Broda's Inert Fill
14677 Harvest Road
Brighton, CO 80603

July 23, 2018

Mrs. Connie Davis
Aggregate Industries – WRC, Inc
1707 Cole Blvd., #100
Golden, Colorado 80401

Re: 2017 Annual Report: Broda's Inert Filling at Aggregate Industries – Platte Valley Operations

Dear Mrs. Davis:

As stipulated in the Lease Agreement between Aggregate Industries (AI) and Patrick Broda and Harrison Broda, this annual report has been prepared and is submitted to you. The information included herein is for the calendar year 2017.

General Summary of Operations:
The filling of Parcel A is progressing according to plan. The Colorado Department of Public Health and Environment (CDPHE) confirmed that the facility is regulated under the Recycling provisions of the Regulations Pertaining to Solid Waste Disposal Sites and Facilities. Groundwater monitoring wells were sampled semi-annually in 2015. Quarterly sampling has been done in 2016 and has continued in 2017. The deliveries of inert materials are based upon the local economy and the volume received in 2017 is approximately 8,495 cubic yards more than in 2016. CDPHE has required that asphalt be segregated for subsequent placement above the groundwater table or crushed and reused on-site or off-site. The asphalt collected has been crushed and AI has used it or delivered it to their customers. Other than the information in this report there have been no incidents of significance and the operations have gone well.

Volume of Materials Placed:
The volume of materials placed during the calendar year 2017 is 29,800 cubic yards.

Testing and Monitoring Reports:
Groundwater monitoring wells MW-1, MW-2, and MW-3 were sampled on 3/27/2017, 6/29/17, 9/22/17, and 1/4/18 and the lake was not sampled in 2017 but has been in 2018. The monitoring wells were analyzed for parameters listed in Appendix IA and IB of CDPHE regulations. Mud truck samples were not taken in 2017 based upon a very minimal number of deliveries. Once a mud truck delivery was received it is expected that they will return and preparations can be made for a sample event. Subsequent deliveries did not occur.

Reports and Documents Filed with Governmental Agencies:
The Recycling and Reuse of Materials and Land Inert Fill Notification dated June 21, 2010, was approved CDPHE in a letter dated March 10, 2011. The Recycling Facility Annual Reporting Form for the facility was submitted on March 8, 2017; a copy is attached to this letter.

Compliance with Governmental Permits, Licenses, and Approvals:
The facility was not inspected by CDPHE in 2017. The Compliance Advisory that was issued based upon a December 18, 2015 inspection, was complied with and an April 21, 2016 No Further Action letter was issued by CDPHE. CDPHE determined that groundwater monitoring reporting with statistical evaluations would be submitted for the facility and it was completed and a copy submitted with the AI 2016 report. Additionally, it was agreed that routine sampling of mud trucks and unplanned inert fill materials will be sampled and manifested moving forward, with results submitted to CDPHE. A 2017 Groundwater Monitoring Report with statistical evaluations is attached to this report and is being submitted to CDPHE in fulfillment of these requirements. To make up for a lack of previous data concerning daylighting and directional utility drilling muds, samples were to be collected from four 2016 and 2017 deliveries and analyzed according to the Design and Operations Plan. Two mud samples were taken in 2016 and none in 2017 because of a lack of deliveries. As has been the case since the facility opened, no oil and gas industry drilling muds will be received at the facility.

Groundwater Analysis
The 2017 Groundwater Monitoring Report for the facility, including analytical results, groundwater elevations, and a statistical evaluation, is attached to this letter. No organic constituents included in the Appendix IB of the CDPHE Regulations Pertaining to Solid Waste Sites and Facilities have been detected during facility monitoring activities, with the exception of one occurrence of acetone at a concentration of 0.095 mg/L in December 2010. Acetone is a common laboratory contaminant and this finding is believed to be a laboratory artifact. Two wells at the facility, MW-1 and MW-2, have exhibited variability with cadmium, chloride, sodium, sulfate, and TOC. These findings could reflect natural variations in the groundwater geochemistry at the facility, and existing and future monitoring data will continue to be used to establish background groundwater quality

conditions. The absence of detectable organic constituents in monitoring to date suggests that there is no impact to groundwater quality from facility activities.

