-110			

Matrix Spike (5D17003-MS2) Prepared: 04/17/2015 07:51 Analyzed: 04/17/2015 10:21

Source: C501944-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	8.7		1.0	mg/L	5.00	4.0	95	90-110			

Matrix Spike Dup (5D17003-MSD1) Prepared: 04/17/2015 07:51 Analyzed: 04/17/2015 10:19

Source: C416902-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	38		5.0	mg/L	25.0	19	75	90-110	12	10	QM-05, QM-11

Batch 5D17008 - Same

Blank (5D17008-BLK1) Prepared: 04/17/2015 11:00 Analyzed: 04/20/2015 11:36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	0.025	U	0.10	mg/L							

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Classical Chemistry Parameters - Quality Control

Batch 5D17008 - Same - Continued

LCS (5D17008-BS1) Prepared: 04/17/2015 11:00 Analyzed: 04/20/2015 11:38

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	1.5		0.10	mg/L	1.60		92	80-120			

Matrix Spike (5D17008-MS1) Prepared: 04/17/2015 11:00 Analyzed: 04/20/2015 11:41

Source: C502672-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	15	D	2.0	mg/L	0.640	15	NR	80-120			QM-17

Matrix Spike Dup (5D17008-MSD1) Prepared: 04/17/2015 11:00 Analyzed: 04/20/2015 11:43

Source: C502672-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	15	D	2.0	mg/L	0.640	15	NR	80-120	0.2	25	QM-17

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence (85% or greater confidence) to make a "tentative identification".
P	Greater than 25% concentration difference was observed between the primary and secondary GC column. The lower concentration is reported.
Q	Analysis performed outside of method - specified holding time.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-11	Precision between duplicate matrix spikes of the same sample was outside acceptance limits.
QM-17	Matrix spike recovery was outside acceptance limits due to high concentrations of analyte in source sample.
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
R-04	The Reporting Limits for this analysis are elevated due to sample foaming.

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

www.encolabs.com

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Client Name: City of Greensboro (CI034)	Project Number: [none]
Address: 2503 White Street	Project Name/Desc: White Street Landfill Leachate
City/ST/Zip: Greensboro, NC 27405	PO # / Billing Info:
Tel: (336) 373-4188 Fax:	Reporting Contact: Lewis Walker
Sampler(s) Name, Affiliation (Print): Gary Simcox	Billing Contact: Angie Wade
Sampler(s) Signature:	Site Location / Time Zone:

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C503939

Requested Analyses / Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn	BOD SM5210B	COD SM5220D	Nitrate Calc 353.2	Nitrite as N 353.2,pH SM4500-H B	NOX 353.2,P	Sulfate 300			Sample Comments
	4112-Leachate	4/6/15	1140	G	GW	7	X	X	X	X	X	X	X	X			
						2											
						4											
						4											
						4											
						4											
						4											
						4											
						4											
						4											
						4											
						4											

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time 4/7/15 0645	Received By	Date/Time 4/7/15 1225
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt		Condition Upon Receipt: ✓ Acceptable ___ Unacceptable	

Matrix : GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments) Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

APPENDIX III
Descriptive Statistics

Basic Statistics
Parameter: Antimony, total
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements	451
Total Non-Detects	433 (96.0089%)
Pooled Mean	19.8763
Pooled Std Dev	34.7582
Compliance Meas.	377
Compliance Mean	19.4918
Compliance Std Dev	33.847
Background Meas.	74
Background Mean	21.8351
Background Std Dev	39.2684

Background Locations
There are 2 background location

Location	Meas.	Non-Detects	% ND	Total
MW-15	37	33	89.1892	963.608
MW-16	37	32	86.4865	652.193

Location	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-15	26.0435	54.0523	0	8949	241.865
MW-16	17.6268	12.9922	0	9166	247.73

Compliance Locations
There are 10 compliance location

Location	Obs.	Non-Detects	% ND	Total
MW-17	38	35	92.1053	661.165
MW-18	38	37	97.3684	672.566
MW-19	38	36	94.7368	666.963
MW-20	38	37	97.3684	672.44
MW-21	38	38	100	678.22
MW-22	38	38	100	678.22
MW-23	38	38	100	678.22
MW-24	38	36	94.7368	1296.38
MW-25	35	35	100	666
MW-25d	38	38	100	678.22

Location	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-17	17.3991	12.8785	-4.43607	6.95338	8911	234.5
MW-18	17.6991	12.5293	-4.13604	6.95338	8469	222.868
MW-19	17.5517	12.7025	-4.28349	6.95338	8691	228.711
MW-20	17.6958	12.534	-4.13936	6.95338	8464	222.737
MW-21	17.8479	12.3499	-3.98725	6.95338	8246	217
MW-22	17.8479	12.3499	-3.98725	6.95338	8246	217
MW-23	17.8479	12.3499	-3.98725	6.95338	8246	217
MW-24	34.1153	100.047	12.2802	6.95338	8697	228.868
MW-25	19.0286	12.1304	-2.80658	7.14756	7595	217
MW-25d	17.8479	12.3499	-3.98725	6.95338	8246	217

Analysis of Variance Statistics

SS Wells	10748.8
SS Total	543658

Kruskal-Wallis Statistics

Non-Detect Rank	217
Background Rank Sum	18115
Background Rank Mean	244.797
H Statistic	2.67304
H Adjusted for Ties	23.2399

Basic Statistics

Parameter: Barium, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements	453
Total Non-Detects	259 (57.1744%)
Pooled Mean	296.468
Pooled Std Dev	215.655
Compliance Meas.	377
Compliance Mean	296.837
Compliance Std Dev	216.947
Background Meas.	76
Background Mean	294.637
Background Std Dev	210.528

Background Locations

There are 2 background location

Location	Meas.	Non-Detects	% ND	Total
MW-15	38	23	60.5263	10300.9
MW-16	38	21	55.2632	12091.5

Location	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-15	271.076	232.997	0	7544	198.526
MW-16	318.197	185.51	0	9851	259.237

Compliance Locations

There are 10 compliance location

Location	Obs.	Non-Detects	% ND	Total
MW-17	38	21	55.2632	10643.1
MW-18	38	21	55.2632	10216.5
MW-19	38	20	52.6316	9866.7
MW-20	38	21	55.2632	10815.4
MW-21	38	21	55.2632	10362.8
MW-22	38	21	55.2632	12141.3
MW-23	38	21	55.2632	10736.4
MW-24	38	21	55.2632	16452
MW-25	35	27	77.1429	10623.1
MW-25d	38	21	55.2632	10050.1

Location	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-17	280.082	223.221	-14.5553	42.4008	8828	232.316
MW-18	268.855	235.054	-25.7816	42.4008	7965	209.605
MW-19	259.65	231.916	-34.9868	42.4008	8416	221.474
MW-20	284.616	218.586	-10.0211	42.4008	9173	241.395
MW-21	272.705	230.982	-21.9316	42.4008	8404	221.158
MW-22	319.508	185.566	24.8711	42.4008	9831	258.711
MW-23	282.537	220.668	-12.1	42.4008	9061	238.447
MW-24	432.947	97.7304	138.311	42.4008	10295	270.921
MW-25	303.517	218.84	8.8803	43.5954	6009	171.686
MW-25d	264.476	239.711	-30.1605	42.4008	7454	196.158

Analysis of Variance Statistics

SS Wells	935916
SS Total	2.10212e+007

Kruskal-Wallis Statistics

Non-Detect Rank	130
Background Rank Sum	17395
Background Rank Mean	228.882
H Statistic	16.5068
H Adjusted for Ties	20.301

Basic Statistics
Parameter: Chromium, total
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements	453
Total Non-Detects	369 (81.457%)
Pooled Mean	8.85208
Pooled Std Dev	5.91224
Compliance Meas.	377
Compliance Mean	8.86024
Compliance Std Dev	6.34773
Background Meas.	76
Background Mean	8.81158
Background Std Dev	2.94146

Background Locations
There are 2 background location

Location	Meas.	Non-Detects	% ND	Total
MW-15	38	35	92.1053	349.35
MW-16	38	32	84.2105	320.33

Location	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-15	9.19342	2.45224	0	7690	202.368
MW-16	8.42974	3.35041	0	8286	218.053

Compliance Locations
There are 10 compliance location

Location	Obs.	Non-Detects	% ND	Total
MW-17	38	28	73.6842	399.98
MW-18	38	36	94.7368	383.32
MW-19	38	30	78.9474	324.21
MW-20	38	29	76.3158	314.57
MW-21	38	29	76.3158	309.05
MW-22	38	34	89.4737	350.7
MW-23	38	35	92.1053	345.56
MW-24	38	29	76.3158	306.46
MW-25	35	30	85.7143	337.12
MW-25d	38	22	57.8947	269.34

Location	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-17	10.5258	17.2955	1.71421	1.17472	9310	245
MW-18	10.0874	3.87642	1.27579	1.17472	7513	197.711
MW-19	8.53184	3.36818	-0.279737	1.17472	8843	232.711
MW-20	8.27816	3.48321	-0.533421	1.17472	8965	235.921
MW-21	8.13289	3.43755	-0.678684	1.17472	9084	239.053
MW-22	9.22895	2.83539	0.417368	1.17472	7922	208.474
MW-23	9.09368	2.68196	0.282105	1.17472	7654	201.421
MW-24	8.06474	3.53199	-0.746842	1.17472	9032	237.684
MW-25	9.632	3.06048	0.820421	1.20782	7617	217.629
MW-25d	7.08789	3.69711	-1.72368	1.17472	10915	287.237

Analysis of Variance Statistics

SS Wells	382.44
SS Total	15799.5

Kruskal-Wallis Statistics

Non-Detect Rank	185
Background Rank Sum	15976
Background Rank Mean	210.211
H Statistic	15.1307
H Adjusted for Ties	32.9275

Basic Statistics

Parameter: Cobalt, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements	453
Total Non-Detects	400 (88.3002%)
Pooled Mean	9.09049
Pooled Std Dev	2.54729
Compliance Meas.	377
Compliance Mean	9.19252
Compliance Std Dev	2.40012
Background Meas.	76
Background Mean	8.58434
Background Std Dev	3.14857

Background Locations

There are 2 background location

Location	Meas.	Non-Detects	% ND	Total
MW-15	38	38	100	371.1
MW-16	38	27	71.0526	281.31

Location	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-15	9.76579	1.44377	0	7619	200.5
MW-16	7.40289	3.89144	0	9985.5	262.776

Compliance Locations

There are 10 compliance location

Location	Obs.	Non-Detects	% ND	Total
MW-17	38	38	100	371.1
MW-18	38	22	57.8947	290.53
MW-19	38	34	89.4737	338.22
MW-20	38	36	94.7368	355.2
MW-21	38	36	94.7368	355.6
MW-22	38	37	97.3684	362.5
MW-23	38	38	100	371.1
MW-24	38	23	60.5263	294.23
MW-25	35	34	97.1429	352
MW-25d	38	37	97.3684	375.1

Location	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-17	9.76579	1.44377	1.18145	0.478148	7619	200.5
MW-18	7.64553	3.60873	-0.938816	0.478148	11312	297.684
MW-19	8.90053	2.87396	0.316184	0.478148	8472	222.947
MW-20	9.34737	2.27343	0.763026	0.478148	8049	211.816
MW-21	9.35789	2.22803	0.773553	0.478148	8064	212.211
MW-22	9.53947	1.98038	0.955132	0.478148	7828.5	206.013
MW-23	9.76579	1.44377	1.18145	0.478148	7619	200.5
MW-24	7.74289	3.10445	-0.841447	0.478148	11122.5	292.697
MW-25	10.0571	0.338062	1.4728	0.49162	7269	207.686
MW-25d	9.87105	1.5988	1.28671	0.478148	7871.5	207.145

Analysis of Variance Statistics

SS Wells	378.673
SS Total	2932.88

Kruskal-Wallis Statistics

Non-Detect Rank	200.5
Background Rank Sum	17604.5
Background Rank Mean	231.638
H Statistic	27.5023
H Adjusted for Ties	88.2813

Basic Statistics
Parameter: Copper, total
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements	453
Total Non-Detects	393 (86.755%)
Pooled Mean	104.712
Pooled Std Dev	95.8773
Compliance Meas.	377
Compliance Mean	104.893
Compliance Std Dev	95.8084
Background Meas.	76
Background Mean	103.813
Background Std Dev	96.8521

Background Locations
There are 2 background location

Location	Meas.	Non-Detects	% ND	Total
MW-15	38	35	92.1053	3968.36
MW-16	38	26	68.4211	3921.46

Location	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-15	104.431	96.8711	0	8144	214.316
MW-16	103.196	98.1295	0	10263	270.079

Compliance Locations
There are 10 compliance location

Location	Obs.	Non-Detects	% ND	Total
MW-17	38	36	94.7368	3966.13
MW-18	38	30	78.9474	3933.62
MW-19	38	29	76.3158	3766.51
MW-20	38	35	92.1053	3956.8
MW-21	38	34	89.4737	3953.61
MW-22	38	36	94.7368	3965.34
MW-23	38	36	94.7368	3972.78
MW-24	38	28	73.6842	4123.58
MW-25	35	31	88.5714	3932.99
MW-25d	38	37	97.3684	3973.26

Location	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-17	104.372	96.9342	0.558421	19.2758	7912	208.211
MW-18	103.516	97.8114	-0.297105	19.2758	9272	244
MW-19	99.1187	97.0348	-4.69474	19.2758	9580	252.105
MW-20	104.126	97.1916	0.312895	19.2758	8117	213.605
MW-21	104.042	97.274	0.228947	19.2758	8369	220.237
MW-22	104.351	96.9567	0.537632	19.2758	7899	207.868
MW-23	104.547	96.7531	0.733421	19.2758	7892	207.684
MW-24	108.515	95.5962	4.70184	19.2758	9911	260.816
MW-25	112.371	96.9087	8.55772	19.8189	7783	222.371
MW-25d	104.559	96.7392	0.746053	19.2758	7689	202.342

Analysis of Variance Statistics

SS Wells	3977.66
SS Total	4.15499e+006

Kruskal-Wallis Statistics

Non-Detect Rank	197
Background Rank Sum	18407
Background Rank Mean	242.197
H Statistic	9.9105
H Adjusted for Ties	28.5567

Basic Statistics

Parameter: Nickel, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements	453
Total Non-Detects	385 (84.989%)
Pooled Mean	42.3185
Pooled Std Dev	17.4942
Compliance Meas.	377
Compliance Mean	42.7383
Compliance Std Dev	17.1609
Background Meas.	76
Background Mean	40.2357
Background Std Dev	19.046

Background Locations

There are 2 background location

Location	Meas.	Non-Detects	% ND	Total
MW-15	38	38	100	1851.8
MW-16	38	23	60.5263	1206.11

Location	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-15	48.7316	7.81907	0	7334	193
MW-16	31.7397	22.9326	0	10776	283.579

Compliance Locations

There are 10 compliance location

Location	Obs.	Non-Detects	% ND	Total
MW-17	38	35	92.1053	1793
MW-18	38	36	94.7368	1777.9
MW-19	38	32	84.2105	1573.31
MW-20	38	25	65.7895	1247.72
MW-21	38	32	84.2105	1565.27
MW-22	38	37	97.3684	1804.2
MW-23	38	36	94.7368	1754.2
MW-24	38	22	57.8947	1171.56
MW-25	35	32	91.4286	1618.89
MW-25d	38	37	97.3684	1806.3

Location	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-17	47.1842	14.7959	6.94855	3.26638	7999	210.5
MW-18	46.7868	11.5858	6.55118	3.26638	7787	204.921
MW-19	41.4029	18.3713	1.16724	3.26638	8651	227.658
MW-20	32.8347	22.7874	-7.40092	3.26638	10312	271.368
MW-21	41.1913	18.7878	0.955658	3.26638	8596	226.211
MW-22	47.4789	10.8397	7.24329	3.26638	7547	198.605
MW-23	46.1632	13.2822	5.9275	3.26638	7726	203.316
MW-24	30.8305	22.8175	-9.40513	3.26638	11100	292.105
MW-25	46.254	12.5418	6.01834	3.35841	7429	212.257
MW-25d	47.5342	10.6065	7.29855	3.26638	7574	199.316

Analysis of Variance Statistics

SS Wells	19136.2
SS Total	138333

Kruskal-Wallis Statistics

Non-Detect Rank	193
Background Rank Sum	18110
Background Rank Mean	238.289
H Statistic	21.1895
H Adjusted for Ties	54.8787

Basic Statistics
Parameter: Vanadium
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements	441
Total Non-Detects	342 (77.551%)
Pooled Mean	27.768
Pooled Std Dev	14.9843
Compliance Meas.	367
Compliance Mean	27.4591
Compliance Std Dev	15.2959
Background Meas.	74
Background Mean	29.3003
Background Std Dev	13.3206

Background Locations
There are 2 background location

Location	Meas.	Non-Detects	% ND	Total
MW-15	37	36	97.2973	1162.2
MW-16	37	27	72.973	1006.02

Location	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-15	31.4108	10.4043	0	6518	176.162
MW-16	27.1897	15.5692	0	8391.5	226.797

Compliance Locations
There are 10 compliance location

Location	Obs.	Non-Detects	% ND	Total
MW-17	37	24	64.8649	890.07
MW-18	37	27	72.973	968.12
MW-19	37	20	54.0541	907.4
MW-20	37	21	56.7568	897.3
MW-21	37	34	91.8919	1132
MW-22	37	36	97.2973	1162.4
MW-23	37	37	100	1186.4
MW-24	37	28	75.6757	1004.47
MW-25	34	31	91.1765	1066.5
MW-25d	37	21	56.7568	862.83

Location	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-17	24.0559	17.9162	-5.24432	2.98328	8908	240.757
MW-18	26.1654	16.3308	-3.13486	2.98328	8418.5	227.527
MW-19	24.5243	18.4426	-4.77595	2.98328	10491	283.541
MW-20	24.2514	16.9858	-5.04892	2.98328	10371.5	280.311
MW-21	30.5946	12.3675	1.29432	2.98328	6931	187.324
MW-22	31.4162	10.388	2.11595	2.98328	6520	176.216
MW-23	32.0649	9.10617	2.76459	2.98328	6345.5	171.5
MW-24	27.1478	16.0032	-2.15243	2.98328	8251	223
MW-25	31.3676	11.6312	2.06738	3.06977	6426.5	189.015
MW-25d	23.3197	18.0337	-5.98054	2.98328	9888.5	267.257

Analysis of Variance Statistics

SS Wells	4613.2
SS Total	98792.7

Kruskal-Wallis Statistics

Non-Detect Rank	171.5
Background Rank Sum	14909.5
Background Rank Mean	201.48
H Statistic	39.4015
H Adjusted for Ties	73.8413

Basic Statistics
Parameter: Zinc, total
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements	453
Total Non-Detects	379 (83.6645%)
Pooled Mean	26.9501
Pooled Std Dev	21.4242
Compliance Meas.	377
Compliance Mean	27.1386
Compliance Std Dev	21.594
Background Meas.	76
Background Mean	26.0154
Background Std Dev	20.6743

Background Locations
There are 2 background location

Location	Meas.	Non-Detects	% ND	Total
MW-15	38	34	89.4737	994.63
MW-16	38	27	71.0526	982.54

Location	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-15	26.1745	20.6654	0	8094	213
MW-16	25.8563	20.9594	0	9752	256.632

Compliance Locations
There are 10 compliance location

Location	Obs.	Non-Detects	% ND	Total
MW-17	38	32	84.2105	984.61
MW-18	38	32	84.2105	1000.13
MW-19	38	27	71.0526	973.38
MW-20	38	37	97.3684	1051.12
MW-21	38	32	84.2105	1010.75
MW-22	38	31	81.5789	966.25
MW-23	38	36	94.7368	1004.8
MW-24	38	24	63.1579	1240.61
MW-25	35	30	85.7143	992.19
MW-25d	38	37	97.3684	1007.4

Location	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-17	25.9108	20.9121	-0.104605	4.29242	8544	224.842
MW-18	26.3192	20.8941	0.303816	4.29242	8618	226.789
MW-19	25.6153	21.4098	-0.400132	4.29242	9695	255.132
MW-20	27.6611	20.3967	1.64566	4.29242	7459	196.289
MW-21	26.5987	20.5447	0.583289	4.29242	8561	225.289
MW-22	25.4276	21.3905	-0.587763	4.29242	8643	227.447
MW-23	26.4421	20.4321	0.426711	4.29242	7662	201.632
MW-24	32.6476	28.4625	6.63224	4.29242	10588	278.632
MW-25	28.3483	21.566	2.33289	4.41336	7792	222.629
MW-25d	26.5105	20.3488	0.495132	4.29242	7423	195.342

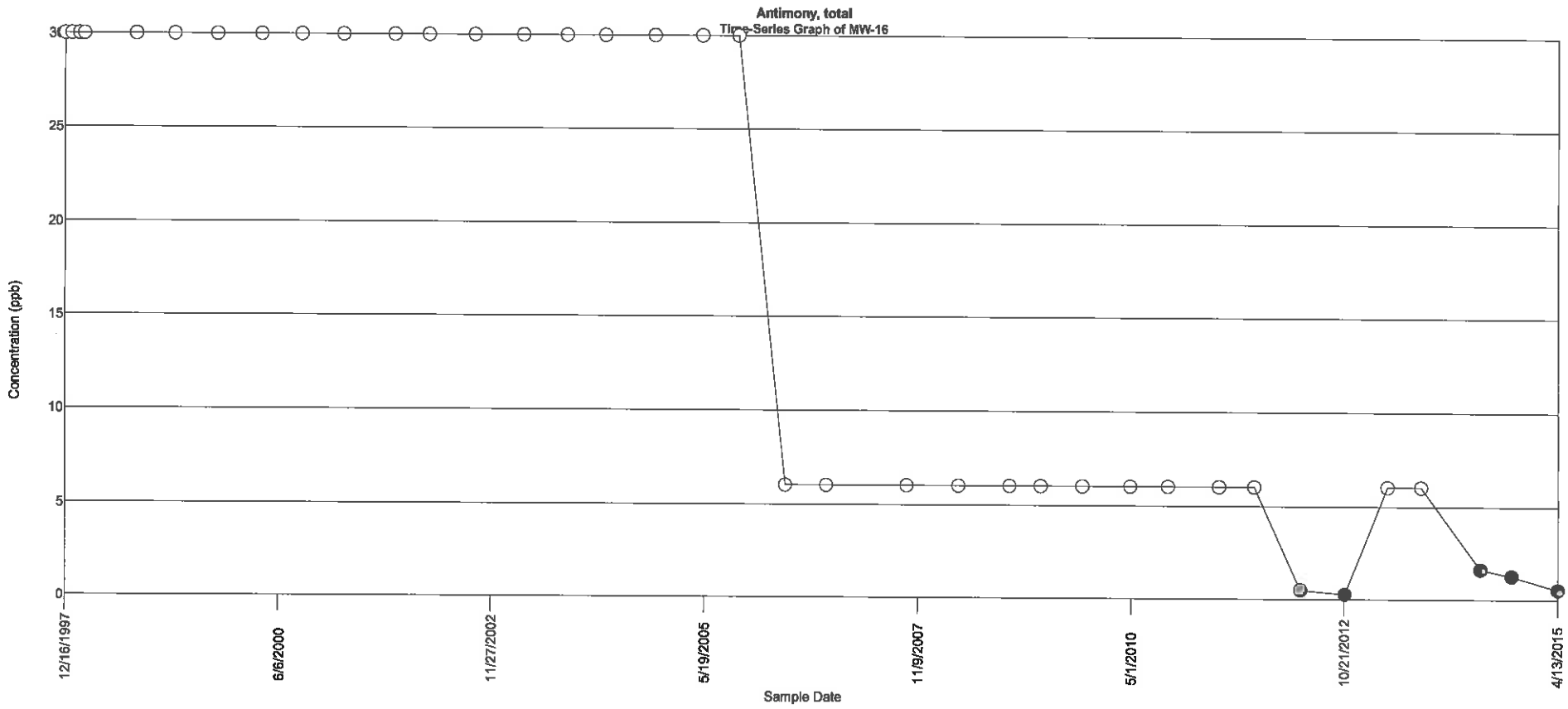
Analysis of Variance Statistics

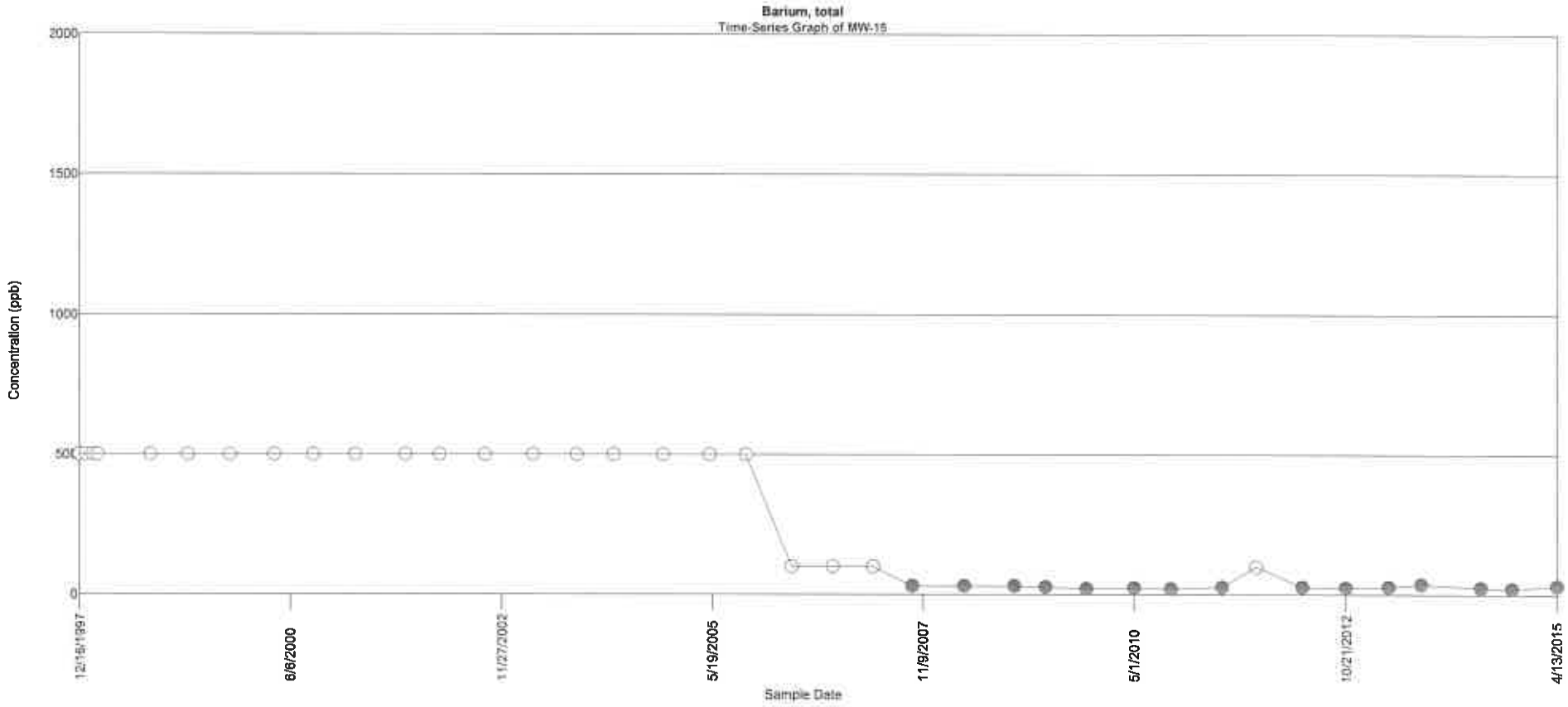
SS Wells	1623.3
SS Total	207466

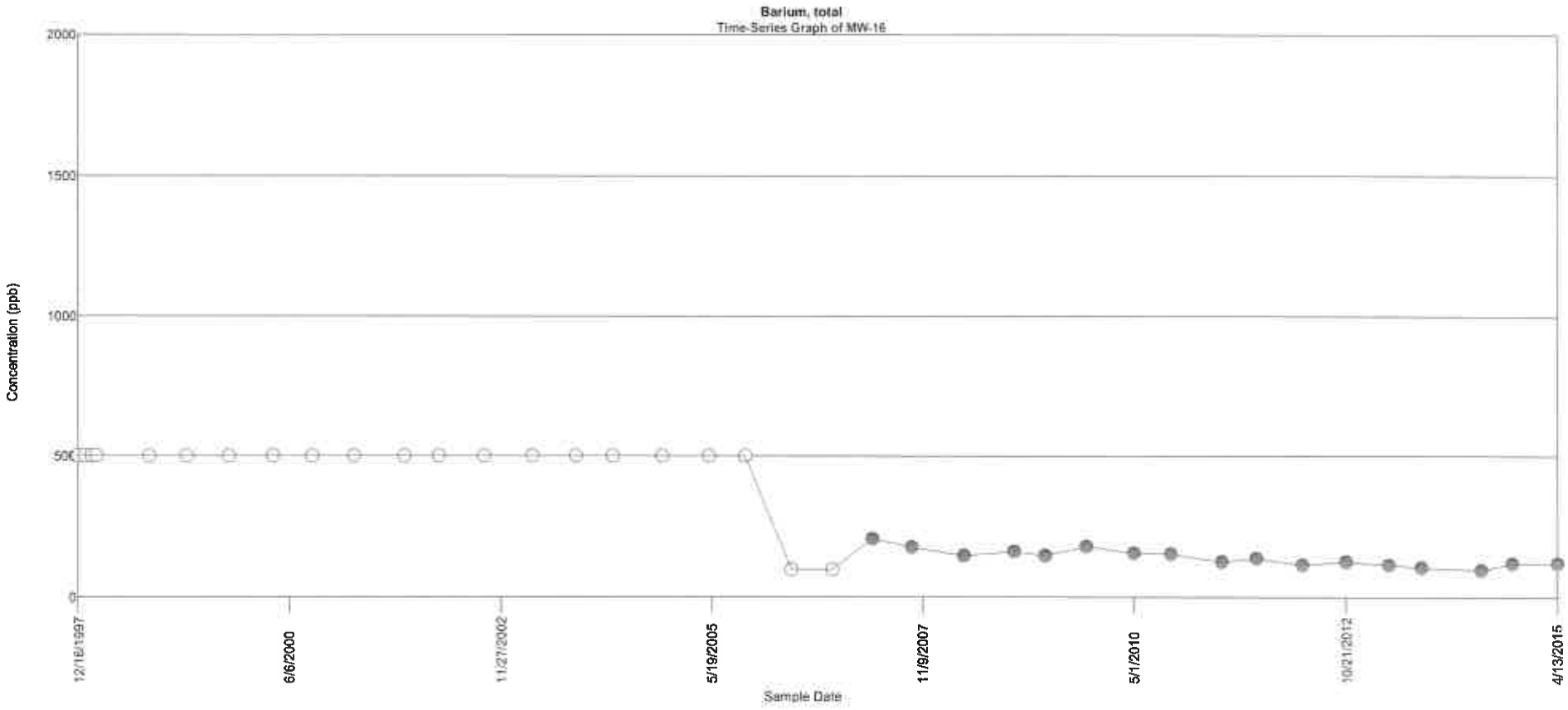
Kruskal-Wallis Statistics

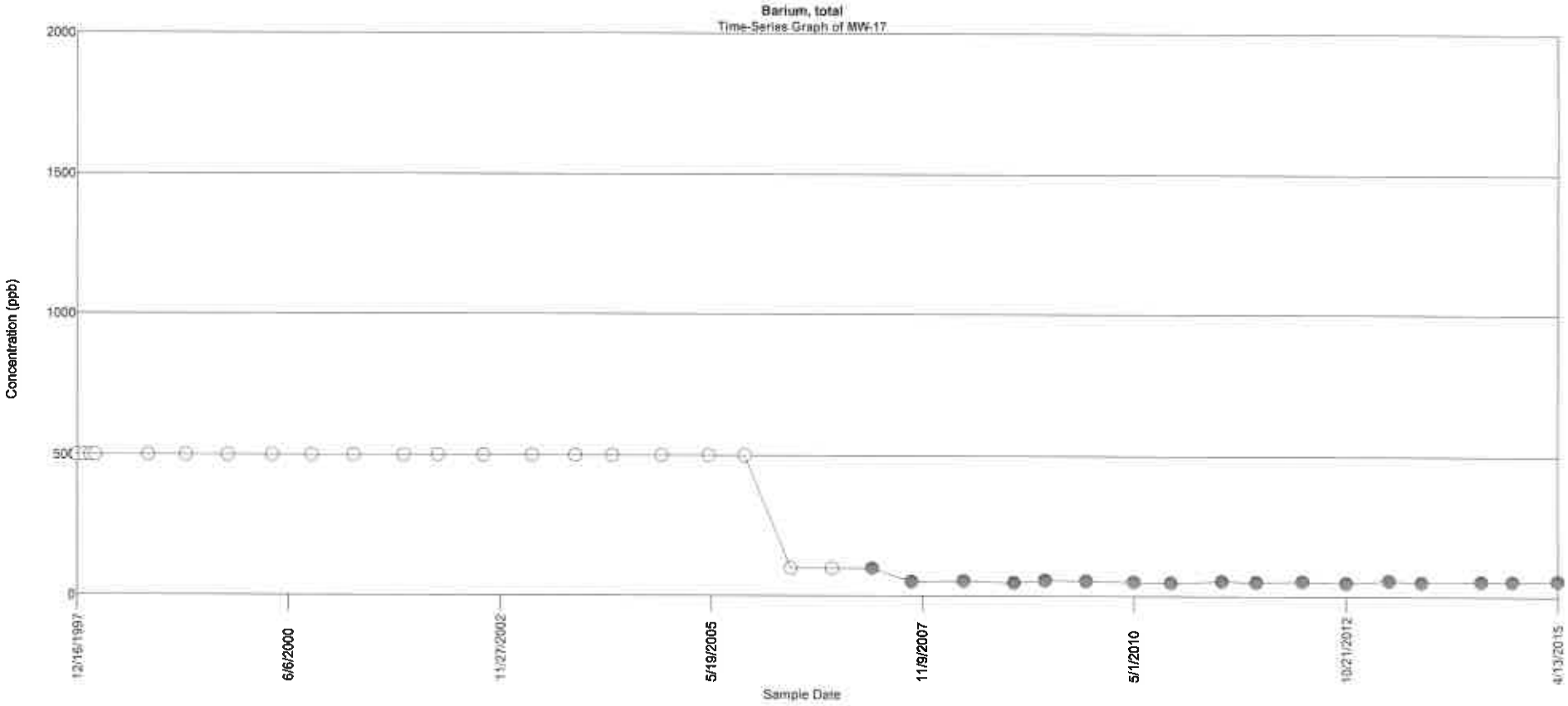
Non-Detect Rank	190
Background Rank Sum	17846
Background Rank Mean	234.816
H Statistic	13.7329
H Adjusted for Ties	33.1415

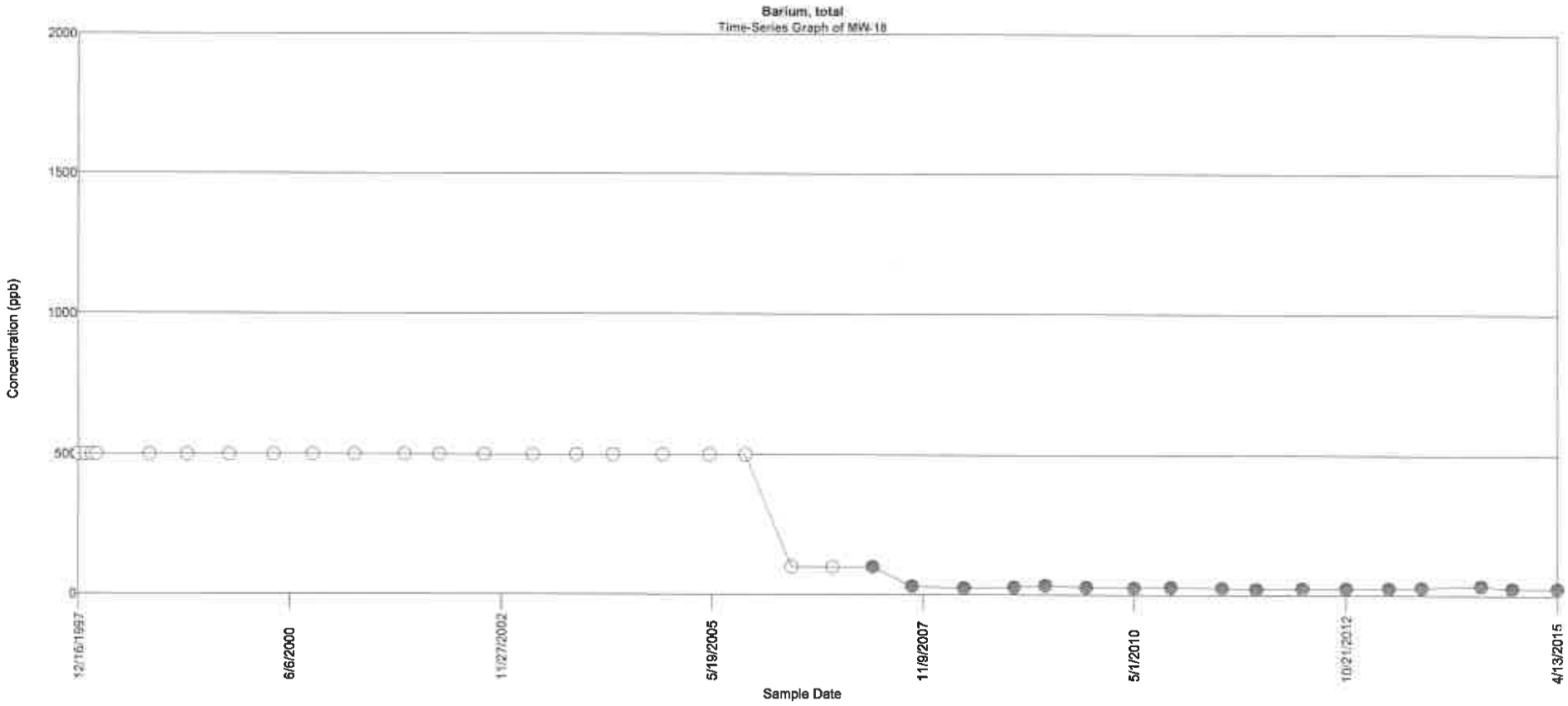
APPENDIX IV
Time vs. Concentration Graphs
&
Mann-Kendall Trend Analysis Tests

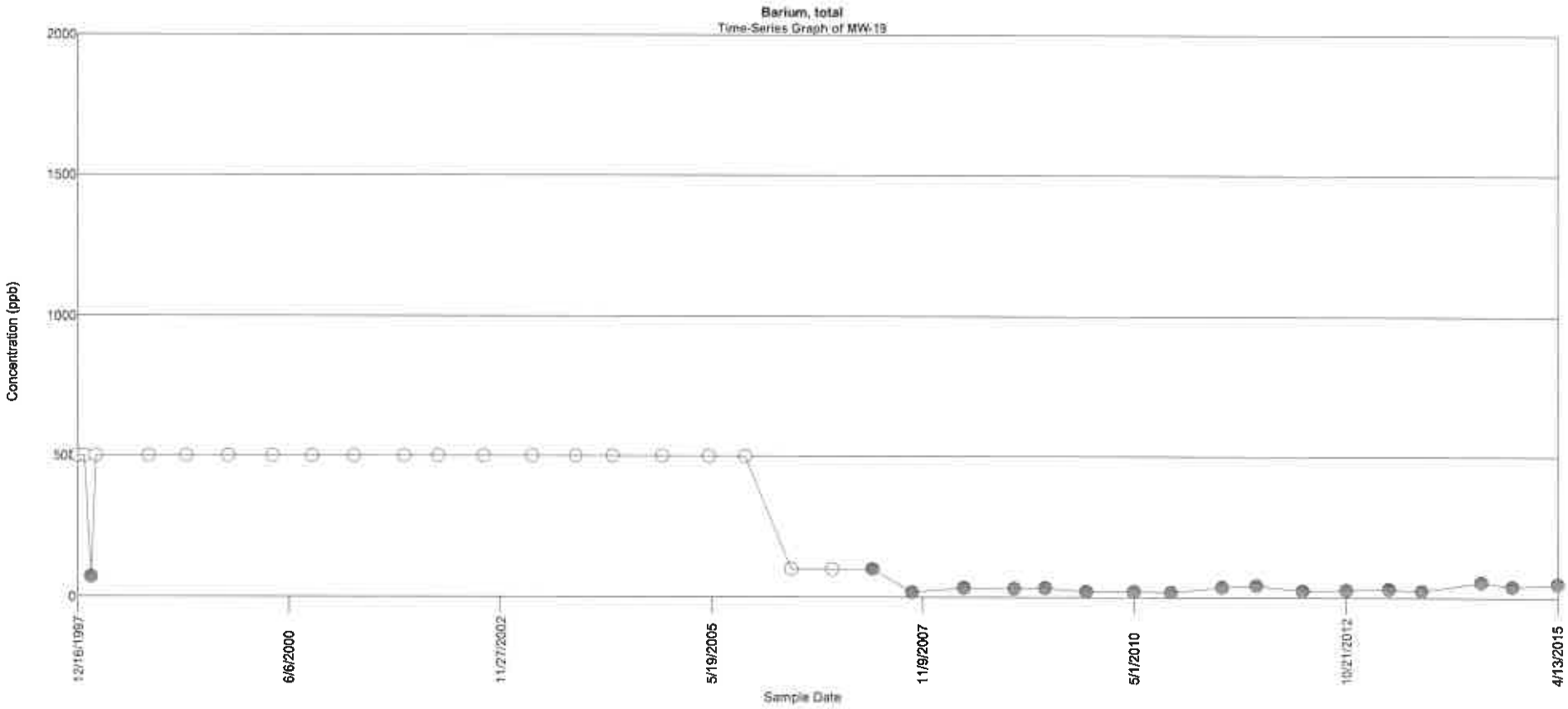

Antimony, total
Time-Series Graph of MW-16
Concentration (ppb)
30
25
20
15
10
5
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

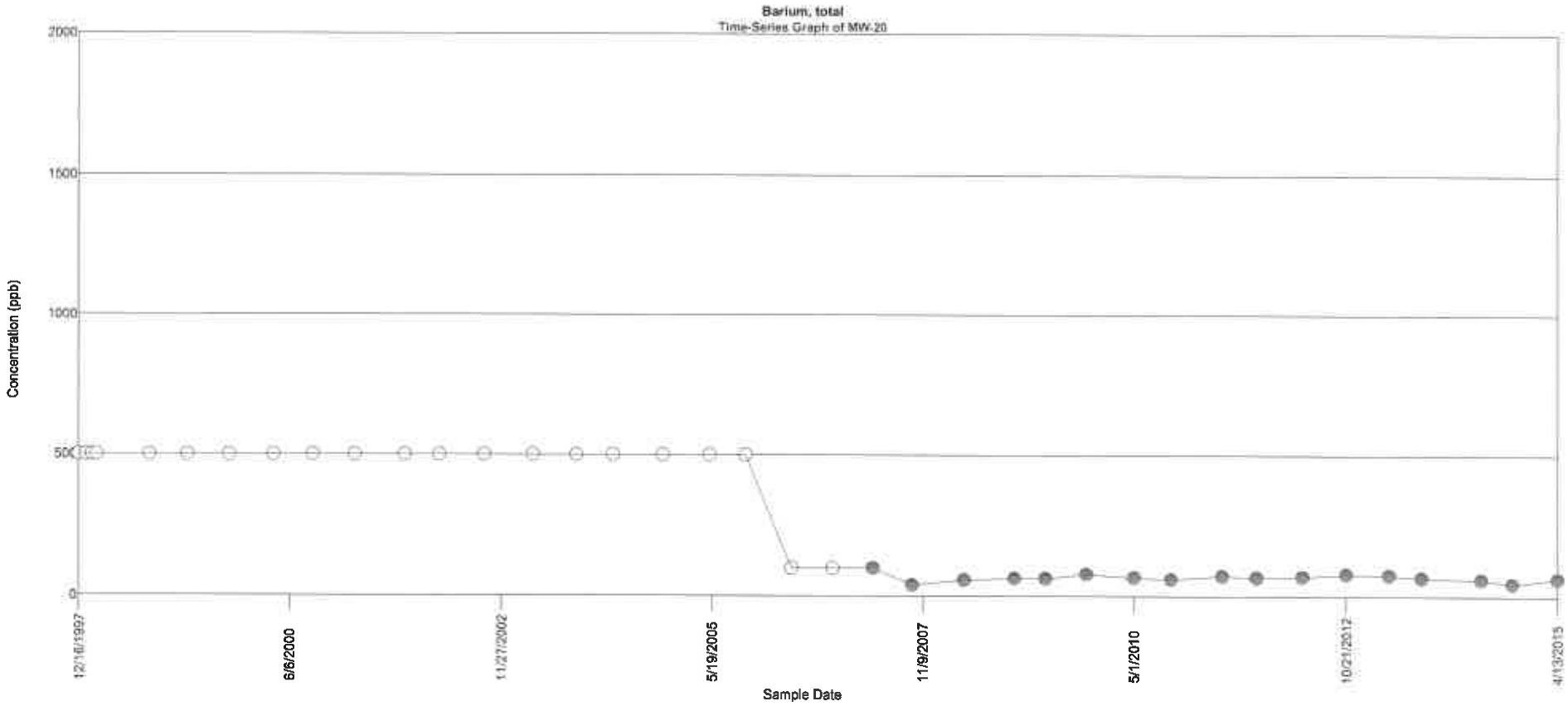

Barium, total
Time-Series Graph of MW-15
Concentration (ppb)
2000
1500
1000
500
0
12/15/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

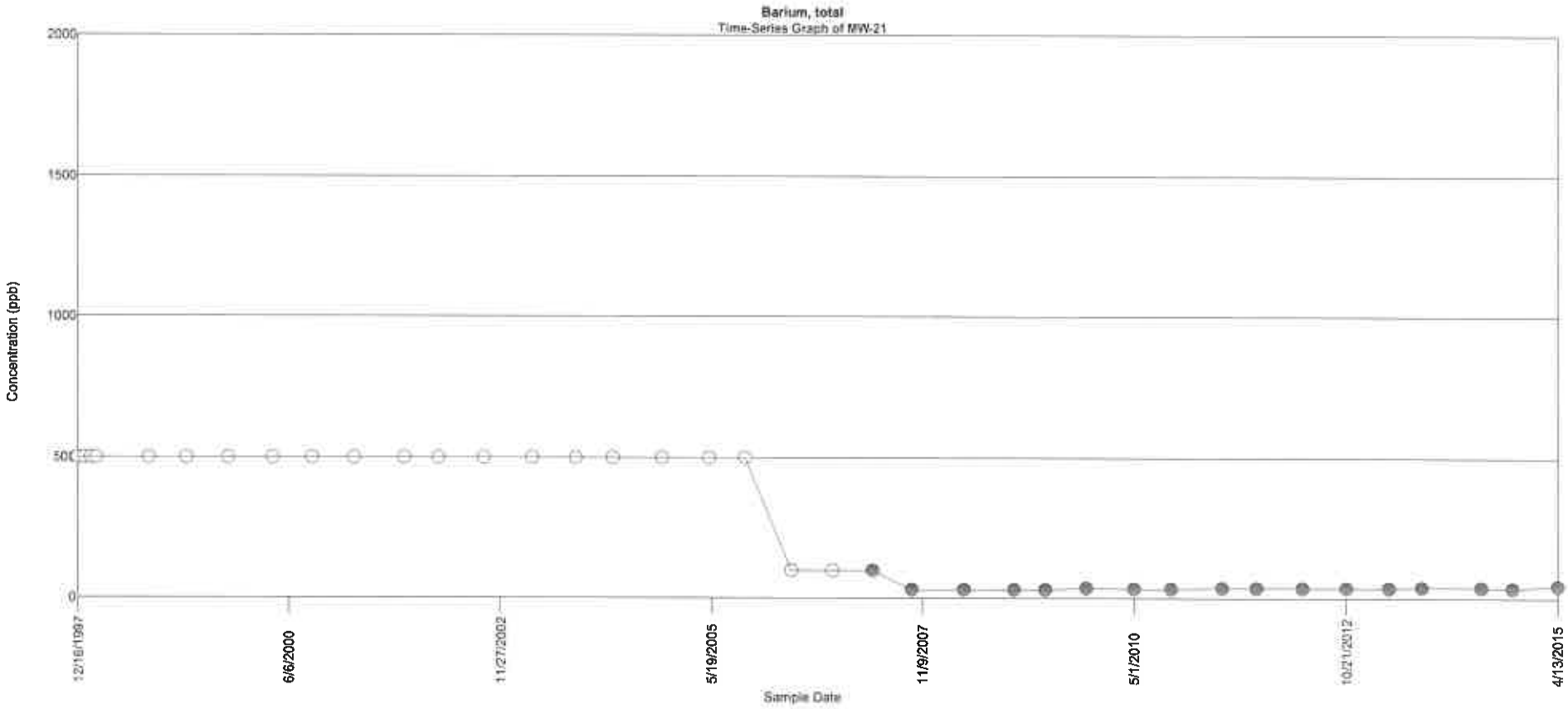

Barium, total
Time-Series Graph of MW-16
Concentration (ppb)
2000
1500
1000
500
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

