SECOND 2015 SEMI-ANNUAL
GROUNDWATER MONITORING REPORT

ENVIRONMENTAL WASTE SOLUTIONS
CAMDEN CLASS II LANDFILL
TDSWM PERMIT NUMBER IDL 03-0212
CAMDEN, TENNESSEE

Prepared For:

ENVIRONMENTAL WASTE SOLUTIONS CLASS II LANDFILL
200 OMAR CIRCLE
CAMDEN, TN 38320

Prepared By:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
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CEC Project 142-059

NOVEMBER 2015

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TDSWM Permit Number IDL 03-0212
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Prepared for:
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200 Omar Circle
Camden, TN 38320

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EXECUTIVE SUMMARY

This report documents the second semi-annual monitoring event of 2015 for the Environmental Waste Solutions, LLC (EWS) Class II Landfill. The Class II landfill is registered with the Tennessee Division of Solid Waste Management (TDSWM) with permit number IDL 03-0212. The EWS Camden Class II Landfill is located in Benton County at 200 Omar Circle, Camden, Tennessee (latitude 36°03'16" N/ longitude 88°05'16" W).

The following table presents the wells that were used to develop this report.

Upgradient Monitoring Points	Downgradient Monitoring Points
MW-1	MW-3, MW-4

Groundwater samples were collected by Civil & Environmental Consultants, Inc. (CEC) on November 11, 2015. Leachate analysis was performed on samples collected on November 4, 2015 and analyzed at TEC Environmental Laboratories, Inc. (TEC) and reported the results on November 12, 2015. ESC Lab Sciences (ESC) performed the groundwater analysis and reported the results on November 25, 2015. All groundwater monitoring wells were sampled during the event, with the exception of MW-2, which was recently replaced by MW-4 in April 2013. MW-2 has subsequently been removed from the detection monitoring network because the well routinely yielded insufficient volumes of water for sampling purposes. MW-2 remains in place, and will continue to be monitored for field parameters and water level data. The collected groundwater samples were analyzed for Appendix I organics, Appendix I inorganics, Bromide, Chloride, Nitrate, Sulfate, Ammonia, and a short list of ions.

The results of the laboratory analysis indicated an elevated chloride concentration observed at MW-3. A supplemental sampling event was conducted on December 4, 2015 to further evaluate the elevated chloride observed at MW-3. Samples were collected from MW-3, Camden POTW locations (Manholes #1 and #2), and the sediment pond upgradient of MW-3 and analyzed for Appendix I inorganics, Bromide, Chloride, Nitrate, Sulfate, Ammonia, a short list of ions, E. Coli, and total coliform. ESC reported the results on December 14, 2015.

Since additional waste streams have been approved for disposal in the EWS Class II Landfill, the TDSWM requested that EWS add the volatile organic compounds (VOCs) included in the Appendix I *Constituents For Groundwater Monitoring* presented in Rule 0400-11-01-.04 (9.) d of the Rules and Regulations Governing Solid Waste Disposal in Tennessee to the existing list of groundwater monitoring constituents.

Inter-well prediction interval analysis was used to identify statistically significant increases (SSIs) over background concentrations for the analyzed water quality parameters. Only parameters reported above the detection limits (practical quantitation limits) of the laboratory were evaluated. The results of the analysis are summarized as follows:

Review of the statistical analysis performed on the available data indicated that there were two statistically significant increases (SSI's) over background data. The SSI's over background data were limited to Barium (MW-3), and Chloride (MW-3 and MW-4). The Barium detection observed at MW-3 and the Chloride detection observed at MW-4 are well below their associated MCL's or National Secondary Drinking Water Standard (2DWS). However, the detected Chloride concentration at MW-3 during the initial sampling event (458 mg/L) and on the separate sampling event (360 mg/L) were above the 2DWS (250 mg/L) for Chloride concentrations.

The next semi-annual monitoring event is tentatively scheduled for May, 2016.

Glossary of Terms

Appendix I	Refers to the required regulatory sample list of groundwater parameters
CEC	Civil & Environmental Consultants, Inc.
Class I Landfill	Municipal Solid Waste Landfill accepts household waste
Class II Landfill	Industrial Waste Landfill
Class IV Landfill	Construction/Demolition Waste Landfill
Class III/IV Landfill	Landscaping and Construction/Demolition Waste Landfill
DML	Construction Demolition Landfill
EPA	Environmental Protection Agency
ESC	ESC Lab Sciences
EWS	Environmental Waste Solutions
GW	Groundwater
HDPE	High Density Polyethylene
HI	Hydrogeologic Investigation
MCL	Maximum Contaminant Level
µS•cm-1	micro-Siemens per centimeter
mg/L	milligrams per Liter
MW	Monitor Well
NPPL	Non-parametric prediction limit analysis
ORP	Oxidation Reduction Potential
POTW	Publically Owned Treatment Works
ppm	parts per million*
PQL	Practical Quantitation Limit
QC	Quality Control
SNL	Sanitary Landfill
SSI	Statistically Significant Increase
TDEC	Tennessee Department of Environment and Conservation
TDOG	Tennessee Division of Geology
TDSWM	Tennessee Division of Solid Waste Management
TOC	Top of Casing
VOC	Volatile Organic Compound

* ppm – parts per million* is equivalent to mg/L – milligrams per Liter for water samples

1.0 INTRODUCTION

1.1 SITE LOCATION

Environmental Waste Solutions, LLC (EWS) manages the Camden Class II landfill located just off highway US 70 at 200 Omar Circle, Camden, Tennessee. The site is located on the Camden, Tennessee USGS quadrangle at north latitude 36° 03' 16" and west longitude 88° 05' 16" at an average elevation of 400 feet above mean sea level datum (MSL). The location of the facility is indicated in Appendix A- Figure 1- Site Location Map. The landfill footprint can be viewed in Appendix A-Figure 2 - Potentiometric Surface Map.

1.2 CURRENT ACTIVITIES

The EWS Camden Class II Landfill currently receives secondary aluminum smelter waste for disposal including aluminum dross and salt cakes and other industrial wastes approved by the TDSWM.

2.0 AQUIFER CHARACTERISTICS

2.1 GEOLOGIC AND AQUIFER CHARACTERISTICS

The extensive reworking of the site as a result of the excavation of chert for local road and fill projects has significantly impacted the original site geology. Based upon a review of the Tennessee Division of Geology (TDOG) Geologic Map and site observations it appears that the site is within the Camden and Harriman Formations. It is reported by the TDOG that the Camden and Harriman Formations are lithologically identical, and not enough fossils are present to form a convenient basis for subdivision.

2.1.1 Camden and Harriman Formations

The Camden and Harriman Formations are described as follows: Chert, gray with specks and mottlings of very light-gray and yellowish-gray (surfaces stained pale to dark yellowish-orange), bedded and blocky (beds 2 to 8 inches thick), dense, conchoidal fracture, contains pods of white to light gray tripolitic clay, locally stained yellow and brown, fossiliferous; locally, especially near the top, fragments of chert are cemented into large masses and beds of breccia by dark-brown to moderate-red limonite.

Groundwater potentiometric data collected from the uppermost water bearing zone across the entire proposed waste area footprint during the 1999 and 2006 hydrogeological investigations indicate that the uppermost aquifer is sloped to the southwest. Comparisons of the water bearing zone elevations to static groundwater elevations indicate an unconfined aquifer.

2.2 MONITOR WELL INTEGRITY & STATIC WATER LEVELS

The groundwater monitoring network for the Class II Landfill consists of monitoring wells MW-1, MW-3, and MW-4. Monitoring well MW-1 serves as an up-gradient monitoring point while monitoring wells MW-3 and MW-4 serve as down-gradient monitoring points.

The integrity of each monitoring well is checked during each sampling event prior to groundwater collection. The physical condition of each wellhead is observed and noted along with the condition and ability of any and all locking mechanisms for each monitoring well. Once the watertight seal is removed from the top of each monitoring well's casing, the well is allowed to de-pressurize. A decontaminated electronic probe is slowly lowered into the well to establish the distance between the established top of casing and the elevation of free groundwater. The distance is then re-checked to ensure that the measurement is of actual static water level and the groundwater is not rising or falling in the monitoring well. The electronic probe is capable of determining this distance to within one-hundredth of one foot (0.01 foot). This distance is written in the site-specific field book as depth-to-water. Upon collection of these data, the electronic water level probe is removed from the monitoring well and decontaminated from contact with the well casing / screen and groundwater.

The following equation is used to determine the elevation of groundwater at each well:
Established Top of Casing Elevation – Depth to Water = Groundwater Elevation

Top of casing elevation has been determined by a licensed land surveyor and is referenced to Mean Sea Level Datum of the World Geodetic Survey of 1984. Groundwater elevations are listed in Appendix A- Table 1 – Field Parameters & Potentiometric Data.

2.3 GROUNDWATER FLOW DIRECTION

Groundwater flow at the landfill appears to flow in a southwesterly direction towards Charlie Creek. Groundwater flow in the vicinity of the Class II Landfill generally flows from a topographic high north of the landfill towards monitor wells MW-3 and MW-4 located to the South. Monitoring wells MW-3 and MW-4 are positioned to intercept any possible groundwater contaminants leaching from the landfill.

2.4 POTENTIOMETRIC GRADIENT

The potentiometric surface of the first aquifer occurring beneath the Class II Landfill occurs at approximately twenty-two (22) feet below ground surface at the up-gradient monitor well MW-1

to approximately twelve (12) feet below ground surface at monitor well MW-4. The groundwater potentiometric data interpreted from the 1999 and 2006 hydrogeological investigations conducted at the site for the uppermost aquifer indicate that the uppermost water bearing zone generally moves in a southwest direction. Comparisons of water bearing zone elevations to static groundwater elevations for both investigations indicate an unconfined aquifer. The potentiometric gradient calculated from groundwater elevation data collected on November 11, 2015 is approximately 1.51 %.

The potentiometric gradient is calculated according to the following formula:

$$\frac{\text{Highest GW. Contour Elev. – Lowest GW. Contour Elev.}}{\text{Horizontal Distance between the Potentiometric Contours}} * 100 = \text{Pot. Grad.}$$

$$\frac{(390') - (370')}{1{,}325'} * 100 = 1.51\%$$

The above calculation assumes a perpendicular gradient between the potentiometric contours drawn between 390' and 370'. These assumptions may provide an artificially higher potentiometric gradient than is likely occurring at the site.

2.5 HYDRAULIC CONDUCTIVITY

Hydraulic conductivity estimations within the first aquifer occurring beneath the landfill have not been determined at this time.

3.0 GROUNDWATER SAMPLING PROCEDURES

3.1 INSTRUMENTATION

Depth to groundwater measurements were collected using a Solinst® electronic water level indicator, model # 122. A YSI Professional Plus® multi-parameter probe was used to record pH, conductivity, temperature, dissolved oxygen and ORP during groundwater sampling events at the landfill. A Hach® model 2100Q turbidity meter was used to collect turbidity readings. Each instrument was either checked against known standards or calibrated per manufacturers' specifications prior to the commencement of sampling activities.

3.2 PURGING AND COLLECTION OF FIELD PARAMETER VALUES

Groundwater was purged using new polyethylene tubing connected to a peristaltic pump, or in the case of a pump malfunction, a new disposable polyethylene bailer. Bailers were factory decontaminated and sealed so as to prevent environmental cross contamination of the bailers. New nylon twine was fixed to each bailer via a tied knot. When purging using a disposable polyethylene bailer, the bailer was slowly lowered into the water column using the nylon twine. The bailer was allowed to completely submerse into the water column prior to extracting the bailer from the monitor well.

The total volume of groundwater residing in each monitor well was calculated as follows: (1) subtracting the depth to water from the total depth of each well; (2) the depth of water in feet was multiplied by 0.163 gallons per foot in a 2 inch (I.D.) monitor well. The initial amount of purged groundwater was collected in a clean, high-density polyethylene (HDPE) flow-through cell where it was measured for temperature, pH, specific conductance, dissolved oxygen, and oxidation-reduction potential (ORP). The turbidity was measured by collecting a small volume of water and using the Hach® model 2100Q turbidimiter. These values were noted in the site specific field book under V_0 and then the collected groundwater was poured onto the ground, down-gradient from the monitor well.

Groundwater was purged from the monitoring well until one calculated well volume of water passed into the flow-through cell. Once this volume of water was purged, the field chemistry parameters were again measured and recorded in the field book as V_1. This procedure for purging groundwater continued for an additional well volume, V_2, if sufficient groundwater was available. After the second purged well volume was observed for field parameter values, the values were checked against values for V_1. If the pH and specific conductance values for each volume purged varied no more than 10% from V_1 to V_2 and the temperature stabilized to within one degree Celsius, preparations were made to collect the groundwater sample for submittal to the analytical laboratory. If the field parameters were not stable, the purging procedures continued until either one of the following conditions were met:

1. Field stabilization occurred,
2. Well was purged dry, or
3. A maximum of three well volumes were purged.

If the monitor well was purged dry, then the recharging groundwater was collected for analysis within twenty-four hours.

Field parameter values for each well are presented in Tables 1a and 1b – Groundwater Field Data, Appendix A. A detailed account of each purge and sample procedure conducted at each monitor well is presented in Appendix D – Standard Operating Procedures.

3.3 SAMPLE COLLECTION & PRESERVATION

Groundwater samples were collected from monitor wells when field parameter data indicated that stagnant water has been purged from the well and replaced by groundwater from the adjacent formation that is representative of actual aquifer conditions. Groundwater is placed in laboratory supplied sample vessels in the following order: Appendix I Organics- three(3), forty (40) mL amber glass containers preserved with Hydrochloric Acid (HCl), Appendix I inorganics – one (1), five-hundred (500) ml HDPE container preserved with nitric acid (HNO_3); Bromide, Chloride, Nitrate, Sulfate – one (1), two-hundred fifty (250) ml unpreserved HDPE container;

Ammonia – one (1), two-hundred fifty (250) ml HDPE jar preserved with sulfuric (H_2SO_4) acid; Dissolved Inorganics- one (1), five-hundred (500) ml unpreserved HDPE container.

3.4 QUALITY ASSURANCE & QUALITY CONTROL

A field blank, and a duplicate sample were collected during the monitoring event performed at the EWS Class II Landfill. CEC collected a field blank next to monitoring well MW-3 and a duplicate sample was collected from MW-4. The field blank was collected by pouring deionized water into a set of sample bottles, thereby allowing any airborne contaminants a chance to enter the field blank sample. Laboratory analytical testing of the field blank revealed that none of the tested constituents were above the PQL. Additionally, the results for the duplicate sample collected from MW-4 were similar to the original MW-4 sample results.

3.5 SAMPLE CHAIN-OF-CUSTODY

A sample Chain-of-Custody (COC) traveled along with the sample kit from ESC to EWS and back to ESC for the sampling event. The CEC SOP 07-01-01 for maintaining sample Chain of Custody may be found in Appendix D – CEC Standard Operating Procedures.

4.0 LABORATORY ANALYTICAL PROCEDURES

4.1 ANALYTICAL METHODS

All laboratory analyses for the November 2015 groundwater monitoring event and December 4, 2015 sampling event were completed by Environmental Science Corporation in Mt. Juliet, Tennessee. The analytical methods chosen for these monitoring events were in full compliance with the procedures required by the Tennessee Division of Solid Waste Management (TN-DSWM) and the United States Environmental Protection Agency's publication SW-846, entitled Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (3rd Edition).

The SW-846 methods used for the analysis of groundwater were as follows:

Method 6010b	Inductively Coupled Plasma (ICP) – Atomic Emission Spectrometry
Method 6020	ICP – Mass Spectrometry
Method 7470A	Mercury in Liquid Waste – Manual Cold Vapor Technique
Method 8011	1,2-dibromoethane & 1,2 dibromo-3-chloropropane by Micro-extraction and Gas Chromatography
Method 8260B	Volatile Organic Compounds by Gas Chromatograph / Mass Spectrometry
Method 9056	Determination of Inorganic Anions by Ion Chromatography (Fluoride)
Method 350.1	Ammonia Nitrogen
Method 9223B-2004	Coliform, Total and E. Coli

4.2 LABORATORY ANALYTICAL RESULTS

Laboratory reports from the analysis of groundwater samples collected from the EWS Camden Class II Landfill during the initial November 11, 2015 semi-annual monitoring event were prepared by ESC and reported to CEC on November 25, 2015. Laboratory reports from the analysis of groundwater, Camden POTW manhole locations, and sediment pond collected during the December 4, 2015 sampling event were prepared by ESC and reported to CEC on December

14, 2015. Copies of the laboratory reports are located in Appendix C – Laboratory Analytical Reports. Constituent values from all laboratory analyses along with applicable (MCLs) or 2DWS's are presented in Tables 2a and 2b – Analytical Results, Appendix A. Leachate analytical results for November 2015 were provided by EWS and are included in Appendix C.

4.3 QUALITY CONTROL QUALIFIER CODES

The EPA Contract Laboratory Program states that sample and result qualifiers should be utilized as part of a total quality control process. ESC complies with this directive and reports all qualifiers along with explanations of QC qualifier codes. Three QC qualifier codes were indicated during the laboratory analysis of groundwater samples during this monitoring event (Sulfate, bromomethane, and 1,1,2,2-Tetrachloroethane) and can be viewed along with the Laboratory Analytical Reports, in Appendix C.

5.0 STATISTICAL ANALYSIS

5.1 APPLICABLE METHODS

The Rules of Tennessee Department of Environment and Conservation, Division of Solid Waste Management Chapter 1200-1-7-.04 states, in part, that each landfill must conduct and report statistical analyses as part of the evaluation of groundwater monitoring data. Several methods may be employed for this endeavor. EWS Camden Class II Landfill has chosen to use inter-well and intra-well non-parametric prediction limit analysis (NPPL) at this time.

First, the distribution of the data was evaluated for normality. The test of normality was conducted using the Shapiro-Wilks method if N <50 or Shapiro-Francia method if N > 50. The normality test was performed for both raw, and log-transformed data with replacement of non-detects to half of the corresponding laboratory detection limit. Data determined to be normally distributed were evaluated using parametric prediction interval analysis. Data that were not normally distributed were evaluated using non-parametric statistical methods. Inter-well and intra-well parametric and non-parametric prediction limit analyses (NPPL) were deemed appropriate for this data set. Inter-well analyses compared the concentrations observed at the down-gradient monitoring locations (MW-3, MW-4) to the concentrations observed at the up-gradient monitoring location (MW-1) during this monitoring event. Intra-well analysis was utilized only at MW-1 to compare the concentrations observed during the current groundwater sampling event to the established background data set for MW-1 concentrations.

The percentage of inter-well background non-detects for each parameter determines the primary statistical method utilized for each parameter. If the percentage of non-detects in the background samples is less than 50%, Shewart-CUSUM control charts are utilized. If more than 50% background non-detects exist for the given parameter, non-parametric inter-well prediction limit analysis is conducted on the data.

The computer program ChemStat was used for all statistical computations. Worksheets indicating inter-well and intra-well statistical analysis sheets and time versus concentration charts may be viewed in Appendix B, Statistical and Trend Analysis.

5.2 STATISTICAL RESULTS

SSIs over background identified for the current monitoring event include Barium and Chloride at MW-3, and Chloride at MW-4. The Barium concentration at MW-3 was 0.701 mg/L during the initial sampling event and 0.579 mg/L during the separate sampling event. Barium remains below the maximum contaminant level (MCL) for the primary drinking water standard for barium (2 mg/L). The Chloride concentration reported at MW-3 was 458 mg/L during the initial sampling event and 360 mg/L during the separate sampling event, which are over the 2DWS for Chloride concentrations (250 mg/L). Chloride concentrations at MW-3 exhibit an increasing trend per the Mann-Kendall Non-parametric trend procedure. The Chloride concentration observed at MW-4 was 7.34 mg/L and is consistent with previous data and below the 2DWS for chloride concentrations (250 mg/L)

The Mann-Kendall trend analysis at the 95% confidence level was utilized by using the data available from past monitoring events. Trend analysis showed no distinct trend for Chloride detections at MW-4 and an upward trend in Barium and Chloride concentrations reported at MW-3.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Representative groundwater samples were collected from monitor wells MW-1, MW-3 and MW-4. The groundwater samples were analyzed for Appendix I list of parameters, plus Chloride, Nitrate, Sulfate, Ammonia, and a short list of ions. A supplemental sampling event was conducted on December 4, 2015 to further evaluate the elevated chloride concentration observed at MW-3. Sampled were collected from monitoring well MW-3, Camden POTW locations (manholes #1 and #2), and the sediment pond and analyzed for Appendix I inorganics, plus Chloride, Nitrate, Sulfate, Ammonia, total coliform, E. coli, and a short list of ions..

The results of the supplemental sampling event indicated that the chloride concentration at MW-3 was still above the 2DW standard for chloride. The concentration of E. coli observed at MW-3 was reported at very low concentrations when compared to the Camden POTW locations. Results of the sampling of the manholes, on-site pond, and MW-3 are shown in Table 2b. Based on a review of the data, including coliforms and metal constituents, it does not appear that MW-3 is being influenced by the nearby sanitary sewer. Additional monitoring will be required to conclusively determine if the pond/basin is influencing the water quality of MW-3. However, based on the current data for the pond in Table 2b, the pond does not appear to be influencing MW-3. Also, concentrations of nitrate and ammonia remained relatively higher than previous sampling events at MW-3. Additional studies to determine the probable contributors to these constituent increases in MW-3 are being planned.

6.1 EWS GROUNDWATER QUALITY RELATIVE TO THE EPA PRIMARY DRINKING WATER STANDARDS

Laboratory analytical results for the groundwater samples collected in November of 2015 from the EWS Class II Landfill indicate that Arsenic in MW-1, the background monitoring well, was detected at concentrations that exceeded the EPA MCL.

Arsenic was detected in MW-1 at a concentration of 0.0469 mg/l. The MCL for arsenic is 0.01 mg/l. Arsenic was detected at concentrations exceeding the primary drinking water MCL prior to the disposal of waste in the landfill. Laboratory analytical testing of groundwater samples taken

from MW-1 during background testing of the groundwater prior to waste placement in the landfill revealed concentrations of arsenic ranging from 0.024 mg/L to 0.072 mg/L. The presence of arsenic in the local groundwater is considered attributable to naturally occurring deposits in the soil overburden since there is no immediate development up- gradient of the well.

6.2 EWS GROUNDWATER QUALITY RELATIVE TO THE TENNESSEE SECONDARY DRINKING WATER STANDARDS

Laboratory analytical results for the groundwater samples collected in November of 2015 from the EWS Class II Landfill groundwater monitoring well network and the separate December 2015 event at MW-3 indicate that four of the site-specific groundwater monitoring list of compounds was detected at concentrations which exceeded the Tennessee Public Water Supply Secondary Drinking Water Standards (2DW). Those parameters included Iron and Manganese in upgradient well MW-1, Chloride and Manganese in MW-3, and Aluminum and Manganese in MW-4.

Aluminum was detected at a concentration of 1.2 mg/L in MW-1 and 1.8 mg/L in MW-3 prior to the placement of waste. The Aluminum concentration observed in MW-4 (0.305 mg/L) during the November 2015 sample event is less than the highest concentrations observed prior to placement of waste and does not appear to exhibit an increasing trend via time-series graphs. Aluminum was not detected at MW-3 during this sampling event.

Iron was detected at a concentration of 26 mg/L in MW-1 and 1.6 mg/L in MW-3 prior to the placement of waste. The concentration in the groundwater samples taken during the November 2015 sample event was 12.3 mg/L in MW-1 is not considered the result of landfill operations. Iron was not detected at MW-3 during this sampling event.

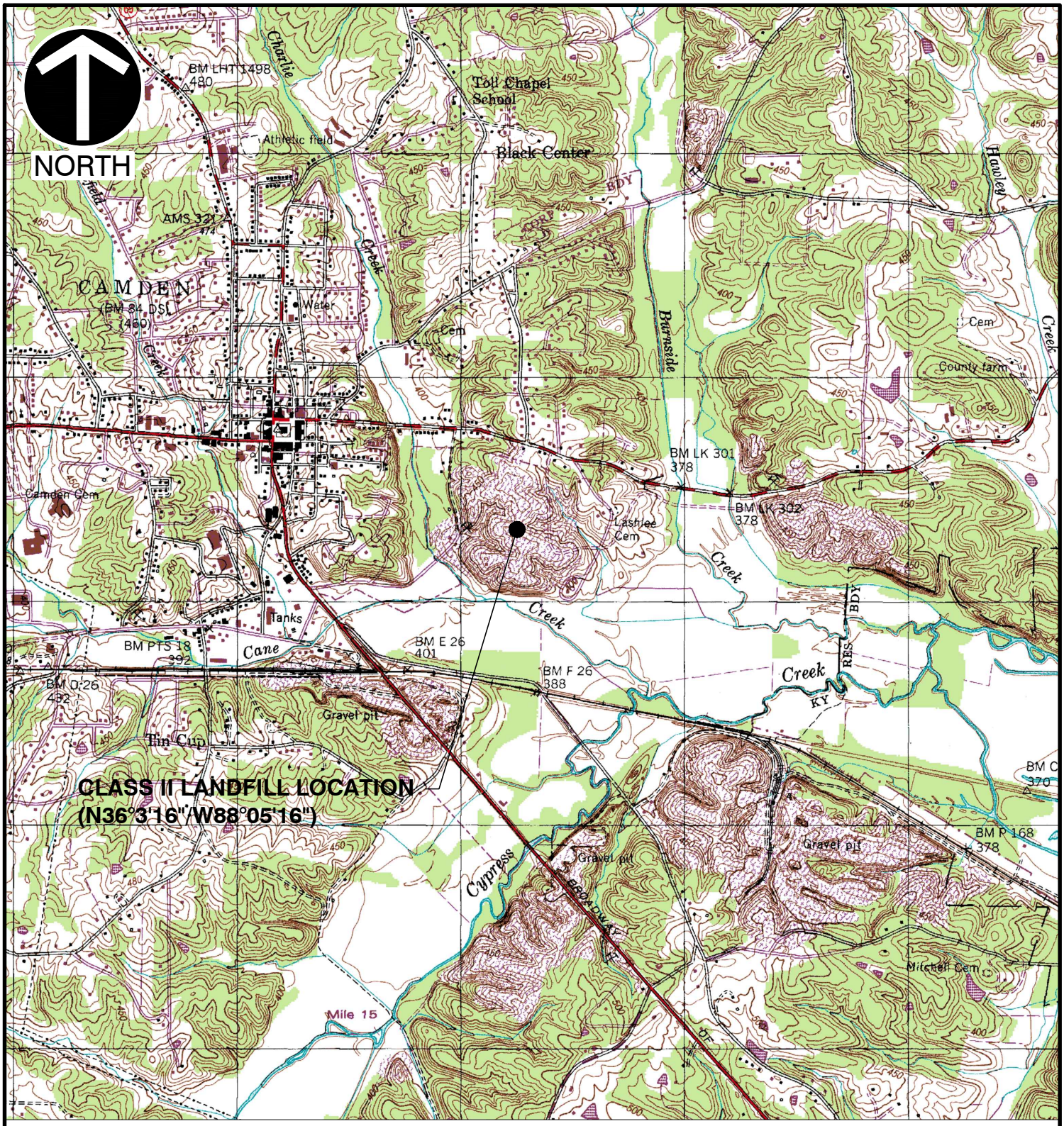
Manganese has been consistently detected in upgradient well MW-1 and has the highest reported concentration observed during the current monitoring event of 0.678 mg/L. The Manganese detections observed in site monitoring wells MW-3 (0.549 mg/L) and MW-4 (.0588 mg/L) may be contributable to a natural variation in local groundwater.

Chloride concentrations indicated an upward trend reported at MW-3. The Chloride concentrations reported at MW-3 during the November 2015 and December 2015 sampling events were above the secondary drinking water standard for chloride concentrations (250 mg/L). Further investigation to determine probably causes for this increase is in the planning stage.

The next semi-annual monitoring event is tentatively scheduled for May 2016.

APPENDIX A

MAPS AND TABLES



REFERENCE

1. U.S.G.S. 7.5' TOPOGRAPHIC MAP, CAMDEN QUADRANGLE, TENN. DATED: 1950, PHOTOREVISED: 1984.

* HAND SIGNATURE ON FILE

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ENVIRONMENTAL WASTE SOLUTIONS
CLASS II CAMDEN LANDFILL
CAMDEN, TENNESSEE

SITE LOCATION MAP

DRAWN BY:	KLU	CHECKED BY:	PC	APPROVED BY:	MJJ	FIGURE NO.:	1
DATE:	NOVEMBER 2015	DWG SCALE:	1"=2000'	PROJECT NO:	142-059		

P:\2014\142-059\-CADD\Dwg\142-059 SITE LOCATION MAP.dwg{LAYOUT1} LS:(12/1/2015 - pcampbell) - LP: 12/1/2015 2:30 PM

NORTH

LEGEND

- MW1 / 392.52 — GROUND WATER MONITORING WELL / GROUND WATER ELEVATION (FMSL)
- 390 — POTENTIOMETRIC SURFACE CONTOUR (FMSL)
- GROUND WATER FLOW DIRECTION
- MH1 — MANHOLE
- APPROXIMATE FILL LIMITS

NOTE:

Hydraulic gradient calculation between contour lines 370' and 390'

$$i = \frac{390'-370'}{1{,}325'} = 0.0151 \text{ ft/ft}$$

GROUNDWATER CONDITIONS

THE WATER LEVELS PRESENTED HEREIN ARE APPLICABLE TO THE LOCATION AND TIME OF MEASUREMENT. WATER LEVELS MAY FLUCTUATE THROUGH TIME.

POTENTIOMETRIC CONTOURS GENERATED FROM THESE DATA ARE CONSTRUCTED BY INTERPOLATION BETWEEN POINTS OF KNOWN STATIC WATER LEVEL ELEVATIONS AND USING KNOWLEDGE OF SPECIFIC SITE CONDITIONS. ACTUAL STATIC WATER LEVELS AT LOCATIONS BETWEEN THE MONITORING POINTS MAY DIFFER FROM THOSE DEPICTED.

SCALE IN FEET

0 300' 600'

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ENVIRONMENTAL WASTE SOLUTIONS
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NOVEMBER 2015
POTENTIOMETRIC SURFACE MAP

DRAWN BY:	PC	CHECKED BY:	MJ	APPROVED BY:	KW
DATE:	NOVEMBER 2015	DWG SCALE:	1"=300'	PROJECT NO:	142-059

FIGURE NO.: 2

P:\2014\142-059\-CADD\DWG\142-059 GROUNDWATER MAP NOVEMBER 2015.DWG{LAYOUT1}LS:(PCAMPBELL - 1/7/2016) - LP: 1/7/2016_3:43:17_PM

Table 1a

Environmental Waste Solutions Camden Class II Landfill IDL 03-0212

Field Parameters and Potentiometric Data - November 11, 2015

Monitoring Well/ Piezometric Well	Date	Sample Time	Top of Casing Elevation (Feet MSL)	Bottom of Well Elevation (Feet)	Well Diameter (Feet)	Well Volume Gallons	Depth to Water (Feet)	Potentiometric Surface (Feet MSL)	Temperature (˚C)	Conductivity (micromhos/cm)	pH (SU)	Dissolved Oxygen ** (mg/l)	Oxidation Reduction Potential (Millivolts)	Turbidity (NTU)
MW-1	11/11/2015	10:00	415.36	382.26	0.17	1.7	22.84	392.52	16.2	95.10	5.6	5.48	30.1	3.82
MW-2*	11/11/2015	NS	380.15	367.70	0.17	1.0	6.36	373.79	18.4	298.5	6.17	5.53	143.5	NS
MW-3	11/11/2015	13:30	392.49	369.66	0.17	0.7	18.84	373.65	18.8	1468	5.21	8.06	207.8	9.3
MW-4	11/11/2015	11:00	381.50	369.39	0.17	0.1	11.8	369.70	16.9	55.80	5.94	5.31	118.6	8.16

* - MW-2 has been removed from monitoring network. Only water level and field parameters collected at MW-2.

**- Dissolved Oxygen measurements are higher than actual dissolved oxygen. Field calibration attempted and could not be calibrated. New membrane was needed, therefore DO measurements recorded do not accurately represent the data.

NS= Not Sampled

Table 1b

Environmental Waste Solutions Camden Class II Landfill IDL 03-0212

Field Parameters and Potentiometric Data - December 4, 2015

Monitoring Well/ Piezometric Well	Date	Sample Time	Top of Casing Elevation (Feet MSL)	Bottom of Well Elevation (Feet)	Well Diameter (Feet)	Well Volume Gallons	Depth to Water (Feet)	Potentiometric Surface (Feet MSL)	Temperature (˚C)	Conductivity (micromhos/cm)	pH (SU)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (Millivolts)	Turbidity (NTU)
Manhole 1	12/4/2015	10:35	NA	NA	NA	NA	NA	NA	15.6	414.7	6.96	4.36	-0.1	100
Manhole 2	12/4/2015	10:00	NA	NA	NA	NA	NA	NA	15.6	442.0	6.92	5.11	7.6	68.4
MW-3	12/4/2015	11:30	392.49	369.66	0.17	2.6	7.48	385.01	15.5	1277	5.40	2.58	163.8	3.99
Pond	12/4/2015	11:00	NA	NA	NA	NA	NA	NA	16.9	488.2	7.91	8.65	84.2	51.2

NS= Not Sampled

Table 2a
Environmental Waste Solutions Camden Class II Landfill IDL 03-0212
Inorganic Analytical Data - November 11, 2015

		MW-1		MW-3		MW-4	
		11/11/2015		11/11/2015		11/11/2015	
Parameter	MCL (mg/l)	Value (mg/l)	Qual	Value (mg/l)	Qual	Value (mg/l)	Qual
Bromide	-	<1.00		<1.00		<1.00	
Chloride	250 [2]	**3.97**		**458**		**7.3**	
Nitrate	10	<0.100		**7.46**		**0.5**	
Sulfate	250 [2]	**18.8**	P1	**29.3**		<5.00	
Ammonia Nitrogen	-	<0.250		**3.1**		<0.250	
Antimony	0.006	<0.00200		<0.00200		<0.00200	
Antimony (dissolved)	-	<0.00200		<0.00200		<0.00200	
Arsenic	0.01	**0.0469**		<0.00200		<0.00200	
Arsenic (dissolved)	-	**0.00797**		<0.00200		<0.00200	
Beryllium	0.004	<0.00200		<0.00200		<0.00200	
Beryllium (dissolved)	-	<0.00200		<0.00200		<0.00200	
Cadmium	0.005	<0.00100		<0.00100		<0.00100	
Cadmium (dissolved)		<0.00100		<0.00100		<0.00100	
Copper	1.3	<0.00500		<0.00500		<0.00500	
Copper (dissolved)	-	<0.00500		<0.00500		<0.00500	
Lead	0.015	<0.00200		<0.00200		<0.00200	
Lead (dissolved)	-	<0.00200		<0.00200		<0.00200	
Selenium	0.05	<0.00200		<0.00200		<0.00200	
Selenium (dissolved)	-	<0.00200		<0.00200		<0.00200	
Thallium	0.002	<0.00200		<0.00200		<0.00200	
Thallium (dissolved)	-	<0.00200		<0.00200		<0.00200	
Zinc	5 [2]	<0.0250		<0.0250		<0.0250	
Zinc (dissolved)	-	<0.0250		<0.0250		0.0549	
Mercury	0.002	<0.000200		<0.000200		<0.000200	
Mercury (dissolved)	-	<0.000200		<0.000200		<0.000200	
Aluminum	0.2 [2]	<0.200		<0.200		**0.305**	
Aluminum (dissolved)	-	<0.200		<0.200		<0.200	
Barium	2	**0.0237**		**0.701**		**0.0105**	
Barium (dissolved)	-	**0.0235**		**0.737**		**0.0156**	
Boron	-	<0.200		<0.200		<0.200	
Boron (dissolved)	-	<0.200		<0.200		<0.200	
Calcium	-	**4.0**		**71.6**		**3.8**	
Calcium (dissolved)	-	**4.2**		**76.8**		**3.8**	
Chromium	0.1	<0.0100		<0.0100		<0.0100	
Chromium (dissolved)	-	<0.0100		<0.0100		<0.0100	
Cobalt	-	**0.0257**		<0.0100		<0.0100	
Cobalt (dissolved)	-	**0.0261**		<0.0100		<0.0100	
Iron	0.3 [2]	**12.3**		<0.100		**0.262**	
Iron (dissolved)	-	**10.0**		<0.100		<0.100	
Magnesium	-	**3.07**		**31.9**		**2.44**	
Magnesium (dissolved)	-	**3.16**		**31.8**		**2.49**	
Manganese	0.05 [2]	**0.678**		**0.549**		**0.0588**	
Manganese (dissolved)	-	**0.703**		**0.572**		**0.0697**	
Nickel	-	**0.0112**		<0.0100		<0.0100	
Nickel (dissolved)	-	**0.0109**		<0.0100		<0.0100	
Potassium	-	**1.16**		**73.1**		**1.1**	
Potassium (dissolved)		**1.18**		**73.6**		**<1.00**	
Silver	0.10 [2]	<0.00500		<0.00500		<0.00500	
Silver (dissolved)	-	<0.00500		<0.00500		<0.00500	
Sodium	-	**4.3**		**150.0**		**4.7**	
Sodium (dissolved)	-	**4.2**		**154.0**		**4.6**	
Vanadium	-	<0.0200		<0.0200		<0.0200	
Vanadium (dissolved)	-	<0.0200		<0.0200		<0.0200	

Notes:

MCL: Maximum Contaminant Level Enforceable National Primary Drinking Water Standards

2: Non-Enforceable National Secondary Drinking Water Standard

Bold text indicates laboratory analytical detections above the practical quantitation level

Greyed text indicates detection above respective MCL

P1: (ESC)- Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.

Table 2b
Environmental Waste Solutions Camden Class II Landfill IDL 03-0212
Inorganic Analytical Data - December 4, 2015

		MW-3		Manhole #1		Manhole #2		Sediment Pond	
		12/4/2015		12/4/2015		12/4/2015		12/4/2015	
Parameter	MCL (mg/l)	Value (mg/l)	Qual	Value (mg/l)	Qual	Value (mg/l)	Qual	Value (mg/l)	Qual
E. Coli	-	**3**		**>2420**		**>2420**		**201**	
Total Coliform	-	**96**		**>2420**		**>2420**		**>2420**	
Bromide	-	<1.00		<1.00		<1.00		<1.00	
Chloride	250 [2]	**360**		**46.4**		**128**		**124.0**	
Nitrate	10	**7.86**		**0.263**		**0.348**		**2.0**	
Sulfate	250 [2]	**29.1**		**18.3**		**19.1**		**16.6**	
Ammonia Nitrogen	-	**2.77**		**7.84**		**7.80**		**3.33**	
Antimony	0.006	<0.00200		<0.00200		<0.00200		<0.00200	
Antimony (dissolved)	-	<0.00200		<0.00200		<0.00200		<0.00200	
Arsenic	0.01	<0.00200		<0.00200		0.00204		<0.00200	
Arsenic (dissolved)	-	<0.00200		<0.00200		<0.00200		<0.00200	
Beryllium	0.004	<0.00200		<0.00200		<0.00200		<0.00200	
Beryllium (dissolved)	-	<0.00200		<0.00200		<0.00200		<0.00200	
Cadmium	0.005	<0.00100		<0.00100		<0.00100		**0.0171**	
Cadmium (dissolved)		<0.00100		<0.00100		<0.00100		**0.0138**	
Copper	1.3	<0.00500		**0.0232**		**0.0404**	B	**0.0102**	
Copper (dissolved)	-	<0.00500		0.00869		0.00552		<0.00500	
Lead	0.015	<0.00200		<0.00200		0.0128		<0.00200	
Lead (dissolved)	-	<0.00200		<0.00200		<0.00200		<0.00200	
Selenium	0.05	<0.00200		<0.00200		<0.00200		<0.00200	
Selenium (dissolved)	-	<0.00200		<0.00200		<0.00200		<0.00200	
Thallium	0.002	<0.00200		<0.00200		<0.00200		<0.00200	
Thallium (dissolved)	-	<0.00200		<0.00200		<0.00200		<0.00200	
Zinc	5 [2]	<0.0250		**0.0518**		**0.176**		**0.0757**	
Zinc (dissolved)	-	<0.0250		<0.0250		<0.0250		0.0292	
Mercury	0.002	<0.000200		<0.000200		<0.000200		<0.000200	
Mercury (dissolved)	-	<0.000200		<0.000200		<0.000200		<0.000200	
Aluminum	0.2 [2]	<0.200		**0.406**		**1.04**		**0.939**	
Aluminum (dissolved)	-	<0.200		<0.200		<0.200		<0.200	
Barium	2	**0.579**		**0.0489**		**0.147**		**0.067**	
Barium (dissolved)	-	**0.579**		**0.0405**		**0.0405**		**0.0549**	
Boron	-	<0.200		<0.200		<0.200		<0.200	
Boron (dissolved)	-	<0.200		<0.200		<0.200		<0.200	
Calcium	-	**52.6**		**25.9**		**37.1**		**20.2**	
Calcium (dissolved)	-	**48.8**		**24**		**26.1**		**20.2**	
Chromium	0.1	<0.0100		<0.0100		<0.0100		<0.0100	
Chromium (dissolved)	-	<0.0100		<0.0100		<0.0100		<0.0100	
Cobalt	-	<0.0100		<0.0100		<0.0100		<0.0100	
Cobalt (dissolved)	-	<0.0100		<0.0100		<0.0100		<0.0100	
Iron	0.3 [2]	<0.100		**2.33**		**7.22**		**0.984**	
Iron (dissolved)	-	<0.100		**1.67**		**1.82**		**0.197**	
Magnesium	-	**20**		**5.4**		**5.95**		**10.7**	
Magnesium (dissolved)	-	**19.8**		**5.34**		**5.41**		**10.6**	
Manganese	0.05 [2]	**0.133**		**0.495**		**0.634**		**0.0365**	
Manganese (dissolved)	-	**0.134**		**0.479**		**0.516**		**0.0161**	
Nickel	-	<0.0100		<0.0100		<0.0100		<0.0100	
Nickel (dissolved)	-	<0.0100		<0.0100		<0.0100		<0.0100	
Potassium	-	**60.2**	B	**6.91**		**6.94**		**28.8**	
Potassium (dissolved)		**58.4**		**6.76**		**6.7**		**28.5**	
Silver	0.10 [2]	<0.00500		<0.00500		<0.00500		<0.00500	
Silver (dissolved)	-	<0.00500		<0.00500		<0.00500		<0.00500	
Sodium	-	**131.0**		**38**		**94.6**		**42.7**	
Sodium (dissolved)	-	**125.0**		**37.3**		**87.9**		**40.6**	
Vanadium	-	<0.0200		<0.0200		<0.0200		<0.0200	
Vanadium (dissolved)	-	<0.0200		<0.0200		<0.0200		<0.0200	

Notes:

MCL: Maximum Contaminant Level Enforceable National Primary Drinking Water Standards

2: Non-Enforceable National Secondary Drinking Water Standard

Bold text indicates laboratory analytical detections above the practical quantitation level

Greyed text indicates detection above respective MCL

B: (ESC)- Additional QC Info: (EPA) - The indicated compound was found in the associated method blank as well as the laborato

APPENDIX B

STATISTICAL EVALUATIONS & TIME SERIES PLOTS

Shapiro-Wilks Test of Normality

Parameter: Aluminum
All Locations
Normality Test of Parameter Concentrations
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
K = 18 for 37 measurements

Sum of b values = 14.0973
Sample Standard Deviation = 3.43707
W Statistic = 0.467299

5% Critical value of 0.936 exceeds 0.467299
Evidence of non-normality at 95% level of significance

1% Critical value of 0.914 exceeds 0.467299
Evidence of non-normality at 99% level of significance

Shapiro-Wilks Test of Normality

Parameter: Arsenic
All Locations
Normality Test of Parameter Concentrations
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
K = 18 for 36 measurements

Sum of b values = 0.184681
Sample Standard Deviation = 0.0363431
W Statistic = 0.73779

5% Critical value of 0.935 exceeds 0.73779
Evidence of non-normality at 95% level of significance

1% Critical value of 0.912 exceeds 0.73779
Evidence of non-normality at 99% level of significance

Shapiro-Wilks Test of Normality

Parameter: Barium
All Locations
Normality Test of Parameter Concentrations
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
K = 18 for 37 measurements

Sum of b values = 0.670442
Sample Standard Deviation = 0.150862
W Statistic = 0.548609

5% Critical value of 0.936 exceeds 0.548609
Evidence of non-normality at 95% level of significance

1% Critical value of 0.914 exceeds 0.548609
Evidence of non-normality at 99% level of significance

Shapiro-Wilks Test of Normality

Parameter: Chloride
All Locations
Normality Test of Parameter Concentrations
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
K = 19 for 38 measurements

Sum of b values = 428.678
Sample Standard Deviation = 100.53
W Statistic = 0.491444

5% Critical value of 0.938 exceeds 0.491444
Evidence of non-normality at 95% level of significance

1% Critical value of 0.916 exceeds 0.491444
Evidence of non-normality at 99% level of significance

Shapiro-Wilks Test of Normality

Parameter: Cobalt
All Locations
Normality Test of Parameter Concentrations
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
K = 18 for 37 measurements

Sum of b values = 0.0737835
Sample Standard Deviation = 0.0137639
W Statistic = 0.798235

5% Critical value of 0.936 exceeds 0.798235
Evidence of non-normality at 95% level of significance

1% Critical value of 0.914 exceeds 0.798235
Evidence of non-normality at 99% level of significance

Shapiro-Wilks Test of Normality

Parameter: Nickel
All Locations
Normality Test of Parameter Concentrations
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
K = 18 for 37 measurements

Sum of b values = 0.136497
Sample Standard Deviation = 0.03865
W Statistic = 0.346456

5% Critical value of 0.936 exceeds 0.346456
Evidence of non-normality at 95% level of significance

1% Critical value of 0.914 exceeds 0.346456
Evidence of non-normality at 99% level of significance

Shapiro-Wilks Test of Normality

Parameter: Aluminum
All Locations
Normality Test of Parameter Concentrations
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
K = 18 for 37 measurements

Sum of b values = 9.57785
Sample Standard Deviation = 1.68312
W Statistic = 0.899507

5% Critical value of 0.936 exceeds 0.899507
Evidence of non-normality at 95% level of significance

1% Critical value of 0.914 exceeds 0.899507
Evidence of non-normality at 99% level of significance

Shapiro-Wilks Test of Normality

Parameter: Arsenic
All Locations
Normality Test of Parameter Concentrations
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
K = 18 for 36 measurements

Sum of b values = 12.7599
Sample Standard Deviation = 2.43451
W Statistic = 0.784883

5% Critical value of 0.935 exceeds 0.784883
Evidence of non-normality at 95% level of significance

1% Critical value of 0.912 exceeds 0.784883
Evidence of non-normality at 99% level of significance

Shapiro-Wilks Test of Normality

Parameter: Barium
All Locations
Normality Test of Parameter Concentrations
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
K = 18 for 37 measurements

Sum of b values = 6.21226
Sample Standard Deviation = 1.07475
W Statistic = 0.928063

5% Critical value of 0.936 exceeds 0.928063
Evidence of non-normality at 95% level of significance

1% Critical value of 0.914 is less than 0.928063
Data is normally distributed at 99% level of significance

Shapiro-Wilks Test of Normality

Parameter: Cobalt
All Locations
Normality Test of Parameter Concentrations
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
K = 18 for 37 measurements

Sum of b values = 6.15164
Sample Standard Deviation = 1.20824
W Statistic = 0.720063

5% Critical value of 0.936 exceeds 0.720063
Evidence of non-normality at 95% level of significance

1% Critical value of 0.914 exceeds 0.720063
Evidence of non-normality at 99% level of significance

Shapiro-Wilks Test of Normality

Parameter: Chloride
All Locations
Normality Test of Parameter Concentrations
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
K = 19 for 38 measurements

Sum of b values = 9.23237
Sample Standard Deviation = 1.59072
W Statistic = 0.910408

5% Critical value of 0.938 exceeds 0.910408
Evidence of non-normality at 95% level of significance