Other Information:
The segregation of asphalt has been ongoing and will continue. When a sufficient amount of asphalt is segregated it will be milled and the millings can be used on site to control dust and provide better surfaces for truck traffic or utilized by AI.

If you have any questions or concerns please contact me at 303-808-2500.

Yours truly,

Patrick Broda
Broda's Inert Fill

Attachments:
A1 Groundwater Monitoring Report for 2010-2017
A2 Recycling Form for 2017

Molen & Associates, LLC
Environmental Consultants

2090 E. 104th Ave., Suite 205 ♦ Thornton, Colorado 80233
Office 303-450-1600 ♦ Fax 303-452-4515

July 18, 2018

Mr. David Snapp
CDPHE – HMWMD
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Subject: Broda's Inert Fill at Aggregate Industries Platte Valley Operations
1859 North Highway 85 at WCR 6, Brighton, Colorado (the Property)
Groundwater Monitoring Reports for 2017

Dear Mr. Snapp:

Contained within this letter report are Broda's Inert Fill at Aggregate Industries Platte Valley Operations (Broda AI) groundwater monitoring results for the year 2017. Data from the period from August 2010 through November 2015 were provided in the 2015 groundwater monitoring report dated February 26, 2016. A Groundwater Monitoring Report for 2016, dated September 8, 2017 provides the information for that time period. This report includes data from 2017 and summaries of statistical analysis of all the data collected at the facility.

Groundwater monitoring at the Broda AI property was conducted on a semi-annual basis through 2015, with sampling events generally occurring in the spring and fall of each year, to establish baseline water quality at the facility. The frequency of the groundwater monitoring was increased to quarterly in 2016 to comply with the Recycling Operations Plan and the No Further Action requirements. The groundwater monitoring network and sample collection procedures at the facility are generally consistent with regulations presented in Appendix B of the Colorado Department of Public Health and Environment (CDPHE) 6 CCR 1007-2, *Regulations Pertaining to Solid Waste Sites and Facilities, July 2007 - Appendix I for Detection Monitoring* as amended from time to time (Groundwater Monitoring Regulations). Routine groundwater sampling analytical parameters are consistent with detection monitoring parameters listed in Appendix IA and IB of the Groundwater Monitoring Regulations.

The following are included in this groundwater monitoring report:

- Groundwater elevation measurements
- Analytical result summaries and laboratory reports from the 2017 sampling events
- Statistical evaluation results (including appropriate Shewhart-CUSUM charts and time series plots) related to groundwater monitoring data from facility monitoring network wells
- Field data sheets for 2017 sampling events

Facility Groundwater Monitoring Network and Property Conditions

The facility groundwater monitoring network consists of monitoring wells MW-1, MW-2, and MW-3 (see Figure 1). The direction of groundwater flow at the facility is northwesterly, toward the nearby South Platte River. Therefore, groundwater monitoring well MW-3 serves as the up-gradient facility well, and wells MW-1 and MW-2 serve as down-gradient facility wells. The Property was previously mined for aggregate, resulting in an open pit. The open pit has been excavated to an elevation below the water table, resulting in ponded groundwater and surface water across much of the property southeast of and adjacent to well MW-2. The Property is being filled with inert material along its east side and at the southwestern corner. Filling has been done along the western boundary to bolster the berm dividing the South Platte River from the facility, an effort precipitated by near flooding conditions in recent years.

Sample Collection

Groundwater samples were collected on a semi-annual basis from facility monitoring wells from 2010 to 2015 and on a quarterly basis since 2016. Groundwater sampling procedures have been performed in general compliance with the Groundwater Monitoring Regulations. Groundwater sample analytical parameters include detection monitoring parameters listed in Appendix IA and IB of the Groundwater Monitoring Regulations. Field data sheets for each 2017 groundwater sampling event are shown in Appendix I.