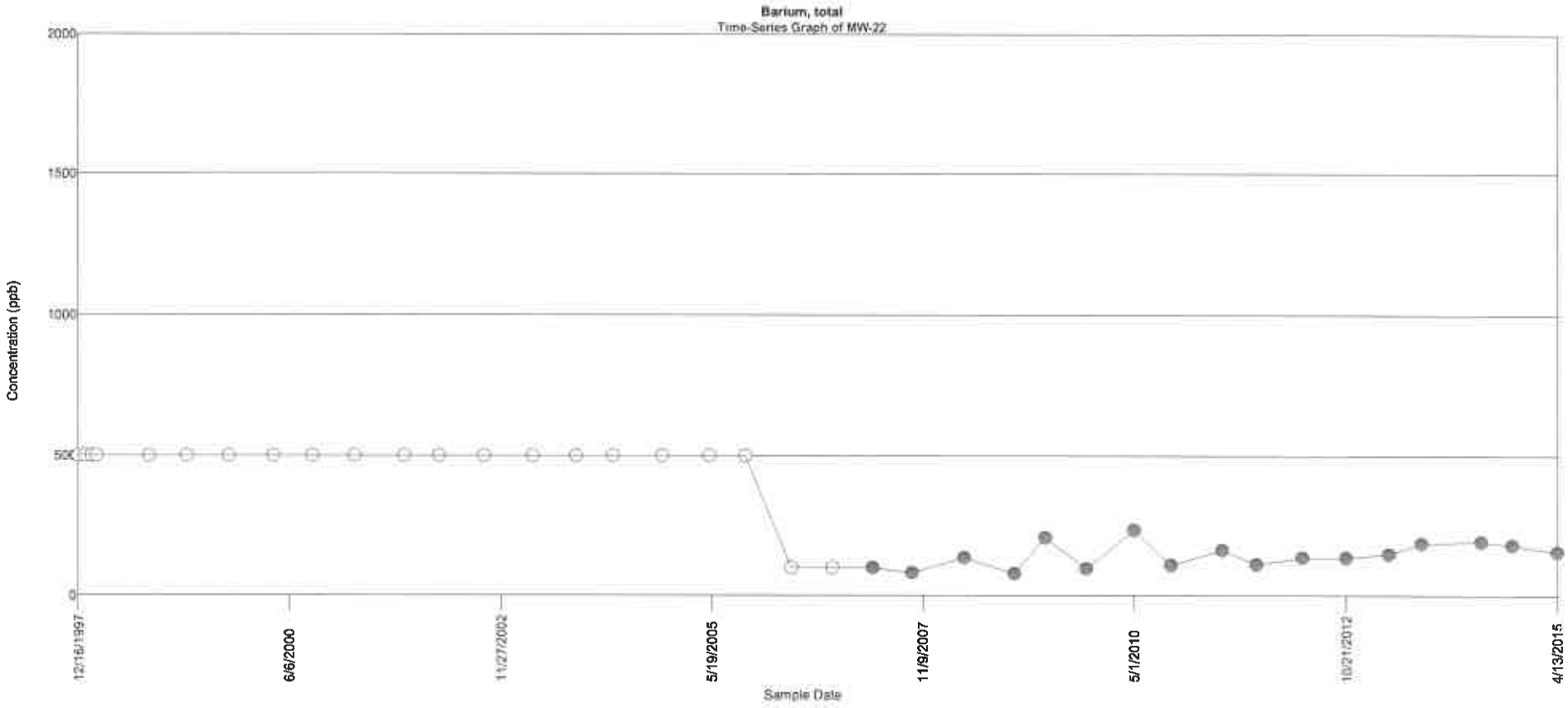

Barium, total
Time-Series Graph of MW-17
Concentration (ppb)
2000
1500
1000
500
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

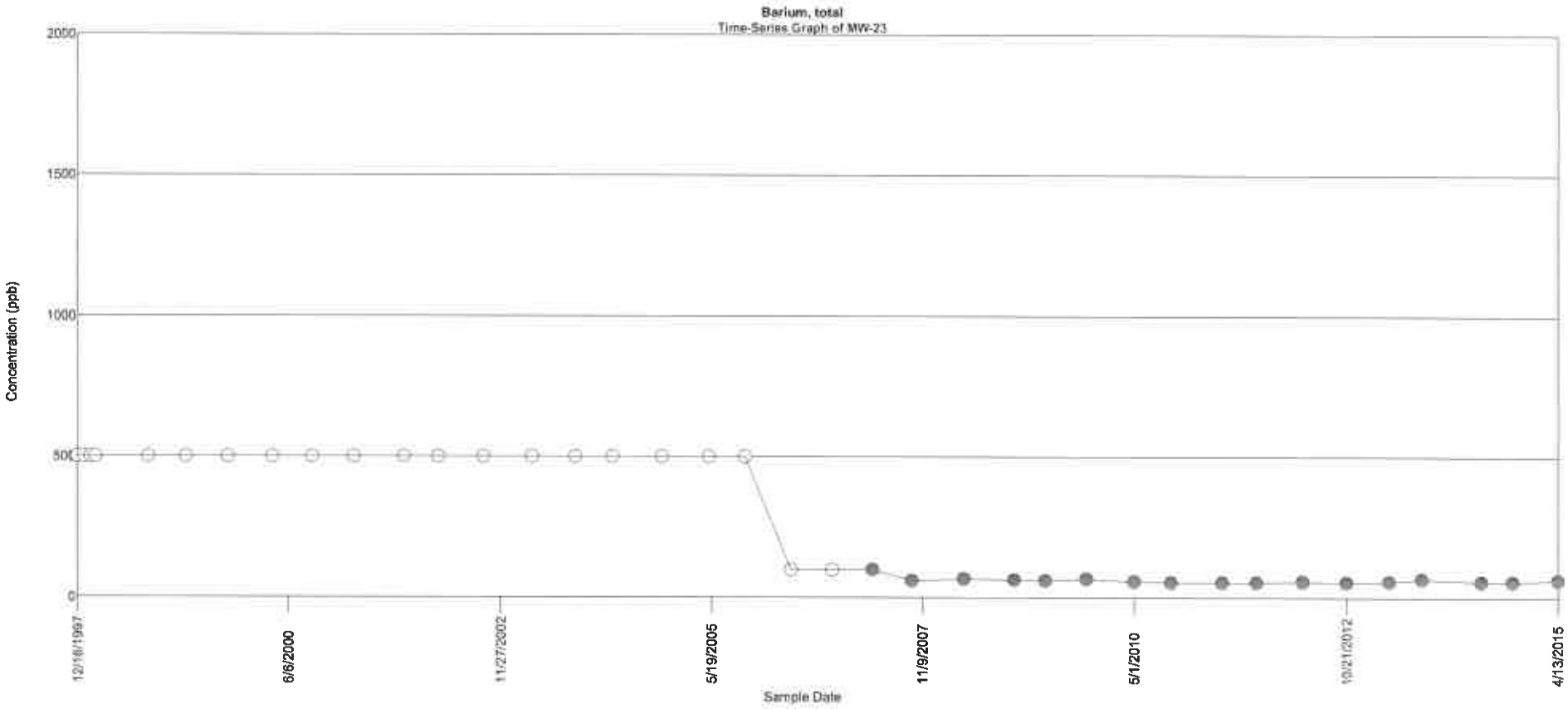

Barium, total
Time-Series Graph of MW-18
Concentration (ppb)
2000
1500
1000
500
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

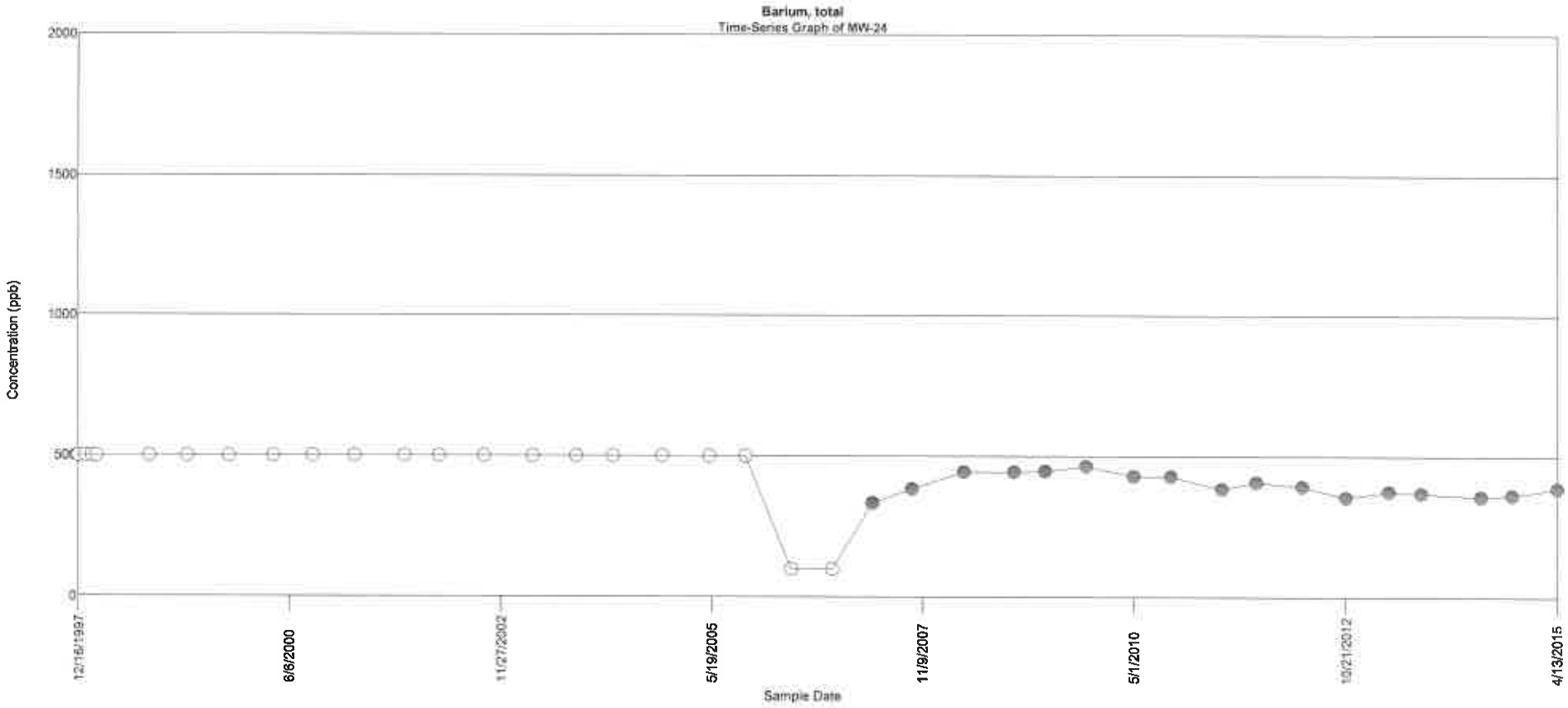

Barium, total
Time-Series Graph of MW-19
Concentration (ppb)
2000
1500
1000
500
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

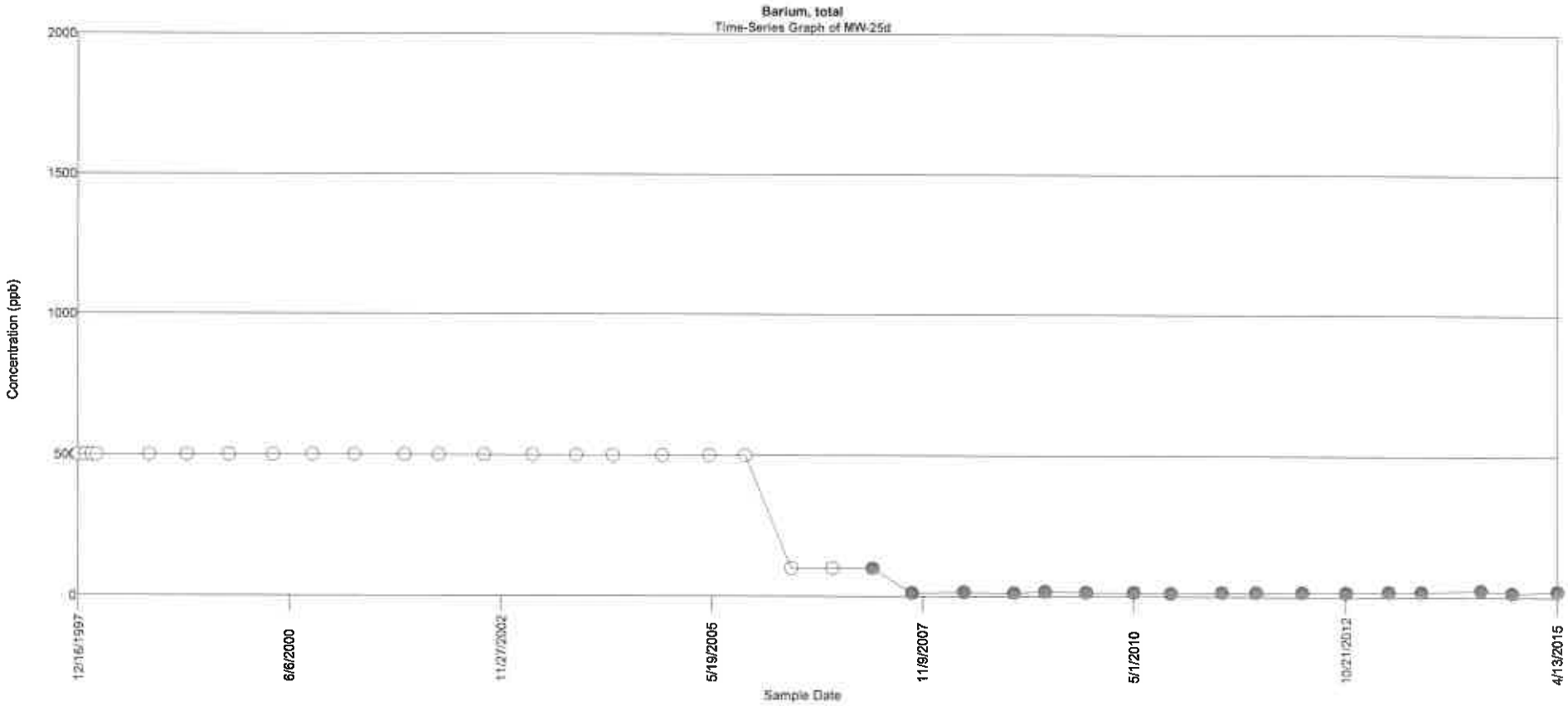

Barium, total
Time-Series Graph of MW-20
Concentration (ppb)
2000
1500
1000
500
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

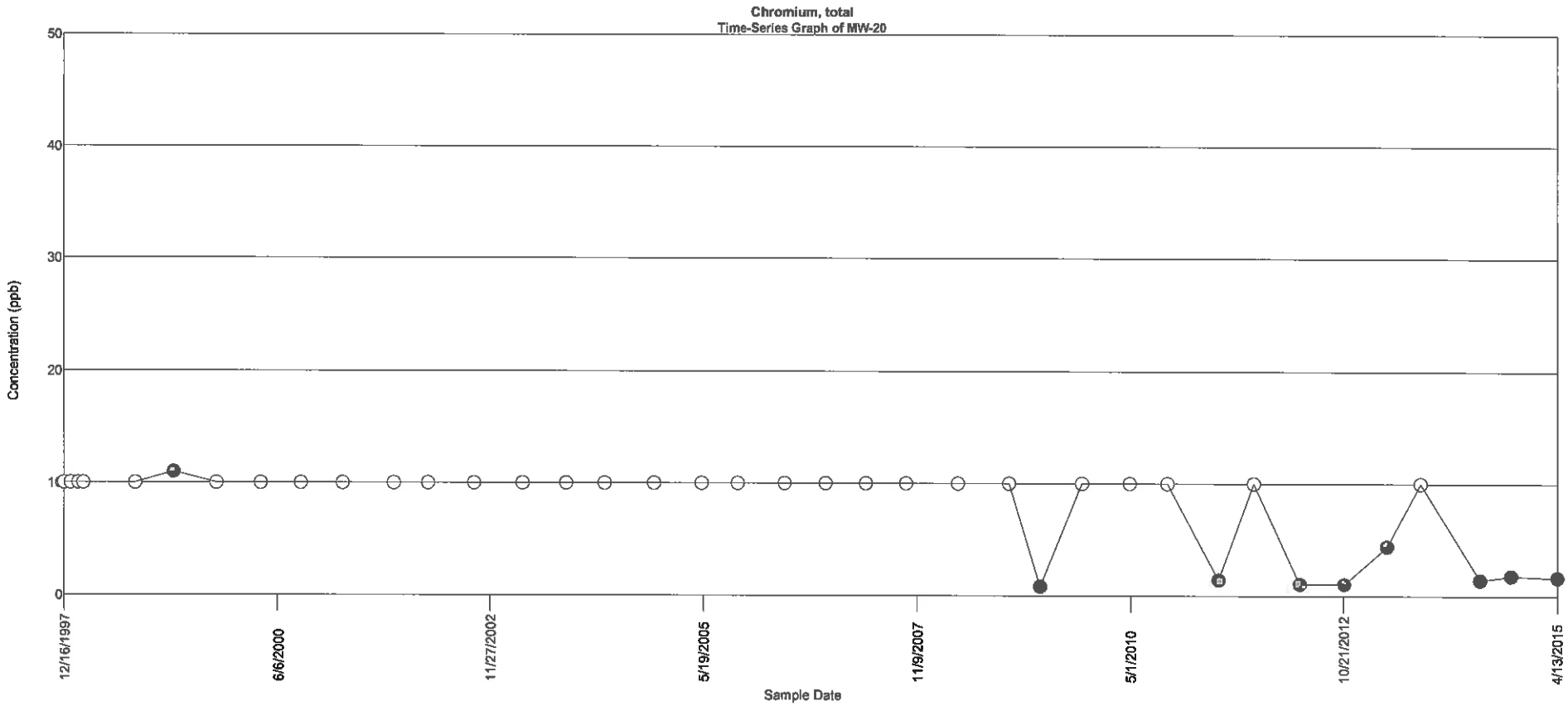

Barium, total
Time-Series Graph of MW-21
Concentration (ppb)
2000
1500
1000
500
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

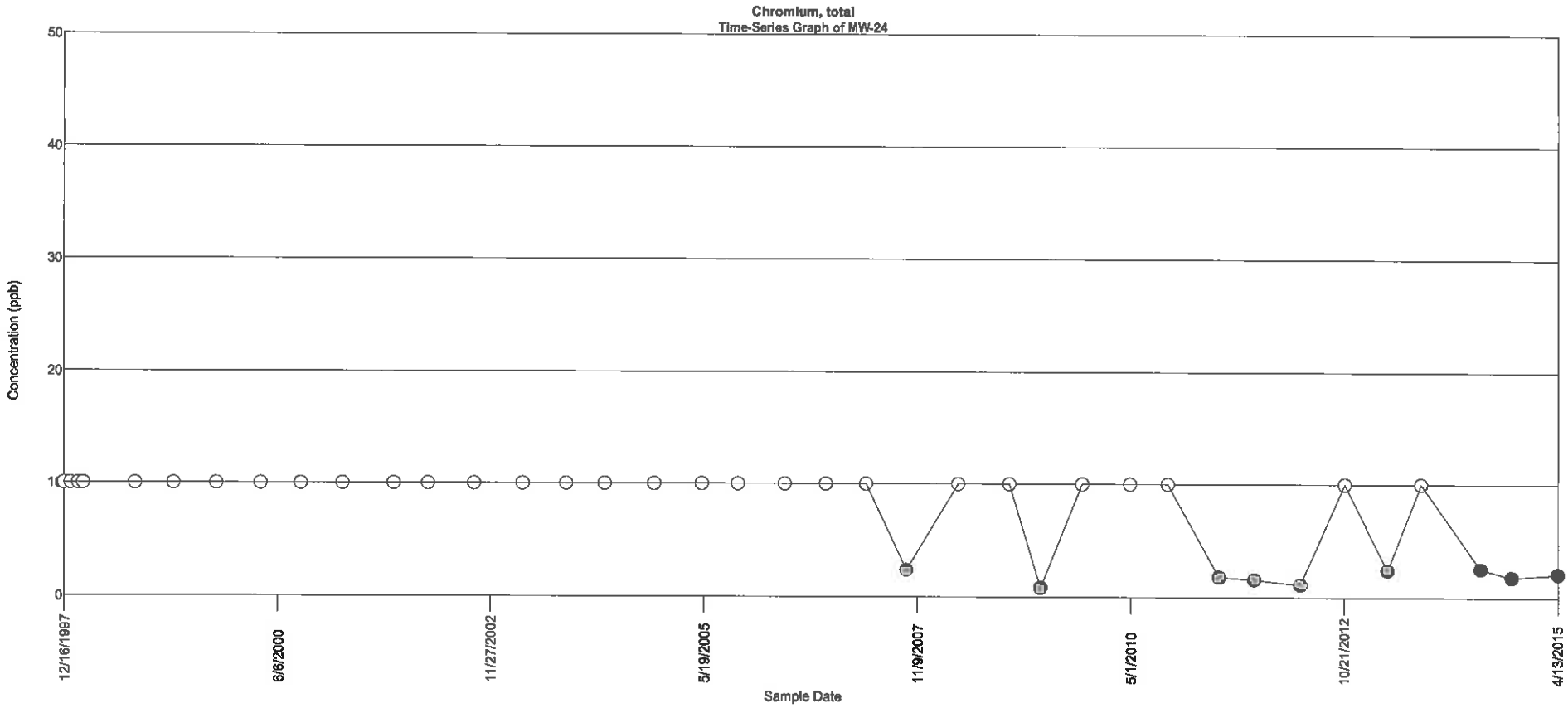

Barium, total
Time-Series Graph of MW-22
Concentration (ppb)
2000
1500
1000
500
0
12/15/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date


Barium, total
Time-Series Graph of MW-23
Concentration (ppb)
2000
1500
1000
500
0
12/18/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

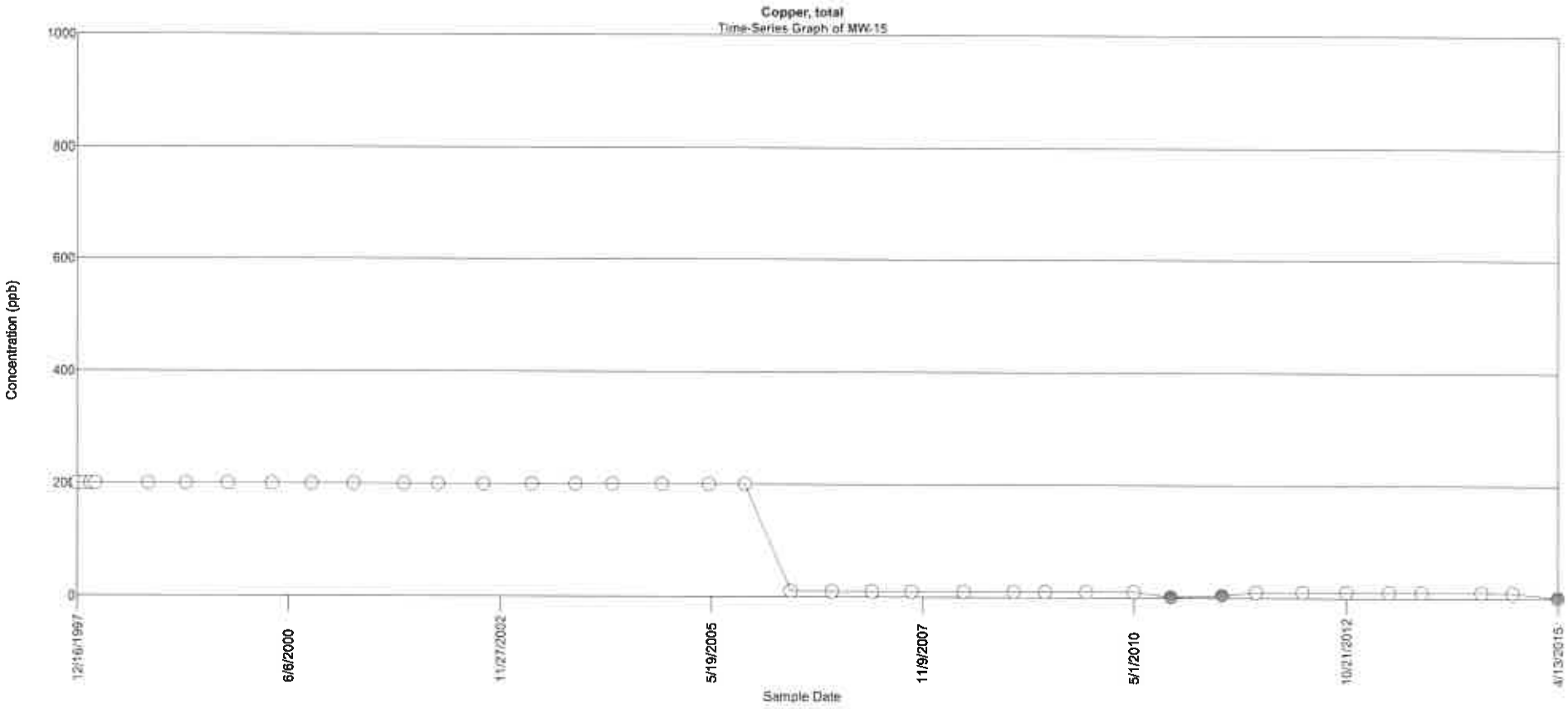

Barium, total
Time-Series Graph of MW-24
Concentration (ppb)
2000
1500
1000
500
0
12/15/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

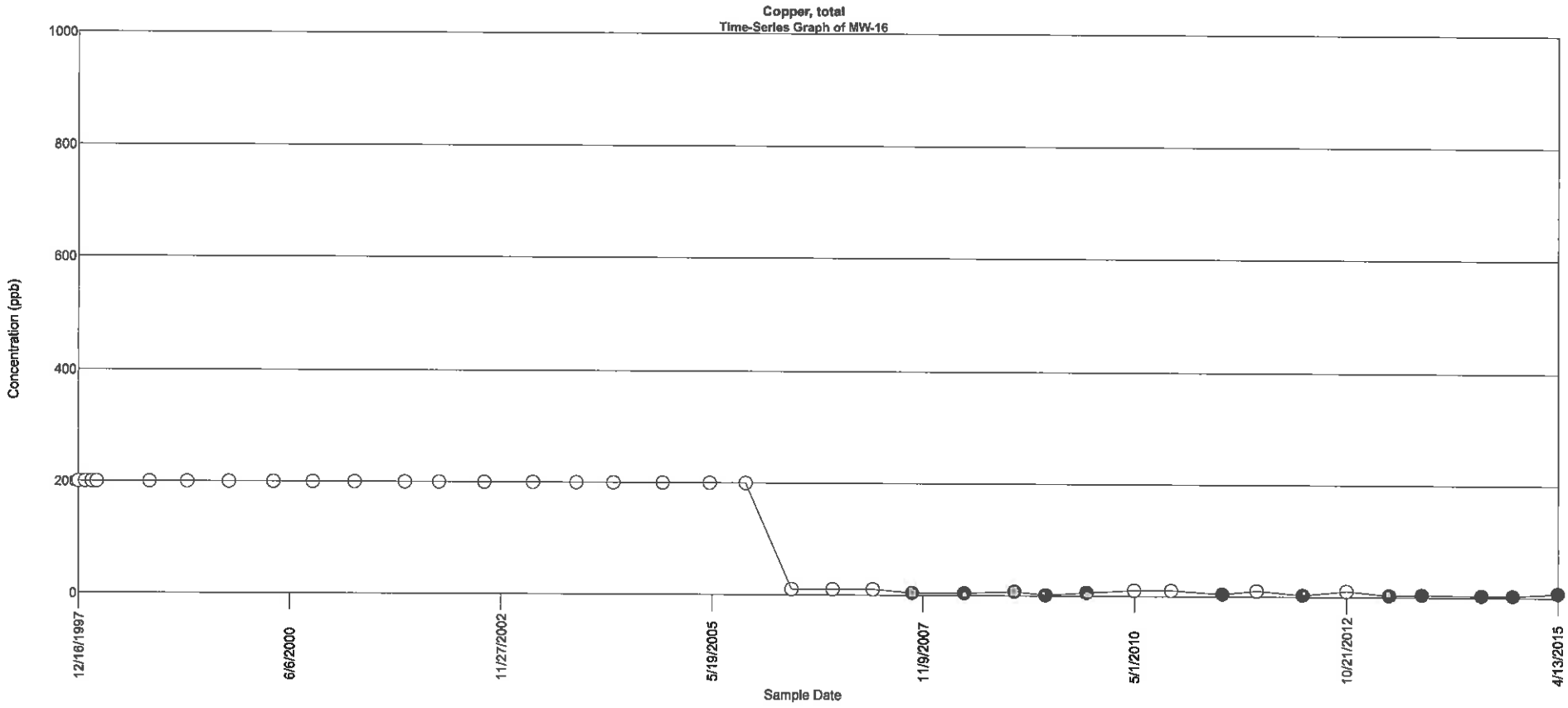

Barium, total
Time-Series Graph of MW-25d
Concentration (ppb)
2000
1500
1000
500
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

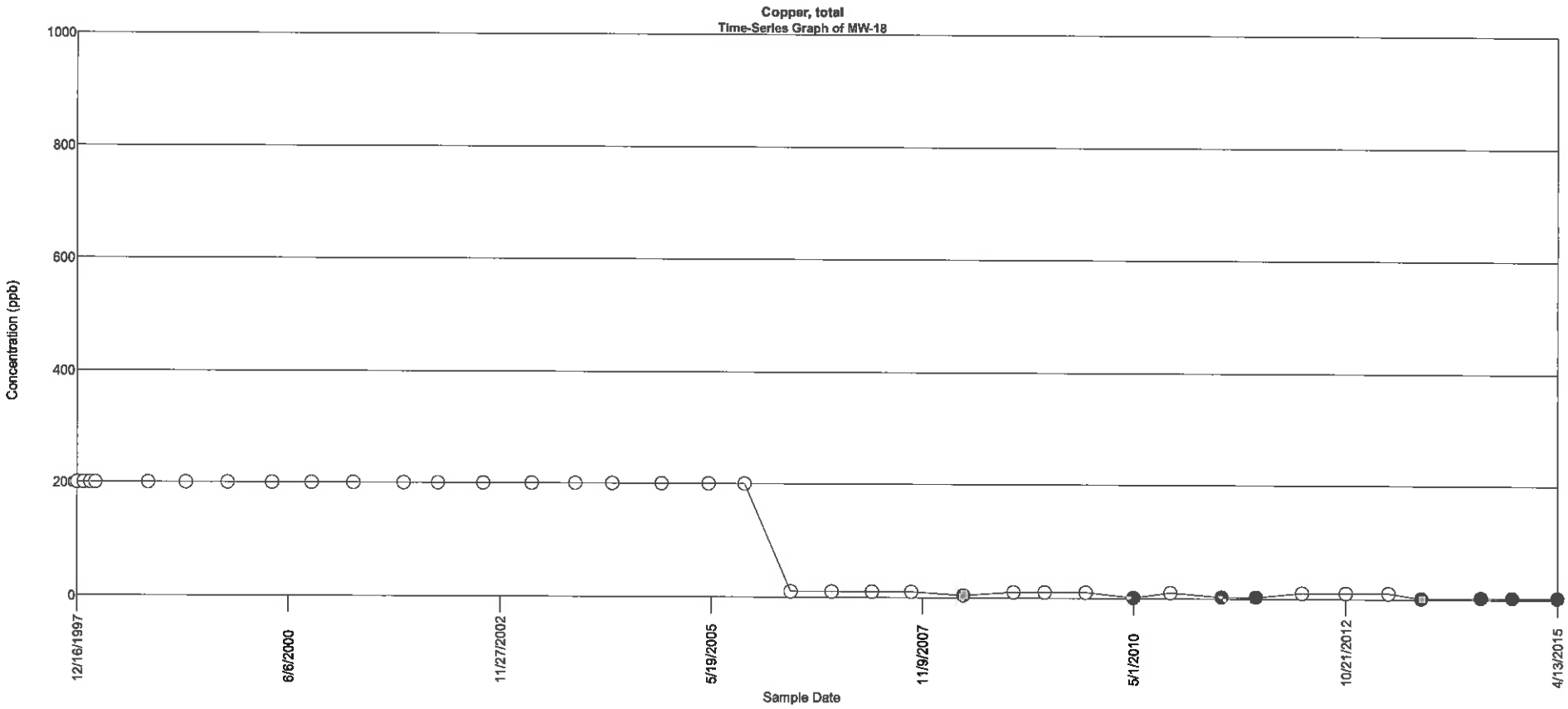

Chromium, total
Time-Series Graph of MW-20
Concentration (ppb)
50
40
30
20
10
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

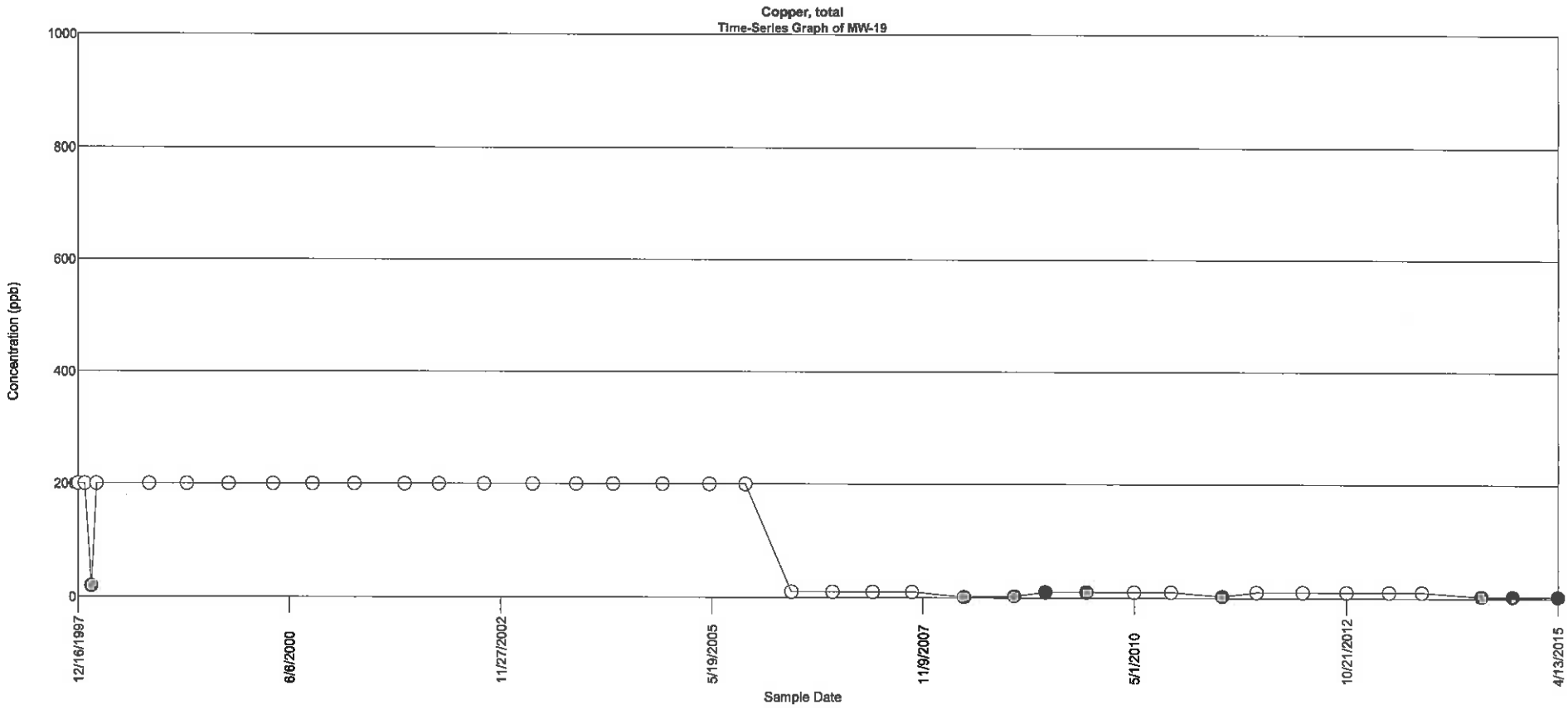

Chromium, total
Time-Series Graph of MW-24
Concentration (ppb)
50
40
30
20
10
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

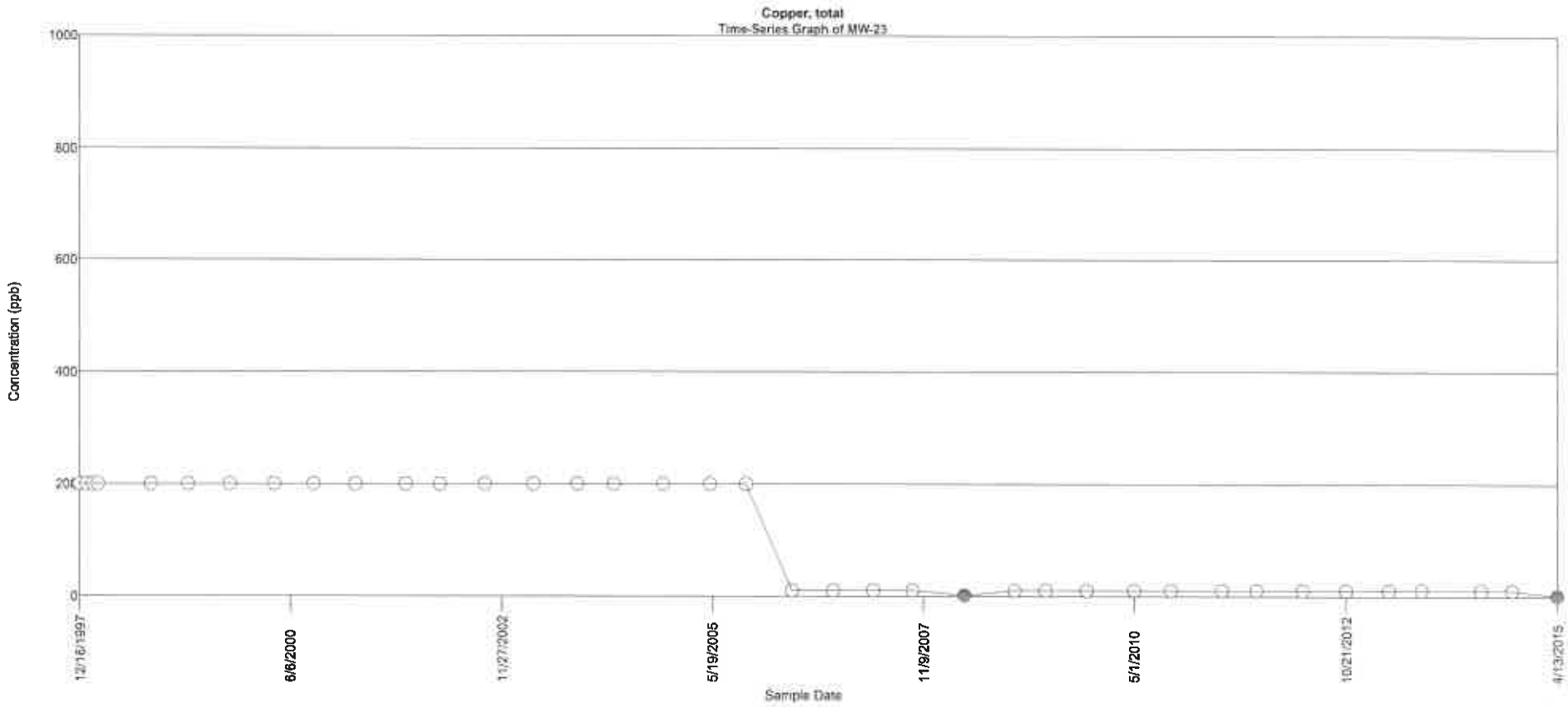
Cobalt, total
Time-Series Graph of MW-24
Concentration (ppb)
Sample Date
0
2
4
6
8
10
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015

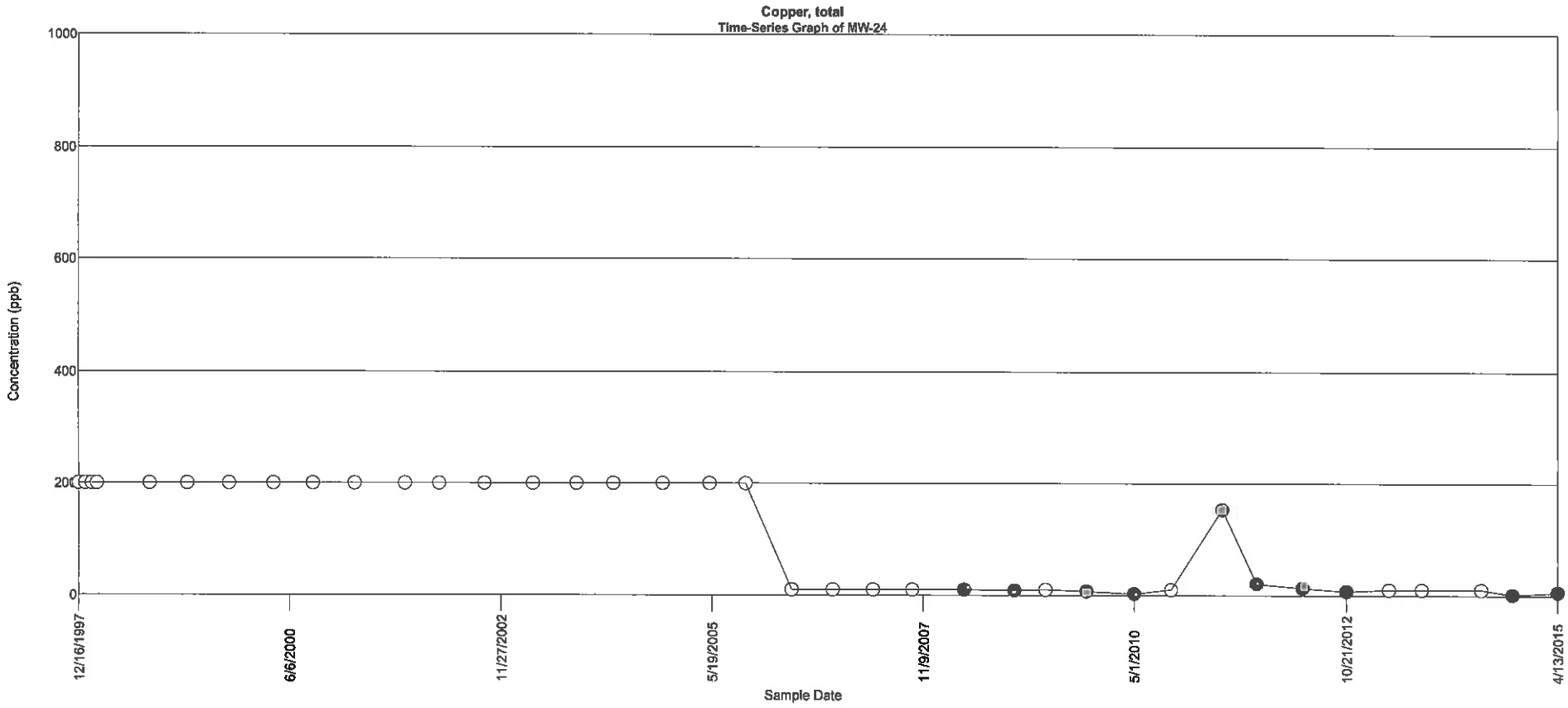

Copper, total
Time-Series Graph of MW-15
Concentration (ppb)
1000
800
600
400
200
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

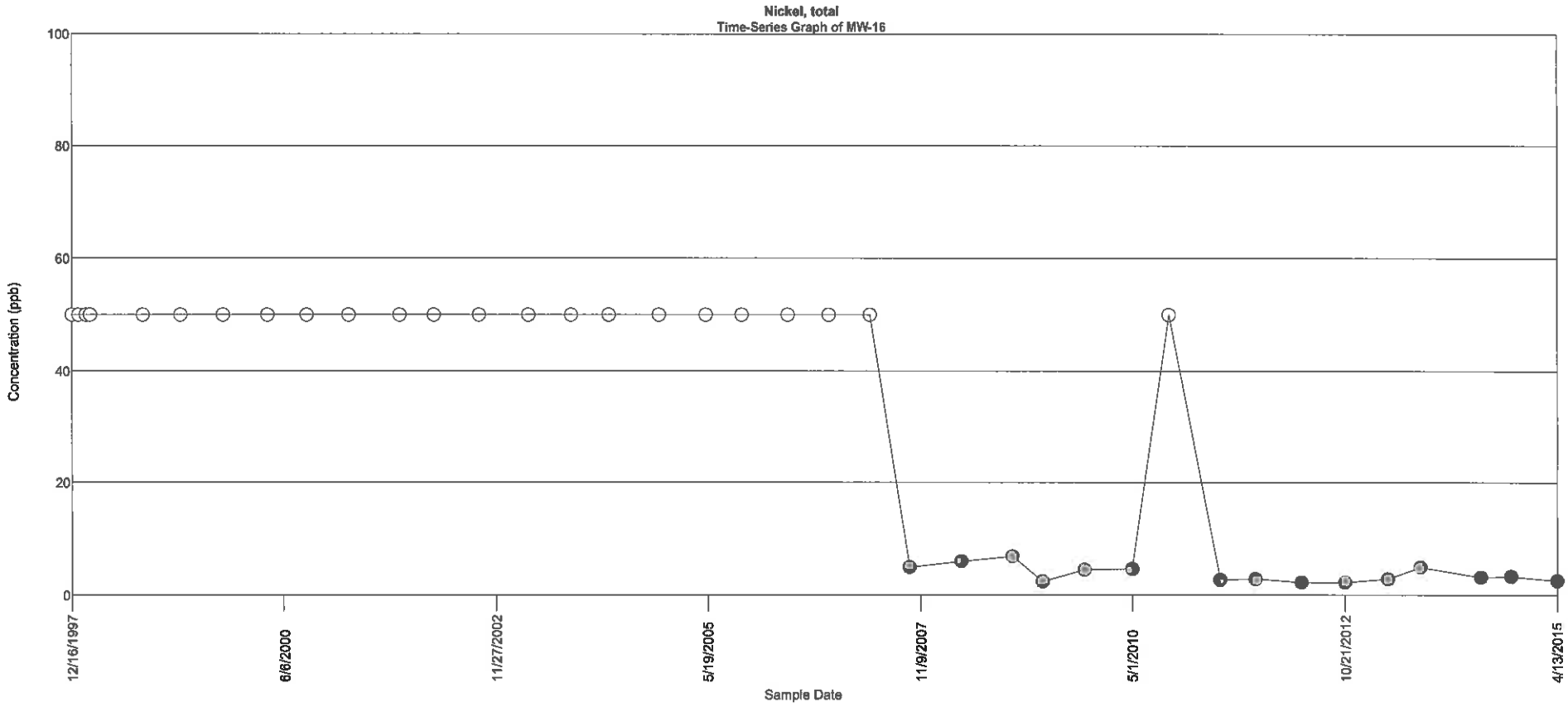

Copper, total
Time-Series Graph of MW-16
Concentration (ppb)
1000
800
600
400
200
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

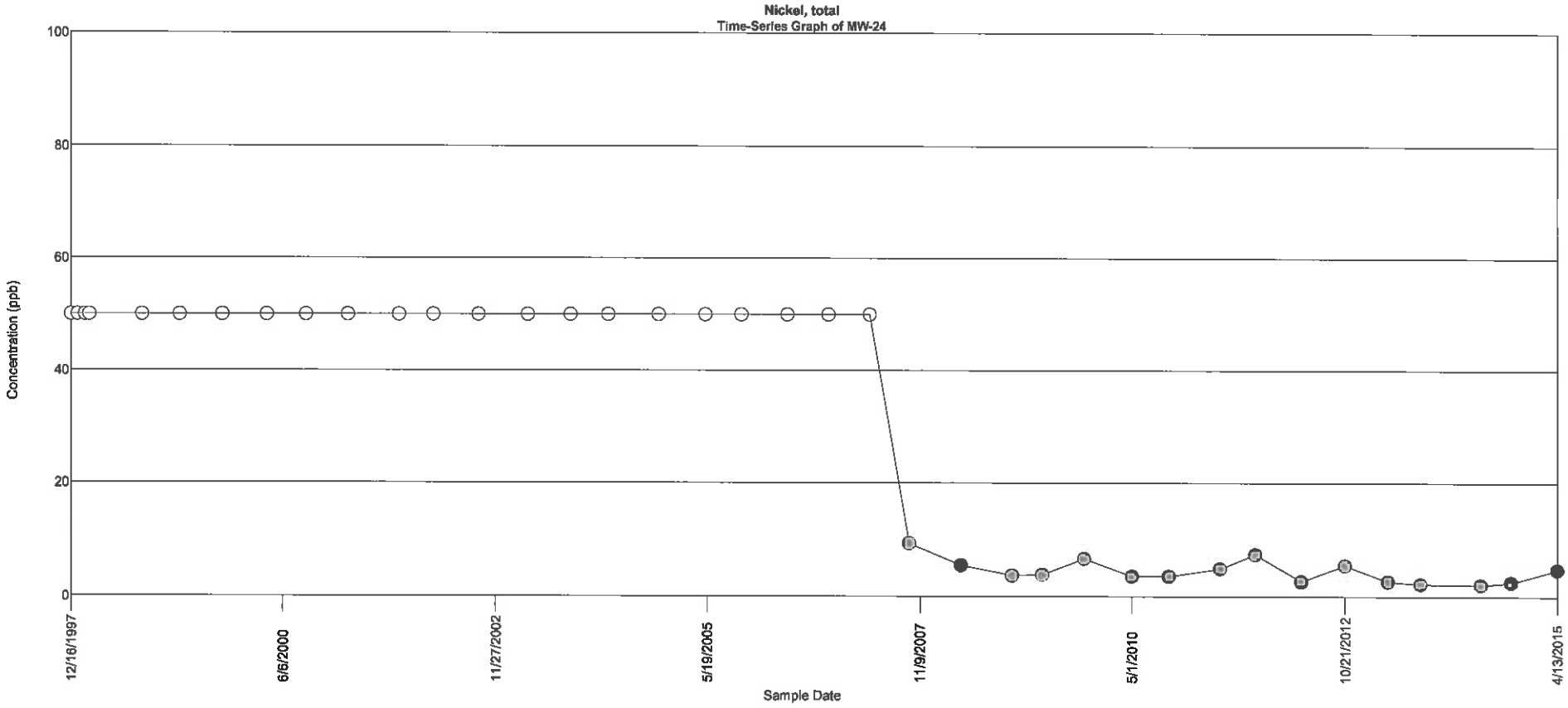

Copper, total
Time-Series Graph of MW-18
Concentration (ppb)
1000
800
600
400
200
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