1% Critical value of 0.916 exceeds 0.910408
Evidence of non-normality at 99% level of significance

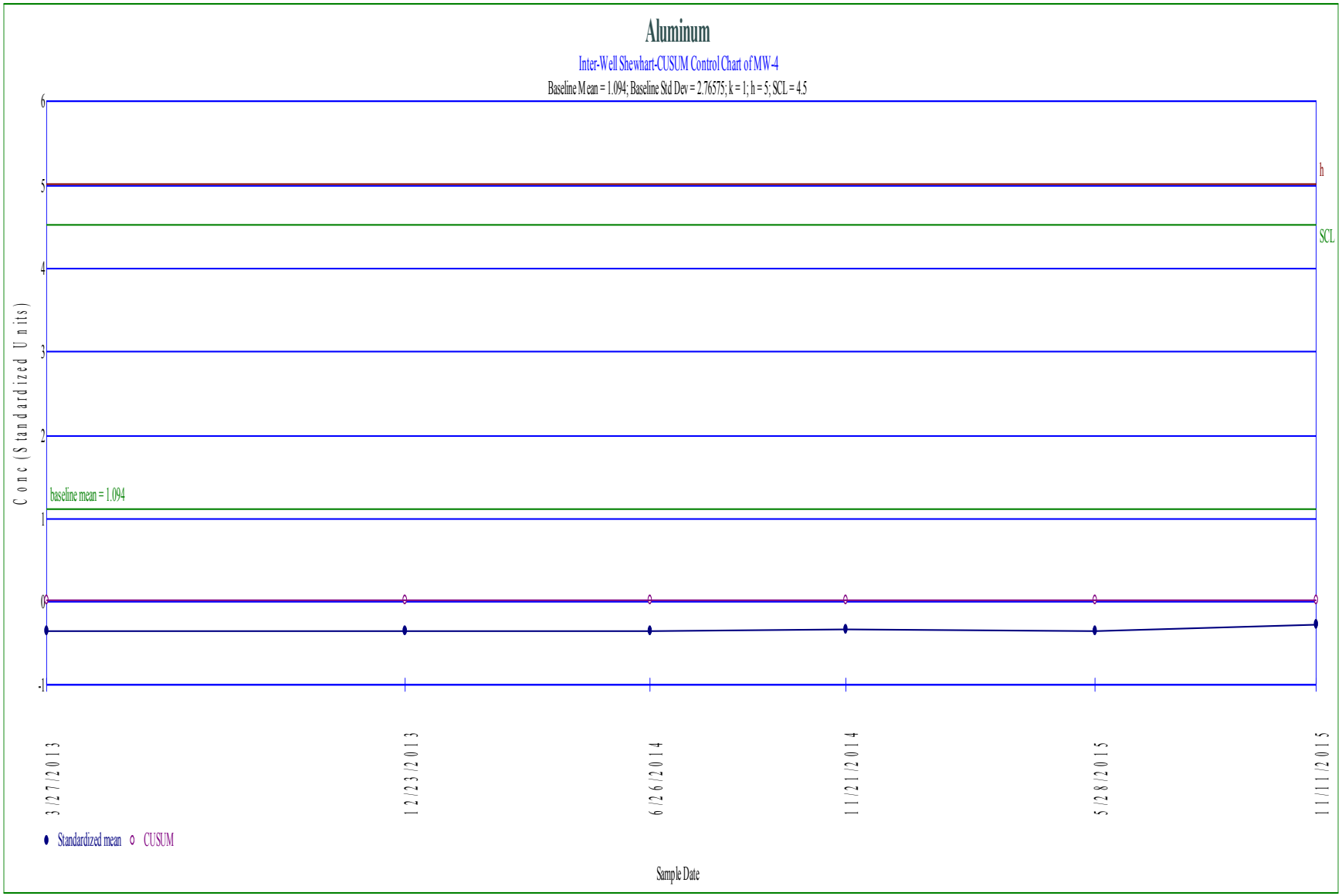
Shapiro-Wilks Test of Normality

Parameter: Nickel
All Locations
Normality Test of Parameter Concentrations
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
K = 18 for 37 measurements

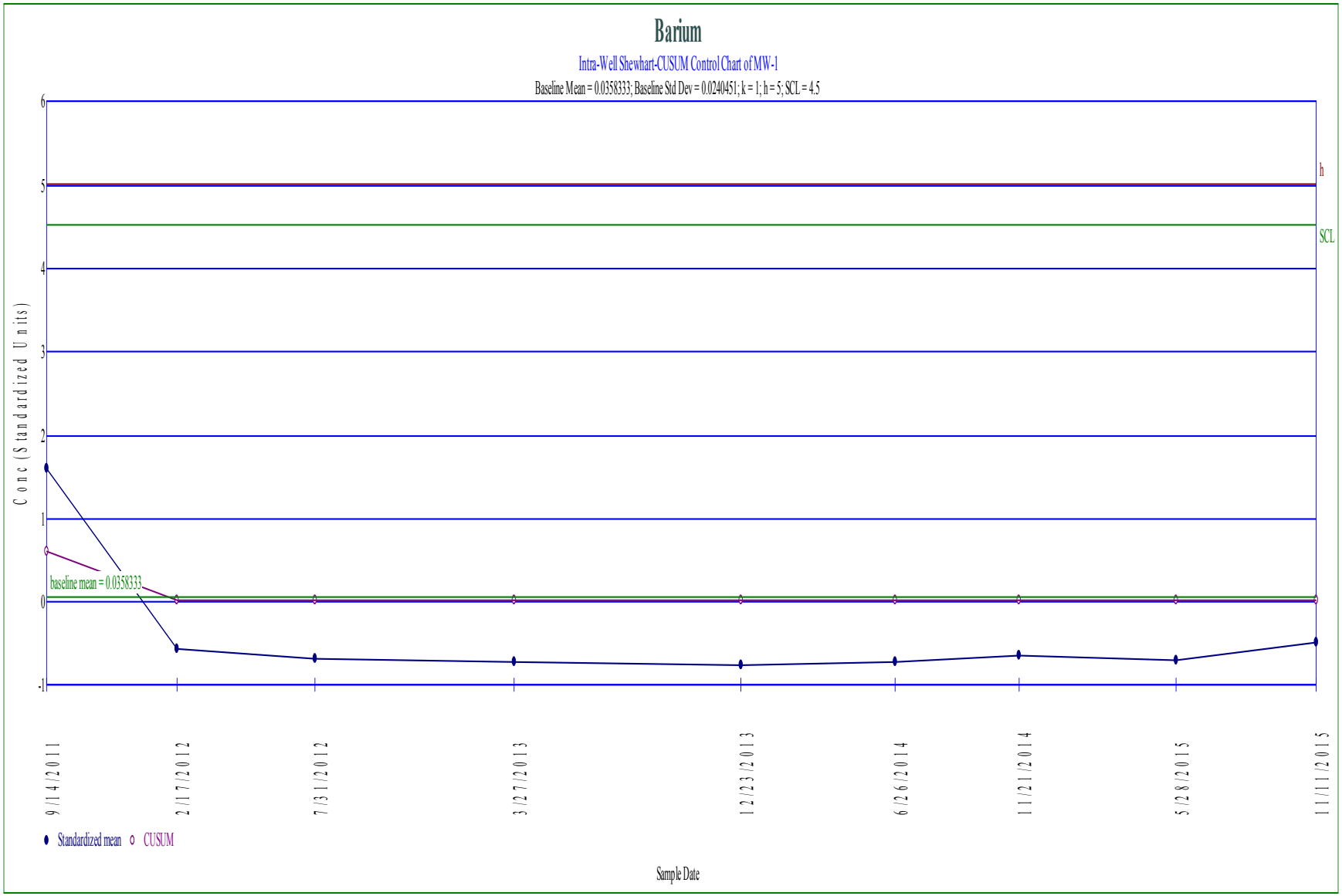
Sum of b values = 4.20527
Sample Standard Deviation = 1.03457
W Statistic = 0.458953

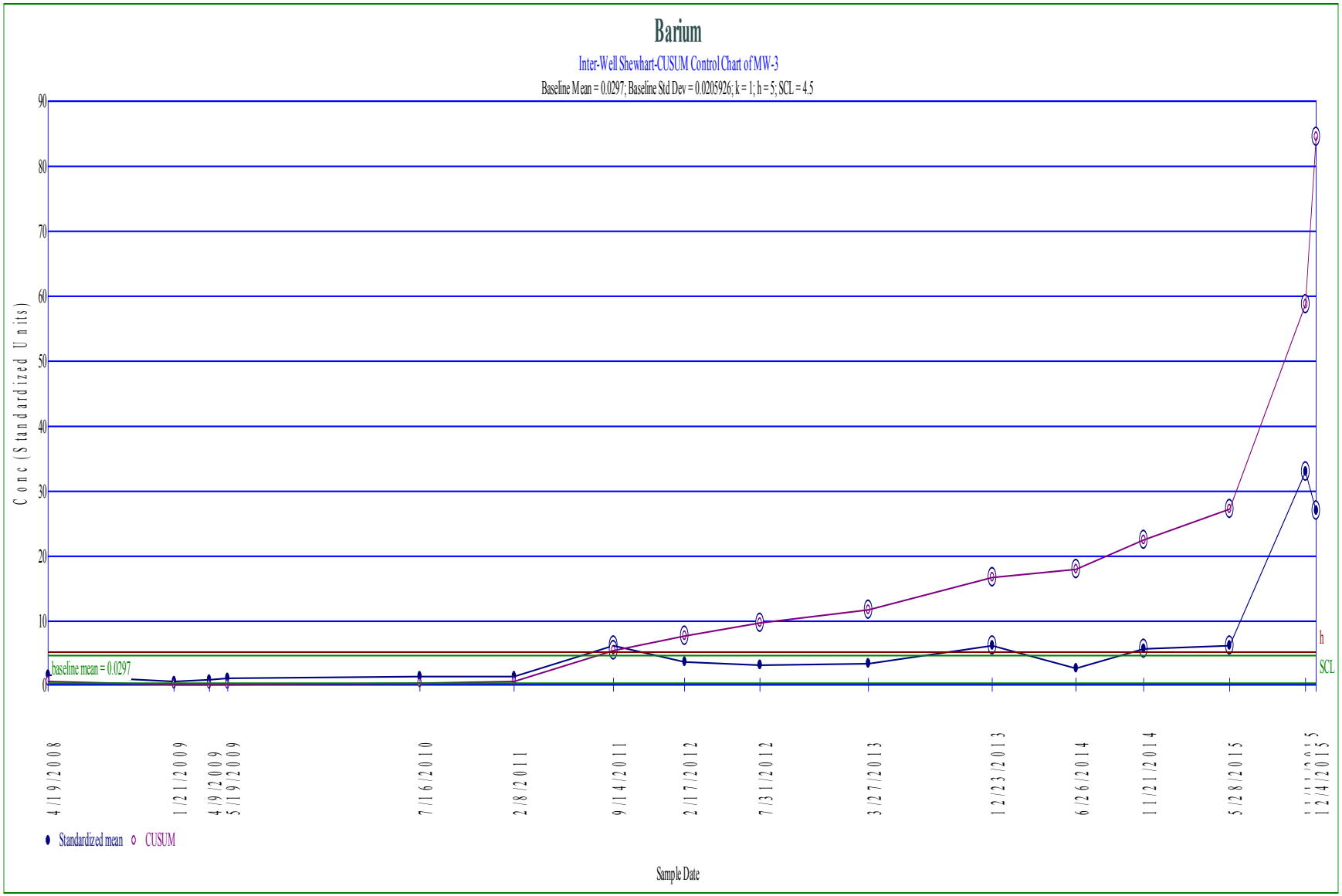
5% Critical value of 0.936 exceeds 0.458953
Evidence of non-normality at 95% level of significance

1% Critical value of 0.914 exceeds 0.458953
Evidence of non-normality at 99% level of significance


Aluminum
Inter-Well Shewhart-CUSUM Control Chart of MW-4
Baseline Mean = 1.094; Baseline Std Dev = 2.76575; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
6
5
4
3
2
1
0
-1
h
SCL
baseline mean = 1.094
3/27/2013
12/23/2013
6/26/2014
11/21/2014
5/28/2015
11/11/2015
Standardized mean
CUSUM
Sample Date


Arsenic
Intra-Well Shewhart-CUSUM Control Chart of MW-1
Baseline Mean = 0.0645; Baseline Std Dev = 0.0212391; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
6
5
4
3
2
1
0
-1
h
SCL
baseline mean = 0.0645
9/14/2011
2/17/2012
7/31/2012
3/27/2013
12/23/2013
6/26/2014
11/21/2014
5/28/2015
11/11/2015
Standardized mean
CUSUM
Sample Date


Barium
Intra-Well Shewhart-CUSUM Control Chart of MW-1
Baseline Mean = 0.0358333; Baseline Std Dev = 0.0240451; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
6
5
4
3
2
1
0
-1
h
SCL
baseline mean = 0.0358333
9/14/2011
2/17/2012
7/31/2012
3/27/2013
12/23/2013
6/26/2014
11/21/2014
5/28/2015
11/11/2015
Standardized mean
CUSUM
Sample Date


Barium
Inter-Well Shewhart-CUSUM Control Chart of MW-3
Baseline Mean = 0.0297; Baseline Std Dev = 0.0205926; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
baseline mean = 0.0297
h
SCL
Standardized mean
CUSUM
Sample Date

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium
Location: MW-3
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
MW-1	4/19/2008	0.084	22
	1/21/2009	0.028	11
	4/9/2009	0.028	12
	5/19/2009	0.033	13
	7/16/2010	0.021	7
	2/8/2011	0.021	8
	9/14/2011	0.074	20
	2/17/2012	0.022	9
	7/31/2012	0.019	5
	3/27/2013	0.018	2
	12/23/2013	0.017	1
	6/26/2014	0.018	3
	11/21/2014	0.02	6
	5/28/2015	0.0188	4
	11/11/2015	0.0237	10
MW-3	4/19/2008	0.056	19
	1/21/2009	0.039	14
	4/9/2009	0.043	15
	5/19/2009	0.047	16
	7/16/2010	0.055	18
	2/8/2011	0.052	17
	9/14/2011	0.15	27
	2/17/2012	0.097	25
	7/31/2012	0.091	23
	3/27/2013	0.094	24
	12/23/2013	0.15	28
	6/26/2014	0.079	21
	11/21/2014	0.14	26
	5/28/2015	0.152	29
	11/11/2015	0.701	31
	12/4/2015	0.579	30

The Wilcoxon Statistic is 227
The Expected value is is 120
The Standard Deviation is 25.2982
The Z Score is 4.20978
The Standard Deviation adjusted for ties is 25.2982
The Z Score adjusted for ties is 4.20978
4.20978 > 2.326 indicating statistical significance at 1% level

4.20978 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Mann-Kendall Trend Analysis

Parameter: Barium
Location: MW-3
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

95% Confidence Level

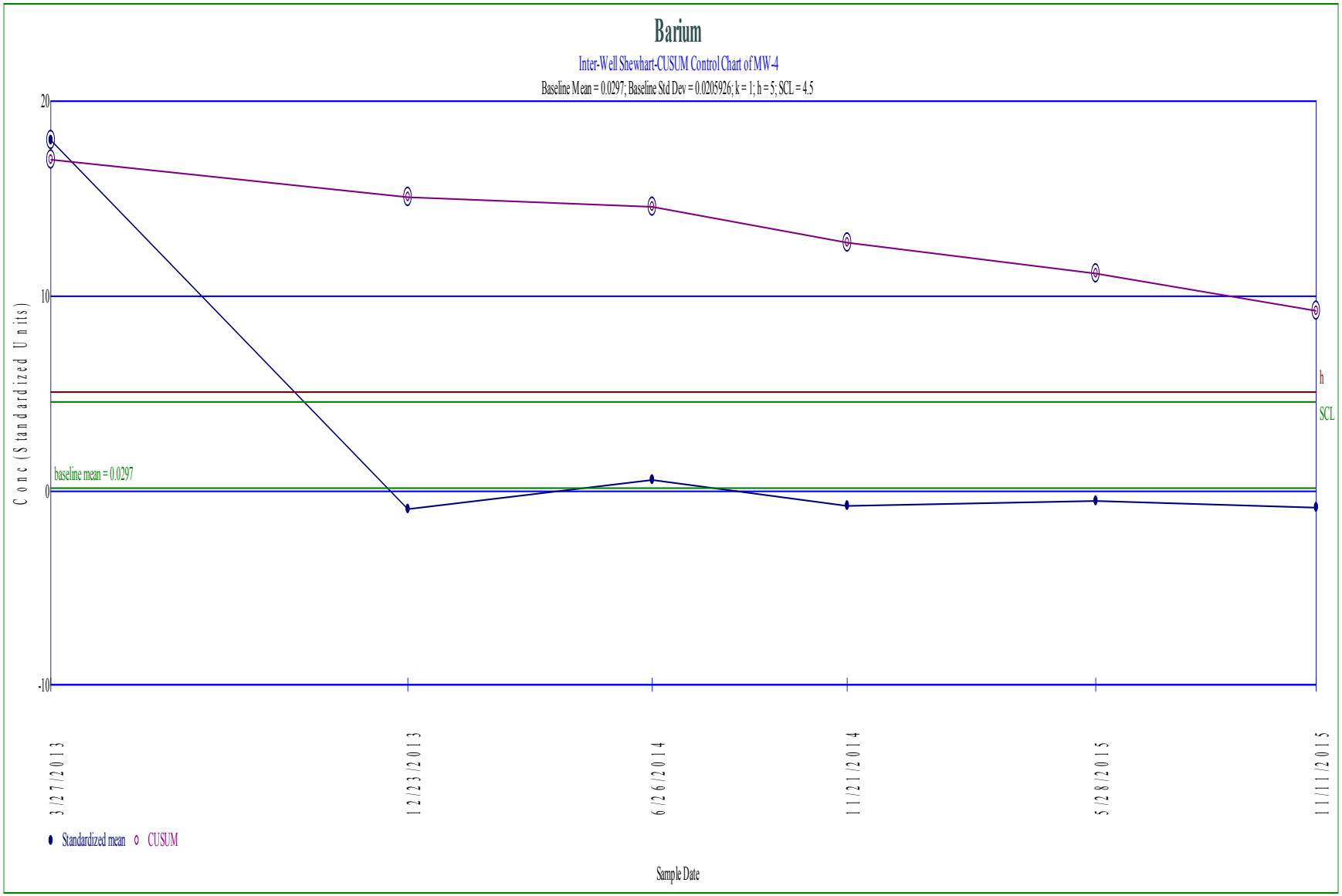
S Statistic = 100 - 19 = 81

Tied Group	Value	Members
1	0.15	2

Time Period	Observations
4/19/2008	1
1/21/2009	1
4/9/2009	1
5/19/2009	1
7/16/2010	1
2/8/2011	1
9/14/2011	1
2/17/2012	1
7/31/2012	1
3/27/2013	1
12/23/2013	1
6/26/2014	1
11/21/2014	1
5/28/2015	1
11/11/2015	1
12/4/2015	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 8880
b = 30240
c = 480
Group Variance = 492.333
Z-Score = 3.60546
Comparison Level at 95% confidence level = 1.65463 (upward trend)
3.60546 > 1.65463 indicating an upward trend


Barium
Inter-Well Shewhart-CUSUM Control Chart of MW-4
Baseline Mean = 0.0297; Baseline Std Dev = 0.0205926; k = 1; h = 5; SCL = 4.5
20
10
0
-10
Conc (Standardized Units)
h
SCL
baseline mean = 0.0297
3/27/2013
12/23/2013
6/26/2014
11/21/2014
5/28/2015
11/11/2015
Standardized mean
CUSUM
Sample Date

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium
Location: MW-4
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
MW-1	4/19/2008	0.084	20
	1/21/2009	0.028	15
	4/9/2009	0.028	16
	5/19/2009	0.033	17
	7/16/2010	0.021	11
	2/8/2011	0.021	12
	9/14/2011	0.074	19
	2/17/2012	0.022	13
	7/31/2012	0.019	9
	3/27/2013	0.018	6
	12/23/2013	0.017	5
	6/26/2014	0.018	7
	11/21/2014	0.02	10
	5/28/2015	0.0188	8
	11/11/2015	0.0237	14
MW-4	3/27/2013	0.4	21
	12/23/2013	0.0096	1
	6/26/2014	0.04	18
	11/21/2014	0.013	3
	5/28/2015	0.0169	4
	11/11/2015	0.0105	2

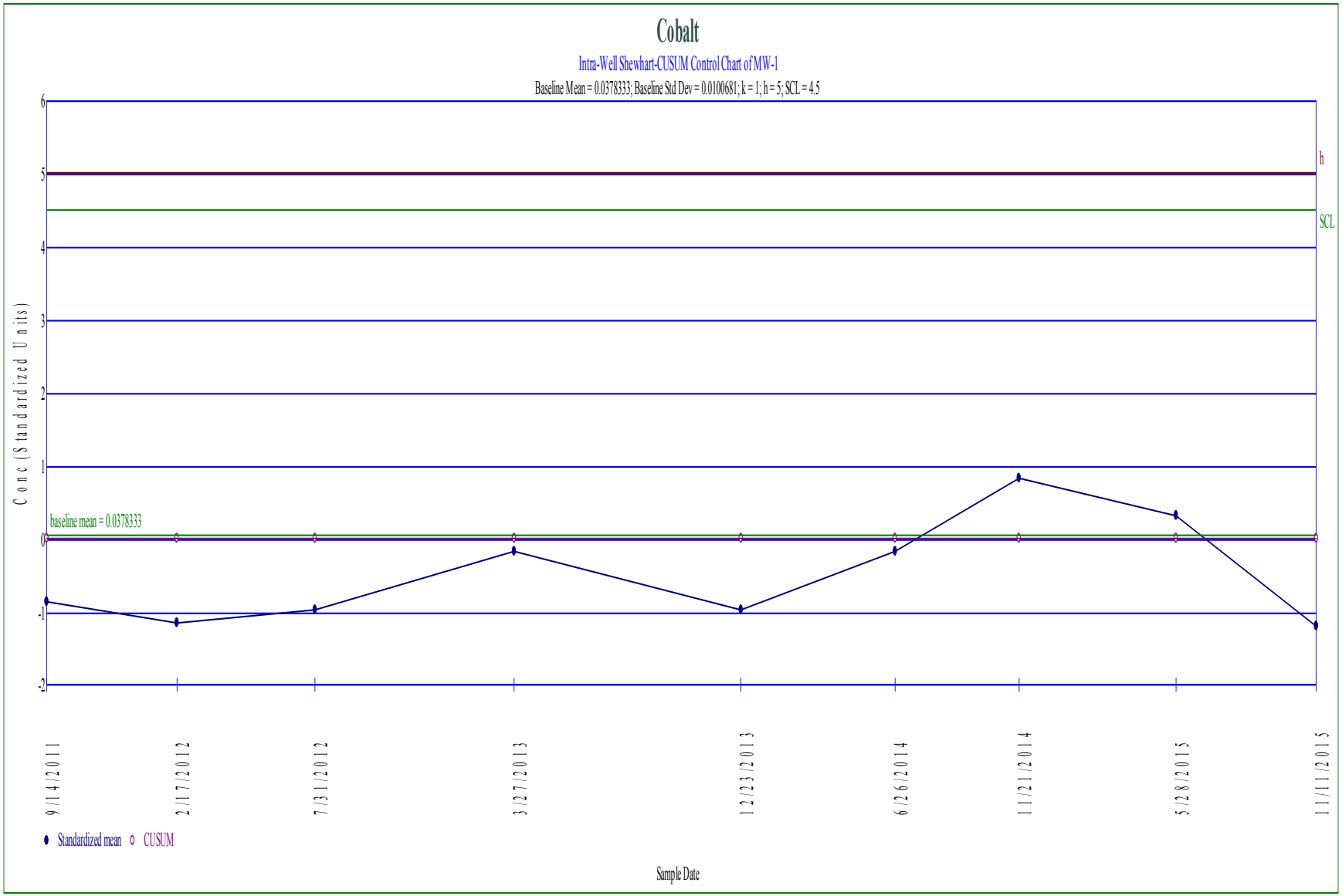
The Wilcoxon Statistic is 28
The Expected value is is 45
The Standard Deviation is 12.8452
The Z Score is -1.36237
The Standard Deviation adjusted for ties is 12.8452
The Z Score adjusted for ties is -1.36237
-1.36237 < 2.326 indicating no statistical significance at 1% level
-1.36237 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

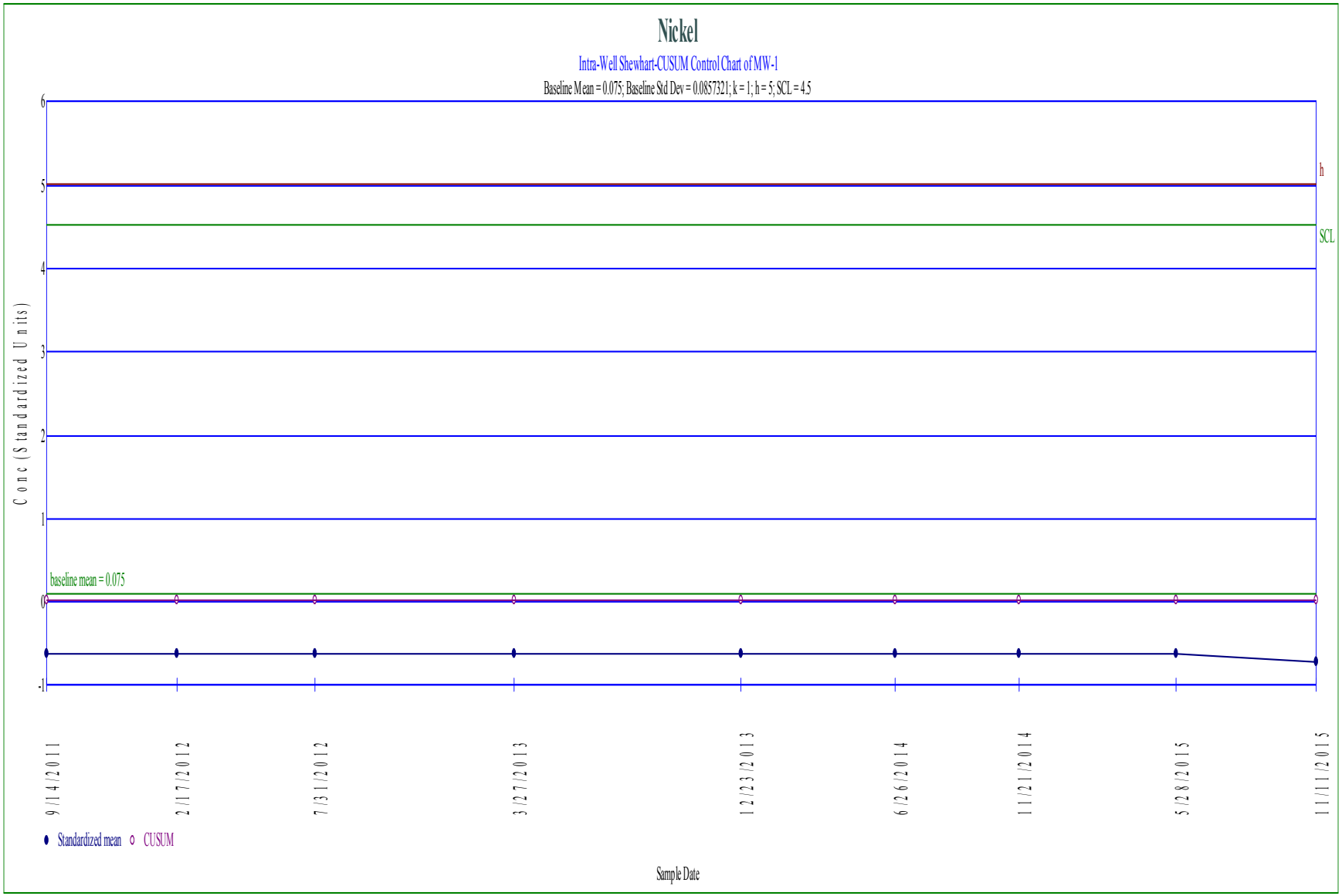
Mann-Kendall Trend Analysis

Parameter: Barium
Location: MW-4
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

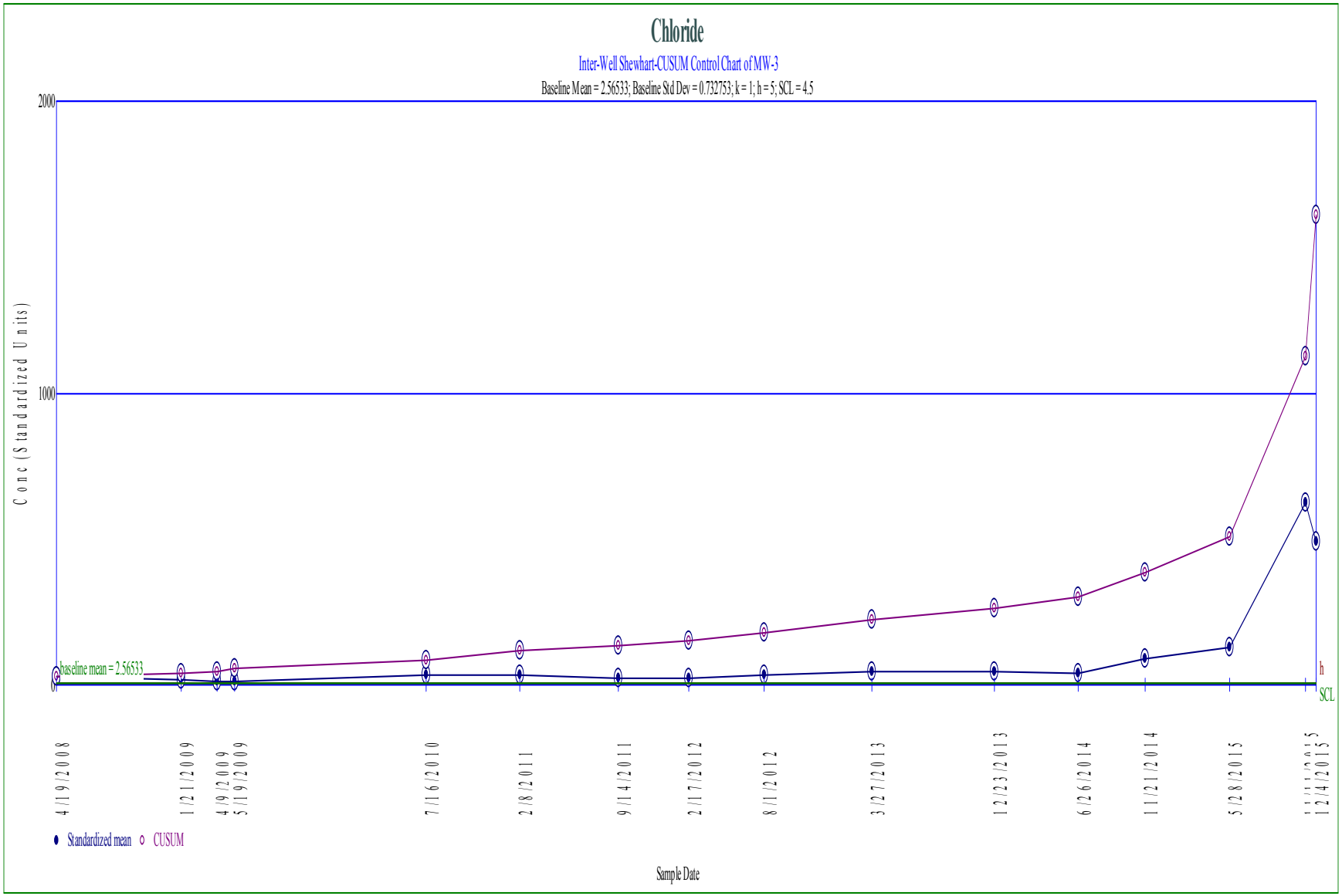
95% Confidence Level

S Statistic = 5 - 10 = -5
Comparing at 95% confidence level (upward trend)
Probability of obtaining S >= -5 is 0.235
S < 0 or 0.235 >= 0.05 indicating no evidence of an upward trend


Cobalt
Intra-Well Shewhart-CUSUM Control Chart of MW-1
Baseline Mean = 0.0378333; Baseline Std Dev = 0.0100681; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
6
5
4
3
2
1
0
-1
-2
h
SCL
baseline mean = 0.0378333
9/14/2011
2/17/2012
7/31/2012
3/27/2013
12/23/2013
6/26/2014
11/21/2014
5/28/2015
11/11/2015
Standardized mean
CUSUM
Sample Date


Nickel
Intra-Well Shewhart-CUSUM Control Chart of MW-1
Baseline Mean = 0.075; Baseline Std Dev = 0.0857321; k = 1; h = 5; SCL = 4.5
h
SCL
baseline mean = 0.075
Conc (Standardized Units)
6
5
4
3
2
1
0
-1
9/14/2011
2/17/2012
7/31/2012
3/27/2013
12/23/2013
6/26/2014
11/21/2014
5/28/2015
11/11/2015
Standardized mean
CUSUM
Sample Date


Chloride
Intra-Well Shewhart-CUSUM Control Chart of MW-1
Baseline Mean = 2.5; Baseline Std Dev = 0.438178; k = 1; h = 5; SCL = 4.5
h
SCL
baseline mean = 2.5
Conc (Standardized Units)
6
5
4
3
2
1
0
-1
-2
-3
9/14/2011
2/17/2012
7/31/2012
3/27/2013
12/23/2013
6/26/2014
11/21/2014
5/28/2015
11/11/2015
Standardized mean
CUSUM
Sample Date


Chloride
Inter-Well Shewhart-CUSUM Control Chart of MW-3
Baseline Mean = 2.56533; Baseline Std Dev = 0.732753; k = 1; h = 5; SCL = 4.5
2000
1000
0
Conc (Standardized Units)
baseline mean = 2.56533
h
SCL
4/19/2008
1/21/2009
4/9/2009
5/19/2009
7/16/2010
2/8/2011
9/14/2011
2/17/2012
8/1/2012
3/27/2013
12/23/2013
6/26/2014
11/21/2014
5/28/2015
12/4/2015
Standardized mean
CUSUM
Sample Date

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride
Location: MW-3
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
MW-1	4/19/2008	2	4
	1/21/2009	2.9	11
	4/9/2009	1.9	3
	5/19/2009	2.8	9
	7/16/2010	2.8	10
	2/8/2011	2.6	8
	9/14/2011	3.1	13
	2/17/2012	2.1	6
	7/31/2012	2.2	7
	3/27/2013	1.8	2
	12/23/2013	1.5	1
	6/26/2014	2.9	12
	11/21/2014	3.9	14
	5/28/2015	2.01	5
	11/11/2015	3.97	15
MW-3	4/19/2008	20	21
	1/21/2009	14	18
	4/9/2009	8.2	16
	5/19/2009	10	17
	7/16/2010	25	22
	2/8/2011	25	23
	9/14/2011	15	19
	2/17/2012	18	20
	8/1/2012	25	24
	3/27/2013	32	26
	12/23/2013	35	27
	6/26/2014	29	25
	11/21/2014	65	28
	5/28/2015	92.8	29
	11/11/2015	458	31
	12/4/2015	360	30

The Wilcoxon Statistic is 240
The Expected value is is 120
The Standard Deviation is 25.2982
The Z Score is 4.72365
The Standard Deviation adjusted for ties is 25.2982
The Z Score adjusted for ties is 4.72365
4.72365 > 2.326 indicating statistical significance at 1% level

4.72365 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Mann-Kendall Trend Analysis

Parameter: Chloride
Location: MW-3
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

95% Confidence Level

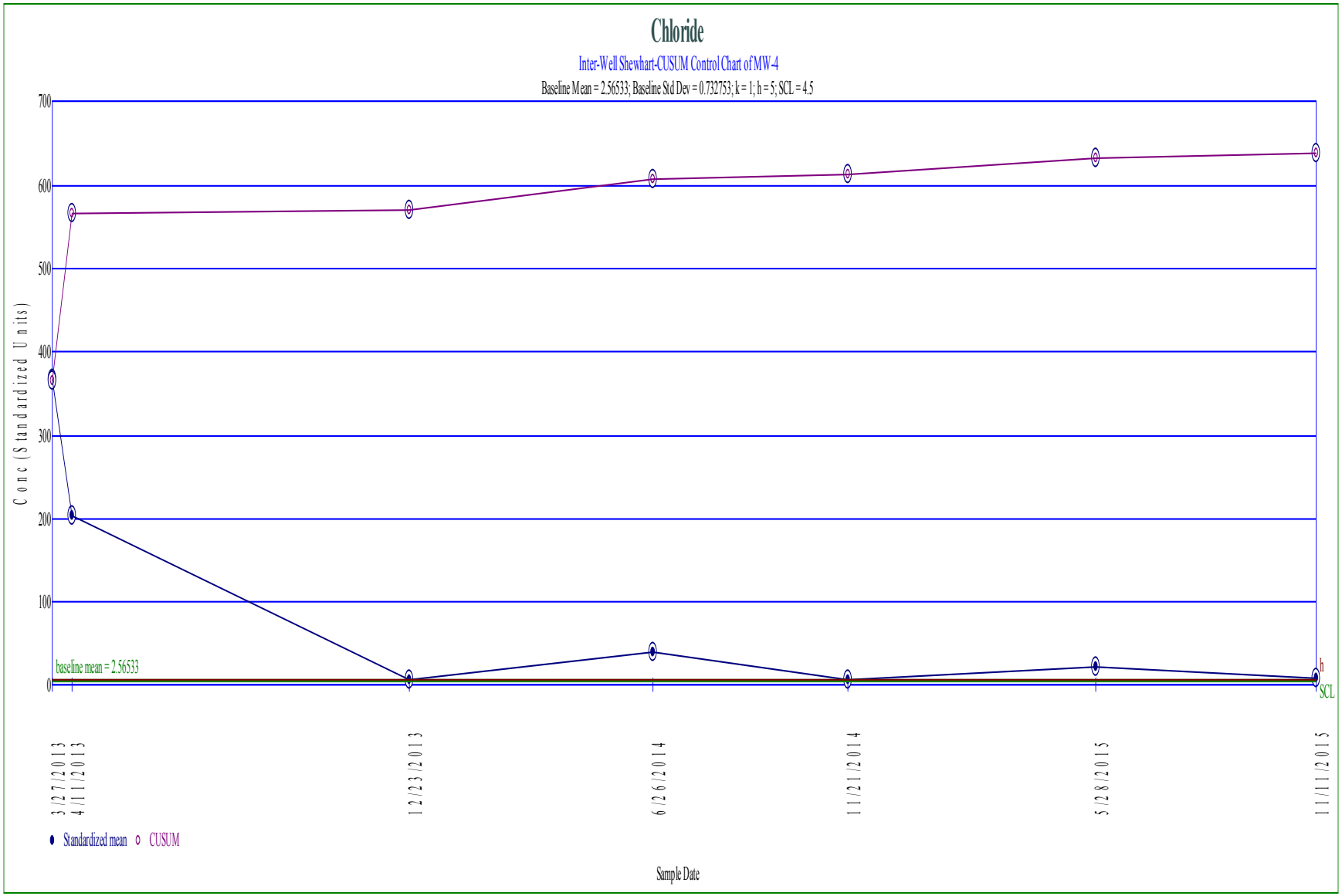
S Statistic = 103 - 14 = 89

Tied Group	Value	Members
1	25	3

Time Period	Observations
4/19/2008	1
1/21/2009	1
4/9/2009	1
5/19/2009	1
7/16/2010	1
2/8/2011	1
9/14/2011	1
2/17/2012	1
8/1/2012	1
3/27/2013	1
12/23/2013	1
6/26/2014	1
11/21/2014	1
5/28/2015	1
11/11/2015	1
12/4/2015	1

There are 0 time periods with multiple data

A = 66
B = 0
C = 6
D = 0
E = 6
F = 0
a = 8880
b = 30240
c = 480
Group Variance = 489.667
Z-Score = 3.97679
Comparison Level at 95% confidence level = 1.65463 (upward trend)
3.97679 > 1.65463 indicating an upward trend


Chloride
Inter-Well Shewhart-CUSUM Control Chart of MW-4
Baseline Mean = 2.56533; Baseline Std Dev = 0.732753; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
700
600
500
400
300
200
100
0
baseline mean = 2.56533
h
SCL
3/27/2013
4/11/2013
12/23/2013
6/26/2014
11/21/2014
5/28/2015
11/11/2015
Standardized mean
CUSUM
Sample Date

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride
Location: MW-4
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
MW-1	4/19/2008	2	4
	1/21/2009	2.9	11
	4/9/2009	1.9	3
	5/19/2009	2.8	9
	7/16/2010	2.8	10
	2/8/2011	2.6	8
	9/14/2011	3.1	13
	2/17/2012	2.1	6
	7/31/2012	2.2	7
	3/27/2013	1.8	2
	12/23/2013	1.5	1
	6/26/2014	2.9	12
	11/21/2014	3.9	14
	5/28/2015	2.01	5
	11/11/2015	3.97	15
MW-4	3/27/2013	270	22
	4/11/2013	150	21
	12/23/2013	6.4	16
	6/26/2014	31	20
	11/21/2014	6.7	17
	5/28/2015	17.5	19
	11/11/2015	7.34	18

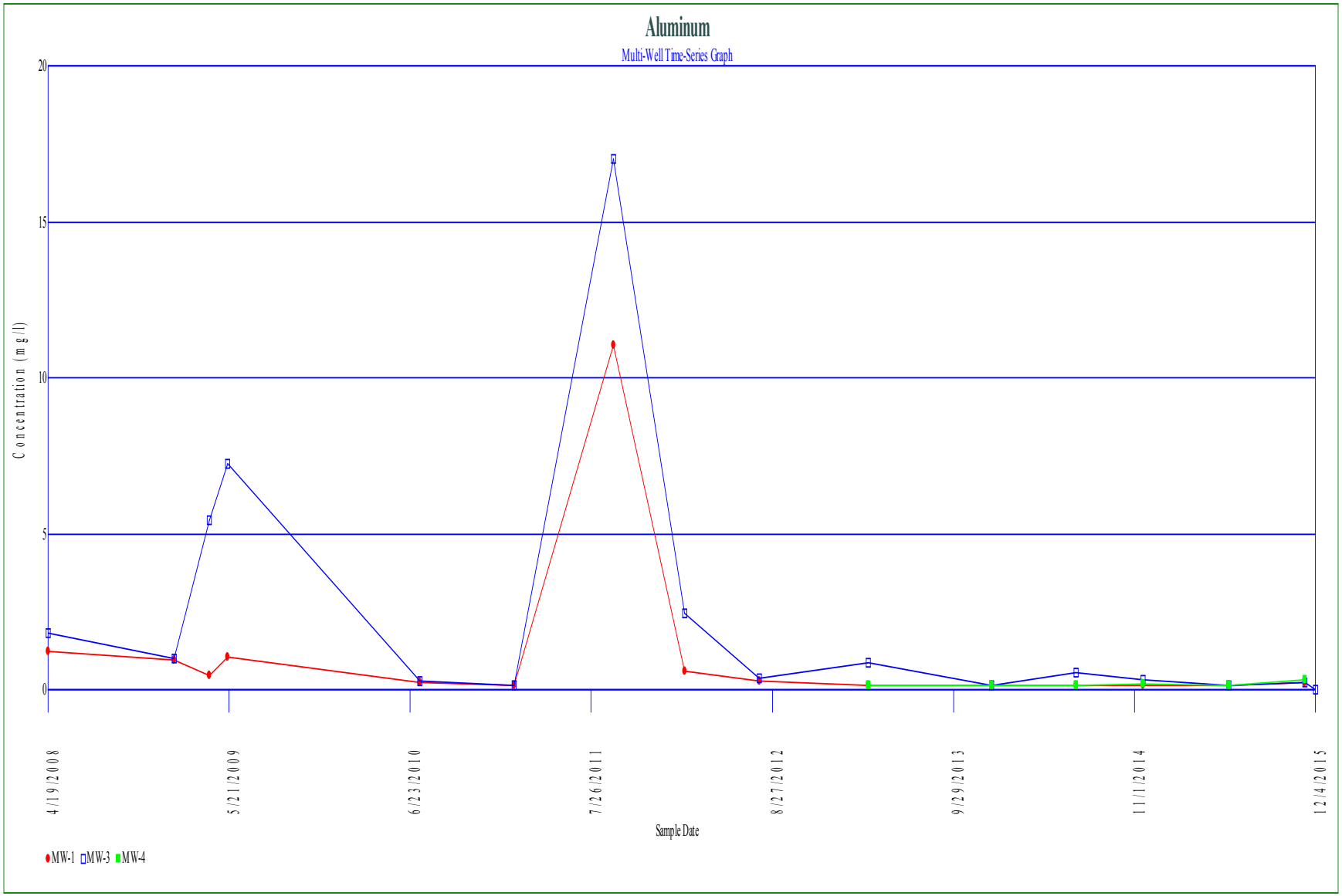
The Wilcoxon Statistic is 105
The Expected value is is 52.5
The Standard Deviation is 14.1863
The Z Score is 3.66552
The Standard Deviation adjusted for ties is 14.1863
The Z Score adjusted for ties is 3.66552
3.66552 > 2.326 indicating statistical significance at 1% level
3.66552 > 2.326 indicating statistical significance at 1% level when adjusted for ties