Groundwater samples are routinely collected only after the following sequence of events have occurred:

- Monitoring well cap, lock and stickup are inspected
- Depths to the static water levels in all monitoring network wells are measured/recorded
- A minimum of three well casing volumes of groundwater are removed from at each well
- Field parameters of temperature, pH, conductivity, and temperature are measured (usually once per casing volume) until three consecutive tests were shown to be stable
- Sample bottles are labeled with the sampled well ID, date, and sampling time

Static groundwater elevation data was compiled from depth to groundwater measurements recorded using a Solinst water level meter with audible indicator. Measurements were recorded when the meter made an audible sound and read by placing the tape against the marked location on north side of the PVC well casing. Surveyed elevations were recorded from this marked location on each PVC well casing.

Monitoring network wells MW-1, MW-2, and MW-3 have dedicated bailers. Well purging and sampling activities were completed using these dedicated bailers and/or a squirt pump. The purge water was measured in a 5-gallon bucket and was discarded on the ground approximately 20 feet from the well. Purging continued until an adequate volume was removed (at least three well bore volumes) and the field parameters had stabilized in the purge water.

Groundwater samples, collected immediately following well purging activities, were transferred directly from the bailers into sample bottles provided by the laboratory. The sample bottles were preserved as appropriate for the analytical method. Sampling activities were conducted using new nitrile gloves, and sample bottles were filled without introducing contamination from soils or other foreign objects. The groundwater sample bottles were labeled, identifying the sample name, collection date and time, sampler's name, and the requested laboratory analyses. Immediately following collection, the samples were placed in an ice-filled cooler for overnight delivery following standard chain-of-custody procedures to Environmental Science Corporation (ESC) analytical laboratory in Mt. Juliet, Tennessee. Following the conclusion of sampling activities, the wells were closed and locked.

Groundwater Elevations

The depth to groundwater at facility monitoring network wells has remained relatively consistent in the 2017 monitoring period, with variations of approximately 1-2 feet measured in each well. Groundwater elevation data related to monitoring at the three monitoring network wells is presented in Table 1 and with charts in Appendix II.

Sample Analysis and Results

A summary of the all laboratory analytical results for each facility monitoring well from 2010 to 2017 is presented in Table 2, with complete laboratory reports provided in Appendix III. Alkalinity is reported as carbonate and bicarbonate, and a summation of those results provide the total alkalinity value. Carbonate values have been below the detection limits in all the groundwater results, and therefore, total alkalinity is equal to the bicarbonate value. No organic constituents included in the Appendix IB list have been detected during facility monitoring activities, with one exception. Acetone was detected in the sample collected from MW-1 on December 14, 2010 at a concentration of 0.095 mg/L. Because acetone is a common laboratory contaminant and acetone has not been detected at well MW-1 since (or any of the other facility monitoring network wells), the detection of acetone at well MW-1 is considered suspect and likely a laboratory artifact.

The following constituents have consistently had concentrations below the detection limits in all wells.

- Antimony
- Mercury
- Nitrite
- Silver
- Thallium

Concentration data used in the ChemStat® statistical software includes the number of non-detects for each parameter and is shown in Appendix IV.

Groundwater Analytical Data Statistical Evaluation

Analytical results from facility monitoring network wells MW-1, MW-2, and MW-3 for 2017 were entered into ChemStat® statistical software. Analytical results include the Appendix IA indicator

parameters and metals from the Appendix IB inorganic constituents. Since there has been no detection of volatile organic compounds (with the exception discussed above), the statistical evaluation of Appendix IB organic constituents is not appropriate. The statistical analysis has been completed using inter-well statistical technique, statistically comparing up-gradient well (MW-3) data to down-gradient wells (MW-1 and MW-2) data.

Two of the facility wells, MW-1 and MW-2, demonstrate continued variability in relation to some constituents as described below:

- MW-1 had a cadmium spike in April 2016 which put it out of control with Shewhart CUSUM control chart. It is expected that the CUSUM will be in control in future sampling events if the concentrations of cadmium is similar to historical levels. Cadmium does not show statistical significance using Wilcoxon Non-Parametric Rank Test. Sulfate is out of control with Shewhart CUSUM control chart and shows statistically significance using Wilcoxon Non-Parametric Rank Test. However both Cadmium and Sulfate are in control with CUSUM when outliers are removed.
- MW-2 exhibits continued variability with chloride, sodium, sulfate, and TOC. All of these parameters have consistently been statistically significant using the Wilcoxon Non-Parametric Rank Test. MW-2 is also above the control limit for those same parameters on the Shewhart CUSUM control charts. Also, the Sen's Slope Analysis and Mann-Kendall Trend Analysis indicate upward trends in the chloride, sodium, and sulfate data for MW-2.