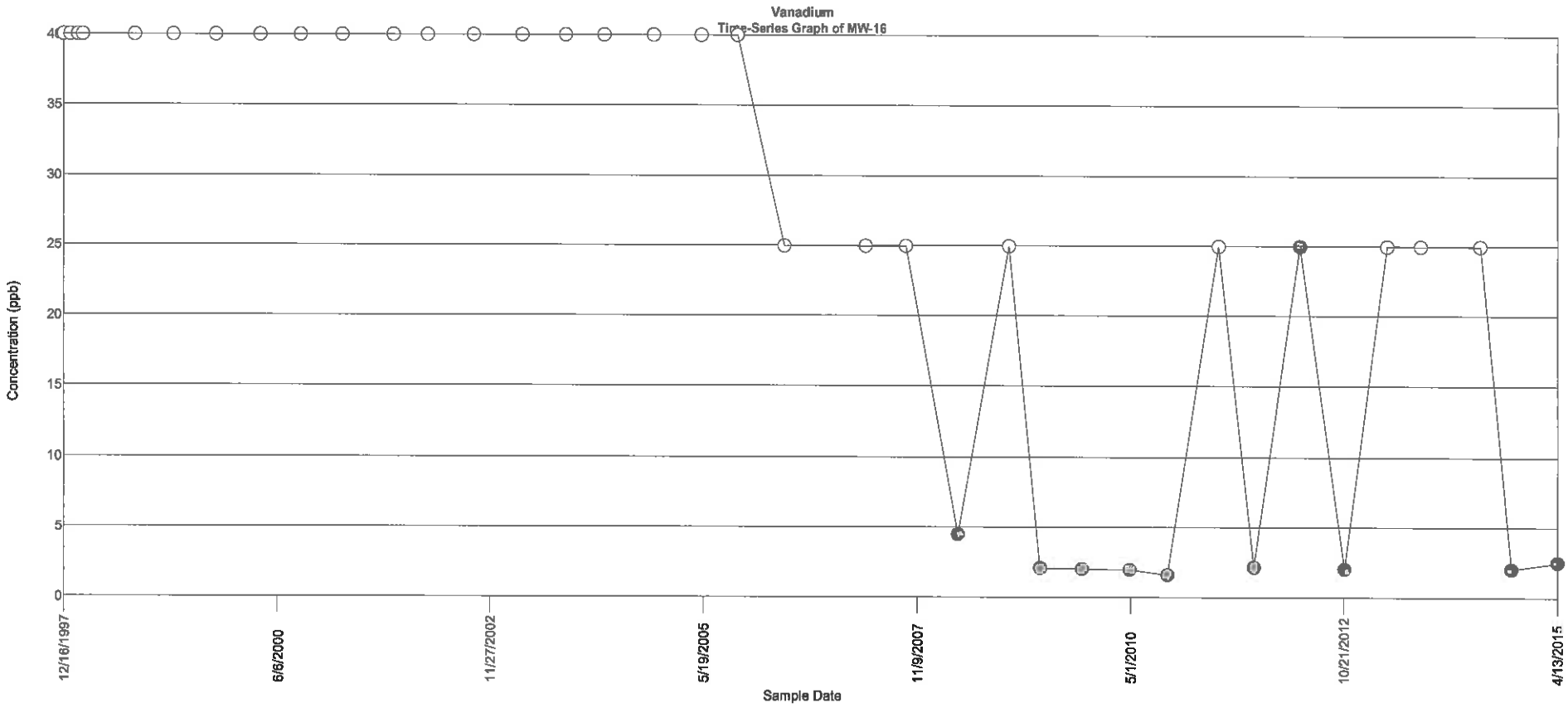

Copper, total
Time-Series Graph of MW-19
Concentration (ppb)
1000
800
600
400
200
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

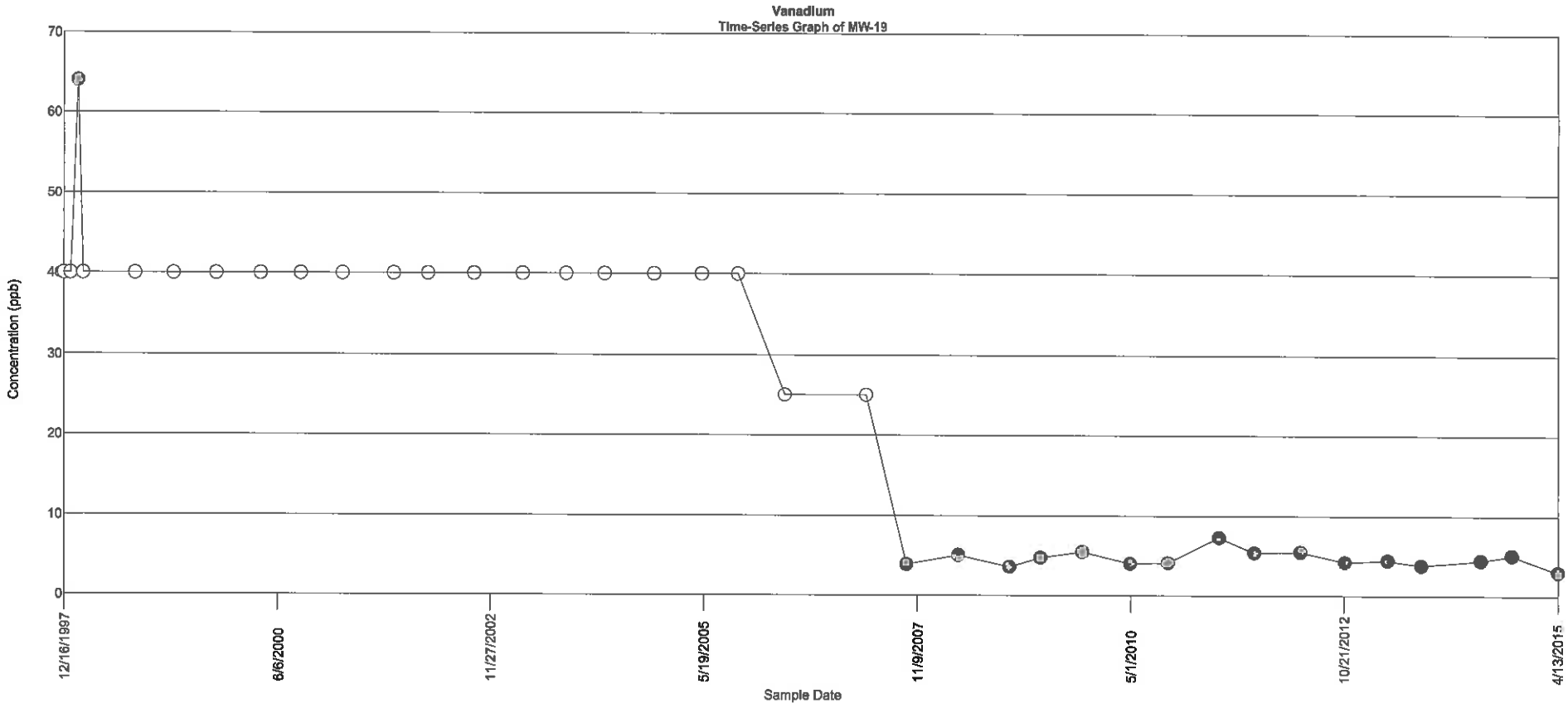

Copper, total
Time-Series Graph of MW-23
Concentration (ppb)
1000
800
600
400
200
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

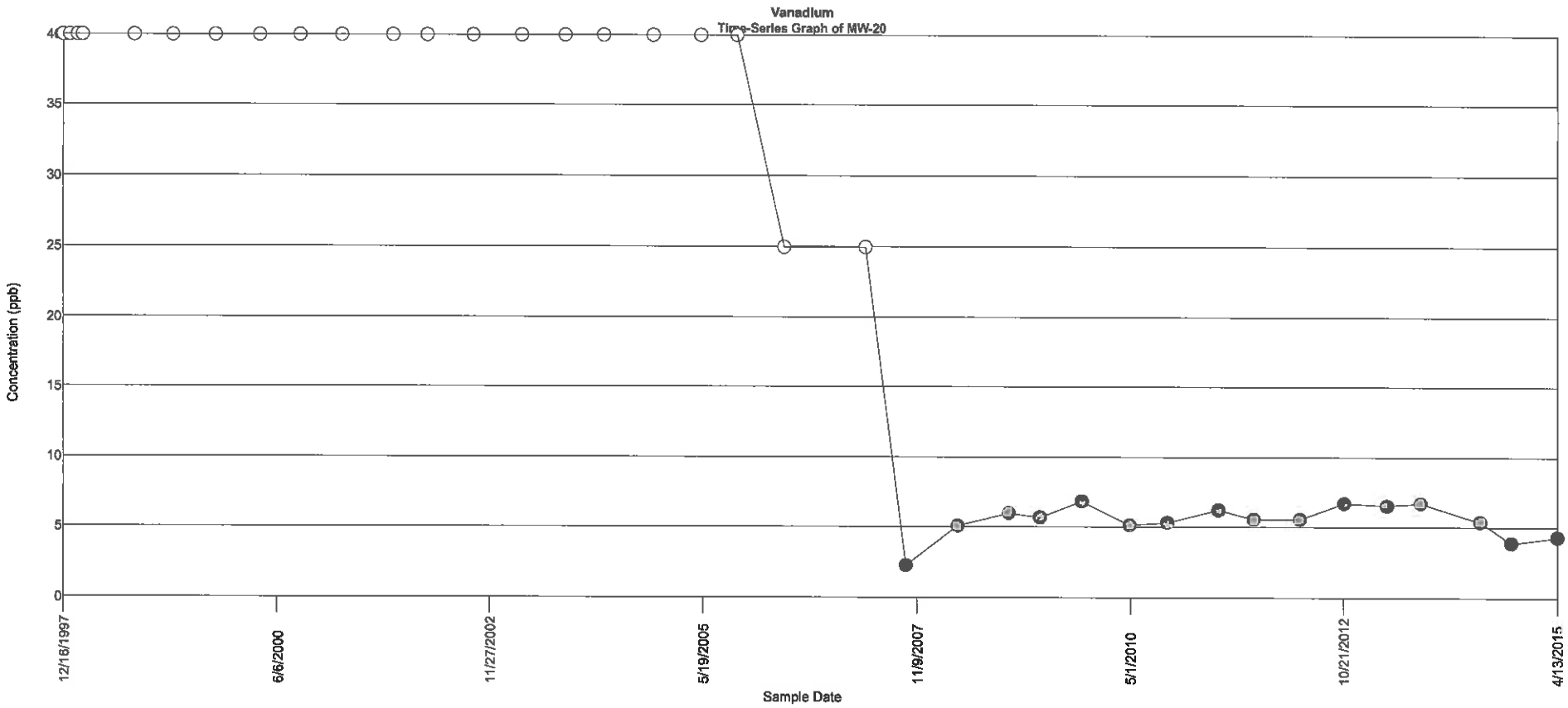

Copper, total
Time-Series Graph of MW-24
Concentration (ppb)
1000
800
600
400
200
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

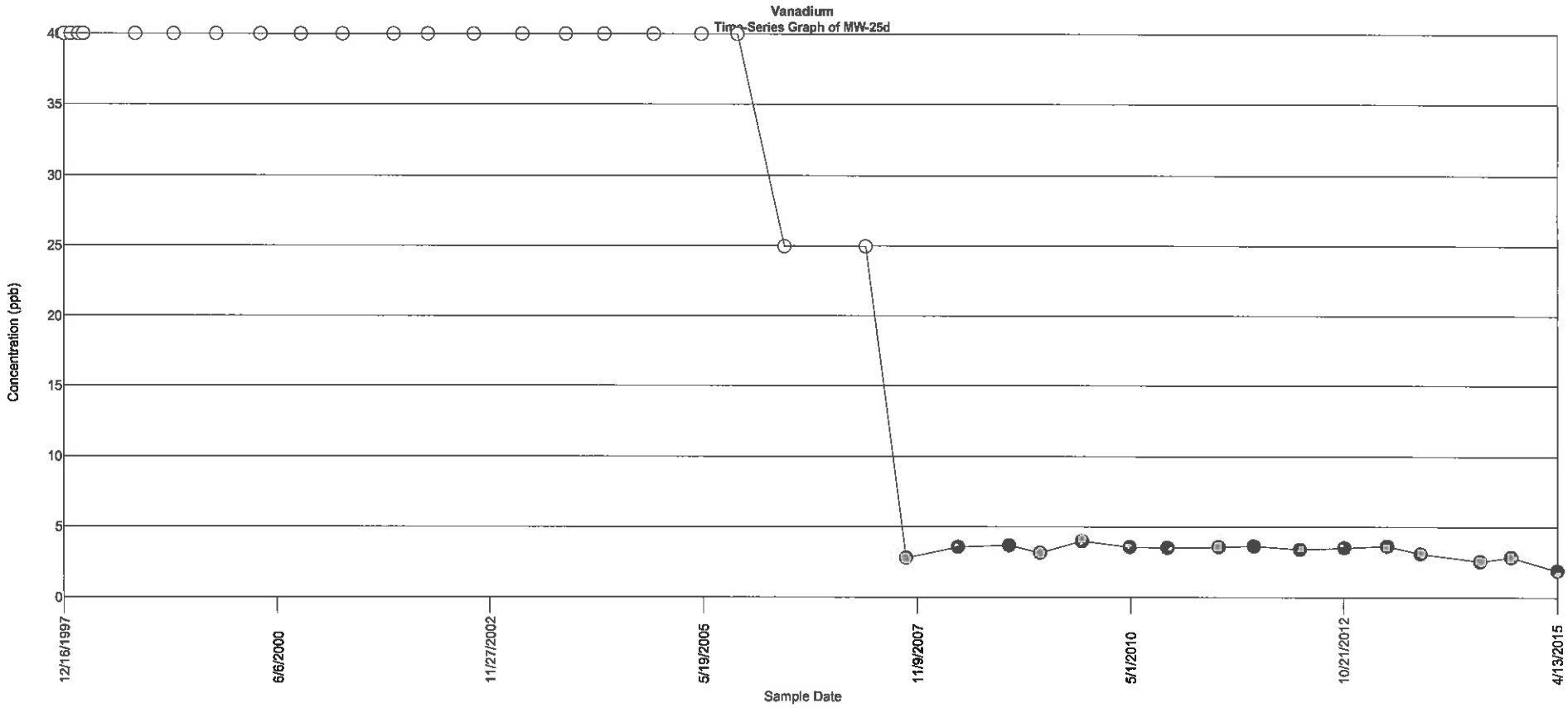

Nickel, total
Time-Series Graph of MW-16
Concentration (ppb)
100
80
60
40
20
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

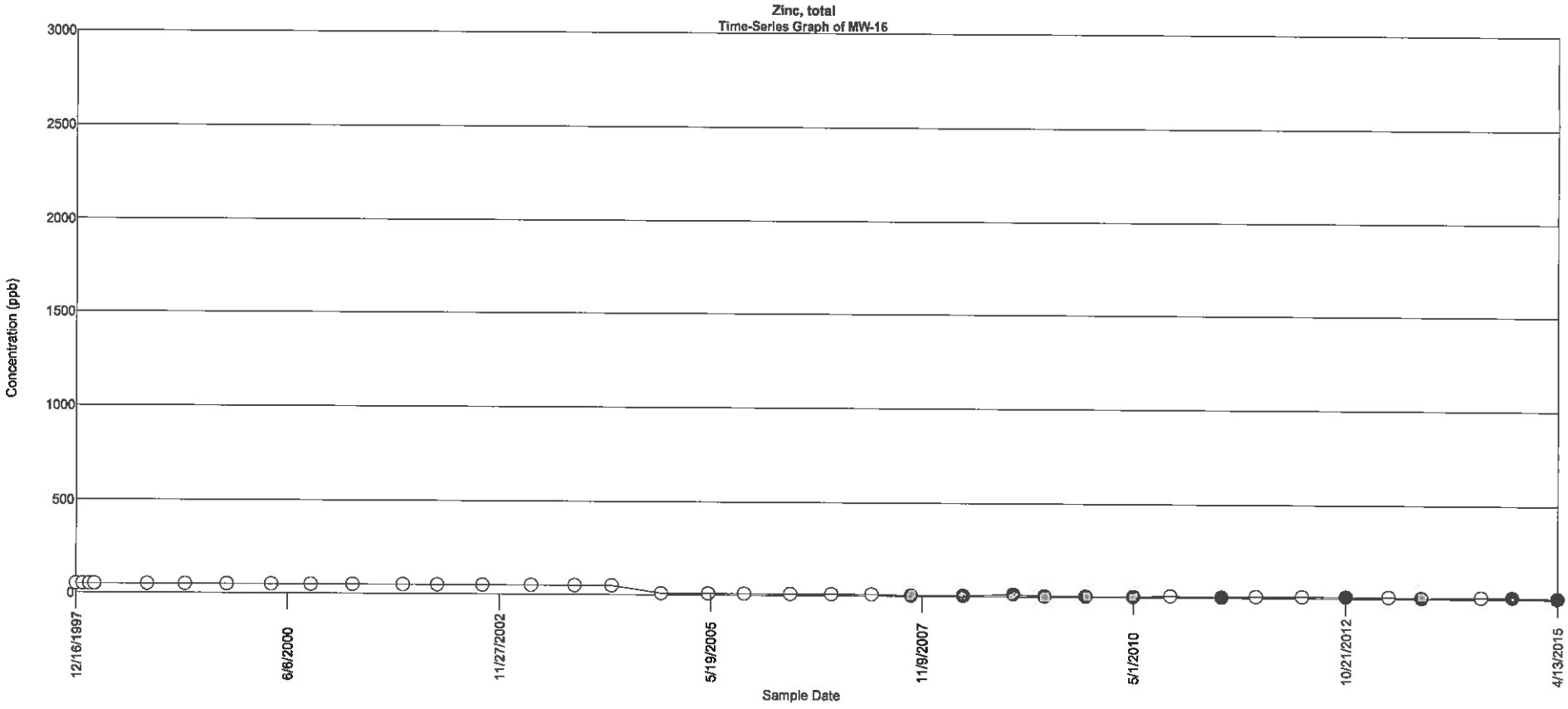

Nickel, total
Time-Series Graph of MW-24
Concentration (ppb)
100
80
60
40
20
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

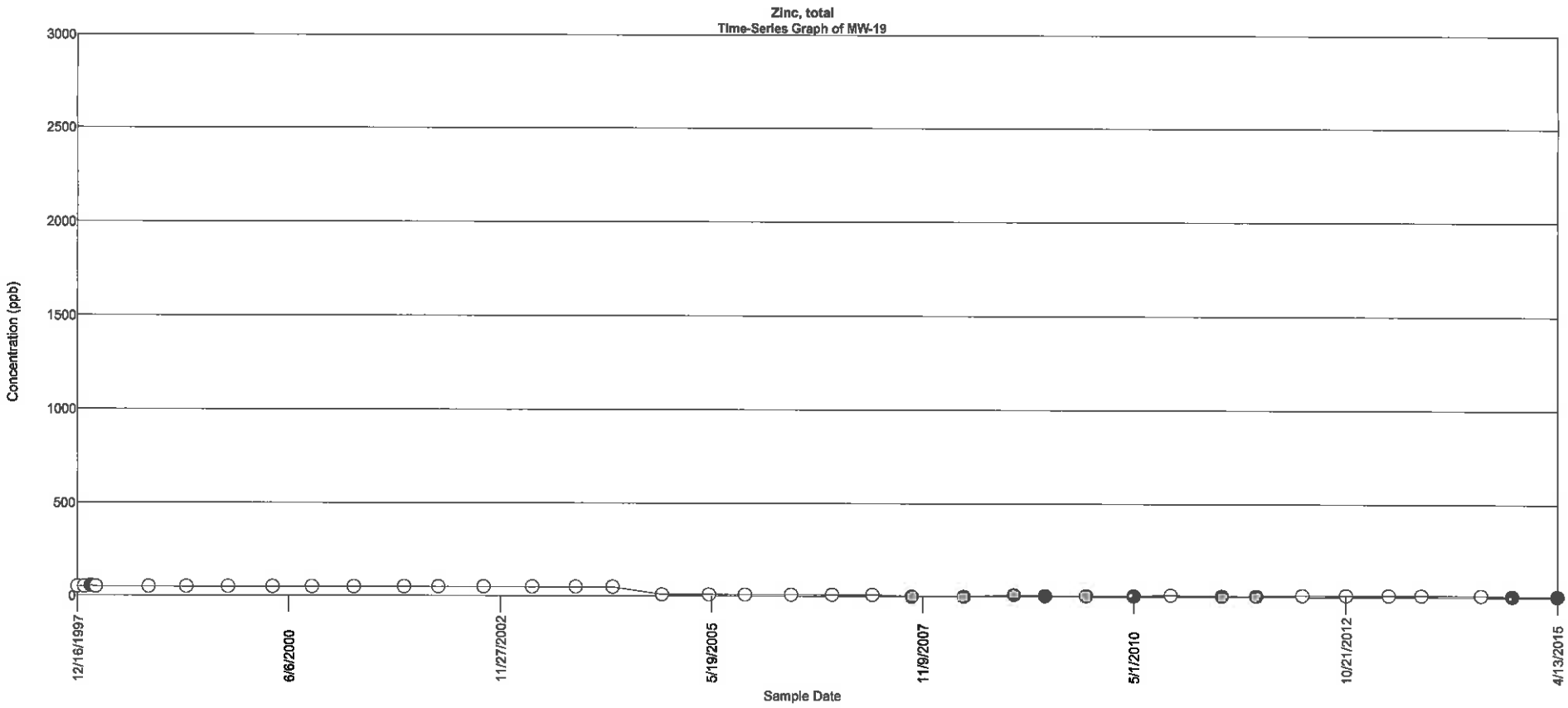

Vanadium
Time-Series Graph of MW-16
Concentration (ppb)
40
35
30
25
20
15
10
5
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

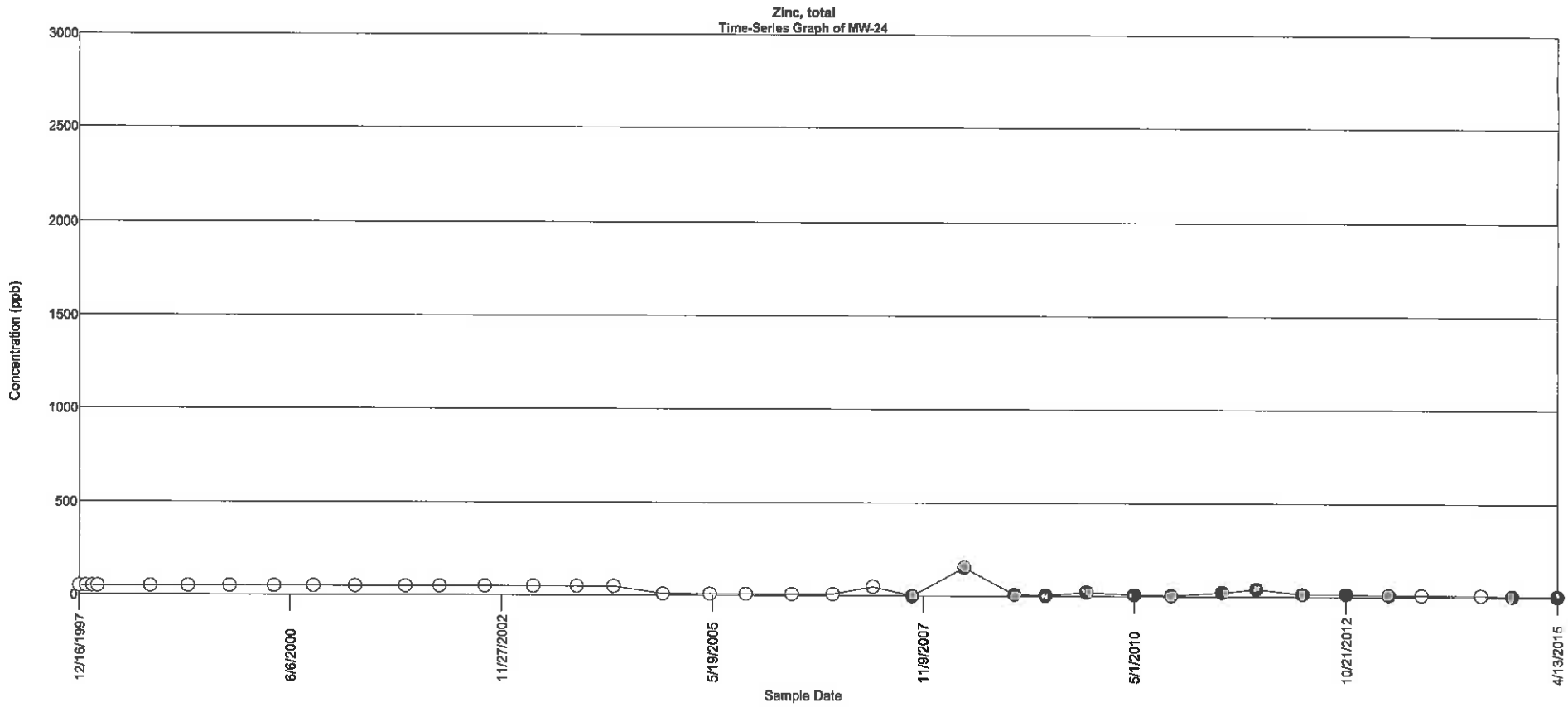

Vanadium
Time-Series Graph of MW-19
Concentration (ppb)
70
60
50
40
30
20
10
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date


Vanadium
Time-Series Graph of MW-20
Concentration (ppb)
40
35
30
25
20
15
10
5
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date


Vanadium
Time Series Graph of MW-25d
Concentration (ppb)
40
35
30
25
20
15
10
5
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date


Zinc, total
Time-Series Graph of MW-16
Concentration (ppb)
3000
2500
2000
1500
1000
500
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date


Zinc, total
Time-Series Graph of MW-19
Concentration (ppb)
3000
2500
2000
1500
1000
500
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date


Zinc, total
Time-Series Graph of MW-24
Concentration (ppb)
3000
2500
2000
1500
1000
500
0
12/16/1997
6/6/2000
11/27/2002
5/19/2005
11/9/2007
5/1/2010
10/21/2012
4/13/2015
Sample Date

Mann-Kendall Trend Analysis
Parameter: Cobalt, total
Location: MW-24
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
ND<10	ND<10	0	0	0
2.9	ND<10	-7.1	0	1
4.8	ND<10	-5.2	0	2
4.3	ND<10	-5.7	0	3
1.4	ND<10	-8.6	0	4
6.23	ND<10	-3.77	0	5
9.33	ND<10	-0.67	0	6
4.47	ND<10	-5.53	0	7
3.64	ND<10	-6.36	0	8
6.28	ND<10	-3.72	0	9
5.33	ND<10	-4.67	0	10
1.69	ND<10	-8.31	0	11
2.53	ND<10	-7.47	0	12
2.41	ND<10	-7.59	0	13
ND<10	ND<10	0	0	13
3.72	ND<10	-6.28	0	14
5.2	ND<10	-4.8	0	15
ND<10	ND<10	0	0	15
ND<10	ND<10	0	0	15
ND<10	ND<10	0	0	15
ND<10	ND<10	0	0	15
ND<10	ND<10	0	0	15
ND<10	ND<10	0	0	15
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ND<10	ND<10	0	0	15
ND<10	ND<10	0	0	15
ND<10	ND<10	0	0	15
ND<10	ND<10	0	0	15
ND<10	ND<10	0	0	15
2.9	ND<10	-7.1	0	16
4.8	ND<10	-5.2	0	17
4.3	ND<10	-5.7	0	18
1.4	ND<10	-8.6	0	19
6.23	ND<10	-3.77	0	20
9.33	ND<10	-0.67	0	21
4.47	ND<10	-5.53	0	22
3.64	ND<10	-6.36	0	23

6.28	ND<10	-3.72	0	24
5.33	ND<10	-4.67	0	25
1.69	ND<10	-8.31	0	26
2.53	ND<10	-7.47	0	27
2.41	ND<10	-7.59	0	28
ND<10	ND<10	0	0	28
3.72	ND<10	-6.28	0	29
5.2	ND<10	-4.8	0	30
ND<10	ND<10	0	0	30
ND<10	ND<10	0	0	30
ND<10	ND<10	0	0	30
ND<10	ND<10	0	0	30
ND<10	ND<10	0	0	30
ND<10	ND<10	0	0	30
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ND<10	ND<10	0	0	30
ND<10	ND<10	0	0	30
ND<10	ND<10	0	0	30
ND<10	ND<10	0	0	30
2.9	ND<10	-7.1	0	31
4.8	ND<10	-5.2	0	32
4.3	ND<10	-5.7	0	33
1.4	ND<10	-8.6	0	34
6.23	ND<10	-3.77	0	35
9.33	ND<10	-0.67	0	36
4.47	ND<10	-5.53	0	37
3.64	ND<10	-6.36	0	38
6.28	ND<10	-3.72	0	39
5.33	ND<10	-4.67	0	40
1.69	ND<10	-8.31	0	41
2.53	ND<10	-7.47	0	42
2.41	ND<10	-7.59	0	43
ND<10	ND<10	0	0	43
3.72	ND<10	-6.28	0	44
5.2	ND<10	-4.8	0	45
ND<10	ND<10	0	0	45
ND<10	ND<10	0	0	45
ND<10	ND<10	0	0	45
ND<10	ND<10	0	0	45
ND<10	ND<10	0	0	45
ND<10	ND<10	0	0	45
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ND<10	ND<10	0	0	45
ND<10	ND<10	0	0	45
ND<10	ND<10	0	0	45
ND<10	ND<10	0	0	45
ND<10	ND<10	0	0	45
2.9	ND<10	-7.1	0	46
4.8	ND<10	-5.2	0	47
4.3	ND<10	-5.7	0	48
1.4	ND<10	-8.6	0	49
6.23	ND<10	-3.77	0	50
9.33	ND<10	-0.67	0	51
4.47	ND<10	-5.53	0	52
3.64	ND<10	-6.36	0	53
6.28	ND<10	-3.72	0	54
5.33	ND<10	-4.67	0	55
1.69	ND<10	-8.31	0	56
2.53	ND<10	-7.47	0	57
2.41	ND<10	-7.59	0	58

ND<10	ND<10	0	0	58
3.72	ND<10	-6.28	0	59
5.2	ND<10	-4.8	0	60
ND<10	ND<10	0	0	60
ND<10	ND<10	0	0	60
ND<10	ND<10	0	0	60
ND<10	ND<10	0	0	60
ND<10	ND<10	0	0	60
ND<10	ND<10	0	0	60
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ND<10	ND<10	0	0	60
ND<10	ND<10	0	0	60
ND<10	ND<10	0	0	60
ND<10	ND<10	0	0	60
ND<10	ND<10	0	0	60
2.9	ND<10	-7.1	0	61
4.8	ND<10	-5.2	0	62
4.3	ND<10	-5.7	0	63
1.4	ND<10	-8.6	0	64
6.23	ND<10	-3.77	0	65
9.33	ND<10	-0.67	0	66
4.47	ND<10	-5.53	0	67
3.64	ND<10	-6.36	0	68
6.28	ND<10	-3.72	0	69
5.33	ND<10	-4.67	0	70
1.69	ND<10	-8.31	0	71
2.53	ND<10	-7.47	0	72
2.41	ND<10	-7.59	0	73
ND<10	ND<10	0	0	73
3.72	ND<10	-6.28	0	74
5.2	ND<10	-4.8	0	75
ND<10	ND<10	0	0	75
ND<10	ND<10	0	0	75
ND<10	ND<10	0	0	75
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ND<10	ND<10	0	0	75
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ND<10	ND<10	0	0	75
ND<10	ND<10	0	0	75
ND<10	ND<10	0	0	75
ND<10	ND<10	0	0	75
ND<10	ND<10	0	0	75
2.9	ND<10	-7.1	0	76
4.8	ND<10	-5.2	0	77
4.3	ND<10	-5.7	0	78
1.4	ND<10	-8.6	0	79
6.23	ND<10	-3.77	0	80
9.33	ND<10	-0.67	0	81
4.47	ND<10	-5.53	0	82
3.64	ND<10	-6.36	0	83
6.28	ND<10	-3.72	0	84
5.33	ND<10	-4.67	0	85
1.69	ND<10	-8.31	0	86
2.53	ND<10	-7.47	0	87
2.41	ND<10	-7.59	0	88
ND<10	ND<10	0	0	88
3.72	ND<10	-6.28	0	89
5.2	ND<10	-4.8	0	90
ND<10	ND<10	0	0	90
ND<10	ND<10	0	0	90
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ND<10	ND<10	0	0	90
ND<10	ND<10	0	0	90
ND<10	ND<10	0	0	90
ND<10	ND<10	0	0	90
ND<10	ND<10	0	0	90
2.9	ND<10	-7.1	0	91
4.8	ND<10	-5.2	0	92
4.3	ND<10	-5.7	0	93
1.4	ND<10	-8.6	0	94
6.23	ND<10	-3.77	0	95
9.33	ND<10	-0.67	0	96
4.47	ND<10	-5.53	0	97
3.64	ND<10	-6.36	0	98
6.28	ND<10	-3.72	0	99
5.33	ND<10	-4.67	0	100
1.69	ND<10	-8.31	0	101
2.53	ND<10	-7.47	0	102
2.41	ND<10	-7.59	0	103
ND<10	ND<10	0	0	103
3.72	ND<10	-6.28	0	104
5.2	ND<10	-4.8	0	105
ND<10	ND<10	0	0	105
ND<10	ND<10	0	0	105
ND<10	ND<10	0	0	105
ND<10	ND<10	0	0	105
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ND<10	ND<10	0	0	105
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ND<10	ND<10	0	0	105
ND<10	ND<10	0	0	105
ND<10	ND<10	0	0	105
ND<10	ND<10	0	0	105
ND<10	ND<10	0	0	105
2.9	ND<10	-7.1	0	106
4.8	ND<10	-5.2	0	107
4.3	ND<10	-5.7	0	108
1.4	ND<10	-8.6	0	109
6.23	ND<10	-3.77	0	110
9.33	ND<10	-0.67	0	111
4.47	ND<10	-5.53	0	112
3.64	ND<10	-6.36	0	113
6.28	ND<10	-3.72	0	114
5.33	ND<10	-4.67	0	115
1.69	ND<10	-8.31	0	116
2.53	ND<10	-7.47	0	117
2.41	ND<10	-7.59	0	118
ND<10	ND<10	0	0	118
3.72	ND<10	-6.28	0	119
5.2	ND<10	-4.8	0	120
ND<10	ND<10	0	0	120
ND<10	ND<10	0	0	120
ND<10	ND<10	0	0	120
ND<10	ND<10	0	0	120
ND<10	ND<10	0	0	120
ND<10	ND<10	0	0	120
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ND<10	ND<10	0	0	120
ND<10	ND<10	0	0	120
ND<10	ND<10	0	0	120
ND<10	ND<10	0	0	120
ND<10	ND<10	0	0	120
2.9	ND<10	-7.1	0	121
4.8	ND<10	-5.2	0	122
4.3	ND<10	-5.7	0	123
1.4	ND<10	-8.6	0	124
6.23	ND<10	-3.77	0	125

9.33	ND<10	-0.67	0	126
4.47	ND<10	-5.53	0	127
3.64	ND<10	-6.36	0	128
6.28	ND<10	-3.72	0	129
5.33	ND<10	-4.67	0	130
1.69	ND<10	-8.31	0	131
2.53	ND<10	-7.47	0	132
2.41	ND<10	-7.59	0	133
ND<10	ND<10	0	0	133
3.72	ND<10	-6.28	0	134
5.2	ND<10	-4.8	0	135
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ND<10	ND<10	0	0	135
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ND<10	ND<10	0	0	135
ND<10	ND<10	0	0	135
ND<10	ND<10	0	0	135
ND<10	ND<10	0	0	135
ND<10	ND<10	0	0	135
2.9	ND<10	-7.1	0	136
4.8	ND<10	-5.2	0	137
4.3	ND<10	-5.7	0	138
1.4	ND<10	-8.6	0	139
6.23	ND<10	-3.77	0	140
9.33	ND<10	-0.67	0	141
4.47	ND<10	-5.53	0	142
3.64	ND<10	-6.36	0	143
6.28	ND<10	-3.72	0	144
5.33	ND<10	-4.67	0	145
1.69	ND<10	-8.31	0	146
2.53	ND<10	-7.47	0	147
2.41	ND<10	-7.59	0	148
ND<10	ND<10	0	0	148
3.72	ND<10	-6.28	0	149
5.2	ND<10	-4.8	0	150
ND<10	ND<10	0	0	150
ND<10	ND<10	0	0	150
ND<10	ND<10	0	0	150
ND<10	ND<10	0	0	150
ND<10	ND<10	0	0	150
ND<10	ND<10	0	0	150
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4.8	ND<10	-5.2	0	152
4.3	ND<10	-5.7	0	153
1.4	ND<10	-8.6	0	154
6.23	ND<10	-3.77	0	155
9.33	ND<10	-0.67	0	156
4.47	ND<10	-5.53	0	157
3.64	ND<10	-6.36	0	158
6.28	ND<10	-3.72	0	159
5.33	ND<10	-4.67	0	160
1.69	ND<10	-8.31	0	161
2.53	ND<10	-7.47	0	162
2.41	ND<10	-7.59	0	163
ND<10	ND<10	0	0	163
3.72	ND<10	-6.28	0	164
5.2	ND<10	-4.8	0	165
ND<10	ND<10	0	0	165
ND<10	ND<10	0	0	165
ND<10	ND<10	0	0	165
ND<10	ND<10	0	0	165
ND<10	ND<10	0	0	165
ND<10	ND<10	0	0	165
ND<10	ND<10	0	0	165

ND<10	ND<10	0	0	165
ND<10	ND<10	0	0	165
ND<10	ND<10	0	0	165
2.9	ND<10	-7.1	0	166
4.8	ND<10	-5.2	0	167
4.3	ND<10	-5.7	0	168
1.4	ND<10	-8.6	0	169
6.23	ND<10	-3.77	0	170
9.33	ND<10	-0.67	0	171
4.47	ND<10	-5.53	0	172
3.64	ND<10	-6.36	0	173
6.28	ND<10	-3.72	0	174
5.33	ND<10	-4.67	0	175
1.69	ND<10	-8.31	0	176
2.53	ND<10	-7.47	0	177
2.41	ND<10	-7.59	0	178
ND<10	ND<10	0	0	178
3.72	ND<10	-6.28	0	179
5.2	ND<10	-4.8	0	180
ND<10	ND<10	0	0	180
ND<10	ND<10	0	0	180
ND<10	ND<10	0	0	180
ND<10	ND<10	0	0	180
ND<10	ND<10	0	0	180
ND<10	ND<10	0	0	180
ND<10	ND<10	0	0	180
ND<10	ND<10	0	0	180
ND<10	ND<10	0	0	180
2.9	ND<10	-7.1	0	181
4.8	ND<10	-5.2	0	182
4.3	ND<10	-5.7	0	183
1.4	ND<10	-8.6	0	184
6.23	ND<10	-3.77	0	185
9.33	ND<10	-0.67	0	186
4.47	ND<10	-5.53	0	187
3.64	ND<10	-6.36	0	188
6.28	ND<10	-3.72	0	189
5.33	ND<10	-4.67	0	190
1.69	ND<10	-8.31	0	191
2.53	ND<10	-7.47	0	192
2.41	ND<10	-7.59	0	193
ND<10	ND<10	0	0	193
3.72	ND<10	-6.28	0	194
5.2	ND<10	-4.8	0	195
ND<10	ND<10	0	0	195
ND<10	ND<10	0	0	195
ND<10	ND<10	0	0	195
ND<10	ND<10	0	0	195
ND<10	ND<10	0	0	195
ND<10	ND<10	0	0	195
ND<10	ND<10	0	0	195
ND<10	ND<10	0	0	195
2.9	ND<10	-7.1	0	196
4.8	ND<10	-5.2	0	197
4.3	ND<10	-5.7	0	198
1.4	ND<10	-8.6	0	199
6.23	ND<10	-3.77	0	200
9.33	ND<10	-0.67	0	201
4.47	ND<10	-5.53	0	202
3.64	ND<10	-6.36	0	203
6.28	ND<10	-3.72	0	204
5.33	ND<10	-4.67	0	205
1.69	ND<10	-8.31	0	206
2.53	ND<10	-7.47	0	207
2.41	ND<10	-7.59	0	208
ND<10	ND<10	0	0	208
3.72	ND<10	-6.28	0	209
5.2	ND<10	-4.8	0	210
ND<10	ND<10	0	0	210
ND<10	ND<10	0	0	210
ND<10	ND<10	0	0	210
ND<10	ND<10	0	0	210
ND<10	ND<10	0	0	210

ND<10	ND<10	0	0	210
ND<10	ND<10	0	0	210
2.9	ND<10	-7.1	0	211
4.8	ND<10	-5.2	0	212
4.3	ND<10	-5.7	0	213
1.4	ND<10	-8.6	0	214
6.23	ND<10	-3.77	0	215
9.33	ND<10	-0.67	0	216
4.47	ND<10	-5.53	0	217
3.64	ND<10	-6.36	0	218
6.28	ND<10	-3.72	0	219
5.33	ND<10	-4.67	0	220
1.69	ND<10	-8.31	0	221
2.53	ND<10	-7.47	0	222
2.41	ND<10	-7.59	0	223
ND<10	ND<10	0	0	223
3.72	ND<10	-6.28	0	224
5.2	ND<10	-4.8	0	225
ND<10	ND<10	0	0	225
ND<10	ND<10	0	0	225
ND<10	ND<10	0	0	225
ND<10	ND<10	0	0	225
ND<10	ND<10	0	0	225
ND<10	ND<10	0	0	225
2.9	ND<10	-7.1	0	226
4.8	ND<10	-5.2	0	227
4.3	ND<10	-5.7	0	228
1.4	ND<10	-8.6	0	229
6.23	ND<10	-3.77	0	230
9.33	ND<10	-0.67	0	231
4.47	ND<10	-5.53	0	232
3.64	ND<10	-6.36	0	233
6.28	ND<10	-3.72	0	234
5.33	ND<10	-4.67	0	235
1.69	ND<10	-8.31	0	236
2.53	ND<10	-7.47	0	237
2.41	ND<10	-7.59	0	238
ND<10	ND<10	0	0	238
3.72	ND<10	-6.28	0	239
5.2	ND<10	-4.8	0	240
ND<10	ND<10	0	0	240
ND<10	ND<10	0	0	240
ND<10	ND<10	0	0	240
ND<10	ND<10	0	0	240
ND<10	ND<10	0	0	240
2.9	ND<10	-7.1	0	241
4.8	ND<10	-5.2	0	242
4.3	ND<10	-5.7	0	243
1.4	ND<10	-8.6	0	244
6.23	ND<10	-3.77	0	245
9.33	ND<10	-0.67	0	246
4.47	ND<10	-5.53	0	247
3.64	ND<10	-6.36	0	248
6.28	ND<10	-3.72	0	249
5.33	ND<10	-4.67	0	250
1.69	ND<10	-8.31	0	251
2.53	ND<10	-7.47	0	252
2.41	ND<10	-7.59	0	253
ND<10	ND<10	0	0	253
3.72	ND<10	-6.28	0	254
5.2	ND<10	-4.8	0	255
ND<10	ND<10	0	0	255
ND<10	ND<10	0	0	255
ND<10	ND<10	0	0	255
ND<10	ND<10	0	0	255
2.9	ND<10	-7.1	0	256
4.8	ND<10	-5.2	0	257
4.3	ND<10	-5.7	0	258
1.4	ND<10	-8.6	0	259
6.23	ND<10	-3.77	0	260
9.33	ND<10	-0.67	0	261
4.47	ND<10	-5.53	0	262
3.64	ND<10	-6.36	0	263

6.28	ND<10	-3.72	0	264
5.33	ND<10	-4.67	0	265
1.69	ND<10	-8.31	0	266
2.53	ND<10	-7.47	0	267
2.41	ND<10	-7.59	0	268
ND<10	ND<10	0	0	268
3.72	ND<10	-6.28	0	269
5.2	ND<10	-4.8	0	270
ND<10	ND<10	0	0	270
ND<10	ND<10	0	0	270
ND<10	ND<10	0	0	270
2.9	ND<10	-7.1	0	271
4.8	ND<10	-5.2	0	272
4.3	ND<10	-5.7	0	273
1.4	ND<10	-8.6	0	274
6.23	ND<10	-3.77	0	275
9.33	ND<10	-0.67	0	276
4.47	ND<10	-5.53	0	277
3.64	ND<10	-6.36	0	278
6.28	ND<10	-3.72	0	279
5.33	ND<10	-4.67	0	280
1.69	ND<10	-8.31	0	281
2.53	ND<10	-7.47	0	282
2.41	ND<10	-7.59	0	283
ND<10	ND<10	0	0	283
3.72	ND<10	-6.28	0	284
5.2	ND<10	-4.8	0	285
ND<10	ND<10	0	0	285
ND<10	ND<10	0	0	285
2.9	ND<10	-7.1	0	286
4.8	ND<10	-5.2	0	287
4.3	ND<10	-5.7	0	288
1.4	ND<10	-8.6	0	289
6.23	ND<10	-3.77	0	290
9.33	ND<10	-0.67	0	291
4.47	ND<10	-5.53	0	292
3.64	ND<10	-6.36	0	293
6.28	ND<10	-3.72	0	294
5.33	ND<10	-4.67	0	295
1.69	ND<10	-8.31	0	296
2.53	ND<10	-7.47	0	297
2.41	ND<10	-7.59	0	298
ND<10	ND<10	0	0	298
3.72	ND<10	-6.28	0	299
5.2	ND<10	-4.8	0	300
ND<10	ND<10	0	0	300
2.9	ND<10	-7.1	0	301
4.8	ND<10	-5.2	0	302
4.3	ND<10	-5.7	0	303
1.4	ND<10	-8.6	0	304
6.23	ND<10	-3.77	0	305
9.33	ND<10	-0.67	0	306
4.47	ND<10	-5.53	0	307
3.64	ND<10	-6.36	0	308
6.28	ND<10	-3.72	0	309
5.33	ND<10	-4.67	0	310
1.69	ND<10	-8.31	0	311
2.53	ND<10	-7.47	0	312
2.41	ND<10	-7.59	0	313
ND<10	ND<10	0	0	313
3.72	ND<10	-6.28	0	314
5.2	ND<10	-4.8	0	315
2.9	ND<10	-7.1	0	316
4.8	ND<10	-5.2	0	317
4.3	ND<10	-5.7	0	318
1.4	ND<10	-8.6	0	319
6.23	ND<10	-3.77	0	320
9.33	ND<10	-0.67	0	321
4.47	ND<10	-5.53	0	322
3.64	ND<10	-6.36	0	323
6.28	ND<10	-3.72	0	324
5.33	ND<10	-4.67	0	325

1.69	ND<10	-8.31	0	326
2.53	ND<10	-7.47	0	327
2.41	ND<10	-7.59	0	328
ND<10	ND<10	0	0	328
3.72	ND<10	-6.28	0	329
5.2	ND<10	-4.8	0	330
4.8	2.9	1.9	1	330
4.3	2.9	1.4	2	330
1.4	2.9	-1.5	2	331
6.23	2.9	3.33	3	331
9.33	2.9	6.43	4	331
4.47	2.9	1.57	5	331
3.64	2.9	0.74	6	331
6.28	2.9	3.38	7	331
5.33	2.9	2.43	8	331
1.69	2.9	-1.21	8	332
2.53	2.9	-0.37	8	333
2.41	2.9	-0.49	8	334
ND<10	2.9	7.1	9	334
3.72	2.9	0.82	10	334
5.2	2.9	2.3	11	334
4.3	4.8	-0.5	11	335
1.4	4.8	-3.4	11	336
6.23	4.8	1.43	12	336
9.33	4.8	4.53	13	336
4.47	4.8	-0.33	13	337
3.64	4.8	-1.16	13	338
6.28	4.8	1.48	14	338
5.33	4.8	0.53	15	338
1.69	4.8	-3.11	15	339
2.53	4.8	-2.27	15	340
2.41	4.8	-2.39	15	341
ND<10	4.8	5.2	16	341
3.72	4.8	-1.08	16	342
5.2	4.8	0.4	17	342
1.4	4.3	-2.9	17	343
6.23	4.3	1.93	18	343
9.33	4.3	5.03	19	343
4.47	4.3	0.17	20	343
3.64	4.3	-0.66	20	344
6.28	4.3	1.98	21	344
5.33	4.3	1.03	22	344
1.69	4.3	-2.61	22	345
2.53	4.3	-1.77	22	346
2.41	4.3	-1.89	22	347
ND<10	4.3	5.7	23	347
3.72	4.3	-0.58	23	348
5.2	4.3	0.9	24	348
6.23	1.4	4.83	25	348
9.33	1.4	7.93	26	348
4.47	1.4	3.07	27	348
3.64	1.4	2.24	28	348
6.28	1.4	4.88	29	348
5.33	1.4	3.93	30	348
1.69	1.4	0.29	31	348
2.53	1.4	1.13	32	348
2.41	1.4	1.01	33	348
ND<10	1.4	8.6	34	348
3.72	1.4	2.32	35	348
5.2	1.4	3.8	36	348
9.33	6.23	3.1	37	348
4.47	6.23	-1.76	37	349
3.64	6.23	-2.59	37	350
6.28	6.23	0.05	38	350
5.33	6.23	-0.9	38	351
1.69	6.23	-4.54	38	352
2.53	6.23	-3.7	38	353
2.41	6.23	-3.82	38	354
ND<10	6.23	3.77	39	354
3.72	6.23	-2.51	39	355
5.2	6.23	-1.03	39	356