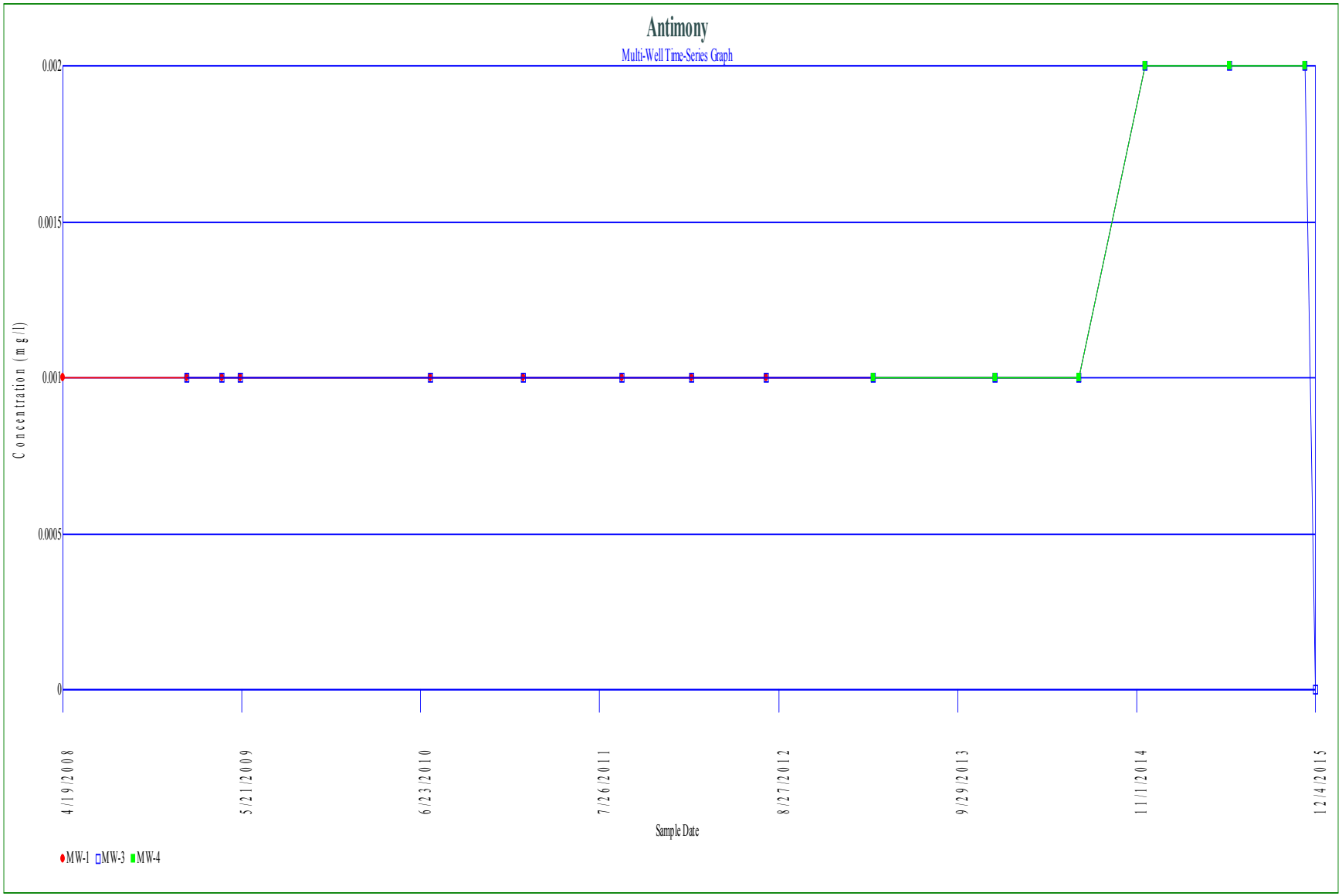
Mann-Kendall Trend Analysis

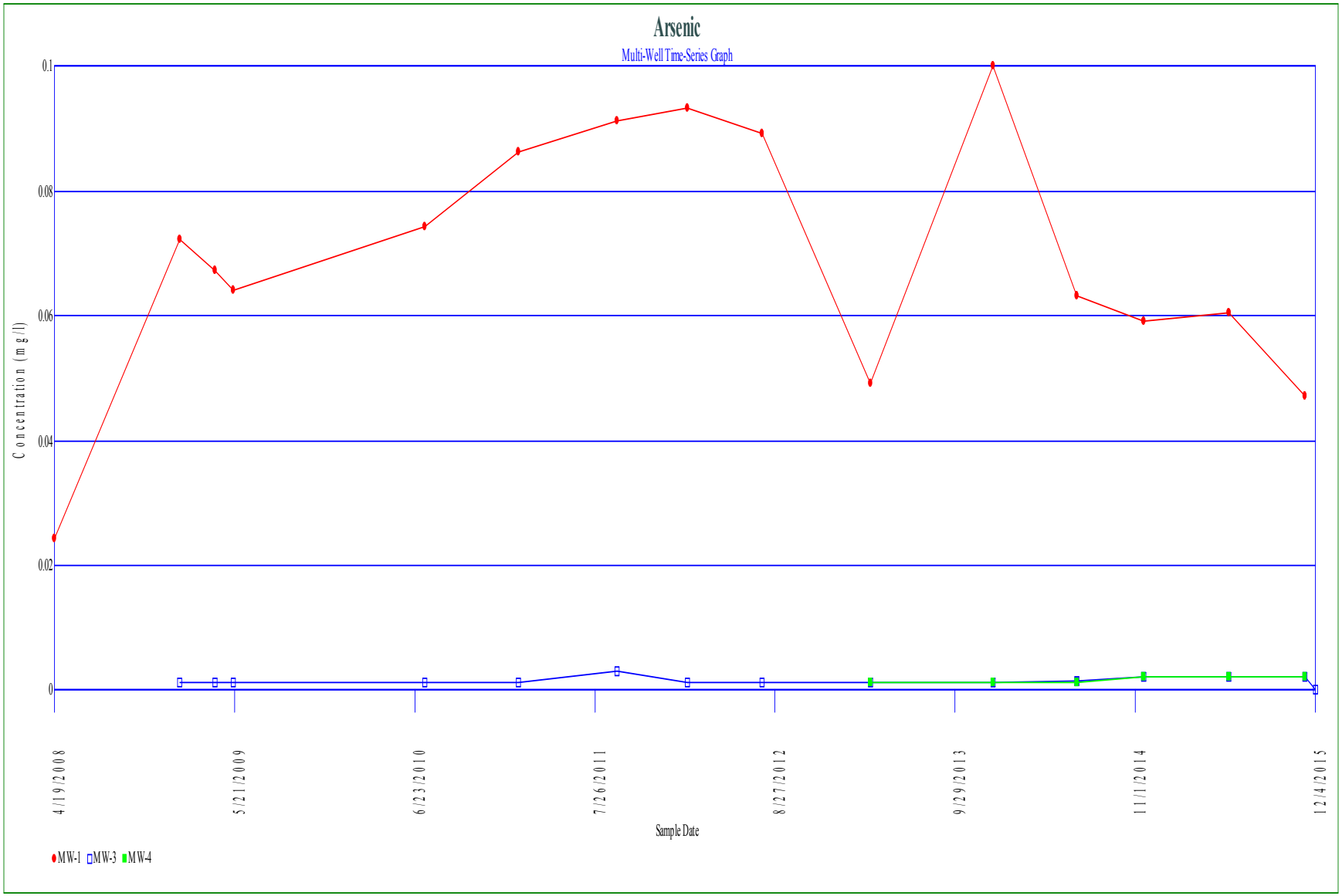
Parameter: Chloride
Location: MW-4
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

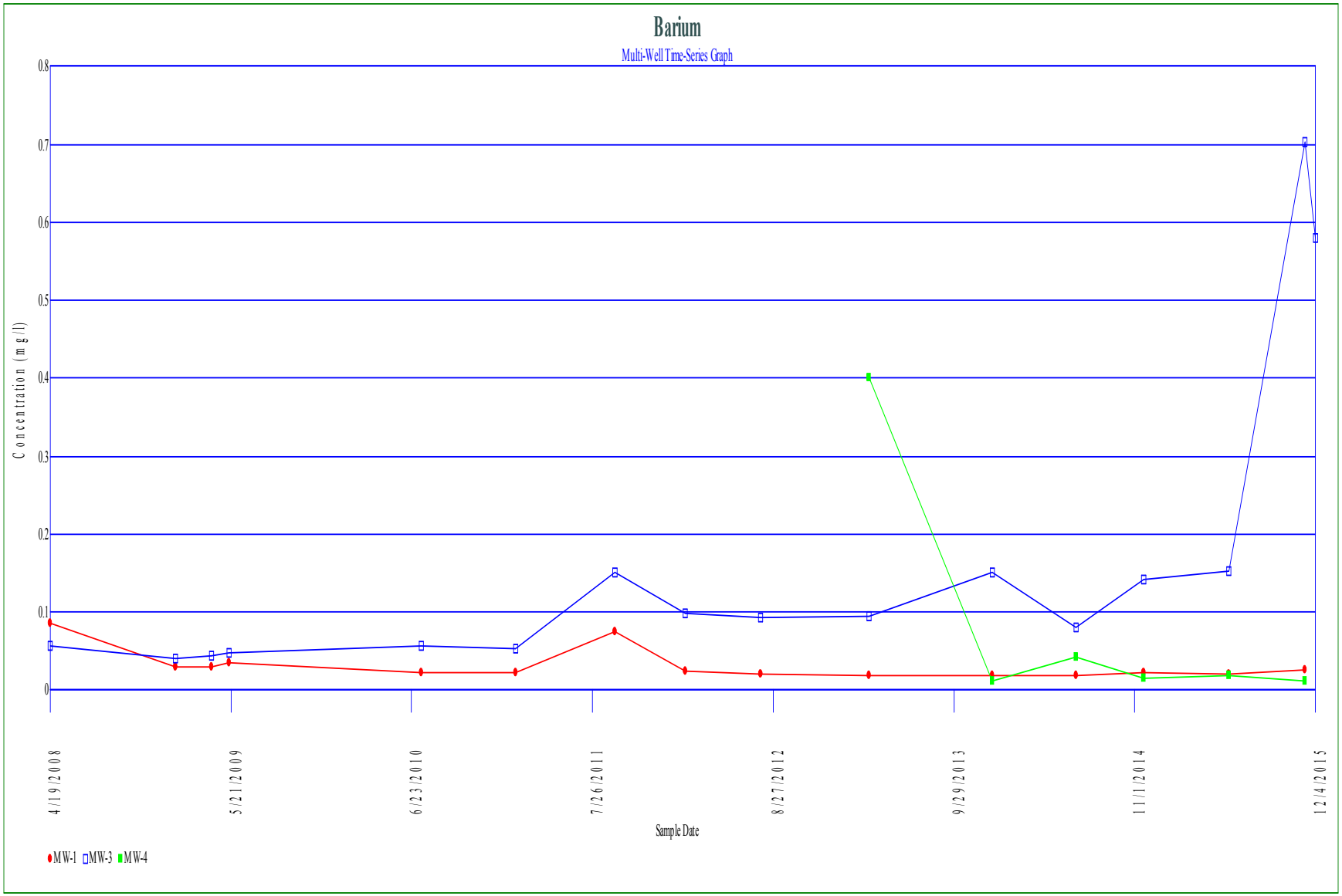
95% Confidence Level

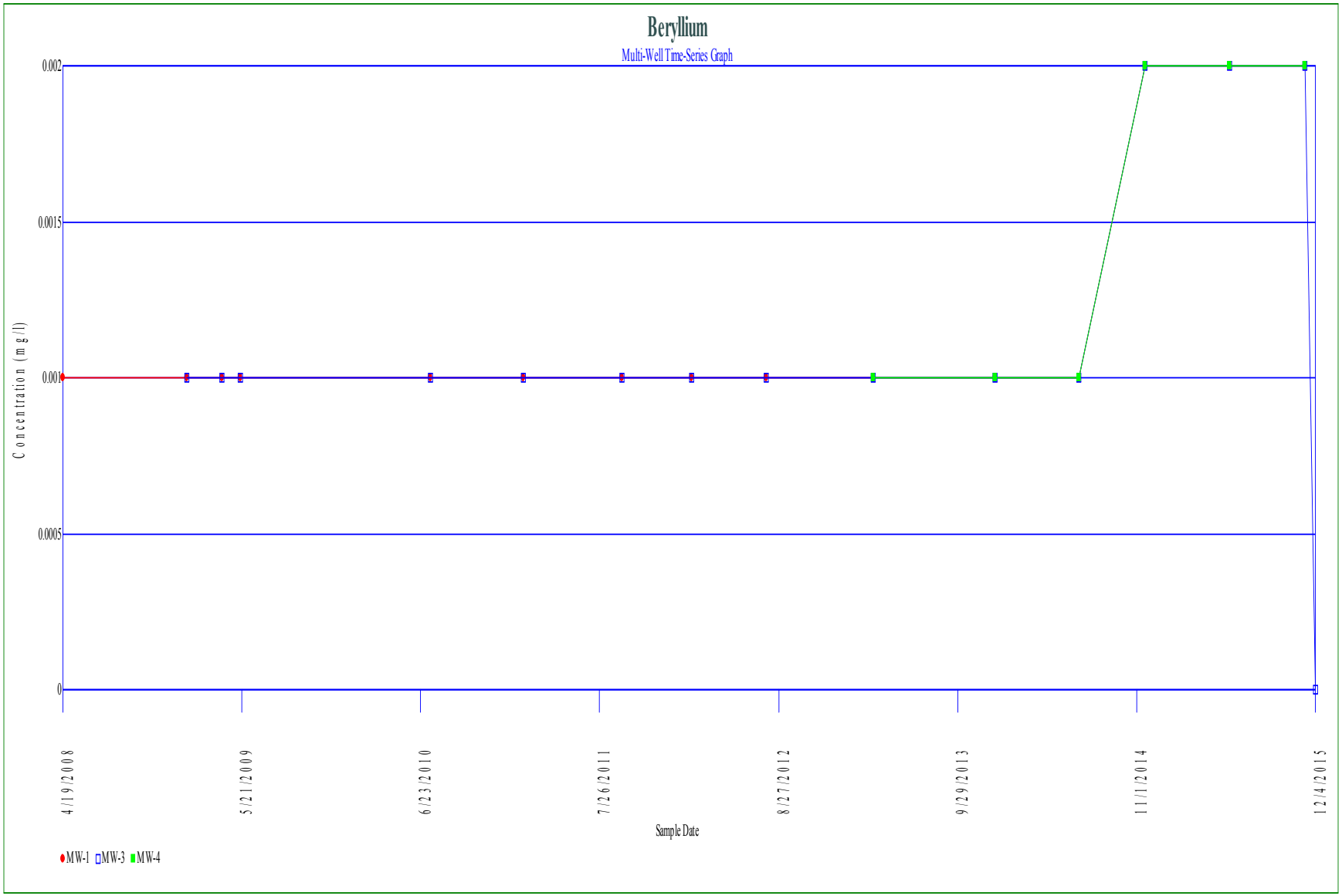
S Statistic = 6 - 15 = -9
Comparing at 95% confidence level (upward trend)
Probability of obtaining S >= -9 is 0.119
S < 0 or 0.119 >= 0.05 indicating no evidence of an upward trend

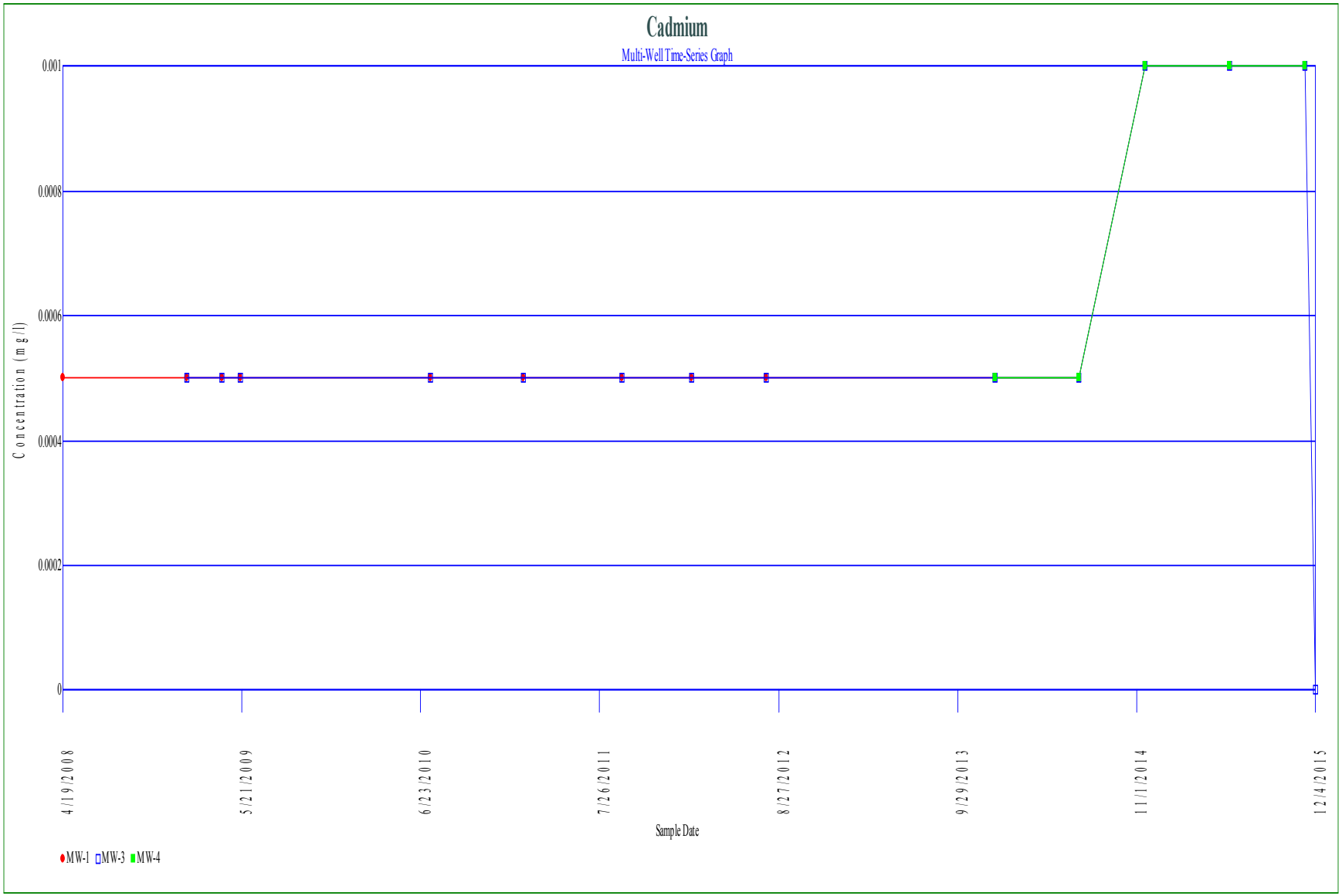

Aluminum
Multi-Well Time-Series Graph
20
15
10
5
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

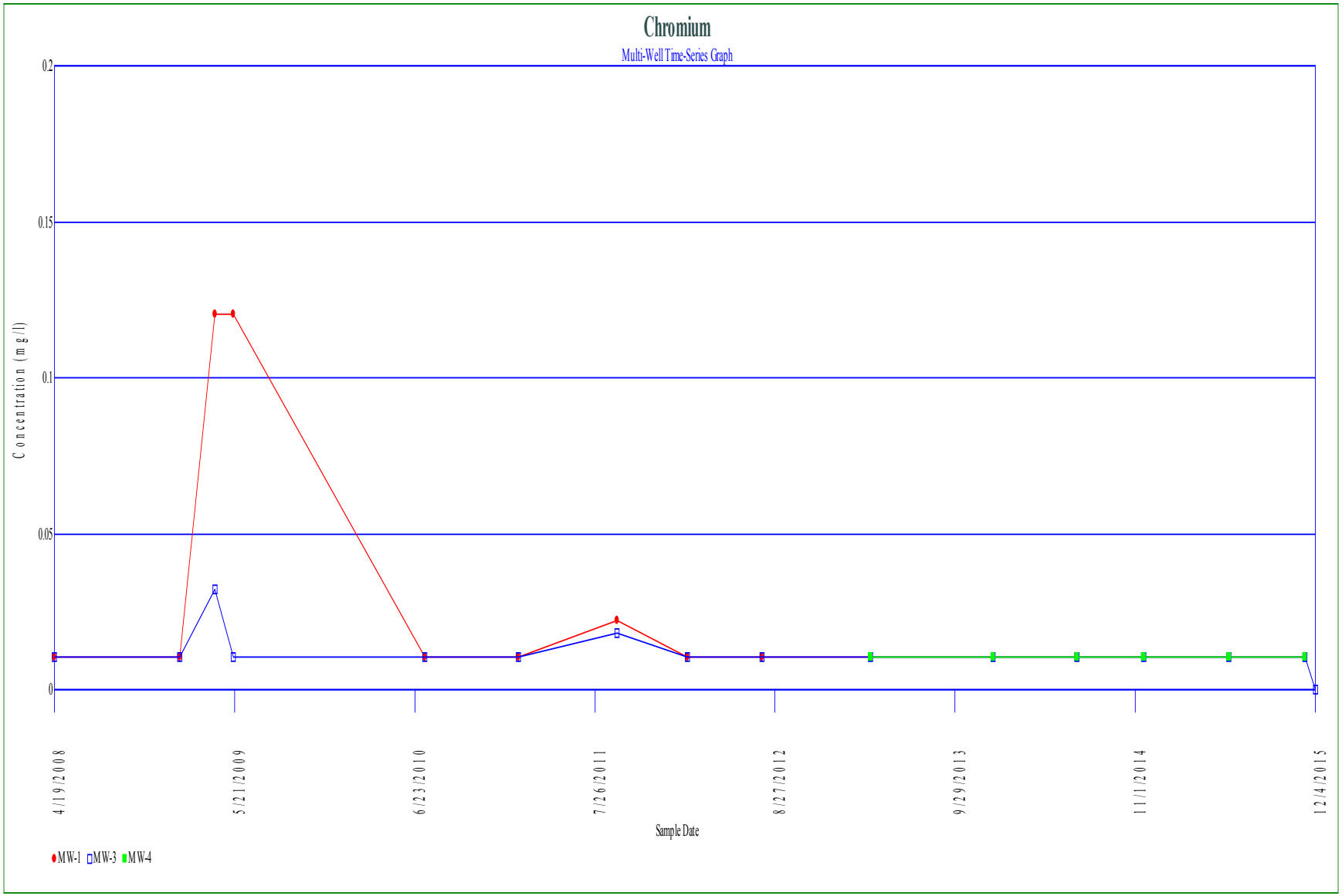

Antimony
Multi-Well Time-Series Graph
0.002
0.0015
0.001
0.0005
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

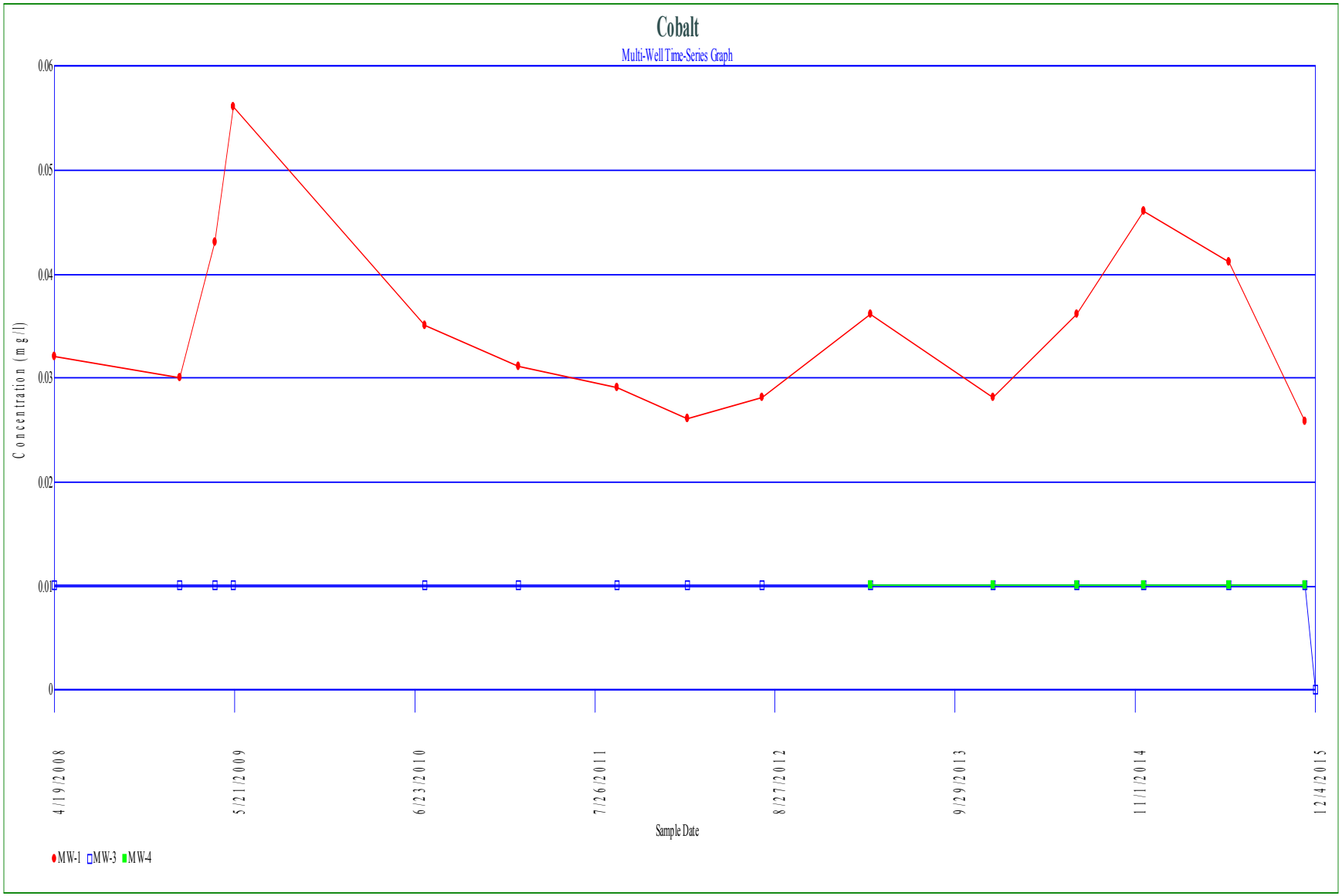

Arsenic
Multi-Well Time-Series Graph
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

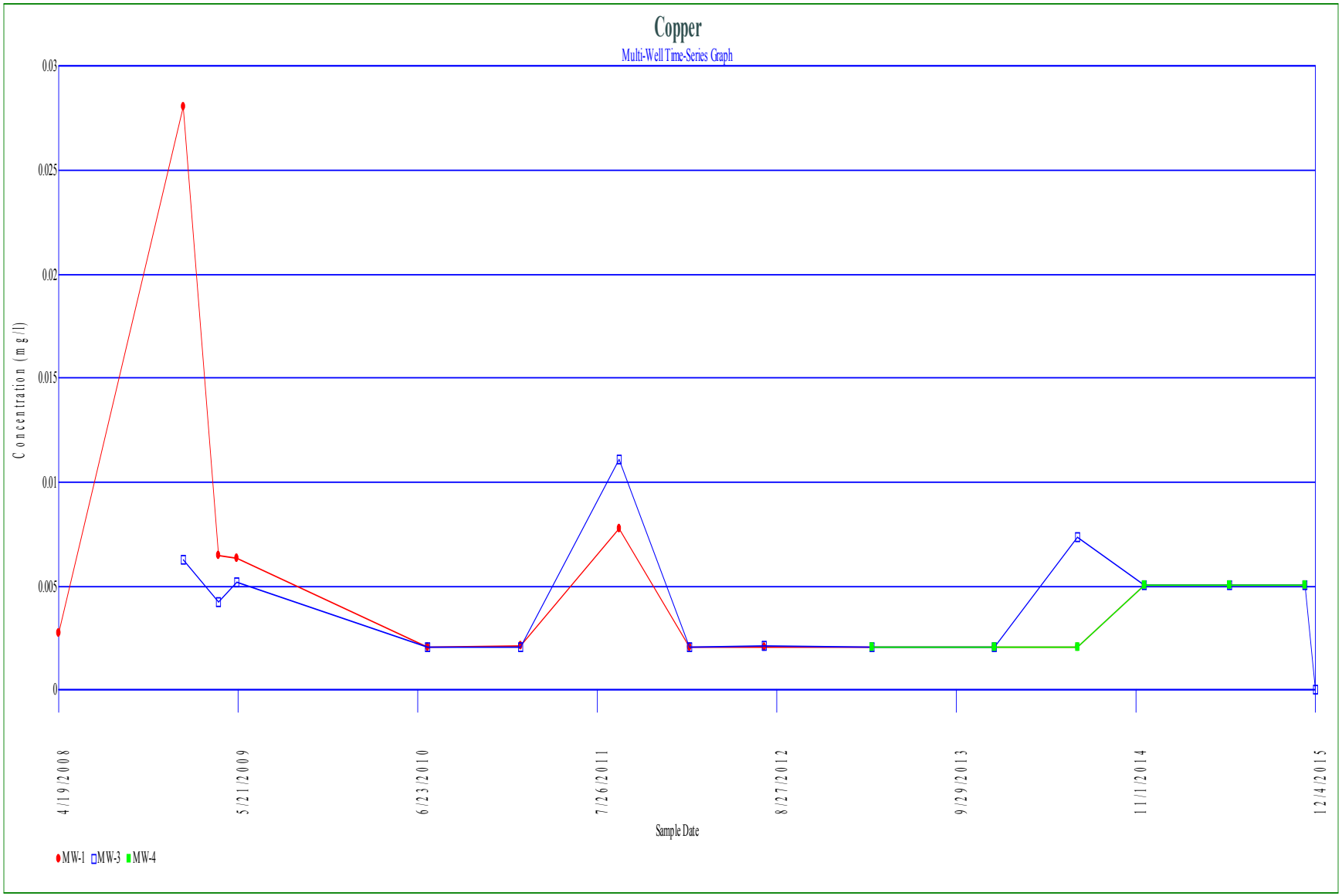

Barium
Multi-Well Time-Series Graph
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

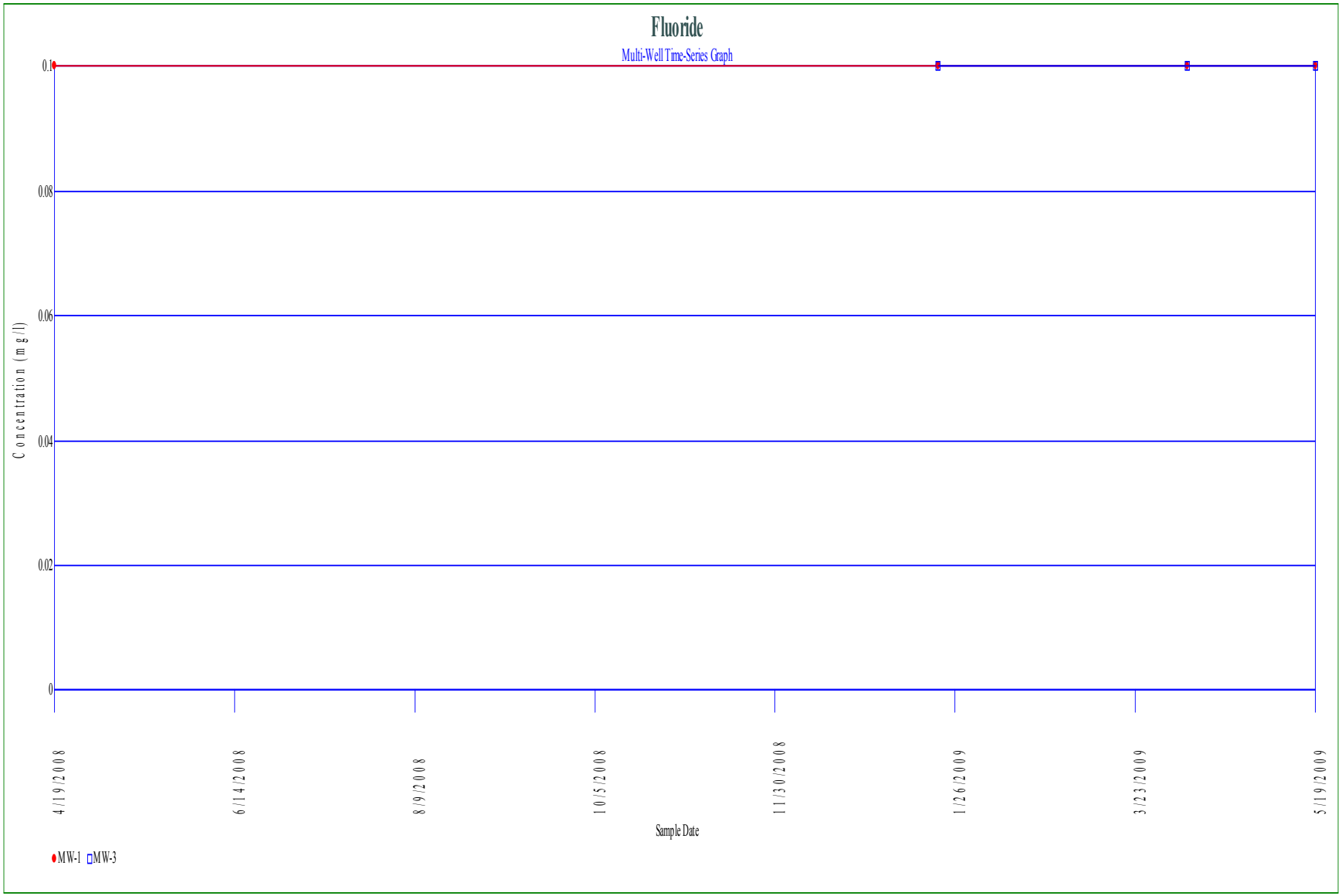

Beryllium
Multi-Well Time-Series Graph
0.002
0.0015
0.001
0.0005
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

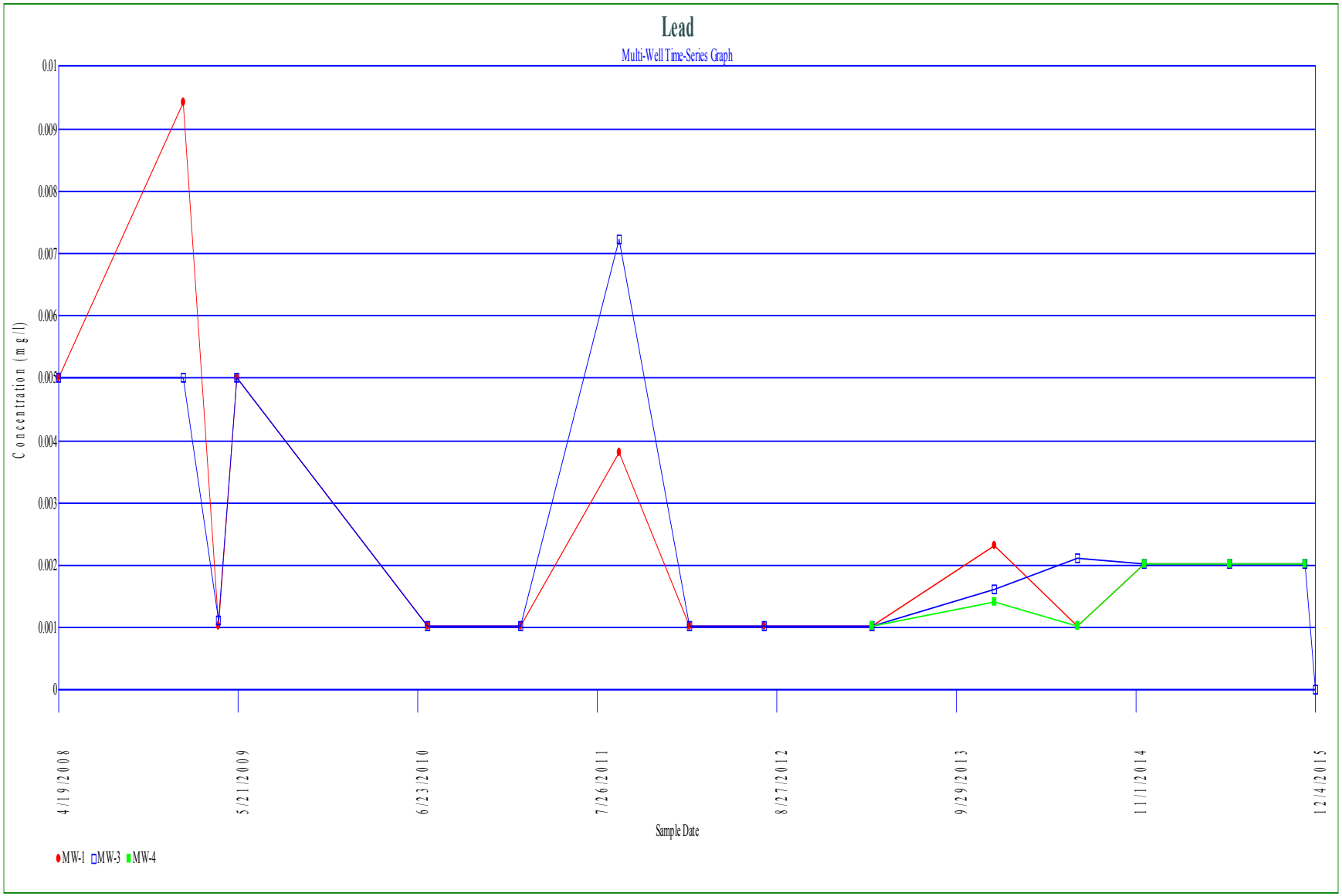

Cadmium
Multi-Well Time-Series Graph
0.001
0.0008
0.0006
0.0004
0.0002
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

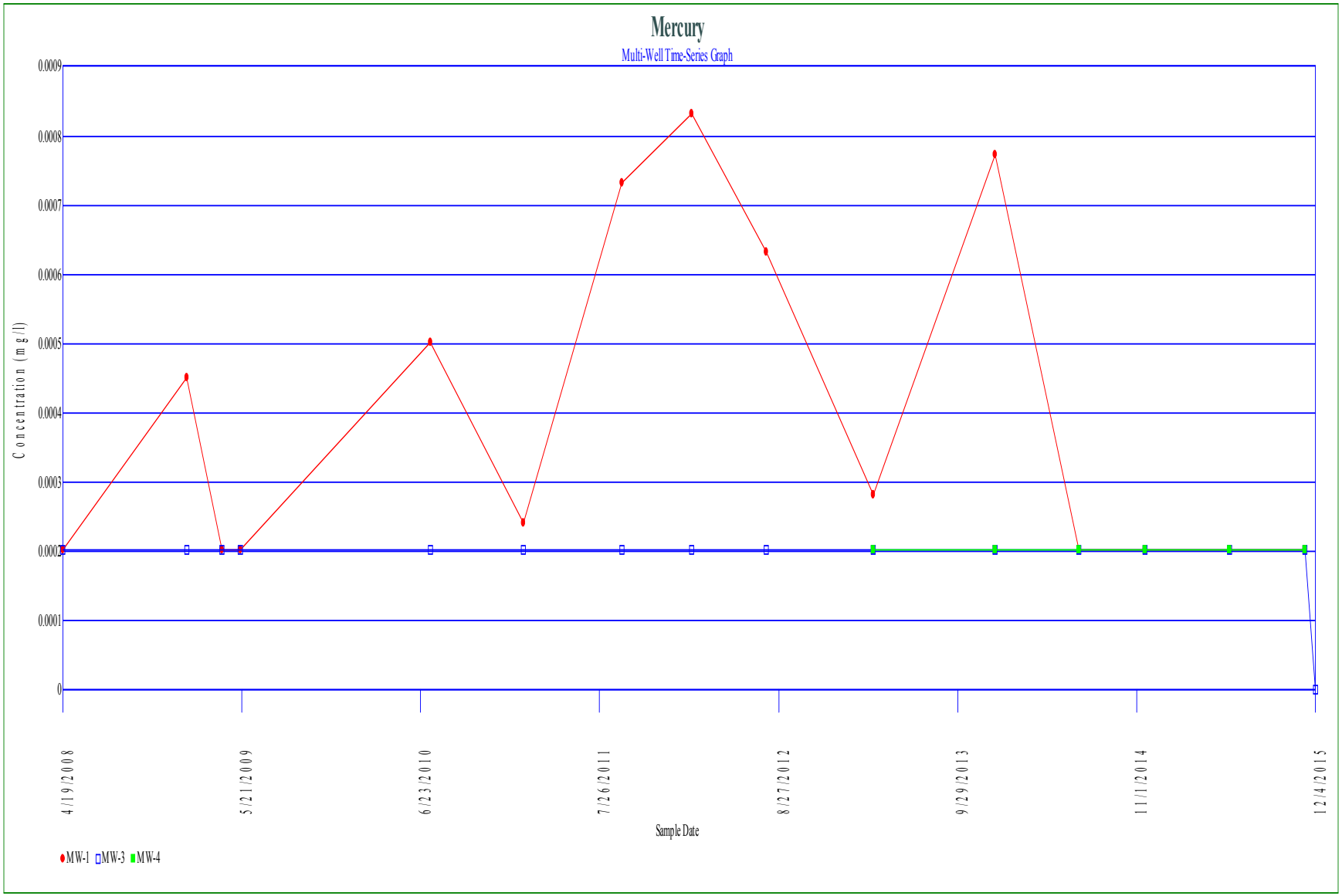

Chromium
Multi-Well Time-Series Graph
0.2
0.15
0.1
0.05
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

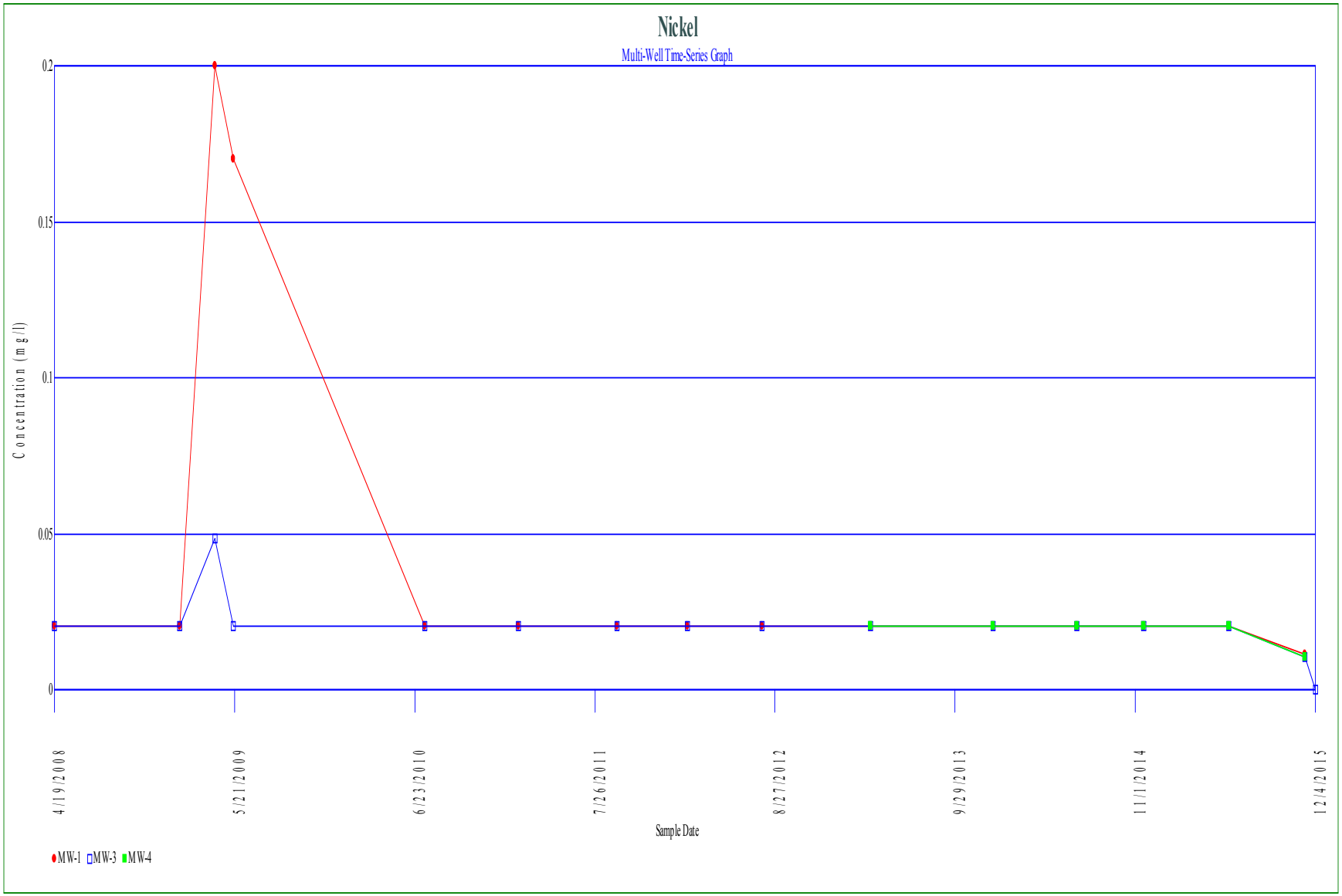

Cobalt
Multi-Well Time-Series Graph
0.06
0.05
0.04
0.03
0.02
0.01
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

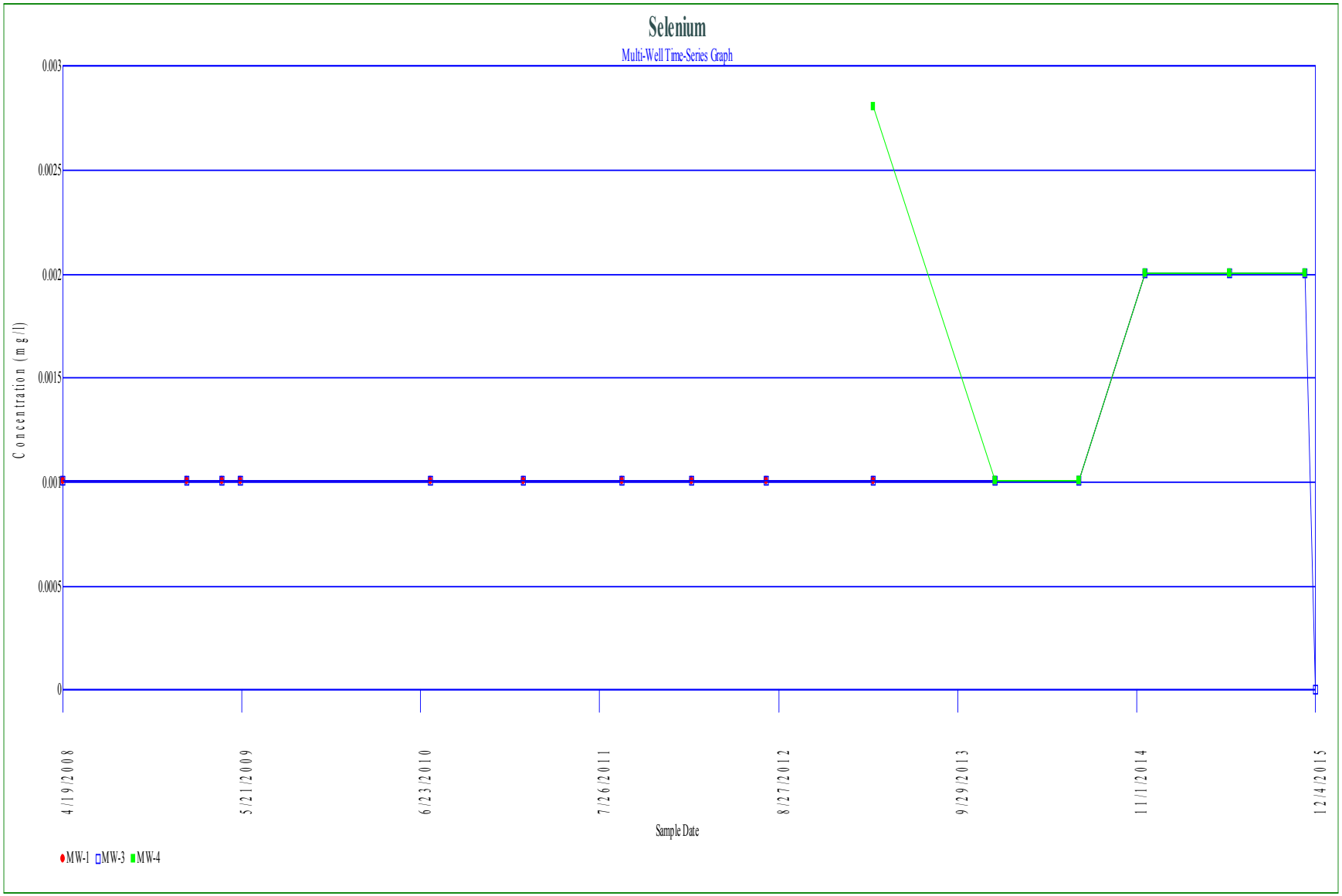

Copper
Multi-Well Time-Series Graph
0.03
0.025
0.02
0.015
0.01
0.005
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