Shewhart CUSUM Control Charts of out of control parameters and Time Series Graphs of all parameters in all wells are shown in Appendix V.

Summary and Discussion

Groundwater monitoring events have been completed without any notable problems. As stated previously, groundwater has been monitored at the facility on a semi-annual basis since August 2010 to 2016 and quarterly from Spring 2016. Analysis will continue quarterly until a lesser frequency is approved by CDPHE.

Dedicated bailers were placed into each well and have been utilized for each sampling event. Laboratory-provided sampling containers were used for all collected samples. Sample preservatives were added, as appropriate, to the samples collected and as indicated on the chain of custody. Iced sample coolers were shipped for over-night delivery, with chain-of-custody documentation, to the analytical laboratory shortly following sample collection. Samples received at the laboratory were immediately logged into the laboratory database for analysis.

The data presented in this report should be considered background data from a statistical standpoint, as facility monitoring wells have not yet chemically stabilized. Current statistically significant, out of control Shewhart Control Charts, and increasing trends may be the result of natural variations in the groundwater geochemistry at the facility. Existing data and future monitoring data will continue to be used to establish background groundwater quality conditions. Lake sampling will continue and may provide additional relevant information about the conditions in MW-2. The lake received water runoff from the adjacent highway as well as discharges from

mining activities on the AI site. The absence of detectable organic constituents in monitoring, to date, suggests that there is no impact to groundwater quality from facility activities. The apparent slight difference in groundwater chemistry at well MW-2 may be due to its location, immediately downgradient from the large body of exposed groundwater on the property.

Please contact me if you have any questions or comments regarding this letter report.

Yours truly,
MOLEN & ASSOCIATES, LLC

Mark A Molen

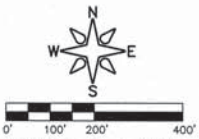
Figure 1: Map of Groundwater Well Locations
Table 1: Groundwater Elevation Measurements
Table 2: Analytical Results Summary: 2010-2017

Appendix I: Field Data Sheets
Appendix II: Groundwater Elevation Charts
Appendix III: Analytical Lab Reports
Appendix IV: Concentrations of Parameters and Non-Detects
Appendix V: Shewhart – CUSUM Control Charts and Time Series Charts

Figures and Tables

MONITORING WELL LOCATIONS- BRODA AI

AGGREGATE INDUSTRIES PLATTE VALLEY OPERATIONS, WELD COUNTY, COLORADO.



SCALE: 1" = 200'

MON. WELL	LATITUDE	LONGITUDE
MONITOR WELL – #1	N 40–01–18.798	W 104–49–06.717
MONITOR WELL – #2	N 40–01–19.675	W 104–49–27.587
MONITOR WELL – #3	N 40–00–58.651	W 104–49–09.930
GREAT WEST SUGER TANK	N 39–59–57.475	W 104–49–12.027
C.D.O.H. MONUMENT	N 40–01–34.580	W 104–49–02.538

NOTICE:
ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.

EXCEPT AS SHOWN OR SPECIFICALLY STATED THIS MAP DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING WHICH MAY BE APPLICABLE TO THE SUBJECT REAL ESTATE; EASEMENTS, OTHER THAN POSSIBLE EASEMENTS WHICH WERE VISIBLE AT THE TIME OF MAKING THIS SURVEY, COMPATIBILITY OF THIS DESCRIPTION WITH THOSE OF ADJACENT TRACTS OF LAND OR RIGHTS–OF–WAYS, RESTRICTIVE COVENANTS, SUBDIVISION RESTRICTIONS, ZONING OR OTHER LAND USE REGULATIONS, ANY OTHER FACTS.

NO STATEMENT IS MADE CONCERNING SUBSURFACE CONDITIONS OR THE EXISTENCE OF OVERHEAD OR UNDERGROUND CONTAINERS OR FACILITIES, WHICH MAY AFFECT THE DEVELOPMENT OF THIS TRACT.