4.47	9.33	-4.86	39	357
3.64	9.33	-5.69	39	358
6.28	9.33	-3.05	39	359
5.33	9.33	-4	39	360
1.69	9.33	-7.64	39	361
2.53	9.33	-6.8	39	362
2.41	9.33	-6.92	39	363
ND<10	9.33	0.67	40	363
3.72	9.33	-5.61	40	364
5.2	9.33	-4.13	40	365
3.64	4.47	-0.83	40	366
6.28	4.47	1.81	41	366
5.33	4.47	0.86	42	366
1.69	4.47	-2.78	42	367
2.53	4.47	-1.94	42	368
2.41	4.47	-2.06	42	369
ND<10	4.47	5.53	43	369
3.72	4.47	-0.75	43	370
5.2	4.47	0.73	44	370
6.28	3.64	2.64	45	370
5.33	3.64	1.69	46	370
1.69	3.64	-1.95	46	371
2.53	3.64	-1.11	46	372
2.41	3.64	-1.23	46	373
ND<10	3.64	6.36	47	373
3.72	3.64	0.08	48	373
5.2	3.64	1.56	49	373
5.33	6.28	-0.95	49	374
1.69	6.28	-4.59	49	375
2.53	6.28	-3.75	49	376
2.41	6.28	-3.87	49	377
ND<10	6.28	3.72	50	377
3.72	6.28	-2.56	50	378
5.2	6.28	-1.08	50	379
1.69	5.33	-3.64	50	380
2.53	5.33	-2.8	50	381
2.41	5.33	-2.92	50	382
ND<10	5.33	4.67	51	382
3.72	5.33	-1.61	51	383
5.2	5.33	-0.13	51	384
2.53	1.69	0.84	52	384
2.41	1.69	0.72	53	384
ND<10	1.69	8.31	54	384
3.72	1.69	2.03	55	384
5.2	1.69	3.51	56	384
2.41	2.53	-0.12	56	385
ND<10	2.53	7.47	57	385
3.72	2.53	1.19	58	385
5.2	2.53	2.67	59	385
ND<10	2.41	7.59	60	385
3.72	2.41	1.31	61	385
5.2	2.41	2.79	62	385
3.72	ND<10	-6.28	62	386
5.2	ND<10	-4.8	62	387
5.2	3.72	1.48	63	387

S Statistic = 63 - 387 = -324

Tied Group	Value	Members
1	10	23

Time Period	Observations
12/16/1997	1
1/14/1998	1
2/13/1998	1

3/6/1998	1
10/15/1998	1
3/25/1999	1
9/23/1999	1
3/29/2000	1
9/14/2000	1
3/12/2001	1
10/13/2001	1
3/8/2002	1
9/19/2002	1
4/15/2003	1
10/16/2003	1
3/25/2004	1
10/22/2004	1
5/11/2005	1
10/11/2005	1
4/27/2006	1
10/18/2006	1
4/9/2007	1
9/24/2007	1
5/2/2008	1
12/5/2008	1
4/15/2009	1
10/9/2009	1
4/30/2010	1
10/5/2010	1
5/12/2011	1
10/6/2011	1
4/19/2012	1
10/23/2012	1
4/23/2013	1
9/10/2013	1
5/22/2014	1
9/30/2014	1
4/13/2015	1

There are 0 time periods with multiple data

A = 25806
B = 0
C = 10626
D = 0
E = 506
F = 0
a = 113886
b = 455544
c = 2812
Group Variance = 4893.33
Z-Score = -4.61743
Comparison Level at 95% confidence level = 1.65463 (upward trend)
-4.61743 <= 1.65463 indicating no evidence of an upward trend

Mann-Kendall Trend Analysis
Parameter: Vanadium
Location: MW-16
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<25	ND<40	-15	0	1
ND<25	ND<40	-15	0	2
ND<25	ND<40	-15	0	3
4.5	ND<40	-35.5	0	4
ND<25	ND<40	-15	0	5
2.1	ND<40	-37.9	0	6
2.06	ND<40	-37.94	0	7
1.97	ND<40	-38.03	0	8
1.63	ND<40	-38.37	0	9
ND<25	ND<40	-15	0	10
2.14	ND<40	-37.86	0	11
25	ND<40	-15	0	12
2.02	ND<40	-37.98	0	13
ND<25	ND<40	-15	0	14
ND<25	ND<40	-15	0	15
ND<25	ND<40	-15	0	16
2.06	ND<40	-37.94	0	17
2.54	ND<40	-37.46	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<25	ND<40	-15	0	19
ND<25	ND<40	-15	0	20
ND<25	ND<40	-15	0	21
4.5	ND<40	-35.5	0	22
ND<25	ND<40	-15	0	23
2.1	ND<40	-37.9	0	24
2.06	ND<40	-37.94	0	25
1.97	ND<40	-38.03	0	26
1.63	ND<40	-38.37	0	27
ND<25	ND<40	-15	0	28
2.14	ND<40	-37.86	0	29
25	ND<40	-15	0	30

2.02	ND<40	-37.98	0	31
ND<25	ND<40	-15	0	32
ND<25	ND<40	-15	0	33
ND<25	ND<40	-15	0	34
2.06	ND<40	-37.94	0	35
2.54	ND<40	-37.46	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<25	ND<40	-15	0	37
ND<25	ND<40	-15	0	38
ND<25	ND<40	-15	0	39
4.5	ND<40	-35.5	0	40
ND<25	ND<40	-15	0	41
2.1	ND<40	-37.9	0	42
2.06	ND<40	-37.94	0	43
1.97	ND<40	-38.03	0	44
1.63	ND<40	-38.37	0	45
ND<25	ND<40	-15	0	46
2.14	ND<40	-37.86	0	47
25	ND<40	-15	0	48
2.02	ND<40	-37.98	0	49
ND<25	ND<40	-15	0	50
ND<25	ND<40	-15	0	51
ND<25	ND<40	-15	0	52
2.06	ND<40	-37.94	0	53
2.54	ND<40	-37.46	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<25	ND<40	-15	0	55
ND<25	ND<40	-15	0	56
ND<25	ND<40	-15	0	57
4.5	ND<40	-35.5	0	58
ND<25	ND<40	-15	0	59
2.1	ND<40	-37.9	0	60
2.06	ND<40	-37.94	0	61
1.97	ND<40	-38.03	0	62
1.63	ND<40	-38.37	0	63
ND<25	ND<40	-15	0	64
2.14	ND<40	-37.86	0	65
25	ND<40	-15	0	66
2.02	ND<40	-37.98	0	67
ND<25	ND<40	-15	0	68
ND<25	ND<40	-15	0	69
ND<25	ND<40	-15	0	70
2.06	ND<40	-37.94	0	71
2.54	ND<40	-37.46	0	72

ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<25	ND<40	-15	0	73
ND<25	ND<40	-15	0	74
ND<25	ND<40	-15	0	75
4.5	ND<40	-35.5	0	76
ND<25	ND<40	-15	0	77
2.1	ND<40	-37.9	0	78
2.06	ND<40	-37.94	0	79
1.97	ND<40	-38.03	0	80
1.63	ND<40	-38.37	0	81
ND<25	ND<40	-15	0	82
2.14	ND<40	-37.86	0	83
25	ND<40	-15	0	84
2.02	ND<40	-37.98	0	85
ND<25	ND<40	-15	0	86
ND<25	ND<40	-15	0	87
ND<25	ND<40	-15	0	88
2.06	ND<40	-37.94	0	89
2.54	ND<40	-37.46	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<25	ND<40	-15	0	91
ND<25	ND<40	-15	0	92
ND<25	ND<40	-15	0	93
4.5	ND<40	-35.5	0	94
ND<25	ND<40	-15	0	95
2.1	ND<40	-37.9	0	96
2.06	ND<40	-37.94	0	97
1.97	ND<40	-38.03	0	98
1.63	ND<40	-38.37	0	99
ND<25	ND<40	-15	0	100
2.14	ND<40	-37.86	0	101
25	ND<40	-15	0	102
2.02	ND<40	-37.98	0	103
ND<25	ND<40	-15	0	104
ND<25	ND<40	-15	0	105
ND<25	ND<40	-15	0	106
2.06	ND<40	-37.94	0	107
2.54	ND<40	-37.46	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108

ND<40	ND<40	0	0	108
ND<25	ND<40	-15	0	109
ND<25	ND<40	-15	0	110
ND<25	ND<40	-15	0	111
4.5	ND<40	-35.5	0	112
ND<25	ND<40	-15	0	113
2.1	ND<40	-37.9	0	114
2.06	ND<40	-37.94	0	115
1.97	ND<40	-38.03	0	116
1.63	ND<40	-38.37	0	117
ND<25	ND<40	-15	0	118
2.14	ND<40	-37.86	0	119
25	ND<40	-15	0	120
2.02	ND<40	-37.98	0	121
ND<25	ND<40	-15	0	122
ND<25	ND<40	-15	0	123
ND<25	ND<40	-15	0	124
2.06	ND<40	-37.94	0	125
2.54	ND<40	-37.46	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
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ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<25	ND<40	-15	0	127
ND<25	ND<40	-15	0	128
ND<25	ND<40	-15	0	129
4.5	ND<40	-35.5	0	130
ND<25	ND<40	-15	0	131
2.1	ND<40	-37.9	0	132
2.06	ND<40	-37.94	0	133
1.97	ND<40	-38.03	0	134
1.63	ND<40	-38.37	0	135
ND<25	ND<40	-15	0	136
2.14	ND<40	-37.86	0	137
25	ND<40	-15	0	138
2.02	ND<40	-37.98	0	139
ND<25	ND<40	-15	0	140
ND<25	ND<40	-15	0	141
ND<25	ND<40	-15	0	142
2.06	ND<40	-37.94	0	143
2.54	ND<40	-37.46	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
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ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<25	ND<40	-15	0	145
ND<25	ND<40	-15	0	146
ND<25	ND<40	-15	0	147
4.5	ND<40	-35.5	0	148
ND<25	ND<40	-15	0	149
2.1	ND<40	-37.9	0	150
2.06	ND<40	-37.94	0	151
1.97	ND<40	-38.03	0	152
1.63	ND<40	-38.37	0	153
ND<25	ND<40	-15	0	154
2.14	ND<40	-37.86	0	155
25	ND<40	-15	0	156
2.02	ND<40	-37.98	0	157
ND<25	ND<40	-15	0	158
ND<25	ND<40	-15	0	159
ND<25	ND<40	-15	0	160

2.06	ND<40	-37.94	0	161
2.54	ND<40	-37.46	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<25	ND<40	-15	0	163
ND<25	ND<40	-15	0	164
ND<25	ND<40	-15	0	165
4.5	ND<40	-35.5	0	166
ND<25	ND<40	-15	0	167
2.1	ND<40	-37.9	0	168
2.06	ND<40	-37.94	0	169
1.97	ND<40	-38.03	0	170
1.63	ND<40	-38.37	0	171
ND<25	ND<40	-15	0	172
2.14	ND<40	-37.86	0	173
25	ND<40	-15	0	174
2.02	ND<40	-37.98	0	175
ND<25	ND<40	-15	0	176
ND<25	ND<40	-15	0	177
ND<25	ND<40	-15	0	178
2.06	ND<40	-37.94	0	179
2.54	ND<40	-37.46	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<25	ND<40	-15	0	181
ND<25	ND<40	-15	0	182
ND<25	ND<40	-15	0	183
4.5	ND<40	-35.5	0	184
ND<25	ND<40	-15	0	185
2.1	ND<40	-37.9	0	186
2.06	ND<40	-37.94	0	187
1.97	ND<40	-38.03	0	188
1.63	ND<40	-38.37	0	189
ND<25	ND<40	-15	0	190
2.14	ND<40	-37.86	0	191
25	ND<40	-15	0	192
2.02	ND<40	-37.98	0	193
ND<25	ND<40	-15	0	194
ND<25	ND<40	-15	0	195
ND<25	ND<40	-15	0	196
2.06	ND<40	-37.94	0	197
2.54	ND<40	-37.46	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<25	ND<40	-15	0	199
ND<25	ND<40	-15	0	200
ND<25	ND<40	-15	0	201
4.5	ND<40	-35.5	0	202
ND<25	ND<40	-15	0	203
2.1	ND<40	-37.9	0	204
2.06	ND<40	-37.94	0	205
1.97	ND<40	-38.03	0	206
1.63	ND<40	-38.37	0	207
ND<25	ND<40	-15	0	208
2.14	ND<40	-37.86	0	209

25	ND<40	-15	0	210
2.02	ND<40	-37.98	0	211
ND<25	ND<40	-15	0	212
ND<25	ND<40	-15	0	213
ND<25	ND<40	-15	0	214
2.06	ND<40	-37.94	0	215
2.54	ND<40	-37.46	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<25	ND<40	-15	0	217
ND<25	ND<40	-15	0	218
ND<25	ND<40	-15	0	219
4.5	ND<40	-35.5	0	220
ND<25	ND<40	-15	0	221
2.1	ND<40	-37.9	0	222
2.06	ND<40	-37.94	0	223
1.97	ND<40	-38.03	0	224
1.63	ND<40	-38.37	0	225
ND<25	ND<40	-15	0	226
2.14	ND<40	-37.86	0	227
25	ND<40	-15	0	228
2.02	ND<40	-37.98	0	229
ND<25	ND<40	-15	0	230
ND<25	ND<40	-15	0	231
ND<25	ND<40	-15	0	232
2.06	ND<40	-37.94	0	233
2.54	ND<40	-37.46	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<25	ND<40	-15	0	235
ND<25	ND<40	-15	0	236
ND<25	ND<40	-15	0	237
4.5	ND<40	-35.5	0	238
ND<25	ND<40	-15	0	239
2.1	ND<40	-37.9	0	240
2.06	ND<40	-37.94	0	241
1.97	ND<40	-38.03	0	242
1.63	ND<40	-38.37	0	243
ND<25	ND<40	-15	0	244
2.14	ND<40	-37.86	0	245
25	ND<40	-15	0	246
2.02	ND<40	-37.98	0	247
ND<25	ND<40	-15	0	248
ND<25	ND<40	-15	0	249
ND<25	ND<40	-15	0	250
2.06	ND<40	-37.94	0	251
2.54	ND<40	-37.46	0	252
ND<40	ND<40	0	0	252
ND<40	ND<40	0	0	252
ND<40	ND<40	0	0	252
ND<40	ND<40	0	0	252
ND<25	ND<40	-15	0	253
ND<25	ND<40	-15	0	254
ND<25	ND<40	-15	0	255
4.5	ND<40	-35.5	0	256
ND<25	ND<40	-15	0	257
2.1	ND<40	-37.9	0	258
2.06	ND<40	-37.94	0	259
1.97	ND<40	-38.03	0	260
1.63	ND<40	-38.37	0	261
ND<25	ND<40	-15	0	262
2.14	ND<40	-37.86	0	263
25	ND<40	-15	0	264
2.02	ND<40	-37.98	0	265
ND<25	ND<40	-15	0	266
ND<25	ND<40	-15	0	267

ND<25	ND<40	-15	0	268
2.06	ND<40	-37.94	0	269
2.54	ND<40	-37.46	0	270
ND<40	ND<40	0	0	270
ND<40	ND<40	0	0	270
ND<40	ND<40	0	0	270
ND<25	ND<40	-15	0	271
ND<25	ND<40	-15	0	272
ND<25	ND<40	-15	0	273
4.5	ND<40	-35.5	0	274
ND<25	ND<40	-15	0	275
2.1	ND<40	-37.9	0	276
2.06	ND<40	-37.94	0	277
1.97	ND<40	-38.03	0	278
1.63	ND<40	-38.37	0	279
ND<25	ND<40	-15	0	280
2.14	ND<40	-37.86	0	281
25	ND<40	-15	0	282
2.02	ND<40	-37.98	0	283
ND<25	ND<40	-15	0	284
ND<25	ND<40	-15	0	285
ND<25	ND<40	-15	0	286
2.06	ND<40	-37.94	0	287
2.54	ND<40	-37.46	0	288
ND<40	ND<40	0	0	288
ND<40	ND<40	0	0	288
ND<25	ND<40	-15	0	289
ND<25	ND<40	-15	0	290
ND<25	ND<40	-15	0	291
4.5	ND<40	-35.5	0	292
ND<25	ND<40	-15	0	293
2.1	ND<40	-37.9	0	294
2.06	ND<40	-37.94	0	295
1.97	ND<40	-38.03	0	296
1.63	ND<40	-38.37	0	297
ND<25	ND<40	-15	0	298
2.14	ND<40	-37.86	0	299
25	ND<40	-15	0	300
2.02	ND<40	-37.98	0	301
ND<25	ND<40	-15	0	302
ND<25	ND<40	-15	0	303
ND<25	ND<40	-15	0	304
2.06	ND<40	-37.94	0	305
2.54	ND<40	-37.46	0	306
ND<40	ND<40	0	0	306
ND<25	ND<40	-15	0	307
ND<25	ND<40	-15	0	308
ND<25	ND<40	-15	0	309
4.5	ND<40	-35.5	0	310
ND<25	ND<40	-15	0	311
2.1	ND<40	-37.9	0	312
2.06	ND<40	-37.94	0	313
1.97	ND<40	-38.03	0	314
1.63	ND<40	-38.37	0	315
ND<25	ND<40	-15	0	316
2.14	ND<40	-37.86	0	317
25	ND<40	-15	0	318
2.02	ND<40	-37.98	0	319
ND<25	ND<40	-15	0	320
ND<25	ND<40	-15	0	321
ND<25	ND<40	-15	0	322
2.06	ND<40	-37.94	0	323
2.54	ND<40	-37.46	0	324
ND<25	ND<40	-15	0	325
ND<25	ND<40	-15	0	326
ND<25	ND<40	-15	0	327
4.5	ND<40	-35.5	0	328
ND<25	ND<40	-15	0	329
2.1	ND<40	-37.9	0	330
2.06	ND<40	-37.94	0	331
1.97	ND<40	-38.03	0	332
1.63	ND<40	-38.37	0	333

ND<25	ND<40	-15	0	334
2.14	ND<40	-37.86	0	335
25	ND<40	-15	0	336
2.02	ND<40	-37.98	0	337
ND<25	ND<40	-15	0	338
ND<25	ND<40	-15	0	339
ND<25	ND<40	-15	0	340
2.06	ND<40	-37.94	0	341
2.54	ND<40	-37.46	0	342
ND<25	ND<25	0	0	342
ND<25	ND<25	0	0	342
4.5	ND<25	-20.5	0	343
ND<25	ND<25	0	0	343
2.1	ND<25	-22.9	0	344
2.06	ND<25	-22.94	0	345
1.97	ND<25	-23.03	0	346
1.63	ND<25	-23.37	0	347
ND<25	ND<25	0	0	347
2.14	ND<25	-22.86	0	348
25	ND<25	0	0	348
2.02	ND<25	-22.98	0	349
ND<25	ND<25	0	0	349
ND<25	ND<25	0	0	349
ND<25	ND<25	0	0	349
2.06	ND<25	-22.94	0	350
2.54	ND<25	-22.46	0	351
ND<25	ND<25	0	0	351
4.5	ND<25	-20.5	0	352
ND<25	ND<25	0	0	352
2.1	ND<25	-22.9	0	353
2.06	ND<25	-22.94	0	354
1.97	ND<25	-23.03	0	355
1.63	ND<25	-23.37	0	356
ND<25	ND<25	0	0	356
2.14	ND<25	-22.86	0	357
25	ND<25	0	0	357
2.02	ND<25	-22.98	0	358
ND<25	ND<25	0	0	358
ND<25	ND<25	0	0	358
ND<25	ND<25	0	0	358
2.06	ND<25	-22.94	0	359
2.54	ND<25	-22.46	0	360
4.5	ND<25	-20.5	0	361
ND<25	ND<25	0	0	361
2.1	ND<25	-22.9	0	362
2.06	ND<25	-22.94	0	363
1.97	ND<25	-23.03	0	364
1.63	ND<25	-23.37	0	365
ND<25	ND<25	0	0	365
2.14	ND<25	-22.86	0	366
25	ND<25	0	0	366
2.02	ND<25	-22.98	0	367
ND<25	ND<25	0	0	367
ND<25	ND<25	0	0	367
ND<25	ND<25	0	0	367
2.06	ND<25	-22.94	0	368
2.54	ND<25	-22.46	0	369
ND<25	4.5	20.5	1	369
2.1	4.5	-2.4	1	370
2.06	4.5	-2.44	1	371
1.97	4.5	-2.53	1	372
1.63	4.5	-2.87	1	373
ND<25	4.5	20.5	2	373
2.14	4.5	-2.36	2	374
25	4.5	20.5	3	374
2.02	4.5	-2.48	3	375
ND<25	4.5	20.5	4	375
ND<25	4.5	20.5	5	375
ND<25	4.5	20.5	6	375
2.06	4.5	-2.44	6	376
2.54	4.5	-1.96	6	377

2.1	ND<25	-22.9	6	378
2.06	ND<25	-22.94	6	379
1.97	ND<25	-23.03	6	380
1.63	ND<25	-23.37	6	381
ND<25	ND<25	0	6	381
2.14	ND<25	-22.86	6	382
25	ND<25	0	6	382
2.02	ND<25	-22.98	6	383
ND<25	ND<25	0	6	383
ND<25	ND<25	0	6	383
ND<25	ND<25	0	6	383
2.06	ND<25	-22.94	6	384
2.54	ND<25	-22.46	6	385
2.06	2.1	-0.04	6	386
1.97	2.1	-0.13	6	387
1.63	2.1	-0.47	6	388
ND<25	2.1	22.9	7	388
2.14	2.1	0.04	8	388
25	2.1	22.9	9	388
2.02	2.1	-0.08	9	389
ND<25	2.1	22.9	10	389
ND<25	2.1	22.9	11	389
ND<25	2.1	22.9	12	389
2.06	2.1	-0.04	12	390
2.54	2.1	0.44	13	390
1.97	2.06	-0.09	13	391
1.63	2.06	-0.43	13	392
ND<25	2.06	22.94	14	392
2.14	2.06	0.08	15	392
25	2.06	22.94	16	392
2.02	2.06	-0.04	16	393
ND<25	2.06	22.94	17	393
ND<25	2.06	22.94	18	393
ND<25	2.06	22.94	19	393
2.06	2.06	0	19	393
2.54	2.06	0.48	20	393
1.63	1.97	-0.34	20	394
ND<25	1.97	23.03	21	394
2.14	1.97	0.17	22	394
25	1.97	23.03	23	394
2.02	1.97	0.05	24	394
ND<25	1.97	23.03	25	394
ND<25	1.97	23.03	26	394
ND<25	1.97	23.03	27	394
2.06	1.97	0.09	28	394
2.54	1.97	0.57	29	394
ND<25	1.63	23.37	30	394
2.14	1.63	0.51	31	394
25	1.63	23.37	32	394
2.02	1.63	0.39	33	394
ND<25	1.63	23.37	34	394
ND<25	1.63	23.37	35	394
ND<25	1.63	23.37	36	394
2.06	1.63	0.43	37	394
2.54	1.63	0.91	38	394
2.14	ND<25	-22.86	38	395
25	ND<25	0	38	395
2.02	ND<25	-22.98	38	396
ND<25	ND<25	0	38	396
ND<25	ND<25	0	38	396
ND<25	ND<25	0	38	396
2.06	ND<25	-22.94	38	397
2.54	ND<25	-22.46	38	398
25	2.14	22.86	39	398
2.02	2.14	-0.12	39	399
ND<25	2.14	22.86	40	399
ND<25	2.14	22.86	41	399
ND<25	2.14	22.86	42	399
2.06	2.14	-0.08	42	400
2.54	2.14	0.4	43	400

2.02	25	-22.98	43	401
ND<25	25	0	43	401
ND<25	25	0	43	401
ND<25	25	0	43	401
2.06	25	-22.94	43	402
2.54	25	-22.46	43	403
ND<25	2.02	22.98	44	403
ND<25	2.02	22.98	45	403
ND<25	2.02	22.98	46	403
2.06	2.02	0.04	47	403
2.54	2.02	0.52	48	403
ND<25	ND<25	0	48	403
ND<25	ND<25	0	48	403
2.06	ND<25	-22.94	48	404
2.54	ND<25	-22.46	48	405
ND<25	ND<25	0	48	405
2.06	ND<25	-22.94	48	406
2.54	ND<25	-22.46	48	407
2.06	ND<25	-22.94	48	408
2.54	ND<25	-22.46	48	409
2.54	2.06	0.48	49	409

S Statistic = 49 - 409 = -360

Tied Group	Value	Members
1	40	19
2	25	9
3	2.06	2

Time Period	Observations
12/16/1997	1
1/14/1998	1
2/13/1998	1
3/6/1998	1
10/15/1998	1
3/25/1999	1
9/23/1999	1
3/29/2000	1
9/14/2000	1
3/12/2001	1
10/13/2001	1
3/8/2002	1
9/19/2002	1
4/15/2003	1
10/16/2003	1
3/25/2004	1
10/22/2004	1
5/11/2005	1
10/11/2005	1
4/27/2006	1
4/9/2007	1
9/24/2007	1
5/2/2008	1
12/5/2008	1
4/15/2009	1
10/9/2009	1
4/30/2010	1
10/5/2010	1
5/12/2011	1
10/6/2011	1
4/19/2012	1
10/23/2012	1
4/23/2013	1
9/10/2013	1
5/22/2014	1
9/30/2014	1
4/13/2015	1

There are 0 time periods with multiple data

A = 16380
B = 0
C = 6318
D = 0
E = 416
F = 0
a = 105228
b = 419580
c = 2664
Group Variance = 4936
Z-Score = -5.10983
Comparison Level at 95% confidence level = 1.65463 (upward trend)
-5.10983 <= 1.65463 indicating no evidence of an upward trend

Mann-Kendall Trend Analysis
Parameter: Vanadium
Location: MW-19
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<40	ND<40	0	0	0
64	ND<40	24	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<40	ND<40	0	1	0
ND<25	ND<40	-15	1	1
ND<25	ND<40	-15	1	2
3.9	ND<40	-36.1	1	3
5	ND<40	-35	1	4
3.6	ND<40	-36.4	1	5
4.7	ND<40	-35.3	1	6
5.42	ND<40	-34.58	1	7
3.95	ND<40	-36.05	1	8
4.04	ND<40	-35.96	1	9
7.24	ND<40	-32.76	1	10
5.38	ND<40	-34.62	1	11
5.48	ND<40	-34.52	1	12
4.2	ND<40	-35.8	1	13
4.39	ND<40	-35.61	1	14
3.78	ND<40	-36.22	1	15
4.43	ND<40	-35.57	1	16
4.99	ND<40	-35.01	1	17
2.9	ND<40	-37.1	1	18
64	ND<40	24	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<40	ND<40	0	2	18
ND<25	ND<40	-15	2	19
ND<25	ND<40	-15	2	20
3.9	ND<40	-36.1	2	21
5	ND<40	-35	2	22
3.6	ND<40	-36.4	2	23
4.7	ND<40	-35.3	2	24
5.42	ND<40	-34.58	2	25
3.95	ND<40	-36.05	2	26
4.04	ND<40	-35.96	2	27
7.24	ND<40	-32.76	2	28
5.38	ND<40	-34.62	2	29
5.48	ND<40	-34.52	2	30

4.2	ND<40	-35.8	2	31
4.39	ND<40	-35.61	2	32
3.78	ND<40	-36.22	2	33
4.43	ND<40	-35.57	2	34
4.99	ND<40	-35.01	2	35
2.9	ND<40	-37.1	2	36
ND<40	64	-24	2	37
ND<40	64	-24	2	38
ND<40	64	-24	2	39
ND<40	64	-24	2	40
ND<40	64	-24	2	41
ND<40	64	-24	2	42
ND<40	64	-24	2	43
ND<40	64	-24	2	44
ND<40	64	-24	2	45
ND<40	64	-24	2	46
ND<40	64	-24	2	47
ND<40	64	-24	2	48
ND<40	64	-24	2	49
ND<40	64	-24	2	50
ND<40	64	-24	2	51
ND<40	64	-24	2	52
ND<25	64	-39	2	53
ND<25	64	-39	2	54
3.9	64	-60.1	2	55
5	64	-59	2	56
3.6	64	-60.4	2	57
4.7	64	-59.3	2	58
5.42	64	-58.58	2	59
3.95	64	-60.05	2	60
4.04	64	-59.96	2	61
7.24	64	-56.76	2	62
5.38	64	-58.62	2	63
5.48	64	-58.52	2	64
4.2	64	-59.8	2	65
4.39	64	-59.61	2	66
3.78	64	-60.22	2	67
4.43	64	-59.57	2	68
4.99	64	-59.01	2	69
2.9	64	-61.1	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<40	ND<40	0	2	70
ND<25	ND<40	-15	2	71
ND<25	ND<40	-15	2	72
3.9	ND<40	-36.1	2	73
5	ND<40	-35	2	74
3.6	ND<40	-36.4	2	75
4.7	ND<40	-35.3	2	76
5.42	ND<40	-34.58	2	77
3.95	ND<40	-36.05	2	78
4.04	ND<40	-35.96	2	79
7.24	ND<40	-32.76	2	80
5.38	ND<40	-34.62	2	81
5.48	ND<40	-34.52	2	82
4.2	ND<40	-35.8	2	83
4.39	ND<40	-35.61	2	84
3.78	ND<40	-36.22	2	85
4.43	ND<40	-35.57	2	86
4.99	ND<40	-35.01	2	87
2.9	ND<40	-37.1	2	88

ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<40	ND<40	0	2	88
ND<25	ND<40	-15	2	89
ND<25	ND<40	-15	2	90
3.9	ND<40	-36.1	2	91
5	ND<40	-35	2	92
3.6	ND<40	-36.4	2	93
4.7	ND<40	-35.3	2	94
5.42	ND<40	-34.58	2	95
3.95	ND<40	-36.05	2	96
4.04	ND<40	-35.96	2	97
7.24	ND<40	-32.76	2	98
5.38	ND<40	-34.62	2	99
5.48	ND<40	-34.52	2	100
4.2	ND<40	-35.8	2	101
4.39	ND<40	-35.61	2	102
3.78	ND<40	-36.22	2	103
4.43	ND<40	-35.57	2	104
4.99	ND<40	-35.01	2	105
2.9	ND<40	-37.1	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<40	ND<40	0	2	106
ND<25	ND<40	-15	2	107
ND<25	ND<40	-15	2	108
3.9	ND<40	-36.1	2	109
5	ND<40	-35	2	110
3.6	ND<40	-36.4	2	111
4.7	ND<40	-35.3	2	112
5.42	ND<40	-34.58	2	113
3.95	ND<40	-36.05	2	114
4.04	ND<40	-35.96	2	115
7.24	ND<40	-32.76	2	116
5.38	ND<40	-34.62	2	117
5.48	ND<40	-34.52	2	118
4.2	ND<40	-35.8	2	119
4.39	ND<40	-35.61	2	120
3.78	ND<40	-36.22	2	121
4.43	ND<40	-35.57	2	122
4.99	ND<40	-35.01	2	123
2.9	ND<40	-37.1	2	124
ND<40	ND<40	0	2	124
ND<40	ND<40	0	2	124
ND<40	ND<40	0	2	124
ND<40	ND<40	0	2	124
ND<40	ND<40	0	2	124
ND<40	ND<40	0	2	124
ND<40	ND<40	0	2	124
ND<40	ND<40	0	2	124
ND<40	ND<40	0	2	124
ND<40	ND<40	0	2	124
ND<40	ND<40	0	2	124

ND<40	ND<40	0	2	124
ND<25	ND<40	-15	2	125
ND<25	ND<40	-15	2	126
3.9	ND<40	-36.1	2	127
5	ND<40	-35	2	128
3.6	ND<40	-36.4	2	129
4.7	ND<40	-35.3	2	130
5.42	ND<40	-34.58	2	131
3.95	ND<40	-36.05	2	132
4.04	ND<40	-35.96	2	133
7.24	ND<40	-32.76	2	134
5.38	ND<40	-34.62	2	135
5.48	ND<40	-34.52	2	136
4.2	ND<40	-35.8	2	137
4.39	ND<40	-35.61	2	138
3.78	ND<40	-36.22	2	139
4.43	ND<40	-35.57	2	140
4.99	ND<40	-35.01	2	141
2.9	ND<40	-37.1	2	142
ND<40	ND<40	0	2	142
ND<40	ND<40	0	2	142
ND<40	ND<40	0	2	142
ND<40	ND<40	0	2	142
ND<40	ND<40	0	2	142
ND<40	ND<40	0	2	142
ND<40	ND<40	0	2	142
ND<40	ND<40	0	2	142
ND<40	ND<40	0	2	142
ND<40	ND<40	0	2	142
ND<40	ND<40	0	2	142
ND<25	ND<40	-15	2	143
ND<25	ND<40	-15	2	144
3.9	ND<40	-36.1	2	145
5	ND<40	-35	2	146
3.6	ND<40	-36.4	2	147
4.7	ND<40	-35.3	2	148
5.42	ND<40	-34.58	2	149
3.95	ND<40	-36.05	2	150
4.04	ND<40	-35.96	2	151
7.24	ND<40	-32.76	2	152
5.38	ND<40	-34.62	2	153
5.48	ND<40	-34.52	2	154
4.2	ND<40	-35.8	2	155
4.39	ND<40	-35.61	2	156
3.78	ND<40	-36.22	2	157
4.43	ND<40	-35.57	2	158
4.99	ND<40	-35.01	2	159
2.9	ND<40	-37.1	2	160
ND<40	ND<40	0	2	160
ND<40	ND<40	0	2	160
ND<40	ND<40	0	2	160
ND<40	ND<40	0	2	160
ND<40	ND<40	0	2	160
ND<40	ND<40	0	2	160
ND<40	ND<40	0	2	160
ND<40	ND<40	0	2	160
ND<40	ND<40	0	2	160
ND<40	ND<40	0	2	160
ND<25	ND<40	-15	2	161
ND<25	ND<40	-15	2	162
3.9	ND<40	-36.1	2	163
5	ND<40	-35	2	164
3.6	ND<40	-36.4	2	165
4.7	ND<40	-35.3	2	166
5.42	ND<40	-34.58	2	167
3.95	ND<40	-36.05	2	168
4.04	ND<40	-35.96	2	169
7.24	ND<40	-32.76	2	170
5.38	ND<40	-34.62	2	171
5.48	ND<40	-34.52	2	172
4.2	ND<40	-35.8	2	173
4.39	ND<40	-35.61	2	174
3.78	ND<40	-36.22	2	175
4.43	ND<40	-35.57	2	176

4.99	ND<40	-35.01	2	177
2.9	ND<40	-37.1	2	178
ND<40	ND<40	0	2	178
ND<40	ND<40	0	2	178
ND<40	ND<40	0	2	178
ND<40	ND<40	0	2	178
ND<40	ND<40	0	2	178
ND<40	ND<40	0	2	178
ND<40	ND<40	0	2	178
ND<40	ND<40	0	2	178
ND<40	ND<40	0	2	178
ND<25	ND<40	-15	2	179
ND<25	ND<40	-15	2	180
3.9	ND<40	-36.1	2	181
5	ND<40	-35	2	182
3.6	ND<40	-36.4	2	183
4.7	ND<40	-35.3	2	184
5.42	ND<40	-34.58	2	185
3.95	ND<40	-36.05	2	186
4.04	ND<40	-35.96	2	187
7.24	ND<40	-32.76	2	188
5.38	ND<40	-34.62	2	189
5.48	ND<40	-34.52	2	190
4.2	ND<40	-35.8	2	191
4.39	ND<40	-35.61	2	192
3.78	ND<40	-36.22	2	193
4.43	ND<40	-35.57	2	194
4.99	ND<40	-35.01	2	195
2.9	ND<40	-37.1	2	196
ND<40	ND<40	0	2	196
ND<40	ND<40	0	2	196
ND<40	ND<40	0	2	196
ND<40	ND<40	0	2	196
ND<40	ND<40	0	2	196
ND<40	ND<40	0	2	196
ND<40	ND<40	0	2	196
ND<40	ND<40	0	2	196
ND<25	ND<40	-15	2	197
ND<25	ND<40	-15	2	198
3.9	ND<40	-36.1	2	199
5	ND<40	-35	2	200
3.6	ND<40	-36.4	2	201
4.7	ND<40	-35.3	2	202
5.42	ND<40	-34.58	2	203
3.95	ND<40	-36.05	2	204
4.04	ND<40	-35.96	2	205
7.24	ND<40	-32.76	2	206
5.38	ND<40	-34.62	2	207
5.48	ND<40	-34.52	2	208
4.2	ND<40	-35.8	2	209
4.39	ND<40	-35.61	2	210
3.78	ND<40	-36.22	2	211
4.43	ND<40	-35.57	2	212
4.99	ND<40	-35.01	2	213
2.9	ND<40	-37.1	2	214
ND<40	ND<40	0	2	214
ND<40	ND<40	0	2	214
ND<40	ND<40	0	2	214
ND<40	ND<40	0	2	214
ND<40	ND<40	0	2	214
ND<40	ND<40	0	2	214
ND<40	ND<40	0	2	214
ND<25	ND<40	-15	2	215
ND<25	ND<40	-15	2	216
3.9	ND<40	-36.1	2	217
5	ND<40	-35	2	218
3.6	ND<40	-36.4	2	219
4.7	ND<40	-35.3	2	220
5.42	ND<40	-34.58	2	221
3.95	ND<40	-36.05	2	222
4.04	ND<40	-35.96	2	223
7.24	ND<40	-32.76	2	224
5.38	ND<40	-34.62	2	225

5.48	ND<40	-34.52	2	226
4.2	ND<40	-35.8	2	227
4.39	ND<40	-35.61	2	228
3.78	ND<40	-36.22	2	229
4.43	ND<40	-35.57	2	230
4.99	ND<40	-35.01	2	231
2.9	ND<40	-37.1	2	232
ND<40	ND<40	0	2	232
ND<40	ND<40	0	2	232
ND<40	ND<40	0	2	232
ND<40	ND<40	0	2	232
ND<40	ND<40	0	2	232
ND<40	ND<40	0	2	232
ND<25	ND<40	-15	2	233
ND<25	ND<40	-15	2	234
3.9	ND<40	-36.1	2	235
5	ND<40	-35	2	236
3.6	ND<40	-36.4	2	237
4.7	ND<40	-35.3	2	238
5.42	ND<40	-34.58	2	239
3.95	ND<40	-36.05	2	240
4.04	ND<40	-35.96	2	241
7.24	ND<40	-32.76	2	242
5.38	ND<40	-34.62	2	243
5.48	ND<40	-34.52	2	244
4.2	ND<40	-35.8	2	245
4.39	ND<40	-35.61	2	246
3.78	ND<40	-36.22	2	247
4.43	ND<40	-35.57	2	248
4.99	ND<40	-35.01	2	249
2.9	ND<40	-37.1	2	250
ND<40	ND<40	0	2	250
ND<40	ND<40	0	2	250
ND<40	ND<40	0	2	250
ND<40	ND<40	0	2	250
ND<40	ND<40	0	2	250
ND<25	ND<40	-15	2	251
ND<25	ND<40	-15	2	252
3.9	ND<40	-36.1	2	253
5	ND<40	-35	2	254
3.6	ND<40	-36.4	2	255
4.7	ND<40	-35.3	2	256
5.42	ND<40	-34.58	2	257
3.95	ND<40	-36.05	2	258
4.04	ND<40	-35.96	2	259
7.24	ND<40	-32.76	2	260
5.38	ND<40	-34.62	2	261
5.48	ND<40	-34.52	2	262
4.2	ND<40	-35.8	2	263
4.39	ND<40	-35.61	2	264
3.78	ND<40	-36.22	2	265
4.43	ND<40	-35.57	2	266
4.99	ND<40	-35.01	2	267
2.9	ND<40	-37.1	2	268
ND<40	ND<40	0	2	268
ND<40	ND<40	0	2	268
ND<40	ND<40	0	2	268
ND<40	ND<40	0	2	268
ND<25	ND<40	-15	2	269
ND<25	ND<40	-15	2	270
3.9	ND<40	-36.1	2	271
5	ND<40	-35	2	272
3.6	ND<40	-36.4	2	273
4.7	ND<40	-35.3	2	274
5.42	ND<40	-34.58	2	275
3.95	ND<40	-36.05	2	276
4.04	ND<40	-35.96	2	277
7.24	ND<40	-32.76	2	278
5.38	ND<40	-34.62	2	279
5.48	ND<40	-34.52	2	280
4.2	ND<40	-35.8	2	281
4.39	ND<40	-35.61	2	282
3.78	ND<40	-36.22	2	283

4.43	ND<40	-35.57	2	284
4.99	ND<40	-35.01	2	285
2.9	ND<40	-37.1	2	286
ND<40	ND<40	0	2	286
ND<40	ND<40	0	2	286
ND<40	ND<40	0	2	286
ND<25	ND<40	-15	2	287
ND<25	ND<40	-15	2	288
3.9	ND<40	-36.1	2	289
5	ND<40	-35	2	290
3.6	ND<40	-36.4	2	291
4.7	ND<40	-35.3	2	292
5.42	ND<40	-34.58	2	293
3.95	ND<40	-36.05	2	294
4.04	ND<40	-35.96	2	295
7.24	ND<40	-32.76	2	296
5.38	ND<40	-34.62	2	297
5.48	ND<40	-34.52	2	298
4.2	ND<40	-35.8	2	299
4.39	ND<40	-35.61	2	300
3.78	ND<40	-36.22	2	301
4.43	ND<40	-35.57	2	302
4.99	ND<40	-35.01	2	303
2.9	ND<40	-37.1	2	304
ND<40	ND<40	0	2	304
ND<40	ND<40	0	2	304
ND<25	ND<40	-15	2	305
ND<25	ND<40	-15	2	306
3.9	ND<40	-36.1	2	307
5	ND<40	-35	2	308
3.6	ND<40	-36.4	2	309
4.7	ND<40	-35.3	2	310
5.42	ND<40	-34.58	2	311
3.95	ND<40	-36.05	2	312
4.04	ND<40	-35.96	2	313
7.24	ND<40	-32.76	2	314
5.38	ND<40	-34.62	2	315
5.48	ND<40	-34.52	2	316
4.2	ND<40	-35.8	2	317
4.39	ND<40	-35.61	2	318
3.78	ND<40	-36.22	2	319
4.43	ND<40	-35.57	2	320
4.99	ND<40	-35.01	2	321
2.9	ND<40	-37.1	2	322
ND<40	ND<40	0	2	322
ND<25	ND<40	-15	2	323
ND<25	ND<40	-15	2	324
3.9	ND<40	-36.1	2	325
5	ND<40	-35	2	326
3.6	ND<40	-36.4	2	327
4.7	ND<40	-35.3	2	328
5.42	ND<40	-34.58	2	329
3.95	ND<40	-36.05	2	330
4.04	ND<40	-35.96	2	331
7.24	ND<40	-32.76	2	332
5.38	ND<40	-34.62	2	333
5.48	ND<40	-34.52	2	334
4.2	ND<40	-35.8	2	335
4.39	ND<40	-35.61	2	336
3.78	ND<40	-36.22	2	337
4.43	ND<40	-35.57	2	338
4.99	ND<40	-35.01	2	339
2.9	ND<40	-37.1	2	340
ND<25	ND<40	-15	2	341
ND<25	ND<40	-15	2	342
3.9	ND<40	-36.1	2	343
5	ND<40	-35	2	344
3.6	ND<40	-36.4	2	345
4.7	ND<40	-35.3	2	346
5.42	ND<40	-34.58	2	347
3.95	ND<40	-36.05	2	348
4.04	ND<40	-35.96	2	349

7.24	ND<40	-32.76	2	350
5.38	ND<40	-34.62	2	351
5.48	ND<40	-34.52	2	352
4.2	ND<40	-35.8	2	353
4.39	ND<40	-35.61	2	354
3.78	ND<40	-36.22	2	355
4.43	ND<40	-35.57	2	356
4.99	ND<40	-35.01	2	357
2.9	ND<40	-37.1	2	358
ND<25	ND<25	0	2	358
3.9	ND<25	-21.1	2	359
5	ND<25	-20	2	360
3.6	ND<25	-21.4	2	361
4.7	ND<25	-20.3	2	362
5.42	ND<25	-19.58	2	363
3.95	ND<25	-21.05	2	364
4.04	ND<25	-20.96	2	365
7.24	ND<25	-17.76	2	366
5.38	ND<25	-19.62	2	367
5.48	ND<25	-19.52	2	368
4.2	ND<25	-20.8	2	369
4.39	ND<25	-20.61	2	370
3.78	ND<25	-21.22	2	371
4.43	ND<25	-20.57	2	372
4.99	ND<25	-20.01	2	373
2.9	ND<25	-22.1	2	374
3.9	ND<25	-21.1	2	375
5	ND<25	-20	2	376
3.6	ND<25	-21.4	2	377
4.7	ND<25	-20.3	2	378
5.42	ND<25	-19.58	2	379
3.95	ND<25	-21.05	2	380
4.04	ND<25	-20.96	2	381
7.24	ND<25	-17.76	2	382
5.38	ND<25	-19.62	2	383
5.48	ND<25	-19.52	2	384
4.2	ND<25	-20.8	2	385
4.39	ND<25	-20.61	2	386
3.78	ND<25	-21.22	2	387
4.43	ND<25	-20.57	2	388
4.99	ND<25	-20.01	2	389
2.9	ND<25	-22.1	2	390
5	3.9	1.1	3	390
3.6	3.9	-0.3	3	391
4.7	3.9	0.8	4	391
5.42	3.9	1.52	5	391
3.95	3.9	0.05	6	391
4.04	3.9	0.14	7	391
7.24	3.9	3.34	8	391
5.38	3.9	1.48	9	391
5.48	3.9	1.58	10	391
4.2	3.9	0.3	11	391
4.39	3.9	0.49	12	391
3.78	3.9	-0.12	12	392
4.43	3.9	0.53	13	392
4.99	3.9	1.09	14	392
2.9	3.9	-1	14	393
3.6	5	-1.4	14	394
4.7	5	-0.3	14	395
5.42	5	0.42	15	395
3.95	5	-1.05	15	396
4.04	5	-0.96	15	397
7.24	5	2.24	16	397
5.38	5	0.38	17	397
5.48	5	0.48	18	397
4.2	5	-0.8	18	398
4.39	5	-0.61	18	399
3.78	5	-1.22	18	400
4.43	5	-0.57	18	401
4.99	5	-0.01	18	402
2.9	5	-2.1	18	403

4.7	3.6	1.1	19	403
5.42	3.6	1.82	20	403
3.95	3.6	0.35	21	403
4.04	3.6	0.44	22	403
7.24	3.6	3.64	23	403
5.38	3.6	1.78	24	403
5.48	3.6	1.88	25	403
4.2	3.6	0.6	26	403
4.39	3.6	0.79	27	403
3.78	3.6	0.18	28	403
4.43	3.6	0.83	29	403
4.99	3.6	1.39	30	403
2.9	3.6	-0.7	30	404
5.42	4.7	0.72	31	404
3.95	4.7	-0.75	31	405
4.04	4.7	-0.66	31	406
7.24	4.7	2.54	32	406
5.38	4.7	0.68	33	406
5.48	4.7	0.78	34	406
4.2	4.7	-0.5	34	407
4.39	4.7	-0.31	34	408
3.78	4.7	-0.92	34	409
4.43	4.7	-0.27	34	410
4.99	4.7	0.29	35	410
2.9	4.7	-1.8	35	411
3.95	5.42	-1.47	35	412
4.04	5.42	-1.38	35	413
7.24	5.42	1.82	36	413
5.38	5.42	-0.04	36	414
5.48	5.42	0.06	37	414
4.2	5.42	-1.22	37	415
4.39	5.42	-1.03	37	416
3.78	5.42	-1.64	37	417
4.43	5.42	-0.99	37	418
4.99	5.42	-0.43	37	419
2.9	5.42	-2.52	37	420
4.04	3.95	0.09	38	420
7.24	3.95	3.29	39	420
5.38	3.95	1.43	40	420
5.48	3.95	1.53	41	420
4.2	3.95	0.25	42	420
4.39	3.95	0.44	43	420
3.78	3.95	-0.17	43	421
4.43	3.95	0.48	44	421
4.99	3.95	1.04	45	421
2.9	3.95	-1.05	45	422
7.24	4.04	3.2	46	422
5.38	4.04	1.34	47	422
5.48	4.04	1.44	48	422
4.2	4.04	0.16	49	422
4.39	4.04	0.35	50	422
3.78	4.04	-0.26	50	423
4.43	4.04	0.39	51	423
4.99	4.04	0.95	52	423
2.9	4.04	-1.14	52	424
5.38	7.24	-1.86	52	425
5.48	7.24	-1.76	52	426
4.2	7.24	-3.04	52	427
4.39	7.24	-2.85	52	428
3.78	7.24	-3.46	52	429
4.43	7.24	-2.81	52	430
4.99	7.24	-2.25	52	431
2.9	7.24	-4.34	52	432
5.48	5.38	0.1	53	432
4.2	5.38	-1.18	53	433
4.39	5.38	-0.99	53	434
3.78	5.38	-1.6	53	435
4.43	5.38	-0.95	53	436
4.99	5.38	-0.39	53	437
2.9	5.38	-2.48	53	438

4.2	5.48	-1.28	53	439
4.39	5.48	-1.09	53	440
3.78	5.48	-1.7	53	441
4.43	5.48	-1.05	53	442
4.99	5.48	-0.49	53	443
2.9	5.48	-2.58	53	444
4.39	4.2	0.19	54	444
3.78	4.2	-0.42	54	445
4.43	4.2	0.23	55	445
4.99	4.2	0.79	56	445
2.9	4.2	-1.3	56	446
3.78	4.39	-0.61	56	447
4.43	4.39	0.04	57	447
4.99	4.39	0.6	58	447
2.9	4.39	-1.49	58	448
4.43	3.78	0.65	59	448
4.99	3.78	1.21	60	448
2.9	3.78	-0.88	60	449
4.99	4.43	0.56	61	449
2.9	4.43	-1.53	61	450
2.9	4.99	-2.09	61	451

S Statistic = 61 - 451 = -390

Tied Group	Value	Members
1	40	18
2	25	2

Time Period	Observations
12/16/1997	1
1/14/1998	1
2/13/1998	1
3/6/1998	1
10/15/1998	1
3/25/1999	1
9/23/1999	1
3/29/2000	1
9/14/2000	1
3/12/2001	1
10/13/2001	1
3/8/2002	1
9/19/2002	1
4/15/2003	1
10/16/2003	1
3/25/2004	1
10/22/2004	1
5/11/2005	1
10/11/2005	1
4/27/2006	1
4/9/2007	1
9/24/2007	1
5/2/2008	1
12/5/2008	1
4/15/2009	1
10/9/2009	1
4/30/2010	1
10/5/2010	1
5/12/2011	1
10/6/2011	1
4/19/2012	1
10/23/2012	1
4/23/2013	1
9/10/2013	1
5/22/2014	1
9/30/2014	1
4/13/2015	1

There are 0 time periods with multiple data

A = 12564

B = 0
C = 4896
D = 0
E = 308
F = 0
a = 105228
b = 419580
c = 2664
Group Variance = 5148
Z-Score = -5.42164
Comparison Level at 95% confidence level = 1.65463 (upward trend)
-5.42164 <= 1.65463 indicating no evidence of an upward trend