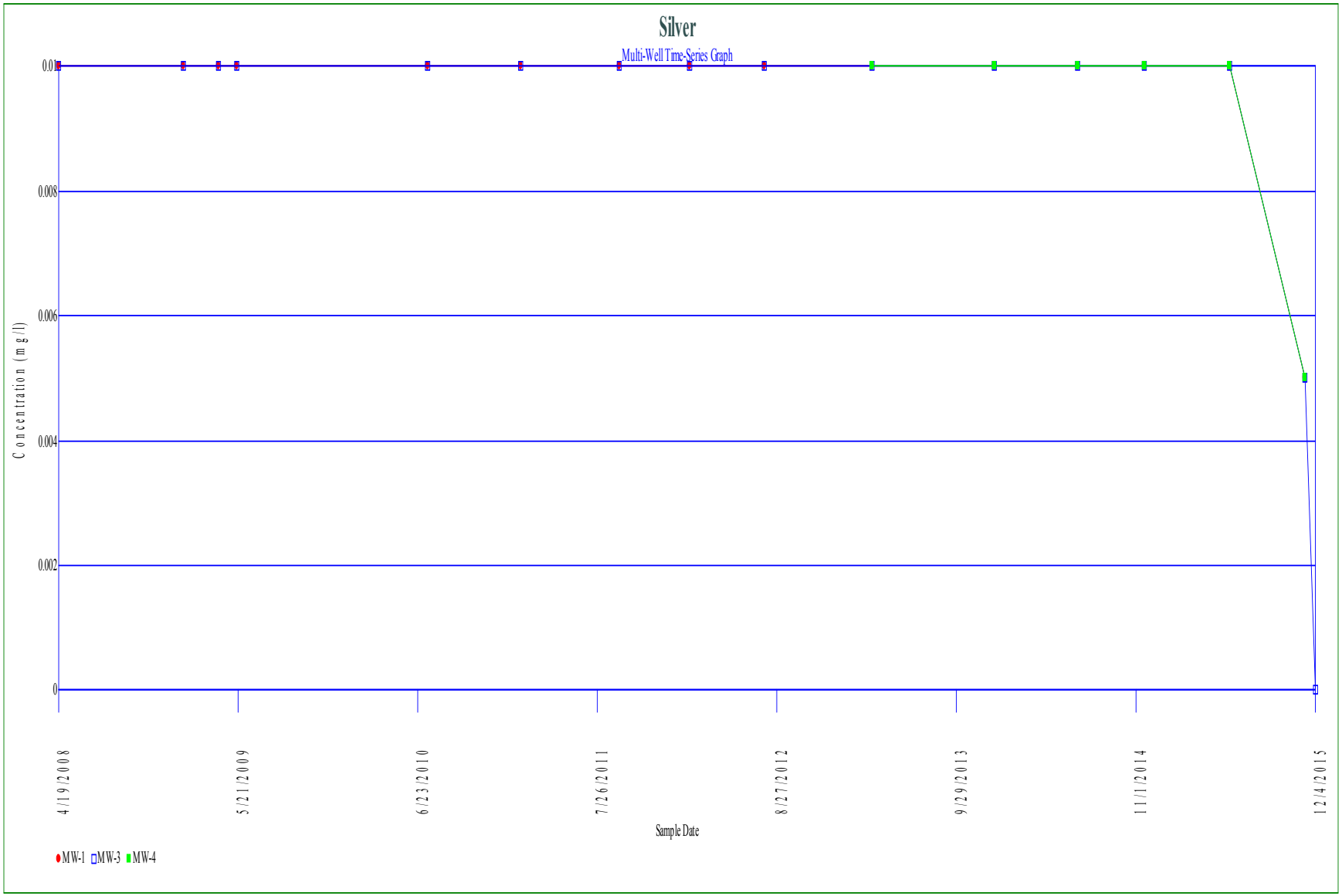

Fluoride
Multi-Well Time-Series Graph
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/l)
4/19/2008
6/14/2008
8/9/2008
10/5/2008
11/30/2008
1/26/2009
3/23/2009
5/19/2009
Sample Date
MW-1
MW-3

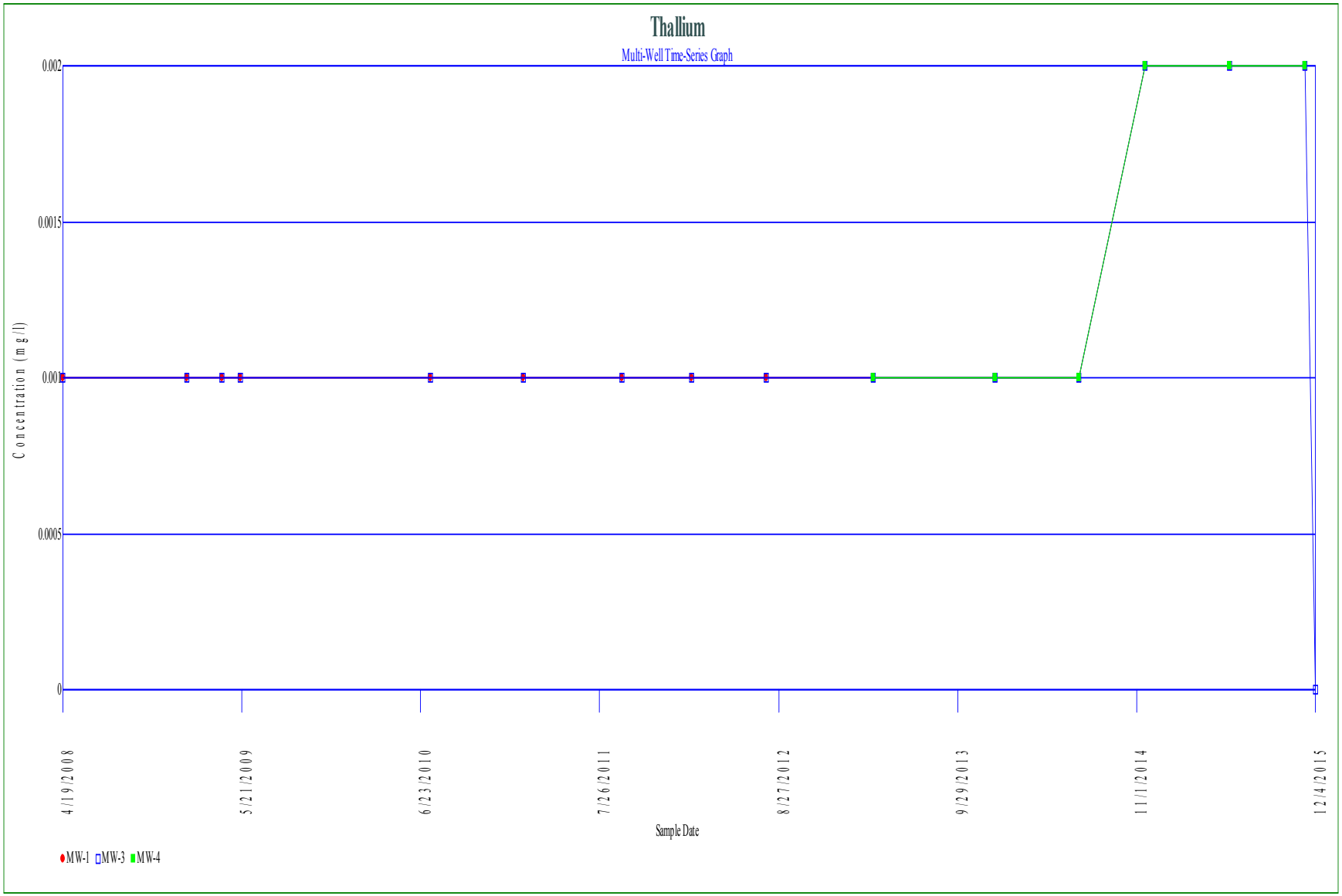

Lead
Multi-Well Time-Series Graph
0.01
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

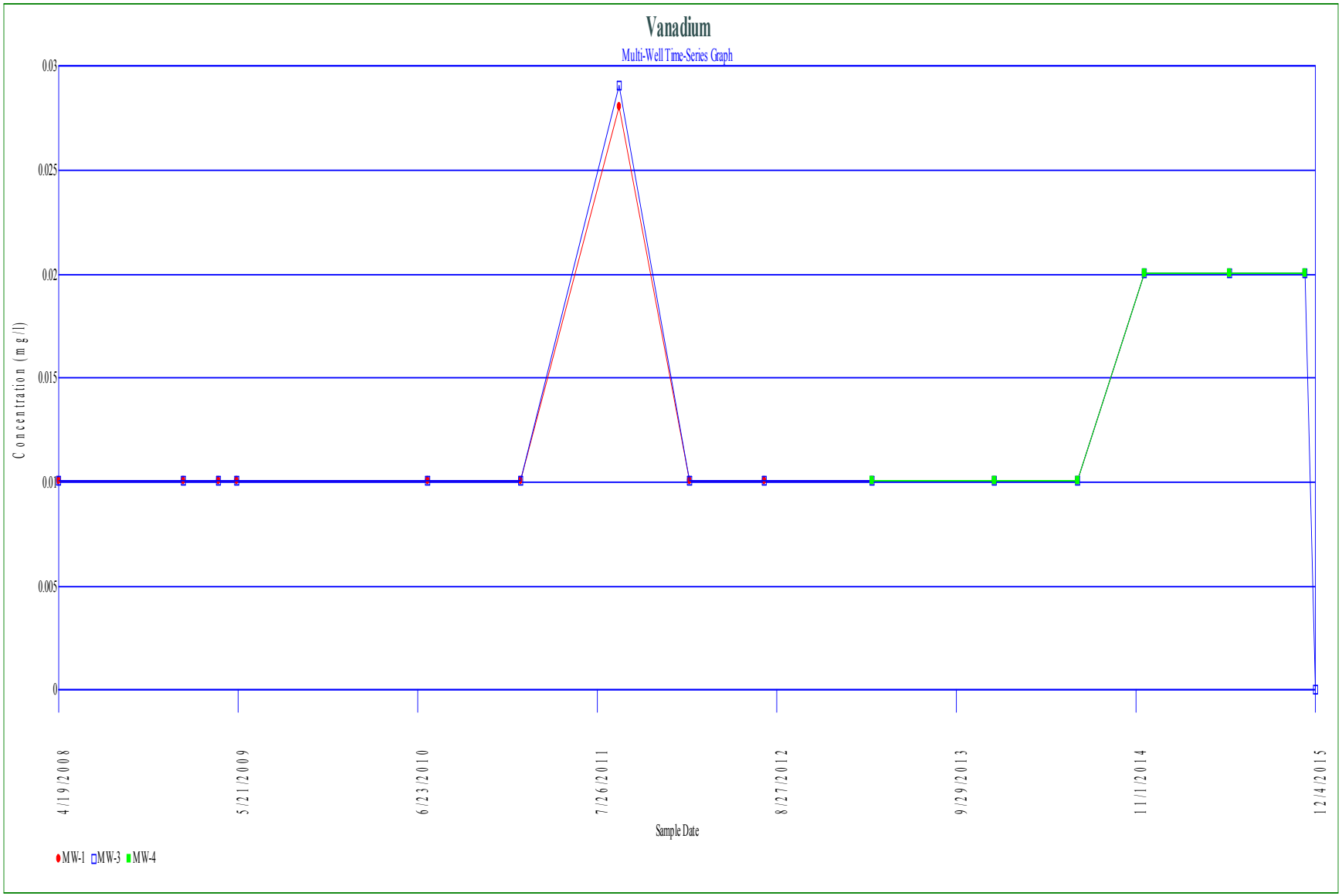

Mercury
Multi-Well Time-Series Graph
0.0009
0.0008
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

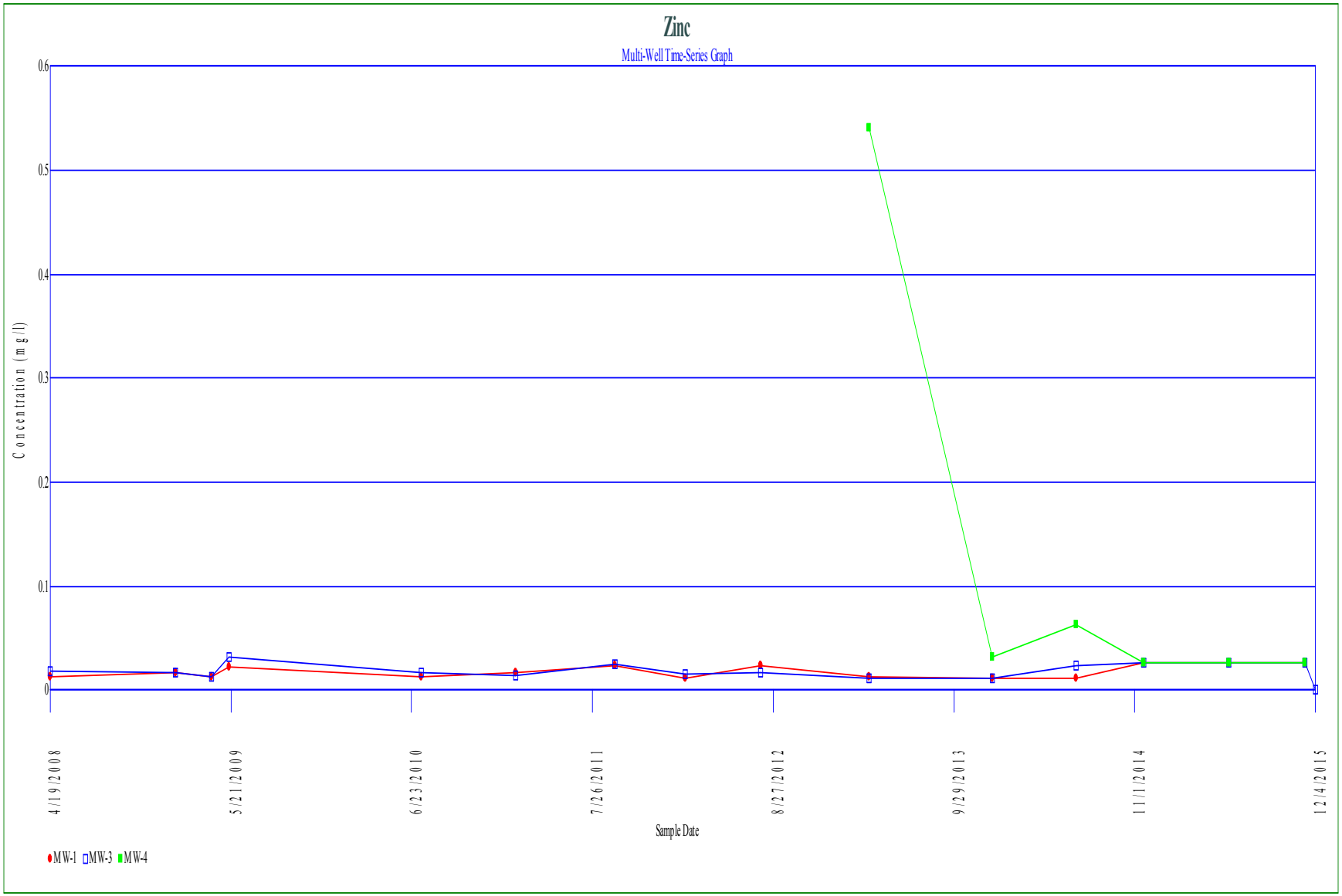

Nickel
Multi-Well Time-Series Graph
0.2
0.15
0.1
0.05
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

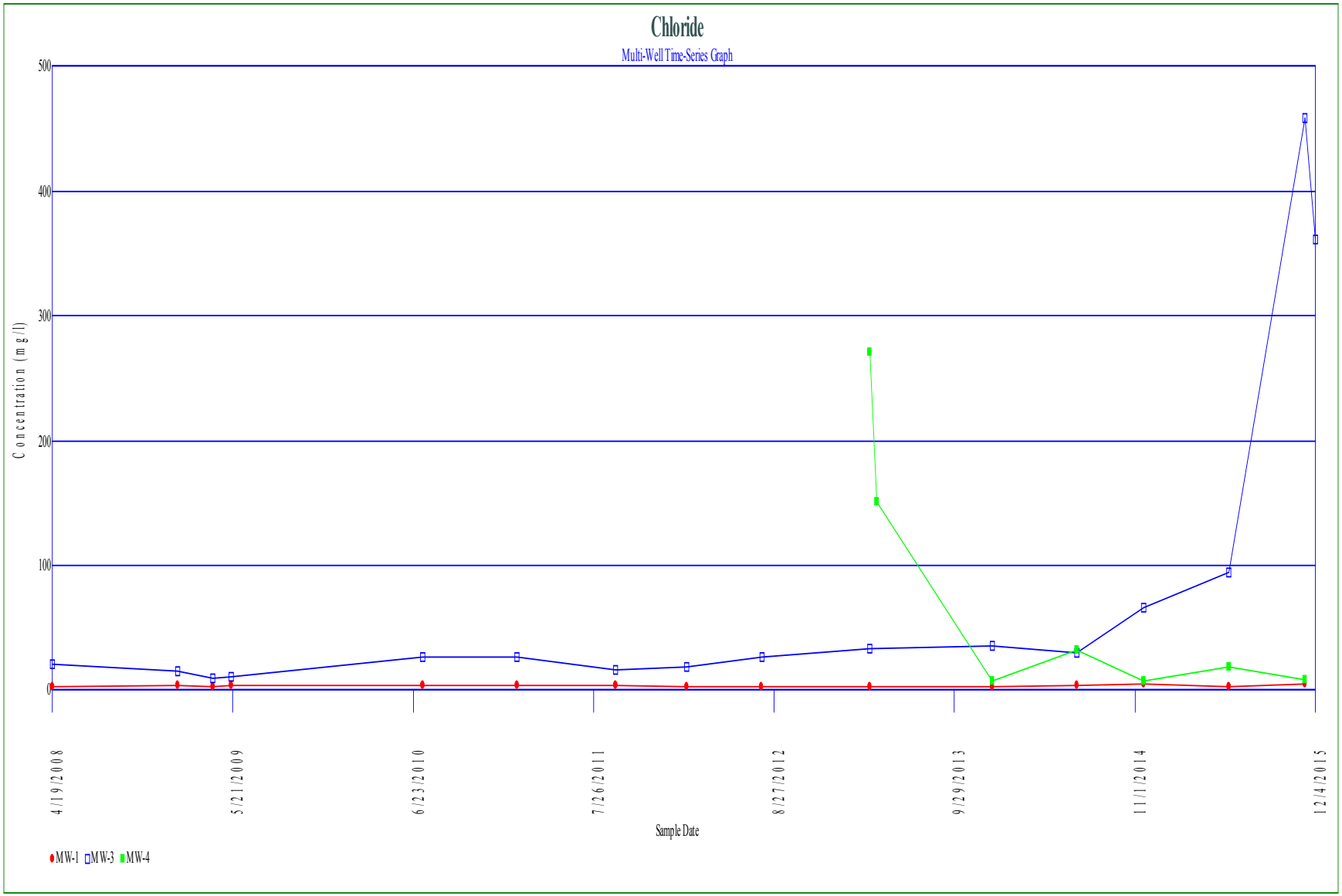

Selenium
Multi-Well Time-Series Graph
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

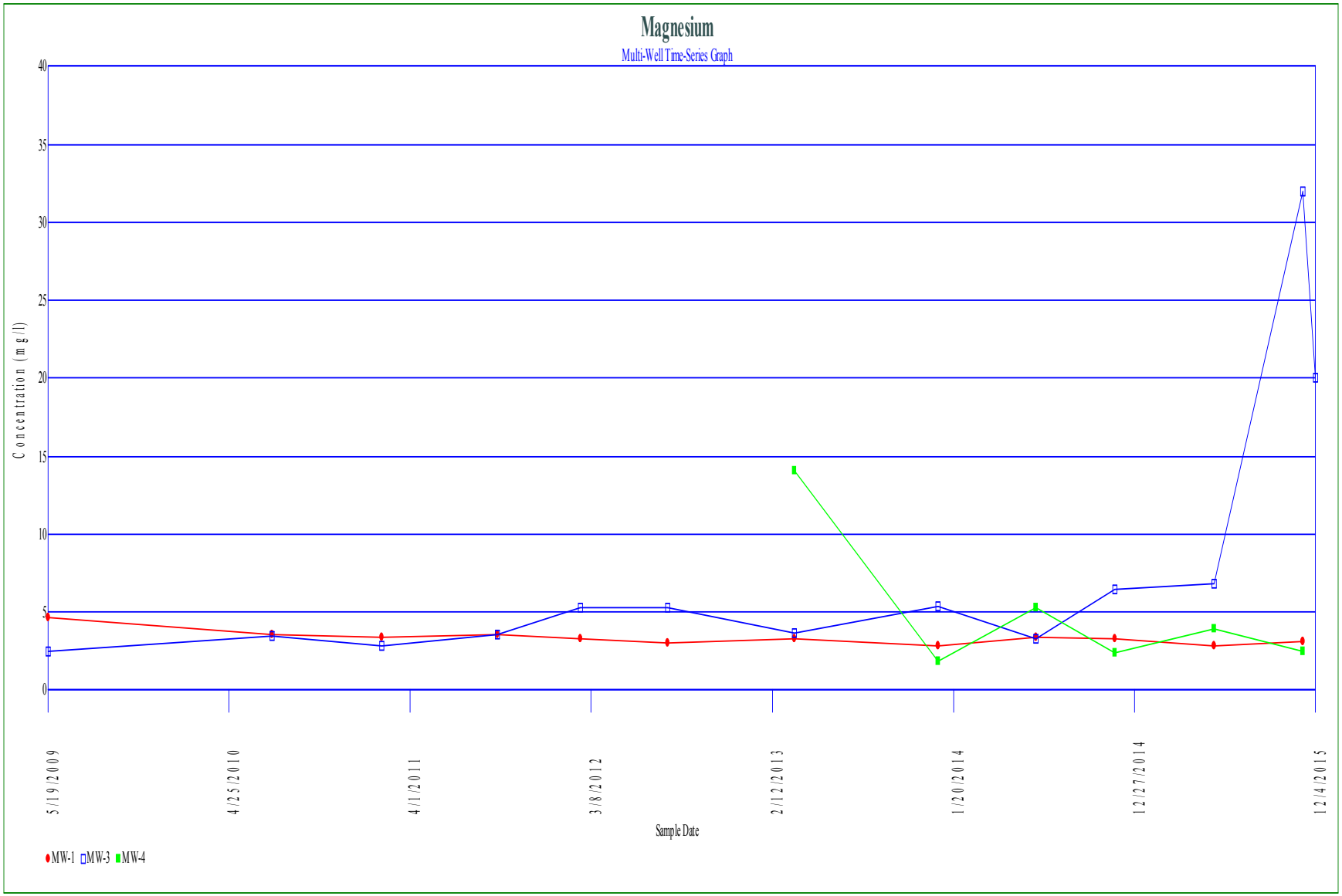

Silver
Multi-Well Time-Series Graph
0.01
0.008
0.006
0.004
0.002
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

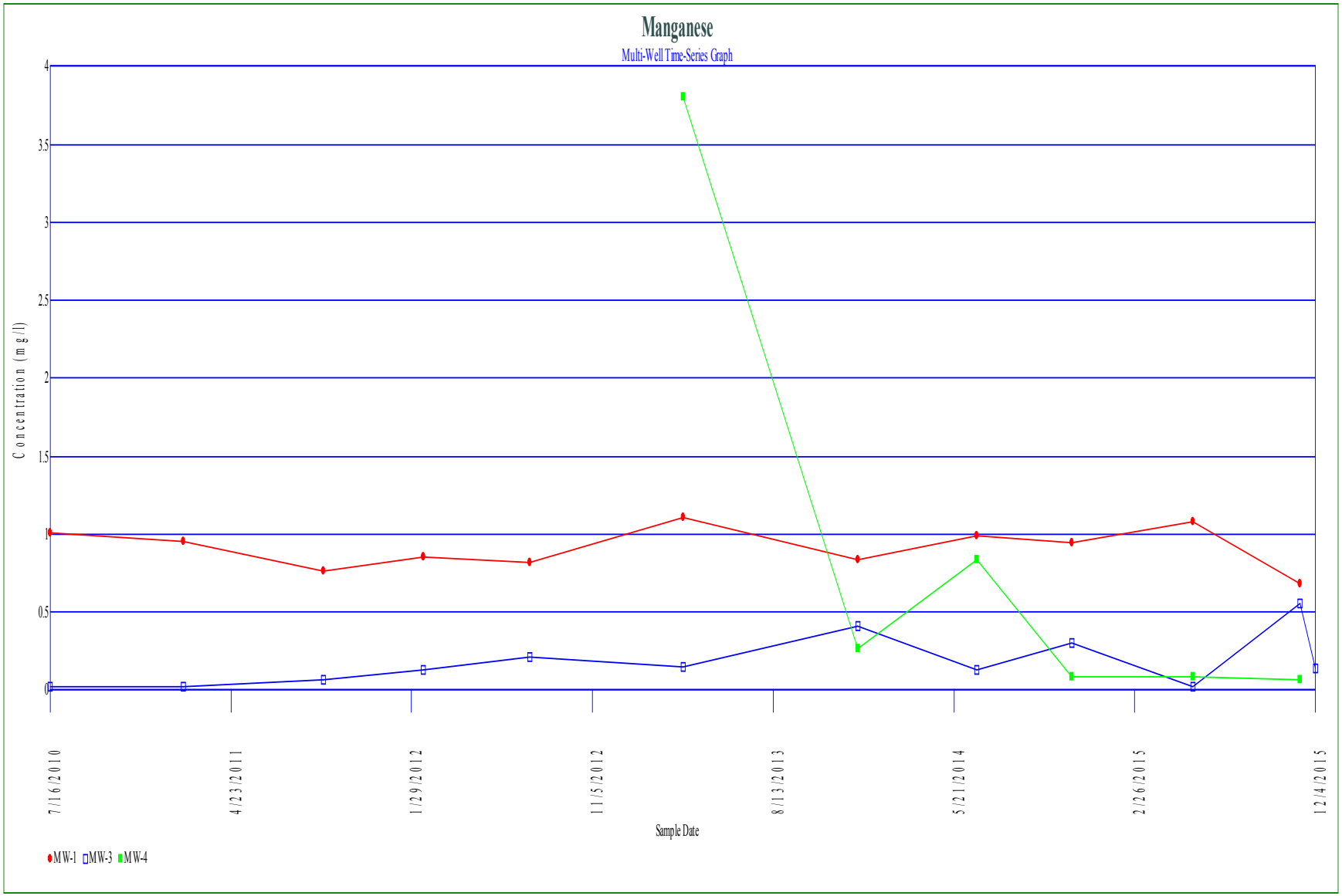

Thallium
Multi-Well Time-Series Graph
0.002
0.0015
0.001
0.0005
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

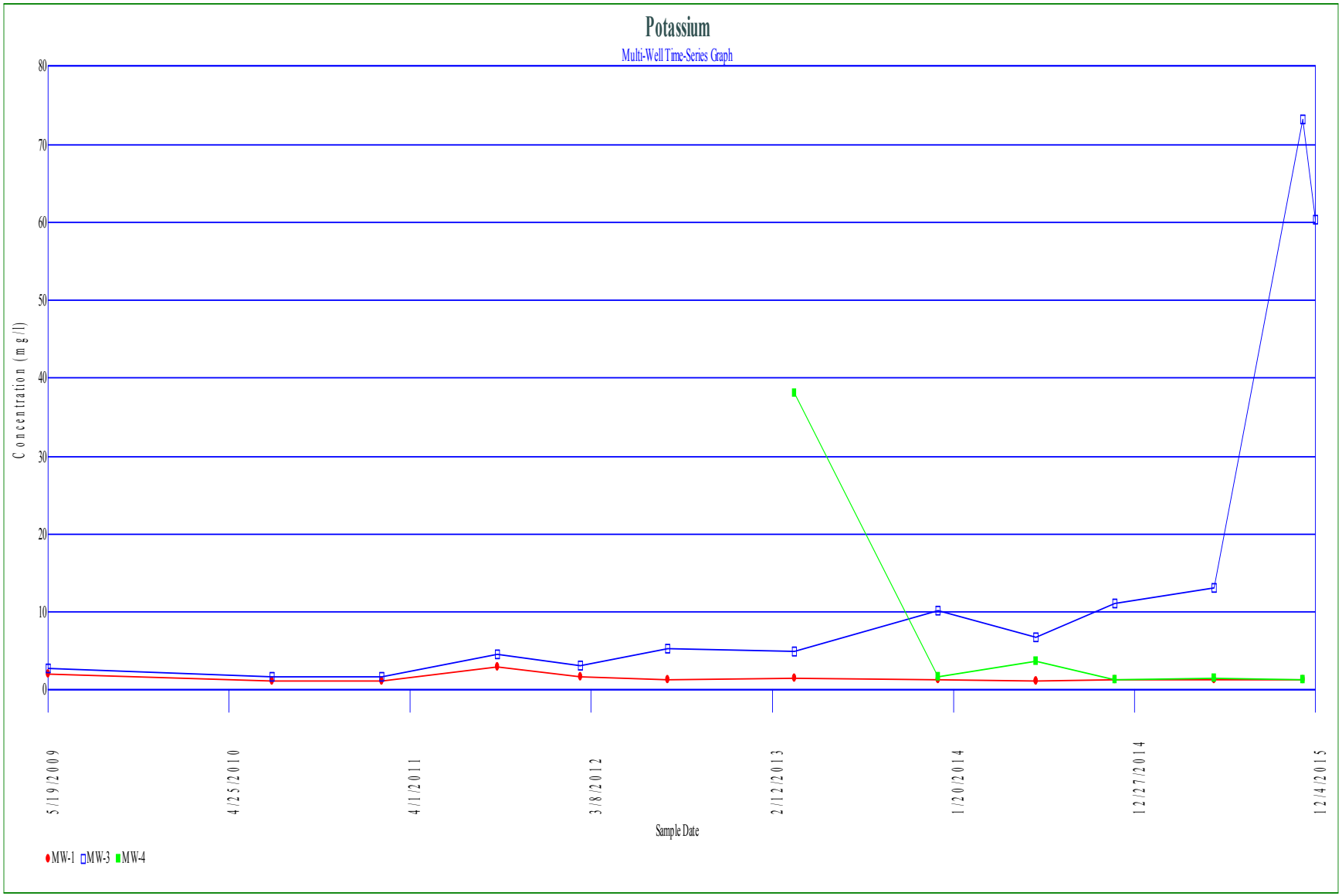

Vanadium
Multi-Well Time-Series Graph
0.03
0.025
0.02
0.015
0.01
0.005
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

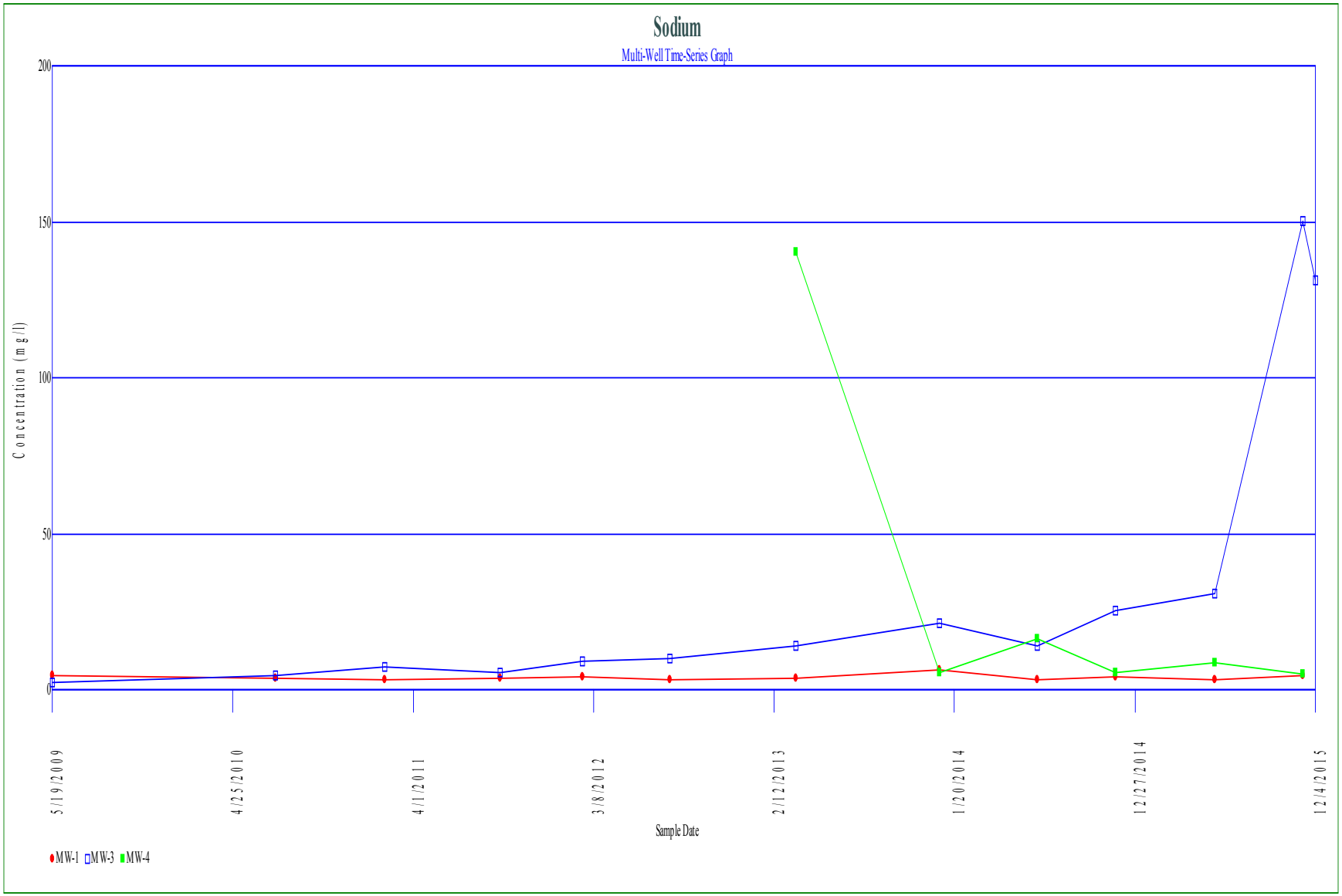

Zinc
Multi-Well Time-Series Graph
0.6
0.5
0.4
0.3
0.2
0.1
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

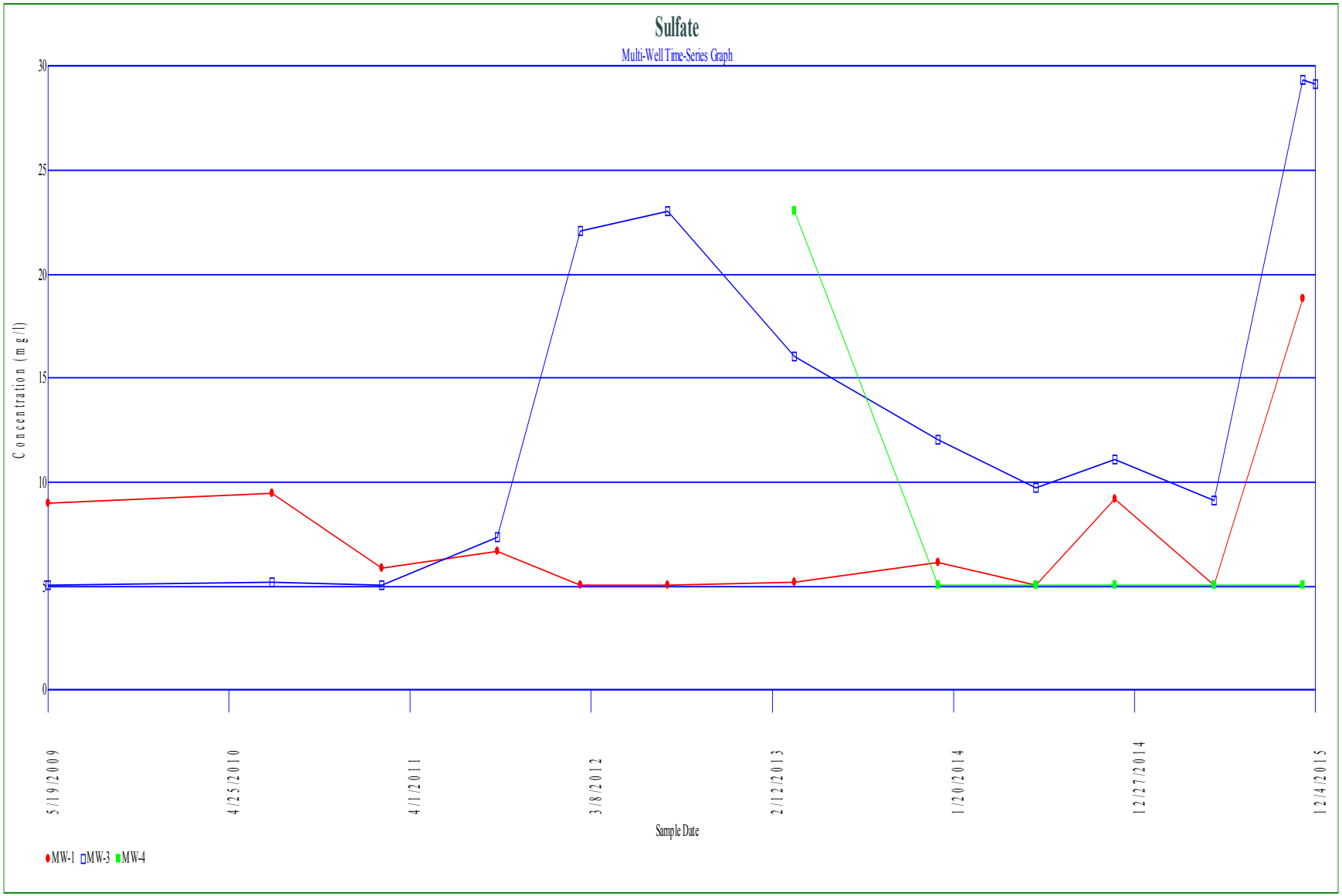

Chloride
Multi-Well Time-Series Graph
500
400
300
200
100
0
Concentration (mg/l)
4/19/2008
5/21/2009
6/23/2010
7/26/2011
8/27/2012
9/29/2013
11/1/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

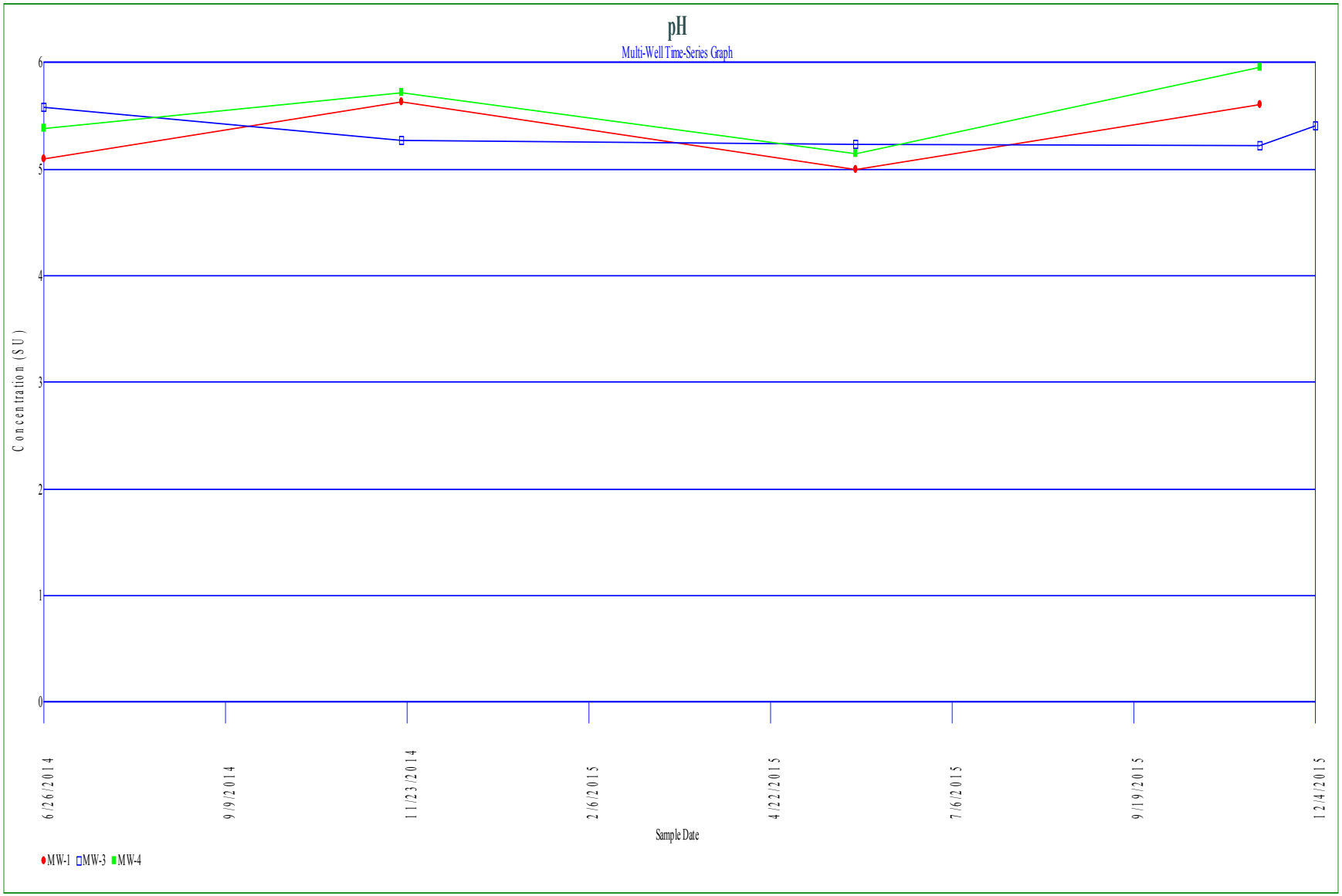

Magnesium
Multi-Well Time-Series Graph
Concentration (mg/l)
40
35
30
25
20
15
10
5
0
5/19/2009
4/25/2010
4/1/2011
3/8/2012
2/12/2013
1/20/2014
12/27/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4

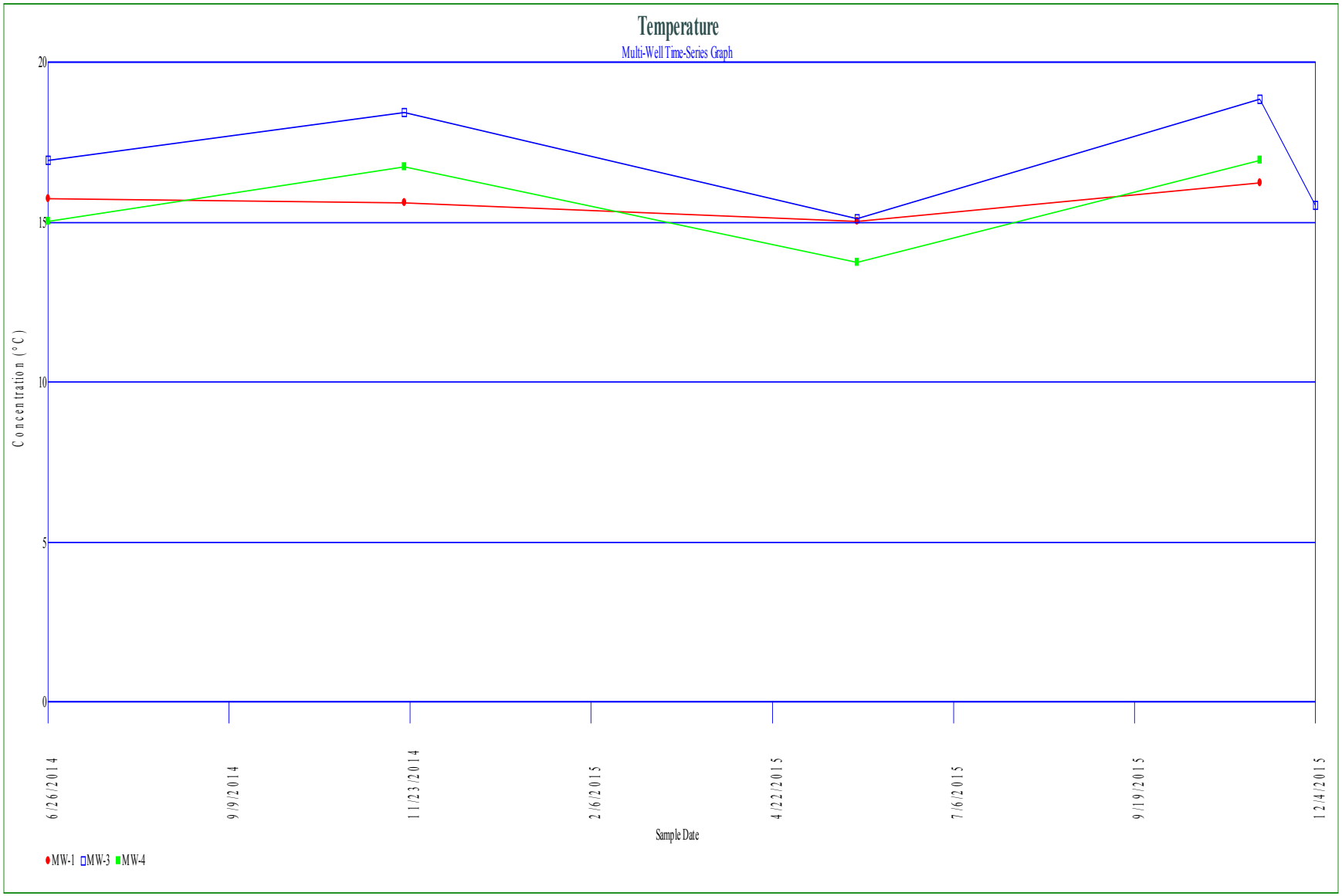

Manganese
Multi-Well Time-Series Graph
Concentration (mg/l)
4
3.5
3
2.5
2
1.5
1
0.5
0
7/16/2010
4/23/2011
1/29/2012
11/5/2012
8/13/2013
5/21/2014
2/26/2015
12/4/2015
Sample Date
MW-1
MW-3
MW-4


Potassium
Multi-Well Time-Series Graph
Concentration (mg/l)
80
70
60
50
40
30
20
10
0
5/19/2009
4/25/2010
4/1/2011
3/8/2012
2/12/2013
1/20/2014
12/27/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4


Sodium
Multi-Well Time-Series Graph
200
150
100
50
0
Concentration (mg/l)
5/19/2009
4/25/2010
4/1/2011
3/8/2012
2/12/2013
1/20/2014
12/27/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4


Sulfate
Multi-Well Time-Series Graph
30
25
20
15
10
5
0
Concentration (mg/l)
5/19/2009
4/25/2010
4/1/2011
3/8/2012
2/12/2013
1/20/2014
12/27/2014
12/4/2015
Sample Date
MW-1
MW-3
MW-4


pH
Multi-Well Time-Series Graph
Concentration (SU)
6
5
4
3
2
1
0
6/26/2014
9/9/2014
11/23/2014
2/6/2015
4/22/2015
7/6/2015
9/19/2015
12/4/2015
Sample Date
MW-1
MW-3
MW-4