THERE MAY BE UNDERGROUND UTILITIES ADJACENT TO OR LOCATED ON THIS PARCEL NOT LOCATED BY THIS SURVEY.

BOUNDARY INFORMATION TAKEN FROM MAP OF PLATTE VALLEY PIT AMUSR–905 BY APPLEGATE GROUP, DATED FEB. 25, 2004.

BENCHMARK: EXISTING 3 1/2" BRASS CAP MATCHING N.G.S. DATA SHEET TIES FOR "Q 260 RESET" IN SECTION 31, TOWNSHIP 1 NORTH, RANGE 66 WEST.
ELEVATION = 4963.01' N.A.V.D. 88 DATUM

T.B.M. TOP OF CONCRETE ON EAST SIDE OF A SIGN THAT IS APPROXIMATLY 75 FEET NORTH AND 30 FEET EAST OF THE SOUTHEAST CORNER OF PARCEL, TOP CONCRETE BASE AT EAST SIDE OF LARGE STEEL SIGN POST 75.00 FEET± NORTH OF EAST–WEST FENCE AND 30.00 FEET± WEST OF WEST RIGHT–OF–WAY FENCE ALONG U.S. HIGHWAY 85.
ELEVATION = 5216.87' N.A.V.D. 88 DATUM

WELD COUNTY ROAD 6

N 1/4 COR OF SEC. 30
T.1N., R.66W.
(MONUMENT IN RANGE BOX)

FOUND AS DESCRIBED ON
N.G.S. DATA SHEET
C.D.O.H. R–O–W
MARKER DISK STAMPED
MP237.85 RT

RIGHT–OF–WAY
FENCE

U.S. HIGHWAY 85

MONITOR WELL #1
ELEV. GROUND = 4938.94'
ELEV. TOP PVC = 4941.26'
ELEV. TOP CASING = 4941.71'

S 01°29'00" W
27.00'

C 1/4 COR OF SEC. 30
T.1N., R.66W.

MONITOR WELL #2
ELEV. GROUND = 4936.42'
ELEV. TOP PVC = 4938.93'
ELEV. TOP CASING = 4939.33'

S 01°29'00" W
450.00'

S 00°30'00" E
101.10'

705.69'

S 01°29'00" W

S 03°51'52" W

SOUTH PLATTE RIVER

BRODA INERT FILL
AREA POND

EAST LINE OF THE WEST
HALF OF SEC. 30

S 89°51'45" W
37.57'

W 1/2, SEC. 30
T.1N., R.66W.

TEMPORARY
CONTROL POINT #1

S 00°09'00" E
2649.60'

MONITOR WELL #3
ELEV. GROUND = 4949.44'
ELEV. TOP PVC = 4951.96'
ELEV. TOP CASING = 4952.33'

T.B.M.
ELEV. = 4950.65'

S 89°47'00" W
499.97'

S 00°08'00" E
499.07'

S 1/4 COR OF SEC. 30
T.1N., R.66W.
(#6 REBAR)

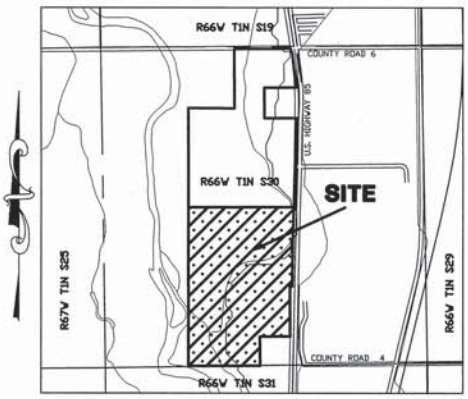
SOUTH LINE OF THE WEST
HALF OF SEC. 30

S 89°47'32" W
1196.15'

WELD COUNTY ROAD 4

GREAT WEST SUGAR PLANT
WATER TANK TOWER MATCHING N.G.S. TIES

VICINITY MAP
NOT TO SCALE



REVISIONS: CAD FILE: M10144/M10144.DWG

R.W. BAYER & ASSOCIATES, INC.
2090 EAST 104TH AVENUE, SUITE 200
THORNTON, COLORADO 80233–4316
(303) 452–4433 FAX: (720)833–4216

MOLEN & ASSOCIATES
2090 EAST 104TH AVENUE, SUITE 205
THORNTON, COLORADO 80233–4316

MONITOR WELL LOCATIONS
THAT PART OF SECTION 30, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH P.M., STATE OF COLORADO.