Mann-Kendall Trend Analysis
Parameter: Vanadium
Location: MW-20
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<25	ND<40	-15	0	1
ND<25	ND<40	-15	0	2
2.3	ND<40	-37.7	0	3
5.1	ND<40	-34.9	0	4
6	ND<40	-34	0	5
5.7	ND<40	-34.3	0	6
6.8	ND<40	-33.2	0	7
5.12	ND<40	-34.88	0	8
5.31	ND<40	-34.69	0	9
6.25	ND<40	-33.75	0	10
5.58	ND<40	-34.42	0	11
5.56	ND<40	-34.44	0	12
6.72	ND<40	-33.28	0	13
6.54	ND<40	-33.46	0	14
6.7	ND<40	-33.3	0	15
5.36	ND<40	-34.64	0	16
3.92	ND<40	-36.08	0	17
4.34	ND<40	-35.66	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<25	ND<40	-15	0	19
ND<25	ND<40	-15	0	20
2.3	ND<40	-37.7	0	21
5.1	ND<40	-34.9	0	22
6	ND<40	-34	0	23
5.7	ND<40	-34.3	0	24
6.8	ND<40	-33.2	0	25
5.12	ND<40	-34.88	0	26
5.31	ND<40	-34.69	0	27
6.25	ND<40	-33.75	0	28
5.58	ND<40	-34.42	0	29
5.56	ND<40	-34.44	0	30

6.72	ND<40	-33.28	0	31
6.54	ND<40	-33.46	0	32
6.7	ND<40	-33.3	0	33
5.36	ND<40	-34.64	0	34
3.92	ND<40	-36.08	0	35
4.34	ND<40	-35.66	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<25	ND<40	-15	0	37
ND<25	ND<40	-15	0	38
2.3	ND<40	-37.7	0	39
5.1	ND<40	-34.9	0	40
6	ND<40	-34	0	41
5.7	ND<40	-34.3	0	42
6.8	ND<40	-33.2	0	43
5.12	ND<40	-34.88	0	44
5.31	ND<40	-34.69	0	45
6.25	ND<40	-33.75	0	46
5.58	ND<40	-34.42	0	47
5.56	ND<40	-34.44	0	48
6.72	ND<40	-33.28	0	49
6.54	ND<40	-33.46	0	50
6.7	ND<40	-33.3	0	51
5.36	ND<40	-34.64	0	52
3.92	ND<40	-36.08	0	53
4.34	ND<40	-35.66	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<25	ND<40	-15	0	55
ND<25	ND<40	-15	0	56
2.3	ND<40	-37.7	0	57
5.1	ND<40	-34.9	0	58
6	ND<40	-34	0	59
5.7	ND<40	-34.3	0	60
6.8	ND<40	-33.2	0	61
5.12	ND<40	-34.88	0	62
5.31	ND<40	-34.69	0	63
6.25	ND<40	-33.75	0	64
5.58	ND<40	-34.42	0	65
5.56	ND<40	-34.44	0	66
6.72	ND<40	-33.28	0	67
6.54	ND<40	-33.46	0	68
6.7	ND<40	-33.3	0	69
5.36	ND<40	-34.64	0	70
3.92	ND<40	-36.08	0	71
4.34	ND<40	-35.66	0	72

ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<25	ND<40	-15	0	73
ND<25	ND<40	-15	0	74
2.3	ND<40	-37.7	0	75
5.1	ND<40	-34.9	0	76
6	ND<40	-34	0	77
5.7	ND<40	-34.3	0	78
6.8	ND<40	-33.2	0	79
5.12	ND<40	-34.88	0	80
5.31	ND<40	-34.69	0	81
6.25	ND<40	-33.75	0	82
5.58	ND<40	-34.42	0	83
5.56	ND<40	-34.44	0	84
6.72	ND<40	-33.28	0	85
6.54	ND<40	-33.46	0	86
6.7	ND<40	-33.3	0	87
5.36	ND<40	-34.64	0	88
3.92	ND<40	-36.08	0	89
4.34	ND<40	-35.66	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<40	ND<40	0	0	90
ND<25	ND<40	-15	0	91
ND<25	ND<40	-15	0	92
2.3	ND<40	-37.7	0	93
5.1	ND<40	-34.9	0	94
6	ND<40	-34	0	95
5.7	ND<40	-34.3	0	96
6.8	ND<40	-33.2	0	97
5.12	ND<40	-34.88	0	98
5.31	ND<40	-34.69	0	99
6.25	ND<40	-33.75	0	100
5.58	ND<40	-34.42	0	101
5.56	ND<40	-34.44	0	102
6.72	ND<40	-33.28	0	103
6.54	ND<40	-33.46	0	104
6.7	ND<40	-33.3	0	105
5.36	ND<40	-34.64	0	106
3.92	ND<40	-36.08	0	107
4.34	ND<40	-35.66	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108

ND<40	ND<40	0	0	108
ND<25	ND<40	-15	0	109
ND<25	ND<40	-15	0	110
2.3	ND<40	-37.7	0	111
5.1	ND<40	-34.9	0	112
6	ND<40	-34	0	113
5.7	ND<40	-34.3	0	114
6.8	ND<40	-33.2	0	115
5.12	ND<40	-34.88	0	116
5.31	ND<40	-34.69	0	117
6.25	ND<40	-33.75	0	118
5.58	ND<40	-34.42	0	119
5.56	ND<40	-34.44	0	120
6.72	ND<40	-33.28	0	121
6.54	ND<40	-33.46	0	122
6.7	ND<40	-33.3	0	123
5.36	ND<40	-34.64	0	124
3.92	ND<40	-36.08	0	125
4.34	ND<40	-35.66	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<25	ND<40	-15	0	127
ND<25	ND<40	-15	0	128
2.3	ND<40	-37.7	0	129
5.1	ND<40	-34.9	0	130
6	ND<40	-34	0	131
5.7	ND<40	-34.3	0	132
6.8	ND<40	-33.2	0	133
5.12	ND<40	-34.88	0	134
5.31	ND<40	-34.69	0	135
6.25	ND<40	-33.75	0	136
5.58	ND<40	-34.42	0	137
5.56	ND<40	-34.44	0	138
6.72	ND<40	-33.28	0	139
6.54	ND<40	-33.46	0	140
6.7	ND<40	-33.3	0	141
5.36	ND<40	-34.64	0	142
3.92	ND<40	-36.08	0	143
4.34	ND<40	-35.66	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<25	ND<40	-15	0	145
ND<25	ND<40	-15	0	146
2.3	ND<40	-37.7	0	147
5.1	ND<40	-34.9	0	148
6	ND<40	-34	0	149
5.7	ND<40	-34.3	0	150
6.8	ND<40	-33.2	0	151
5.12	ND<40	-34.88	0	152
5.31	ND<40	-34.69	0	153
6.25	ND<40	-33.75	0	154
5.58	ND<40	-34.42	0	155
5.56	ND<40	-34.44	0	156
6.72	ND<40	-33.28	0	157
6.54	ND<40	-33.46	0	158
6.7	ND<40	-33.3	0	159
5.36	ND<40	-34.64	0	160

3.92	ND<40	-36.08	0	161
4.34	ND<40	-35.66	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<25	ND<40	-15	0	163
ND<25	ND<40	-15	0	164
2.3	ND<40	-37.7	0	165
5.1	ND<40	-34.9	0	166
6	ND<40	-34	0	167
5.7	ND<40	-34.3	0	168
6.8	ND<40	-33.2	0	169
5.12	ND<40	-34.88	0	170
5.31	ND<40	-34.69	0	171
6.25	ND<40	-33.75	0	172
5.58	ND<40	-34.42	0	173
5.56	ND<40	-34.44	0	174
6.72	ND<40	-33.28	0	175
6.54	ND<40	-33.46	0	176
6.7	ND<40	-33.3	0	177
5.36	ND<40	-34.64	0	178
3.92	ND<40	-36.08	0	179
4.34	ND<40	-35.66	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<25	ND<40	-15	0	181
ND<25	ND<40	-15	0	182
2.3	ND<40	-37.7	0	183
5.1	ND<40	-34.9	0	184
6	ND<40	-34	0	185
5.7	ND<40	-34.3	0	186
6.8	ND<40	-33.2	0	187
5.12	ND<40	-34.88	0	188
5.31	ND<40	-34.69	0	189
6.25	ND<40	-33.75	0	190
5.58	ND<40	-34.42	0	191
5.56	ND<40	-34.44	0	192
6.72	ND<40	-33.28	0	193
6.54	ND<40	-33.46	0	194
6.7	ND<40	-33.3	0	195
5.36	ND<40	-34.64	0	196
3.92	ND<40	-36.08	0	197
4.34	ND<40	-35.66	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<25	ND<40	-15	0	199
ND<25	ND<40	-15	0	200
2.3	ND<40	-37.7	0	201
5.1	ND<40	-34.9	0	202
6	ND<40	-34	0	203
5.7	ND<40	-34.3	0	204
6.8	ND<40	-33.2	0	205
5.12	ND<40	-34.88	0	206
5.31	ND<40	-34.69	0	207
6.25	ND<40	-33.75	0	208
5.58	ND<40	-34.42	0	209

5.56	ND<40	-34.44	0	210
6.72	ND<40	-33.28	0	211
6.54	ND<40	-33.46	0	212
6.7	ND<40	-33.3	0	213
5.36	ND<40	-34.64	0	214
3.92	ND<40	-36.08	0	215
4.34	ND<40	-35.66	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<25	ND<40	-15	0	217
ND<25	ND<40	-15	0	218
2.3	ND<40	-37.7	0	219
5.1	ND<40	-34.9	0	220
6	ND<40	-34	0	221
5.7	ND<40	-34.3	0	222
6.8	ND<40	-33.2	0	223
5.12	ND<40	-34.88	0	224
5.31	ND<40	-34.69	0	225
6.25	ND<40	-33.75	0	226
5.58	ND<40	-34.42	0	227
5.56	ND<40	-34.44	0	228
6.72	ND<40	-33.28	0	229
6.54	ND<40	-33.46	0	230
6.7	ND<40	-33.3	0	231
5.36	ND<40	-34.64	0	232
3.92	ND<40	-36.08	0	233
4.34	ND<40	-35.66	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<25	ND<40	-15	0	235
ND<25	ND<40	-15	0	236
2.3	ND<40	-37.7	0	237
5.1	ND<40	-34.9	0	238
6	ND<40	-34	0	239
5.7	ND<40	-34.3	0	240
6.8	ND<40	-33.2	0	241
5.12	ND<40	-34.88	0	242
5.31	ND<40	-34.69	0	243
6.25	ND<40	-33.75	0	244
5.58	ND<40	-34.42	0	245
5.56	ND<40	-34.44	0	246
6.72	ND<40	-33.28	0	247
6.54	ND<40	-33.46	0	248
6.7	ND<40	-33.3	0	249
5.36	ND<40	-34.64	0	250
3.92	ND<40	-36.08	0	251
4.34	ND<40	-35.66	0	252
ND<40	ND<40	0	0	252
ND<40	ND<40	0	0	252
ND<40	ND<40	0	0	252
ND<40	ND<40	0	0	252
ND<25	ND<40	-15	0	253
ND<25	ND<40	-15	0	254
2.3	ND<40	-37.7	0	255
5.1	ND<40	-34.9	0	256
6	ND<40	-34	0	257
5.7	ND<40	-34.3	0	258
6.8	ND<40	-33.2	0	259
5.12	ND<40	-34.88	0	260
5.31	ND<40	-34.69	0	261
6.25	ND<40	-33.75	0	262
5.58	ND<40	-34.42	0	263
5.56	ND<40	-34.44	0	264
6.72	ND<40	-33.28	0	265
6.54	ND<40	-33.46	0	266
6.7	ND<40	-33.3	0	267

5.36	ND<40	-34.64	0	268
3.92	ND<40	-36.08	0	269
4.34	ND<40	-35.66	0	270
ND<40	ND<40	0	0	270
ND<40	ND<40	0	0	270
ND<40	ND<40	0	0	270
ND<25	ND<40	-15	0	271
ND<25	ND<40	-15	0	272
2.3	ND<40	-37.7	0	273
5.1	ND<40	-34.9	0	274
6	ND<40	-34	0	275
5.7	ND<40	-34.3	0	276
6.8	ND<40	-33.2	0	277
5.12	ND<40	-34.88	0	278
5.31	ND<40	-34.69	0	279
6.25	ND<40	-33.75	0	280
5.58	ND<40	-34.42	0	281
5.56	ND<40	-34.44	0	282
6.72	ND<40	-33.28	0	283
6.54	ND<40	-33.46	0	284
6.7	ND<40	-33.3	0	285
5.36	ND<40	-34.64	0	286
3.92	ND<40	-36.08	0	287
4.34	ND<40	-35.66	0	288
ND<40	ND<40	0	0	288
ND<40	ND<40	0	0	288
ND<25	ND<40	-15	0	289
ND<25	ND<40	-15	0	290
2.3	ND<40	-37.7	0	291
5.1	ND<40	-34.9	0	292
6	ND<40	-34	0	293
5.7	ND<40	-34.3	0	294
6.8	ND<40	-33.2	0	295
5.12	ND<40	-34.88	0	296
5.31	ND<40	-34.69	0	297
6.25	ND<40	-33.75	0	298
5.58	ND<40	-34.42	0	299
5.56	ND<40	-34.44	0	300
6.72	ND<40	-33.28	0	301
6.54	ND<40	-33.46	0	302
6.7	ND<40	-33.3	0	303
5.36	ND<40	-34.64	0	304
3.92	ND<40	-36.08	0	305
4.34	ND<40	-35.66	0	306
ND<40	ND<40	0	0	306
ND<25	ND<40	-15	0	307
ND<25	ND<40	-15	0	308
2.3	ND<40	-37.7	0	309
5.1	ND<40	-34.9	0	310
6	ND<40	-34	0	311
5.7	ND<40	-34.3	0	312
6.8	ND<40	-33.2	0	313
5.12	ND<40	-34.88	0	314
5.31	ND<40	-34.69	0	315
6.25	ND<40	-33.75	0	316
5.58	ND<40	-34.42	0	317
5.56	ND<40	-34.44	0	318
6.72	ND<40	-33.28	0	319
6.54	ND<40	-33.46	0	320
6.7	ND<40	-33.3	0	321
5.36	ND<40	-34.64	0	322
3.92	ND<40	-36.08	0	323
4.34	ND<40	-35.66	0	324
ND<25	ND<40	-15	0	325
ND<25	ND<40	-15	0	326
2.3	ND<40	-37.7	0	327
5.1	ND<40	-34.9	0	328
6	ND<40	-34	0	329
5.7	ND<40	-34.3	0	330
6.8	ND<40	-33.2	0	331
5.12	ND<40	-34.88	0	332
5.31	ND<40	-34.69	0	333

6.25	ND<40	-33.75	0	334
5.58	ND<40	-34.42	0	335
5.56	ND<40	-34.44	0	336
6.72	ND<40	-33.28	0	337
6.54	ND<40	-33.46	0	338
6.7	ND<40	-33.3	0	339
5.36	ND<40	-34.64	0	340
3.92	ND<40	-36.08	0	341
4.34	ND<40	-35.66	0	342
ND<25	ND<25	0	0	342
2.3	ND<25	-22.7	0	343
5.1	ND<25	-19.9	0	344
6	ND<25	-19	0	345
5.7	ND<25	-19.3	0	346
6.8	ND<25	-18.2	0	347
5.12	ND<25	-19.88	0	348
5.31	ND<25	-19.69	0	349
6.25	ND<25	-18.75	0	350
5.58	ND<25	-19.42	0	351
5.56	ND<25	-19.44	0	352
6.72	ND<25	-18.28	0	353
6.54	ND<25	-18.46	0	354
6.7	ND<25	-18.3	0	355
5.36	ND<25	-19.64	0	356
3.92	ND<25	-21.08	0	357
4.34	ND<25	-20.66	0	358
2.3	ND<25	-22.7	0	359
5.1	ND<25	-19.9	0	360
6	ND<25	-19	0	361
5.7	ND<25	-19.3	0	362
6.8	ND<25	-18.2	0	363
5.12	ND<25	-19.88	0	364
5.31	ND<25	-19.69	0	365
6.25	ND<25	-18.75	0	366
5.58	ND<25	-19.42	0	367
5.56	ND<25	-19.44	0	368
6.72	ND<25	-18.28	0	369
6.54	ND<25	-18.46	0	370
6.7	ND<25	-18.3	0	371
5.36	ND<25	-19.64	0	372
3.92	ND<25	-21.08	0	373
4.34	ND<25	-20.66	0	374
5.1	2.3	2.8	1	374
6	2.3	3.7	2	374
5.7	2.3	3.4	3	374
6.8	2.3	4.5	4	374
5.12	2.3	2.82	5	374
5.31	2.3	3.01	6	374
6.25	2.3	3.95	7	374
5.58	2.3	3.28	8	374
5.56	2.3	3.26	9	374
6.72	2.3	4.42	10	374
6.54	2.3	4.24	11	374
6.7	2.3	4.4	12	374
5.36	2.3	3.06	13	374
3.92	2.3	1.62	14	374
4.34	2.3	2.04	15	374
6	5.1	0.9	16	374
5.7	5.1	0.6	17	374
6.8	5.1	1.7	18	374
5.12	5.1	0.02	19	374
5.31	5.1	0.21	20	374
6.25	5.1	1.15	21	374
5.58	5.1	0.48	22	374
5.56	5.1	0.46	23	374
6.72	5.1	1.62	24	374
6.54	5.1	1.44	25	374
6.7	5.1	1.6	26	374
5.36	5.1	0.26	27	374
3.92	5.1	-1.18	27	375
4.34	5.1	-0.76	27	376

5.7	6	-0.3	27	377
6.8	6	0.8	28	377
5.12	6	-0.88	28	378
5.31	6	-0.69	28	379
6.25	6	0.25	29	379
5.58	6	-0.42	29	380
5.56	6	-0.44	29	381
6.72	6	0.72	30	381
6.54	6	0.54	31	381
6.7	6	0.7	32	381
5.36	6	-0.64	32	382
3.92	6	-2.08	32	383
4.34	6	-1.66	32	384
6.8	5.7	1.1	33	384
5.12	5.7	-0.58	33	385
5.31	5.7	-0.39	33	386
6.25	5.7	0.55	34	386
5.58	5.7	-0.12	34	387
5.56	5.7	-0.14	34	388
6.72	5.7	1.02	35	388
6.54	5.7	0.84	36	388
6.7	5.7	1	37	388
5.36	5.7	-0.34	37	389
3.92	5.7	-1.78	37	390
4.34	5.7	-1.36	37	391
5.12	6.8	-1.68	37	392
5.31	6.8	-1.49	37	393
6.25	6.8	-0.55	37	394
5.58	6.8	-1.22	37	395
5.56	6.8	-1.24	37	396
6.72	6.8	-0.08	37	397
6.54	6.8	-0.26	37	398
6.7	6.8	-0.1	37	399
5.36	6.8	-1.44	37	400
3.92	6.8	-2.88	37	401
4.34	6.8	-2.46	37	402
5.31	5.12	0.19	38	402
6.25	5.12	1.13	39	402
5.58	5.12	0.46	40	402
5.56	5.12	0.44	41	402
6.72	5.12	1.6	42	402
6.54	5.12	1.42	43	402
6.7	5.12	1.58	44	402
5.36	5.12	0.24	45	402
3.92	5.12	-1.2	45	403
4.34	5.12	-0.78	45	404
6.25	5.31	0.94	46	404
5.58	5.31	0.27	47	404
5.56	5.31	0.25	48	404
6.72	5.31	1.41	49	404
6.54	5.31	1.23	50	404
6.7	5.31	1.39	51	404
5.36	5.31	0.05	52	404
3.92	5.31	-1.39	52	405
4.34	5.31	-0.97	52	406
5.58	6.25	-0.67	52	407
5.56	6.25	-0.69	52	408
6.72	6.25	0.47	53	408
6.54	6.25	0.29	54	408
6.7	6.25	0.45	55	408
5.36	6.25	-0.89	55	409
3.92	6.25	-2.33	55	410
4.34	6.25	-1.91	55	411
5.56	5.58	-0.02	55	412
6.72	5.58	1.14	56	412
6.54	5.58	0.96	57	412
6.7	5.58	1.12	58	412
5.36	5.58	-0.22	58	413
3.92	5.58	-1.66	58	414
4.34	5.58	-1.24	58	415

6.72	5.56	1.16	59	415
6.54	5.56	0.98	60	415
6.7	5.56	1.14	61	415
5.36	5.56	-0.2	61	416
3.92	5.56	-1.64	61	417
4.34	5.56	-1.22	61	418
6.54	6.72	-0.18	61	419
6.7	6.72	-0.02	61	420
5.36	6.72	-1.36	61	421
3.92	6.72	-2.8	61	422
4.34	6.72	-2.38	61	423
6.7	6.54	0.16	62	423
5.36	6.54	-1.18	62	424
3.92	6.54	-2.62	62	425
4.34	6.54	-2.2	62	426
5.36	6.7	-1.34	62	427
3.92	6.7	-2.78	62	428
4.34	6.7	-2.36	62	429
3.92	5.36	-1.44	62	430
4.34	5.36	-1.02	62	431
4.34	3.92	0.42	63	431

S Statistic = 63 - 431 = -368

Tied Group	Value	Members
1	40	19
2	25	2

Time Period	Observations
12/16/1997	1
1/14/1998	1
2/13/1998	1
3/6/1998	1
10/15/1998	1
3/25/1999	1
9/23/1999	1
3/29/2000	1
9/14/2000	1
3/12/2001	1
10/13/2001	1
3/8/2002	1
9/19/2002	1
4/15/2003	1
10/16/2003	1
3/25/2004	1
10/22/2004	1
5/11/2005	1
10/11/2005	1
4/27/2006	1
4/9/2007	1
9/24/2007	1
5/2/2008	1
12/5/2008	1
4/15/2009	1
10/9/2009	1
4/30/2010	1
10/5/2010	1
5/12/2011	1
10/6/2011	1
4/19/2012	1
10/23/2012	1
4/23/2013	1
9/10/2013	1
5/22/2014	1
9/30/2014	1
4/13/2015	1

There are 0 time periods with multiple data

A = 14724

B = 0
C = 5814
D = 0
E = 344
F = 0
a = 105228
b = 419580
c = 2664
Group Variance = 5028
Z-Score = -5.17569
Comparison Level at 95% confidence level = 1.65463 (upward trend)
-5.17569 <= 1.65463 indicating no evidence of an upward trend

Mann-Kendall Trend Analysis
Parameter: Vanadium
Location: MW-25d
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<40	ND<40	0	0	0
ND<25	ND<40	-15	0	1
ND<25	ND<40	-15	0	2
2.8	ND<40	-37.2	0	3
3.6	ND<40	-36.4	0	4
3.7	ND<40	-36.3	0	5
3.2	ND<40	-36.8	0	6
4	ND<40	-36	0	7
3.6	ND<40	-36.4	0	8
3.52	ND<40	-36.48	0	9
3.6	ND<40	-36.4	0	10
3.67	ND<40	-36.33	0	11
3.43	ND<40	-36.57	0	12
3.55	ND<40	-36.45	0	13
3.68	ND<40	-36.32	0	14
3.1	ND<40	-36.9	0	15
2.56	ND<40	-37.44	0	16
2.88	ND<40	-37.12	0	17
1.94	ND<40	-38.06	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<40	ND<40	0	0	18
ND<25	ND<40	-15	0	19
ND<25	ND<40	-15	0	20
2.8	ND<40	-37.2	0	21
3.6	ND<40	-36.4	0	22
3.7	ND<40	-36.3	0	23
3.2	ND<40	-36.8	0	24
4	ND<40	-36	0	25
3.6	ND<40	-36.4	0	26
3.52	ND<40	-36.48	0	27
3.6	ND<40	-36.4	0	28
3.67	ND<40	-36.33	0	29
3.43	ND<40	-36.57	0	30

3.55	ND<40	-36.45	0	31
3.68	ND<40	-36.32	0	32
3.1	ND<40	-36.9	0	33
2.56	ND<40	-37.44	0	34
2.88	ND<40	-37.12	0	35
1.94	ND<40	-38.06	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
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ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<40	ND<40	0	0	36
ND<25	ND<40	-15	0	37
ND<25	ND<40	-15	0	38
2.8	ND<40	-37.2	0	39
3.6	ND<40	-36.4	0	40
3.7	ND<40	-36.3	0	41
3.2	ND<40	-36.8	0	42
4	ND<40	-36	0	43
3.6	ND<40	-36.4	0	44
3.52	ND<40	-36.48	0	45
3.6	ND<40	-36.4	0	46
3.67	ND<40	-36.33	0	47
3.43	ND<40	-36.57	0	48
3.55	ND<40	-36.45	0	49
3.68	ND<40	-36.32	0	50
3.1	ND<40	-36.9	0	51
2.56	ND<40	-37.44	0	52
2.88	ND<40	-37.12	0	53
1.94	ND<40	-38.06	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
ND<40	ND<40	0	0	54
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2.8	ND<40	-37.2	0	57
3.6	ND<40	-36.4	0	58
3.7	ND<40	-36.3	0	59
3.2	ND<40	-36.8	0	60
4	ND<40	-36	0	61
3.6	ND<40	-36.4	0	62
3.52	ND<40	-36.48	0	63
3.6	ND<40	-36.4	0	64
3.67	ND<40	-36.33	0	65
3.43	ND<40	-36.57	0	66
3.55	ND<40	-36.45	0	67
3.68	ND<40	-36.32	0	68
3.1	ND<40	-36.9	0	69
2.56	ND<40	-37.44	0	70
2.88	ND<40	-37.12	0	71
1.94	ND<40	-38.06	0	72

ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
ND<40	ND<40	0	0	72
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ND<40	ND<40	0	0	72
ND<25	ND<40	-15	0	73
ND<25	ND<40	-15	0	74
2.8	ND<40	-37.2	0	75
3.6	ND<40	-36.4	0	76
3.7	ND<40	-36.3	0	77
3.2	ND<40	-36.8	0	78
4	ND<40	-36	0	79
3.6	ND<40	-36.4	0	80
3.52	ND<40	-36.48	0	81
3.6	ND<40	-36.4	0	82
3.67	ND<40	-36.33	0	83
3.43	ND<40	-36.57	0	84
3.55	ND<40	-36.45	0	85
3.68	ND<40	-36.32	0	86
3.1	ND<40	-36.9	0	87
2.56	ND<40	-37.44	0	88
2.88	ND<40	-37.12	0	89
1.94	ND<40	-38.06	0	90
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ND<25	ND<40	-15	0	91
ND<25	ND<40	-15	0	92
2.8	ND<40	-37.2	0	93
3.6	ND<40	-36.4	0	94
3.7	ND<40	-36.3	0	95
3.2	ND<40	-36.8	0	96
4	ND<40	-36	0	97
3.6	ND<40	-36.4	0	98
3.52	ND<40	-36.48	0	99
3.6	ND<40	-36.4	0	100
3.67	ND<40	-36.33	0	101
3.43	ND<40	-36.57	0	102
3.55	ND<40	-36.45	0	103
3.68	ND<40	-36.32	0	104
3.1	ND<40	-36.9	0	105
2.56	ND<40	-37.44	0	106
2.88	ND<40	-37.12	0	107
1.94	ND<40	-38.06	0	108
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ND<40	ND<40	0	0	108
ND<40	ND<40	0	0	108

ND<40	ND<40	0	0	108
ND<25	ND<40	-15	0	109
ND<25	ND<40	-15	0	110
2.8	ND<40	-37.2	0	111
3.6	ND<40	-36.4	0	112
3.7	ND<40	-36.3	0	113
3.2	ND<40	-36.8	0	114
4	ND<40	-36	0	115
3.6	ND<40	-36.4	0	116
3.52	ND<40	-36.48	0	117
3.6	ND<40	-36.4	0	118
3.67	ND<40	-36.33	0	119
3.43	ND<40	-36.57	0	120
3.55	ND<40	-36.45	0	121
3.68	ND<40	-36.32	0	122
3.1	ND<40	-36.9	0	123
2.56	ND<40	-37.44	0	124
2.88	ND<40	-37.12	0	125
1.94	ND<40	-38.06	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
ND<40	ND<40	0	0	126
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ND<40	ND<40	0	0	126
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ND<40	ND<40	0	0	126
ND<25	ND<40	-15	0	127
ND<25	ND<40	-15	0	128
2.8	ND<40	-37.2	0	129
3.6	ND<40	-36.4	0	130
3.7	ND<40	-36.3	0	131
3.2	ND<40	-36.8	0	132
4	ND<40	-36	0	133
3.6	ND<40	-36.4	0	134
3.52	ND<40	-36.48	0	135
3.6	ND<40	-36.4	0	136
3.67	ND<40	-36.33	0	137
3.43	ND<40	-36.57	0	138
3.55	ND<40	-36.45	0	139
3.68	ND<40	-36.32	0	140
3.1	ND<40	-36.9	0	141
2.56	ND<40	-37.44	0	142
2.88	ND<40	-37.12	0	143
1.94	ND<40	-38.06	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
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ND<40	ND<40	0	0	144
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ND<40	ND<40	0	0	144
ND<40	ND<40	0	0	144
ND<25	ND<40	-15	0	145
ND<25	ND<40	-15	0	146
2.8	ND<40	-37.2	0	147
3.6	ND<40	-36.4	0	148
3.7	ND<40	-36.3	0	149
3.2	ND<40	-36.8	0	150
4	ND<40	-36	0	151
3.6	ND<40	-36.4	0	152
3.52	ND<40	-36.48	0	153
3.6	ND<40	-36.4	0	154
3.67	ND<40	-36.33	0	155
3.43	ND<40	-36.57	0	156
3.55	ND<40	-36.45	0	157
3.68	ND<40	-36.32	0	158
3.1	ND<40	-36.9	0	159
2.56	ND<40	-37.44	0	160

2.88	ND<40	-37.12	0	161
1.94	ND<40	-38.06	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<40	ND<40	0	0	162
ND<25	ND<40	-15	0	163
ND<25	ND<40	-15	0	164
2.8	ND<40	-37.2	0	165
3.6	ND<40	-36.4	0	166
3.7	ND<40	-36.3	0	167
3.2	ND<40	-36.8	0	168
4	ND<40	-36	0	169
3.6	ND<40	-36.4	0	170
3.52	ND<40	-36.48	0	171
3.6	ND<40	-36.4	0	172
3.67	ND<40	-36.33	0	173
3.43	ND<40	-36.57	0	174
3.55	ND<40	-36.45	0	175
3.68	ND<40	-36.32	0	176
3.1	ND<40	-36.9	0	177
2.56	ND<40	-37.44	0	178
2.88	ND<40	-37.12	0	179
1.94	ND<40	-38.06	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
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ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<40	ND<40	0	0	180
ND<25	ND<40	-15	0	181
ND<25	ND<40	-15	0	182
2.8	ND<40	-37.2	0	183
3.6	ND<40	-36.4	0	184
3.7	ND<40	-36.3	0	185
3.2	ND<40	-36.8	0	186
4	ND<40	-36	0	187
3.6	ND<40	-36.4	0	188
3.52	ND<40	-36.48	0	189
3.6	ND<40	-36.4	0	190
3.67	ND<40	-36.33	0	191
3.43	ND<40	-36.57	0	192
3.55	ND<40	-36.45	0	193
3.68	ND<40	-36.32	0	194
3.1	ND<40	-36.9	0	195
2.56	ND<40	-37.44	0	196
2.88	ND<40	-37.12	0	197
1.94	ND<40	-38.06	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<40	ND<40	0	0	198
ND<25	ND<40	-15	0	199
ND<25	ND<40	-15	0	200
2.8	ND<40	-37.2	0	201
3.6	ND<40	-36.4	0	202
3.7	ND<40	-36.3	0	203
3.2	ND<40	-36.8	0	204
4	ND<40	-36	0	205
3.6	ND<40	-36.4	0	206
3.52	ND<40	-36.48	0	207
3.6	ND<40	-36.4	0	208
3.67	ND<40	-36.33	0	209

3.43	ND<40	-36.57	0	210
3.55	ND<40	-36.45	0	211
3.68	ND<40	-36.32	0	212
3.1	ND<40	-36.9	0	213
2.56	ND<40	-37.44	0	214
2.88	ND<40	-37.12	0	215
1.94	ND<40	-38.06	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<40	ND<40	0	0	216
ND<25	ND<40	-15	0	217
ND<25	ND<40	-15	0	218
2.8	ND<40	-37.2	0	219
3.6	ND<40	-36.4	0	220
3.7	ND<40	-36.3	0	221
3.2	ND<40	-36.8	0	222
4	ND<40	-36	0	223
3.6	ND<40	-36.4	0	224
3.52	ND<40	-36.48	0	225
3.6	ND<40	-36.4	0	226
3.67	ND<40	-36.33	0	227
3.43	ND<40	-36.57	0	228
3.55	ND<40	-36.45	0	229
3.68	ND<40	-36.32	0	230
3.1	ND<40	-36.9	0	231
2.56	ND<40	-37.44	0	232
2.88	ND<40	-37.12	0	233
1.94	ND<40	-38.06	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<40	ND<40	0	0	234
ND<25	ND<40	-15	0	235
ND<25	ND<40	-15	0	236
2.8	ND<40	-37.2	0	237
3.6	ND<40	-36.4	0	238
3.7	ND<40	-36.3	0	239
3.2	ND<40	-36.8	0	240
4	ND<40	-36	0	241
3.6	ND<40	-36.4	0	242
3.52	ND<40	-36.48	0	243
3.6	ND<40	-36.4	0	244
3.67	ND<40	-36.33	0	245
3.43	ND<40	-36.57	0	246
3.55	ND<40	-36.45	0	247
3.68	ND<40	-36.32	0	248
3.1	ND<40	-36.9	0	249
2.56	ND<40	-37.44	0	250
2.88	ND<40	-37.12	0	251
1.94	ND<40	-38.06	0	252
ND<40	ND<40	0	0	252
ND<40	ND<40	0	0	252
ND<40	ND<40	0	0	252
ND<40	ND<40	0	0	252
ND<25	ND<40	-15	0	253
ND<25	ND<40	-15	0	254
2.8	ND<40	-37.2	0	255
3.6	ND<40	-36.4	0	256
3.7	ND<40	-36.3	0	257
3.2	ND<40	-36.8	0	258
4	ND<40	-36	0	259
3.6	ND<40	-36.4	0	260
3.52	ND<40	-36.48	0	261
3.6	ND<40	-36.4	0	262
3.67	ND<40	-36.33	0	263
3.43	ND<40	-36.57	0	264
3.55	ND<40	-36.45	0	265
3.68	ND<40	-36.32	0	266
3.1	ND<40	-36.9	0	267

2.56	ND<40	-37.44	0	268
2.88	ND<40	-37.12	0	269
1.94	ND<40	-38.06	0	270
ND<40	ND<40	0	0	270
ND<40	ND<40	0	0	270
ND<40	ND<40	0	0	270
ND<25	ND<40	-15	0	271
ND<25	ND<40	-15	0	272
2.8	ND<40	-37.2	0	273
3.6	ND<40	-36.4	0	274
3.7	ND<40	-36.3	0	275
3.2	ND<40	-36.8	0	276
4	ND<40	-36	0	277
3.6	ND<40	-36.4	0	278
3.52	ND<40	-36.48	0	279
3.6	ND<40	-36.4	0	280
3.67	ND<40	-36.33	0	281
3.43	ND<40	-36.57	0	282
3.55	ND<40	-36.45	0	283
3.68	ND<40	-36.32	0	284
3.1	ND<40	-36.9	0	285
2.56	ND<40	-37.44	0	286
2.88	ND<40	-37.12	0	287
1.94	ND<40	-38.06	0	288
ND<40	ND<40	0	0	288
ND<40	ND<40	0	0	288
ND<25	ND<40	-15	0	289
ND<25	ND<40	-15	0	290
2.8	ND<40	-37.2	0	291
3.6	ND<40	-36.4	0	292
3.7	ND<40	-36.3	0	293
3.2	ND<40	-36.8	0	294
4	ND<40	-36	0	295
3.6	ND<40	-36.4	0	296
3.52	ND<40	-36.48	0	297
3.6	ND<40	-36.4	0	298
3.67	ND<40	-36.33	0	299
3.43	ND<40	-36.57	0	300
3.55	ND<40	-36.45	0	301
3.68	ND<40	-36.32	0	302
3.1	ND<40	-36.9	0	303
2.56	ND<40	-37.44	0	304
2.88	ND<40	-37.12	0	305
1.94	ND<40	-38.06	0	306
ND<40	ND<40	0	0	306
ND<25	ND<40	-15	0	307
ND<25	ND<40	-15	0	308
2.8	ND<40	-37.2	0	309
3.6	ND<40	-36.4	0	310
3.7	ND<40	-36.3	0	311
3.2	ND<40	-36.8	0	312
4	ND<40	-36	0	313
3.6	ND<40	-36.4	0	314
3.52	ND<40	-36.48	0	315
3.6	ND<40	-36.4	0	316
3.67	ND<40	-36.33	0	317
3.43	ND<40	-36.57	0	318
3.55	ND<40	-36.45	0	319
3.68	ND<40	-36.32	0	320
3.1	ND<40	-36.9	0	321
2.56	ND<40	-37.44	0	322
2.88	ND<40	-37.12	0	323
1.94	ND<40	-38.06	0	324
ND<25	ND<40	-15	0	325
ND<25	ND<40	-15	0	326
2.8	ND<40	-37.2	0	327
3.6	ND<40	-36.4	0	328
3.7	ND<40	-36.3	0	329
3.2	ND<40	-36.8	0	330
4	ND<40	-36	0	331
3.6	ND<40	-36.4	0	332
3.52	ND<40	-36.48	0	333

3.6	ND<40	-36.4	0	334
3.67	ND<40	-36.33	0	335
3.43	ND<40	-36.57	0	336
3.55	ND<40	-36.45	0	337
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2.56	ND<40	-37.44	0	340
2.88	ND<40	-37.12	0	341
1.94	ND<40	-38.06	0	342
ND<25	ND<25	0	0	342
2.8	ND<25	-22.2	0	343
3.6	ND<25	-21.4	0	344
3.7	ND<25	-21.3	0	345
3.2	ND<25	-21.8	0	346
4	ND<25	-21	0	347
3.6	ND<25	-21.4	0	348
3.52	ND<25	-21.48	0	349
3.6	ND<25	-21.4	0	350
3.67	ND<25	-21.33	0	351
3.43	ND<25	-21.57	0	352
3.55	ND<25	-21.45	0	353
3.68	ND<25	-21.32	0	354
3.1	ND<25	-21.9	0	355
2.56	ND<25	-22.44	0	356
2.88	ND<25	-22.12	0	357
1.94	ND<25	-23.06	0	358
2.8	ND<25	-22.2	0	359
3.6	ND<25	-21.4	0	360
3.7	ND<25	-21.3	0	361
3.2	ND<25	-21.8	0	362
4	ND<25	-21	0	363
3.6	ND<25	-21.4	0	364
3.52	ND<25	-21.48	0	365
3.6	ND<25	-21.4	0	366
3.67	ND<25	-21.33	0	367
3.43	ND<25	-21.57	0	368
3.55	ND<25	-21.45	0	369
3.68	ND<25	-21.32	0	370
3.1	ND<25	-21.9	0	371
2.56	ND<25	-22.44	0	372
2.88	ND<25	-22.12	0	373
1.94	ND<25	-23.06	0	374
3.6	2.8	0.8	1	374
3.7	2.8	0.9	2	374
3.2	2.8	0.4	3	374
4	2.8	1.2	4	374
3.6	2.8	0.8	5	374
3.52	2.8	0.72	6	374
3.6	2.8	0.8	7	374
3.67	2.8	0.87	8	374
3.43	2.8	0.63	9	374
3.55	2.8	0.75	10	374
3.68	2.8	0.88	11	374
3.1	2.8	0.3	12	374
2.56	2.8	-0.24	12	375
2.88	2.8	0.08	13	375
1.94	2.8	-0.86	13	376
3.7	3.6	0.1	14	376
3.2	3.6	-0.4	14	377
4	3.6	0.4	15	377
3.6	3.6	0	15	377
3.52	3.6	-0.08	15	378
3.6	3.6	0	15	378
3.67	3.6	0.07	16	378
3.43	3.6	-0.17	16	379
3.55	3.6	-0.05	16	380
3.68	3.6	0.08	17	380
3.1	3.6	-0.5	17	381
2.56	3.6	-1.04	17	382
2.88	3.6	-0.72	17	383
1.94	3.6	-1.66	17	384

3.2	3.7	-0.5	17	385
4	3.7	0.3	18	385
3.6	3.7	-0.1	18	386
3.52	3.7	-0.18	18	387
3.6	3.7	-0.1	18	388
3.67	3.7	-0.03	18	389
3.43	3.7	-0.27	18	390
3.55	3.7	-0.15	18	391
3.68	3.7	-0.02	18	392
3.1	3.7	-0.6	18	393
2.56	3.7	-1.14	18	394
2.88	3.7	-0.82	18	395
1.94	3.7	-1.76	18	396
4	3.2	0.8	19	396
3.6	3.2	0.4	20	396
3.52	3.2	0.32	21	396
3.6	3.2	0.4	22	396
3.67	3.2	0.47	23	396
3.43	3.2	0.23	24	396
3.55	3.2	0.35	25	396
3.68	3.2	0.48	26	396
3.1	3.2	-0.1	26	397
2.56	3.2	-0.64	26	398
2.88	3.2	-0.32	26	399
1.94	3.2	-1.26	26	400
3.6	4	-0.4	26	401
3.52	4	-0.48	26	402
3.6	4	-0.4	26	403
3.67	4	-0.33	26	404
3.43	4	-0.57	26	405
3.55	4	-0.45	26	406
3.68	4	-0.32	26	407
3.1	4	-0.9	26	408
2.56	4	-1.44	26	409
2.88	4	-1.12	26	410
1.94	4	-2.06	26	411
3.52	3.6	-0.08	26	412
3.6	3.6	0	26	412
3.67	3.6	0.07	27	412
3.43	3.6	-0.17	27	413
3.55	3.6	-0.05	27	414
3.68	3.6	0.08	28	414
3.1	3.6	-0.5	28	415
2.56	3.6	-1.04	28	416
2.88	3.6	-0.72	28	417
1.94	3.6	-1.66	28	418
3.6	3.52	0.08	29	418
3.67	3.52	0.15	30	418
3.43	3.52	-0.09	30	419
3.55	3.52	0.03	31	419
3.68	3.52	0.16	32	419
3.1	3.52	-0.42	32	420
2.56	3.52	-0.96	32	421
2.88	3.52	-0.64	32	422
1.94	3.52	-1.58	32	423
3.67	3.6	0.07	33	423
3.43	3.6	-0.17	33	424
3.55	3.6	-0.05	33	425
3.68	3.6	0.08	34	425
3.1	3.6	-0.5	34	426
2.56	3.6	-1.04	34	427
2.88	3.6	-0.72	34	428
1.94	3.6	-1.66	34	429
3.43	3.67	-0.24	34	430
3.55	3.67	-0.12	34	431
3.68	3.67	0.01	35	431
3.1	3.67	-0.57	35	432
2.56	3.67	-1.11	35	433
2.88	3.67	-0.79	35	434
1.94	3.67	-1.73	35	435

3.55	3.43	0.12	36	435
3.68	3.43	0.25	37	435
3.1	3.43	-0.33	37	436
2.56	3.43	-0.87	37	437
2.88	3.43	-0.55	37	438
1.94	3.43	-1.49	37	439
3.68	3.55	0.13	38	439
3.1	3.55	-0.45	38	440
2.56	3.55	-0.99	38	441
2.88	3.55	-0.67	38	442
1.94	3.55	-1.61	38	443
3.1	3.68	-0.58	38	444
2.56	3.68	-1.12	38	445
2.88	3.68	-0.8	38	446
1.94	3.68	-1.74	38	447
2.56	3.1	-0.54	38	448
2.88	3.1	-0.22	38	449
1.94	3.1	-1.16	38	450
2.88	2.56	0.32	39	450
1.94	2.56	-0.62	39	451
1.94	2.88	-0.94	39	452

S Statistic = 39 - 452 = -413

Tied Group	Value	Members
1	40	19
2	25	2
3	3.6	3

Time Period	Observations
12/16/1997	1
1/14/1998	1
2/13/1998	1
3/6/1998	1
10/15/1998	1
3/25/1999	1
9/23/1999	1
3/29/2000	1
9/14/2000	1
3/12/2001	1
10/13/2001	1
3/8/2002	1
9/19/2002	1
4/15/2003	1
10/16/2003	1
3/25/2004	1
10/22/2004	1
5/11/2005	1
10/11/2005	1
4/27/2006	1
4/9/2007	1
9/24/2007	1
5/2/2008	1
12/5/2008	1
4/15/2009	1
10/9/2009	1
4/30/2010	1
10/5/2010	1
5/12/2011	1
10/6/2011	1
4/19/2012	1
10/23/2012	1
4/23/2013	1
9/10/2013	1
5/22/2014	1
9/30/2014	1
4/13/2015	1

There are 0 time periods with multiple data

A = 14790
B = 0
C = 5820
D = 0
E = 350
F = 0
a = 105228
b = 419580
c = 2664
Group Variance = 5024.33
Z-Score = -5.81243
Comparison Level at 95% confidence level = 1.65463 (upward trend)
-5.81243 <= 1.65463 indicating no evidence of an upward trend

APPENDIX V
Non-Parametric Upper Tolerance Limit Computations

Non-Parametric Tolerance Interval

Parameter: Antimony, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 96.0089%
Background measurements (n) = 74
Maximum Background Concentration = 337
Minimum Coverage = 96.1%
Average Coverage = 98.6667%

Location	Date	Value	Significant
MW-17	12/16/1997	ND<30	FALSE
MW-17	1/14/1998	ND<30	FALSE
MW-17	2/13/1998	ND<30	FALSE
MW-17	3/6/1998	ND<30	FALSE
MW-17	10/15/1998	ND<30	FALSE
MW-17	3/25/1999	ND<30	FALSE
MW-17	9/23/1999	ND<30	FALSE
MW-17	3/29/2000	ND<30	FALSE
MW-17	9/14/2000	ND<30	FALSE
MW-17	3/12/2001	ND<30	FALSE
MW-17	10/13/2001	ND<30	FALSE
MW-17	3/8/2002	ND<30	FALSE
MW-17	9/19/2002	ND<30	FALSE
MW-17	4/15/2003	ND<30	FALSE
MW-17	10/16/2003	ND<30	FALSE
MW-17	3/25/2004	ND<30	FALSE
MW-17	10/22/2004	ND<30	FALSE
MW-17	5/11/2005	ND<30	FALSE
MW-17	10/11/2005	ND<30	FALSE
MW-17	4/27/2006	ND<6	FALSE
MW-17	10/18/2006	ND<6	FALSE
MW-17	4/9/2007	ND<6	FALSE
MW-17	9/24/2007	ND<6	FALSE
MW-17	5/2/2008	ND<6	FALSE
MW-17	12/5/2008	ND<6	FALSE
MW-17	4/15/2009	ND<6	FALSE
MW-17	10/9/2009	ND<6	FALSE
MW-17	4/30/2010	ND<6	FALSE
MW-17	10/5/2010	ND<6	FALSE
MW-17	5/12/2011	ND<6	FALSE
MW-17	10/6/2011	ND<6	FALSE
MW-17	4/19/2012	0.239	FALSE
MW-17	10/23/2012	ND<6	FALSE
MW-17	4/23/2013	ND<6	FALSE
MW-17	9/10/2013	ND<6	FALSE
MW-17	5/22/2014	0.428	FALSE
MW-17	9/30/2014	0.278	FALSE
MW-17	4/13/2015	ND<0.22	FALSE
MW-18	12/16/1997	ND<30	FALSE
MW-18	1/14/1998	ND<30	FALSE
MW-18	2/13/1998	ND<30	FALSE
MW-18	3/6/1998	ND<30	FALSE
MW-18	10/15/1998	ND<30	FALSE
MW-18	3/25/1999	ND<30	FALSE
MW-18	9/23/1999	ND<30	FALSE
MW-18	3/29/2000	ND<30	FALSE
MW-18	9/14/2000	ND<30	FALSE
MW-18	3/12/2001	ND<30	FALSE
MW-18	10/13/2001	ND<30	FALSE
MW-18	3/8/2002	ND<30	FALSE
MW-18	9/19/2002	ND<30	FALSE
MW-18	4/15/2003	ND<30	FALSE
MW-18	10/16/2003	ND<30	FALSE
MW-18	3/25/2004	ND<30	FALSE
MW-18	10/22/2004	ND<30	FALSE
MW-18	5/11/2005	ND<30	FALSE
MW-18	10/11/2005	ND<30	FALSE
MW-18	4/27/2006	ND<6	FALSE
MW-18	10/18/2006	ND<6	FALSE
MW-18	4/9/2007	ND<6	FALSE
MW-18	9/24/2007	ND<6	FALSE