Temperature
Multi-Well Time-Series Graph
20
15
10
5
0
Concentration (°C)
6/26/2014
9/9/2014
11/23/2014
2/6/2015
4/22/2015
7/6/2015
9/19/2015
12/4/2015
Sample Date
MW-1
MW-3
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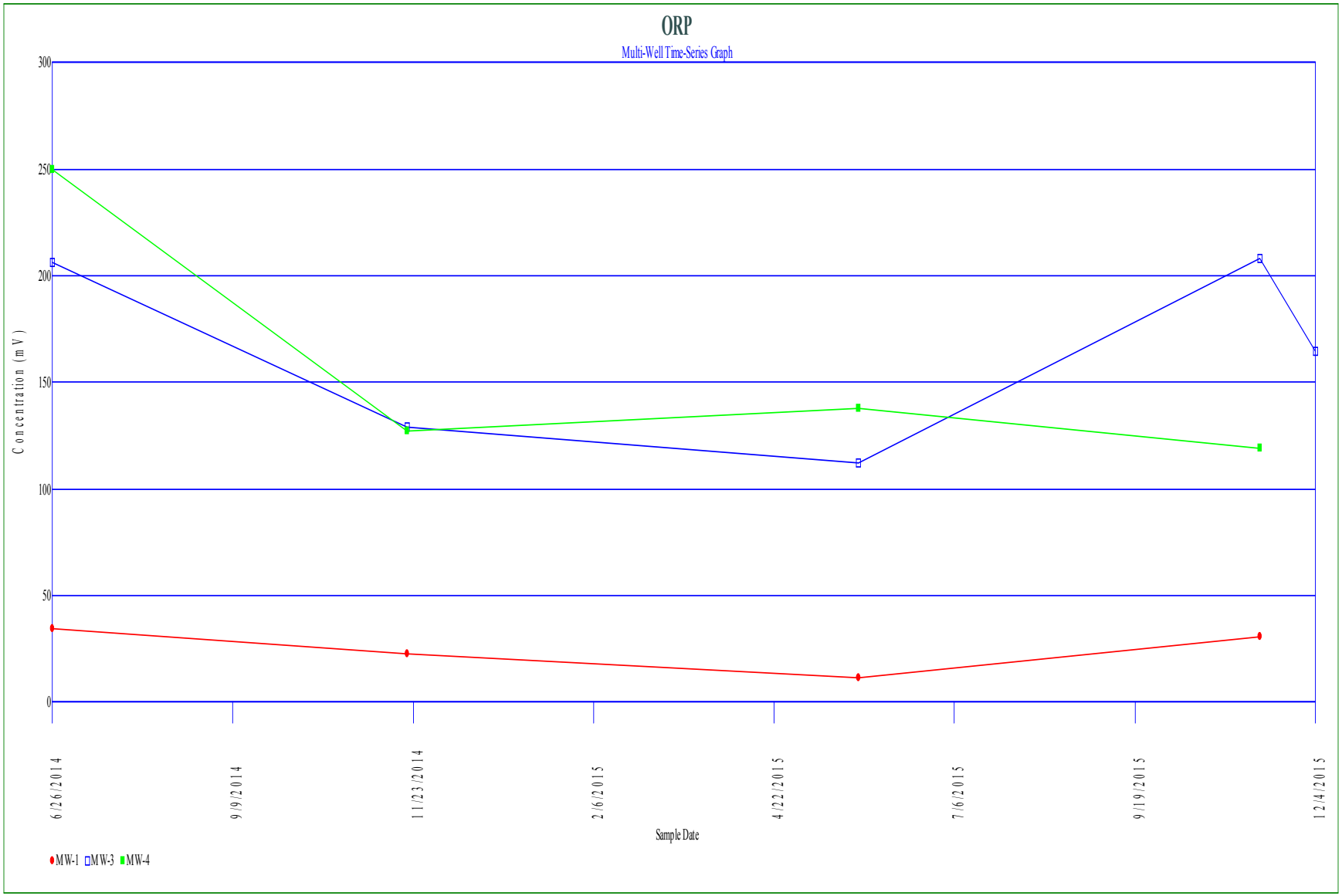
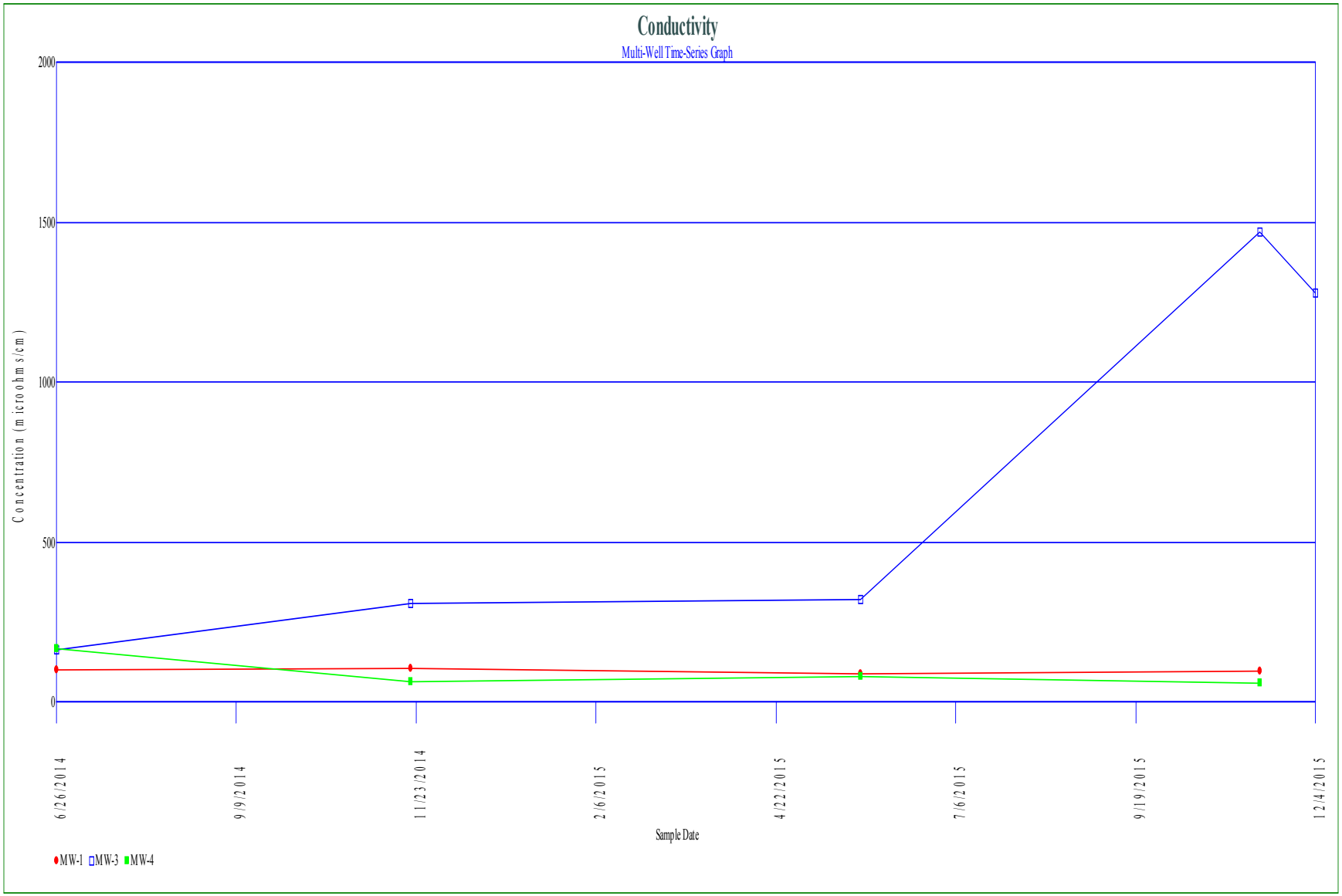
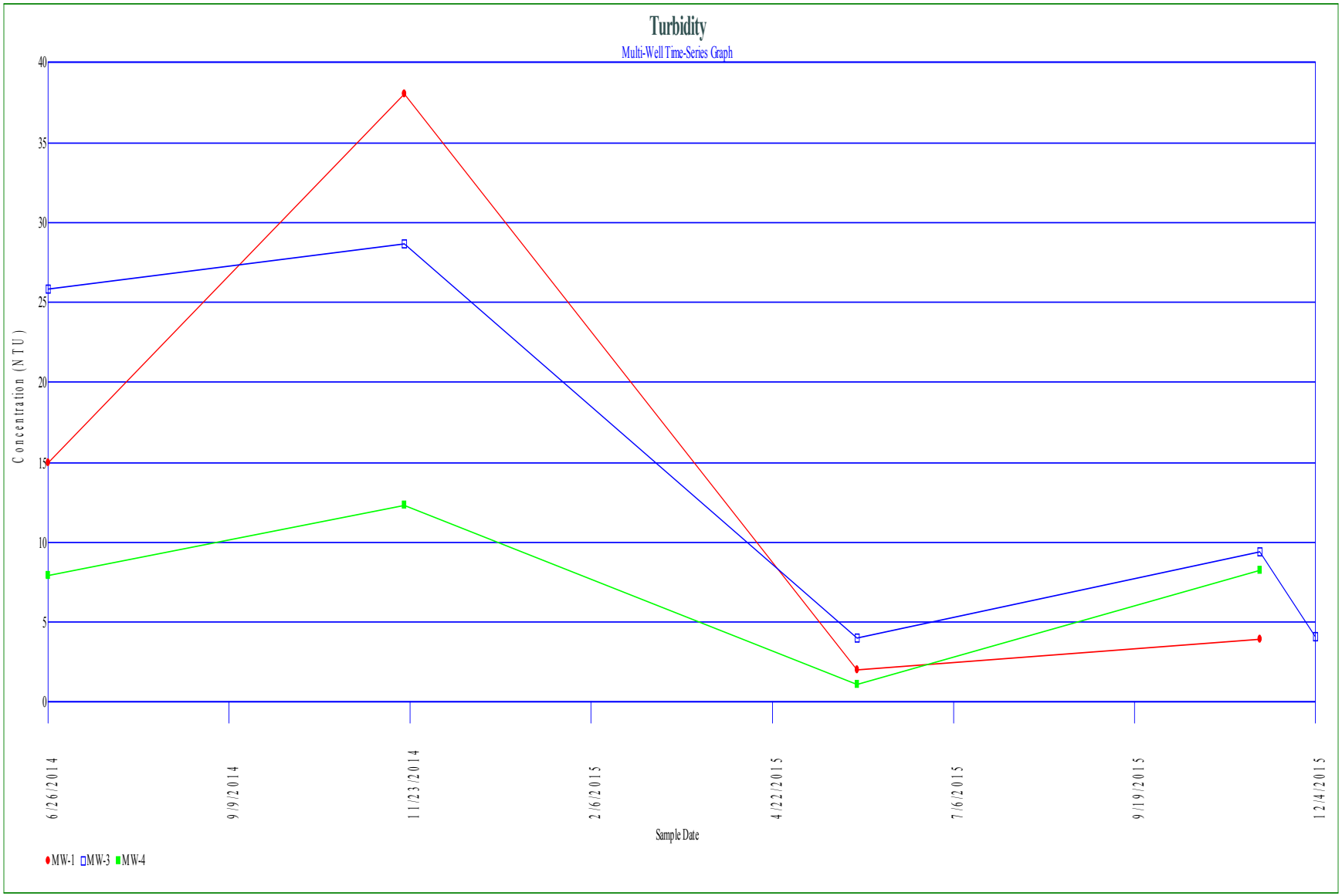
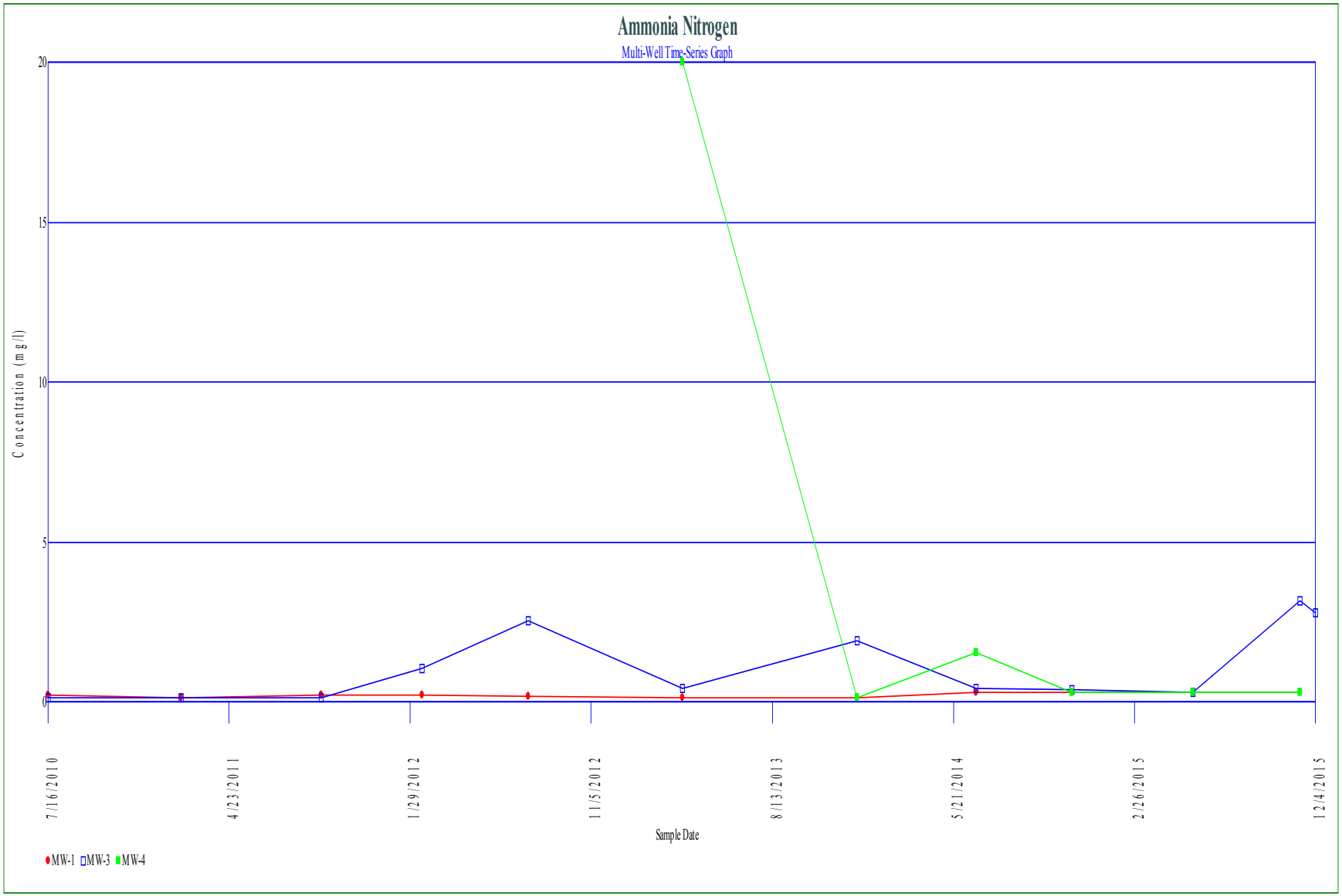
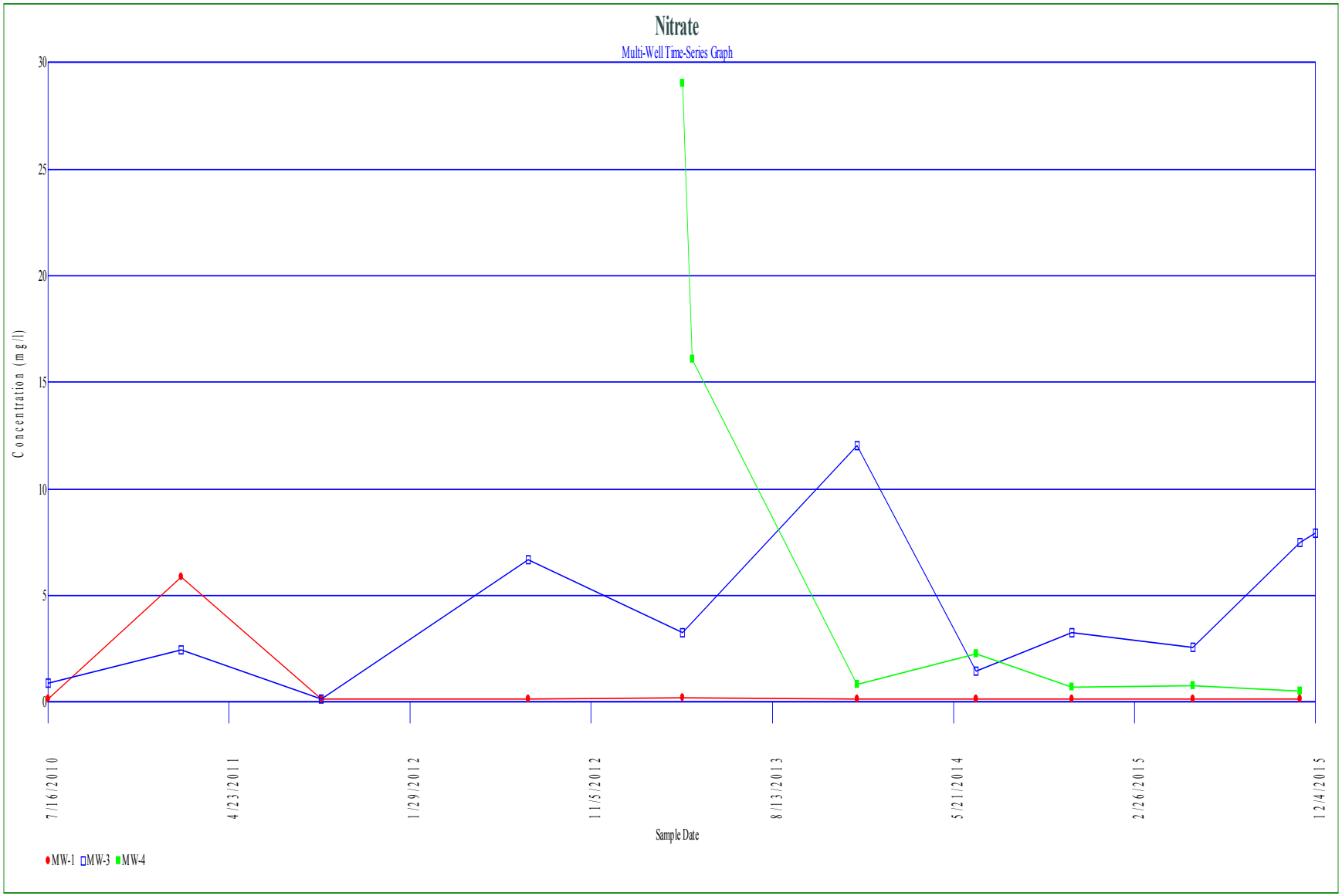

ORP
Multi-Well Time-Series Graph
300
250
200
150
100
50
0
Concentration (mV)
6/26/2014
9/9/2014
11/23/2014
2/6/2015
4/22/2015
7/6/2015
9/19/2015
12/4/2015
Sample Date
MW-1
MW-3
MW-4


Conductivity
Multi-Well Time-Series Graph
2000
1500
1000
500
0
Concentration (microohms/cm)
6/26/2014
9/9/2014
11/23/2014
2/6/2015
4/22/2015
7/6/2015
9/19/2015
12/4/2015
Sample Date
MW-1
MW-3
MW-4


Turbidity
Multi-Well Time-Series Graph
Concentration (NTU)
40
35
30
25
20
15
10
5
0
6/26/2014
9/9/2014
11/23/2014
2/6/2015
4/22/2015
7/6/2015
9/19/2015
12/4/2015
Sample Date
MW-1
MW-3
MW-4


Ammonia Nitrogen
Multi-Well Time-Series Graph
20
15
10
5
0
Concentration (mg/l)
7/16/2010
4/23/2011
1/29/2012
11/5/2012
8/13/2013
5/21/2014
2/26/2015
12/4/2015
Sample Date
MW-1
MW-3
MW-4


Nitrate
Multi-Well Time-Series Graph
30
25
20
15
10
5
0
Concentration (mg/l)
7/16/2010
4/23/2011
1/29/2012
11/5/2012
8/13/2013
5/21/2014
2/26/2015
12/4/2015
Sample Date
MW-1
MW-3
MW-4

APPENDIX C

LABORATORY ANALYTICAL REPORT, FIELD INFORMATION LOGS

ANALYTICAL REPORT

December 02, 2015

Civil & Environmental Consultants - TN

Sample Delivery Group:	L800499
Samples Received:	11/12/2015
Project Number:	
Description:	EWS Camden Class 2 Landfill
Site:	CAMDEN, TN
Report To:	Philip Campbell 325 Seaboard Lane, Suite 170 Franklin, TN 37067

Entire Report Reviewed By:

Jimmy Hunt
Technical Service Representative

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MW-1 L800499-01 GW

Collected by: Philip Campbell
Collected date/time: 11/11/15 10:00
Received date/time: 11/12/15 12:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG828701	1	11/13/15 10:42	11/13/15 15:08	TRB
Mercury by Method 7470A	WG828702	1	11/13/15 10:48	11/13/15 15:48	TRB
Metals (ICP) by Method 6010B	WG828857	1	11/15/15 20:33	11/16/15 12:20	LTB
Metals (ICP) by Method 6010B	WG829252	1	11/17/15 22:21	11/18/15 10:09	LTB
Metals (ICPMS) by Method 6020	WG829110	1	11/14/15 14:48	11/16/15 02:14	JD
Metals (ICPMS) by Method 6020	WG829110	1	11/14/15 14:48	11/16/15 11:04	JDG
Metals (ICPMS) by Method 6020	WG829185	1	11/17/15 14:44	11/18/15 13:03	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG828737	1	11/16/15 07:13	11/16/15 07:13	JHH
Wet Chemistry by Method 350.1	WG830350	1	11/20/15 09:53	11/20/15 09:53	JAL
Wet Chemistry by Method 9056MOD	WG828562	1	11/13/15 09:44	11/13/15 09:44	DJD
Wet Chemistry by Method 9056MOD	WG829103	1	11/18/15 00:02	11/18/15 00:02	DJD

MW-3 L800499-02 GW

Collected by: Philip Campbell
Collected date/time: 11/11/15 11:00
Received date/time: 11/12/15 12:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG828701	1	11/13/15 10:42	11/13/15 15:10	TRB
Mercury by Method 7470A	WG828702	1	11/13/15 10:48	11/13/15 15:50	TRB
Metals (ICP) by Method 6010B	WG828857	1	11/15/15 20:33	11/16/15 12:23	LTB
Metals (ICP) by Method 6010B	WG829252	1	11/17/15 22:21	11/18/15 10:27	LTB
Metals (ICPMS) by Method 6020	WG829110	1	11/14/15 14:48	11/16/15 02:16	JD
Metals (ICPMS) by Method 6020	WG829110	1	11/14/15 14:48	11/16/15 11:06	JDG
Metals (ICPMS) by Method 6020	WG829185	1	11/17/15 14:44	11/18/15 13:05	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG828737	1	11/16/15 07:36	11/16/15 07:36	JHH
Wet Chemistry by Method 350.1	WG830350	1	11/20/15 09:56	11/20/15 09:56	JAL
Wet Chemistry by Method 9056MOD	WG828562	1	11/13/15 10:29	11/13/15 10:29	DJD
Wet Chemistry by Method 9056MOD	WG828562	10	11/13/15 18:17	11/13/15 18:17	DJD

MW-4 L800499-03 GW

Collected by: Philip Campbell
Collected date/time: 11/11/15 13:30
Received date/time: 11/12/15 12:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG828701	1	11/13/15 10:42	11/13/15 15:13	TRB
Mercury by Method 7470A	WG828702	1	11/13/15 10:48	11/13/15 15:53	TRB
Metals (ICP) by Method 6010B	WG829252	1	11/17/15 22:21	11/18/15 10:30	LTB
Metals (ICP) by Method 6010B	WG831185	1	11/23/15 17:24	11/23/15 22:44	ST
Metals (ICPMS) by Method 6020	WG829110	1	11/14/15 14:48	11/16/15 02:18	JD
Metals (ICPMS) by Method 6020	WG829110	1	11/14/15 14:48	11/16/15 11:09	JDG
Metals (ICPMS) by Method 6020	WG829185	1	11/17/15 14:44	11/18/15 13:08	LAT
Metals (ICPMS) by Method 6020	WG831214	1	11/23/15 18:53	11/24/15 12:12	JDG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG828737	1	11/16/15 07:59	11/16/15 07:59	JHH
Wet Chemistry by Method 350.1	WG830350	1	11/20/15 09:58	11/20/15 09:58	JAL
Wet Chemistry by Method 9056MOD	WG828562	1	11/13/15 11:46	11/13/15 11:46	DJD

DUPLICATE L800499-04 GW

Collected by: Philip Campbell
Collected date/time: 11/11/15 00:00
Received date/time: 11/12/15 12:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG828701	1	11/13/15 10:42	11/13/15 15:19	TRB
Mercury by Method 7470A	WG828702	1	11/13/15 10:48	11/13/15 15:55	TRB
Metals (ICP) by Method 6010B	WG828857	1	11/15/15 20:33	11/16/15 12:29	LTB
Metals (ICP) by Method 6010B	WG829252	1	11/17/15 22:21	11/18/15 10:33	LTB

DUPLICATE L800499-04 GW

Collected by: Philip Campbell
Collected date/time: 11/11/15 00:00
Received date/time: 11/12/15 12:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020	WG829110	1	11/14/15 14:48	11/16/15 02:21	JD
Metals (ICPMS) by Method 6020	WG829110	1	11/14/15 14:48	11/16/15 11:11	JDG
Metals (ICPMS) by Method 6020	WG829185	1	11/17/15 14:44	11/18/15 13:11	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG828737	1	11/16/15 08:21	11/16/15 08:21	JHH
Wet Chemistry by Method 350.1	WG830350	1	11/20/15 10:01	11/20/15 10:01	JAL
Wet Chemistry by Method 9056MOD	WG828306	1	11/12/15 17:17	11/12/15 17:17	CM
Wet Chemistry by Method 9056MOD	WG829643	1	11/19/15 12:31	11/19/15 12:31	DJD

FIELD BLANK L800499-05 GW

Collected by: Philip Campbell
Collected date/time: 11/11/15 11:50
Received date/time: 11/12/15 12:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG828701	1	11/13/15 10:42	11/13/15 15:21	TRB
Mercury by Method 7470A	WG828702	1	11/13/15 10:48	11/13/15 15:57	TRB
Metals (ICP) by Method 6010B	WG828857	1	11/15/15 20:33	11/16/15 12:32	LTB
Metals (ICP) by Method 6010B	WG829252	1	11/17/15 22:21	11/18/15 10:36	LTB
Metals (ICPMS) by Method 6020	WG829110	1	11/14/15 14:48	11/16/15 02:23	JD
Metals (ICPMS) by Method 6020	WG829110	1	11/14/15 14:48	11/16/15 11:13	JDG
Metals (ICPMS) by Method 6020	WG829185	1	11/17/15 14:44	11/18/15 13:14	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG828737	1	11/16/15 00:49	11/16/15 00:49	JHH
Wet Chemistry by Method 350.1	WG830350	1	11/20/15 10:03	11/20/15 10:03	JAL
Wet Chemistry by Method 9056MOD	WG828562	1	11/13/15 10:45	11/13/15 10:45	DJD

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jimmy Hunt
Technical Service Representative

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	ND		0.250	1	11/20/2015 09:53	WG830350

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	11/13/2015 09:44	WG828562
Chloride	3.97		1.00	1	11/18/2015 00:02	WG829103
Nitrate	ND		0.100	1	11/13/2015 09:44	WG828562
Sulfate	18.8	P1	5.00	1	11/13/2015 09:44	WG828562

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/13/2015 15:08	WG828701
Mercury,Dissolved	ND		0.000200	1	11/13/2015 15:48	WG828702

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	ND		0.200	1	11/18/2015 10:09	WG829252
Aluminum,Dissolved	ND		0.200	1	11/16/2015 12:20	WG828857
Barium	0.0237		0.00500	1	11/18/2015 10:09	WG829252
Barium,Dissolved	0.0235		0.00500	1	11/16/2015 12:20	WG828857
Boron	ND		0.200	1	11/18/2015 10:09	WG829252
Boron,Dissolved	ND		0.200	1	11/16/2015 12:20	WG828857
Calcium	3.99		1.00	1	11/18/2015 10:09	WG829252
Calcium,Dissolved	4.21		1.00	1	11/16/2015 12:20	WG828857
Chromium	ND		0.0100	1	11/18/2015 10:09	WG829252
Chromium,Dissolved	ND		0.0100	1	11/16/2015 12:20	WG828857
Cobalt	0.0257		0.0100	1	11/18/2015 10:09	WG829252
Cobalt,Dissolved	0.0261		0.0100	1	11/16/2015 12:20	WG828857
Iron	12.3		0.100	1	11/18/2015 10:09	WG829252
Iron,Dissolved	10.0		0.100	1	11/16/2015 12:20	WG828857
Magnesium	3.07		1.00	1	11/18/2015 10:09	WG829252
Magnesium,Dissolved	3.16		1.00	1	11/16/2015 12:20	WG828857
Manganese	0.678		0.0100	1	11/18/2015 10:09	WG829252
Manganese,Dissolved	0.703		0.0100	1	11/16/2015 12:20	WG828857
Nickel	0.0112		0.0100	1	11/18/2015 10:09	WG829252
Nickel,Dissolved	0.0109		0.0100	1	11/16/2015 12:20	WG828857
Potassium	1.16		1.00	1	11/18/2015 10:09	WG829252
Potassium,Dissolved	1.18		1.00	1	11/16/2015 12:20	WG828857
Silver	ND		0.00500	1	11/18/2015 10:09	WG829252
Silver,Dissolved	ND		0.00500	1	11/16/2015 12:20	WG828857
Sodium	4.25		1.00	1	11/18/2015 10:09	WG829252
Sodium,Dissolved	4.18		1.00	1	11/16/2015 12:20	WG828857
Vanadium	ND		0.0200	1	11/18/2015 10:09	WG829252
Vanadium,Dissolved	ND		0.0200	1	11/16/2015 12:20	WG828857

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	11/16/2015 02:14	WG829110
Antimony,Dissolved	ND		0.00200	1	11/18/2015 13:03	WG829185
Arsenic	0.0469		0.00200	1	11/16/2015 02:14	WG829110
Arsenic,Dissolved	0.00797		0.00200	1	11/18/2015 13:03	WG829185
Beryllium	ND		0.00200	1	11/16/2015 02:14	WG829110
Beryllium,Dissolved	ND		0.00200	1	11/18/2015 13:03	WG829185
Cadmium	ND		0.00100	1	11/16/2015 02:14	WG829110
Cadmium,Dissolved	ND		0.00100	1	11/18/2015 13:03	WG829185
Copper	ND		0.00500	1	11/16/2015 02:14	WG829110
Copper,Dissolved	ND		0.00500	1	11/18/2015 13:03	WG829185
Lead	ND		0.00200	1	11/16/2015 02:14	WG829110
Lead,Dissolved	ND		0.00200	1	11/18/2015 13:03	WG829185
Selenium	ND		0.00200	1	11/16/2015 11:04	WG829110
Selenium,Dissolved	ND		0.00200	1	11/18/2015 13:03	WG829185
Thallium	ND		0.00200	1	11/16/2015 02:14	WG829110
Thallium,Dissolved	ND		0.00200	1	11/18/2015 13:03	WG829185
Zinc	ND		0.0250	1	11/16/2015 02:14	WG829110
Zinc,Dissolved	ND		0.0250	1	11/18/2015 13:03	WG829185

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	11/16/2015 07:13	WG828737
Acrylonitrile	ND		0.0100	1	11/16/2015 07:13	WG828737
Benzene	ND		0.00100	1	11/16/2015 07:13	WG828737
Bromochloromethane	ND		0.00100	1	11/16/2015 07:13	WG828737
Bromodichloromethane	ND		0.00100	1	11/16/2015 07:13	WG828737
Bromoform	ND		0.00100	1	11/16/2015 07:13	WG828737
Bromomethane	ND	J3	0.00500	1	11/16/2015 07:13	WG828737
Carbon disulfide	ND		0.00100	1	11/16/2015 07:13	WG828737
Carbon tetrachloride	ND		0.00100	1	11/16/2015 07:13	WG828737
Chlorobenzene	ND		0.00100	1	11/16/2015 07:13	WG828737
Chlorodibromomethane	ND		0.00100	1	11/16/2015 07:13	WG828737
Chloroethane	ND		0.00500	1	11/16/2015 07:13	WG828737
Chloroform	ND		0.00500	1	11/16/2015 07:13	WG828737
Chloromethane	ND		0.00250	1	11/16/2015 07:13	WG828737
Dibromomethane	ND		0.00100	1	11/16/2015 07:13	WG828737
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	11/16/2015 07:13	WG828737
1,2-Dibromoethane	ND		0.00100	1	11/16/2015 07:13	WG828737
1,2-Dichlorobenzene	ND		0.00100	1	11/16/2015 07:13	WG828737
1,4-Dichlorobenzene	ND		0.00100	1	11/16/2015 07:13	WG828737
trans-1,4-Dichloro-2-butene	ND		0.00250	1	11/16/2015 07:13	WG828737
1,1-Dichloroethane	ND		0.00100	1	11/16/2015 07:13	WG828737
1,2-Dichloroethane	ND		0.00100	1	11/16/2015 07:13	WG828737
1,1-Dichloroethene	ND		0.00100	1	11/16/2015 07:13	WG828737
cis-1,2-Dichloroethene	ND		0.00100	1	11/16/2015 07:13	WG828737
trans-1,2-Dichloroethene	ND		0.00100	1	11/16/2015 07:13	WG828737
1,2-Dichloropropane	ND		0.00100	1	11/16/2015 07:13	WG828737
cis-1,3-Dichloropropene	ND		0.00100	1	11/16/2015 07:13	WG828737
trans-1,3-Dichloropropene	ND		0.00100	1	11/16/2015 07:13	WG828737
Ethylbenzene	ND		0.00100	1	11/16/2015 07:13	WG828737
2-Hexanone	ND		0.0100	1	11/16/2015 07:13	WG828737
Iodomethane	ND		0.0100	1	11/16/2015 07:13	WG828737
2-Butanone (MEK)	ND		0.0100	1	11/16/2015 07:13	WG828737
Methylene Chloride	ND		0.00500	1	11/16/2015 07:13	WG828737
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	11/16/2015 07:13	WG828737

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Styrene	ND		0.00100	1	11/16/2015 07:13	WG828737
1,1,1,2-Tetrachloroethane	ND		0.00100	1	11/16/2015 07:13	WG828737
1,1,2,2-Tetrachloroethane	ND	J4	0.00100	1	11/16/2015 07:13	WG828737
Tetrachloroethene	ND		0.00100	1	11/16/2015 07:13	WG828737
Toluene	ND		0.00500	1	11/16/2015 07:13	WG828737
1,1,1-Trichloroethane	ND		0.00100	1	11/16/2015 07:13	WG828737
1,1,2-Trichloroethane	ND		0.00100	1	11/16/2015 07:13	WG828737
Trichloroethene	ND		0.00100	1	11/16/2015 07:13	WG828737
Trichlorofluoromethane	ND		0.00500	1	11/16/2015 07:13	WG828737
1,2,3-Trichloropropane	ND		0.00250	1	11/16/2015 07:13	WG828737
Vinyl acetate	ND		0.0100	1	11/16/2015 07:13	WG828737
Vinyl chloride	ND		0.00100	1	11/16/2015 07:13	WG828737
Xylenes, Total	ND		0.00300	1	11/16/2015 07:13	WG828737
(S) Toluene-d8	*106*		*90.0-115*		*11/16/2015 07:13*	WG828737
(S) Dibromofluoromethane	*101*		*79.0-121*		*11/16/2015 07:13*	WG828737
(S) a,a,a-Trifluorotoluene	*106*		*90.4-116*		*11/16/2015 07:13*	WG828737
(S) 4-Bromofluorobenzene	*96.3*		*80.1-120*		*11/16/2015 07:13*	WG828737

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	3.12		0.250	1	11/20/2015 09:56	WG830350

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	11/13/2015 10:29	WG828562
Chloride	458		10.0	10	11/13/2015 18:17	WG828562
Nitrate	7.46		0.100	1	11/13/2015 10:29	WG828562
Sulfate	29.3		5.00	1	11/13/2015 10:29	WG828562

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/13/2015 15:10	WG828701
Mercury,Dissolved	ND		0.000200	1	11/13/2015 15:50	WG828702

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	ND		0.200	1	11/18/2015 10:27	WG829252
Aluminum,Dissolved	ND		0.200	1	11/16/2015 12:23	WG828857
Barium	0.701		0.00500	1	11/18/2015 10:27	WG829252
Barium,Dissolved	0.737		0.00500	1	11/16/2015 12:23	WG828857
Boron	ND		0.200	1	11/18/2015 10:27	WG829252
Boron,Dissolved	ND		0.200	1	11/16/2015 12:23	WG828857
Calcium	71.6		1.00	1	11/18/2015 10:27	WG829252
Calcium,Dissolved	76.8		1.00	1	11/16/2015 12:23	WG828857
Chromium	ND		0.0100	1	11/18/2015 10:27	WG829252
Chromium,Dissolved	ND		0.0100	1	11/16/2015 12:23	WG828857
Cobalt	ND		0.0100	1	11/18/2015 10:27	WG829252
Cobalt,Dissolved	ND		0.0100	1	11/16/2015 12:23	WG828857
Iron	ND		0.100	1	11/18/2015 10:27	WG829252
Iron,Dissolved	ND		0.100	1	11/16/2015 12:23	WG828857
Magnesium	31.9		1.00	1	11/18/2015 10:27	WG829252
Magnesium,Dissolved	31.8		1.00	1	11/16/2015 12:23	WG828857
Manganese	0.549		0.0100	1	11/18/2015 10:27	WG829252
Manganese,Dissolved	0.572		0.0100	1	11/16/2015 12:23	WG828857
Nickel	ND		0.0100	1	11/18/2015 10:27	WG829252
Nickel,Dissolved	ND		0.0100	1	11/16/2015 12:23	WG828857
Potassium	73.1		1.00	1	11/18/2015 10:27	WG829252
Potassium,Dissolved	73.6		1.00	1	11/16/2015 12:23	WG828857
Silver	ND		0.00500	1	11/18/2015 10:27	WG829252
Silver,Dissolved	ND		0.00500	1	11/16/2015 12:23	WG828857
Sodium	150		1.00	1	11/18/2015 10:27	WG829252
Sodium,Dissolved	154		1.00	1	11/16/2015 12:23	WG828857
Vanadium	ND		0.0200	1	11/18/2015 10:27	WG829252
Vanadium,Dissolved	ND		0.0200	1	11/16/2015 12:23	WG828857

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	11/16/2015 02:16	WG829110
Antimony,Dissolved	ND		0.00200	1	11/18/2015 13:05	WG829185
Arsenic	ND		0.00200	1	11/16/2015 02:16	WG829110
Arsenic,Dissolved	ND		0.00200	1	11/18/2015 13:05	WG829185
Beryllium	ND		0.00200	1	11/16/2015 02:16	WG829110
Beryllium,Dissolved	ND		0.00200	1	11/18/2015 13:05	WG829185
Cadmium	ND		0.00100	1	11/16/2015 02:16	WG829110
Cadmium,Dissolved	ND		0.00100	1	11/18/2015 13:05	WG829185
Copper	ND		0.00500	1	11/16/2015 02:16	WG829110
Copper,Dissolved	ND		0.00500	1	11/18/2015 13:05	WG829185
Lead	ND		0.00200	1	11/16/2015 02:16	WG829110
Lead,Dissolved	ND		0.00200	1	11/18/2015 13:05	WG829185
Selenium	ND		0.00200	1	11/16/2015 11:06	WG829110
Selenium,Dissolved	ND		0.00200	1	11/18/2015 13:05	WG829185
Thallium	ND		0.00200	1	11/16/2015 02:16	WG829110
Thallium,Dissolved	ND		0.00200	1	11/18/2015 13:05	WG829185
Zinc	ND		0.0250	1	11/16/2015 02:16	WG829110
Zinc,Dissolved	ND		0.0250	1	11/18/2015 13:05	WG829185

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	11/16/2015 07:36	WG828737
Acrylonitrile	ND		0.0100	1	11/16/2015 07:36	WG828737
Benzene	ND		0.00100	1	11/16/2015 07:36	WG828737
Bromochloromethane	ND		0.00100	1	11/16/2015 07:36	WG828737
Bromodichloromethane	ND		0.00100	1	11/16/2015 07:36	WG828737
Bromoform	ND		0.00100	1	11/16/2015 07:36	WG828737
Bromomethane	ND	J3	0.00500	1	11/16/2015 07:36	WG828737
Carbon disulfide	ND		0.00100	1	11/16/2015 07:36	WG828737
Carbon tetrachloride	ND		0.00100	1	11/16/2015 07:36	WG828737
Chlorobenzene	ND		0.00100	1	11/16/2015 07:36	WG828737
Chlorodibromomethane	ND		0.00100	1	11/16/2015 07:36	WG828737
Chloroethane	ND		0.00500	1	11/16/2015 07:36	WG828737
Chloroform	ND		0.00500	1	11/16/2015 07:36	WG828737
Chloromethane	ND		0.00250	1	11/16/2015 07:36	WG828737
Dibromomethane	ND		0.00100	1	11/16/2015 07:36	WG828737
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	11/16/2015 07:36	WG828737
1,2-Dibromoethane	ND		0.00100	1	11/16/2015 07:36	WG828737
1,2-Dichlorobenzene	ND		0.00100	1	11/16/2015 07:36	WG828737
1,4-Dichlorobenzene	ND		0.00100	1	11/16/2015 07:36	WG828737
trans-1,4-Dichloro-2-butene	ND		0.00250	1	11/16/2015 07:36	WG828737
1,1-Dichloroethane	ND		0.00100	1	11/16/2015 07:36	WG828737
1,2-Dichloroethane	ND		0.00100	1	11/16/2015 07:36	WG828737
1,1-Dichloroethene	ND		0.00100	1	11/16/2015 07:36	WG828737
cis-1,2-Dichloroethene	ND		0.00100	1	11/16/2015 07:36	WG828737
trans-1,2-Dichloroethene	ND		0.00100	1	11/16/2015 07:36	WG828737
1,2-Dichloropropane	ND		0.00100	1	11/16/2015 07:36	WG828737
cis-1,3-Dichloropropene	ND		0.00100	1	11/16/2015 07:36	WG828737
trans-1,3-Dichloropropene	ND		0.00100	1	11/16/2015 07:36	WG828737
Ethylbenzene	ND		0.00100	1	11/16/2015 07:36	WG828737
2-Hexanone	ND		0.0100	1	11/16/2015 07:36	WG828737
Iodomethane	ND		0.0100	1	11/16/2015 07:36	WG828737
2-Butanone (MEK)	ND		0.0100	1	11/16/2015 07:36	WG828737
Methylene Chloride	ND		0.00500	1	11/16/2015 07:36	WG828737
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	11/16/2015 07:36	WG828737

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Styrene	ND		0.00100	1	11/16/2015 07:36	WG828737
1,1,1,2-Tetrachloroethane	ND		0.00100	1	11/16/2015 07:36	WG828737
1,1,2,2-Tetrachloroethane	ND	J4	0.00100	1	11/16/2015 07:36	WG828737
Tetrachloroethene	ND		0.00100	1	11/16/2015 07:36	WG828737
Toluene	ND		0.00500	1	11/16/2015 07:36	WG828737
1,1,1-Trichloroethane	ND		0.00100	1	11/16/2015 07:36	WG828737
1,1,2-Trichloroethane	ND		0.00100	1	11/16/2015 07:36	WG828737
Trichloroethene	ND		0.00100	1	11/16/2015 07:36	WG828737
Trichlorofluoromethane	ND		0.00500	1	11/16/2015 07:36	WG828737
1,2,3-Trichloropropane	ND		0.00250	1	11/16/2015 07:36	WG828737
Vinyl acetate	ND		0.0100	1	11/16/2015 07:36	WG828737
Vinyl chloride	ND		0.00100	1	11/16/2015 07:36	WG828737
Xylenes, Total	ND		0.00300	1	11/16/2015 07:36	WG828737
(S) Toluene-d8	*106*		*90.0-115*		*11/16/2015 07:36*	WG828737
(S) Dibromofluoromethane	*103*		*79.0-121*		*11/16/2015 07:36*	WG828737
(S) a,a,a-Trifluorotoluene	*106*		*90.4-116*		*11/16/2015 07:36*	WG828737
(S) 4-Bromofluorobenzene	*96.3*		*80.1-120*		*11/16/2015 07:36*	WG828737

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	ND		0.250	1	11/20/2015 09:58	WG830350

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	11/13/2015 11:46	WG828562
Chloride	7.34		1.00	1	11/13/2015 11:46	WG828562
Nitrate	0.483		0.100	1	11/13/2015 11:46	WG828562
Sulfate	ND		5.00	1	11/13/2015 11:46	WG828562

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/13/2015 15:13	WG828701
Mercury,Dissolved	ND		0.000200	1	11/13/2015 15:53	WG828702

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	0.305		0.200	1	11/18/2015 10:30	WG829252
Aluminum,Dissolved	ND		0.200	1	11/23/2015 22:44	WG831185
Barium	0.0105		0.00500	1	11/18/2015 10:30	WG829252
Barium,Dissolved	0.0156		0.00500	1	11/23/2015 22:44	WG831185
Boron	ND		0.200	1	11/18/2015 10:30	WG829252
Boron,Dissolved	ND		0.200	1	11/23/2015 22:44	WG831185
Calcium	3.77		1.00	1	11/18/2015 10:30	WG829252
Calcium,Dissolved	3.82		1.00	1	11/23/2015 22:44	WG831185
Chromium	ND		0.0100	1	11/18/2015 10:30	WG829252
Chromium,Dissolved	ND		0.0100	1	11/23/2015 22:44	WG831185
Cobalt	ND		0.0100	1	11/18/2015 10:30	WG829252
Cobalt,Dissolved	ND		0.0100	1	11/23/2015 22:44	WG831185
Iron	0.262		0.100	1	11/18/2015 10:30	WG829252
Iron,Dissolved	ND		0.100	1	11/23/2015 22:44	WG831185
Magnesium	2.44		1.00	1	11/18/2015 10:30	WG829252
Magnesium,Dissolved	2.49		1.00	1	11/23/2015 22:44	WG831185
Manganese	0.0588		0.0100	1	11/18/2015 10:30	WG829252
Manganese,Dissolved	0.0697		0.0100	1	11/23/2015 22:44	WG831185
Nickel	ND		0.0100	1	11/18/2015 10:30	WG829252
Nickel,Dissolved	ND		0.0100	1	11/23/2015 22:44	WG831185
Potassium	1.12		1.00	1	11/18/2015 10:30	WG829252
Potassium,Dissolved	ND		1.00	1	11/23/2015 22:44	WG831185
Silver	ND		0.00500	1	11/18/2015 10:30	WG829252
Silver,Dissolved	ND		0.00500	1	11/23/2015 22:44	WG831185
Sodium	4.67		1.00	1	11/18/2015 10:30	WG829252
Sodium,Dissolved	4.63		1.00	1	11/23/2015 22:44	WG831185
Vanadium	ND		0.0200	1	11/18/2015 10:30	WG829252
Vanadium,Dissolved	ND		0.0200	1	11/23/2015 22:44	WG831185

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	11/16/2015 02:18	WG829110
Antimony,Dissolved	ND		0.00200	1	11/18/2015 13:08	WG829185
Arsenic	ND		0.00200	1	11/16/2015 02:18	WG829110
Arsenic,Dissolved	ND		0.00200	1	11/18/2015 13:08	WG829185
Beryllium	ND		0.00200	1	11/16/2015 02:18	WG829110
Beryllium,Dissolved	ND		0.00200	1	11/18/2015 13:08	WG829185
Cadmium	ND		0.00100	1	11/16/2015 02:18	WG829110
Cadmium,Dissolved	ND		0.00100	1	11/18/2015 13:08	WG829185
Copper	ND		0.00500	1	11/16/2015 02:18	WG829110
Copper,Dissolved	ND		0.00500	1	11/18/2015 13:08	WG829185
Lead	ND		0.00200	1	11/16/2015 02:18	WG829110
Lead,Dissolved	ND		0.00200	1	11/18/2015 13:08	WG829185
Selenium	ND		0.00200	1	11/16/2015 11:09	WG829110
Selenium,Dissolved	ND		0.00200	1	11/18/2015 13:08	WG829185
Thallium	ND		0.00200	1	11/16/2015 02:18	WG829110
Thallium,Dissolved	ND		0.00200	1	11/18/2015 13:08	WG829185
Zinc	ND		0.0250	1	11/16/2015 02:18	WG829110
Zinc,Dissolved	0.0549		0.0250	1	11/24/2015 12:12	WG831214

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	11/16/2015 07:59	WG828737
Acrylonitrile	ND		0.0100	1	11/16/2015 07:59	WG828737
Benzene	ND		0.00100	1	11/16/2015 07:59	WG828737
Bromochloromethane	ND		0.00100	1	11/16/2015 07:59	WG828737
Bromodichloromethane	ND		0.00100	1	11/16/2015 07:59	WG828737
Bromoform	ND		0.00100	1	11/16/2015 07:59	WG828737
Bromomethane	ND	J3	0.00500	1	11/16/2015 07:59	WG828737
Carbon disulfide	ND		0.00100	1	11/16/2015 07:59	WG828737
Carbon tetrachloride	ND		0.00100	1	11/16/2015 07:59	WG828737
Chlorobenzene	ND		0.00100	1	11/16/2015 07:59	WG828737
Chlorodibromomethane	ND		0.00100	1	11/16/2015 07:59	WG828737
Chloroethane	ND		0.00500	1	11/16/2015 07:59	WG828737
Chloroform	ND		0.00500	1	11/16/2015 07:59	WG828737
Chloromethane	ND		0.00250	1	11/16/2015 07:59	WG828737
Dibromomethane	ND		0.00100	1	11/16/2015 07:59	WG828737
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	11/16/2015 07:59	WG828737
1,2-Dibromoethane	ND		0.00100	1	11/16/2015 07:59	WG828737
1,2-Dichlorobenzene	ND		0.00100	1	11/16/2015 07:59	WG828737
1,4-Dichlorobenzene	ND		0.00100	1	11/16/2015 07:59	WG828737
trans-1,4-Dichloro-2-butene	ND		0.00250	1	11/16/2015 07:59	WG828737
1,1-Dichloroethane	ND		0.00100	1	11/16/2015 07:59	WG828737
1,2-Dichloroethane	ND		0.00100	1	11/16/2015 07:59	WG828737
1,1-Dichloroethene	ND		0.00100	1	11/16/2015 07:59	WG828737
cis-1,2-Dichloroethene	ND		0.00100	1	11/16/2015 07:59	WG828737
trans-1,2-Dichloroethene	ND		0.00100	1	11/16/2015 07:59	WG828737
1,2-Dichloropropane	ND		0.00100	1	11/16/2015 07:59	WG828737
cis-1,3-Dichloropropene	ND		0.00100	1	11/16/2015 07:59	WG828737
trans-1,3-Dichloropropene	ND		0.00100	1	11/16/2015 07:59	WG828737
Ethylbenzene	ND		0.00100	1	11/16/2015 07:59	WG828737
2-Hexanone	ND		0.0100	1	11/16/2015 07:59	WG828737
Iodomethane	ND		0.0100	1	11/16/2015 07:59	WG828737
2-Butanone (MEK)	ND		0.0100	1	11/16/2015 07:59	WG828737
Methylene Chloride	ND		0.00500	1	11/16/2015 07:59	WG828737
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	11/16/2015 07:59	WG828737