SCALE:	DATE:	DRW BY:	CKD BY:	PROJ NO:
1"=200'	DEC. 21, 2010	S.J.M.	R.B.	2010–144

BOOK:	PAGE:	FILE NO:	SHEET NO:
655	73	30–1N66–89L	1 OF 1

Table 1
Groundwater Elevations

Well ID	Date	Total Depth (ft)	Static Water Level to TOC (ft)	Ground Surface Elevation (ft)	Surveyed Top of Casing (ft)	Groundwater Elevation (ft)
MW-1	8/18/2010	36.28	6.13	4938.94	4941.26	4935.13
	9/29/2010	36.28	6.33	4938.94	4941.26	4934.93
	12/14/2010	36.28	6.82	4938.94	4941.26	4934.44
	4/5/2011	36.28	6.96	4938.94	4941.26	4934.30
	10/17/2011	36.28	6.28	4938.94	4941.26	4934.98
	4/24/2012	36.28	8.13	4938.94	4941.26	4933.13
	10/24/2012	36.28	7.71	4938.94	4941.26	4933.55
	4/30/2013	36.28	8.90	4938.94	4941.26	4932.36
	11/26/2013	36.28	6.66	4938.94	4941.26	4934.60
	5/5/2014	36.28	7.19	4938.94	4941.26	4934.07
	11/19/2014	36.28	6.28	4938.94	4941.26	4934.98
	4/29/2015	36.28	6.99	4938.94	4941.26	4934.27
	11/10/2015	36.28	6.78	4938.94	4941.26	4934.48
	4/25/2016	36.28	6.99	4938.94	4941.26	4934.27
	6/29/2016	36.28	6.48	4938.94	4941.26	4934.78
	12/28/2016	36.28	7.58	4938.94	4941.26	4933.68
	3/27/2017	36.03	8.45	4938.94	4941.26	4932.81
	6/27/2017	36.22	6.72	4938.94	4941.26	4934.54
	9/22/2017	36.02	6.65	4938.94	4941.26	4934.61
	1/4/2018	36.14	8.71	4938.94	4941.26	4932.55
MW-2	8/18/2010	27.90	8.08	4936.42	4938.93	4930.85
	9/29/2010	27.51	8.53	4936.42	4938.93	4930.4
	12/14/2010	27.49	8.59	4936.42	4938.93	4930.34
	4/5/2011	27.72	8.63	4936.42	4938.93	4930.3
	10/17/2011	27.08	8.55	4936.42	4938.93	4930.38
	4/24/2012	27.34	8.86	4936.42	4938.93	4930.07
	10/24/2012	27.83	8.91	4936.42	4938.93	4930.02
	4/30/2013	27.15	8.81	4936.42	4938.93	4930.12
	11/26/2013	27.17	8.30	4936.42	4938.93	4930.63
	5/5/2014	27.17	8.91	4936.42	4938.93	4930.02
	11/19/2014	27.17	8.09	4936.42	4938.93	4930.84
	4/29/2015	27.17	6.92	4936.42	4938.93	4932.01
	11/10/2015	27.17	8.01	4936.42	4938.93	4930.92
	4/25/2016	27.17	6.35	4936.42	4938.93	4932.58
	6/29/2016	27.17	7.15	4936.42	4938.93	4931.78
	12/28/2016	27.17	8.32	4936.42	4938.93	4930.61
	3/27/2017	27.17	8.42	4936.42	4938.93	4930.51
	6/27/2017	27.30	7.59	4936.42	4938.93	4931.34
	9/22/2017	27.40	5.80	4936.42	4938.93	4933.13
	1/4/2018	27.41	8.74	4936.42	4938.93	4930.19