MW-18	5/2/2008	ND<6	FALSE
MW-18	12/5/2008	ND<6	FALSE
MW-18	4/15/2009	ND<6	FALSE
MW-18	10/9/2009	ND<6	FALSE
MW-18	4/30/2010	ND<6	FALSE
MW-18	10/5/2010	ND<6	FALSE
MW-18	5/12/2011	ND<6	FALSE
MW-18	10/6/2011	ND<6	FALSE
MW-18	4/19/2012	ND<6	FALSE
MW-18	10/23/2012	ND<6	FALSE
MW-18	4/23/2013	ND<6	FALSE
MW-18	9/10/2013	ND<6	FALSE
MW-18	5/22/2014	0.346	FALSE
MW-18	9/30/2014	ND<6	FALSE
MW-18	4/13/2015	ND<0.22	FALSE
MW-19	12/16/1997	ND<30	FALSE
MW-19	1/14/1998	ND<30	FALSE
MW-19	2/13/1998	ND<30	FALSE
MW-19	3/6/1998	ND<30	FALSE
MW-19	10/15/1998	ND<30	FALSE
MW-19	3/25/1999	ND<30	FALSE
MW-19	9/23/1999	ND<30	FALSE
MW-19	3/29/2000	ND<30	FALSE
MW-19	9/14/2000	ND<30	FALSE
MW-19	3/12/2001	ND<30	FALSE
MW-19	10/13/2001	ND<30	FALSE
MW-19	3/8/2002	ND<30	FALSE
MW-19	9/19/2002	ND<30	FALSE
MW-19	4/15/2003	ND<30	FALSE
MW-19	10/16/2003	ND<30	FALSE
MW-19	3/25/2004	ND<30	FALSE
MW-19	10/22/2004	ND<30	FALSE
MW-19	5/11/2005	ND<30	FALSE
MW-19	10/11/2005	ND<30	FALSE
MW-19	4/27/2006	ND<6	FALSE
MW-19	10/18/2006	ND<6	FALSE
MW-19	4/9/2007	ND<6	FALSE
MW-19	9/24/2007	ND<6	FALSE
MW-19	5/2/2008	ND<6	FALSE
MW-19	12/5/2008	ND<6	FALSE
MW-19	4/15/2009	ND<6	FALSE
MW-19	10/9/2009	ND<6	FALSE
MW-19	4/30/2010	ND<6	FALSE
MW-19	10/5/2010	ND<6	FALSE
MW-19	5/12/2011	ND<6	FALSE
MW-19	10/6/2011	ND<6	FALSE
MW-19	4/19/2012	0.254	FALSE
MW-19	10/23/2012	ND<6	FALSE
MW-19	4/23/2013	ND<6	FALSE
MW-19	9/10/2013	ND<6	FALSE
MW-19	5/22/2014	0.489	FALSE
MW-19	9/30/2014	ND<6	FALSE
MW-19	4/13/2015	ND<0.22	FALSE
MW-20	12/16/1997	ND<30	FALSE
MW-20	1/14/1998	ND<30	FALSE
MW-20	2/13/1998	ND<30	FALSE
MW-20	3/6/1998	ND<30	FALSE
MW-20	10/15/1998	ND<30	FALSE
MW-20	3/25/1999	ND<30	FALSE
MW-20	9/23/1999	ND<30	FALSE
MW-20	3/29/2000	ND<30	FALSE
MW-20	9/14/2000	ND<30	FALSE
MW-20	3/12/2001	ND<30	FALSE
MW-20	10/13/2001	ND<30	FALSE
MW-20	3/8/2002	ND<30	FALSE
MW-20	9/19/2002	ND<30	FALSE
MW-20	4/15/2003	ND<30	FALSE
MW-20	10/16/2003	ND<30	FALSE
MW-20	3/25/2004	ND<30	FALSE
MW-20	10/22/2004	ND<30	FALSE
MW-20	5/11/2005	ND<30	FALSE
MW-20	10/11/2005	ND<30	FALSE

MW-20	4/27/2006	ND<6	FALSE
MW-20	10/18/2006	ND<6	FALSE
MW-20	4/9/2007	ND<6	FALSE
MW-20	9/24/2007	ND<6	FALSE
MW-20	5/2/2008	ND<6	FALSE
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MW-20	5/12/2011	ND<6	FALSE
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MW-20	10/23/2012	ND<6	FALSE
MW-20	4/23/2013	ND<6	FALSE
MW-20	9/10/2013	ND<6	FALSE
MW-20	5/22/2014	0.22	FALSE
MW-20	9/30/2014	ND<6	FALSE
MW-20	4/13/2015	ND<0.22	FALSE
MW-21	12/16/1997	ND<30	FALSE
MW-21	1/14/1998	ND<30	FALSE
MW-21	2/13/1998	ND<30	FALSE
MW-21	3/6/1998	ND<30	FALSE
MW-21	10/15/1998	ND<30	FALSE
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MW-21	9/23/1999	ND<30	FALSE
MW-21	3/29/2000	ND<30	FALSE
MW-21	9/14/2000	ND<30	FALSE
MW-21	3/12/2001	ND<30	FALSE
MW-21	10/13/2001	ND<30	FALSE
MW-21	3/8/2002	ND<30	FALSE
MW-21	9/19/2002	ND<30	FALSE
MW-21	4/15/2003	ND<30	FALSE
MW-21	10/16/2003	ND<30	FALSE
MW-21	3/25/2004	ND<30	FALSE
MW-21	10/22/2004	ND<30	FALSE
MW-21	5/11/2005	ND<30	FALSE
MW-21	10/11/2005	ND<30	FALSE
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MW-21	10/18/2006	ND<6	FALSE
MW-21	4/9/2007	ND<6	FALSE
MW-21	9/24/2007	ND<6	FALSE
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MW-21	5/22/2014	ND<6	FALSE
MW-21	9/30/2014	ND<6	FALSE
MW-21	4/13/2015	ND<0.22	FALSE
MW-22	12/16/1997	ND<30	FALSE
MW-22	1/14/1998	ND<30	FALSE
MW-22	2/13/1998	ND<30	FALSE
MW-22	3/6/1998	ND<30	FALSE
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MW-22	10/13/2001	ND<30	FALSE
MW-22	3/8/2002	ND<30	FALSE
MW-22	9/19/2002	ND<30	FALSE
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MW-22	10/16/2003	ND<30	FALSE

MW-22	3/25/2004	ND<30	FALSE
MW-22	10/22/2004	ND<30	FALSE
MW-22	5/11/2005	ND<30	FALSE
MW-22	10/11/2005	ND<30	FALSE
MW-22	4/27/2006	ND<6	FALSE
MW-22	10/18/2006	ND<6	FALSE
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MW-22	9/24/2007	ND<6	FALSE
MW-22	5/2/2008	ND<6	FALSE
MW-22	12/5/2008	ND<6	FALSE
MW-22	4/15/2009	ND<6	FALSE
MW-22	10/9/2009	ND<6	FALSE
MW-22	4/30/2010	ND<6	FALSE
MW-22	10/5/2010	ND<6	FALSE
MW-22	5/12/2011	ND<6	FALSE
MW-22	10/6/2011	ND<6	FALSE
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MW-22	4/23/2013	ND<6	FALSE
MW-22	9/10/2013	ND<6	FALSE
MW-22	5/22/2014	ND<6	FALSE
MW-22	9/30/2014	ND<6	FALSE
MW-22	4/13/2015	ND<0.22	FALSE
MW-23	12/16/1997	ND<30	FALSE
MW-23	1/14/1998	ND<30	FALSE
MW-23	2/13/1998	ND<30	FALSE
MW-23	3/6/1998	ND<30	FALSE
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MW-23	9/14/2000	ND<30	FALSE
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MW-23	3/8/2002	ND<30	FALSE
MW-23	9/19/2002	ND<30	FALSE
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MW-23	9/24/2007	ND<6	FALSE
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MW-23	4/15/2009	ND<6	FALSE
MW-23	10/9/2009	ND<6	FALSE
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MW-23	10/5/2010	ND<6	FALSE
MW-23	5/12/2011	ND<6	FALSE
MW-23	10/6/2011	ND<6	FALSE
MW-23	4/19/2012	ND<6	FALSE
MW-23	10/23/2012	ND<6	FALSE
MW-23	4/23/2013	ND<6	FALSE
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MW-23	5/22/2014	ND<6	FALSE
MW-23	9/30/2014	ND<6	FALSE
MW-23	4/13/2015	ND<0.22	FALSE
MW-24	12/16/1997	ND<30	FALSE
MW-24	1/14/1998	ND<30	FALSE
MW-24	2/13/1998	ND<30	FALSE
MW-24	3/6/1998	ND<30	FALSE
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MW-24	3/25/1999	ND<30	FALSE
MW-24	9/23/1999	ND<30	FALSE
MW-24	3/29/2000	ND<30	FALSE
MW-24	9/14/2000	ND<30	FALSE
MW-24	3/12/2001	ND<30	FALSE
MW-24	10/13/2001	ND<30	FALSE

MW-24	3/8/2002	ND<30	FALSE
MW-24	9/19/2002	ND<30	FALSE
MW-24	4/15/2003	ND<30	FALSE
MW-24	10/16/2003	ND<30	FALSE
MW-24	3/25/2004	ND<30	FALSE
MW-24	10/22/2004	ND<30	FALSE
MW-24	5/11/2005	ND<30	FALSE
MW-24	10/11/2005	ND<30	FALSE
MW-24	4/27/2006	ND<6	FALSE
MW-24	10/18/2006	ND<6	FALSE
MW-24	4/9/2007	ND<6	FALSE
MW-24	9/24/2007	ND<6	FALSE
MW-24	5/2/2008	ND<6	FALSE
MW-24	12/5/2008	ND<6	FALSE
MW-24	**4/15/2009**	**630**	**TRUE**
MW-24	10/9/2009	0.162	FALSE
MW-24	4/30/2010	ND<6	FALSE
MW-24	10/5/2010	ND<6	FALSE
MW-24	5/12/2011	ND<6	FALSE
MW-24	10/6/2011	ND<6	FALSE
MW-24	4/19/2012	ND<6	FALSE
MW-24	10/23/2012	ND<6	FALSE
MW-24	4/23/2013	ND<6	FALSE
MW-24	9/10/2013	ND<6	FALSE
MW-24	5/22/2014	ND<6	FALSE
MW-24	9/30/2014	ND<6	FALSE
MW-24	4/13/2015	ND<0.22	FALSE
MW-25	12/16/1997	ND<30	FALSE
MW-25	1/14/1998	ND<30	FALSE
MW-25	2/13/1998	ND<30	FALSE
MW-25	3/6/1998	ND<30	FALSE
MW-25	10/15/1998	ND<30	FALSE
MW-25	3/25/1999	ND<30	FALSE
MW-25	9/23/1999	ND<30	FALSE
MW-25	3/29/2000	ND<30	FALSE
MW-25	9/14/2000	ND<30	FALSE
MW-25	3/12/2001	ND<30	FALSE
MW-25	10/13/2001	ND<30	FALSE
MW-25	3/8/2002	ND<30	FALSE
MW-25	9/19/2002	ND<30	FALSE
MW-25	4/15/2003	ND<30	FALSE
MW-25	10/16/2003	ND<30	FALSE
MW-25	3/25/2004	ND<30	FALSE
MW-25	10/22/2004	ND<30	FALSE
MW-25	5/11/2005	ND<30	FALSE
MW-25	10/11/2005	ND<30	FALSE
MW-25	4/27/2006	ND<6	FALSE
MW-25	10/18/2006	ND<6	FALSE
MW-25	4/9/2007	ND<6	FALSE
MW-25	9/24/2007	ND<6	FALSE
MW-25	5/2/2008	ND<6	FALSE
MW-25	12/5/2008	ND<6	FALSE
MW-25	4/15/2009	ND<6	FALSE
MW-25	10/9/2009	ND<6	FALSE
MW-25	4/30/2010	ND<6	FALSE
MW-25	10/5/2010	ND<6	FALSE
MW-25	5/12/2011	ND<6	FALSE
MW-25	10/6/2011	ND<6	FALSE
MW-25	4/19/2012	ND<6	FALSE
MW-25	10/23/2012	ND<6	FALSE
MW-25	5/22/2014	ND<6	FALSE
MW-25	9/30/2014	ND<6	FALSE
MW-25d	12/16/1997	ND<30	FALSE
MW-25d	1/14/1998	ND<30	FALSE
MW-25d	2/13/1998	ND<30	FALSE
MW-25d	3/6/1998	ND<30	FALSE
MW-25d	10/15/1998	ND<30	FALSE
MW-25d	3/25/1999	ND<30	FALSE
MW-25d	9/23/1999	ND<30	FALSE
MW-25d	3/29/2000	ND<30	FALSE
MW-25d	9/14/2000	ND<30	FALSE
MW-25d	3/12/2001	ND<30	FALSE

MW-25d	10/13/2001	ND<30	FALSE
MW-25d	3/8/2002	ND<30	FALSE
MW-25d	9/19/2002	ND<30	FALSE
MW-25d	4/15/2003	ND<30	FALSE
MW-25d	10/16/2003	ND<30	FALSE
MW-25d	3/25/2004	ND<30	FALSE
MW-25d	10/22/2004	ND<30	FALSE
MW-25d	5/11/2005	ND<30	FALSE
MW-25d	10/11/2005	ND<30	FALSE
MW-25d	4/27/2006	ND<6	FALSE
MW-25d	10/18/2006	ND<6	FALSE
MW-25d	4/9/2007	ND<6	FALSE
MW-25d	9/24/2007	ND<6	FALSE
MW-25d	5/2/2008	ND<6	FALSE
MW-25d	12/5/2008	ND<6	FALSE
MW-25d	4/15/2009	ND<6	FALSE
MW-25d	10/9/2009	ND<6	FALSE
MW-25d	4/30/2010	ND<6	FALSE
MW-25d	10/5/2010	ND<6	FALSE
MW-25d	5/12/2011	ND<6	FALSE
MW-25d	10/6/2011	ND<6	FALSE
MW-25d	4/19/2012	ND<6	FALSE
MW-25d	10/23/2012	ND<6	FALSE
MW-25d	4/23/2013	ND<6	FALSE
MW-25d	9/10/2013	ND<6	FALSE
MW-25d	5/22/2014	ND<6	FALSE
MW-25d	9/30/2014	ND<6	FALSE
MW-25d	4/13/2015	ND<0.22	FALSE

Non-Parametric Tolerance Interval

Parameter: Barium, total

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 57.1744%
Background measurements (n) = 76
Maximum Background Concentration = 500
Minimum Coverage = 96.3%
Average Coverage = 98.7013%

Location	Date	Value	Significant
MW-17	12/16/1997	ND<500	FALSE
MW-17	1/14/1998	ND<500	FALSE
MW-17	2/13/1998	ND<500	FALSE
MW-17	3/6/1998	ND<500	FALSE
MW-17	10/15/1998	ND<500	FALSE
MW-17	3/25/1999	ND<500	FALSE
MW-17	9/23/1999	ND<500	FALSE
MW-17	3/29/2000	ND<500	FALSE
MW-17	9/14/2000	ND<500	FALSE
MW-17	3/12/2001	ND<500	FALSE
MW-17	10/13/2001	ND<500	FALSE
MW-17	3/8/2002	ND<500	FALSE
MW-17	9/19/2002	ND<500	FALSE
MW-17	4/15/2003	ND<500	FALSE
MW-17	10/16/2003	ND<500	FALSE
MW-17	3/25/2004	ND<500	FALSE
MW-17	10/22/2004	ND<500	FALSE
MW-17	5/11/2005	ND<500	FALSE
MW-17	10/11/2005	ND<500	FALSE
MW-17	4/27/2006	ND<100	FALSE
MW-17	10/18/2006	ND<100	FALSE
MW-17	4/9/2007	100	FALSE
MW-17	9/24/2007	50.3	FALSE
MW-17	5/2/2008	52.7	FALSE
MW-17	12/5/2008	49.3	FALSE
MW-17	4/15/2009	57.6	FALSE
MW-17	10/9/2009	52.4	FALSE
MW-17	4/30/2010	51.8	FALSE
MW-17	10/5/2010	47.4	FALSE
MW-17	5/12/2011	54	FALSE
MW-17	10/6/2011	51.5	FALSE
MW-17	4/19/2012	53.8	FALSE
MW-17	10/23/2012	48.6	FALSE
MW-17	4/23/2013	56.1	FALSE
MW-17	9/10/2013	51.8	FALSE
MW-17	5/22/2014	54.3	FALSE
MW-17	9/30/2014	54.3	FALSE
MW-17	4/13/2015	57.2	FALSE
MW-18	12/16/1997	ND<500	FALSE
MW-18	1/14/1998	ND<500	FALSE
MW-18	2/13/1998	ND<500	FALSE
MW-18	3/6/1998	ND<500	FALSE
MW-18	10/15/1998	ND<500	FALSE
MW-18	3/25/1999	ND<500	FALSE
MW-18	9/23/1999	ND<500	FALSE
MW-18	3/29/2000	ND<500	FALSE
MW-18	9/14/2000	ND<500	FALSE
MW-18	3/12/2001	ND<500	FALSE
MW-18	10/13/2001	ND<500	FALSE
MW-18	3/8/2002	ND<500	FALSE
MW-18	9/19/2002	ND<500	FALSE
MW-18	4/15/2003	ND<500	FALSE
MW-18	10/16/2003	ND<500	FALSE
MW-18	3/25/2004	ND<500	FALSE
MW-18	10/22/2004	ND<500	FALSE
MW-18	5/11/2005	ND<500	FALSE
MW-18	10/11/2005	ND<500	FALSE
MW-18	4/27/2006	ND<100	FALSE
MW-18	10/18/2006	ND<100	FALSE
MW-18	4/9/2007	100	FALSE
MW-18	9/24/2007	29	FALSE

MW-18	5/2/2008	23	FALSE
MW-18	12/5/2008	28.1	FALSE
MW-18	4/15/2009	34.3	FALSE
MW-18	10/9/2009	25.9	FALSE
MW-18	4/30/2010	23.6	FALSE
MW-18	10/5/2010	25.5	FALSE
MW-18	5/12/2011	24.1	FALSE
MW-18	10/6/2011	22.1	FALSE
MW-18	4/19/2012	24.2	FALSE
MW-18	10/23/2012	23.3	FALSE
MW-18	4/23/2013	23.6	FALSE
MW-18	9/10/2013	27.5	FALSE
MW-18	5/22/2014	32.6	FALSE
MW-18	9/30/2014	24.7	FALSE
MW-18	4/13/2015	25	FALSE
MW-19	12/16/1997	ND<500	FALSE
MW-19	1/14/1998	ND<500	FALSE
MW-19	2/13/1998	69	FALSE
MW-19	3/6/1998	ND<500	FALSE
MW-19	10/15/1998	ND<500	FALSE
MW-19	3/25/1999	ND<500	FALSE
MW-19	9/23/1999	ND<500	FALSE
MW-19	3/29/2000	ND<500	FALSE
MW-19	9/14/2000	ND<500	FALSE
MW-19	3/12/2001	ND<500	FALSE
MW-19	10/13/2001	ND<500	FALSE
MW-19	3/8/2002	ND<500	FALSE
MW-19	9/19/2002	ND<500	FALSE
MW-19	4/15/2003	ND<500	FALSE
MW-19	10/16/2003	ND<500	FALSE
MW-19	3/25/2004	ND<500	FALSE
MW-19	10/22/2004	ND<500	FALSE
MW-19	5/11/2005	ND<500	FALSE
MW-19	10/11/2005	ND<500	FALSE
MW-19	4/27/2006	ND<100	FALSE
MW-19	10/18/2006	ND<100	FALSE
MW-19	4/9/2007	100	FALSE
MW-19	9/24/2007	17.2	FALSE
MW-19	5/2/2008	31.7	FALSE
MW-19	12/5/2008	31	FALSE
MW-19	4/15/2009	32.7	FALSE
MW-19	10/9/2009	22.1	FALSE
MW-19	4/30/2010	21.1	FALSE
MW-19	10/5/2010	17.1	FALSE
MW-19	5/12/2011	36.9	FALSE
MW-19	10/6/2011	40.8	FALSE
MW-19	4/19/2012	25	FALSE
MW-19	10/23/2012	27.7	FALSE
MW-19	4/23/2013	28.9	FALSE
MW-19	9/10/2013	24.5	FALSE
MW-19	5/22/2014	54.4	FALSE
MW-19	9/30/2014	38.4	FALSE
MW-19	4/13/2015	48.2	FALSE
MW-20	12/16/1997	ND<500	FALSE
MW-20	1/14/1998	ND<500	FALSE
MW-20	2/13/1998	ND<500	FALSE
MW-20	3/6/1998	ND<500	FALSE
MW-20	10/15/1998	ND<500	FALSE
MW-20	3/25/1999	ND<500	FALSE
MW-20	9/23/1999	ND<500	FALSE
MW-20	3/29/2000	ND<500	FALSE
MW-20	9/14/2000	ND<500	FALSE
MW-20	3/12/2001	ND<500	FALSE
MW-20	10/13/2001	ND<500	FALSE
MW-20	3/8/2002	ND<500	FALSE
MW-20	9/19/2002	ND<500	FALSE
MW-20	4/15/2003	ND<500	FALSE
MW-20	10/16/2003	ND<500	FALSE
MW-20	3/25/2004	ND<500	FALSE
MW-20	10/22/2004	ND<500	FALSE
MW-20	5/11/2005	ND<500	FALSE
MW-20	10/11/2005	ND<500	FALSE

MW-20	4/27/2006	ND<100	FALSE
MW-20	10/18/2006	ND<100	FALSE
MW-20	4/9/2007	100	FALSE
MW-20	9/24/2007	39.2	FALSE
MW-20	5/2/2008	55.4	FALSE
MW-20	12/5/2008	63.6	FALSE
MW-20	4/15/2009	62.7	FALSE
MW-20	10/9/2009	76.4	FALSE
MW-20	4/30/2010	65.9	FALSE
MW-20	10/5/2010	60.1	FALSE
MW-20	5/12/2011	71.6	FALSE
MW-20	10/6/2011	64.7	FALSE
MW-20	4/19/2012	70.3	FALSE
MW-20	10/23/2012	79.1	FALSE
MW-20	4/23/2013	74.2	FALSE
MW-20	9/10/2013	64.9	FALSE
MW-20	5/22/2014	58.8	FALSE
MW-20	9/30/2014	46	FALSE
MW-20	4/13/2015	62.5	FALSE
MW-21	12/16/1997	ND<500	FALSE
MW-21	1/14/1998	ND<500	FALSE
MW-21	2/13/1998	ND<500	FALSE
MW-21	3/6/1998	ND<500	FALSE
MW-21	10/15/1998	ND<500	FALSE
MW-21	3/25/1999	ND<500	FALSE
MW-21	9/23/1999	ND<500	FALSE
MW-21	3/29/2000	ND<500	FALSE
MW-21	9/14/2000	ND<500	FALSE
MW-21	3/12/2001	ND<500	FALSE
MW-21	10/13/2001	ND<500	FALSE
MW-21	3/8/2002	ND<500	FALSE
MW-21	9/19/2002	ND<500	FALSE
MW-21	4/15/2003	ND<500	FALSE
MW-21	10/16/2003	ND<500	FALSE
MW-21	3/25/2004	ND<500	FALSE
MW-21	10/22/2004	ND<500	FALSE
MW-21	5/11/2005	ND<500	FALSE
MW-21	10/11/2005	ND<500	FALSE
MW-21	4/27/2006	ND<100	FALSE
MW-21	10/18/2006	ND<100	FALSE
MW-21	4/9/2007	100	FALSE
MW-21	9/24/2007	30.7	FALSE
MW-21	5/2/2008	30	FALSE
MW-21	12/5/2008	30.1	FALSE
MW-21	4/15/2009	30.2	FALSE
MW-21	10/9/2009	35.9	FALSE
MW-21	4/30/2010	32.5	FALSE
MW-21	10/5/2010	33.7	FALSE
MW-21	5/12/2011	34.8	FALSE
MW-21	10/6/2011	36.4	FALSE
MW-21	4/19/2012	36.1	FALSE
MW-21	10/23/2012	35.9	FALSE
MW-21	4/23/2013	36.9	FALSE
MW-21	9/10/2013	37.5	FALSE
MW-21	5/22/2014	39.4	FALSE
MW-21	9/30/2014	37.4	FALSE
MW-21	4/13/2015	45.3	FALSE
MW-22	12/16/1997	ND<500	FALSE
MW-22	1/14/1998	ND<500	FALSE
MW-22	2/13/1998	ND<500	FALSE
MW-22	3/6/1998	ND<500	FALSE
MW-22	10/15/1998	ND<500	FALSE
MW-22	3/25/1999	ND<500	FALSE
MW-22	9/23/1999	ND<500	FALSE
MW-22	3/29/2000	ND<500	FALSE
MW-22	9/14/2000	ND<500	FALSE
MW-22	3/12/2001	ND<500	FALSE
MW-22	10/13/2001	ND<500	FALSE
MW-22	3/8/2002	ND<500	FALSE
MW-22	9/19/2002	ND<500	FALSE
MW-22	4/15/2003	ND<500	FALSE
MW-22	10/16/2003	ND<500	FALSE

MW-22	3/25/2004	ND<500	FALSE
MW-22	10/22/2004	ND<500	FALSE
MW-22	5/11/2005	ND<500	FALSE
MW-22	10/11/2005	ND<500	FALSE
MW-22	4/27/2006	ND<100	FALSE
MW-22	10/18/2006	ND<100	FALSE
MW-22	4/9/2007	100	FALSE
MW-22	9/24/2007	80.4	FALSE
MW-22	5/2/2008	136	FALSE
MW-22	12/5/2008	78.5	FALSE
MW-22	4/15/2009	207	FALSE
MW-22	10/9/2009	96.4	FALSE
MW-22	4/30/2010	233	FALSE
MW-22	10/5/2010	107	FALSE
MW-22	5/12/2011	162	FALSE
MW-22	10/6/2011	112	FALSE
MW-22	4/19/2012	136	FALSE
MW-22	10/23/2012	134	FALSE
MW-22	4/23/2013	146	FALSE
MW-22	9/10/2013	186	FALSE
MW-22	5/22/2014	191	FALSE
MW-22	9/30/2014	179	FALSE
MW-22	4/13/2015	157	FALSE
MW-23	12/16/1997	ND<500	FALSE
MW-23	1/14/1998	ND<500	FALSE
MW-23	2/13/1998	ND<500	FALSE
MW-23	3/6/1998	ND<500	FALSE
MW-23	10/15/1998	ND<500	FALSE
MW-23	3/25/1999	ND<500	FALSE
MW-23	9/23/1999	ND<500	FALSE
MW-23	3/29/2000	ND<500	FALSE
MW-23	9/14/2000	ND<500	FALSE
MW-23	3/12/2001	ND<500	FALSE
MW-23	10/13/2001	ND<500	FALSE
MW-23	3/8/2002	ND<500	FALSE
MW-23	9/19/2002	ND<500	FALSE
MW-23	4/15/2003	ND<500	FALSE
MW-23	10/16/2003	ND<500	FALSE
MW-23	3/25/2004	ND<500	FALSE
MW-23	10/22/2004	ND<500	FALSE
MW-23	5/11/2005	ND<500	FALSE
MW-23	10/11/2005	ND<500	FALSE
MW-23	4/27/2006	ND<100	FALSE
MW-23	10/18/2006	ND<100	FALSE
MW-23	4/9/2007	100	FALSE
MW-23	9/24/2007	60	FALSE
MW-23	5/2/2008	66.6	FALSE
MW-23	12/5/2008	61.4	FALSE
MW-23	4/15/2009	59.4	FALSE
MW-23	10/9/2009	65	FALSE
MW-23	4/30/2010	56.3	FALSE
MW-23	10/5/2010	53.7	FALSE
MW-23	5/12/2011	53.2	FALSE
MW-23	10/6/2011	53.4	FALSE
MW-23	4/19/2012	56.9	FALSE
MW-23	10/23/2012	53.6	FALSE
MW-23	4/23/2013	57.4	FALSE
MW-23	9/10/2013	65.1	FALSE
MW-23	5/22/2014	55.5	FALSE
MW-23	9/30/2014	55.7	FALSE
MW-23	4/13/2015	63.2	FALSE
MW-24	12/16/1997	ND<500	FALSE
MW-24	1/14/1998	ND<500	FALSE
MW-24	2/13/1998	ND<500	FALSE
MW-24	3/6/1998	ND<500	FALSE
MW-24	10/15/1998	ND<500	FALSE
MW-24	3/25/1999	ND<500	FALSE
MW-24	9/23/1999	ND<500	FALSE
MW-24	3/29/2000	ND<500	FALSE
MW-24	9/14/2000	ND<500	FALSE
MW-24	3/12/2001	ND<500	FALSE
MW-24	10/13/2001	ND<500	FALSE

MW-24	3/8/2002	ND<500	FALSE
MW-24	9/19/2002	ND<500	FALSE
MW-24	4/15/2003	ND<500	FALSE
MW-24	10/16/2003	ND<500	FALSE
MW-24	3/25/2004	ND<500	FALSE
MW-24	10/22/2004	ND<500	FALSE
MW-24	5/11/2005	ND<500	FALSE
MW-24	10/11/2005	ND<500	FALSE
MW-24	4/27/2006	ND<100	FALSE
MW-24	10/18/2006	ND<100	FALSE
MW-24	4/9/2007	332	FALSE
MW-24	9/24/2007	382	FALSE
MW-24	5/2/2008	444	FALSE
MW-24	12/5/2008	444	FALSE
MW-24	4/15/2009	447	FALSE
MW-24	10/9/2009	465	FALSE
MW-24	4/30/2010	429	FALSE
MW-24	10/5/2010	427	FALSE
MW-24	5/12/2011	383	FALSE
MW-24	10/6/2011	407	FALSE
MW-24	4/19/2012	393	FALSE
MW-24	10/23/2012	354	FALSE
MW-24	4/23/2013	374	FALSE
MW-24	9/10/2013	368	FALSE
MW-24	5/22/2014	355	FALSE
MW-24	9/30/2014	363	FALSE
MW-24	4/13/2015	385	FALSE
MW-25	12/16/1997	ND<500	FALSE
MW-25	1/14/1998	ND<500	FALSE
MW-25	2/13/1998	ND<500	FALSE
MW-25	3/6/1998	ND<500	FALSE
MW-25	10/15/1998	ND<500	FALSE
MW-25	3/25/1999	ND<500	FALSE
MW-25	9/23/1999	ND<500	FALSE
MW-25	3/29/2000	ND<500	FALSE
MW-25	9/14/2000	ND<500	FALSE
MW-25	3/12/2001	ND<500	FALSE
MW-25	10/13/2001	ND<500	FALSE
MW-25	3/8/2002	ND<500	FALSE
MW-25	9/19/2002	ND<500	FALSE
MW-25	4/15/2003	ND<500	FALSE
MW-25	10/16/2003	ND<500	FALSE
MW-25	3/25/2004	ND<500	FALSE
MW-25	10/22/2004	ND<500	FALSE
MW-25	5/11/2005	ND<500	FALSE
MW-25	10/11/2005	ND<500	FALSE
MW-25	4/27/2006	ND<100	FALSE
MW-25	10/18/2006	ND<100	FALSE
MW-25	4/9/2007	100	FALSE
MW-25	9/24/2007	100	FALSE
MW-25	5/2/2008	19.6	FALSE
MW-25	12/5/2008	ND<100	FALSE
MW-25	4/15/2009	22.8	FALSE
MW-25	10/9/2009	ND<100	FALSE
MW-25	4/30/2010	23.4	FALSE
MW-25	10/5/2010	ND<100	FALSE
MW-25	5/12/2011	22.7	FALSE
MW-25	10/6/2011	14.1	FALSE
MW-25	4/19/2012	ND<100	FALSE
MW-25	10/23/2012	ND<100	FALSE
MW-25	5/22/2014	20.5	FALSE
MW-25	9/30/2014	ND<100	FALSE
MW-25d	12/16/1997	ND<500	FALSE
MW-25d	1/14/1998	ND<500	FALSE
MW-25d	2/13/1998	ND<500	FALSE
MW-25d	3/6/1998	ND<500	FALSE
MW-25d	10/15/1998	ND<500	FALSE
MW-25d	3/25/1999	ND<500	FALSE
MW-25d	9/23/1999	ND<500	FALSE
MW-25d	3/29/2000	ND<500	FALSE
MW-25d	9/14/2000	ND<500	FALSE
MW-25d	3/12/2001	ND<500	FALSE

MW-25d	10/13/2001	ND<500	FALSE
MW-25d	3/8/2002	ND<500	FALSE
MW-25d	9/19/2002	ND<500	FALSE
MW-25d	4/15/2003	ND<500	FALSE
MW-25d	10/16/2003	ND<500	FALSE
MW-25d	3/25/2004	ND<500	FALSE
MW-25d	10/22/2004	ND<500	FALSE
MW-25d	5/11/2005	ND<500	FALSE
MW-25d	10/11/2005	ND<500	FALSE
MW-25d	4/27/2006	ND<100	FALSE
MW-25d	10/18/2006	ND<100	FALSE
MW-25d	4/9/2007	100	FALSE
MW-25d	9/24/2007	13	FALSE
MW-25d	5/2/2008	16.2	FALSE
MW-25d	12/5/2008	12.4	FALSE
MW-25d	4/15/2009	19.1	FALSE
MW-25d	10/9/2009	13.5	FALSE
MW-25d	4/30/2010	13.5	FALSE
MW-25d	10/5/2010	11.3	FALSE
MW-25d	5/12/2011	15.3	FALSE
MW-25d	10/6/2011	13.8	FALSE
MW-25d	4/19/2012	14.6	FALSE
MW-25d	10/23/2012	13.6	FALSE
MW-25d	4/23/2013	18.2	FALSE
MW-25d	9/10/2013	16.5	FALSE
MW-25d	5/22/2014	23.9	FALSE
MW-25d	9/30/2014	13.9	FALSE
MW-25d	4/13/2015	21.3	FALSE

Non-Parametric Tolerance Interval

Parameter: Chromium, total

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 81.457%
Background measurements (n) = 76
Maximum Background Concentration = 10
Minimum Coverage = 96.3%
Average Coverage = 98.7013%

Location	Date	Value	Significant
MW-17	12/16/1997	ND<10	FALSE
MW-17	1/14/1998	ND<10	FALSE
MW-17	2/13/1998	ND<10	FALSE
MW-17	3/6/1998	ND<10	FALSE
MW-17	10/15/1998	ND<10	FALSE
MW-17	3/25/1999	ND<10	FALSE
MW-17	9/23/1999	ND<10	FALSE
MW-17	3/29/2000	ND<10	FALSE
MW-17	9/14/2000	ND<10	FALSE
MW-17	3/12/2001	ND<10	FALSE
MW-17	10/13/2001	ND<10	FALSE
MW-17	3/8/2002	ND<10	FALSE
MW-17	9/19/2002	ND<10	FALSE
MW-17	4/15/2003	ND<10	FALSE
MW-17	10/16/2003	ND<10	FALSE
MW-17	3/25/2004	ND<10	FALSE
MW-17	10/22/2004	ND<10	FALSE
MW-17	5/11/2005	ND<10	FALSE
MW-17	10/11/2005	ND<10	FALSE
MW-17	4/27/2006	ND<10	FALSE
MW-17	10/18/2006	ND<10	FALSE
MW-17	4/9/2007	ND<10	FALSE
MW-17	9/24/2007	ND<10	FALSE
MW-17	**5/2/2008**	**112**	**TRUE**
MW-17	12/5/2008	2	FALSE
MW-17	4/15/2009	2.6	FALSE
MW-17	10/9/2009	1.47	FALSE
MW-17	4/30/2010	1.64	FALSE
MW-17	10/5/2010	1.74	FALSE
MW-17	5/12/2011	2.41	FALSE
MW-17	10/6/2011	ND<10	FALSE
MW-17	4/19/2012	1.25	FALSE
MW-17	10/23/2012	ND<10	FALSE
MW-17	4/23/2013	1.52	FALSE
MW-17	9/10/2013	ND<10	FALSE
MW-17	5/22/2014	ND<10	FALSE
MW-17	9/30/2014	1.95	FALSE
MW-17	4/13/2015	ND<1.4	FALSE
MW-18	12/16/1997	ND<10	FALSE
MW-18	1/14/1998	ND<10	FALSE
MW-18	2/13/1998	ND<10	FALSE
MW-18	3/6/1998	ND<10	FALSE
MW-18	10/15/1998	ND<10	FALSE
MW-18	3/25/1999	ND<10	FALSE
MW-18	9/23/1999	ND<10	FALSE
MW-18	3/29/2000	ND<10	FALSE
MW-18	9/14/2000	ND<10	FALSE
MW-18	3/12/2001	ND<10	FALSE
MW-18	10/13/2001	ND<10	FALSE
MW-18	3/8/2002	ND<10	FALSE
MW-18	9/19/2002	ND<10	FALSE
MW-18	4/15/2003	ND<10	FALSE
MW-18	10/16/2003	ND<10	FALSE
MW-18	3/25/2004	ND<10	FALSE
MW-18	10/22/2004	ND<10	FALSE
MW-18	5/11/2005	ND<10	FALSE
MW-18	10/11/2005	ND<10	FALSE
MW-18	4/27/2006	ND<10	FALSE
MW-18	10/18/2006	ND<10	FALSE
MW-18	4/9/2007	ND<10	FALSE
MW-18	9/24/2007	ND<10	FALSE

MW-18	**5/2/2008**	**30.3**	**TRUE**
MW-18	12/5/2008	ND<10	FALSE
MW-18	4/15/2009	ND<10	FALSE
MW-18	10/9/2009	ND<10	FALSE
MW-18	4/30/2010	ND<10	FALSE
MW-18	10/5/2010	ND<10	FALSE
MW-18	5/12/2011	ND<10	FALSE
MW-18	10/6/2011	ND<10	FALSE
MW-18	4/19/2012	ND<10	FALSE
MW-18	10/23/2012	ND<10	FALSE
MW-18	4/23/2013	ND<10	FALSE
MW-18	9/10/2013	ND<10	FALSE
MW-18	5/22/2014	ND<10	FALSE
MW-18	9/30/2014	1.62	FALSE
MW-18	4/13/2015	ND<1.4	FALSE
MW-19	12/16/1997	ND<10	FALSE
MW-19	1/14/1998	ND<10	FALSE
MW-19	**2/13/1998**	**12**	**TRUE**
MW-19	3/6/1998	ND<10	FALSE
MW-19	10/15/1998	ND<10	FALSE
MW-19	3/25/1999	ND<10	FALSE
MW-19	9/23/1999	ND<10	FALSE
MW-19	3/29/2000	ND<10	FALSE
MW-19	9/14/2000	ND<10	FALSE
MW-19	3/12/2001	ND<10	FALSE
MW-19	10/13/2001	ND<10	FALSE
MW-19	3/8/2002	ND<10	FALSE
MW-19	9/19/2002	ND<10	FALSE
MW-19	4/15/2003	ND<10	FALSE
MW-19	10/16/2003	ND<10	FALSE
MW-19	3/25/2004	ND<10	FALSE
MW-19	10/22/2004	ND<10	FALSE
MW-19	5/11/2005	ND<10	FALSE
MW-19	10/11/2005	ND<10	FALSE
MW-19	4/27/2006	ND<10	FALSE
MW-19	10/18/2006	ND<10	FALSE
MW-19	4/9/2007	ND<10	FALSE
MW-19	9/24/2007	ND<10	FALSE
MW-19	**5/2/2008**	**11.1**	**TRUE**
MW-19	12/5/2008	1.2	FALSE
MW-19	4/15/2009	1.6	FALSE
MW-19	10/9/2009	1.84	FALSE
MW-19	4/30/2010	ND<10	FALSE
MW-19	10/5/2010	ND<10	FALSE
MW-19	5/12/2011	2.34	FALSE
MW-19	10/6/2011	1.59	FALSE
MW-19	4/19/2012	1.14	FALSE
MW-19	10/23/2012	ND<10	FALSE
MW-19	4/23/2013	ND<10	FALSE
MW-19	9/10/2013	ND<10	FALSE
MW-19	5/22/2014	ND<10	FALSE
MW-19	9/30/2014	ND<10	FALSE
MW-19	4/13/2015	ND<1.4	FALSE
MW-20	12/16/1997	ND<10	FALSE
MW-20	1/14/1998	ND<10	FALSE
MW-20	2/13/1998	ND<10	FALSE
MW-20	3/6/1998	ND<10	FALSE
MW-20	10/15/1998	ND<10	FALSE
MW-20	**3/25/1999**	**11**	**TRUE**
MW-20	9/23/1999	ND<10	FALSE
MW-20	3/29/2000	ND<10	FALSE
MW-20	9/14/2000	ND<10	FALSE
MW-20	3/12/2001	ND<10	FALSE
MW-20	10/13/2001	ND<10	FALSE
MW-20	3/8/2002	ND<10	FALSE
MW-20	9/19/2002	ND<10	FALSE
MW-20	4/15/2003	ND<10	FALSE
MW-20	10/16/2003	ND<10	FALSE
MW-20	3/25/2004	ND<10	FALSE
MW-20	10/22/2004	ND<10	FALSE
MW-20	5/11/2005	ND<10	FALSE
MW-20	10/11/2005	ND<10	FALSE

MW-20	4/27/2006	ND<10	FALSE
MW-20	10/18/2006	ND<10	FALSE
MW-20	4/9/2007	ND<10	FALSE
MW-20	9/24/2007	ND<10	FALSE
MW-20	5/2/2008	ND<10	FALSE
MW-20	12/5/2008	ND<10	FALSE
MW-20	4/15/2009	0.8	FALSE
MW-20	10/9/2009	ND<10	FALSE
MW-20	4/30/2010	ND<10	FALSE
MW-20	10/5/2010	ND<10	FALSE
MW-20	5/12/2011	1.42	FALSE
MW-20	10/6/2011	ND<10	FALSE
MW-20	4/19/2012	1.07	FALSE
MW-20	10/23/2012	1.07	FALSE
MW-20	4/23/2013	4.38	FALSE
MW-20	9/10/2013	ND<10	FALSE
MW-20	5/22/2014	1.43	FALSE
MW-20	9/30/2014	1.79	FALSE
MW-20	4/13/2015	1.61	FALSE
MW-21	12/16/1997	ND<10	FALSE
MW-21	1/14/1998	ND<10	FALSE
MW-21	2/13/1998	10	FALSE
MW-21	3/6/1998	ND<10	FALSE
MW-21	10/15/1998	ND<10	FALSE
MW-21	3/25/1999	ND<10	FALSE
MW-21	9/23/1999	ND<10	FALSE
MW-21	3/29/2000	ND<10	FALSE
MW-21	9/14/2000	ND<10	FALSE
MW-21	3/12/2001	ND<10	FALSE
MW-21	10/13/2001	ND<10	FALSE
MW-21	3/8/2002	ND<10	FALSE
MW-21	9/19/2002	ND<10	FALSE
MW-21	4/15/2003	ND<10	FALSE
MW-21	10/16/2003	ND<10	FALSE
MW-21	3/25/2004	ND<10	FALSE
MW-21	10/22/2004	ND<10	FALSE
MW-21	5/11/2005	ND<10	FALSE
MW-21	10/11/2005	ND<10	FALSE
MW-21	4/27/2006	ND<10	FALSE
MW-21	10/18/2006	ND<10	FALSE
MW-21	4/9/2007	ND<10	FALSE
MW-21	9/24/2007	ND<10	FALSE
MW-21	5/2/2008	3.2	FALSE
MW-21	12/5/2008	3.2	FALSE
MW-21	4/15/2009	1.2	FALSE
MW-21	10/9/2009	ND<10	FALSE
MW-21	4/30/2010	1.78	FALSE
MW-21	10/5/2010	1.24	FALSE
MW-21	5/12/2011	ND<10	FALSE
MW-21	10/6/2011	ND<10	FALSE
MW-21	4/19/2012	ND<10	FALSE
MW-21	10/23/2012	1.14	FALSE
MW-21	4/23/2013	4.26	FALSE
MW-21	9/10/2013	ND<10	FALSE
MW-21	5/22/2014	ND<10	FALSE
MW-21	9/30/2014	1.63	FALSE
MW-21	4/13/2015	ND<1.4	FALSE
MW-22	12/16/1997	ND<10	FALSE
MW-22	1/14/1998	ND<10	FALSE
MW-22	2/13/1998	ND<10	FALSE
MW-22	**3/6/1998**	**15**	**TRUE**
MW-22	10/15/1998	ND<10	FALSE
MW-22	3/25/1999	ND<10	FALSE
MW-22	9/23/1999	ND<10	FALSE
MW-22	3/29/2000	ND<10	FALSE
MW-22	9/14/2000	ND<10	FALSE
MW-22	3/12/2001	ND<10	FALSE
MW-22	10/13/2001	ND<10	FALSE
MW-22	3/8/2002	ND<10	FALSE
MW-22	9/19/2002	ND<10	FALSE
MW-22	4/15/2003	ND<10	FALSE
MW-22	10/16/2003	ND<10	FALSE

MW-22	3/25/2004	ND<10	FALSE
MW-22	10/22/2004	ND<10	FALSE
MW-22	5/11/2005	ND<10	FALSE
MW-22	10/11/2005	ND<10	FALSE
MW-22	4/27/2006	ND<10	FALSE
MW-22	10/18/2006	ND<10	FALSE
MW-22	4/9/2007	ND<10	FALSE
MW-22	9/24/2007	ND<10	FALSE
MW-22	5/2/2008	ND<10	FALSE
MW-22	12/5/2008	ND<10	FALSE
MW-22	4/15/2009	0.9	FALSE
MW-22	10/9/2009	ND<10	FALSE
MW-22	4/30/2010	ND<10	FALSE
MW-22	10/5/2010	ND<10	FALSE
MW-22	5/12/2011	ND<10	FALSE
MW-22	10/6/2011	1.2	FALSE
MW-22	4/19/2012	ND<10	FALSE
MW-22	10/23/2012	ND<10	FALSE
MW-22	4/23/2013	2.2	FALSE
MW-22	9/10/2013	ND<10	FALSE
MW-22	5/22/2014	ND<10	FALSE
MW-22	9/30/2014	ND<10	FALSE
MW-22	4/13/2015	ND<1.4	FALSE
MW-23	12/16/1997	ND<10	FALSE
MW-23	1/14/1998	ND<10	FALSE
MW-23	2/13/1998	ND<10	FALSE
MW-23	3/6/1998	ND<10	FALSE
MW-23	10/15/1998	ND<10	FALSE
MW-23	3/25/1999	ND<10	FALSE
MW-23	9/23/1999	ND<10	FALSE
MW-23	3/29/2000	ND<10	FALSE
MW-23	9/14/2000	ND<10	FALSE
MW-23	3/12/2001	ND<10	FALSE
MW-23	10/13/2001	ND<10	FALSE
MW-23	3/8/2002	ND<10	FALSE
MW-23	9/19/2002	ND<10	FALSE
MW-23	4/15/2003	ND<10	FALSE
MW-23	10/16/2003	ND<10	FALSE
MW-23	3/25/2004	ND<10	FALSE
MW-23	10/22/2004	ND<10	FALSE
MW-23	5/11/2005	ND<10	FALSE
MW-23	10/11/2005	ND<10	FALSE
MW-23	4/27/2006	ND<10	FALSE
MW-23	10/18/2006	ND<10	FALSE
MW-23	4/9/2007	ND<10	FALSE
MW-23	9/24/2007	ND<10	FALSE
MW-23	5/2/2008	ND<10	FALSE
MW-23	12/5/2008	ND<10	FALSE
MW-23	4/15/2009	0.7	FALSE
MW-23	10/9/2009	ND<10	FALSE
MW-23	4/30/2010	ND<10	FALSE
MW-23	10/5/2010	ND<10	FALSE
MW-23	5/12/2011	ND<10	FALSE
MW-23	10/6/2011	ND<10	FALSE
MW-23	4/19/2012	ND<10	FALSE
MW-23	10/23/2012	ND<10	FALSE
MW-23	4/23/2013	ND<10	FALSE
MW-23	9/10/2013	ND<10	FALSE
MW-23	5/22/2014	1.97	FALSE
MW-23	9/30/2014	1.49	FALSE
MW-23	4/13/2015	ND<1.4	FALSE
MW-24	12/16/1997	ND<10	FALSE
MW-24	1/14/1998	ND<10	FALSE
MW-24	2/13/1998	ND<10	FALSE
MW-24	3/6/1998	ND<10	FALSE
MW-24	10/15/1998	ND<10	FALSE
MW-24	3/25/1999	ND<10	FALSE
MW-24	9/23/1999	ND<10	FALSE
MW-24	3/29/2000	ND<10	FALSE
MW-24	9/14/2000	ND<10	FALSE
MW-24	3/12/2001	ND<10	FALSE
MW-24	10/13/2001	ND<10	FALSE

MW-24	3/8/2002	ND<10	FALSE
MW-24	9/19/2002	ND<10	FALSE
MW-24	4/15/2003	ND<10	FALSE
MW-24	10/16/2003	ND<10	FALSE
MW-24	3/25/2004	ND<10	FALSE
MW-24	10/22/2004	ND<10	FALSE
MW-24	5/11/2005	ND<10	FALSE
MW-24	10/11/2005	ND<10	FALSE
MW-24	4/27/2006	ND<10	FALSE
MW-24	10/18/2006	ND<10	FALSE
MW-24	4/9/2007	ND<10	FALSE
MW-24	9/24/2007	2.4	FALSE
MW-24	5/2/2008	ND<10	FALSE
MW-24	12/5/2008	ND<10	FALSE
MW-24	4/15/2009	0.8	FALSE
MW-24	10/9/2009	ND<10	FALSE
MW-24	4/30/2010	ND<10	FALSE
MW-24	10/5/2010	ND<10	FALSE
MW-24	5/12/2011	1.77	FALSE
MW-24	10/6/2011	1.54	FALSE
MW-24	4/19/2012	1.1	FALSE
MW-24	10/23/2012	ND<10	FALSE
MW-24	4/23/2013	2.43	FALSE
MW-24	9/10/2013	ND<10	FALSE
MW-24	5/22/2014	2.58	FALSE
MW-24	9/30/2014	1.77	FALSE
MW-24	4/13/2015	2.07	FALSE
MW-25	12/16/1997	ND<10	FALSE
MW-25	1/14/1998	ND<10	FALSE
MW-25	**2/13/1998**	**19**	**TRUE**
MW-25	3/6/1998	ND<10	FALSE
MW-25	10/15/1998	ND<10	FALSE
MW-25	3/25/1999	ND<10	FALSE
MW-25	9/23/1999	ND<10	FALSE
MW-25	3/29/2000	ND<10	FALSE
MW-25	9/14/2000	ND<10	FALSE
MW-25	3/12/2001	ND<10	FALSE
MW-25	10/13/2001	ND<10	FALSE
MW-25	3/8/2002	ND<10	FALSE
MW-25	9/19/2002	ND<10	FALSE
MW-25	4/15/2003	ND<10	FALSE
MW-25	10/16/2003	ND<10	FALSE
MW-25	3/25/2004	ND<10	FALSE
MW-25	10/22/2004	ND<10	FALSE
MW-25	5/11/2005	ND<10	FALSE
MW-25	10/11/2005	ND<10	FALSE
MW-25	4/27/2006	ND<10	FALSE
MW-25	10/18/2006	ND<10	FALSE
MW-25	4/9/2007	ND<10	FALSE
MW-25	9/24/2007	ND<10	FALSE
MW-25	**5/2/2008**	**14.1**	**TRUE**
MW-25	12/5/2008	ND<10	FALSE
MW-25	4/15/2009	1	FALSE
MW-25	10/9/2009	ND<10	FALSE
MW-25	4/30/2010	ND<10	FALSE
MW-25	10/5/2010	ND<10	FALSE
MW-25	5/12/2011	1.17	FALSE
MW-25	10/6/2011	1.85	FALSE
MW-25	4/19/2012	ND<10	FALSE
MW-25	10/23/2012	ND<10	FALSE
MW-25	5/22/2014	ND<10	FALSE
MW-25	9/30/2014	ND<10	FALSE
MW-25d	12/16/1997	ND<10	FALSE
MW-25d	1/14/1998	ND<10	FALSE
MW-25d	2/13/1998	ND<10	FALSE
MW-25d	3/6/1998	ND<10	FALSE
MW-25d	10/15/1998	ND<10	FALSE
MW-25d	3/25/1999	ND<10	FALSE
MW-25d	9/23/1999	ND<10	FALSE
MW-25d	3/29/2000	ND<10	FALSE
MW-25d	9/14/2000	ND<10	FALSE
MW-25d	3/12/2001	ND<10	FALSE