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Styrene	ND		0.00100	1	11/16/2015 07:59	WG828737
1,1,1,2-Tetrachloroethane	ND		0.00100	1	11/16/2015 07:59	WG828737
1,1,2,2-Tetrachloroethane	ND	J4	0.00100	1	11/16/2015 07:59	WG828737
Tetrachloroethene	ND		0.00100	1	11/16/2015 07:59	WG828737
Toluene	ND		0.00500	1	11/16/2015 07:59	WG828737
1,1,1-Trichloroethane	ND		0.00100	1	11/16/2015 07:59	WG828737
1,1,2-Trichloroethane	ND		0.00100	1	11/16/2015 07:59	WG828737
Trichloroethene	ND		0.00100	1	11/16/2015 07:59	WG828737
Trichlorofluoromethane	ND		0.00500	1	11/16/2015 07:59	WG828737
1,2,3-Trichloropropane	ND		0.00250	1	11/16/2015 07:59	WG828737
Vinyl acetate	ND		0.0100	1	11/16/2015 07:59	WG828737
Vinyl chloride	ND		0.00100	1	11/16/2015 07:59	WG828737
Xylenes, Total	ND		0.00300	1	11/16/2015 07:59	WG828737
(S) Toluene-d8	*106*		*90.0-115*		*11/16/2015 07:59*	WG828737
(S) Dibromofluoromethane	*101*		*79.0-121*		*11/16/2015 07:59*	WG828737
(S) a,a,a-Trifluorotoluene	*107*		*90.4-116*		*11/16/2015 07:59*	WG828737
(S) 4-Bromofluorobenzene	*97.1*		*80.1-120*		*11/16/2015 07:59*	WG828737

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	ND		0.250	1	11/20/2015 10:01	WG830350

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	11/19/2015 12:31	WG829643
Chloride	7.31		1.00	1	11/12/2015 17:17	WG828306
Nitrate	0.513		0.100	1	11/12/2015 17:17	WG828306
Sulfate	ND		5.00	1	11/12/2015 17:17	WG828306

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/13/2015 15:19	WG828701
Mercury,Dissolved	ND		0.000200	1	11/13/2015 15:55	WG828702

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	0.343		0.200	1	11/18/2015 10:33	WG829252
Aluminum,Dissolved	ND		0.200	1	11/16/2015 12:29	WG828857
Barium	0.0113		0.00500	1	11/18/2015 10:33	WG829252
Barium,Dissolved	0.0109		0.00500	1	11/16/2015 12:29	WG828857
Boron	ND		0.200	1	11/18/2015 10:33	WG829252
Boron,Dissolved	ND		0.200	1	11/16/2015 12:29	WG828857
Calcium	3.80		1.00	1	11/18/2015 10:33	WG829252
Calcium,Dissolved	4.17		1.00	1	11/16/2015 12:29	WG828857
Chromium	ND		0.0100	1	11/18/2015 10:33	WG829252
Chromium,Dissolved	ND		0.0100	1	11/16/2015 12:29	WG828857
Cobalt	ND		0.0100	1	11/18/2015 10:33	WG829252
Cobalt,Dissolved	ND		0.0100	1	11/16/2015 12:29	WG828857
Iron	0.328		0.100	1	11/18/2015 10:33	WG829252
Iron,Dissolved	ND		0.100	1	11/16/2015 12:29	WG828857
Magnesium	2.47		1.00	1	11/18/2015 10:33	WG829252
Magnesium,Dissolved	2.59		1.00	1	11/16/2015 12:29	WG828857
Manganese	0.0605		0.0100	1	11/18/2015 10:33	WG829252
Manganese,Dissolved	0.0627		0.0100	1	11/16/2015 12:29	WG828857
Nickel	ND		0.0100	1	11/18/2015 10:33	WG829252
Nickel,Dissolved	ND		0.0100	1	11/16/2015 12:29	WG828857
Potassium	1.07		1.00	1	11/18/2015 10:33	WG829252
Potassium,Dissolved	1.09		1.00	1	11/16/2015 12:29	WG828857
Silver	ND		0.00500	1	11/18/2015 10:33	WG829252
Silver,Dissolved	ND		0.00500	1	11/16/2015 12:29	WG828857
Sodium	4.69		1.00	1	11/18/2015 10:33	WG829252
Sodium,Dissolved	4.91		1.00	1	11/16/2015 12:29	WG828857
Vanadium	ND		0.0200	1	11/18/2015 10:33	WG829252
Vanadium,Dissolved	ND		0.0200	1	11/16/2015 12:29	WG828857

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	11/16/2015 02:21	WG829110
Antimony,Dissolved	ND		0.00200	1	11/18/2015 13:11	WG829185
Arsenic	ND		0.00200	1	11/16/2015 02:21	WG829110
Arsenic,Dissolved	ND		0.00200	1	11/18/2015 13:11	WG829185
Beryllium	ND		0.00200	1	11/16/2015 02:21	WG829110
Beryllium,Dissolved	ND		0.00200	1	11/18/2015 13:11	WG829185
Cadmium	ND		0.00100	1	11/16/2015 02:21	WG829110
Cadmium,Dissolved	ND		0.00100	1	11/18/2015 13:11	WG829185
Copper	ND		0.00500	1	11/16/2015 02:21	WG829110
Copper,Dissolved	ND		0.00500	1	11/18/2015 13:11	WG829185
Lead	ND		0.00200	1	11/16/2015 02:21	WG829110
Lead,Dissolved	ND		0.00200	1	11/18/2015 13:11	WG829185
Selenium	ND		0.00200	1	11/16/2015 11:11	WG829110
Selenium,Dissolved	ND		0.00200	1	11/18/2015 13:11	WG829185
Thallium	ND		0.00200	1	11/16/2015 02:21	WG829110
Thallium,Dissolved	ND		0.00200	1	11/18/2015 13:11	WG829185
Zinc	0.0276		0.0250	1	11/16/2015 02:21	WG829110
Zinc,Dissolved	ND		0.0250	1	11/18/2015 13:11	WG829185

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	11/16/2015 08:21	WG828737
Acrylonitrile	ND		0.0100	1	11/16/2015 08:21	WG828737
Benzene	ND		0.00100	1	11/16/2015 08:21	WG828737
Bromochloromethane	ND		0.00100	1	11/16/2015 08:21	WG828737
Bromodichloromethane	ND		0.00100	1	11/16/2015 08:21	WG828737
Bromoform	ND		0.00100	1	11/16/2015 08:21	WG828737
Bromomethane	ND	J3	0.00500	1	11/16/2015 08:21	WG828737
Carbon disulfide	ND		0.00100	1	11/16/2015 08:21	WG828737
Carbon tetrachloride	ND		0.00100	1	11/16/2015 08:21	WG828737
Chlorobenzene	ND		0.00100	1	11/16/2015 08:21	WG828737
Chlorodibromomethane	ND		0.00100	1	11/16/2015 08:21	WG828737
Chloroethane	ND		0.00500	1	11/16/2015 08:21	WG828737
Chloroform	ND		0.00500	1	11/16/2015 08:21	WG828737
Chloromethane	ND		0.00250	1	11/16/2015 08:21	WG828737
Dibromomethane	ND		0.00100	1	11/16/2015 08:21	WG828737
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	11/16/2015 08:21	WG828737
1,2-Dibromoethane	ND		0.00100	1	11/16/2015 08:21	WG828737
1,2-Dichlorobenzene	ND		0.00100	1	11/16/2015 08:21	WG828737
1,4-Dichlorobenzene	ND		0.00100	1	11/16/2015 08:21	WG828737
trans-1,4-Dichloro-2-butene	ND		0.00250	1	11/16/2015 08:21	WG828737
1,1-Dichloroethane	ND		0.00100	1	11/16/2015 08:21	WG828737
1,2-Dichloroethane	ND		0.00100	1	11/16/2015 08:21	WG828737
1,1-Dichloroethene	ND		0.00100	1	11/16/2015 08:21	WG828737
cis-1,2-Dichloroethene	ND		0.00100	1	11/16/2015 08:21	WG828737
trans-1,2-Dichloroethene	ND		0.00100	1	11/16/2015 08:21	WG828737
1,2-Dichloropropane	ND		0.00100	1	11/16/2015 08:21	WG828737
cis-1,3-Dichloropropene	ND		0.00100	1	11/16/2015 08:21	WG828737
trans-1,3-Dichloropropene	ND		0.00100	1	11/16/2015 08:21	WG828737
Ethylbenzene	ND		0.00100	1	11/16/2015 08:21	WG828737
2-Hexanone	ND		0.0100	1	11/16/2015 08:21	WG828737
Iodomethane	ND		0.0100	1	11/16/2015 08:21	WG828737
2-Butanone (MEK)	ND		0.0100	1	11/16/2015 08:21	WG828737
Methylene Chloride	ND		0.00500	1	11/16/2015 08:21	WG828737
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	11/16/2015 08:21	WG828737

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Styrene	ND		0.00100	1	11/16/2015 08:21	WG828737
1,1,1,2-Tetrachloroethane	ND		0.00100	1	11/16/2015 08:21	WG828737
1,1,2,2-Tetrachloroethane	ND	J4	0.00100	1	11/16/2015 08:21	WG828737
Tetrachloroethene	ND		0.00100	1	11/16/2015 08:21	WG828737
Toluene	ND		0.00500	1	11/16/2015 08:21	WG828737
1,1,1-Trichloroethane	ND		0.00100	1	11/16/2015 08:21	WG828737
1,1,2-Trichloroethane	ND		0.00100	1	11/16/2015 08:21	WG828737
Trichloroethene	ND		0.00100	1	11/16/2015 08:21	WG828737
Trichlorofluoromethane	ND		0.00500	1	11/16/2015 08:21	WG828737
1,2,3-Trichloropropane	ND		0.00250	1	11/16/2015 08:21	WG828737
Vinyl acetate	ND		0.0100	1	11/16/2015 08:21	WG828737
Vinyl chloride	ND		0.00100	1	11/16/2015 08:21	WG828737
Xylenes, Total	ND		0.00300	1	11/16/2015 08:21	WG828737
(S) Toluene-d8	*106*		*90.0-115*		*11/16/2015 08:21*	WG828737
(S) Dibromofluoromethane	*103*		*79.0-121*		*11/16/2015 08:21*	WG828737
(S) a,a,a-Trifluorotoluene	*106*		*90.4-116*		*11/16/2015 08:21*	WG828737
(S) 4-Bromofluorobenzene	*96.8*		*80.1-120*		*11/16/2015 08:21*	WG828737

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	ND		0.250	1	11/20/2015 10:03	WG830350

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	11/13/2015 10:45	WG828562
Chloride	ND		1.00	1	11/13/2015 10:45	WG828562
Nitrate	ND		0.100	1	11/13/2015 10:45	WG828562
Sulfate	ND		5.00	1	11/13/2015 10:45	WG828562

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/13/2015 15:21	WG828701
Mercury,Dissolved	ND		0.000200	1	11/13/2015 15:57	WG828702

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	ND		0.200	1	11/18/2015 10:36	WG829252
Aluminum,Dissolved	ND		0.200	1	11/16/2015 12:32	WG828857
Barium	ND		0.00500	1	11/18/2015 10:36	WG829252
Barium,Dissolved	ND		0.00500	1	11/16/2015 12:32	WG828857
Boron	ND		0.200	1	11/18/2015 10:36	WG829252
Boron,Dissolved	ND		0.200	1	11/16/2015 12:32	WG828857
Calcium	ND		1.00	1	11/18/2015 10:36	WG829252
Calcium,Dissolved	ND		1.00	1	11/16/2015 12:32	WG828857
Chromium	ND		0.0100	1	11/18/2015 10:36	WG829252
Chromium,Dissolved	ND		0.0100	1	11/16/2015 12:32	WG828857
Cobalt	ND		0.0100	1	11/18/2015 10:36	WG829252
Cobalt,Dissolved	ND		0.0100	1	11/16/2015 12:32	WG828857
Iron	ND		0.100	1	11/18/2015 10:36	WG829252
Iron,Dissolved	ND		0.100	1	11/16/2015 12:32	WG828857
Magnesium	ND		1.00	1	11/18/2015 10:36	WG829252
Magnesium,Dissolved	ND		1.00	1	11/16/2015 12:32	WG828857
Manganese	ND		0.0100	1	11/18/2015 10:36	WG829252
Manganese,Dissolved	ND		0.0100	1	11/16/2015 12:32	WG828857
Nickel	ND		0.0100	1	11/18/2015 10:36	WG829252
Nickel,Dissolved	ND		0.0100	1	11/16/2015 12:32	WG828857
Potassium	ND		1.00	1	11/18/2015 10:36	WG829252
Potassium,Dissolved	ND		1.00	1	11/16/2015 12:32	WG828857
Silver	ND		0.00500	1	11/18/2015 10:36	WG829252
Silver,Dissolved	ND		0.00500	1	11/16/2015 12:32	WG828857
Sodium	ND		1.00	1	11/18/2015 10:36	WG829252
Sodium,Dissolved	ND		1.00	1	11/16/2015 12:32	WG828857
Vanadium	ND		0.0200	1	11/18/2015 10:36	WG829252
Vanadium,Dissolved	ND		0.0200	1	11/16/2015 12:32	WG828857

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	11/16/2015 02:23	WG829110
Antimony,Dissolved	ND		0.00200	1	11/18/2015 13:14	WG829185
Arsenic	ND		0.00200	1	11/16/2015 02:23	WG829110
Arsenic,Dissolved	ND		0.00200	1	11/18/2015 13:14	WG829185
Beryllium	ND		0.00200	1	11/16/2015 02:23	WG829110
Beryllium,Dissolved	ND		0.00200	1	11/18/2015 13:14	WG829185
Cadmium	ND		0.00100	1	11/16/2015 02:23	WG829110
Cadmium,Dissolved	ND		0.00100	1	11/18/2015 13:14	WG829185
Copper	ND		0.00500	1	11/16/2015 02:23	WG829110
Copper,Dissolved	ND		0.00500	1	11/18/2015 13:14	WG829185
Lead	ND		0.00200	1	11/16/2015 02:23	WG829110
Lead,Dissolved	ND		0.00200	1	11/18/2015 13:14	WG829185
Selenium	ND		0.00200	1	11/16/2015 11:13	WG829110
Selenium,Dissolved	ND		0.00200	1	11/18/2015 13:14	WG829185
Thallium	ND		0.00200	1	11/16/2015 02:23	WG829110
Thallium,Dissolved	ND		0.00200	1	11/18/2015 13:14	WG829185
Zinc	ND		0.0250	1	11/16/2015 02:23	WG829110
Zinc,Dissolved	ND		0.0250	1	11/18/2015 13:14	WG829185

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	11/16/2015 00:49	WG828737
Acrylonitrile	ND		0.0100	1	11/16/2015 00:49	WG828737
Benzene	ND		0.00100	1	11/16/2015 00:49	WG828737
Bromochloromethane	ND		0.00100	1	11/16/2015 00:49	WG828737
Bromodichloromethane	ND		0.00100	1	11/16/2015 00:49	WG828737
Bromoform	ND		0.00100	1	11/16/2015 00:49	WG828737
Bromomethane	ND	J3	0.00500	1	11/16/2015 00:49	WG828737
Carbon disulfide	ND		0.00100	1	11/16/2015 00:49	WG828737
Carbon tetrachloride	ND		0.00100	1	11/16/2015 00:49	WG828737
Chlorobenzene	ND		0.00100	1	11/16/2015 00:49	WG828737
Chlorodibromomethane	ND		0.00100	1	11/16/2015 00:49	WG828737
Chloroethane	ND		0.00500	1	11/16/2015 00:49	WG828737
Chloroform	ND		0.00500	1	11/16/2015 00:49	WG828737
Chloromethane	ND		0.00250	1	11/16/2015 00:49	WG828737
Dibromomethane	ND		0.00100	1	11/16/2015 00:49	WG828737
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	11/16/2015 00:49	WG828737
1,2-Dibromoethane	ND		0.00100	1	11/16/2015 00:49	WG828737
1,2-Dichlorobenzene	ND		0.00100	1	11/16/2015 00:49	WG828737
1,4-Dichlorobenzene	ND		0.00100	1	11/16/2015 00:49	WG828737
trans-1,4-Dichloro-2-butene	ND		0.00250	1	11/16/2015 00:49	WG828737
1,1-Dichloroethane	ND		0.00100	1	11/16/2015 00:49	WG828737
1,2-Dichloroethane	ND		0.00100	1	11/16/2015 00:49	WG828737
1,1-Dichloroethene	ND		0.00100	1	11/16/2015 00:49	WG828737
cis-1,2-Dichloroethene	ND		0.00100	1	11/16/2015 00:49	WG828737
trans-1,2-Dichloroethene	ND		0.00100	1	11/16/2015 00:49	WG828737
1,2-Dichloropropane	ND		0.00100	1	11/16/2015 00:49	WG828737
cis-1,3-Dichloropropene	ND		0.00100	1	11/16/2015 00:49	WG828737
trans-1,3-Dichloropropene	ND		0.00100	1	11/16/2015 00:49	WG828737
Ethylbenzene	ND		0.00100	1	11/16/2015 00:49	WG828737
2-Hexanone	ND		0.0100	1	11/16/2015 00:49	WG828737
Iodomethane	ND		0.0100	1	11/16/2015 00:49	WG828737
2-Butanone (MEK)	ND		0.0100	1	11/16/2015 00:49	WG828737
Methylene Chloride	ND		0.00500	1	11/16/2015 00:49	WG828737
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	11/16/2015 00:49	WG828737

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Styrene	ND		0.00100	1	11/16/2015 00:49	WG828737
1,1,1,2-Tetrachloroethane	ND		0.00100	1	11/16/2015 00:49	WG828737
1,1,2,2-Tetrachloroethane	ND	J4	0.00100	1	11/16/2015 00:49	WG828737
Tetrachloroethene	ND		0.00100	1	11/16/2015 00:49	WG828737
Toluene	ND		0.00500	1	11/16/2015 00:49	WG828737
1,1,1-Trichloroethane	ND		0.00100	1	11/16/2015 00:49	WG828737
1,1,2-Trichloroethane	ND		0.00100	1	11/16/2015 00:49	WG828737
Trichloroethene	ND		0.00100	1	11/16/2015 00:49	WG828737
Trichlorofluoromethane	ND		0.00500	1	11/16/2015 00:49	WG828737
1,2,3-Trichloropropane	ND		0.00250	1	11/16/2015 00:49	WG828737
Vinyl acetate	ND		0.0100	1	11/16/2015 00:49	WG828737
Vinyl chloride	ND		0.00100	1	11/16/2015 00:49	WG828737
Xylenes, Total	ND		0.00300	1	11/16/2015 00:49	WG828737
(S) Toluene-d8	*108*		*90.0-115*		*11/16/2015 00:49*	WG828737
(S) Dibromofluoromethane	*108*		*79.0-121*		*11/16/2015 00:49*	WG828737
(S) a,a,a-Trifluorotoluene	*107*		*90.4-116*		*11/16/2015 00:49*	WG828737
(S) 4-Bromofluorobenzene	*96.0*		*80.1-120*		*11/16/2015 00:49*	WG828737

Method Blank (MB)

(MB) 11/20/15 08:43

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Ammonia Nitrogen	ND		0.250

L797938-01 Original Sample (OS) • Duplicate (DUP)

(OS) 11/20/15 08:56 • (DUP) 11/20/15 08:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ammonia Nitrogen	0.0820	0.0640	1	0		20

L800477-02 Original Sample (OS) • Duplicate (DUP)

(OS) 11/20/15 09:41 • (DUP) 11/20/15 09:43

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ammonia Nitrogen	6.11	6.24	1	2		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/20/15 08:48 • (LCSD) 11/20/15 08:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	7.50	7.81	7.58	104	101	90-110			3	20

L800433-01 Original Sample (OS) • Matrix Spike (MS)

(OS) 11/20/15 09:03 • (MS) 11/20/15 09:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Ammonia Nitrogen	10.0	4.80	15.1	103	1	90-110	

L800477-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/20/15 09:46 • (MS) 11/20/15 09:48 • (MSD) 11/20/15 09:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	10.0	4.87	15.4	15.5	105	106	1	90-110			0	20

Method Blank (MB)

(MB) 11/12/15 07:03

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Chloride	ND		1.00
Nitrate	ND		0.100
Sulfate	ND		5.00

L800119-04 Original Sample (OS) • Duplicate (DUP)

(OS) 11/12/15 09:01 • (DUP) 11/12/15 09:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	33.0	32.9	1	0		20
Nitrate	ND	0.000	1	0		20
Sulfate	5.36	5.23	1	2		20

L800404-04 Original Sample (OS) • Duplicate (DUP)

(OS) 11/12/15 12:19 • (DUP) 11/12/15 14:38

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	9.91	3.75	1	90	J3	20
Nitrate	ND	0.000	1	0		20
Sulfate	11.5	11.5	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/12/15 07:16 • (LCSD) 11/12/15 07:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	42.5	42.6	106	106	90-110			0	20
Nitrate	8.00	8.45	8.47	106	106	90-110			0	20
Sulfate	40.0	40.7	40.8	102	102	90-110			0	20

L800159-03 Original Sample (OS) • Matrix Spike (MS)

(OS) 11/12/15 10:41 • (MS) 11/12/15 10:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	47.6	73.9	53	1	80-120	J6
Nitrate	5.00	ND	5.12	102	1	80-120	
Sulfate	50.0	36.4	61.9	51	1	80-120	J6

L800400-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/12/15 13:28 • (MS) 11/12/15 13:42 • (MSD) 11/12/15 13:56

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	32.5	83.2	77.2	101	89	1	80-120			8	20
Nitrate	5.00	0.849	5.69	5.73	97	98	1	80-120			1	20
Sulfate	50.0	10.5	60.2	60.1	99	99	1	80-120			0	20

Method Blank (MB)

(MB) 11/13/15 08:24

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Bromide	ND		1.00
Chloride	ND		1.00
Nitrate	ND		0.100
Sulfate	ND		5.00

L800499-01 Original Sample (OS) • Duplicate (DUP)

(OS) 11/13/15 09:44 • (DUP) 11/13/15 12:17

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	0.000	1	0		20
Nitrate	ND	0.000	1	0		20
Sulfate	18.8	10.4	1	58	P1	20

L800710-06 Original Sample (OS) • Duplicate (DUP)

(OS) 11/13/15 15:07 • (DUP) 11/13/15 15:24

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	0.958	0.959	1	0	J	20
Nitrate	ND	0.000	1	0		20
Sulfate	89.3	89.3	1	0		20

L800710-06 Original Sample (OS) • Duplicate (DUP)

(OS) 11/13/15 19:19 • (DUP) 11/13/15 19:34

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	295	295	10	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/13/15 08:39 • (LCSD) 11/13/15 08:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/13/15 08:39 • (LCSD) 11/13/15 08:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromide	40.0	39.9	39.5	100	99	90-110			1	20
Chloride	40.0	39.3	39.0	98	97	90-110			1	20
Nitrate	8.00	8.01	7.94	100	99	90-110			1	20
Sulfate	40.0	40.0	39.6	100	99	90-110			1	20

L800507-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/13/15 09:58 • (MS) 11/13/15 12:33 • (MSD) 11/13/15 12:48

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	50.0	ND	48.6	48.6	97	97	1	80-120			0	20
Chloride	50.0	4.07	74.1	74.2	140	140	1	80-120	J5	J5	0	20
Nitrate	5.00	ND	4.86	4.86	97	97	1	80-120			0	20
Sulfate	50.0	10.4	69.3	69.3	118	118	1	80-120			0	20

L800710-07 Original Sample (OS) • Matrix Spike (MS)

(OS) 11/13/15 15:39 • (MS) 11/13/15 15:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	ND	51.3	103	1	80-120	
Chloride	50.0	0.0549	51.0	102	1	80-120	
Nitrate	5.00	ND	5.04	101	1	80-120	
Sulfate	50.0	ND	51.4	103	1	80-120	

Method Blank (MB)

(MB) 11/17/15 15:52

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Chloride	ND		1.00

L800064-01 Original Sample (OS) • Duplicate (DUP)

(OS) 11/17/15 17:04 • (DUP) 11/17/15 17:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	707	706	20	0		20

L800499-01 Original Sample (OS) • Duplicate (DUP)

(OS) 11/18/15 00:02 • (DUP) 11/18/15 00:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	3.97	3.96	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/17/15 16:07 • (LCSD) 11/17/15 16:21

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Chloride	40.0	40.1	40.2	100	100	90-110			0	20

L800393-01 Original Sample (OS) • Matrix Spike (MS)

(OS) 11/17/15 18:45 • (MS) 11/17/15 19:00

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Chloride	50.0	30.1	73.6	87	1	80-120	

L800406-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/17/15 21:24 • (MS) 11/17/15 21:38 • (MSD) 11/17/15 21:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	278	2920	2900	106	105	50	80-120			1	20

Method Blank (MB)

(MB) 11/19/15 06:56

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Bromide	ND		1.00

L801035-13 Original Sample (OS) • Duplicate (DUP)

(OS) 11/19/15 10:08 • (DUP) 11/19/15 10:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Bromide	ND	0.000	10	0		20

L801102-01 Original Sample (OS) • Duplicate (DUP)

(OS) 11/19/15 15:53 • (DUP) 11/19/15 16:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Bromide	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/19/15 07:10 • (LCSD) 11/19/15 08:08

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Bromide	40.0	43.2	43.2	108	108	90-110			0	20

L801074-01 Original Sample (OS) • Matrix Spike (MS)

(OS) 11/19/15 10:50 • (MS) 11/19/15 11:05

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Bromide	5.00	ND	499	100	10	80-120	

L801077-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/19/15 15:10 • (MS) 11/19/15 15:24 • (MSD) 11/19/15 15:39

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	5.00	ND	494	493	99	99	10	80-120			0	20

Method Blank (MB)

(MB) 11/13/15 14:22

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Mercury	ND		0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/13/15 14:24 • (LCSD) 11/13/15 14:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Mercury	0.00300	0.00281	0.00271	94	90	80-120			4	20

L800625-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/13/15 14:29 • (MS) 11/13/15 14:31 • (MSD) 11/13/15 14:33

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	ND	0.00198	0.00304	66	101	1	75-125	J6	J3	42	20

Method Blank (MB)

(MB) 11/13/15 15:26

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Mercury,Dissolved	ND		0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/13/15 15:28 • (LCSD) 11/13/15 15:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Mercury,Dissolved	0.00300	0.00271	0.00279	90	93	80-120			3	20

L800436-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/13/15 15:33 • (MS) 11/13/15 15:35 • (MSD) 11/13/15 15:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury,Dissolved	0.00300	ND	0.00309	0.00305	103	102	1	75-125			1	20

Method Blank (MB)

(MB) 11/16/15 11:06

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Aluminum,Dissolved	ND		0.200
Barium,Dissolved	ND		0.00500
Boron,Dissolved	ND		0.200
Calcium,Dissolved	ND		1.00
Chromium,Dissolved	ND		0.0100
Cobalt,Dissolved	ND		0.0100
Iron,Dissolved	ND		0.100
Magnesium,Dissolved	ND		1.00
Manganese,Dissolved	ND		0.0100
Nickel,Dissolved	ND		0.0100
Potassium,Dissolved	ND		1.00
Silver,Dissolved	ND		0.00500
Sodium,Dissolved	ND		1.00
Vanadium,Dissolved	ND		0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/16/15 11:08 • (LCSD) 11/16/15 11:11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	1.00	1.00	1.07	100	107	80-120			7	20
Barium,Dissolved	1.00	0.991	1.00	99	100	80-120			1	20
Boron,Dissolved	1.00	1.02	1.06	102	106	80-120			4	20
Calcium,Dissolved	10.0	10.3	10.5	103	105	80-120			2	20
Chromium,Dissolved	1.00	1.04	1.05	104	105	80-120			1	20
Cobalt,Dissolved	1.00	0.999	1.01	100	101	80-120			1	20
Iron,Dissolved	1.00	1.02	1.02	102	102	80-120			0	20
Magnesium,Dissolved	10.0	10.4	10.5	104	105	80-120			1	20
Manganese,Dissolved	1.00	1.01	1.03	101	103	80-120			2	20
Nickel,Dissolved	1.00	1.01	1.01	101	101	80-120			1	20
Potassium,Dissolved	10.0	10.4	10.7	104	107	80-120			3	20
Silver,Dissolved	1.00	1.05	1.07	105	107	80-120			2	20
Sodium,Dissolved	10.0	10.4	10.6	104	106	80-120			3	20
Vanadium,Dissolved	1.00	1.03	1.05	103	105	80-120			1	20

L800119-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/16/15 11:14 • (MS) 11/16/15 11:20 • (MSD) 11/16/15 11:23

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	1.00	ND	1.01	1.00	101	100	1	75-125			1	20
Barium,Dissolved	1.00	0.0699	1.07	1.07	100	100	1	75-125			0	20
Boron,Dissolved	1.00	0.0558	1.11	1.13	105	107	1	75-125			2	20
Calcium,Dissolved	10.0	43.3	52.7	53.5	93	102	1	75-125			2	20
Chromium,Dissolved	1.00	0.000784	1.04	1.04	104	104	1	75-125			0	20
Cobalt,Dissolved	1.00	0.000593	1.01	1.01	101	101	1	75-125			0	20
Iron,Dissolved	1.00	0.148	1.18	1.20	103	105	1	75-125			1	20
Magnesium,Dissolved	10.0	18.2	28.1	28.5	99	103	1	75-125			2	20
Manganese,Dissolved	1.00	0.377	1.38	1.38	100	101	1	75-125			0	20
Nickel,Dissolved	1.00	0.00899	1.03	1.03	102	102	1	75-125			0	20
Potassium,Dissolved	10.0	3.90	14.3	14.6	104	107	1	75-125			2	20
Silver,Dissolved	1.00	ND	1.06	1.07	106	107	1	75-125			0	20
Sodium,Dissolved	10.0	20.6	31.7	32.2	111	116	1	75-125			2	20
Vanadium,Dissolved	1.00	0.00133	1.05	1.07	105	106	1	75-125			1	20

Method Blank (MB)

(MB) 11/18/15 09:43

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Aluminum	ND		0.200
Barium	ND		0.00500
Boron	ND		0.200
Calcium	ND		1.00
Chromium	ND		0.0100
Cobalt	ND		0.0100
Iron	ND		0.100
Magnesium	ND		1.00
Manganese	ND		0.0100
Nickel	ND		0.0100
Potassium	ND		1.00
Silver	ND		0.00500
Sodium	ND		1.00
Vanadium	ND		0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/18/15 09:45 • (LCSD) 11/18/15 09:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	1.07	1.05	107	105	80-120			1	20
Barium	1.00	1.03	1.01	103	101	80-120			2	20
Boron	1.00	1.10	1.09	110	109	80-120			0	20
Calcium	10.0	10.6	10.5	106	105	80-120			1	20
Chromium	1.00	1.10	1.10	110	110	80-120			0	20
Cobalt	1.00	1.05	1.03	105	103	80-120			2	20
Iron	1.00	1.05	1.03	105	103	80-120			2	20
Magnesium	10.0	10.9	10.8	109	108	80-120			1	20
Manganese	1.00	1.05	1.04	105	104	80-120			0	20
Nickel	1.00	1.05	1.04	105	104	80-120			1	20
Potassium	10.0	10.6	10.5	106	105	80-120			1	20
Silver	1.00	1.07	1.07	107	107	80-120			1	20
Sodium	10.0	10.9	10.8	109	108	80-120			0	20
Vanadium	1.00	1.09	1.09	109	109	80-120			0	20

L800507-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/18/15 09:51 • (MS) 11/18/15 09:57 • (MSD) 11/18/15 10:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	ND	0.984	1.01	98	101	1	75-125			2	20
Barium	1.00	0.613	1.60	1.62	99	101	1	75-125			2	20
Boron	1.00	0.271	1.33	1.36	105	109	1	75-125			2	20
Calcium	10.0	183	188	190	51	72	1	75-125	V	V	1	20
Chromium	1.00	0.000319	1.06	1.10	106	110	1	75-125			3	20
Cobalt	1.00	0.00105	1.04	1.05	103	105	1	75-125			2	20
Iron	1.00	5.99	6.89	6.98	90	100	1	75-125			1	20
Magnesium	10.0	62.0	70.8	71.3	88	93	1	75-125			1	20
Manganese	1.00	1.47	2.44	2.47	97	100	1	75-125			1	20
Nickel	1.00	0.00431	1.03	1.05	103	104	1	75-125			2	20
Potassium	10.0	3.79	13.8	14.1	100	103	1	75-125			2	20
Silver	1.00	ND	1.08	1.10	108	110	1	75-125			2	20
Sodium	10.0	84.5	92.1	93.3	76	87	1	75-125			1	20
Vanadium	1.00	0.00332	1.06	1.09	105	109	1	75-125			3	20

Method Blank (MB)

(MB) 11/23/15 22:24

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Aluminum,Dissolved	ND		0.200
Barium,Dissolved	ND		0.00500
Boron,Dissolved	ND		0.200
Calcium,Dissolved	ND		1.00
Chromium,Dissolved	ND		0.0100
Cobalt,Dissolved	ND		0.0100
Iron,Dissolved	ND		0.100
Magnesium,Dissolved	ND		1.00
Manganese,Dissolved	ND		0.0100
Nickel,Dissolved	ND		0.0100
Potassium,Dissolved	ND		1.00
Silver,Dissolved	ND		0.00500
Sodium,Dissolved	ND		1.00
Vanadium,Dissolved	ND		0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/23/15 22:27 • (LCSD) 11/23/15 22:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	1.00	1.02	1.01	102	101	80-120			1	20
Barium,Dissolved	1.00	0.996	0.997	100	100	80-120			0	20
Boron,Dissolved	1.00	1.01	1.02	101	102	80-120			1	20
Calcium,Dissolved	10.0	9.82	9.81	98	98	80-120			0	20
Chromium,Dissolved	1.00	1.03	1.03	103	103	80-120			0	20
Cobalt,Dissolved	1.00	1.01	1.01	101	101	80-120			0	20
Iron,Dissolved	1.00	0.982	0.983	98	98	80-120			0	20
Magnesium,Dissolved	10.0	10.3	10.4	103	104	80-120			1	20
Manganese,Dissolved	1.00	0.979	0.979	98	98	80-120			0	20
Nickel,Dissolved	1.00	1.00	1.00	100	100	80-120			0	20
Potassium,Dissolved	10.0	9.67	9.60	97	96	80-120			1	20
Silver,Dissolved	1.00	1.00	1.01	100	101	80-120			0	20
Sodium,Dissolved	10.0	9.87	9.83	99	98	80-120			0	20
Vanadium,Dissolved	1.00	1.02	1.02	102	102	80-120			0	20

L801946-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/23/15 22:32 • (MS) 11/23/15 22:38 • (MSD) 11/23/15 22:41

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	1.00	0.0520	1.01	1.01	96	96	1	75-125			0	20
Barium,Dissolved	1.00	0.0411	1.04	1.04	99	100	1	75-125			1	20
Boron,Dissolved	1.00	0.539	1.58	1.58	104	104	1	75-125			0	20
Calcium,Dissolved	10.0	253	262	259	94	65	1	75-125		V	1	20
Chromium,Dissolved	1.00	ND	1.01	1.01	101	101	1	75-125			0	20
Cobalt,Dissolved	1.00	0.00190	1.03	1.04	103	104	1	75-125			1	20
Iron,Dissolved	1.00	0.00556	0.988	0.975	98	97	1	75-125			1	20
Magnesium,Dissolved	10.0	157	164	163	73	61	1	75-125	V	V	1	20
Manganese,Dissolved	1.00	0.427	1.38	1.38	95	95	1	75-125			0	20
Nickel,Dissolved	1.00	0.00294	1.01	1.02	101	102	1	75-125			1	20
Potassium,Dissolved	10.0	7.43	17.2	17.2	98	97	1	75-125			0	20
Silver,Dissolved	1.00	ND	1.07	1.07	107	107	1	75-125			0	20
Sodium,Dissolved	10.0	135	146	144	102	88	1	75-125			1	20
Vanadium,Dissolved	1.00	0.00264	1.04	1.03	103	103	1	75-125			1	20

Method Blank (MB)

(MB) 11/16/15 01:23

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Antimony	ND		0.00200
Arsenic	ND		0.00200
Beryllium	ND		0.00200
Cadmium	ND		0.00100
Copper	ND		0.00500
Lead	ND		0.00200
Selenium	ND		0.00200
Thallium	ND		0.00200
Zinc	ND		0.0250

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/16/15 01:25 • (LCSD) 11/16/15 01:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.0521	0.0513	104	103	80-120			2	20
Arsenic	0.0500	0.0486	0.0491	97	98	80-120			1	20
Beryllium	0.0500	0.0484	0.0491	97	98	80-120			2	20
Cadmium	0.0500	0.0505	0.0513	101	103	80-120			1	20
Copper	0.0500	0.0531	0.0522	106	104	80-120			2	20
Lead	0.0500	0.0503	0.0504	101	101	80-120			0	20
Selenium	0.0500	0.0490	0.0478	98	96	80-120			2	20
Thallium	0.0500	0.0499	0.0505	100	101	80-120			1	20
Zinc	0.0500	0.0495	0.0495	99	99	80-120			0	20

L800625-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/16/15 01:30 • (MS) 11/16/15 01:35 • (MSD) 11/16/15 01:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.000109	0.0504	0.0522	100	104	1	75-125			4	20
Arsenic	0.0500	0.000659	0.0510	0.0507	101	100	1	75-125			1	20
Beryllium	0.0500	ND	0.0492	0.0503	98	101	1	75-125			2	20
Cadmium	0.0500	0.00000838	0.0529	0.0523	106	105	1	75-125			1	20
Copper	0.0500	0.000682	0.0529	0.0533	104	105	1	75-125			1	20

L800625-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/16/15 01:30 • (MS) 11/16/15 01:35 • (MSD) 11/16/15 01:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	0.0500	0.0000625	0.0501	0.0495	100	99	1	75-125			1	20
Selenium	0.0500	0.0000519	0.0493	0.0491	99	98	1	75-125			1	20
Thallium	0.0500	0.0000694	0.0501	0.0495	100	99	1	75-125			1	20
Zinc	0.0500	0.0000433	0.0487	0.0497	97	99	1	75-125			2	20

Method Blank (MB)

(MB) 11/18/15 11:25

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Antimony,Dissolved	ND		0.00200
Arsenic,Dissolved	ND		0.00200
Beryllium,Dissolved	ND		0.00200
Cadmium,Dissolved	ND		0.00100
Copper,Dissolved	ND		0.00500
Lead,Dissolved	ND		0.00200
Selenium,Dissolved	ND		0.00200
Thallium,Dissolved	ND		0.00200
Zinc,Dissolved	ND		0.0250

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/18/15 11:28 • (LCSD) 11/18/15 11:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony,Dissolved	0.0500	0.0513	0.0511	103	102	80-120			0	20
Arsenic,Dissolved	0.0500	0.0522	0.0524	104	105	80-120			1	20
Beryllium,Dissolved	0.0500	0.0588	0.0589	118	118	80-120			0	20
Cadmium,Dissolved	0.0500	0.0520	0.0518	104	104	80-120			0	20
Copper,Dissolved	0.0500	0.0577	0.0577	115	115	80-120			0	20
Lead,Dissolved	0.0500	0.0519	0.0518	104	104	80-120			0	20
Selenium,Dissolved	0.0500	0.0540	0.0535	108	107	80-120			1	20
Thallium,Dissolved	0.0500	0.0510	0.0515	102	103	80-120			1	20
Zinc,Dissolved	0.0500	0.0506	0.0497	101	99	80-120			2	20

L800278-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/18/15 11:33 • (MS) 11/18/15 11:45 • (MSD) 11/18/15 11:47

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony,Dissolved	0.0500	0.00189	0.0497	0.0503	96	97	1	75-125			1	20
Arsenic,Dissolved	0.0500	0.00561	0.0608	0.0613	110	111	1	75-125			1	20
Beryllium,Dissolved	0.0500	0.0000364	0.0548	0.0598	109	120	1	75-125			9	20
Cadmium,Dissolved	0.0500	0.000154	0.0541	0.0538	108	107	1	75-125			1	20
Copper,Dissolved	0.0500	0.0429	0.0958	0.0999	106	114	1	75-125			4	20

L800278-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/18/15 11:33 • (MS) 11/18/15 11:45 • (MSD) 11/18/15 11:47

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	0.0500	0.440	0.467	0.488	55	97	1	75-125	V		4	20
Selenium,Dissolved	0.0500	0.000457	0.0551	0.0553	109	110	1	75-125			0	20
Thallium,Dissolved	0.0500	0.0000587	0.0495	0.0508	99	101	1	75-125			3	20
Zinc,Dissolved	0.0500	0.368	0.402	0.416	67	95	1	75-125	V		3	20

Method Blank (MB)

(MB) 11/24/15 12:32

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Zinc,Dissolved	ND		0.0250

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/24/15 11:53 • (LCSD) 11/24/15 11:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Zinc,Dissolved	0.0500	0.0490	0.0508	98	102	80-120			4	20

L802239-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/24/15 11:58 • (MS) 11/24/15 12:07 • (MSD) 11/24/15 12:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Zinc,Dissolved	0.0500	0.00294	0.0477	0.0486	89	91	1	75-125			2	20

Method Blank (MB)

(MB) 11/15/15 19:28

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Acetone	ND		0.0500
Acrylonitrile	ND		0.0100
Benzene	ND		0.00100
Bromodichloromethane	ND		0.00100
Bromochloromethane	ND		0.00100
Bromoform	ND		0.00100
Bromomethane	ND		0.00500
Carbon disulfide	ND		0.00100
Carbon tetrachloride	ND		0.00100
Chlorobenzene	ND		0.00100
Chlorodibromomethane	ND		0.00100
Chloroethane	ND		0.00500
Chloroform	ND		0.00500
Chloromethane	ND		0.00250
1,2-Dibromo-3-Chloropropane	ND		0.00500
1,2-Dibromoethane	ND		0.00100
Dibromomethane	ND		0.00100
1,2-Dichlorobenzene	ND		0.00100
1,4-Dichlorobenzene	ND		0.00100
trans-1,4-Dichloro-2-butene	ND		0.00250
1,1-Dichloroethane	ND		0.00100
1,2-Dichloroethane	ND		0.00100
1,1-Dichloroethene	ND		0.00100
cis-1,2-Dichloroethene	ND		0.00100
trans-1,2-Dichloroethene	ND		0.00100
1,2-Dichloropropane	ND		0.00100
cis-1,3-Dichloropropene	ND		0.00100
trans-1,3-Dichloropropene	ND		0.00100
Ethylbenzene	ND		0.00100
2-Hexanone	ND		0.0100
Iodomethane	ND		0.0100
2-Butanone (MEK)	ND		0.0100
Methylene Chloride	ND		0.00500
4-Methyl-2-pentanone (MIBK)	ND		0.0100
Styrene	ND		0.00100
1,1,1,2-Tetrachloroethane	ND		0.00100

Method Blank (MB)

(MB) 11/15/15 19:28

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
1,1,2,2-Tetrachloroethane	ND		0.00100
Tetrachloroethene	ND		0.00100
Toluene	ND		0.00500
1,1,1-Trichloroethane	ND		0.00100
1,1,2-Trichloroethane	ND		0.00100
Trichloroethene	ND		0.00100
Trichlorofluoromethane	ND		0.00500
1,2,3-Trichloropropane	ND		0.00250
Vinyl acetate	ND		0.0100
Vinyl chloride	ND		0.00100
Xylenes, Total	ND		0.00300
(S) Toluene-d8	*106*		*90.0-115*
(S) Dibromofluoromethane	*105*		*79.0-121*
(S) a,a,a-Trifluorotoluene	*107*		*90.4-116*
(S) 4-Bromofluorobenzene	*99.6*		*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/15/15 18:43 • (LCSD) 11/15/15 21:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.146	0.139	117	111	28.7-175			5.17	20.9
Acrylonitrile	0.125	0.155	0.144	124	116	58.2-145			7.22	20
Benzene	0.0250	0.0263	0.0271	105	108	73.0-122			3.12	20
Bromodichloromethane	0.0250	0.0270	0.0275	108	110	75.5-121			2.10	20
Bromochloromethane	0.0250	0.0257	0.0273	103	109	78.9-123			6.17	20
Bromoform	0.0250	0.0242	0.0243	96.8	97.3	71.5-131			0.520	20
Bromomethane	0.0250	0.0260	0.0327	104	131	22.4-187		J3	22.8	20
Carbon disulfide	0.0250	0.0250	0.0255	100	102	53.0-134			1.71	20
Carbon tetrachloride	0.0250	0.0271	0.0280	109	112	70.9-129			3.03	20
Chlorobenzene	0.0250	0.0239	0.0243	95.7	97.1	79.7-122			1.40	20
Chlorodibromomethane	0.0250	0.0247	0.0250	98.9	100	78.2-124			1.26	20
Chloroethane	0.0250	0.0266	0.0268	107	107	41.2-153			0.480	20
Chloroform	0.0250	0.0263	0.0272	105	109	73.2-125			3.41	20
Chloromethane	0.0250	0.0275	0.0275	110	110	55.8-134			0.100	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0271	0.0248	108	99.1	64.8-131			8.98	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 11/15/15 18:43 • (LCSD) 11/15/15 21:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,2-Dibromoethane	0.0250	0.0239	0.0238	95.6	95.3	79.8-122			0.320	20
Dibromomethane	0.0250	0.0255	0.0261	102	105	79.5-118			2.38	20
1,2-Dichlorobenzene	0.0250	0.0252	0.0252	101	101	84.7-118			0.000	20
1,4-Dichlorobenzene	0.0250	0.0248	0.0249	99.0	99.7	82.2-114			0.690	20
trans-1,4-Dichloro-2-butene	0.0250	0.0259	0.0250	104	100	58.3-129			3.34	20
1,1-Dichloroethane	0.0250	0.0271	0.0278	108	111	71.7-127			2.66	20
1,2-Dichloroethane	0.0250	0.0259	0.0272	104	109	65.3-126			4.75	20
1,1-Dichloroethene	0.0250	0.0268	0.0272	107	109	59.9-137			1.69	20
cis-1,2-Dichloroethene	0.0250	0.0261	0.0269	104	108	77.3-122			3.11	20
trans-1,2-Dichloroethene	0.0250	0.0261	0.0264	104	105	72.6-125			0.910	20
1,2-Dichloropropane	0.0250	0.0269	0.0274	108	109	77.4-125			1.50	20
cis-1,3-Dichloropropene	0.0250	0.0265	0.0269	106	108	77.7-124			1.44	20
trans-1,3-Dichloropropene	0.0250	0.0246	0.0250	98.6	100	73.5-127			1.60	20
Ethylbenzene	0.0250	0.0246	0.0248	98.3	99.3	80.9-121			1.00	20
2-Hexanone	0.125	0.147	0.142	118	113	59.4-151			3.75	20
Iodomethane	0.125	0.117	0.121	94.0	97.1	64.6-137			3.22	20
2-Butanone (MEK)	0.125	0.159	0.154	128	123	46.4-155			3.75	20
Methylene Chloride	0.0250	0.0242	0.0269	96.9	108	69.5-120			10.5	20
4-Methyl-2-pentanone (MIBK)	0.125	0.145	0.139	116	111	63.3-138			4.73	20
Styrene	0.0250	0.0241	0.0243	96.3	97.2	79.9-124			0.950	20
1,1,1,2-Tetrachloroethane	0.0250	0.0244	0.0252	97.7	101	78.5-125			2.96	20
1,1,2,2-Tetrachloroethane	0.0250	0.0197	0.0193	78.7	77.2	79.3-123	J4	J4	1.98	20
Tetrachloroethene	0.0250	0.0242	0.0239	96.6	95.7	73.5-130			0.930	20
Toluene	0.0250	0.0253	0.0257	101	103	77.9-116			1.55	20
1,1,1-Trichloroethane	0.0250	0.0270	0.0276	108	111	71.1-129			2.21	20
1,1,2-Trichloroethane	0.0250	0.0246	0.0247	98.2	98.9	81.6-120			0.690	20
Trichloroethene	0.0250	0.0291	0.0294	116	118	79.5-121			1.12	20
Trichlorofluoromethane	0.0250	0.0314	0.0279	126	112	49.1-157			12.0	20
1,2,3-Trichloropropane	0.0250	0.0251	0.0246	100	98.2	74.9-124			2.05	20
Vinyl acetate	0.125	0.157	0.164	125	131	41.7-159			4.77	20
Vinyl chloride	0.0250	0.0267	0.0267	107	107	61.5-134			0.000	20
Xylenes, Total	0.0750	0.0731	0.0735	97.5	98.0	79.2-122			0.600	20
(S) Toluene-d8				*105*	*107*	*90.0-115*				
(S) Dibromofluoromethane				*102*	*107*	*79.0-121*				
(S) a,a,a-Trifluorotoluene				*105*	*106*	*90.4-116*				
(S) 4-Bromofluorobenzene				*96.9*	*98.9*	*80.1-120*				