Table 1
Groundwater Elevations

Well ID	Date	Total Depth (ft)	Static Water Level to TOC (ft)	Ground Surface Elevation (ft)	Surveyed Top of Casing (ft)	Groundwater Elevation (ft)
MW-3	8/18/2010	40.00	14.40	4949.44	4951.96	4937.56
	9/29/2010	39.90	14.58	4949.44	4951.96	4937.38
	12/14/2010	39.50	14.50	4949.44	4951.96	4937.46
	4/5/2011	39.58	15.42	4949.44	4951.96	4936.54
	10/17/2011	39.11	14.32	4949.44	4951.96	4937.64
	4/24/2012	39.35	15.52	4949.44	4951.96	4936.44
	10/24/2012	39.06	15.22	4949.44	4951.96	4936.74
	4/30/2013	39.03	15.96	4949.44	4951.96	4936
	11/26/2013	38.99	14.17	4949.44	4951.96	4937.79
	5/5/2014	38.99	15.10	4949.44	4951.96	4936.86
	11/19/2014	38.99	13.80	4949.44	4951.96	4938.16
	4/29/2015	38.99	14.41	4949.44	4951.96	4937.55
	11/10/2015	37.27	13.80	4949.44	4951.96	4938.16
	4/25/2016	38.10	14.93	4949.42	4953.08	4938.15
	6/29/2016	38.10	14.77	4949.42	4953.08	4938.31
	12/28/2016	38.10	15.53	4949.42	4953.08	4937.55
	3/27/2017	38.10	16.02	4949.42	4953.08	4937.06
	6/27/2017	37.95	15.09	4949.42	4953.08	4937.99
	9/22/2017	38.00	15.12	4949.42	4953.08	4937.96
	1/4/2018	38.05	15.41	4949.42	4953.08	4937.67

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Sample ID			MW-1		MW-1		MW-1		MW-1		MW-1		MW-1	
Collect Date			8/18/2010		9/29/2010		12/14/2010		4/5/2011		10/17/2011		4/24/2012	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	140		130		110		130		110		120	
9056	Nitrate	mg/l	6.3		5.9		5.2		4.3		4.5		3.6	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Sulfate	mg/l	190		180		180		180		180		180	
2320B	Alkalinity	mg/l	170		180		180		170		160		160	
2320B	Alkalinity,Bicarbonate	mg/l	170		180		180		170		160		160	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20	
9040C	pH	su	7.3	T8	7.5	T8	7.1	T8	7	T8	7.5	T8	7.3	T8
9050A	Specific Conductance	umhos/cm	1200		1200		1100		1100		1100		1000	
9060A	TOC (Total Organic Carbon)	mg/l	3.7		3.6		2.8	P1	1		3		2.8	
6020	Antimony	mg/l	<0.0010		0.0013		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Beryllium	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Cadmium	mg/l	<0.0005		<0.0005		<0.0005		<0.0005		0.0009		<0.0005	
6020	Copper	mg/l	0.009		0.017		0.0048		0.0072		0.0044		<0.0020	
6020	Lead	mg/l	<0.0050		0.011		0.0029		0.0033		0.0028		<0.0010	
6020	Selenium	mg/l	0.0032		0.0043		0.0038		0.0046		0.0034		0.0022	
6010/6020	Thallium	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Zinc	mg/l	0.027		0.05		0.014		0.019		0.01		<0.010	
6020/6010	Arsenic	mg/l	0.0018		0.0032		0.0014		0.0038		0.0019		0.0013	
6010B	Barium	mg/l	0.15		0.15		0.094		0.11		0.35		0.074	
6010B	Calcium	mg/l	79		81		75		67		68		63	
6010B	Chromium	mg/l	<0.010		<0.010		<0.010		<0.01		0.025		<0.010	
6010B	Cobalt	mg/l	<0.010		<0.010		<0.010		<0.01		0.01		<0.010	
6010B	Magnesium	mg/l	22		22		22		21		25		20	
6010B	Nickel	mg/l	<0.020		<0.020		<0.020		<0.02		0.022		<0.020	
6010B	Potassium	mg/l	10		8.7		9.5		8.5		17		7.3	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Sodium	mg/l	140		120		140		120		160		120	
6010B	Vanadium	mg/l	0.015		<0.010		<0.010		<0.01		0.047		<0.010	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002		<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.050		0.095		<0.050		<0.050		<0.050	