MW-25d	10/13/2001	ND<10	FALSE
MW-25d	3/8/2002	ND<10	FALSE
MW-25d	9/19/2002	ND<10	FALSE
MW-25d	4/15/2003	10	FALSE
MW-25d	10/16/2003	ND<10	FALSE
MW-25d	3/25/2004	ND<10	FALSE
MW-25d	10/22/2004	ND<10	FALSE
MW-25d	5/11/2005	ND<10	FALSE
MW-25d	10/11/2005	ND<10	FALSE
MW-25d	4/27/2006	ND<10	FALSE
MW-25d	10/18/2006	ND<10	FALSE
MW-25d	4/9/2007	ND<10	FALSE
MW-25d	9/24/2007	2.1	FALSE
MW-25d	5/2/2008	5.2	FALSE
MW-25d	12/5/2008	ND<10	FALSE
MW-25d	4/15/2009	2.1	FALSE
MW-25d	10/9/2009	2.2	FALSE
MW-25d	4/30/2010	2.26	FALSE
MW-25d	10/5/2010	2.26	FALSE
MW-25d	5/12/2011	2.56	FALSE
MW-25d	10/6/2011	2.18	FALSE
MW-25d	4/19/2012	3.05	FALSE
MW-25d	10/23/2012	2.46	FALSE
MW-25d	4/23/2013	3.88	FALSE
MW-25d	9/10/2013	2.02	FALSE
MW-25d	5/22/2014	1.88	FALSE
MW-25d	9/30/2014	3.33	FALSE
MW-25d	4/13/2015	1.86	FALSE

Non-Parametric Tolerance Interval

Parameter: Cobalt, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 88.3002%
Background measurements (n) = 76
Maximum Background Concentration = 10
Minimum Coverage = 96.3%
Average Coverage = 98.7013%

Location	Date	Value	Significant
MW-17	12/16/1997	ND<10	FALSE
MW-17	1/14/1998	ND<10	FALSE
MW-17	2/13/1998	ND<10	FALSE
MW-17	3/6/1998	ND<10	FALSE
MW-17	10/15/1998	ND<10	FALSE
MW-17	3/25/1999	ND<10	FALSE
MW-17	9/23/1999	ND<10	FALSE
MW-17	3/29/2000	ND<10	FALSE
MW-17	9/14/2000	ND<10	FALSE
MW-17	3/12/2001	ND<10	FALSE
MW-17	10/13/2001	ND<10	FALSE
MW-17	3/8/2002	ND<10	FALSE
MW-17	9/19/2002	ND<10	FALSE
MW-17	4/15/2003	ND<10	FALSE
MW-17	10/16/2003	ND<10	FALSE
MW-17	3/25/2004	ND<10	FALSE
MW-17	10/22/2004	ND<10	FALSE
MW-17	5/11/2005	ND<10	FALSE
MW-17	10/11/2005	ND<10	FALSE
MW-17	4/27/2006	ND<10	FALSE
MW-17	10/18/2006	ND<10	FALSE
MW-17	4/9/2007	ND<10	FALSE
MW-17	9/24/2007	ND<10	FALSE
MW-17	5/2/2008	ND<10	FALSE
MW-17	12/5/2008	ND<10	FALSE
MW-17	4/15/2009	ND<10	FALSE
MW-17	10/9/2009	ND<10	FALSE
MW-17	4/30/2010	ND<10	FALSE
MW-17	10/5/2010	ND<10	FALSE
MW-17	5/12/2011	ND<10	FALSE
MW-17	10/6/2011	ND<10	FALSE
MW-17	4/19/2012	ND<10	FALSE
MW-17	10/23/2012	ND<10	FALSE
MW-17	4/23/2013	ND<10	FALSE
MW-17	9/10/2013	ND<10	FALSE
MW-17	5/22/2014	ND<10	FALSE
MW-17	9/30/2014	ND<10	FALSE
MW-17	4/13/2015	ND<1.1	FALSE
MW-18	12/16/1997	ND<10	FALSE
MW-18	1/14/1998	ND<10	FALSE
MW-18	2/13/1998	ND<10	FALSE
MW-18	3/6/1998	ND<10	FALSE
MW-18	10/15/1998	ND<10	FALSE
MW-18	3/25/1999	ND<10	FALSE
MW-18	9/23/1999	ND<10	FALSE
MW-18	3/29/2000	ND<10	FALSE
MW-18	9/14/2000	ND<10	FALSE
MW-18	3/12/2001	ND<10	FALSE
MW-18	10/13/2001	ND<10	FALSE
MW-18	3/8/2002	ND<10	FALSE
MW-18	9/19/2002	ND<10	FALSE
MW-18	4/15/2003	ND<10	FALSE
MW-18	**10/16/2003**	**12**	**TRUE**
MW-18	**3/25/2004**	**12**	**TRUE**
MW-18	10/22/2004	ND<10	FALSE
MW-18	5/11/2005	ND<10	FALSE
MW-18	10/11/2005	ND<10	FALSE
MW-18	4/27/2006	ND<10	FALSE
MW-18	10/18/2006	ND<10	FALSE
MW-18	4/9/2007	ND<10	FALSE
MW-18	9/24/2007	ND<10	FALSE

MW-18	5/2/2008	3.9	FALSE
MW-18	12/5/2008	9.1	FALSE
MW-18	4/15/2009	8.7	FALSE
MW-18	10/9/2009	5.89	FALSE
MW-18	4/30/2010	3.25	FALSE
MW-18	10/5/2010	2.04	FALSE
MW-18	5/12/2011	3.85	FALSE
MW-18	10/6/2011	1.15	FALSE
MW-18	4/19/2012	1.2	FALSE
MW-18	10/23/2012	1.71	FALSE
MW-18	4/23/2013	2.46	FALSE
MW-18	9/10/2013	6.73	FALSE
MW-18	5/22/2014	1.3	FALSE
MW-18	9/30/2014	4.15	FALSE
MW-18	4/13/2015	ND<1.1	FALSE
MW-19	12/16/1997	ND<10	FALSE
MW-19	1/14/1998	ND<10	FALSE
MW-19	2/13/1998	3	FALSE
MW-19	3/6/1998	ND<10	FALSE
MW-19	10/15/1998	ND<10	FALSE
MW-19	3/25/1999	ND<10	FALSE
MW-19	9/23/1999	ND<10	FALSE
MW-19	3/29/2000	ND<10	FALSE
MW-19	9/14/2000	ND<10	FALSE
MW-19	3/12/2001	ND<10	FALSE
MW-19	10/13/2001	ND<10	FALSE
MW-19	3/8/2002	ND<10	FALSE
MW-19	9/19/2002	ND<10	FALSE
MW-19	4/15/2003	ND<10	FALSE
MW-19	10/16/2003	ND<10	FALSE
MW-19	3/25/2004	ND<10	FALSE
MW-19	10/22/2004	ND<10	FALSE
MW-19	5/11/2005	ND<10	FALSE
MW-19	10/11/2005	ND<10	FALSE
MW-19	4/27/2006	ND<10	FALSE
MW-19	10/18/2006	ND<10	FALSE
MW-19	4/9/2007	ND<10	FALSE
MW-19	9/24/2007	ND<10	FALSE
MW-19	5/2/2008	ND<10	FALSE
MW-19	12/5/2008	1.2	FALSE
MW-19	4/15/2009	ND<10	FALSE
MW-19	10/9/2009	1.34	FALSE
MW-19	4/30/2010	ND<10	FALSE
MW-19	10/5/2010	ND<10	FALSE
MW-19	5/12/2011	ND<10	FALSE
MW-19	10/6/2011	ND<10	FALSE
MW-19	4/19/2012	ND<10	FALSE
MW-19	10/23/2012	ND<10	FALSE
MW-19	4/23/2013	ND<10	FALSE
MW-19	9/10/2013	ND<10	FALSE
MW-19	5/22/2014	ND<10	FALSE
MW-19	9/30/2014	1.58	FALSE
MW-19	4/13/2015	ND<1.1	FALSE
MW-20	12/16/1997	ND<10	FALSE
MW-20	1/14/1998	ND<10	FALSE
MW-20	2/13/1998	ND<10	FALSE
MW-20	3/6/1998	ND<10	FALSE
MW-20	10/15/1998	ND<10	FALSE
MW-20	3/25/1999	ND<10	FALSE
MW-20	9/23/1999	ND<10	FALSE
MW-20	3/29/2000	ND<10	FALSE
MW-20	9/14/2000	ND<10	FALSE
MW-20	3/12/2001	ND<10	FALSE
MW-20	10/13/2001	ND<10	FALSE
MW-20	3/8/2002	ND<10	FALSE
MW-20	9/19/2002	ND<10	FALSE
MW-20	4/15/2003	ND<10	FALSE
MW-20	10/16/2003	ND<10	FALSE
MW-20	3/25/2004	ND<10	FALSE
MW-20	10/22/2004	ND<10	FALSE
MW-20	5/11/2005	ND<10	FALSE
MW-20	10/11/2005	ND<10	FALSE

MW-20	4/27/2006	ND<10	FALSE
MW-20	10/18/2006	ND<10	FALSE
MW-20	4/9/2007	ND<10	FALSE
MW-20	9/24/2007	ND<10	FALSE
MW-20	5/2/2008	ND<10	FALSE
MW-20	12/5/2008	3	FALSE
MW-20	4/15/2009	ND<10	FALSE
MW-20	10/9/2009	1.1	FALSE
MW-20	4/30/2010	ND<10	FALSE
MW-20	10/5/2010	ND<10	FALSE
MW-20	5/12/2011	ND<10	FALSE
MW-20	10/6/2011	ND<10	FALSE
MW-20	4/19/2012	ND<10	FALSE
MW-20	10/23/2012	ND<10	FALSE
MW-20	4/23/2013	ND<10	FALSE
MW-20	9/10/2013	ND<10	FALSE
MW-20	5/22/2014	ND<10	FALSE
MW-20	9/30/2014	ND<10	FALSE
MW-20	4/13/2015	ND<1.1	FALSE
MW-21	12/16/1997	ND<10	FALSE
MW-21	1/14/1998	ND<10	FALSE
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MW-21	3/6/1998	ND<10	FALSE
MW-21	10/15/1998	ND<10	FALSE
MW-21	3/25/1999	ND<10	FALSE
MW-21	9/23/1999	ND<10	FALSE
MW-21	3/29/2000	ND<10	FALSE
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MW-21	10/13/2001	ND<10	FALSE
MW-21	3/8/2002	ND<10	FALSE
MW-21	9/19/2002	ND<10	FALSE
MW-21	4/15/2003	ND<10	FALSE
MW-21	10/16/2003	ND<10	FALSE
MW-21	3/25/2004	ND<10	FALSE
MW-21	10/22/2004	ND<10	FALSE
MW-21	5/11/2005	ND<10	FALSE
MW-21	10/11/2005	ND<10	FALSE
MW-21	4/27/2006	ND<10	FALSE
MW-21	10/18/2006	ND<10	FALSE
MW-21	4/9/2007	ND<10	FALSE
MW-21	9/24/2007	ND<10	FALSE
MW-21	5/2/2008	2.3	FALSE
MW-21	12/5/2008	2.2	FALSE
MW-21	4/15/2009	ND<10	FALSE
MW-21	10/9/2009	ND<10	FALSE
MW-21	4/30/2010	ND<10	FALSE
MW-21	10/5/2010	ND<10	FALSE
MW-21	5/12/2011	ND<10	FALSE
MW-21	10/6/2011	ND<10	FALSE
MW-21	4/19/2012	ND<10	FALSE
MW-21	10/23/2012	ND<10	FALSE
MW-21	4/23/2013	ND<10	FALSE
MW-21	9/10/2013	ND<10	FALSE
MW-21	5/22/2014	ND<10	FALSE
MW-21	9/30/2014	ND<10	FALSE
MW-21	4/13/2015	ND<1.1	FALSE
MW-22	12/16/1997	ND<10	FALSE
MW-22	1/14/1998	ND<10	FALSE
MW-22	2/13/1998	ND<10	FALSE
MW-22	3/6/1998	ND<10	FALSE
MW-22	10/15/1998	ND<10	FALSE
MW-22	3/25/1999	ND<10	FALSE
MW-22	9/23/1999	ND<10	FALSE
MW-22	3/29/2000	ND<10	FALSE
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MW-22	10/13/2001	ND<10	FALSE
MW-22	3/8/2002	ND<10	FALSE
MW-22	9/19/2002	ND<10	FALSE
MW-22	4/15/2003	ND<10	FALSE
MW-22	10/16/2003	ND<10	FALSE

MW-22	3/25/2004	ND<10	FALSE
MW-22	10/22/2004	ND<10	FALSE
MW-22	5/11/2005	ND<10	FALSE
MW-22	10/11/2005	ND<10	FALSE
MW-22	4/27/2006	ND<10	FALSE
MW-22	10/18/2006	ND<10	FALSE
MW-22	4/9/2007	ND<10	FALSE
MW-22	9/24/2007	ND<10	FALSE
MW-22	5/2/2008	ND<10	FALSE
MW-22	12/5/2008	1.4	FALSE
MW-22	4/15/2009	ND<10	FALSE
MW-22	10/9/2009	ND<10	FALSE
MW-22	4/30/2010	ND<10	FALSE
MW-22	10/5/2010	ND<10	FALSE
MW-22	5/12/2011	ND<10	FALSE
MW-22	10/6/2011	ND<10	FALSE
MW-22	4/19/2012	ND<10	FALSE
MW-22	10/23/2012	ND<10	FALSE
MW-22	4/23/2013	ND<10	FALSE
MW-22	9/10/2013	ND<10	FALSE
MW-22	5/22/2014	ND<10	FALSE
MW-22	9/30/2014	ND<10	FALSE
MW-22	4/13/2015	ND<1.1	FALSE
MW-23	12/16/1997	ND<10	FALSE
MW-23	1/14/1998	ND<10	FALSE
MW-23	2/13/1998	ND<10	FALSE
MW-23	3/6/1998	ND<10	FALSE
MW-23	10/15/1998	ND<10	FALSE
MW-23	3/25/1999	ND<10	FALSE
MW-23	9/23/1999	ND<10	FALSE
MW-23	3/29/2000	ND<10	FALSE
MW-23	9/14/2000	ND<10	FALSE
MW-23	3/12/2001	ND<10	FALSE
MW-23	10/13/2001	ND<10	FALSE
MW-23	3/8/2002	ND<10	FALSE
MW-23	9/19/2002	ND<10	FALSE
MW-23	4/15/2003	ND<10	FALSE
MW-23	10/16/2003	ND<10	FALSE
MW-23	3/25/2004	ND<10	FALSE
MW-23	10/22/2004	ND<10	FALSE
MW-23	5/11/2005	ND<10	FALSE
MW-23	10/11/2005	ND<10	FALSE
MW-23	4/27/2006	ND<10	FALSE
MW-23	10/18/2006	ND<10	FALSE
MW-23	4/9/2007	ND<10	FALSE
MW-23	9/24/2007	ND<10	FALSE
MW-23	5/2/2008	ND<10	FALSE
MW-23	12/5/2008	ND<10	FALSE
MW-23	4/15/2009	ND<10	FALSE
MW-23	10/9/2009	ND<10	FALSE
MW-23	4/30/2010	ND<10	FALSE
MW-23	10/5/2010	ND<10	FALSE
MW-23	5/12/2011	ND<10	FALSE
MW-23	10/6/2011	ND<10	FALSE
MW-23	4/19/2012	ND<10	FALSE
MW-23	10/23/2012	ND<10	FALSE
MW-23	4/23/2013	ND<10	FALSE
MW-23	9/10/2013	ND<10	FALSE
MW-23	5/22/2014	ND<10	FALSE
MW-23	9/30/2014	ND<10	FALSE
MW-23	4/13/2015	ND<1.1	FALSE
MW-24	12/16/1997	ND<10	FALSE
MW-24	1/14/1998	ND<10	FALSE
MW-24	2/13/1998	ND<10	FALSE
MW-24	3/6/1998	ND<10	FALSE
MW-24	10/15/1998	ND<10	FALSE
MW-24	3/25/1999	ND<10	FALSE
MW-24	9/23/1999	ND<10	FALSE
MW-24	3/29/2000	ND<10	FALSE
MW-24	9/14/2000	ND<10	FALSE
MW-24	3/12/2001	ND<10	FALSE
MW-24	10/13/2001	ND<10	FALSE

MW-24	3/8/2002	ND<10	FALSE
MW-24	9/19/2002	ND<10	FALSE
MW-24	4/15/2003	ND<10	FALSE
MW-24	10/16/2003	ND<10	FALSE
MW-24	3/25/2004	ND<10	FALSE
MW-24	10/22/2004	ND<10	FALSE
MW-24	5/11/2005	ND<10	FALSE
MW-24	10/11/2005	ND<10	FALSE
MW-24	4/27/2006	ND<10	FALSE
MW-24	10/18/2006	ND<10	FALSE
MW-24	4/9/2007	ND<10	FALSE
MW-24	9/24/2007	2.9	FALSE
MW-24	5/2/2008	4.8	FALSE
MW-24	12/5/2008	4.3	FALSE
MW-24	4/15/2009	1.4	FALSE
MW-24	10/9/2009	6.23	FALSE
MW-24	4/30/2010	9.33	FALSE
MW-24	10/5/2010	4.47	FALSE
MW-24	5/12/2011	3.64	FALSE
MW-24	10/6/2011	6.28	FALSE
MW-24	4/19/2012	5.33	FALSE
MW-24	10/23/2012	1.69	FALSE
MW-24	4/23/2013	2.53	FALSE
MW-24	9/10/2013	2.41	FALSE
MW-24	5/22/2014	ND<10	FALSE
MW-24	9/30/2014	3.72	FALSE
MW-24	4/13/2015	5.2	FALSE
MW-25	12/16/1997	ND<10	FALSE
MW-25	1/14/1998	ND<10	FALSE
MW-25	2/13/1998	ND<10	FALSE
MW-25	3/6/1998	ND<10	FALSE
MW-25	10/15/1998	ND<10	FALSE
MW-25	3/25/1999	ND<10	FALSE
MW-25	9/23/1999	ND<10	FALSE
MW-25	3/29/2000	ND<10	FALSE
MW-25	9/14/2000	ND<10	FALSE
MW-25	3/12/2001	ND<10	FALSE
MW-25	10/13/2001	ND<10	FALSE
MW-25	3/8/2002	ND<10	FALSE
MW-25	9/19/2002	ND<10	FALSE
MW-25	**4/15/2003**	**12**	**TRUE**
MW-25	10/16/2003	ND<10	FALSE
MW-25	3/25/2004	ND<10	FALSE
MW-25	10/22/2004	ND<10	FALSE
MW-25	5/11/2005	ND<10	FALSE
MW-25	10/11/2005	ND<10	FALSE
MW-25	4/27/2006	ND<10	FALSE
MW-25	10/18/2006	ND<10	FALSE
MW-25	4/9/2007	ND<10	FALSE
MW-25	9/24/2007	ND<10	FALSE
MW-25	5/2/2008	ND<10	FALSE
MW-25	12/5/2008	ND<10	FALSE
MW-25	4/15/2009	ND<10	FALSE
MW-25	10/9/2009	ND<10	FALSE
MW-25	4/30/2010	ND<10	FALSE
MW-25	10/5/2010	ND<10	FALSE
MW-25	5/12/2011	ND<10	FALSE
MW-25	10/6/2011	ND<10	FALSE
MW-25	4/19/2012	ND<10	FALSE
MW-25	10/23/2012	ND<10	FALSE
MW-25	5/22/2014	ND<10	FALSE
MW-25	9/30/2014	ND<10	FALSE
MW-25d	12/16/1997	ND<10	FALSE
MW-25d	1/14/1998	ND<10	FALSE
MW-25d	2/13/1998	ND<10	FALSE
MW-25d	3/6/1998	ND<10	FALSE
MW-25d	10/15/1998	ND<10	FALSE
MW-25d	3/25/1999	ND<10	FALSE
MW-25d	9/23/1999	ND<10	FALSE
MW-25d	3/29/2000	ND<10	FALSE
MW-25d	9/14/2000	ND<10	FALSE
MW-25d	3/12/2001	ND<10	FALSE

MW-25d	10/13/2001	ND<10	FALSE
MW-25d	3/8/2002	ND<10	FALSE
MW-25d	9/19/2002	ND<10	FALSE
MW-25d	**4/15/2003**	**14**	**TRUE**
MW-25d	10/16/2003	ND<10	FALSE
MW-25d	3/25/2004	ND<10	FALSE
MW-25d	10/22/2004	ND<10	FALSE
MW-25d	5/11/2005	ND<10	FALSE
MW-25d	10/11/2005	ND<10	FALSE
MW-25d	4/27/2006	ND<10	FALSE
MW-25d	10/18/2006	ND<10	FALSE
MW-25d	4/9/2007	ND<10	FALSE
MW-25d	9/24/2007	ND<10	FALSE
MW-25d	5/2/2008	ND<10	FALSE
MW-25d	12/5/2008	ND<10	FALSE
MW-25d	4/15/2009	ND<10	FALSE
MW-25d	10/9/2009	ND<10	FALSE
MW-25d	4/30/2010	ND<10	FALSE
MW-25d	10/5/2010	ND<10	FALSE
MW-25d	5/12/2011	ND<10	FALSE
MW-25d	10/6/2011	ND<10	FALSE
MW-25d	4/19/2012	ND<10	FALSE
MW-25d	10/23/2012	ND<10	FALSE
MW-25d	4/23/2013	ND<10	FALSE
MW-25d	9/10/2013	ND<10	FALSE
MW-25d	5/22/2014	ND<10	FALSE
MW-25d	9/30/2014	ND<10	FALSE
MW-25d	4/13/2015	ND<1.1	FALSE

Non-Parametric Tolerance Interval

Parameter: Copper, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 86.755%
Background measurements (n) = 76
Maximum Background Concentration = 200
Minimum Coverage = 96.3%
Average Coverage = 98.7013%

Location	Date	Value	Significant
MW-17	12/16/1997	ND<200	FALSE
MW-17	1/14/1998	ND<200	FALSE
MW-17	2/13/1998	ND<200	FALSE
MW-17	3/6/1998	ND<200	FALSE
MW-17	10/15/1998	ND<200	FALSE
MW-17	3/25/1999	ND<200	FALSE
MW-17	9/23/1999	ND<200	FALSE
MW-17	3/29/2000	ND<200	FALSE
MW-17	9/14/2000	ND<200	FALSE
MW-17	3/12/2001	ND<200	FALSE
MW-17	10/13/2001	ND<200	FALSE
MW-17	3/8/2002	ND<200	FALSE
MW-17	9/19/2002	ND<200	FALSE
MW-17	4/15/2003	ND<200	FALSE
MW-17	10/16/2003	ND<200	FALSE
MW-17	3/25/2004	ND<200	FALSE
MW-17	10/22/2004	ND<200	FALSE
MW-17	5/11/2005	ND<200	FALSE
MW-17	10/11/2005	ND<200	FALSE
MW-17	4/27/2006	ND<10	FALSE
MW-17	10/18/2006	ND<10	FALSE
MW-17	4/9/2007	ND<10	FALSE
MW-17	9/24/2007	ND<10	FALSE
MW-17	5/2/2008	1.9	FALSE
MW-17	12/5/2008	ND<10	FALSE
MW-17	4/15/2009	ND<10	FALSE
MW-17	10/9/2009	ND<10	FALSE
MW-17	4/30/2010	2.63	FALSE
MW-17	10/5/2010	ND<10	FALSE
MW-17	5/12/2011	ND<10	FALSE
MW-17	10/6/2011	ND<10	FALSE
MW-17	4/19/2012	ND<10	FALSE
MW-17	10/23/2012	ND<10	FALSE
MW-17	4/23/2013	ND<10	FALSE
MW-17	9/10/2013	ND<10	FALSE
MW-17	5/22/2014	ND<10	FALSE
MW-17	9/30/2014	ND<10	FALSE
MW-17	4/13/2015	ND<1.6	FALSE
MW-18	12/16/1997	ND<200	FALSE
MW-18	1/14/1998	ND<200	FALSE
MW-18	2/13/1998	ND<200	FALSE
MW-18	3/6/1998	ND<200	FALSE
MW-18	10/15/1998	ND<200	FALSE
MW-18	3/25/1999	ND<200	FALSE
MW-18	9/23/1999	ND<200	FALSE
MW-18	3/29/2000	ND<200	FALSE
MW-18	9/14/2000	ND<200	FALSE
MW-18	3/12/2001	ND<200	FALSE
MW-18	10/13/2001	ND<200	FALSE
MW-18	3/8/2002	ND<200	FALSE
MW-18	9/19/2002	ND<200	FALSE
MW-18	4/15/2003	ND<200	FALSE
MW-18	10/16/2003	ND<200	FALSE
MW-18	3/25/2004	ND<200	FALSE
MW-18	10/22/2004	ND<200	FALSE
MW-18	5/11/2005	ND<200	FALSE
MW-18	10/11/2005	ND<200	FALSE
MW-18	4/27/2006	ND<10	FALSE
MW-18	10/18/2006	ND<10	FALSE
MW-18	4/9/2007	ND<10	FALSE
MW-18	9/24/2007	ND<10	FALSE

MW-18	5/2/2008	4.7	FALSE
MW-18	12/5/2008	ND<10	FALSE
MW-18	4/15/2009	ND<10	FALSE
MW-18	10/9/2009	ND<10	FALSE
MW-18	4/30/2010	1.94	FALSE
MW-18	10/5/2010	ND<10	FALSE
MW-18	5/12/2011	3.67	FALSE
MW-18	10/6/2011	2.67	FALSE
MW-18	4/19/2012	ND<10	FALSE
MW-18	10/23/2012	ND<10	FALSE
MW-18	4/23/2013	ND<10	FALSE
MW-18	9/10/2013	2.09	FALSE
MW-18	5/22/2014	2.67	FALSE
MW-18	9/30/2014	3.09	FALSE
MW-18	4/13/2015	2.79	FALSE
MW-19	12/16/1997	ND<200	FALSE
MW-19	1/14/1998	ND<200	FALSE
MW-19	2/13/1998	19	FALSE
MW-19	3/6/1998	ND<200	FALSE
MW-19	10/15/1998	ND<200	FALSE
MW-19	3/25/1999	ND<200	FALSE
MW-19	9/23/1999	ND<200	FALSE
MW-19	3/29/2000	ND<200	FALSE
MW-19	9/14/2000	ND<200	FALSE
MW-19	3/12/2001	ND<200	FALSE
MW-19	10/13/2001	ND<200	FALSE
MW-19	3/8/2002	ND<200	FALSE
MW-19	9/19/2002	ND<200	FALSE
MW-19	4/15/2003	ND<200	FALSE
MW-19	10/16/2003	ND<200	FALSE
MW-19	3/25/2004	ND<200	FALSE
MW-19	10/22/2004	ND<200	FALSE
MW-19	5/11/2005	ND<200	FALSE
MW-19	10/11/2005	ND<200	FALSE
MW-19	4/27/2006	ND<10	FALSE
MW-19	10/18/2006	ND<10	FALSE
MW-19	4/9/2007	ND<10	FALSE
MW-19	9/24/2007	ND<10	FALSE
MW-19	5/2/2008	1.8	FALSE
MW-19	12/5/2008	2.8	FALSE
MW-19	4/15/2009	10	FALSE
MW-19	10/9/2009	10	FALSE
MW-19	4/30/2010	ND<10	FALSE
MW-19	10/5/2010	ND<10	FALSE
MW-19	5/12/2011	3.52	FALSE
MW-19	10/6/2011	ND<10	FALSE
MW-19	4/19/2012	ND<10	FALSE
MW-19	10/23/2012	ND<10	FALSE
MW-19	4/23/2013	ND<10	FALSE
MW-19	9/10/2013	ND<10	FALSE
MW-19	5/22/2014	3.43	FALSE
MW-19	9/30/2014	2.4	FALSE
MW-19	4/13/2015	3.56	FALSE
MW-20	12/16/1997	ND<200	FALSE
MW-20	1/14/1998	ND<200	FALSE
MW-20	2/13/1998	ND<200	FALSE
MW-20	3/6/1998	ND<200	FALSE
MW-20	10/15/1998	ND<200	FALSE
MW-20	3/25/1999	ND<200	FALSE
MW-20	9/23/1999	ND<200	FALSE
MW-20	3/29/2000	ND<200	FALSE
MW-20	9/14/2000	ND<200	FALSE
MW-20	3/12/2001	ND<200	FALSE
MW-20	10/13/2001	ND<200	FALSE
MW-20	3/8/2002	ND<200	FALSE
MW-20	9/19/2002	ND<200	FALSE
MW-20	4/15/2003	ND<200	FALSE
MW-20	10/16/2003	ND<200	FALSE
MW-20	3/25/2004	ND<200	FALSE
MW-20	10/22/2004	ND<200	FALSE
MW-20	5/11/2005	ND<200	FALSE
MW-20	10/11/2005	ND<200	FALSE

MW-20	4/27/2006	ND<10	FALSE
MW-20	10/18/2006	ND<10	FALSE
MW-20	4/9/2007	ND<10	FALSE
MW-20	9/24/2007	1	FALSE
MW-20	5/2/2008	0.6	FALSE
MW-20	12/5/2008	3.6	FALSE
MW-20	4/15/2009	ND<10	FALSE
MW-20	10/9/2009	ND<10	FALSE
MW-20	4/30/2010	ND<10	FALSE
MW-20	10/5/2010	ND<10	FALSE
MW-20	5/12/2011	ND<10	FALSE
MW-20	10/6/2011	ND<10	FALSE
MW-20	4/19/2012	ND<10	FALSE
MW-20	10/23/2012	ND<10	FALSE
MW-20	4/23/2013	ND<10	FALSE
MW-20	9/10/2013	ND<10	FALSE
MW-20	5/22/2014	ND<10	FALSE
MW-20	9/30/2014	ND<10	FALSE
MW-20	4/13/2015	ND<1.6	FALSE
MW-21	12/16/1997	ND<200	FALSE
MW-21	1/14/1998	ND<200	FALSE
MW-21	2/13/1998	ND<200	FALSE
MW-21	3/6/1998	ND<200	FALSE
MW-21	10/15/1998	ND<200	FALSE
MW-21	3/25/1999	ND<200	FALSE
MW-21	9/23/1999	ND<200	FALSE
MW-21	3/29/2000	ND<200	FALSE
MW-21	9/14/2000	ND<200	FALSE
MW-21	3/12/2001	ND<200	FALSE
MW-21	10/13/2001	ND<200	FALSE
MW-21	3/8/2002	ND<200	FALSE
MW-21	9/19/2002	ND<200	FALSE
MW-21	4/15/2003	ND<200	FALSE
MW-21	10/16/2003	ND<200	FALSE
MW-21	3/25/2004	ND<200	FALSE
MW-21	10/22/2004	ND<200	FALSE
MW-21	5/11/2005	ND<200	FALSE
MW-21	10/11/2005	ND<200	FALSE
MW-21	4/27/2006	ND<10	FALSE
MW-21	10/18/2006	ND<10	FALSE
MW-21	4/9/2007	ND<10	FALSE
MW-21	9/24/2007	ND<10	FALSE
MW-21	5/2/2008	2.2	FALSE
MW-21	12/5/2008	2.3	FALSE
MW-21	4/15/2009	ND<10	FALSE
MW-21	10/9/2009	2.22	FALSE
MW-21	4/30/2010	ND<10	FALSE
MW-21	10/5/2010	ND<10	FALSE
MW-21	5/12/2011	ND<10	FALSE
MW-21	10/6/2011	ND<10	FALSE
MW-21	4/19/2012	5.29	FALSE
MW-21	10/23/2012	ND<10	FALSE
MW-21	4/23/2013	ND<10	FALSE
MW-21	9/10/2013	ND<10	FALSE
MW-21	5/22/2014	ND<10	FALSE
MW-21	9/30/2014	ND<10	FALSE
MW-21	4/13/2015	ND<1.6	FALSE
MW-22	12/16/1997	ND<200	FALSE
MW-22	1/14/1998	ND<200	FALSE
MW-22	2/13/1998	ND<200	FALSE
MW-22	3/6/1998	ND<200	FALSE
MW-22	10/15/1998	ND<200	FALSE
MW-22	3/25/1999	ND<200	FALSE
MW-22	9/23/1999	ND<200	FALSE
MW-22	3/29/2000	ND<200	FALSE
MW-22	9/14/2000	ND<200	FALSE
MW-22	3/12/2001	ND<200	FALSE
MW-22	10/13/2001	ND<200	FALSE
MW-22	3/8/2002	ND<200	FALSE
MW-22	9/19/2002	ND<200	FALSE
MW-22	4/15/2003	ND<200	FALSE
MW-22	10/16/2003	ND<200	FALSE

MW-22	3/25/2004	ND<200	FALSE
MW-22	10/22/2004	ND<200	FALSE
MW-22	5/11/2005	ND<200	FALSE
MW-22	10/11/2005	ND<200	FALSE
MW-22	4/27/2006	ND<10	FALSE
MW-22	10/18/2006	ND<10	FALSE
MW-22	4/9/2007	ND<10	FALSE
MW-22	9/24/2007	ND<10	FALSE
MW-22	5/2/2008	ND<10	FALSE
MW-22	12/5/2008	ND<10	FALSE
MW-22	4/15/2009	1.62	FALSE
MW-22	10/9/2009	ND<10	FALSE
MW-22	4/30/2010	ND<10	FALSE
MW-22	10/5/2010	ND<10	FALSE
MW-22	5/12/2011	ND<10	FALSE
MW-22	10/6/2011	2.12	FALSE
MW-22	4/19/2012	ND<10	FALSE
MW-22	10/23/2012	ND<10	FALSE
MW-22	4/23/2013	ND<10	FALSE
MW-22	9/10/2013	ND<10	FALSE
MW-22	5/22/2014	ND<10	FALSE
MW-22	9/30/2014	ND<10	FALSE
MW-22	4/13/2015	ND<1.6	FALSE
MW-23	12/16/1997	ND<200	FALSE
MW-23	1/14/1998	ND<200	FALSE
MW-23	2/13/1998	ND<200	FALSE
MW-23	3/6/1998	ND<200	FALSE
MW-23	10/15/1998	ND<200	FALSE
MW-23	3/25/1999	ND<200	FALSE
MW-23	9/23/1999	ND<200	FALSE
MW-23	3/29/2000	ND<200	FALSE
MW-23	9/14/2000	ND<200	FALSE
MW-23	3/12/2001	ND<200	FALSE
MW-23	10/13/2001	ND<200	FALSE
MW-23	3/8/2002	ND<200	FALSE
MW-23	9/19/2002	ND<200	FALSE
MW-23	4/15/2003	ND<200	FALSE
MW-23	10/16/2003	ND<200	FALSE
MW-23	3/25/2004	ND<200	FALSE
MW-23	10/22/2004	ND<200	FALSE
MW-23	5/11/2005	ND<200	FALSE
MW-23	10/11/2005	ND<200	FALSE
MW-23	4/27/2006	ND<10	FALSE
MW-23	10/18/2006	ND<10	FALSE
MW-23	4/9/2007	ND<10	FALSE
MW-23	9/24/2007	ND<10	FALSE
MW-23	5/2/2008	0.8	FALSE
MW-23	12/5/2008	ND<10	FALSE
MW-23	4/15/2009	ND<10	FALSE
MW-23	10/9/2009	ND<10	FALSE
MW-23	4/30/2010	ND<10	FALSE
MW-23	10/5/2010	ND<10	FALSE
MW-23	5/12/2011	ND<10	FALSE
MW-23	10/6/2011	ND<10	FALSE
MW-23	4/19/2012	ND<10	FALSE
MW-23	10/23/2012	ND<10	FALSE
MW-23	4/23/2013	ND<10	FALSE
MW-23	9/10/2013	ND<10	FALSE
MW-23	5/22/2014	ND<10	FALSE
MW-23	9/30/2014	ND<10	FALSE
MW-23	4/13/2015	1.98	FALSE
MW-24	12/16/1997	ND<200	FALSE
MW-24	1/14/1998	ND<200	FALSE
MW-24	2/13/1998	ND<200	FALSE
MW-24	3/6/1998	ND<200	FALSE
MW-24	10/15/1998	ND<200	FALSE
MW-24	3/25/1999	ND<200	FALSE
MW-24	9/23/1999	ND<200	FALSE
MW-24	3/29/2000	ND<200	FALSE
MW-24	9/14/2000	ND<200	FALSE
MW-24	3/12/2001	ND<200	FALSE
MW-24	10/13/2001	ND<200	FALSE

MW-24	3/8/2002	ND<200	FALSE
MW-24	9/19/2002	ND<200	FALSE
MW-24	4/15/2003	ND<200	FALSE
MW-24	10/16/2003	ND<200	FALSE
MW-24	3/25/2004	ND<200	FALSE
MW-24	10/22/2004	ND<200	FALSE
MW-24	5/11/2005	ND<200	FALSE
MW-24	10/11/2005	ND<200	FALSE
MW-24	4/27/2006	ND<10	FALSE
MW-24	10/18/2006	ND<10	FALSE
MW-24	4/9/2007	ND<10	FALSE
MW-24	9/24/2007	ND<10	FALSE
MW-24	5/2/2008	11.1	FALSE
MW-24	12/5/2008	9.2	FALSE
MW-24	4/15/2009	ND<10	FALSE
MW-24	10/9/2009	7.11	FALSE
MW-24	4/30/2010	2.64	FALSE
MW-24	10/5/2010	ND<10	FALSE
MW-24	5/12/2011	154	FALSE
MW-24	10/6/2011	21.3	FALSE
MW-24	4/19/2012	13.1	FALSE
MW-24	10/23/2012	7.69	FALSE
MW-24	4/23/2013	ND<10	FALSE
MW-24	9/10/2013	ND<10	FALSE
MW-24	5/22/2014	ND<10	FALSE
MW-24	9/30/2014	1.81	FALSE
MW-24	4/13/2015	5.63	FALSE
MW-25	12/16/1997	ND<200	FALSE
MW-25	1/14/1998	ND<200	FALSE
MW-25	2/13/1998	ND<200	FALSE
MW-25	3/6/1998	ND<200	FALSE
MW-25	10/15/1998	ND<200	FALSE
MW-25	3/25/1999	ND<200	FALSE
MW-25	9/23/1999	ND<200	FALSE
MW-25	3/29/2000	ND<200	FALSE
MW-25	9/14/2000	ND<200	FALSE
MW-25	3/12/2001	ND<200	FALSE
MW-25	10/13/2001	ND<200	FALSE
MW-25	3/8/2002	ND<200	FALSE
MW-25	9/19/2002	ND<200	FALSE
MW-25	4/15/2003	ND<200	FALSE
MW-25	10/16/2003	ND<200	FALSE
MW-25	3/25/2004	ND<200	FALSE
MW-25	10/22/2004	ND<200	FALSE
MW-25	5/11/2005	ND<200	FALSE
MW-25	10/11/2005	ND<200	FALSE
MW-25	4/27/2006	ND<10	FALSE
MW-25	10/18/2006	ND<10	FALSE
MW-25	4/9/2007	ND<10	FALSE
MW-25	9/24/2007	ND<10	FALSE
MW-25	5/2/2008	2.9	FALSE
MW-25	12/5/2008	ND<10	FALSE
MW-25	4/15/2009	0.98	FALSE
MW-25	10/9/2009	ND<10	FALSE
MW-25	4/30/2010	6.56	FALSE
MW-25	10/5/2010	ND<10	FALSE
MW-25	5/12/2011	2.55	FALSE
MW-25	10/6/2011	ND<10	FALSE
MW-25	4/19/2012	ND<10	FALSE
MW-25	10/23/2012	ND<10	FALSE
MW-25	5/22/2014	ND<10	FALSE
MW-25	9/30/2014	ND<10	FALSE
MW-25d	12/16/1997	ND<200	FALSE
MW-25d	1/14/1998	ND<200	FALSE
MW-25d	2/13/1998	ND<200	FALSE
MW-25d	3/6/1998	ND<200	FALSE
MW-25d	10/15/1998	ND<200	FALSE
MW-25d	3/25/1999	ND<200	FALSE
MW-25d	9/23/1999	ND<200	FALSE
MW-25d	3/29/2000	ND<200	FALSE
MW-25d	9/14/2000	ND<200	FALSE
MW-25d	3/12/2001	ND<200	FALSE

MW-25d	10/13/2001	ND<200	FALSE
MW-25d	3/8/2002	ND<200	FALSE
MW-25d	9/19/2002	ND<200	FALSE
MW-25d	4/15/2003	ND<200	FALSE
MW-25d	10/16/2003	ND<200	FALSE
MW-25d	3/25/2004	ND<200	FALSE
MW-25d	10/22/2004	ND<200	FALSE
MW-25d	5/11/2005	ND<200	FALSE
MW-25d	10/11/2005	ND<200	FALSE
MW-25d	4/27/2006	ND<10	FALSE
MW-25d	10/18/2006	ND<10	FALSE
MW-25d	4/9/2007	ND<10	FALSE
MW-25d	9/24/2007	ND<10	FALSE
MW-25d	5/2/2008	ND<10	FALSE
MW-25d	12/5/2008	ND<10	FALSE
MW-25d	4/15/2009	ND<10	FALSE
MW-25d	10/9/2009	ND<10	FALSE
MW-25d	4/30/2010	ND<10	FALSE
MW-25d	10/5/2010	ND<10	FALSE
MW-25d	5/12/2011	1.66	FALSE
MW-25d	10/6/2011	ND<10	FALSE
MW-25d	4/19/2012	ND<10	FALSE
MW-25d	10/23/2012	ND<10	FALSE
MW-25d	4/23/2013	ND<10	FALSE
MW-25d	9/10/2013	ND<10	FALSE
MW-25d	5/22/2014	ND<10	FALSE
MW-25d	9/30/2014	ND<10	FALSE
MW-25d	4/13/2015	ND<1.6	FALSE

Non-Parametric Tolerance Interval

Parameter: Nickel, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 84.989%
Background measurements (n) = 76
Maximum Background Concentration = 50
Minimum Coverage = 96.3%
Average Coverage = 98.7013%

Location	Date	Value	Significant
MW-17	12/16/1997	ND<50	FALSE
MW-17	1/14/1998	ND<50	FALSE
MW-17	2/13/1998	ND<50	FALSE
MW-17	3/6/1998	ND<50	FALSE
MW-17	10/15/1998	ND<50	FALSE
MW-17	3/25/1999	ND<50	FALSE
MW-17	9/23/1999	ND<50	FALSE
MW-17	3/29/2000	ND<50	FALSE
MW-17	9/14/2000	ND<50	FALSE
MW-17	3/12/2001	ND<50	FALSE
MW-17	10/13/2001	ND<50	FALSE
MW-17	3/8/2002	ND<50	FALSE
MW-17	9/19/2002	ND<50	FALSE
MW-17	4/15/2003	ND<50	FALSE
MW-17	10/16/2003	ND<50	FALSE
MW-17	3/25/2004	ND<50	FALSE
MW-17	10/22/2004	ND<50	FALSE
MW-17	5/11/2005	ND<50	FALSE
MW-17	10/11/2005	ND<50	FALSE
MW-17	4/27/2006	ND<50	FALSE
MW-17	10/18/2006	ND<50	FALSE
MW-17	4/9/2007	ND<50	FALSE
MW-17	9/24/2007	ND<50	FALSE
MW-17	**5/2/2008**	**87.7**	**TRUE**
MW-17	12/5/2008	2.3	FALSE
MW-17	4/15/2009	1.2	FALSE
MW-17	10/9/2009	ND<50	FALSE
MW-17	4/30/2010	ND<50	FALSE
MW-17	10/5/2010	ND<50	FALSE
MW-17	5/12/2011	ND<50	FALSE
MW-17	10/6/2011	ND<50	FALSE
MW-17	4/19/2012	ND<50	FALSE
MW-17	10/23/2012	ND<50	FALSE
MW-17	4/23/2013	ND<50	FALSE
MW-17	9/10/2013	ND<50	FALSE
MW-17	5/22/2014	ND<50	FALSE
MW-17	9/30/2014	ND<50	FALSE
MW-17	4/13/2015	ND<1.8	FALSE
MW-18	12/16/1997	ND<50	FALSE
MW-18	1/14/1998	ND<50	FALSE
MW-18	2/13/1998	ND<50	FALSE
MW-18	3/6/1998	ND<50	FALSE
MW-18	10/15/1998	ND<50	FALSE
MW-18	3/25/1999	ND<50	FALSE
MW-18	9/23/1999	ND<50	FALSE
MW-18	3/29/2000	ND<50	FALSE
MW-18	9/14/2000	ND<50	FALSE
MW-18	3/12/2001	ND<50	FALSE
MW-18	10/13/2001	ND<50	FALSE
MW-18	3/8/2002	ND<50	FALSE
MW-18	9/19/2002	ND<50	FALSE
MW-18	4/15/2003	ND<50	FALSE
MW-18	10/16/2003	ND<50	FALSE
MW-18	3/25/2004	ND<50	FALSE
MW-18	10/22/2004	ND<50	FALSE
MW-18	5/11/2005	ND<50	FALSE
MW-18	10/11/2005	ND<50	FALSE
MW-18	4/27/2006	ND<50	FALSE
MW-18	10/18/2006	ND<50	FALSE
MW-18	4/9/2007	ND<50	FALSE
MW-18	9/24/2007	ND<50	FALSE

MW-18	5/2/2008	25.4	FALSE
MW-18	12/5/2008	ND<50	FALSE
MW-18	4/15/2009	0.7	FALSE
MW-18	10/9/2009	ND<50	FALSE
MW-18	4/30/2010	ND<50	FALSE
MW-18	10/5/2010	ND<50	FALSE
MW-18	5/12/2011	ND<50	FALSE
MW-18	10/6/2011	ND<50	FALSE
MW-18	4/19/2012	ND<50	FALSE
MW-18	10/23/2012	ND<50	FALSE
MW-18	4/23/2013	ND<50	FALSE
MW-18	9/10/2013	ND<50	FALSE
MW-18	5/22/2014	ND<50	FALSE
MW-18	9/30/2014	ND<50	FALSE
MW-18	4/13/2015	ND<1.8	FALSE
MW-19	12/16/1997	ND<50	FALSE
MW-19	1/14/1998	ND<50	FALSE
MW-19	2/13/1998	ND<50	FALSE
MW-19	3/6/1998	ND<50	FALSE
MW-19	10/15/1998	ND<50	FALSE
MW-19	3/25/1999	ND<50	FALSE
MW-19	9/23/1999	ND<50	FALSE
MW-19	3/29/2000	ND<50	FALSE
MW-19	9/14/2000	ND<50	FALSE
MW-19	3/12/2001	ND<50	FALSE
MW-19	10/13/2001	ND<50	FALSE
MW-19	3/8/2002	ND<50	FALSE
MW-19	9/19/2002	ND<50	FALSE
MW-19	4/15/2003	ND<50	FALSE
MW-19	10/16/2003	ND<50	FALSE
MW-19	3/25/2004	ND<50	FALSE
MW-19	10/22/2004	ND<50	FALSE
MW-19	5/11/2005	ND<50	FALSE
MW-19	10/11/2005	ND<50	FALSE
MW-19	4/27/2006	ND<50	FALSE
MW-19	10/18/2006	ND<50	FALSE
MW-19	4/9/2007	ND<50	FALSE
MW-19	9/24/2007	ND<50	FALSE
MW-19	5/2/2008	9.6	FALSE
MW-19	12/5/2008	3	FALSE
MW-19	4/15/2009	1.4	FALSE
MW-19	10/9/2009	ND<50	FALSE
MW-19	4/30/2010	ND<50	FALSE
MW-19	10/5/2010	ND<50	FALSE
MW-19	5/12/2011	1.83	FALSE
MW-19	10/6/2011	1.99	FALSE
MW-19	4/19/2012	ND<50	FALSE
MW-19	10/23/2012	ND<50	FALSE
MW-19	4/23/2013	ND<50	FALSE
MW-19	9/10/2013	ND<50	FALSE
MW-19	5/22/2014	3.69	FALSE
MW-19	9/30/2014	ND<50	FALSE
MW-19	4/13/2015	ND<1.8	FALSE
MW-20	12/16/1997	ND<50	FALSE
MW-20	1/14/1998	ND<50	FALSE
MW-20	2/13/1998	ND<50	FALSE
MW-20	3/6/1998	ND<50	FALSE
MW-20	10/15/1998	ND<50	FALSE
MW-20	3/25/1999	ND<50	FALSE
MW-20	9/23/1999	ND<50	FALSE
MW-20	3/29/2000	ND<50	FALSE
MW-20	9/14/2000	ND<50	FALSE
MW-20	3/12/2001	ND<50	FALSE
MW-20	10/13/2001	ND<50	FALSE
MW-20	3/8/2002	ND<50	FALSE
MW-20	9/19/2002	ND<50	FALSE
MW-20	4/15/2003	ND<50	FALSE
MW-20	10/16/2003	ND<50	FALSE
MW-20	3/25/2004	ND<50	FALSE
MW-20	10/22/2004	ND<50	FALSE
MW-20	5/11/2005	ND<50	FALSE
MW-20	10/11/2005	ND<50	FALSE