L800507-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/16/15 12:21 • (MS) 11/16/15 12:43 • (MSD) 11/16/15 13:04

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.00189	0.0542	0.0516	41.8	39.8	1	25.0-156			4.95	21.5
Acrylonitrile	0.125	ND	0.140	0.143	112	115	1	55.9-161			2.19	20
Benzene	0.0250	0.00112	0.0229	0.0232	87.2	88.4	1	58.6-133			1.30	20
Bromodichloromethane	0.0250	ND	0.0237	0.0246	94.9	98.4	1	69.2-127			3.61	20
Bromochloromethane	0.0250	ND	0.0221	0.0224	88.4	89.6	1	74.4-128			1.45	20
Bromoform	0.0250	ND	0.0252	0.0265	101	106	1	66.3-140			5.21	20
Bromomethane	0.0250	ND	0.0128	0.0132	51.2	52.9	1	16.6-183			3.15	20.5
Carbon disulfide	0.0250	ND	0.0130	0.0133	52.1	53.3	1	34.9-138			2.40	20
Carbon tetrachloride	0.0250	ND	0.0222	0.0230	88.8	92.1	1	60.6-139			3.69	20
Chlorobenzene	0.0250	0.000681	0.0242	0.0251	94.2	97.5	1	70.1-130			3.39	20
Chlorodibromomethane	0.0250	ND	0.0234	0.0249	93.7	99.5	1	71.6-132			6.01	20
Chloroethane	0.0250	ND	0.0150	0.0152	60.2	60.9	1	33.3-155			1.21	20
Chloroform	0.0250	ND	0.0223	0.0228	89.0	91.2	1	66.1-133			2.37	20
Chloromethane	0.0250	ND	0.0161	0.0168	64.4	67.1	1	40.7-139			4.05	20
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.0235	0.0253	94.1	101	1	63.9-142			7.23	20.2
1,2-Dibromoethane	0.0250	ND	0.0234	0.0247	93.5	98.9	1	73.8-131			5.62	20
Dibromomethane	0.0250	ND	0.0234	0.0242	93.6	96.8	1	72.8-127			3.40	20
1,2-Dichlorobenzene	0.0250	ND	0.0261	0.0274	105	110	1	77.4-127			4.67	20
1,4-Dichlorobenzene	0.0250	0.00108	0.0258	0.0266	98.8	102	1	74.4-123			2.99	20
trans-1,4-Dichloro-2-butene	0.0250	ND	0.0241	0.0257	96.3	103	1	57.6-136			6.37	20
1,1-Dichloroethane	0.0250	0.000601	0.0236	0.0245	92.0	95.6	1	64.0-134			3.68	20
1,2-Dichloroethane	0.0250	0.000321	0.0217	0.0225	85.4	88.6	1	60.7-132			3.62	20
1,1-Dichloroethene	0.0250	ND	0.0200	0.0205	80.2	82.2	1	48.8-144			2.48	20
cis-1,2-Dichloroethene	0.0250	0.00747	0.0299	0.0300	89.6	90.3	1	60.6-136			0.540	20
trans-1,2-Dichloroethene	0.0250	ND	0.0202	0.0203	81.0	81.1	1	61.0-132			0.170	20
1,2-Dichloropropane	0.0250	ND	0.0267	0.0274	107	110	1	69.7-130			2.49	20
cis-1,3-Dichloropropene	0.0250	ND	0.0243	0.0250	97.1	100	1	71.1-129			2.93	20
trans-1,3-Dichloropropene	0.0250	ND	0.0251	0.0259	100	103	1	66.3-136			3.11	20
Ethylbenzene	0.0250	ND	0.0228	0.0237	91.2	94.7	1	62.7-136			3.76	20
2-Hexanone	0.125	ND	0.113	0.120	90.1	95.9	1	59.4-154			6.20	20.1
Iodomethane	0.125	ND	0.0923	0.0957	73.9	76.6	1	55.2-140			3.55	20
2-Butanone (MEK)	0.125	ND	0.0935	0.0950	74.8	76.0	1	45.0-156			1.63	20.8
Methylene Chloride	0.0250	ND	0.0190	0.0198	76.0	79.1	1	61.5-125			3.99	20
4-Methyl-2-pentanone (MIBK)	0.125	ND	0.139	0.145	111	116	1	60.7-150			4.05	20
Styrene	0.0250	ND	0.0246	0.0256	98.6	102	1	68.2-133			3.92	20
1,1,1,2-Tetrachloroethane	0.0250	ND	0.0240	0.0259	95.9	103	1	70.5-132			7.60	20

L800507-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 11/16/15 12:21 • (MS) 11/16/15 12:43 • (MSD) 11/16/15 13:04

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0262	0.0279	105	112	1	64.9-145			6.30	20
Tetrachloroethene	0.0250	ND	0.0216	0.0228	86.6	91.1	1	57.4-141			5.06	20
Toluene	0.0250	ND	0.0230	0.0235	91.8	94.1	1	67.8-124			2.41	20
1,1,1-Trichloroethane	0.0250	ND	0.0215	0.0219	85.9	87.7	1	58.7-134			2.09	20
1,1,2-Trichloroethane	0.0250	ND	0.0242	0.0254	96.8	102	1	74.1-130			4.88	20
Trichloroethene	0.0250	ND	0.0215	0.0223	86.0	89.3	1	48.9-148			3.81	20
Trichlorofluoromethane	0.0250	ND	0.0175	0.0184	69.9	73.6	1	39.9-165			5.15	20
1,2,3-Trichloropropane	0.0250	ND	0.0241	0.0253	96.5	101	1	71.5-134			4.88	20
Vinyl acetate	0.125	ND	0.146	0.151	116	121	1	42.8-181			3.78	20
Vinyl chloride	0.0250	0.00340	0.0182	0.0182	59.2	59.2	1	44.3-143			0.0700	20
Xylenes, Total	0.0750	ND	0.0702	0.0742	93.6	98.9	1	65.6-133			5.53	20
(S) Toluene-d8					*107*	*106*		*90.0-115*				
(S) Dibromofluoromethane					*96.0*	*96.4*		*79.0-121*				
(S) a,a,a-Trifluorotoluene					*104*	*105*		*90.4-116*				
(S) 4-Bromofluorobenzene					*102*	*104*		*80.1-120*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

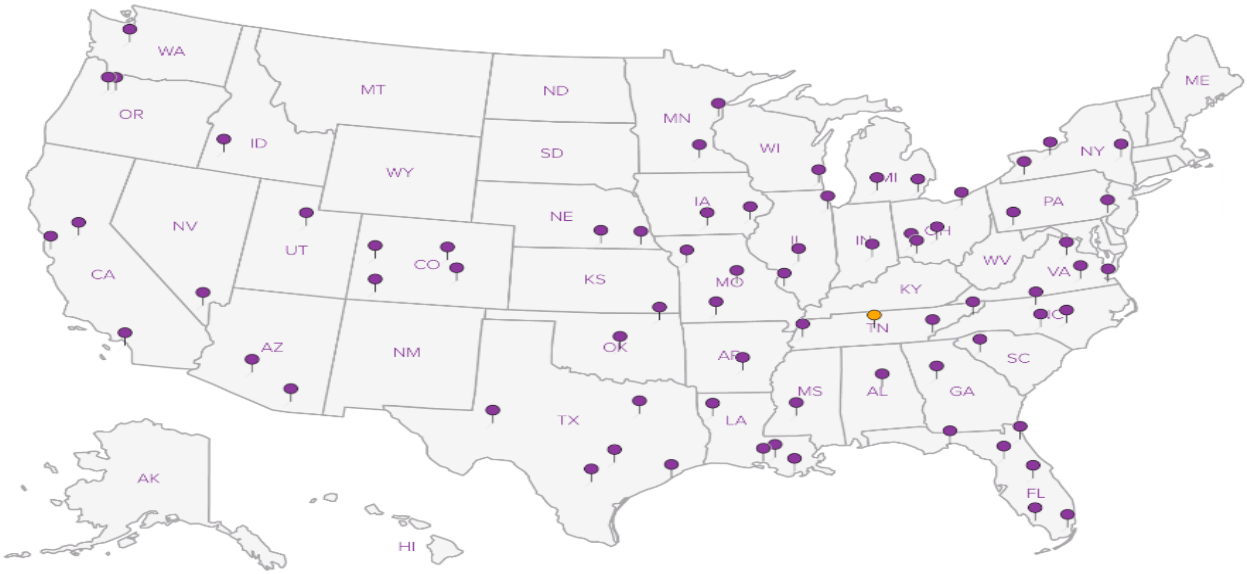
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Civil & Environmental Consultants - TN

325 Seaboard Lane, Suite 170
Franklin, TN 37067

Report to: **Philip Campbell**

Billing Information:
Dr. Kevin Wolfe
325 Seaboard Lane, Suite 170
Franklin, TN 37067

Email To: **pcampbell@cecinc.com**

Project Description: **EWS Camden Class 2 Landfill**

City/State Collected:

Phone: **615-333-7797**
Fax: **615-333-7751**

Client Project #

Lab Project #: **CEC-EWS CAMDEN LF**

Collected by (print): Philip Campbell

Site/Facility ID #: **CAMDEN, TN**

P.O. #

Collected by (signature): Philip Campbell

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X__Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Bromide,Cl, NO3, SO4 250mlHDPE-NoPres	Dissolved Metals 500mlHDPE-NoPres	NH3 250mlHDPE-H2SO4 <2	Total Metals 500mlHDPE-HNO3 <2	V8260AP1 40mlAmb-HCl					Rem./Contaminant	Sample # (lab only)
MW-1	Grab	GW	—	11-11-15	10:00	6	X	X	X	X	X						-01
MW-4	Grab	GW	—	11-11-15	11:00	6	X	X	X	X	X						02
MW-3	Grab	GW	—	11-11-15	13:30	6	X	X	X	X	X						03
DUPLICATE	Grab	GW	—	11-11-15	—	6	X	X	X	X	X						04
FIELD BLANK	Grab	GW	—	11-11-15	11:50	6	X	X	X	X	X						05
~~EQUIPMENT BLANK~~		~~GW~~				~~6~~	X	X	X	X	X						

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:Total & Dissolved metals = AP1 + Al, B, Ca, Fe, K, Mg, Mn, Na

pH _____ Temp _____
Flow _____ Other _____

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L800494
C165

Acctnum: **CEC**
Template: **T76821**
Prelogin: **P530416**
TSR: **350 - Jimmy Hunt**
PB: 11-5-15
Shipped Via: **Courier**

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Philip Campbell	11-12-15	10:30	
Relinquished by : (Signature)	Date: 11/12/15	Time: 11:06	Received by: (Signature)
Relinquished by : (Signature)	Date: 11/12/15	Time: 12:45	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 3.2 °C Bottles Received: 30
Date: 11/12/15 Time: ~~1245~~

Hold #
Condition: (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: <2 NCF:

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 325 Seaboard Lane, Ste. 170 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	EWS	**MONITORING WELL I.D.**	MW-1
LOCATION	Camden, TN	**TEMPERATURE & WEATHER**	clear, 50's
DATE & TIME	11-11-15	**EVENT FREQUENCY**	Semi-Annual
PURGE METHOD	Peristaltic Pump	**FIELD REPRESENTATIVE**	Philip Campbell
TOTAL WELL DEPTH (feet)	30.5	**SAMPLING EQUIPMENT**	~~Bailer~~ Peristaltic Pump, VOC's Soda-straw method
DEPTH TO WATER (feet)	22.84	**IS SAMPLE EQUIPMENT DEDICATED?**	No
CASING DIAMETER (inches)	2	**DUPLICATE COLLECTED?**	No
WATER COLUMN (feet)	8.16	**FIELD BLANK COLLECTED?**	No
PURGE VOLUME (gallons)	4.5	**EQUIPMENT BLANK COLLECTED?**	No

PURGE INFORMATION

	Gallons Purged	Time (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L) *	ORP	NTU
V_0	0	940	0	15.8	5.44	44.1	8.28	535	655
V_1	1.5	944	4	16.2	5.52	72.2	7.32	50.1	513
V_2	3.0	948	8	16.2	5.61	88.6	5.68	45.5	14.7
V_3	4.5	952	12	16.2	5.60	95.1	5.48	30.1	3.82

SAMPLE DATA

Gallons Purged	Time Collected (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L) *	ORP	NTU
4.5	10:00	12	16.2	5.60	95.1	5.48 *	30.1	3.82

Sample Charateristics (Odor, Color)	Clear, No odor	**Preservatives Used**	See COC
Number of Containers	6	**Sampler Signature**	Philip Campbell

WELL DATA

Number of Baffles	@ 4	**Well Cap Dedicated/In Place?**	NA / NA
Well Clear of Weeds/Accessible?	yes / yes	**Fittings/Well Head Condition**	good / good
Pad/Casing Quality	good / good	**Lock Condition**	good, will replace

* DO meter not accurate. Attempted calibration in field & would not calibrate. Readings are falsely high. Needs new membrane.

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 325 Seaboard Lane, Ste. 170 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	EWS	**MONITORING WELL I.D.**	MW-2
LOCATION	Camden, TN	**TEMPERATURE & WEATHER**	Clear, 60's
DATE & TIME	11-11-15 / 11:50	**EVENT FREQUENCY**	Semi-Annual
PURGE METHOD	NA, parameters only	**FIELD REPRESENTATIVE**	Philip Campbell
TOTAL WELL DEPTH (feet)	10	**SAMPLING EQUIPMENT**	YSI 600 pro plus
DEPTH TO WATER (feet)	6.36	**IS SAMPLE EQUIPMENT DEDICATED?**	No
CASING DIAMETER (inches)	2	**DUPLICATE COLLECTED?**	No
WATER COLUMN (feet)	3.64	**FIELD BLANK COLLECTED?**	No
PURGE VOLUME (gallons)	—	**EQUIPMENT BLANK COLLECTED?**	No

SAMPLE DATA

Gallons Purged	Time Collected (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L) *	ORP	NTU
—	11:50	—	18.4	6.17	198.5	5.53	143.5	NS

Sample Charateristics (Odor, Color)	—	**Preservatives Used**	—
Number of Containers	—	**Sampler Signature**	—

WELL DATA

Number of Baffles	4	**Well Cap Dedicated/In Place?**	NA/NA
Well Clear of Weeds/Accessible?	yes/yes	**Fittings/Well Head Condition**	good/good
Pad/Casing Quality	good/good	**Lock Condition**	OK, will replace

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 325 Seaboard Lane, Ste. 170 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	EWS	**MONITORING WELL I.D.**	MW-3
LOCATION	Camden, TN	**TEMPERATURE & WEATHER**	Clear, 60's
DATE & TIME	11-11-15 / 11:15	**EVENT FREQUENCY**	Semi-Annual
PURGE METHOD	Peristaltic Pump	**FIELD REPRESENTATIVE**	Philip Campbell
TOTAL WELL DEPTH (feet)	27	**SAMPLING EQUIPMENT**	Bailer
DEPTH TO WATER (feet)	18.84	**IS SAMPLE EQUIPMENT DEDICATED?**	No
CASING DIAMETER (inches)	2	**DUPLICATE COLLECTED?**	NO
WATER COLUMN (feet)	8.16	**FIELD BLANK COLLECTED?**	YES
PURGE VOLUME (gallons)	4.5	**EQUIPMENT BLANK COLLECTED?**	NO

PURGE INFORMATION

	Gallons Purged	Time (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)*	ORP	NTU
V_0	0	11:20	0	18.3	5.52	1601	—	189.4	79.8
V_1	1.5	11:24	4	18.5	5.29	1434	7.15	147.1	43.9
V_2	3.0	11:30	10	18.7	5.20	1398	7.81	205.6	105
~~V_3~~	~~4.5~~	~~11:40~~	* Turn off + let recharge some						
V_3	4.5	11:40	14	18.8	5.21	1468	8.06	207.8	51.8
									9.30 — @ metals samples

SAMPLE DATA

Gallons Purged	Time Collected (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)*	ORP	NTU
4.5	13:30	14	18.8	5.21	1468	8.06*	207.8	9.30 — metals

Sample Charateristics (Odor, Color)	Clear-slightly cloudy, slight odor	**Preservatives Used**	See COC
Number of Containers	6	**Sampler Signature**	Philip Campbell

WELL DATA

Number of Baffles	4	**Well Cap Dedicated/In Place?**	NA / NA
Well Clear of Weeds/Accessible?	No/yes	**Fittings/Well Head Condition**	good / good
Pad/Casing Quality	good / good	**Lock Condition**	OK, will replace

* DO measurement is not accurate to current site conditions. Equipment (probe) not working properly

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 325 Seaboard Lane, Ste. 170 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	EWS	**MONITORING WELL I.D.**	MW-4
LOCATION	Camden, TN	**TEMPERATURE & WEATHER**	clear, 60's
DATE & TIME	11-11-15 / 10:30	**EVENT FREQUENCY**	Semi-Annual
PURGE METHOD	Peristaltic Pump	**FIELD REPRESENTATIVE**	Philip Campbell
TOTAL WELL DEPTH (feet)	23.25	**SAMPLING EQUIPMENT**	Bailer
DEPTH TO WATER (feet)	11.8	**IS SAMPLE EQUIPMENT DEDICATED?**	No
CASING DIAMETER (inches)	2	**DUPLICATE COLLECTED?**	Yes
WATER COLUMN (feet)	11.45	**FIELD BLANK COLLECTED?**	No
PURGE VOLUME (gallons)	6	**EQUIPMENT BLANK COLLECTED?**	No

PURGE INFORMATION

	Gallons Purged	Time (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L) *	ORP	NTU
V_0	0	10:40	0	16.7	6.01	56.1	7.16	90.9	277
V_1	2	10:44	4	16.8	6.02	55.2	6.02	93.6	30.2
V_2	4	10:48	8	16.9	5.96	55.0	5.49	110.1	15.1
V_3	6	10:52	12	16.9	5.94	55.8	5.31	118.6	8.16

SAMPLE DATA

Gallons Purged	Time Collected (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
6	11:00	12	16.9	5.94	55.8	5.31 *	118.6	8.16

Sample Charateristics (Odor, Color)	clear, No odor	**Preservatives Used**	See COC
Number of Containers	6	**Sampler Signature**	Philip Campbell

WELL DATA

Number of Baffles	4	**Well Cap Dedicated/In Place?**	NA/NA
Well Clear of Weeds/Accessible?	yes/yes	**Fittings/Well Head Condition**	good/good
Pad/Casing Quality	good/good	**Lock Condition**	OK, will replace.

ANALYTICAL REPORT

December 14, 2015

Civil & Environmental Consultants - TN

Sample Delivery Group:	L804721
Samples Received:	12/04/2015
Project Number:	142-059
Description:	EWS Camden Class 2 Landfill
Site:	CAMDEN, TN
Report To:	Philip Campbell 325 Seaboard Lane, Suite 170 Franklin, TN 37067

Entire Report Reviewed By:

Jimmy Hunt
Technical Service Representative

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MW-3 L804721-01 GW

Collected by: Adrian Baugh
Collected date/time: 12/04/15 11:30
Received date/time: 12/04/15 15:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG833501	1	12/05/15 15:45	12/07/15 09:38	BRJ
Mercury by Method 7470A	WG833503	1	12/05/15 15:45	12/07/15 11:43	BRJ
Metals (ICP) by Method 6010B	WG833642	1	12/08/15 09:47	12/08/15 16:05	ST
Metals (ICP) by Method 6010B	WG833648	1	12/07/15 16:31	12/07/15 22:09	RDS
Metals (ICPMS) by Method 6020	WG833649	1	12/06/15 17:37	12/07/15 19:56	VSS
Metals (ICPMS) by Method 6020	WG833971	1	12/09/15 13:06	12/09/15 14:34	VSS
Metals (ICPMS) by Method 6020	WG835053	1	12/11/15 15:26	12/11/15 17:15	ST
Microbiology by Method 9223B-2004	WG833833	1	12/04/15 17:25	12/04/15 17:25	SWS
Wet Chemistry by Method 350.1	WG834631	1	12/11/15 12:00	12/11/15 12:00	JAL
Wet Chemistry by Method 9056A	WG834134	10	12/09/15 17:10	12/09/15 17:10	CM
Wet Chemistry by Method 9056MOD	WG833389	1	12/05/15 11:45	12/05/15 11:45	CM

MANHOLE 1 L804721-02 GW

Collected by: Adrian Baugh
Collected date/time: 12/04/15 10:35
Received date/time: 12/04/15 15:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG833501	1	12/05/15 15:45	12/07/15 09:47	BRJ
Mercury by Method 7470A	WG833503	1	12/05/15 15:45	12/07/15 12:19	BRJ
Metals (ICP) by Method 6010B	WG833642	1	12/08/15 09:47	12/08/15 16:08	ST
Metals (ICP) by Method 6010B	WG833648	1	12/07/15 16:31	12/07/15 22:18	RDS
Metals (ICPMS) by Method 6020	WG833649	1	12/06/15 17:37	12/07/15 20:01	VSS
Metals (ICPMS) by Method 6020	WG833971	1	12/09/15 13:06	12/09/15 14:44	VSS
Metals (ICPMS) by Method 6020	WG835053	1	12/11/15 15:26	12/11/15 17:26	ST
Microbiology by Method 9223B-2004	WG833833	1	12/04/15 17:25	12/04/15 17:25	SWS
Wet Chemistry by Method 350.1	WG834683	1	12/11/15 12:25	12/11/15 12:25	JAL
Wet Chemistry by Method 9056MOD	WG833389	1	12/05/15 11:59	12/05/15 11:59	CM

MANHOLE 2 L804721-03 GW

Collected by: Adrian Baugh
Collected date/time: 12/04/15 10:00
Received date/time: 12/04/15 15:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG833501	1	12/05/15 15:45	12/07/15 09:50	BRJ
Mercury by Method 7470A	WG833503	1	12/05/15 15:45	12/07/15 12:22	BRJ
Metals (ICP) by Method 6010B	WG833642	1	12/08/15 09:47	12/08/15 16:17	ST
Metals (ICP) by Method 6010B	WG833648	1	12/07/15 16:31	12/07/15 22:21	RDS
Metals (ICPMS) by Method 6020	WG833649	1	12/06/15 17:37	12/07/15 20:06	VSS
Metals (ICPMS) by Method 6020	WG833971	1	12/09/15 13:06	12/09/15 14:46	VSS
Metals (ICPMS) by Method 6020	WG835053	1	12/11/15 15:26	12/11/15 17:29	ST
Microbiology by Method 9223B-2004	WG833833	1	12/04/15 17:25	12/04/15 17:25	SWS
Wet Chemistry by Method 350.1	WG834683	1	12/11/15 12:30	12/11/15 12:30	JAL
Wet Chemistry by Method 9056MOD	WG833389	1	12/05/15 12:13	12/05/15 12:13	CM
Wet Chemistry by Method 9056MOD	WG833389	2	12/05/15 15:41	12/05/15 15:41	CM

POND L804721-04 GW

Collected by: Adrian Baugh
Collected date/time: 12/04/15 11:00
Received date/time: 12/04/15 15:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG833501	1	12/05/15 15:45	12/07/15 09:53	BRJ
Mercury by Method 7470A	WG833503	1	12/05/15 15:45	12/07/15 12:25	BRJ
Metals (ICP) by Method 6010B	WG833642	1	12/08/15 09:47	12/08/15 16:20	ST
Metals (ICP) by Method 6010B	WG833648	1	12/07/15 16:31	12/07/15 22:24	RDS
Metals (ICPMS) by Method 6020	WG833649	1	12/06/15 17:37	12/07/15 20:10	VSS

POND L804721-04 GW

Collected by: Adrian Baugh
Collected date/time: 12/04/15 11:00
Received date/time: 12/04/15 15:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020	WG833971	1	12/09/15 13:06	12/09/15 14:48	VSS
Metals (ICPMS) by Method 6020	WG835053	1	12/11/15 15:26	12/11/15 17:31	ST
Microbiology by Method 9223B-2004	WG833833	1	12/04/15 17:25	12/04/15 17:25	SWS
Wet Chemistry by Method 350.1	WG834683	1	12/11/15 12:35	12/11/15 12:35	JAL
Wet Chemistry by Method 9056MOD	WG833389	1	12/05/15 12:27	12/05/15 12:27	CM
Wet Chemistry by Method 9056MOD	WG833389	2	12/05/15 15:55	12/05/15 15:55	CM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jimmy Hunt
Technical Service Representative

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	2.77		0.250	1	12/11/2015 12:00	WG834631

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	360		10.0	10	12/09/2015 17:10	WG834134

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	12/05/2015 11:45	WG833389
Nitrate	7.86		0.100	1	12/05/2015 11:45	WG833389
Sulfate	29.1		5.00	1	12/05/2015 11:45	WG833389

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	12/07/2015 09:38	WG833501
Mercury,Dissolved	ND		0.000200	1	12/07/2015 11:43	WG833503

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	ND		0.200	1	12/08/2015 16:05	WG833642
Aluminum,Dissolved	ND		0.200	1	12/07/2015 22:09	WG833648
Barium	0.579		0.00500	1	12/08/2015 16:05	WG833642
Barium,Dissolved	0.579		0.00500	1	12/07/2015 22:09	WG833648
Boron	ND		0.200	1	12/08/2015 16:05	WG833642
Boron,Dissolved	ND		0.200	1	12/07/2015 22:09	WG833648
Calcium	52.7		1.00	1	12/08/2015 16:05	WG833642
Calcium,Dissolved	48.8		1.00	1	12/07/2015 22:09	WG833648
Chromium	ND		0.0100	1	12/08/2015 16:05	WG833642
Chromium,Dissolved	ND		0.0100	1	12/07/2015 22:09	WG833648
Cobalt	ND		0.0100	1	12/08/2015 16:05	WG833642
Cobalt,Dissolved	ND		0.0100	1	12/07/2015 22:09	WG833648
Iron	ND		0.100	1	12/08/2015 16:05	WG833642
Iron,Dissolved	ND		0.100	1	12/07/2015 22:09	WG833648
Magnesium	20.1		1.00	1	12/08/2015 16:05	WG833642
Magnesium,Dissolved	19.8		1.00	1	12/07/2015 22:09	WG833648
Manganese	0.133		0.0100	1	12/08/2015 16:05	WG833642
Manganese,Dissolved	0.134		0.0100	1	12/07/2015 22:09	WG833648
Nickel	ND		0.0100	1	12/08/2015 16:05	WG833642
Nickel,Dissolved	ND		0.0100	1	12/07/2015 22:09	WG833648
Potassium	60.2	B	1.00	1	12/08/2015 16:05	WG833642
Potassium,Dissolved	58.5		1.00	1	12/07/2015 22:09	WG833648
Silver	ND		0.00500	1	12/08/2015 16:05	WG833642
Silver,Dissolved	ND		0.00500	1	12/07/2015 22:09	WG833648
Sodium	131		1.00	1	12/08/2015 16:05	WG833642
Sodium,Dissolved	125		1.00	1	12/07/2015 22:09	WG833648
Vanadium	ND		0.0200	1	12/08/2015 16:05	WG833642
Vanadium,Dissolved	ND		0.0200	1	12/07/2015 22:09	WG833648

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	12/09/2015 14:34	WG833971
Antimony,Dissolved	ND		0.00200	1	12/07/2015 19:56	WG833649
Arsenic	ND		0.00200	1	12/09/2015 14:34	WG833971
Arsenic,Dissolved	ND		0.00200	1	12/07/2015 19:56	WG833649
Beryllium	ND		0.00200	1	12/09/2015 14:34	WG833971
Beryllium,Dissolved	ND		0.00200	1	12/11/2015 17:15	WG835053
Cadmium	ND		0.00100	1	12/09/2015 14:34	WG833971
Cadmium,Dissolved	ND		0.00100	1	12/07/2015 19:56	WG833649
Copper	ND		0.00500	1	12/09/2015 14:34	WG833971
Copper,Dissolved	ND		0.00500	1	12/07/2015 19:56	WG833649
Lead	ND		0.00200	1	12/09/2015 14:34	WG833971
Lead,Dissolved	ND		0.00200	1	12/07/2015 19:56	WG833649
Selenium	ND		0.00200	1	12/09/2015 14:34	WG833971
Selenium,Dissolved	ND		0.00200	1	12/07/2015 19:56	WG833649
Thallium	ND		0.00200	1	12/09/2015 14:34	WG833971
Thallium,Dissolved	ND		0.00200	1	12/07/2015 19:56	WG833649
Zinc	ND		0.0250	1	12/09/2015 14:34	WG833971
Zinc,Dissolved	ND		0.0250	1	12/11/2015 17:15	WG835053

Microbiology by Method 9223B-2004

Analyte	Result MPN/100ml	Qualifier	RDL MPN/100ml	Dilution	Analysis date / time	Batch
E.Coli	3			1	12/04/2015 17:25	WG833833
Coliform,Total	96			1	12/04/2015 17:25	WG833833

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	7.84		0.250	1	12/11/2015 12:25	WG834683

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	12/05/2015 11:59	WG833389
Chloride	46.4		1.00	1	12/05/2015 11:59	WG833389
Nitrate	0.263		0.100	1	12/05/2015 11:59	WG833389
Sulfate	18.3		5.00	1	12/05/2015 11:59	WG833389

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	12/07/2015 09:47	WG833501
Mercury,Dissolved	ND		0.000200	1	12/07/2015 12:19	WG833503

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	0.406		0.200	1	12/08/2015 16:08	WG833642
Aluminum,Dissolved	ND		0.200	1	12/07/2015 22:18	WG833648
Barium	0.0489		0.00500	1	12/08/2015 16:08	WG833642
Barium,Dissolved	0.0405		0.00500	1	12/07/2015 22:18	WG833648
Boron	ND		0.200	1	12/08/2015 16:08	WG833642
Boron,Dissolved	ND		0.200	1	12/07/2015 22:18	WG833648
Calcium	25.9		1.00	1	12/08/2015 16:08	WG833642
Calcium,Dissolved	24.0		1.00	1	12/07/2015 22:18	WG833648
Chromium	ND		0.0100	1	12/08/2015 16:08	WG833642
Chromium,Dissolved	ND		0.0100	1	12/07/2015 22:18	WG833648
Cobalt	ND		0.0100	1	12/08/2015 16:08	WG833642
Cobalt,Dissolved	ND		0.0100	1	12/07/2015 22:18	WG833648
Iron	2.33		0.100	1	12/08/2015 16:08	WG833642
Iron,Dissolved	1.67		0.100	1	12/07/2015 22:18	WG833648
Magnesium	5.40		1.00	1	12/08/2015 16:08	WG833642
Magnesium,Dissolved	5.34		1.00	1	12/07/2015 22:18	WG833648
Manganese	0.495		0.0100	1	12/08/2015 16:08	WG833642
Manganese,Dissolved	0.479		0.0100	1	12/07/2015 22:18	WG833648
Nickel	ND		0.0100	1	12/08/2015 16:08	WG833642
Nickel,Dissolved	ND		0.0100	1	12/07/2015 22:18	WG833648
Potassium	6.91		1.00	1	12/08/2015 16:08	WG833642
Potassium,Dissolved	6.77		1.00	1	12/07/2015 22:18	WG833648
Silver	ND		0.00500	1	12/08/2015 16:08	WG833642
Silver,Dissolved	ND		0.00500	1	12/07/2015 22:18	WG833648
Sodium	38.0		1.00	1	12/08/2015 16:08	WG833642
Sodium,Dissolved	37.3		1.00	1	12/07/2015 22:18	WG833648
Vanadium	ND		0.0200	1	12/08/2015 16:08	WG833642
Vanadium,Dissolved	ND		0.0200	1	12/07/2015 22:18	WG833648

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	12/09/2015 14:44	WG833971
Antimony,Dissolved	ND		0.00200	1	12/07/2015 20:01	WG833649
Arsenic	ND		0.00200	1	12/09/2015 14:44	WG833971
Arsenic,Dissolved	ND		0.00200	1	12/07/2015 20:01	WG833649
Beryllium	ND		0.00200	1	12/09/2015 14:44	WG833971
Beryllium,Dissolved	ND		0.00200	1	12/11/2015 17:26	WG835053
Cadmium	ND		0.00100	1	12/09/2015 14:44	WG833971
Cadmium,Dissolved	ND		0.00100	1	12/07/2015 20:01	WG833649
Copper	0.0232		0.00500	1	12/09/2015 14:44	WG833971
Copper,Dissolved	0.00869		0.00500	1	12/07/2015 20:01	WG833649
Lead	ND		0.00200	1	12/09/2015 14:44	WG833971
Lead,Dissolved	ND		0.00200	1	12/07/2015 20:01	WG833649
Selenium	ND		0.00200	1	12/09/2015 14:44	WG833971
Selenium,Dissolved	ND		0.00200	1	12/07/2015 20:01	WG833649
Thallium	ND		0.00200	1	12/09/2015 14:44	WG833971
Thallium,Dissolved	ND		0.00200	1	12/07/2015 20:01	WG833649
Zinc	0.0518		0.0250	1	12/09/2015 14:44	WG833971
Zinc,Dissolved	ND		0.0250	1	12/11/2015 17:26	WG835053

Microbiology by Method 9223B-2004

Analyte	Result MPN/100ml	Qualifier	RDL MPN/100ml	Dilution	Analysis date / time	Batch
E.Coli	>2420			1	12/04/2015 17:25	WG833833
Coliform,Total	>2420			1	12/04/2015 17:25	WG833833

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	7.80		0.250	1	12/11/2015 12:30	WG834683

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	12/05/2015 12:13	WG833389
Chloride	128		2.00	2	12/05/2015 15:41	WG833389
Nitrate	0.348		0.100	1	12/05/2015 12:13	WG833389
Sulfate	19.1		5.00	1	12/05/2015 12:13	WG833389

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	12/07/2015 09:50	WG833501
Mercury,Dissolved	ND		0.000200	1	12/07/2015 12:22	WG833503

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	1.04		0.200	1	12/08/2015 16:17	WG833642
Aluminum,Dissolved	ND		0.200	1	12/07/2015 22:21	WG833648
Barium	0.147		0.00500	1	12/08/2015 16:17	WG833642
Barium,Dissolved	0.0405		0.00500	1	12/07/2015 22:21	WG833648
Boron	ND		0.200	1	12/08/2015 16:17	WG833642
Boron,Dissolved	ND		0.200	1	12/07/2015 22:21	WG833648
Calcium	37.1		1.00	1	12/08/2015 16:17	WG833642
Calcium,Dissolved	26.1		1.00	1	12/07/2015 22:21	WG833648
Chromium	ND		0.0100	1	12/08/2015 16:17	WG833642
Chromium,Dissolved	ND		0.0100	1	12/07/2015 22:21	WG833648
Cobalt	ND		0.0100	1	12/08/2015 16:17	WG833642
Cobalt,Dissolved	ND		0.0100	1	12/07/2015 22:21	WG833648
Iron	7.22		0.100	1	12/08/2015 16:17	WG833642
Iron,Dissolved	1.82		0.100	1	12/07/2015 22:21	WG833648
Magnesium	5.95		1.00	1	12/08/2015 16:17	WG833642
Magnesium,Dissolved	5.41		1.00	1	12/07/2015 22:21	WG833648
Manganese	0.634		0.0100	1	12/08/2015 16:17	WG833642
Manganese,Dissolved	0.516		0.0100	1	12/07/2015 22:21	WG833648
Nickel	ND		0.0100	1	12/08/2015 16:17	WG833642
Nickel,Dissolved	ND		0.0100	1	12/07/2015 22:21	WG833648
Potassium	6.94		1.00	1	12/08/2015 16:17	WG833642
Potassium,Dissolved	6.70		1.00	1	12/07/2015 22:21	WG833648
Silver	ND		0.00500	1	12/08/2015 16:17	WG833642
Silver,Dissolved	ND		0.00500	1	12/07/2015 22:21	WG833648
Sodium	94.6		1.00	1	12/08/2015 16:17	WG833642
Sodium,Dissolved	87.9		1.00	1	12/07/2015 22:21	WG833648
Vanadium	ND		0.0200	1	12/08/2015 16:17	WG833642
Vanadium,Dissolved	ND		0.0200	1	12/07/2015 22:21	WG833648

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	12/09/2015 14:46	WG833971
Antimony,Dissolved	ND		0.00200	1	12/07/2015 20:06	WG833649
Arsenic	0.00204		0.00200	1	12/09/2015 14:46	WG833971
Arsenic,Dissolved	ND		0.00200	1	12/07/2015 20:06	WG833649
Beryllium	ND		0.00200	1	12/09/2015 14:46	WG833971
Beryllium,Dissolved	ND		0.00200	1	12/11/2015 17:29	WG835053
Cadmium	ND		0.00100	1	12/09/2015 14:46	WG833971
Cadmium,Dissolved	ND		0.00100	1	12/07/2015 20:06	WG833649
Copper	0.0404	B	0.00500	1	12/09/2015 14:46	WG833971
Copper,Dissolved	0.00552		0.00500	1	12/07/2015 20:06	WG833649
Lead	0.0128		0.00200	1	12/09/2015 14:46	WG833971
Lead,Dissolved	ND		0.00200	1	12/07/2015 20:06	WG833649
Selenium	ND		0.00200	1	12/09/2015 14:46	WG833971
Selenium,Dissolved	ND		0.00200	1	12/07/2015 20:06	WG833649
Thallium	ND		0.00200	1	12/09/2015 14:46	WG833971
Thallium,Dissolved	ND		0.00200	1	12/07/2015 20:06	WG833649
Zinc	0.176		0.0250	1	12/09/2015 14:46	WG833971
Zinc,Dissolved	ND		0.0250	1	12/11/2015 17:29	WG835053

Microbiology by Method 9223B-2004

Analyte	Result MPN/100ml	Qualifier	RDL MPN/100ml	Dilution	Analysis date / time	Batch
E.Coli	>2420			1	12/04/2015 17:25	WG833833
Coliform,Total	>2420			1	12/04/2015 17:25	WG833833

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	3.33		0.250	1	12/11/2015 12:35	WG834683

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	12/05/2015 12:27	WG833389
Chloride	124		2.00	2	12/05/2015 15:55	WG833389
Nitrate	2.00		0.100	1	12/05/2015 12:27	WG833389
Sulfate	16.7		5.00	1	12/05/2015 12:27	WG833389

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	12/07/2015 09:53	WG833501
Mercury,Dissolved	ND		0.000200	1	12/07/2015 12:25	WG833503

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	0.939		0.200	1	12/08/2015 16:20	WG833642
Aluminum,Dissolved	ND		0.200	1	12/07/2015 22:24	WG833648
Barium	0.0671		0.00500	1	12/08/2015 16:20	WG833642
Barium,Dissolved	0.0549		0.00500	1	12/07/2015 22:24	WG833648
Boron	ND		0.200	1	12/08/2015 16:20	WG833642
Boron,Dissolved	ND		0.200	1	12/07/2015 22:24	WG833648
Calcium	20.3		1.00	1	12/08/2015 16:20	WG833642
Calcium,Dissolved	20.2		1.00	1	12/07/2015 22:24	WG833648
Chromium	ND		0.0100	1	12/08/2015 16:20	WG833642
Chromium,Dissolved	ND		0.0100	1	12/07/2015 22:24	WG833648
Cobalt	ND		0.0100	1	12/08/2015 16:20	WG833642
Cobalt,Dissolved	ND		0.0100	1	12/07/2015 22:24	WG833648
Iron	0.984		0.100	1	12/08/2015 16:20	WG833642
Iron,Dissolved	0.197		0.100	1	12/07/2015 22:24	WG833648
Magnesium	10.7		1.00	1	12/08/2015 16:20	WG833642
Magnesium,Dissolved	10.6		1.00	1	12/07/2015 22:24	WG833648
Manganese	0.0365		0.0100	1	12/08/2015 16:20	WG833642
Manganese,Dissolved	0.0161		0.0100	1	12/07/2015 22:24	WG833648
Nickel	ND		0.0100	1	12/08/2015 16:20	WG833642
Nickel,Dissolved	ND		0.0100	1	12/07/2015 22:24	WG833648
Potassium	28.8	B	1.00	1	12/08/2015 16:20	WG833642
Potassium,Dissolved	28.5		1.00	1	12/07/2015 22:24	WG833648
Silver	ND		0.00500	1	12/08/2015 16:20	WG833642
Silver,Dissolved	ND		0.00500	1	12/07/2015 22:24	WG833648
Sodium	42.7		1.00	1	12/08/2015 16:20	WG833642
Sodium,Dissolved	40.6		1.00	1	12/07/2015 22:24	WG833648
Vanadium	ND		0.0200	1	12/08/2015 16:20	WG833642
Vanadium,Dissolved	ND		0.0200	1	12/07/2015 22:24	WG833648

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	12/09/2015 14:48	WG833971
Antimony,Dissolved	ND		0.00200	1	12/07/2015 20:10	WG833649
Arsenic	ND		0.00200	1	12/09/2015 14:48	WG833971
Arsenic,Dissolved	ND		0.00200	1	12/07/2015 20:10	WG833649
Beryllium	ND		0.00200	1	12/09/2015 14:48	WG833971
Beryllium,Dissolved	ND		0.00200	1	12/11/2015 17:31	WG835053
Cadmium	0.0171		0.00100	1	12/09/2015 14:48	WG833971
Cadmium,Dissolved	0.0138		0.00100	1	12/07/2015 20:10	WG833649
Copper	0.0102		0.00500	1	12/09/2015 14:48	WG833971
Copper,Dissolved	ND		0.00500	1	12/07/2015 20:10	WG833649
Lead	ND		0.00200	1	12/09/2015 14:48	WG833971
Lead,Dissolved	ND		0.00200	1	12/07/2015 20:10	WG833649
Selenium	ND		0.00200	1	12/09/2015 14:48	WG833971
Selenium,Dissolved	ND		0.00200	1	12/07/2015 20:10	WG833649
Thallium	ND		0.00200	1	12/09/2015 14:48	WG833971
Thallium,Dissolved	ND		0.00200	1	12/07/2015 20:10	WG833649
Zinc	0.0757		0.0250	1	12/09/2015 14:48	WG833971
Zinc,Dissolved	0.0292		0.0250	1	12/11/2015 17:31	WG835053

Microbiology by Method 9223B-2004

Analyte	Result MPN/100ml	Qualifier	RDL MPN/100ml	Dilution	Analysis date / time	Batch
E.Coli	201			1	12/04/2015 17:25	WG833833
Coliform,Total	>2420			1	12/04/2015 17:25	WG833833

Method Blank (MB)

(MB) 12/11/15 10:40

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Ammonia Nitrogen	ND		0.250

L804628-01 Original Sample (OS) • Duplicate (DUP)

(OS) 12/11/15 10:52 • (DUP) 12/11/15 10:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ammonia Nitrogen	ND	-0.0160	1	0		20

L804628-12 Original Sample (OS) • Duplicate (DUP)

(OS) 12/11/15 11:32 • (DUP) 12/11/15 11:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ammonia Nitrogen	ND	-0.0100	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/11/15 10:45 • (LCSD) 12/11/15 10:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	7.50	6.97	7.02	93	94	90-110			1	20

L804628-02 Original Sample (OS) • Matrix Spike (MS)

(OS) 12/11/15 10:57 • (MS) 12/11/15 11:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Ammonia Nitrogen	10.0	ND	9.54	95	1	90-110	

L804628-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/11/15 11:37 • (MS) 12/11/15 11:40 • (MSD) 12/11/15 11:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	10.0	ND	9.68	9.59	97	96	1	90-110			1	20

Method Blank (MB)

(MB) 12/11/15 12:10

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Ammonia Nitrogen	ND		0.250

L804721-02 Original Sample (OS) • Duplicate (DUP)

(OS) 12/11/15 12:25 • (DUP) 12/11/15 12:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Ammonia Nitrogen	7.84	7.81	1	0		20

L805020-04 Original Sample (OS) • Duplicate (DUP)

(OS) 12/11/15 13:00 • (DUP) 12/11/15 13:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Ammonia Nitrogen	0.0370	0.0370	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/11/15 12:15 • (LCSD) 12/11/15 12:17

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Ammonia Nitrogen	7.50	6.91	6.98	92	93	90-110			1	20

L804721-03 Original Sample (OS) • Matrix Spike (MS)

(OS) 12/11/15 12:30 • (MS) 12/11/15 12:32

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Ammonia Nitrogen	10.0	7.80	17.4	96	1	90-110	

L805020-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/11/15 13:05 • (MS) 12/11/15 13:07 • (MSD) 12/11/15 13:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	10.0	ND	9.44	9.60	94	96	1	90-110			2	20

Method Blank (MB)

(MB) 12/09/15 10:34

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Chloride	ND		1.00

L804967-03 Original Sample (OS) • Duplicate (DUP)

(OS) 12/09/15 12:05 • (DUP) 12/09/15 12:18

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	12.1	12.1	1	1		15

L804721-01 Original Sample (OS) • Duplicate (DUP)

(OS) 12/09/15 17:10 • (DUP) 12/09/15 17:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	360	360	10	0		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/09/15 10:47 • (LCSD) 12/09/15 11:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	40.2	40.2	100	101	80-120			0	15

L804967-02 Original Sample (OS) • Matrix Spike (MS)

(OS) 12/09/15 11:39 • (MS) 12/09/15 11:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	17.2	66.7	99	1	80-120	

L804933-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/09/15 17:36 • (MS) 12/09/15 17:49 • (MSD) 12/09/15 18:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	19.2	117	117	196	197	1	80-120	J5	J5	0	15

Method Blank (MB)

(MB) 12/04/15 19:23

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Bromide	ND		1.00
Chloride	ND		1.00
Nitrate	ND		0.100
Sulfate	ND		5.00

L804630-08 Original Sample (OS) • Duplicate (DUP)

(OS) 12/04/15 20:32 • (DUP) 12/04/15 20:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	0.000	1	0		20
Chloride	53.2	53.2	1	0		20
Nitrate	ND	0.000	1	0		20
Sulfate	15.4	15.3	1	0		20

L804644-05 Original Sample (OS) • Duplicate (DUP)

(OS) 12/05/15 00:43 • (DUP) 12/05/15 00:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	0.000	1	0		15
Chloride	ND	0.000	1	0		15
Nitrate	ND	0.000	1	0		15
Sulfate	ND	0.219	1	200	P1	15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/04/15 19:36 • (LCSD) 12/04/15 19:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromide	40.0	40.7	40.7	102	102	90-110			0	20
Chloride	40.0	40.1	40.0	100	100	90-110			0	20
Nitrate	8.00	8.22	8.22	103	103	90-110			0	20
Sulfate	40.0	40.3	40.3	101	101	90-110			0	20

L804630-09 Original Sample (OS) • Matrix Spike (MS)

(OS) 12/04/15 21:00 • (MS) 12/04/15 21:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	ND	50.3	101	1	80-120	
Chloride	50.0	53.1	103	99	1	80-120	
Nitrate	5.00	ND	5.13	103	1	80-120	
Sulfate	50.0	15.3	66.3	102	1	80-120	

L804644-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/05/15 00:01 • (MS) 12/05/15 00:15 • (MSD) 12/05/15 00:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	50.0	5.30	57.3	57.2	104	104	1	80-120			0	20
Nitrate	5.00	0.316	5.56	5.56	105	105	1	80-120			0	20
Sulfate	50.0	65.9	114	114	97	96	1	80-120			0	20

L804644-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/05/15 13:51 • (MS) 12/05/15 14:04 • (MSD) 12/05/15 14:18

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	1.00	1650	4080	4080	97	97	50	80-120			0	20

Method Blank (MB)

(MB) 12/07/15 08:36

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Mercury	ND		0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/07/15 08:39 • (LCSD) 12/07/15 08:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.00292	0.00280	97	93	80-120			4	20

L804710-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/07/15 08:45 • (MS) 12/07/15 08:48 • (MSD) 12/07/15 08:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.0000259	0.00290	0.00298	96	99	1	75-125			3	20

Method Blank (MB)

(MB) 12/07/15 11:35

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Mercury,Dissolved	ND		0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/07/15 11:38 • (LCSD) 12/07/15 11:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	0.00300	0.00286	0.00264	95	88	80-120			8	20

L804721-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/07/15 11:43 • (MS) 12/07/15 11:46 • (MSD) 12/07/15 11:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	0.00300	0.0000261	0.00291	0.00287	96	95	1	75-125			2	20

Method Blank (MB)

(MB) 12/08/15 15:06

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Aluminum	ND		0.200
Barium	ND		0.00500
Boron	ND		0.200
Calcium	ND		1.00
Chromium	ND		0.0100
Cobalt	ND		0.0100
Iron	ND		0.100
Magnesium	ND		1.00
Manganese	ND		0.0100
Nickel	ND		0.0100
Potassium	ND		1.00
Silver	ND		0.00500
Sodium	ND		1.00
Vanadium	ND		0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/08/15 15:08 • (LCSD) 12/08/15 15:11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	1.09	1.07	109	107	80-120			2	20
Barium	1.00	1.04	1.03	104	103	80-120			1	20
Boron	1.00	1.03	1.01	103	101	80-120			3	20
Calcium	10.0	10.2	10.0	102	100	80-120			1	20
Chromium	1.00	1.04	1.04	104	104	80-120			1	20
Cobalt	1.00	1.03	1.02	103	102	80-120			1	20
Iron	1.00	1.01	1.01	101	101	80-120			0	20
Magnesium	10.0	10.8	10.6	108	106	80-120			2	20
Manganese	1.00	1.02	1.00	102	100	80-120			1	20
Nickel	1.00	1.02	1.01	102	101	80-120			1	20
Potassium	10.0	10.9	10.6	109	106	80-120			2	20
Silver	1.00	1.05	1.04	105	104	80-120			1	20
Sodium	10.0	10.8	10.5	108	105	80-120			3	20
Vanadium	1.00	1.06	1.05	106	105	80-120			1	20

L804928-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/08/15 15:14 • (MS) 12/08/15 15:20 • (MSD) 12/08/15 15:23

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	0.0896	1.17	1.16	108	107	1	75-125			1	20
Barium	1.00	0.0245	1.06	1.06	104	104	1	75-125			0	20
Boron	1.00	0.0232	1.07	1.07	105	105	1	75-125			0	20
Calcium	10.0	19.4	31.3	31.4	119	120	1	75-125			0	20
Chromium	1.00	ND	1.05	1.05	105	105	1	75-125			0	20
Cobalt	1.00	0.0000809	1.04	1.04	104	104	1	75-125			0	20
Iron	1.00	0.141	1.15	1.15	101	101	1	75-125			0	20
Magnesium	10.0	2.91	13.4	13.5	105	105	1	75-125			0	20
Manganese	1.00	0.0818	1.09	1.09	100	101	1	75-125			1	20
Nickel	1.00	ND	1.03	1.03	103	103	1	75-125			0	20
Potassium	10.0	2.18	11.6	11.7	94	95	1	75-125			1	20
Silver	1.00	ND	1.05	1.05	105	105	1	75-125			0	20
Sodium	10.0	10.0	19.5	19.5	95	95	1	75-125			0	20
Vanadium	1.00	0.00599	1.06	1.07	105	106	1	75-125			1	20

Method Blank (MB)

(MB) 12/07/15 21:07

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Aluminum,Dissolved	ND		0.200
Barium,Dissolved	ND		0.00500
Boron,Dissolved	ND		0.200
Calcium,Dissolved	ND		1.00
Chromium,Dissolved	ND		0.0100
Cobalt,Dissolved	ND		0.0100
Iron,Dissolved	ND		0.100
Magnesium,Dissolved	ND		1.00
Manganese,Dissolved	ND		0.0100
Nickel,Dissolved	ND		0.0100
Potassium,Dissolved	ND		1.00
Silver,Dissolved	ND		0.00500
Sodium,Dissolved	ND		1.00
Vanadium,Dissolved	ND		0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/07/15 21:10 • (LCSD) 12/07/15 21:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	1.00	1.01	1.00	101	100	80-120			0	20
Barium,Dissolved	1.00	1.02	1.01	102	101	80-120			0	20
Boron,Dissolved	1.00	1.02	1.02	102	102	80-120			1	20
Calcium,Dissolved	10.0	10.0	10.0	100	100	80-120			0	20
Chromium,Dissolved	1.00	1.03	1.03	103	103	80-120			1	20
Cobalt,Dissolved	1.00	1.03	1.02	103	102	80-120			1	20
Iron,Dissolved	1.00	0.991	1.01	99	101	80-120			2	20
Magnesium,Dissolved	10.0	10.6	10.5	106	105	80-120			0	20
Manganese,Dissolved	1.00	0.997	0.990	100	99	80-120			1	20
Nickel,Dissolved	1.00	1.02	1.01	102	101	80-120			1	20
Potassium,Dissolved	10.0	10.1	10.1	101	101	80-120			0	20
Silver,Dissolved	1.00	1.02	1.01	102	101	80-120			1	20
Sodium,Dissolved	10.0	10.1	10.1	101	101	80-120			1	20
Vanadium,Dissolved	1.00	1.05	1.04	105	104	80-120			0	20

L804815-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/07/15 21:16 • (MS) 12/07/15 21:21 • (MSD) 12/07/15 21:24

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	1.00	ND	0.940	1.04	94	104	1	75-125			10	20
Barium,Dissolved	1.00	0.221	1.23	1.23	101	101	1	75-125			0	20
Boron,Dissolved	1.00	0.0163	1.07	1.06	105	105	1	75-125			0	20
Calcium,Dissolved	10.0	66.5	75.5	76.1	90	95	1	75-125			1	20
Chromium,Dissolved	1.00	0.0000330	1.04	1.03	104	103	1	75-125			0	20
Cobalt,Dissolved	1.00	0.000216	1.05	1.05	105	105	1	75-125			0	20
Iron,Dissolved	1.00	0.00215	0.995	1.00	99	100	1	75-125			1	20
Magnesium,Dissolved	10.0	9.37	19.7	19.7	103	104	1	75-125			0	20
Manganese,Dissolved	1.00	0.000422	0.994	0.995	99	100	1	75-125			0	20
Nickel,Dissolved	1.00	0.000684	1.04	1.04	104	104	1	75-125			0	20
Potassium,Dissolved	10.0	3.61	13.5	13.6	99	100	1	75-125			1	20
Silver,Dissolved	1.00	ND	1.04	1.03	104	103	1	75-125			1	20
Sodium,Dissolved	10.0	109	116	115	70	67	1	75-125	V	V	0	20
Vanadium,Dissolved	1.00	ND	1.05	1.05	105	105	1	75-125			0	20

Method Blank (MB)

(MB) 12/07/15 17:45

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Antimony,Dissolved	ND		0.00200
Arsenic,Dissolved	ND		0.00200
Cadmium,Dissolved	ND		0.00100
Copper,Dissolved	ND		0.00500
Lead,Dissolved	ND		0.00200
Selenium,Dissolved	ND		0.00200
Thallium,Dissolved	ND		0.00200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/07/15 17:50 • (LCSD) 12/07/15 17:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony,Dissolved	0.0500	0.0447	0.0457	89	91	80-120			2	20
Arsenic,Dissolved	0.0500	0.0405	0.0435	81	87	80-120			7	20
Cadmium,Dissolved	0.0500	0.0426	0.0453	85	91	80-120			6	20
Copper,Dissolved	0.0500	0.0431	0.0463	86	93	80-120			7	20
Lead,Dissolved	0.0500	0.0442	0.0486	88	97	80-120			10	20
Selenium,Dissolved	0.0500	0.0435	0.0461	87	92	80-120			6	20
Thallium,Dissolved	0.0500	0.0425	0.0479	85	96	80-120			12	20

L804483-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/07/15 17:59 • (MS) 12/07/15 18:09 • (MSD) 12/07/15 18:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony,Dissolved	0.0500	0.000142	0.0472	0.0465	94	93	1	75-125			2	20
Arsenic,Dissolved	0.0500	0.00123	0.0453	0.0446	88	87	1	75-125			2	20
Cadmium,Dissolved	0.0500	0.0000230	0.0466	0.0461	93	92	1	75-125			1	20
Copper,Dissolved	0.0500	0.00177	0.0483	0.0479	93	92	1	75-125			1	20
Lead,Dissolved	0.0500	0.000677	0.0489	0.0492	96	97	1	75-125			1	20
Selenium,Dissolved	0.0500	0.0000765	0.0514	0.0461	103	92	1	75-125			11	20
Thallium,Dissolved	0.0500	0.000307	0.0469	0.0478	93	95	1	75-125			2	20

Method Blank (MB)

(MB) 12/09/15 14:27

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Antimony	ND		0.00200
Arsenic	ND		0.00200
Beryllium	ND		0.00200
Cadmium	ND		0.00100
Copper	ND		0.00500
Lead	ND		0.00200
Selenium	ND		0.00200
Thallium	ND		0.00200
Zinc	ND		0.0250

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/09/15 14:29 • (LCSD) 12/09/15 14:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.0484	0.0481	97	96	80-120			1	20
Arsenic	0.0500	0.0488	0.0481	98	96	80-120			1	20
Beryllium	0.0500	0.0510	0.0510	102	102	80-120			0	20
Cadmium	0.0500	0.0504	0.0496	101	99	80-120			2	20
Copper	0.0500	0.0531	0.0524	106	105	80-120			1	20
Lead	0.0500	0.0478	0.0478	96	96	80-120			0	20
Selenium	0.0500	0.0498	0.0493	100	99	80-120			1	20
Thallium	0.0500	0.0480	0.0479	96	96	80-120			0	20
Zinc	0.0500	0.0444	0.0448	89	90	80-120			1	20

L804721-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/09/15 14:34 • (MS) 12/09/15 14:39 • (MSD) 12/09/15 14:41

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.000395	0.0509	0.0501	101	99	1	75-125			2	20
Arsenic	0.0500	0.000674	0.0517	0.0503	102	99	1	75-125			3	20
Beryllium	0.0500	0.000108	0.0487	0.0497	97	99	1	75-125			2	20
Cadmium	0.0500	0.000218	0.0513	0.0495	102	99	1	75-125			3	20
Copper	0.0500	0.00467	0.0513	0.0507	93	92	1	75-125			1	20

L804721-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/09/15 14:34 • (MS) 12/09/15 14:39 • (MSD) 12/09/15 14:41

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	0.0500	0.000336	0.0482	0.0483	96	96	1	75-125			0	20
Selenium	0.0500	0.000472	0.0494	0.0504	98	100	1	75-125			2	20
Thallium	0.0500	0.000151	0.0481	0.0479	96	95	1	75-125			0	20
Zinc	0.0500	0.0157	0.0593	0.0591	87	87	1	75-125			0	20

Method Blank (MB)

(MB) 12/11/15 17:07

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Beryllium,Dissolved	ND		0.00200
Zinc,Dissolved	ND		0.0250

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/11/15 17:10 • (LCSD) 12/11/15 17:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Beryllium,Dissolved	0.0500	0.0482	0.0483	96	97	80-120			0	20
Zinc,Dissolved	0.0500	0.0485	0.0490	97	98	80-120			1	20

L804721-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/11/15 17:15 • (MS) 12/11/15 17:21 • (MSD) 12/11/15 17:23

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Beryllium,Dissolved	0.0500	0.0000971	0.0492	0.0481	98	96	1	75-125			2	20
Zinc,Dissolved	0.0500	0.0176	0.0643	0.0644	93	93	1	75-125			0	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
B	The same analyte is found in the associated blank.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

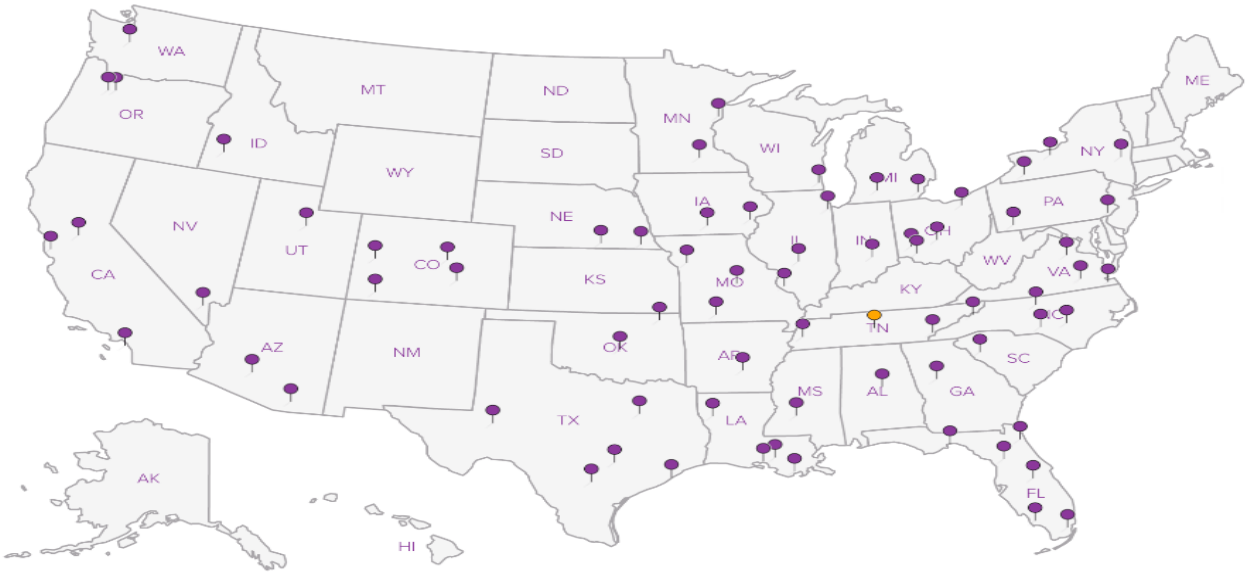
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Civil & Environmental Consultants - TN

325 Seaboard Lane, Suite 170
Franklin. TN 37067

Report to: **Philip Campbell**

Billing Information:
Dr. Kevin Wolfe
325 Seaboard Lane, Suite 170
Franklin, TN 37067

Email To: **pcampbell@cecinc.com**

Project Description: **EWS Camden Class 2 Landfill**

City/State Collected:

Phone: **615-333-7797**
Fax: **615-333-7751**

Client Project # 142-059

Lab Project # **CEC-EWS CAMDEN LF**

Collected by (print): Adrian Baugh

Site/Facility ID # **CAMDEN, TN**

P.O. #

Collected by (signature): A. Baugh
Immediately Packed on Ice N___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: normal

Email? ___No X_Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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Fax: 615-758-5859

L# L804721
F070
Acctnum: CEC
Template: T107880
Prelogin: P534291
TSR: 350 - Jimmy Hunt
PB: 12-2-15
Shipped Via: Courier

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Bromide,Cl, NO3, SO4 250mlHDPE-NoPres	COLILERT Microbiological	Dissolved Metals 500mlHDPE-NoPres	NH3 250mlHDPE-H2SO4 c2	Total Metals 500mlHDPE-HNO3 c2	V8260AP1 40mlAmb-HCl				Rem./Contaminant	Sample # (lab only)
MW-3	Grab	GW		12/4/15	1130	7	X	X	X	X	X	X					-01
MANHOLE 1	↓	GW		↓	1035	7	X	X	X	X	X	X					-02
MANHOLE 2	↓	GW		↓	1000	7	X	X	X	X	X	X					-03
~~MANHOLE 3~~		~~GW~~				~~7~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~					
POND	Grab	GW		12/4/15	1100	5	X	X	X	X	X						-04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
A. Baugh	12/4/15	1406	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
	12/4/15	15:20	

Samples returned via: ☐ UPS ☐ FedEx ☑ Courier ☐ _____
Temp: 4.1 °C Bottles Received: 24
Date: 12/4/15 Time: 1520

Condition: ice OK (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: 12 NCF:

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 405 Duke Drive Suite 270 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	EWS	MONITORING WELL I.D.	MW-3
LOCATION	Camden, TN	TEMPERATURE & WEATHER	30s Sunny
DATE & TIME	12-4-15 900	EVENT FREQUENCY	Re-monitor
PURGE METHOD	Peristaltic pump	FIELD REPRESENTATIVE	Adrian Baugh
TOTAL WELL DEPTH (feet)	27.80	SAMPLING EQUIPMENT	Peristaltic pump, Bailer
DEPTH TO WATER (feet)	7.48	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	NO
WATER COLUMN (feet)	20.32	FIELD BLANK COLLECTED?	NO
PURGE VOLUME (gallons)	5.25	EQUIPMENT BLANK COLLECTED?	NO

PURGE INFORMATION

Gallons Purged	Time (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	902	0	15.7	5.40	1282	4.91	179.6	22.8
1.75	905	3	15.5	5.41	1279	3.57	174.8	8.10
3.5	915	13	15.5	5.41	1278	2.86	169.7	4.10
5.25	923	20	15.5	5.40	1277	2.58	163.8	4.97

SAMPLE DATA

Gallons Purged	Time Collected (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU *
5.25	1130	20	15.5	5.40	1277	2.58	163.8	3.99

Sample Charateristics (Odor, Color)	Clear	Preservatives Used	See COC
Number of Containers	See COC	Sampler Signature	A Baugh

WELL DATA

Number of Baffles	4	Well Cap Dedicated/In Place?	N/A
Well Clear of Weeds/Accessible?	No / Yes	Fittings/Well Head Condition	N/A
Pad/Casing Quality	good / good	Lock Condition	good

* Taken during metals sample.

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 405 Duke Drive Suite 270 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	EWS	MONITORING WELL I.D.	Manhole #1
LOCATION	Camden, TN	TEMPERATURE & WEATHER	30s Sunny
DATE & TIME	12-4-15 1030	EVENT FREQUENCY	Re-monitoring event
PURGE METHOD	N/A	FIELD REPRESENTATIVE	Adrian Baugh
TOTAL WELL DEPTH (feet)	N/A	SAMPLING EQUIPMENT	Bailer
DEPTH TO WATER (feet)	N/A	IS SAMPLE EQUIPMENT DEDICATED?	NO
CASING DIAMETER (inches)	N/A	DUPLICATE COLLECTED?	NO
WATER COLUMN (feet)	N/A	FIELD BLANK COLLECTED?	NO
PURGE VOLUME (gallons)	N/A	EQUIPMENT BLANK COLLECTED?	NO

PURGE INFORMATION

Gallons Purged	Time (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU

SAMPLE DATA

Gallons Purged	Time Collected (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
Ø	1035	Ø	15.6	6.96	414.7	4.36	-0.1	100

Sample Charateristics (Odor, Color)	Strong odor; brown solids	Preservatives Used	See COC
Number of Containers	See COC	Sampler Signature	A. Baugh

WELL DATA

Number of Baffles	N/A	Well Cap Dedicated/In Place?	N/A
Well Clear of Weeds/Accessible?	Yes	Fittings/Well Head Condition	N/A
Pad/Casing Quality	good	Lock Condition	N/A

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 405 Duke Drive Suite 270 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	EWS	MONITORING WELL I.D.	Manhole #2
LOCATION	Camden, TN	TEMPERATURE & WEATHER	30s Sunny
DATE & TIME	12-4-15 950	EVENT FREQUENCY	Re-monitor – Non-routine
PURGE METHOD	N/A	FIELD REPRESENTATIVE	Adrian Baugh
TOTAL WELL DEPTH (feet)	N/A	SAMPLING EQUIPMENT	Bailer
DEPTH TO WATER (feet)	N/A	IS SAMPLE EQUIPMENT DEDICATED?	NO
CASING DIAMETER (inches)	N/A	DUPLICATE COLLECTED?	NO
WATER COLUMN (feet)	N/A	FIELD BLANK COLLECTED?	NO
PURGE VOLUME (gallons)	N/A	EQUIPMENT BLANK COLLECTED?	NO

PURGE INFORMATION

Gallons Purged	Time (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU

SAMPLE DATA

Gallons Purged	Time Collected (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
Ø	1000	Ø	15.6	6.92	442	5.11	7.6	68.4

Sample Charateristics (Odor, Color)	Strong odor; Brown color; Solids	Preservatives Used	see COC
Number of Containers	See COC	Sampler Signature	A. Baugh

WELL DATA

Number of Baffles	N/A	Well Cap Dedicated/In Place?	N/A
Well Clear of Weeds/Accessible?	yes	Fittings/Well Head Condition	N/A
Pad/Casing Quality	good	Lock Condition	N/A

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 405 Duke Drive Suite 270 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Ewy	MONITORING WELL I.D.	Sediment Pond
LOCATION	Camden, TN	TEMPERATURE & WEATHER	30s Sunny
DATE & TIME	12-4-15 1100	EVENT FREQUENCY	Re-monitor Non-routine
PURGE METHOD	N/A	FIELD REPRESENTATIVE	Adrian Baugh
TOTAL WELL DEPTH (feet)	N/A	SAMPLING EQUIPMENT	Bailer
DEPTH TO WATER (feet)	N/A	IS SAMPLE EQUIPMENT DEDICATED?	NO
CASING DIAMETER (inches)	N/A	DUPLICATE COLLECTED?	NO
WATER COLUMN (feet)	N/A	FIELD BLANK COLLECTED?	NO
PURGE VOLUME (gallons)	N/A	EQUIPMENT BLANK COLLECTED?	NO

PURGE INFORMATION

Gallons Purged	Time (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU

SAMPLE DATA

Gallons Purged	Time Collected (00:00)	Minutes Purged	°C	pH	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	1100	0	9.5	7.91	488.2	8.65	84.2	51.2

Sample Charateristics (Odor, Color)	Slight odor / color	Preservatives Used	See COC
Number of Containers	See COC	Sampler Signature	A. Baugh

WELL DATA

Number of Baffles	N/A	Well Cap Dedicated/In Place?	N/A
Well Clear of Weeds/Accessible?	Yes	Fittings/Well Head Condition	N/A
Pad/Casing Quality	N/A	Lock Condition	N/A

TEC Environmental Laboratories, INC
2269 Dr. F.E. Wright Drive
Jackson, TN 38305
TEL: 731-423-5330 FAX: 731-423-5326
Website: www.tecenvirolabs.com

November 12, 2015

Chris White
Environmental Waste Solutions
4521 Tronsdale Drive
Nashville, TN 37204
TEL: (615) 717-5564
FAX

RE: EWS Camden-Bruceton Order No.: 1511083

Dear Chris White:

TEC Environmental Laboratories, INC received 1 sample(s) on 11/4/2015 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative. Analytical results designated with a "J" qualifier are estimated and represent a detection above the Method Detection Limit (MDL) and less than the Reporting Limit (PQL).

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

As always we appreciate your business and are pleased to be of service to you.

If you have any questions, please feel free to call or email.

Sincerely,

Billie J. Haynes

Billie Haynes
Laboratory Manager
2269 Dr. F.E. Wright Drive
Jackson, TN 38305

TEC Environmental Laboratories, INC
2269 Dr. F.E. Wright Drive
Jackson, TN 38305
TEL: 731-423-5330 FAX: 731-423-5326
Website: www.tecenvirolabs.com

Analytical Report

WO#: **1511083**
Date Reported: **11/12/2015**

CLIENT: Environmental Waste Solutions
Collection Date: 11/4/2015 8:00:00 AM
Project: EWS Camden-Bruceton
Lab ID: 1511083-001
Matrix: LEACHATE
Client Sample ID EWS Camden

Analyses	Result	MDL	MCL	Qual	Units	DF	Date Analyzed
ICP METALS				**E200.7**			Analyst: **rh**
Cadmium	ND	0.00300			mg/L	10	11/5/2015 3:19:40 PM
Chromium	ND	0.00200			mg/L	10	11/5/2015 3:19:40 PM
Copper	ND	0.00500			mg/L	10	11/5/2015 3:19:40 PM
Lead	ND	0.0100			mg/L	10	11/5/2015 3:19:40 PM
Nickel	ND	0.00700			mg/L	10	11/5/2015 3:19:40 PM
Silver	ND	0.00500			mg/L	10	11/5/2015 3:19:40 PM
Zinc	0.0928	0.00700			mg/L	10	11/5/2015 3:19:40 PM
CR+6				**M3500-CR B 200**			Analyst: **rh**
Chromium, Hexavalent	ND	0.0100			mg/L	1	11/4/2015 1:45:00 PM
MERCURY				**E245.1-1994**			Analyst: **rh**
Mercury	ND	0.000200			mg/L	1	11/10/2015 3:15:00 PM
BOD, 5 DAY, 20°C				**SM5210 B-2001**			Analyst: **ps**
Biochemical Oxygen Demand	15.7	3.00			mg/L	1	11/9/2015 8:00:00 AM
AMMONIA AS N				**I4500-NH3 D-199**			Analyst: **ps**
Ammonia	558	10.0			mg/L	50	11/10/2015 9:00:00 AM
TOTAL SUSPENDED SOLIDS				**SM2540-D-1997**			Analyst: **ps**
Suspended Solids (Residue, Non-Filterable)	72.0	2.00			mg/L	1	11/6/2015 3:00:00 PM
PURGEABLES				**E624**			Analyst: **tlm**

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
PL	Permit Limit
RL	Reporting Detection Limit
H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits

TEC Environmental Laboratories, INC
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Analytical Report

WO#: **1511083**
Date Reported: **11/12/2015**

CLIENT: Environmental Waste Solutions
Collection Date: 11/4/2015 8:00:00 AM
Project: EWS Camden-Bruceton
Lab ID: 1511083-001
Matrix: LEACHATE
Client Sample ID EWS Camden

Analyses	Result	MDL	MCL	Qual	Units	DF	Date Analyzed
PURGEABLES				**E624**			Analyst: **tlm**
Bromomethane	ND	0.00500			mg/L	1	11/4/2015 3:18:00 PM
Chloroform	0.0134	0.00300			mg/L	1	11/4/2015 3:18:00 PM
Dibromochloromethane	ND	0.00500			mg/L	1	11/4/2015 3:18:00 PM
PH				**A4500-H+B**			Analyst: **jkh**
pH	8.8				SI	1	11/4/2015 8:10:00 AM
TEMPERATURE				**SM2550_B-2000**			Analyst: **jkh**
Temperature	65				°F	1	11/4/2015 8:10:00 AM
ANIONS BY ION CHROMATOGRAPHY				**E300**			Analyst: **SUB**
Bromide	13	0.010			mg/L	1	11/5/2015 10:28:00 PM
OIL AND GREASE				**1664**			Analyst: **hh**
Oil and Grease	ND	1.3			mg/L	1	11/5/2015 12:40:00 PM
TOTAL CYANIDE				**E335.4**			Analyst: **hh**
Cyanide	0.00679	0.00500			mg/L	1	11/10/2015 9:00:00 AM
TOTAL PHENOLICS				**E420.4**			Analyst: **hh**
Phenols	0.0341	0.00200			mg/L	1	11/12/2015 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
PL	Permit Limit
RL	Reporting Detection Limit
H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits

APPENDIX D

CEC STANDARD OPERATING PROCEDURES

03-02-01 MONITORING WELLS USING CONVENTIONAL PURGING

I. SCOPE AND APPLICABILITY: This procedure is applicable to the sampling of monitoring wells which do not contain free product using conventional purge methodology.

II. PROJECT-SPECIFIC REQUIREMENTS

A. SAMPLE LOCATIONS AND NUMBERING SYSTEM:

B. ANALYTICAL PARAMETERS AND SAMPLE FREQUENCY:

C. FIELD SCREENING AND ANALYSES: *Reference appropriate SOPs.*

D. QUALITY ASSURANCE SAMPLES: *Number and type of blanks and duplicates. Reference SOPs 04-01-01, 04-01-02, and 04-02-01 as appropriate.*

E. FILTRATION:

F. PURGE CRITERION AND DISPOSAL OF PURGE WATER:

G. WELL KEYS: *Indicate whether wells use CEC's standard key*

H. DEDICATED EQUIPMENT: *Indicate whether dedicated pumps or bailers have been installed.*

I. OTHER REQUIREMENTS:

III. METHODOLOGY: Monitoring wells should be sampled progressing from least contaminated to most contaminated to reduce the chances of cross contamination between samples. If a bailer is employed, use new rope for each well.

A. PURGING: Purging is performed to remove static water standing in the well bore, thereby allowing collection of a sample representative of water in the aquifer. Unless otherwise specified in Section II.F., well development may suffice for the purge, so long as the sample is collected immediately following development.

1. Measure the water level from the top of the riser pipe at the pre-marked reference point (SOP 06-01-01).

2. Calculate the purge volume using the data presented in Exhibit 03-02-01 and the criterion presented in Section II.F.

3. Remove the required volume of water using one of the following methods. If the well goes dry, the purge can be considered complete unless otherwise specified in Section II.F. However, attempts should be made to prevent the well from going dry during purging, drying the well disrupts the flow regime and can result in the loss of volatile compounds. Therefore:

≅ If a well is known to have a low yield, it should be purged by bailing.

≅ If a pump is used for purging, adjust the pumping rate to maintain a water column in the well, if possible.

≅ Do not attempt to purge a well to dryness unless it is infeasible to maintain water in the well at a reasonable purge rate.

METHOD A: If the purge criterion is specified on volume of water to be removed:

a. Remove the required volume of water using a submersible pump or bailer. If a pump is used, a check valve must be installed on the pump to prevent pumped water from returning to the well. Begin purging at the top of the water column. Minimize aeration of the water during purging by pumping at a low rate or lowering the bailer gently into the water.

b. Lower the pump or bailer as necessary to continue purging until the well volume criterion is met.

METHOD B: If the purge criteria are specified on stabilization of field analyses:

a. Measure initial water quality by retrieving a sample from the top of the water column using a bailer. Conduct the field analyses specified in Section II.F. Record these results on the Groundwater Monitoring Data Sheet (SOP 07-02-01).

b. Remove one well volume of water by submersible pump or bailer. If a pump is used, a check valve must be installed to prevent water from returning to the well. Begin purging at the top of the water column. Minimize aeration of the water during purging by pumping at a low rate or lowering the bailer gently into the water.

c. After one well volume has been removed, conduct field analyses on the groundwater being discharged. Record results on the Monitoring Sampling Data Sheet.

d. Repeat steps b and c until the purge criteria have been met.

B. SAMPLE COLLECTION: Groundwater samples should be collected immediately after purging , if the well will yield sufficiently. Some low-yielding wells may require time to recover prior to sampling. If the well will not yield a sample immediately after purging, a maximum of 24 hours between purging and sampling is permitted.

1. Collect water from the well by slowly lowering a decontaminated bailer into the water column.

2. Transfer the samples which do not require filtering directly into sample bottles in the following order:

Volatile Organic Compounds
Semi-Volatile Organic Compounds
Pesticides and PCBs
Cations and Anions
Radionuclides
Bacteria.

3. If indicated in Section II.E., filter the required aliquots (SOP 05-03-02 or 05-03-03) and fill those sample bottles.

4. Preserve the samples immediately in accordance with SOP 07-01-02.

5. Conduct field analyses: pH (SOP 05-04-01 or 05-04-04), temperature, specific conductance (SOP 05-04-02), dissolved oxygen (SOP 05-04-03), Eh (SOP 05-04-08), and any other parameters listed in Section II.C.

6. If a dedicated sample bailer was used, return it to the well head. Otherwise, decontaminate the bailer as specified in SOP 01-01-00.

7. Replace the well cap and lock the protective casing.

8. Collect quality-assurance samples specified in Section II.D in accordance with SOP 04-01-01, 04-01-02, and 04-02-01.

9. Decontaminate samples in accordance with SOP 01-01-00.

10. Pack and ship the samples in accordance with SOP 07-01-03. Samples should be shipped on a daily basis and such that holding time requirements (SOP 07-01-02) can be met.

IV. PRECAUTIONS AND COMMON PROBLEMS

A. When using a bailer, do not allow the rope to drag on the ground. If necessary, lay out plastic sheeting to catch the rope.

B. When using a pump, exercise caution to prevent cross-contaminating samples with the hose. Do not sample from the pump discharge for trace organic compounds. Always use a check valve if not using a dedicated hose. Discard hose if there is a question about whether it can be adequately decontaminated.

C. Check the holding times on the analyses to be conducted. The holding time for some parameters is 24 hours. Plan sampling and shipping of these samples accordingly.

D. Preserve samples immediately after collection, including keeping them cool. Do not let samples sit in a hot vehicle until the end of the day.

V. DOCUMENTATION

A. Record information on a Groundwater Monitoring Data Sheet (SOP 07-02-01).

B. Prepare a Trip Report (SOP 07-02-04) and include:

- ≅ Time, date, and method of sample shipment
- ≅ Preservation methods and sample handling
- ≅ Description of purge and sampling methods
- ≅ The Groundwater Monitoring Data Sheet.

VII. REFERENCES

None

04-01-01 EQUIPMENT BLANKS

I. SCOPE AND APPLICABILITY: Equipment blanks are collected to assess the adequacy of decontamination procedures and to determine whether sampling equipment and methods are contributing contaminants to samples.

II. PROJECT-SPECIFIC REQUIREMENTS:

WATER TYPES TO BE USED FOR BLANKS: *[distilled water, deionized water, HPLC-grade water, etc.]*

III. METHODOLOGY

A. Review the SOP for the medium sampled to establish the frequency for collection of blanks.

B. Assemble a complete set of decontaminated sampling equipment for the subject sampling effort.

C. Rinse the blank water across the sampling equipment, catching it in a decontaminated stainless-steel bucket. Handle the water in the same manner as the samples. For example, if samples for metals analysis are to be filtered with a disposable filter, the blank aliquot for metals analysis should be processed through a new disposable filter. Blanks for soil sampling may be run across the split-spoon sampler, trowel, and bucket.

D. Fill a complete set of sample bottles.

E. Assign the blank a sample number of the same format as the other samples in the series.

F. Store, handle, and ship the blanks in the same manner as the samples.

IV. PRECAUTIONS AND COMMON PROBLEMS

A. The selection of stock solution depends upon the requirements of the project. Analyses for trace contaminants will require a purer blank solution than analyses for major constituents. Stringent analytical requirements will necessitate the use of laboratory-supplied blank water.

B. Include ALL sampling equipment in the rinsing procedure.

V. DOCUMENTATION: Record the following information in the field logbook:

- ≅ Source of blank water
- ≅ Time and sequence within the sampling event when the blanks were prepared
- ≅ Description of the procedure for preparing the blanks
- ≅ Sample numbers assigned to blanks.

Incorporate this information into the Trip Report (SOP 07-02-04).

VI. REFERENCES

EPA, 1986. Test Methods for Evaluating Solid Waste: SW-846; Volume II. Washington, DC.

04-01-02 TRIP BLANKS

I. SCOPE AND APPLICABILITY: Trip blanks are prepared to evaluate whether volatile constituents have migrated into samples from the air on-site, during shipping, or at the laboratory.

II. PROJECT-SPECIFIC REQUIREMENTS:

A. Frequency:

B. Other Criteria:

III. METHODOLOGY

A. When ordering bottles from the laboratory for the sampling event, request that trip blanks be sent also.

B. Keep the supplied blanks with the samples being collected throughout the sampling event. Handle the blanks in the same manner as the filled sample vials.

C. Assign the trip blank a sample number of the format used for the sampling event.

D. Return the trip blanks to the laboratory with the samples. Include the samples on the Chain-of-Custody form (SOP 07-02-02). Analysis is typically performed for volatile organic compounds only.

IV. PRECAUTIONS AND COMMON PROBLEMS: None.

V. DOCUMENTATION: Describe handling on the trip blanks in the Trip Report (SOP 07-02-04). Include the sample numbers assigned.

VI. REFERENCES

EPA, 1986. Test Methods for Evaluating Solid Waste: SW-846; Volume II. Washington, DC.

04-02-01 LIQUID DUPLICATES

I. SCOPE AND APPLICABILITY: Duplicate samples are collected to evaluate the precision involved in the sampling effort. Duplicate samples must be collected to be as similar as possible to the original sample. This procedure is applicable of collection of duplicate samples of all liquids and flowable sludges.

II. PROJECT-SPECIFIC REQUIREMENTS:

NUMBER/FREQUENCY OF DUPLICATE SAMPLING:

DUPLICATE NUMBERING SYSTEM: *[Indicate how sample numbers are to be assigned to duplicates, and whether "blind" numbers should be assigned.]*

III. METHODOLOGY

A. Prepare sample bottles for the target sample and its duplicate.

B. Collect the liquid sample in accordance with the appropriate SOP.

C. When filling sample bottles, fill each type of bottle for the sample and duplicate in sequence. Fill both VOA vials, then both metals bottles, etc. This will assure that the duplicate is as similar to the original sample as possible.

D. Preserve the sample and duplicate identically.

IV. PRECAUTIONS AND COMMON PROBLEMS

A. Failure to fill bottles alternately between the sample and duplicate may result in poor reproducibility between analyses.

B. Samples with free product or multiple phases present special problems. The phase distribution must be the same in both aliquots.

V. DOCUMENTATION: List the sample and duplicate on the Groundwater Monitoring Data Sheet as separate samples, describing the duplicate in the "Comments" column. If a Groundwater Monitoring Data Sheet is not appropriate, incorporate this information into the Trip Report (SOP 07-02-04).

VI. REFERENCES: None.

05-03-05 BAILER

I. EQUIPMENT SPECIFICATION: This procedure is applicable to the use of all bottom-fill bailers.

II. INSPECTION AND CALIBRATION

A. DAILY INSPECTION AND CHECKS: Make sure fittings at both ends of the bailer are secure. Assure that the check valve opens and closes freely.

B. CALIBRATION: There is no calibration applicable to this equipment.

C. ROUTINE MAINTENANCE: There is no maintenance applicable to this equipment. Bailers are typically replaced if damaged.

III. USE

A. Select a rope or cable for suspension of the bailer which is appropriate to project requirements. Typically, small gauge nylon rope is used, although stainless-steel cable may be used when samples will be analyzed to very low detection limits. The rope or cable should be new and clean. Do not use materials which have been used on another project, as this may result in cross contamination.

B. Consult the Project Manager to select a bailer composition which is compatible with the anticipated groundwater quality. For most applications, PVC bailers are adequate. Stainless-steel may be used where very low levels of organic compounds are of interest. Teflon bailers are available and may be requested on some projects.

C. Using a strong, non-slipping knot, such as a bowline, tie the rope or cable to the top of the bailer.

D. Lower the bailer into the well. Do not let the bailer free-fall down the well, as the device may shatter or the ball valve may become dislodged upon striking the water or the bottom of the well.

E. Raise the bailer by pulling the rope with a smooth, uniform motion. A jerky motion may open the check valve, resulting in water loss. Check the knot periodically.

Do not allow the bailer rope to drag on the ground. Place plastic sheeting on the ground to keep the rope clean if conditions are muddy, the ground surface is contaminated, or very low levels of contaminants are of interest.

IV. DECONTAMINATION: The equipment should be decontaminated in accordance with SOP 01-01-00.

Typically, the bailer is washed with a potable water and non-phosphate soap solution. The bailer is then rinsed with distilled water and wrapped in plastic or foil until used.

V. TROUBLESHOOTING

A. If the knot should come undone or the rope breaks, the bailer typically can be recovered using a weighted fishing hook tied to monofilament line.

B. When bailing turbid water, it may be necessary to rinse the ball-valve at the bottom of the bailer with distilled water if it clogs.

06-01-01 WATER-LEVEL MEASUREMENT IN MONITORING WELLS

I. SCOPE AND APPLICABILITY: This procedure is applicable to the measurement of water levels in monitoring wells and open boreholes.

II. PROJECT-SPECIFIC REQUIREMENTS

A. REQUIRED READINGS:

B. APPLICABLE METHODS:

III. METHODOLOGY: Water levels should always be recorded to ±0.01 foot. Measurements should be made from a marked point on the inner casing for monitoring wells, and from the ground surface for open boreholes. Equipment should be decontaminated in accordance with SOP 01-01-00 after each measurement. The following methods may be used:

A. CHALKED-TAPE METHOD

1. Check records for historic water levels in the well, if available.

2. Rub the first five feet of a steel surveyor's chain or fiberglass tape with carpenter's chalk.

3. Lower the tape into the well until the end of the tape enters the water.

4. Record the tape footing at the wellhead to within 0.01 feet.

5. Pull the tape out of the well and read the tape footage of the water mark to within 0.01 feet. The difference between the readings is the water level.

B. SOUNDING

1. Attach a small float or hollow-bottom weight or sounder to the end of a tape measure.

2. Lower the sounder into the well and listen for the sound of the weight hitting the water surface.

3. When this is heard, pull the sounder back a few inches and redrop it by 1/4-inch increments until the sound is heard again.

4. Subsequent smaller increments of lowering the sounder will allow water-level measurements to within 0.01 feet.

5. Measure the length from the zero mark on the tape measure to the bottom of the weight. Add this value to all field measurements made with the sounder.

C. ELECTRIC-WATER LEVEL METER (Solinst)

1. Turn the Solinst on by turning the knob clockwise. This knob is also the volume control. Test the Solinst to see if the battery is dead by pushing the button next to the volume knob.If the battery is charged the Solinst will emit an audible tone and the red indicator light will illuminate.
2. Lower the end of the probe into the well or borehole. The probe will cause the unit to emit the tone and illuminate the light when it contacts water.

3. Pull the probe back a few inches and lower the probe in smaller increments until the water level is measured to within 0.01 feet.

4. The water level is read directly from the Solinst tape, and already includes a correction for the length of the probe on the bottom of the tape.

D. INTERFACE PROBE: This is the only reliable method for wells with floating free product.

1. Push the On/Off button to turn unit on. Lower the probe into the liquid. The horn will sound a steady tone and the yellow light will illuminate when the probe contacts an oil product. Slowly raise probe until sound stops, lower until sound is heard again to refine the oil level.

2. Read the tape marking and note as the surface level of product.

3. Slowly lower the probe through the oil product, searching for the oil-water interface. When the probe reaches water the tone will switch from steady to a beeping tone and the red light will illuminate. Slowly move probe up and down to refine the oil/water interface to within 0.01 feet. Read the water level directly from the tape. The length of the probe is already considered.

NOTE: Auto Shutoff Feature: After approximately five minutes of power on, the unit will auto-shut off. A chirping sound will be heard, warning impending shut off. Press

<POWER ON/RENEW> to continue operation. During five minute interval, short "alive" beep is heard.

IV. PRECAUTIONS AND COMMON PROBLEMS:

1. Be sure to allow sufficient time after development, purging or pumping to allow the well to recover to static conditions.

2. Sounding may be difficult with very deep water levels or in noisy conditions because the sound is hard to hear.

3. Measurement of water levels in pumping wells or wells/boreholes with cascading water can be difficult. Installing a narrow PVC access tube inside the well casing can make obtaining accurate readings easier.

4. Free product floating on the water table depresses the natural water level. If a true water level is required, the product of the oil thickness and the oil specific gravity must be added to the oil/water interface elevation.

5. If there is no measurement mark on the well riser, add one in indelible ink.

V. DOCUMENTATION

1. Record water levels in a field notebook or Groundwater Monitoring Data Sheet (SOP 07-02-01). Be sure to record the date and time of the measurement.

2. Data should be incorporated into the Trip Report (SOP 07-02-04). Method of measurement should be reported.

VI. REFERENCES: None

07-01-01 MAINTAINING SAMPLE CHAIN OF CUSTODY

I. SCOPE AND APPLICABILITY: This procedure is to be employed whenever samples are collected for laboratory analysis, and is designed to ensure that sample integrity is maintained. These procedures are necessary to assure that samples are defensible.

II. PROJECT-SPECIFIC REQUIREMENTS: None.

III. METHODOLOGY

A. SAMPLE CUSTODY: The sampling personnel must maintain custody of the samples until they are delivered to the laboratory, at which time the laboratory takes over the custody record. A sample is considered to be in custody if:

- it is in the investigator's actual possession
- it is in view of the investigator
- it has been placed in a secure area
- a signed custody seal has been placed on the sample container such that the seal would be destroyed if the container was opened.

B. CUSTODY RECORD

1. Complete a Chain-of-Custody Form for each shipping container of samples as described in SOP 07-02-02. Place the white copy of the completed form in the shipping container with the samples, as discussed in SOP 07-01-03.

2. Affix a signed custody seal to secure all samples. Seals may be placed across the lids of individual sample bottles, or on each shipping container of samples. If seals are placed on shipping containers, at least two seals must be used, and they must be placed such that the container cannot be opened without breaking the seals.

IV. PRECAUTIONS AND COMMON PROBLEMS

A. It may be necessary to cover custody seals with clear postal tape to prevent them from falling off.

B. Deliver or fax a copy of the custody form to the Project Manager within 24 hours of shipping the samples so that any errors can be corrected before the laboratory begins processing the samples.

V. DOCUMENTATION

A. The pink copy of the Chain-of-Custody Form should be submitted to the Project Manager as soon as possible after the samples are shipped.

B. The Project Manager or a designee must review the form for completeness and correctness. Any errors should be flagged, and the laboratory should be contacted if errors could affect analysis. The reviewer should initial and date the form, then place it in the Project File.

C. Compliance or problems with custody procedures should be documented in the Trip Report (SOP 07-02-04).

VI. REFERENCES

EPA Region IV; 1991. Environmental Compliance Branch, Standard Operating Procedures and Quality Assurance Manual. Athens, Georgia.

07-02-01 GROUNDWATER MONITORING DATA SHEET

I. SCOPE AND APPLICABILITY: A Groundwater Monitoring Data Sheet is completed each time water samples are collected to document field data and sampling methodology.

II. PROJECT-SPECIFIC REQUIREMENTS: None.

III. METHODOLOGY: Complete the form (Exhibit 07-02-01) as samples are collected, as follows:

a. Self explanatory
b. CEC project number
c. Names or initials of all members of the sampling team
d. Complete well designation
e. Depth to water level, reported to $\pm$0.01 ft. (Check measurement datum at the top of the column.)
f. Date and time well purging is started
g. Volume of water removed, in gallons
h. Check if well was purged to dryness
i. Indicate method of purging, such as submersible pump or bailer
j. Date and time that the actual sample was withdrawn. If sample bottles were filled at multiple, separate times, these should all be indicated.
k. Self explanatory (Check units for temperature.)
l. Unusual odors or other observations
m. Other atypical information, such as special handling of purge water or field problems

IV. PRECAUTIONS AND COMMON PROBLEMS: All information required by the form must be provided.

V. DOCUMENTATION: Attach the form to the Trip Report (SOP 07-02-04).

VI. REFERENCES: None.