MW-20	4/27/2006	ND<50	FALSE
MW-20	10/18/2006	ND<50	FALSE
MW-20	4/9/2007	ND<50	FALSE
MW-20	9/24/2007	ND<50	FALSE
MW-20	5/2/2008	5.6	FALSE
MW-20	12/5/2008	5.4	FALSE
MW-20	4/15/2009	3.6	FALSE
MW-20	10/9/2009	4.56	FALSE
MW-20	4/30/2010	ND<50	FALSE
MW-20	10/5/2010	3.23	FALSE
MW-20	5/12/2011	3.03	FALSE
MW-20	10/6/2011	4.56	FALSE
MW-20	4/19/2012	2.79	FALSE
MW-20	10/23/2012	3.15	FALSE
MW-20	4/23/2013	3.2	FALSE
MW-20	9/10/2013	2.23	FALSE
MW-20	5/22/2014	2.11	FALSE
MW-20	9/30/2014	2.46	FALSE
MW-20	4/13/2015	ND<1.8	FALSE
MW-21	12/16/1997	ND<50	FALSE
MW-21	1/14/1998	ND<50	FALSE
MW-21	2/13/1998	ND<50	FALSE
MW-21	3/6/1998	ND<50	FALSE
MW-21	10/15/1998	ND<50	FALSE
MW-21	3/25/1999	ND<50	FALSE
MW-21	9/23/1999	ND<50	FALSE
MW-21	3/29/2000	ND<50	FALSE
MW-21	9/14/2000	ND<50	FALSE
MW-21	3/12/2001	ND<50	FALSE
MW-21	10/13/2001	ND<50	FALSE
MW-21	3/8/2002	ND<50	FALSE
MW-21	9/19/2002	ND<50	FALSE
MW-21	4/15/2003	ND<50	FALSE
MW-21	10/16/2003	ND<50	FALSE
MW-21	3/25/2004	ND<50	FALSE
MW-21	10/22/2004	ND<50	FALSE
MW-21	5/11/2005	ND<50	FALSE
MW-21	10/11/2005	ND<50	FALSE
MW-21	4/27/2006	ND<50	FALSE
MW-21	10/18/2006	ND<50	FALSE
MW-21	4/9/2007	ND<50	FALSE
MW-21	9/24/2007	ND<50	FALSE
MW-21	5/2/2008	3	FALSE
MW-21	12/5/2008	3.1	FALSE
MW-21	4/15/2009	1.4	FALSE
MW-21	10/9/2009	ND<50	FALSE
MW-21	4/30/2010	ND<50	FALSE
MW-21	10/5/2010	ND<50	FALSE
MW-21	5/12/2011	ND<50	FALSE
MW-21	10/6/2011	2.32	FALSE
MW-21	4/19/2012	ND<50	FALSE
MW-21	10/23/2012	1.84	FALSE
MW-21	4/23/2013	ND<50	FALSE
MW-21	9/10/2013	ND<50	FALSE
MW-21	5/22/2014	1.81	FALSE
MW-21	9/30/2014	ND<50	FALSE
MW-21	4/13/2015	ND<1.8	FALSE
MW-22	12/16/1997	ND<50	FALSE
MW-22	1/14/1998	ND<50	FALSE
MW-22	2/13/1998	ND<50	FALSE
MW-22	3/6/1998	ND<50	FALSE
MW-22	10/15/1998	ND<50	FALSE
MW-22	3/25/1999	ND<50	FALSE
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MW-22	10/13/2001	ND<50	FALSE
MW-22	3/8/2002	ND<50	FALSE
MW-22	9/19/2002	ND<50	FALSE
MW-22	4/15/2003	ND<50	FALSE
MW-22	10/16/2003	ND<50	FALSE

MW-22	3/25/2004	ND<50	FALSE
MW-22	10/22/2004	ND<50	FALSE
MW-22	5/11/2005	ND<50	FALSE
MW-22	10/11/2005	ND<50	FALSE
MW-22	4/27/2006	ND<50	FALSE
MW-22	10/18/2006	ND<50	FALSE
MW-22	4/9/2007	ND<50	FALSE
MW-22	9/24/2007	ND<50	FALSE
MW-22	5/2/2008	ND<50	FALSE
MW-22	12/5/2008	2.4	FALSE
MW-22	4/15/2009	ND<50	FALSE
MW-22	10/9/2009	ND<50	FALSE
MW-22	4/30/2010	ND<50	FALSE
MW-22	10/5/2010	ND<50	FALSE
MW-22	5/12/2011	ND<50	FALSE
MW-22	10/6/2011	ND<50	FALSE
MW-22	4/19/2012	ND<50	FALSE
MW-22	10/23/2012	ND<50	FALSE
MW-22	4/23/2013	ND<50	FALSE
MW-22	9/10/2013	ND<50	FALSE
MW-22	5/22/2014	ND<50	FALSE
MW-22	9/30/2014	ND<50	FALSE
MW-22	4/13/2015	ND<1.8	FALSE
MW-23	12/16/1997	ND<50	FALSE
MW-23	1/14/1998	ND<50	FALSE
MW-23	2/13/1998	ND<50	FALSE
MW-23	3/6/1998	ND<50	FALSE
MW-23	10/15/1998	ND<50	FALSE
MW-23	3/25/1999	ND<50	FALSE
MW-23	9/23/1999	ND<50	FALSE
MW-23	3/29/2000	ND<50	FALSE
MW-23	9/14/2000	ND<50	FALSE
MW-23	3/12/2001	ND<50	FALSE
MW-23	10/13/2001	ND<50	FALSE
MW-23	3/8/2002	ND<50	FALSE
MW-23	9/19/2002	ND<50	FALSE
MW-23	4/15/2003	ND<50	FALSE
MW-23	10/16/2003	ND<50	FALSE
MW-23	3/25/2004	ND<50	FALSE
MW-23	10/22/2004	ND<50	FALSE
MW-23	5/11/2005	ND<50	FALSE
MW-23	10/11/2005	ND<50	FALSE
MW-23	4/27/2006	ND<50	FALSE
MW-23	10/18/2006	ND<50	FALSE
MW-23	4/9/2007	ND<50	FALSE
MW-23	9/24/2007	ND<50	FALSE
MW-23	5/2/2008	ND<50	FALSE
MW-23	12/5/2008	1.8	FALSE
MW-23	4/15/2009	0.6	FALSE
MW-23	10/9/2009	ND<50	FALSE
MW-23	4/30/2010	ND<50	FALSE
MW-23	10/5/2010	ND<50	FALSE
MW-23	5/12/2011	ND<50	FALSE
MW-23	10/6/2011	ND<50	FALSE
MW-23	4/19/2012	ND<50	FALSE
MW-23	10/23/2012	ND<50	FALSE
MW-23	4/23/2013	ND<50	FALSE
MW-23	9/10/2013	ND<50	FALSE
MW-23	5/22/2014	ND<50	FALSE
MW-23	9/30/2014	ND<50	FALSE
MW-23	4/13/2015	ND<1.8	FALSE
MW-24	12/16/1997	ND<50	FALSE
MW-24	1/14/1998	ND<50	FALSE
MW-24	2/13/1998	ND<50	FALSE
MW-24	3/6/1998	ND<50	FALSE
MW-24	10/15/1998	ND<50	FALSE
MW-24	3/25/1999	ND<50	FALSE
MW-24	9/23/1999	ND<50	FALSE
MW-24	3/29/2000	ND<50	FALSE
MW-24	9/14/2000	ND<50	FALSE
MW-24	3/12/2001	ND<50	FALSE
MW-24	10/13/2001	ND<50	FALSE

MW-24	3/8/2002	ND<50	FALSE
MW-24	9/19/2002	ND<50	FALSE
MW-24	4/15/2003	ND<50	FALSE
MW-24	10/16/2003	ND<50	FALSE
MW-24	3/25/2004	ND<50	FALSE
MW-24	10/22/2004	ND<50	FALSE
MW-24	5/11/2005	ND<50	FALSE
MW-24	10/11/2005	ND<50	FALSE
MW-24	4/27/2006	ND<50	FALSE
MW-24	10/18/2006	ND<50	FALSE
MW-24	4/9/2007	ND<50	FALSE
MW-24	9/24/2007	9.4	FALSE
MW-24	5/2/2008	5.6	FALSE
MW-24	12/5/2008	3.7	FALSE
MW-24	4/15/2009	3.9	FALSE
MW-24	10/9/2009	6.74	FALSE
MW-24	4/30/2010	3.52	FALSE
MW-24	10/5/2010	3.53	FALSE
MW-24	5/12/2011	4.92	FALSE
MW-24	10/6/2011	7.43	FALSE
MW-24	4/19/2012	2.75	FALSE
MW-24	10/23/2012	5.57	FALSE
MW-24	4/23/2013	2.72	FALSE
MW-24	9/10/2013	2.27	FALSE
MW-24	5/22/2014	2.16	FALSE
MW-24	9/30/2014	2.59	FALSE
MW-24	4/13/2015	4.76	FALSE
MW-25	12/16/1997	ND<50	FALSE
MW-25	1/14/1998	ND<50	FALSE
MW-25	2/13/1998	ND<50	FALSE
MW-25	3/6/1998	ND<50	FALSE
MW-25	10/15/1998	ND<50	FALSE
MW-25	3/25/1999	ND<50	FALSE
MW-25	9/23/1999	ND<50	FALSE
MW-25	3/29/2000	ND<50	FALSE
MW-25	9/14/2000	ND<50	FALSE
MW-25	3/12/2001	ND<50	FALSE
MW-25	10/13/2001	ND<50	FALSE
MW-25	3/8/2002	ND<50	FALSE
MW-25	9/19/2002	ND<50	FALSE
MW-25	4/15/2003	ND<50	FALSE
MW-25	10/16/2003	ND<50	FALSE
MW-25	3/25/2004	ND<50	FALSE
MW-25	10/22/2004	ND<50	FALSE
MW-25	5/11/2005	ND<50	FALSE
MW-25	10/11/2005	ND<50	FALSE
MW-25	4/27/2006	ND<50	FALSE
MW-25	10/18/2006	ND<50	FALSE
MW-25	4/9/2007	ND<50	FALSE
MW-25	9/24/2007	ND<50	FALSE
MW-25	5/2/2008	14.8	FALSE
MW-25	12/5/2008	ND<50	FALSE
MW-25	4/15/2009	1.4	FALSE
MW-25	10/9/2009	ND<50	FALSE
MW-25	4/30/2010	ND<50	FALSE
MW-25	10/5/2010	ND<50	FALSE
MW-25	5/12/2011	2.69	FALSE
MW-25	10/6/2011	ND<50	FALSE
MW-25	4/19/2012	ND<50	FALSE
MW-25	10/23/2012	ND<50	FALSE
MW-25	5/22/2014	ND<50	FALSE
MW-25	9/30/2014	ND<50	FALSE
MW-25d	12/16/1997	ND<50	FALSE
MW-25d	1/14/1998	ND<50	FALSE
MW-25d	2/13/1998	ND<50	FALSE
MW-25d	3/6/1998	ND<50	FALSE
MW-25d	10/15/1998	ND<50	FALSE
MW-25d	3/25/1999	ND<50	FALSE
MW-25d	9/23/1999	ND<50	FALSE
MW-25d	3/29/2000	ND<50	FALSE
MW-25d	9/14/2000	ND<50	FALSE
MW-25d	3/12/2001	ND<50	FALSE

MW-25d	10/13/2001	ND<50	FALSE
MW-25d	3/8/2002	ND<50	FALSE
MW-25d	9/19/2002	ND<50	FALSE
MW-25d	4/15/2003	ND<50	FALSE
MW-25d	10/16/2003	ND<50	FALSE
MW-25d	3/25/2004	ND<50	FALSE
MW-25d	10/22/2004	ND<50	FALSE
MW-25d	5/11/2005	ND<50	FALSE
MW-25d	10/11/2005	ND<50	FALSE
MW-25d	4/27/2006	ND<50	FALSE
MW-25d	10/18/2006	ND<50	FALSE
MW-25d	4/9/2007	ND<50	FALSE
MW-25d	9/24/2007	ND<50	FALSE
MW-25d	5/2/2008	4.5	FALSE
MW-25d	12/5/2008	ND<50	FALSE
MW-25d	4/15/2009	ND<50	FALSE
MW-25d	10/9/2009	ND<50	FALSE
MW-25d	4/30/2010	ND<50	FALSE
MW-25d	10/5/2010	ND<50	FALSE
MW-25d	5/12/2011	ND<50	FALSE
MW-25d	10/6/2011	ND<50	FALSE
MW-25d	4/19/2012	ND<50	FALSE
MW-25d	10/23/2012	ND<50	FALSE
MW-25d	4/23/2013	ND<50	FALSE
MW-25d	9/10/2013	ND<50	FALSE
MW-25d	5/22/2014	ND<50	FALSE
MW-25d	9/30/2014	ND<50	FALSE
MW-25d	4/13/2015	ND<1.8	FALSE

Non-Parametric Tolerance Interval

Parameter: Vanadium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 77.551%
Background measurements (n) = 74
Maximum Background Concentration = 40
Minimum Coverage = 96.1%
Average Coverage = 98.6667%

Location	Date	Value	Significant
MW-17	12/16/1997	ND<40	FALSE
MW-17	1/14/1998	ND<40	FALSE
MW-17	2/13/1998	ND<40	FALSE
MW-17	3/6/1998	ND<40	FALSE
MW-17	10/15/1998	ND<40	FALSE
MW-17	3/25/1999	ND<40	FALSE
MW-17	9/23/1999	ND<40	FALSE
MW-17	3/29/2000	ND<40	FALSE
MW-17	9/14/2000	ND<40	FALSE
MW-17	3/12/2001	ND<40	FALSE
MW-17	10/13/2001	ND<40	FALSE
MW-17	3/8/2002	ND<40	FALSE
MW-17	9/19/2002	ND<40	FALSE
MW-17	4/15/2003	ND<40	FALSE
MW-17	10/16/2003	ND<40	FALSE
MW-17	3/25/2004	ND<40	FALSE
MW-17	10/22/2004	ND<40	FALSE
MW-17	5/11/2005	ND<40	FALSE
MW-17	10/11/2005	ND<40	FALSE
MW-17	4/27/2006	ND<25	FALSE
MW-17	4/9/2007	ND<25	FALSE
MW-17	9/24/2007	1.4	FALSE
MW-17	5/2/2008	2	FALSE
MW-17	12/5/2008	2.6	FALSE
MW-17	4/15/2009	3	FALSE
MW-17	10/9/2009	2.31	FALSE
MW-17	4/30/2010	2.07	FALSE
MW-17	10/5/2010	2.36	FALSE
MW-17	5/12/2011	2.36	FALSE
MW-17	10/6/2011	2.46	FALSE
MW-17	4/19/2012	1.79	FALSE
MW-17	10/23/2012	2.21	FALSE
MW-17	4/23/2013	2.29	FALSE
MW-17	9/10/2013	ND<25	FALSE
MW-17	5/22/2014	1.82	FALSE
MW-17	9/30/2014	ND<25	FALSE
MW-17	4/13/2015	ND<1.4	FALSE
MW-18	12/16/1997	ND<40	FALSE
MW-18	1/14/1998	ND<40	FALSE
MW-18	2/13/1998	ND<40	FALSE
MW-18	3/6/1998	ND<40	FALSE
MW-18	10/15/1998	ND<40	FALSE
MW-18	3/25/1999	ND<40	FALSE
MW-18	9/23/1999	ND<40	FALSE
MW-18	3/29/2000	ND<40	FALSE
MW-18	9/14/2000	ND<40	FALSE
MW-18	3/12/2001	ND<40	FALSE
MW-18	10/13/2001	ND<40	FALSE
MW-18	3/8/2002	ND<40	FALSE
MW-18	9/19/2002	ND<40	FALSE
MW-18	4/15/2003	ND<40	FALSE
MW-18	10/16/2003	ND<40	FALSE
MW-18	3/25/2004	ND<40	FALSE
MW-18	10/22/2004	ND<40	FALSE
MW-18	5/11/2005	ND<40	FALSE
MW-18	10/11/2005	ND<40	FALSE
MW-18	4/27/2006	ND<25	FALSE
MW-18	4/9/2007	ND<25	FALSE
MW-18	9/24/2007	9.9	FALSE
MW-18	5/2/2008	2.1	FALSE
MW-18	12/5/2008	3.1	FALSE

MW-18	4/15/2009	2.5	FALSE
MW-18	10/9/2009	2.48	FALSE
MW-18	4/30/2010	ND<25	FALSE
MW-18	10/5/2010	1.83	FALSE
MW-18	5/12/2011	1.92	FALSE
MW-18	10/6/2011	ND<25	FALSE
MW-18	4/19/2012	ND<25	FALSE
MW-18	10/23/2012	ND<25	FALSE
MW-18	4/23/2013	1.77	FALSE
MW-18	9/10/2013	ND<25	FALSE
MW-18	5/22/2014	4.06	FALSE
MW-18	9/30/2014	2.06	FALSE
MW-18	4/13/2015	ND<1.4	FALSE
MW-19	12/16/1997	ND<40	FALSE
MW-19	1/14/1998	ND<40	FALSE
MW-19	**2/13/1998**	**64**	**TRUE**
MW-19	3/6/1998	ND<40	FALSE
MW-19	10/15/1998	ND<40	FALSE
MW-19	3/25/1999	ND<40	FALSE
MW-19	9/23/1999	ND<40	FALSE
MW-19	3/29/2000	ND<40	FALSE
MW-19	9/14/2000	ND<40	FALSE
MW-19	3/12/2001	ND<40	FALSE
MW-19	10/13/2001	ND<40	FALSE
MW-19	3/8/2002	ND<40	FALSE
MW-19	9/19/2002	ND<40	FALSE
MW-19	4/15/2003	ND<40	FALSE
MW-19	10/16/2003	ND<40	FALSE
MW-19	3/25/2004	ND<40	FALSE
MW-19	10/22/2004	ND<40	FALSE
MW-19	5/11/2005	ND<40	FALSE
MW-19	10/11/2005	ND<40	FALSE
MW-19	4/27/2006	ND<25	FALSE
MW-19	4/9/2007	ND<25	FALSE
MW-19	9/24/2007	3.9	FALSE
MW-19	5/2/2008	5	FALSE
MW-19	12/5/2008	3.6	FALSE
MW-19	4/15/2009	4.7	FALSE
MW-19	10/9/2009	5.42	FALSE
MW-19	4/30/2010	3.95	FALSE
MW-19	10/5/2010	4.04	FALSE
MW-19	5/12/2011	7.24	FALSE
MW-19	10/6/2011	5.38	FALSE
MW-19	4/19/2012	5.48	FALSE
MW-19	10/23/2012	4.2	FALSE
MW-19	4/23/2013	4.39	FALSE
MW-19	9/10/2013	3.78	FALSE
MW-19	5/22/2014	4.43	FALSE
MW-19	9/30/2014	4.99	FALSE
MW-19	4/13/2015	2.9	FALSE
MW-20	12/16/1997	ND<40	FALSE
MW-20	1/14/1998	ND<40	FALSE
MW-20	2/13/1998	ND<40	FALSE
MW-20	3/6/1998	ND<40	FALSE
MW-20	10/15/1998	ND<40	FALSE
MW-20	3/25/1999	ND<40	FALSE
MW-20	9/23/1999	ND<40	FALSE
MW-20	3/29/2000	ND<40	FALSE
MW-20	9/14/2000	ND<40	FALSE
MW-20	3/12/2001	ND<40	FALSE
MW-20	10/13/2001	ND<40	FALSE
MW-20	3/8/2002	ND<40	FALSE
MW-20	9/19/2002	ND<40	FALSE
MW-20	4/15/2003	ND<40	FALSE
MW-20	10/16/2003	ND<40	FALSE
MW-20	3/25/2004	ND<40	FALSE
MW-20	10/22/2004	ND<40	FALSE
MW-20	5/11/2005	ND<40	FALSE
MW-20	10/11/2005	ND<40	FALSE
MW-20	4/27/2006	ND<25	FALSE
MW-20	4/9/2007	ND<25	FALSE
MW-20	9/24/2007	2.3	FALSE

MW-20	5/2/2008	5.1	FALSE
MW-20	12/5/2008	6	FALSE
MW-20	4/15/2009	5.7	FALSE
MW-20	10/9/2009	6.8	FALSE
MW-20	4/30/2010	5.12	FALSE
MW-20	10/5/2010	5.31	FALSE
MW-20	5/12/2011	6.25	FALSE
MW-20	10/6/2011	5.58	FALSE
MW-20	4/19/2012	5.56	FALSE
MW-20	10/23/2012	6.72	FALSE
MW-20	4/23/2013	6.54	FALSE
MW-20	9/10/2013	6.7	FALSE
MW-20	5/22/2014	5.36	FALSE
MW-20	9/30/2014	3.92	FALSE
MW-20	4/13/2015	4.34	FALSE
MW-21	12/16/1997	ND<40	FALSE
MW-21	1/14/1998	ND<40	FALSE
MW-21	2/13/1998	ND<40	FALSE
MW-21	3/6/1998	ND<40	FALSE
MW-21	10/15/1998	ND<40	FALSE
MW-21	3/25/1999	ND<40	FALSE
MW-21	9/23/1999	ND<40	FALSE
MW-21	3/29/2000	ND<40	FALSE
MW-21	9/14/2000	ND<40	FALSE
MW-21	3/12/2001	ND<40	FALSE
MW-21	10/13/2001	ND<40	FALSE
MW-21	3/8/2002	ND<40	FALSE
MW-21	9/19/2002	ND<40	FALSE
MW-21	4/15/2003	ND<40	FALSE
MW-21	10/16/2003	ND<40	FALSE
MW-21	3/25/2004	ND<40	FALSE
MW-21	10/22/2004	ND<40	FALSE
MW-21	5/11/2005	ND<40	FALSE
MW-21	10/11/2005	ND<40	FALSE
MW-21	4/27/2006	ND<25	FALSE
MW-21	4/9/2007	ND<25	FALSE
MW-21	9/24/2007	ND<25	FALSE
MW-21	5/2/2008	2.6	FALSE
MW-21	12/5/2008	2.3	FALSE
MW-21	4/15/2009	0.7	FALSE
MW-21	10/9/2009	ND<40	FALSE
MW-21	4/30/2010	ND<25	FALSE
MW-21	10/5/2010	ND<25	FALSE
MW-21	5/12/2011	ND<25	FALSE
MW-21	10/6/2011	ND<25	FALSE
MW-21	4/19/2012	ND<25	FALSE
MW-21	10/23/2012	ND<25	FALSE
MW-21	4/23/2013	ND<25	FALSE
MW-21	9/10/2013	ND<25	FALSE
MW-21	5/22/2014	ND<25	FALSE
MW-21	9/30/2014	ND<25	FALSE
MW-21	4/13/2015	ND<1.4	FALSE
MW-22	12/16/1997	ND<40	FALSE
MW-22	1/14/1998	ND<40	FALSE
MW-22	2/13/1998	ND<40	FALSE
MW-22	3/6/1998	ND<40	FALSE
MW-22	10/15/1998	ND<40	FALSE
MW-22	3/25/1999	ND<40	FALSE
MW-22	9/23/1999	ND<40	FALSE
MW-22	3/29/2000	ND<40	FALSE
MW-22	9/14/2000	ND<40	FALSE
MW-22	3/12/2001	ND<40	FALSE
MW-22	10/13/2001	ND<40	FALSE
MW-22	3/8/2002	ND<40	FALSE
MW-22	9/19/2002	ND<40	FALSE
MW-22	4/15/2003	ND<40	FALSE
MW-22	10/16/2003	ND<40	FALSE
MW-22	3/25/2004	ND<40	FALSE
MW-22	10/22/2004	ND<40	FALSE
MW-22	5/11/2005	ND<40	FALSE
MW-22	10/11/2005	ND<40	FALSE
MW-22	4/27/2006	ND<25	FALSE

MW-22	4/9/2007	ND<25	FALSE
MW-22	9/24/2007	ND<25	FALSE
MW-22	5/2/2008	ND<25	FALSE
MW-22	12/5/2008	ND<25	FALSE
MW-22	4/15/2009	1	FALSE
MW-22	10/9/2009	ND<25	FALSE
MW-22	4/30/2010	ND<25	FALSE
MW-22	10/5/2010	ND<25	FALSE
MW-22	5/12/2011	ND<25	FALSE
MW-22	10/6/2011	ND<25	FALSE
MW-22	4/19/2012	ND<25	FALSE
MW-22	10/23/2012	ND<25	FALSE
MW-22	4/23/2013	ND<25	FALSE
MW-22	9/10/2013	ND<25	FALSE
MW-22	5/22/2014	ND<25	FALSE
MW-22	9/30/2014	ND<25	FALSE
MW-22	4/13/2015	ND<1.4	FALSE
MW-23	12/16/1997	ND<40	FALSE
MW-23	1/14/1998	ND<40	FALSE
MW-23	2/13/1998	ND<40	FALSE
MW-23	3/6/1998	ND<40	FALSE
MW-23	10/15/1998	ND<40	FALSE
MW-23	3/25/1999	ND<40	FALSE
MW-23	9/23/1999	ND<40	FALSE
MW-23	3/29/2000	ND<40	FALSE
MW-23	9/14/2000	ND<40	FALSE
MW-23	3/12/2001	ND<40	FALSE
MW-23	10/13/2001	ND<40	FALSE
MW-23	3/8/2002	ND<40	FALSE
MW-23	9/19/2002	ND<40	FALSE
MW-23	4/15/2003	ND<40	FALSE
MW-23	10/16/2003	ND<40	FALSE
MW-23	3/25/2004	ND<40	FALSE
MW-23	10/22/2004	ND<40	FALSE
MW-23	5/11/2005	ND<40	FALSE
MW-23	10/11/2005	ND<40	FALSE
MW-23	4/27/2006	ND<25	FALSE
MW-23	4/9/2007	ND<25	FALSE
MW-23	9/24/2007	ND<25	FALSE
MW-23	5/2/2008	ND<25	FALSE
MW-23	12/5/2008	ND<25	FALSE
MW-23	4/15/2009	ND<25	FALSE
MW-23	10/9/2009	ND<25	FALSE
MW-23	4/30/2010	ND<25	FALSE
MW-23	10/5/2010	ND<25	FALSE
MW-23	5/12/2011	ND<25	FALSE
MW-23	10/6/2011	ND<25	FALSE
MW-23	4/19/2012	ND<25	FALSE
MW-23	10/23/2012	ND<25	FALSE
MW-23	4/23/2013	ND<25	FALSE
MW-23	9/10/2013	ND<25	FALSE
MW-23	5/22/2014	ND<25	FALSE
MW-23	9/30/2014	ND<25	FALSE
MW-23	4/13/2015	ND<1.4	FALSE
MW-24	12/16/1997	ND<40	FALSE
MW-24	1/14/1998	ND<40	FALSE
MW-24	2/13/1998	ND<40	FALSE
MW-24	3/6/1998	ND<40	FALSE
MW-24	10/15/1998	ND<40	FALSE
MW-24	3/25/1999	ND<40	FALSE
MW-24	9/23/1999	ND<40	FALSE
MW-24	3/29/2000	ND<40	FALSE
MW-24	9/14/2000	ND<40	FALSE
MW-24	3/12/2001	ND<40	FALSE
MW-24	10/13/2001	ND<40	FALSE
MW-24	3/8/2002	ND<40	FALSE
MW-24	9/19/2002	ND<40	FALSE
MW-24	4/15/2003	ND<40	FALSE
MW-24	10/16/2003	ND<40	FALSE
MW-24	3/25/2004	ND<40	FALSE
MW-24	10/22/2004	ND<40	FALSE
MW-24	5/11/2005	ND<40	FALSE

MW-24	10/11/2005	ND<40	FALSE
MW-24	4/27/2006	ND<25	FALSE
MW-24	4/9/2007	ND<40	FALSE
MW-24	9/24/2007	ND<25	FALSE
MW-24	5/2/2008	ND<25	FALSE
MW-24	12/5/2008	2	FALSE
MW-24	4/15/2009	3.8	FALSE
MW-24	10/9/2009	6.31	FALSE
MW-24	4/30/2010	ND<25	FALSE
MW-24	10/5/2010	1.61	FALSE
MW-24	5/12/2011	5.54	FALSE
MW-24	10/6/2011	2.1	FALSE
MW-24	4/19/2012	2.87	FALSE
MW-24	10/23/2012	ND<25	FALSE
MW-24	4/23/2013	2.34	FALSE
MW-24	9/10/2013	ND<25	FALSE
MW-24	5/22/2014	1.5	FALSE
MW-24	9/30/2014	ND<25	FALSE
MW-24	4/13/2015	ND<1.4	FALSE
MW-25	12/16/1997	ND<40	FALSE
MW-25	1/14/1998	ND<40	FALSE
MW-25	2/13/1998	ND<40	FALSE
MW-25	3/6/1998	ND<40	FALSE
MW-25	10/15/1998	ND<40	FALSE
MW-25	3/25/1999	ND<40	FALSE
MW-25	9/23/1999	ND<40	FALSE
MW-25	3/29/2000	ND<40	FALSE
MW-25	9/14/2000	ND<40	FALSE
MW-25	3/12/2001	ND<40	FALSE
MW-25	10/13/2001	ND<40	FALSE
MW-25	3/8/2002	ND<40	FALSE
MW-25	9/19/2002	ND<40	FALSE
MW-25	4/15/2003	ND<40	FALSE
MW-25	10/16/2003	ND<40	FALSE
MW-25	3/25/2004	ND<40	FALSE
MW-25	10/22/2004	ND<40	FALSE
MW-25	5/11/2005	ND<40	FALSE
MW-25	10/11/2005	ND<40	FALSE
MW-25	4/27/2006	ND<25	FALSE
MW-25	4/9/2007	ND<25	FALSE
MW-25	9/24/2007	ND<25	FALSE
MW-25	5/2/2008	2.1	FALSE
MW-25	12/5/2008	ND<25	FALSE
MW-25	4/15/2009	0.8	FALSE
MW-25	10/9/2009	ND<25	FALSE
MW-25	4/30/2010	ND<25	FALSE
MW-25	10/5/2010	ND<25	FALSE
MW-25	5/12/2011	ND<25	FALSE
MW-25	10/6/2011	3.6	FALSE
MW-25	4/19/2012	ND<25	FALSE
MW-25	10/23/2012	ND<25	FALSE
MW-25	5/22/2014	ND<25	FALSE
MW-25	9/30/2014	ND<25	FALSE
MW-25d	12/16/1997	ND<40	FALSE
MW-25d	1/14/1998	ND<40	FALSE
MW-25d	2/13/1998	ND<40	FALSE
MW-25d	3/6/1998	ND<40	FALSE
MW-25d	10/15/1998	ND<40	FALSE
MW-25d	3/25/1999	ND<40	FALSE
MW-25d	9/23/1999	ND<40	FALSE
MW-25d	3/29/2000	ND<40	FALSE
MW-25d	9/14/2000	ND<40	FALSE
MW-25d	3/12/2001	ND<40	FALSE
MW-25d	10/13/2001	ND<40	FALSE
MW-25d	3/8/2002	ND<40	FALSE
MW-25d	9/19/2002	ND<40	FALSE
MW-25d	4/15/2003	ND<40	FALSE
MW-25d	10/16/2003	ND<40	FALSE
MW-25d	3/25/2004	ND<40	FALSE
MW-25d	10/22/2004	ND<40	FALSE
MW-25d	5/11/2005	ND<40	FALSE
MW-25d	10/11/2005	ND<40	FALSE

MW-25d	4/27/2006	ND<25	FALSE
MW-25d	4/9/2007	ND<25	FALSE
MW-25d	9/24/2007	2.8	FALSE
MW-25d	5/2/2008	3.6	FALSE
MW-25d	12/5/2008	3.7	FALSE
MW-25d	4/15/2009	3.2	FALSE
MW-25d	10/9/2009	4	FALSE
MW-25d	4/30/2010	3.6	FALSE
MW-25d	10/5/2010	3.52	FALSE
MW-25d	5/12/2011	3.6	FALSE
MW-25d	10/6/2011	3.67	FALSE
MW-25d	4/19/2012	3.43	FALSE
MW-25d	10/23/2012	3.55	FALSE
MW-25d	4/23/2013	3.68	FALSE
MW-25d	9/10/2013	3.1	FALSE
MW-25d	5/22/2014	2.56	FALSE
MW-25d	9/30/2014	2.88	FALSE
MW-25d	4/13/2015	1.94	FALSE

Non-Parametric Tolerance Interval

Parameter: Zinc, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 83.6645%
Background measurements (n) = 76
Maximum Background Concentration = 50
Minimum Coverage = 96.3%
Average Coverage = 98.7013%

Location	Date	Value	Significant
MW-17	12/16/1997	ND<50	FALSE
MW-17	1/14/1998	ND<50	FALSE
MW-17	2/13/1998	ND<50	FALSE
MW-17	3/6/1998	ND<50	FALSE
MW-17	10/15/1998	ND<50	FALSE
MW-17	3/25/1999	ND<50	FALSE
MW-17	9/23/1999	ND<50	FALSE
MW-17	3/29/2000	ND<50	FALSE
MW-17	9/14/2000	ND<50	FALSE
MW-17	3/12/2001	ND<50	FALSE
MW-17	10/13/2001	ND<50	FALSE
MW-17	3/8/2002	ND<50	FALSE
MW-17	9/19/2002	ND<50	FALSE
MW-17	4/15/2003	ND<50	FALSE
MW-17	10/16/2003	ND<50	FALSE
MW-17	3/25/2004	ND<50	FALSE
MW-17	10/22/2004	ND<10	FALSE
MW-17	5/11/2005	ND<10	FALSE
MW-17	10/11/2005	ND<10	FALSE
MW-17	4/27/2006	ND<10	FALSE
MW-17	10/18/2006	ND<10	FALSE
MW-17	4/9/2007	ND<10	FALSE
MW-17	9/24/2007	2.3	FALSE
MW-17	5/2/2008	5.8	FALSE
MW-17	12/5/2008	ND<10	FALSE
MW-17	4/15/2009	6.4	FALSE
MW-17	10/9/2009	3.96	FALSE
MW-17	4/30/2010	ND<10	FALSE
MW-17	10/5/2010	7.98	FALSE
MW-17	5/12/2011	4.37	FALSE
MW-17	10/6/2011	ND<10	FALSE
MW-17	4/19/2012	ND<10	FALSE
MW-17	10/23/2012	ND<10	FALSE
MW-17	4/23/2013	ND<10	FALSE
MW-17	9/10/2013	ND<10	FALSE
MW-17	5/22/2014	ND<10	FALSE
MW-17	9/30/2014	ND<10	FALSE
MW-17	4/13/2015	ND<3.8	FALSE
MW-18	12/16/1997	ND<50	FALSE
MW-18	1/14/1998	ND<50	FALSE
MW-18	2/13/1998	ND<50	FALSE
MW-18	**3/6/1998**	**56**	**TRUE**
MW-18	10/15/1998	ND<50	FALSE
MW-18	3/25/1999	ND<50	FALSE
MW-18	9/23/1999	ND<50	FALSE
MW-18	3/29/2000	ND<50	FALSE
MW-18	9/14/2000	ND<50	FALSE
MW-18	3/12/2001	ND<50	FALSE
MW-18	10/13/2001	50	FALSE
MW-18	3/8/2002	ND<50	FALSE
MW-18	9/19/2002	ND<50	FALSE
MW-18	4/15/2003	ND<50	FALSE
MW-18	10/16/2003	ND<50	FALSE
MW-18	3/25/2004	ND<50	FALSE
MW-18	10/22/2004	ND<10	FALSE
MW-18	5/11/2005	ND<10	FALSE
MW-18	10/11/2005	ND<10	FALSE
MW-18	4/27/2006	ND<10	FALSE
MW-18	10/18/2006	ND<10	FALSE
MW-18	4/9/2007	ND<10	FALSE
MW-18	9/24/2007	2.1	FALSE

MW-18	5/2/2008	5.4	FALSE
MW-18	12/5/2008	ND<10	FALSE
MW-18	4/15/2009	ND<10	FALSE
MW-18	10/9/2009	8.55	FALSE
MW-18	4/30/2010	ND<10	FALSE
MW-18	10/5/2010	ND<10	FALSE
MW-18	5/12/2011	4.28	FALSE
MW-18	10/6/2011	ND<10	FALSE
MW-18	4/19/2012	ND<10	FALSE
MW-18	10/23/2012	ND<10	FALSE
MW-18	4/23/2013	ND<10	FALSE
MW-18	9/10/2013	ND<10	FALSE
MW-18	5/22/2014	ND<10	FALSE
MW-18	9/30/2014	ND<10	FALSE
MW-18	4/13/2015	ND<3.8	FALSE
MW-19	12/16/1997	ND<50	FALSE
MW-19	1/14/1998	ND<50	FALSE
MW-19	**2/13/1998**	**54**	**TRUE**
MW-19	3/6/1998	ND<50	FALSE
MW-19	10/15/1998	ND<50	FALSE
MW-19	3/25/1999	ND<50	FALSE
MW-19	9/23/1999	ND<50	FALSE
MW-19	3/29/2000	ND<50	FALSE
MW-19	9/14/2000	ND<50	FALSE
MW-19	3/12/2001	ND<50	FALSE
MW-19	10/13/2001	ND<50	FALSE
MW-19	3/8/2002	ND<50	FALSE
MW-19	9/19/2002	ND<50	FALSE
MW-19	4/15/2003	ND<50	FALSE
MW-19	10/16/2003	ND<50	FALSE
MW-19	3/25/2004	ND<50	FALSE
MW-19	10/22/2004	ND<10	FALSE
MW-19	5/11/2005	ND<10	FALSE
MW-19	10/11/2005	ND<10	FALSE
MW-19	4/27/2006	ND<10	FALSE
MW-19	10/18/2006	ND<10	FALSE
MW-19	4/9/2007	ND<10	FALSE
MW-19	9/24/2007	1	FALSE
MW-19	5/2/2008	2.2	FALSE
MW-19	12/5/2008	7.5	FALSE
MW-19	4/15/2009	5.1	FALSE
MW-19	10/9/2009	5.22	FALSE
MW-19	4/30/2010	5.22	FALSE
MW-19	10/5/2010	ND<10	FALSE
MW-19	5/12/2011	5.98	FALSE
MW-19	10/6/2011	6.51	FALSE
MW-19	4/19/2012	ND<10	FALSE
MW-19	10/23/2012	ND<10	FALSE
MW-19	4/23/2013	ND<10	FALSE
MW-19	9/10/2013	ND<10	FALSE
MW-19	5/22/2014	ND<10	FALSE
MW-19	9/30/2014	5.49	FALSE
MW-19	4/13/2015	5.16	FALSE
MW-20	12/16/1997	ND<50	FALSE
MW-20	1/14/1998	ND<50	FALSE
MW-20	2/13/1998	ND<50	FALSE
MW-20	3/6/1998	ND<50	FALSE
MW-20	10/15/1998	ND<50	FALSE
MW-20	3/25/1999	ND<50	FALSE
MW-20	9/23/1999	ND<50	FALSE
MW-20	3/29/2000	ND<50	FALSE
MW-20	9/14/2000	ND<50	FALSE
MW-20	3/12/2001	ND<50	FALSE
MW-20	10/13/2001	ND<50	FALSE
MW-20	3/8/2002	ND<50	FALSE
MW-20	9/19/2002	ND<50	FALSE
MW-20	4/15/2003	ND<50	FALSE
MW-20	10/16/2003	ND<50	FALSE
MW-20	3/25/2004	ND<50	FALSE
MW-20	10/22/2004	ND<10	FALSE
MW-20	5/11/2005	ND<10	FALSE
MW-20	10/11/2005	ND<10	FALSE

MW-20	4/27/2006	ND<10	FALSE
MW-20	10/18/2006	ND<10	FALSE
MW-20	4/9/2007	ND<10	FALSE
MW-20	9/24/2007	ND<10	FALSE
MW-20	5/2/2008	ND<10	FALSE
MW-20	12/5/2008	ND<10	FALSE
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MW-20	10/9/2009	7.32	FALSE
MW-20	4/30/2010	ND<10	FALSE
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MW-20	5/12/2011	ND<10	FALSE
MW-20	10/6/2011	ND<10	FALSE
MW-20	4/19/2012	ND<10	FALSE
MW-20	10/23/2012	ND<10	FALSE
MW-20	4/23/2013	ND<10	FALSE
MW-20	9/10/2013	ND<10	FALSE
MW-20	5/22/2014	ND<10	FALSE
MW-20	9/30/2014	ND<10	FALSE
MW-20	4/13/2015	ND<3.8	FALSE
MW-21	12/16/1997	ND<50	FALSE
MW-21	1/14/1998	ND<50	FALSE
MW-21	2/13/1998	ND<50	FALSE
MW-21	3/6/1998	ND<50	FALSE
MW-21	10/15/1998	ND<50	FALSE
MW-21	3/25/1999	ND<50	FALSE
MW-21	9/23/1999	ND<50	FALSE
MW-21	3/29/2000	ND<50	FALSE
MW-21	9/14/2000	ND<50	FALSE
MW-21	3/12/2001	ND<50	FALSE
MW-21	10/13/2001	ND<50	FALSE
MW-21	3/8/2002	ND<50	FALSE
MW-21	9/19/2002	ND<50	FALSE
MW-21	4/15/2003	ND<50	FALSE
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MW-21	10/22/2004	ND<10	FALSE
MW-21	5/11/2005	ND<10	FALSE
MW-21	10/11/2005	ND<10	FALSE
MW-21	4/27/2006	ND<10	FALSE
MW-21	10/18/2006	ND<10	FALSE
MW-21	4/9/2007	ND<10	FALSE
MW-21	9/24/2007	2.4	FALSE
MW-21	5/2/2008	2.5	FALSE
MW-21	12/5/2008	5.2	FALSE
MW-21	4/15/2009	ND<25	FALSE
MW-21	10/9/2009	17.5	FALSE
MW-21	4/30/2010	9.83	FALSE
MW-21	10/5/2010	ND<10	FALSE
MW-21	5/12/2011	ND<10	FALSE
MW-21	10/6/2011	ND<10	FALSE
MW-21	4/19/2012	ND<10	FALSE
MW-21	10/23/2012	ND<10	FALSE
MW-21	4/23/2013	ND<10	FALSE
MW-21	9/10/2013	4.52	FALSE
MW-21	5/22/2014	ND<10	FALSE
MW-21	9/30/2014	ND<10	FALSE
MW-21	4/13/2015	ND<3.8	FALSE
MW-22	12/16/1997	ND<50	FALSE
MW-22	1/14/1998	ND<50	FALSE
MW-22	2/13/1998	ND<50	FALSE
MW-22	3/6/1998	ND<50	FALSE
MW-22	10/15/1998	ND<50	FALSE
MW-22	3/25/1999	ND<50	FALSE
MW-22	9/23/1999	ND<50	FALSE
MW-22	3/29/2000	ND<50	FALSE
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MW-22	10/13/2001	ND<50	FALSE
MW-22	3/8/2002	ND<50	FALSE
MW-22	9/19/2002	ND<50	FALSE
MW-22	4/15/2003	ND<50	FALSE
MW-22	10/16/2003	ND<50	FALSE

MW-22	3/25/2004	ND<50	FALSE
MW-22	10/22/2004	ND<10	FALSE
MW-22	5/11/2005	ND<10	FALSE
MW-22	10/11/2005	ND<10	FALSE
MW-22	4/27/2006	ND<10	FALSE
MW-22	10/18/2006	ND<10	FALSE
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MW-22	9/24/2007	1.3	FALSE
MW-22	5/2/2008	1	FALSE
MW-22	12/5/2008	3.9	FALSE
MW-22	4/15/2009	3.5	FALSE
MW-22	10/9/2009	ND<10	FALSE
MW-22	4/30/2010	4.47	FALSE
MW-22	10/5/2010	ND<10	FALSE
MW-22	5/12/2011	ND<10	FALSE
MW-22	10/6/2011	ND<10	FALSE
MW-22	4/19/2012	ND<10	FALSE
MW-22	10/23/2012	ND<10	FALSE
MW-22	4/23/2013	4.08	FALSE
MW-22	9/10/2013	4.2	FALSE
MW-22	5/22/2014	ND<10	FALSE
MW-22	9/30/2014	ND<10	FALSE
MW-22	4/13/2015	ND<3.8	FALSE
MW-23	12/16/1997	ND<50	FALSE
MW-23	1/14/1998	ND<50	FALSE
MW-23	2/13/1998	ND<50	FALSE
MW-23	3/6/1998	ND<50	FALSE
MW-23	10/15/1998	ND<50	FALSE
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MW-23	4/27/2006	ND<10	FALSE
MW-23	10/18/2006	ND<10	FALSE
MW-23	4/9/2007	ND<10	FALSE
MW-23	9/24/2007	ND<10	FALSE
MW-23	5/2/2008	1	FALSE
MW-23	12/5/2008	ND<10	FALSE
MW-23	4/15/2009	10	FALSE
MW-23	10/9/2009	ND<10	FALSE
MW-23	4/30/2010	ND<10	FALSE
MW-23	10/5/2010	ND<10	FALSE
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MW-23	4/19/2012	ND<10	FALSE
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MW-23	4/23/2013	ND<10	FALSE
MW-23	9/10/2013	ND<10	FALSE
MW-23	5/22/2014	ND<10	FALSE
MW-23	9/30/2014	ND<10	FALSE
MW-23	4/13/2015	ND<3.8	FALSE
MW-24	12/16/1997	ND<50	FALSE
MW-24	1/14/1998	ND<50	FALSE
MW-24	2/13/1998	ND<50	FALSE
MW-24	3/6/1998	ND<50	FALSE
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MW-24	9/14/2000	ND<50	FALSE
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MW-24	10/13/2001	ND<50	FALSE

MW-24	3/8/2002	ND<50	FALSE
MW-24	9/19/2002	ND<50	FALSE
MW-24	4/15/2003	ND<50	FALSE
MW-24	10/16/2003	ND<50	FALSE
MW-24	3/25/2004	ND<50	FALSE
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MW-24	10/11/2005	ND<10	FALSE
MW-24	4/27/2006	ND<10	FALSE
MW-24	10/18/2006	ND<10	FALSE
MW-24	4/9/2007	ND<50	FALSE
MW-24	9/24/2007	1.5	FALSE
MW-24	**5/2/2008**	**154**	**TRUE**
MW-24	12/5/2008	9	FALSE
MW-24	4/15/2009	5.8	FALSE
MW-24	10/9/2009	24.5	FALSE
MW-24	4/30/2010	8.38	FALSE
MW-24	10/5/2010	4.78	FALSE
MW-24	5/12/2011	24.6	FALSE
MW-24	10/6/2011	40	FALSE
MW-24	4/19/2012	14.8	FALSE
MW-24	10/23/2012	13.6	FALSE
MW-24	4/23/2013	9.38	FALSE
MW-24	9/10/2013	ND<10	FALSE
MW-24	5/22/2014	ND<10	FALSE
MW-24	9/30/2014	4.39	FALSE
MW-24	4/13/2015	5.88	FALSE

MW-25	12/16/1997	ND<50	FALSE
MW-25	1/14/1998	ND<50	FALSE
MW-25	**2/13/1998**	**69**	**TRUE**
MW-25	3/6/1998	ND<50	FALSE
MW-25	10/15/1998	ND<50	FALSE
MW-25	3/25/1999	ND<50	FALSE
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MW-25	3/29/2000	ND<50	FALSE
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MW-25	5/11/2005	ND<10	FALSE
MW-25	10/11/2005	ND<10	FALSE
MW-25	4/27/2006	ND<10	FALSE
MW-25	10/18/2006	ND<10	FALSE
MW-25	4/9/2007	ND<10	FALSE
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MW-25	12/5/2008	ND<10	FALSE
MW-25	4/15/2009	4.1	FALSE
MW-25	10/9/2009	ND<10	FALSE
MW-25	4/30/2010	11.4	FALSE
MW-25	10/5/2010	ND<10	FALSE
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MW-25	10/6/2011	ND<10	FALSE
MW-25	4/19/2012	ND<10	FALSE
MW-25	10/23/2012	ND<10	FALSE
MW-25	5/22/2014	ND<10	FALSE
MW-25	9/30/2014	ND<10	FALSE

MW-25d	12/16/1997	ND<50	FALSE
MW-25d	1/14/1998	ND<50	FALSE
MW-25d	2/13/1998	ND<50	FALSE
MW-25d	3/6/1998	ND<50	FALSE
MW-25d	10/15/1998	ND<50	FALSE
MW-25d	3/25/1999	ND<50	FALSE
MW-25d	9/23/1999	ND<50	FALSE
MW-25d	3/29/2000	ND<50	FALSE
MW-25d	9/14/2000	ND<50	FALSE
MW-25d	3/12/2001	ND<50	FALSE

MW-25d	10/13/2001	ND<50	FALSE
MW-25d	3/8/2002	ND<50	FALSE
MW-25d	9/19/2002	ND<50	FALSE
MW-25d	4/15/2003	ND<50	FALSE
MW-25d	10/16/2003	ND<50	FALSE
MW-25d	3/25/2004	ND<50	FALSE
MW-25d	10/22/2004	ND<10	FALSE
MW-25d	5/11/2005	ND<10	FALSE
MW-25d	10/11/2005	ND<10	FALSE
MW-25d	4/27/2006	ND<10	FALSE
MW-25d	10/18/2006	ND<10	FALSE
MW-25d	4/9/2007	ND<10	FALSE
MW-25d	9/24/2007	ND<10	FALSE
MW-25d	5/2/2008	ND<10	FALSE
MW-25d	12/5/2008	ND<10	FALSE
MW-25d	4/15/2009	3.6	FALSE
MW-25d	10/9/2009	ND<10	FALSE
MW-25d	4/30/2010	ND<10	FALSE
MW-25d	10/5/2010	ND<10	FALSE
MW-25d	5/12/2011	ND<10	FALSE
MW-25d	10/6/2011	ND<10	FALSE
MW-25d	4/19/2012	ND<10	FALSE
MW-25d	10/23/2012	ND<10	FALSE
MW-25d	4/23/2013	ND<10	FALSE
MW-25d	9/10/2013	ND<10	FALSE
MW-25d	5/22/2014	ND<10	FALSE
MW-25d	9/30/2014	ND<10	FALSE
MW-25d	4/13/2015	ND<3.8	FALSE

APPENDIX VI
NCDENR EDDS (CD only)