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Sample ID			MW-1		MW-1		MW-1		MW-1		MW-1		MW-1	
Collect Date			10/24/2012		4/30/2013		11/26/2013		5/5/2014		11/19/2014		4/29/2015	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	110		110		110		110		110		180	
9056	Nitrate	mg/l	3.9		4.1		3.3		4.3		4.5		5.8	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Sulfate	mg/l	170		180		160		160		160		170	
2320B	Alkalinity	mg/l	220		180		170		160		170		180	
2320B	Alkalinity,Bicarbonate	mg/l	220		180		170		160		170		180	
2320B	Alkalinity,Carbonate	mg/l	<100		<20		<20		<20		<20		<20	
9040C	pH	su	7.6	T8	7.3	T8	7.8	T8	7.4	T8	7.8	T8	6.9	T8
9050A	Specific Conductance	umhos/cm	1000		1100		1000		1000		1100		1100	
9060A	TOC (Total Organic Carbon)	mg/l	2.8		3.8		2.6		2		2.3		2.8	
6020	Antimony	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0020		<0.0020	
6020	Beryllium	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0020		<0.0020	
6020	Cadmium	mg/l	<0.0005		0.0016		0.0007		0.001		<0.001		<0.001	
6020	Copper	mg/l	0.0034		0.014		0.0094		0.012		<0.005		<0.005	
6020	Lead	mg/l	0.0012		0.0044		0.0023		0.0047		<0.0020		0.004	
6020	Selenium	mg/l	0.0036		0.0033		0.0033		0.0021		<0.0020		<0.0020	
6010/6020	Thallium	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.002		<0.002	
6020	Zinc	mg/l	<0.010		0.026		0.011		0.039		<0.025		<0.025	
6020/6010	Arsenic	mg/l	0.0023		0.0013		0.0012		0.0012		<0.0020		<0.0020	
6010B	Barium	mg/l	0.076		0.11		0.072		0.12		0.052		0.11	
6010B	Calcium	mg/l	62		74		60		69		130		71	
6010B	Chromium	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Cobalt	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Magnesium	mg/l	21		23		21		23		7.2		23	
6010B	Nickel	mg/l	<0.020		<0.020		<0.020		<0.020		<0.020		<0.020	
6010B	Potassium	mg/l	8		7.9		8.6		9.1		<0.010		9.3	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.10		<0.10	
6010B	Sodium	mg/l	120		120		120		120		6.4		120	
6010B	Vanadium	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002		<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Sample ID			MW-1		MW-1		MW-1		MW-1		MW-1		MW-1	
Collect Date			11/10/2015		04/25/2016		06/29/2016		09/21/2016		12/28/2016		3/27/2017	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	120		118		129		128		135		140	
9056	Nitrate	mg/l	6.58		8.94		9.08		8.84		8.96		9.66	
9056	Nitrite	mg/l	<0.10		<0.1		<0.1		<0.1		<0.1		<0.1	
9056	Sulfate	mg/l	88.4		128		124		118		126		122	
2320B	Alkalinity	mg/l	194		184	J6	NA		167		189		195	
2320B	Alkalinity,Bicarbonate	mg/l	194		184		218		167		189		195	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20	
9040C	pH	su	7.29	T8	6.67	T8	7.09	T8	7.33	T8	7.36	T8	7.23	T8
9050A	Specific Conductance	umhos/cm	1130		1130		1120		1120		1130		1170	
9060A	TOC (Total Organic Carbon)	mg/l	2.23		1.61		1.97		2.04		2.17		1.81	
6020	Antimony	mg/l	<0.0020		<0.002		<0.002		<0.002		<0.002		<0.002	
6020	Beryllium	mg/l	<0.0020		<0.002		<0.002		<0.002		<0.002		<0.002	
6020	Cadmium	mg/l	<0.001		0.0047		<0.001		<0.001		<0.001		<0.001	
6020	Copper	mg/l	<0.005		0.0108		<0.005		<0.005		<0.005		0.0266	
6020	Lead	mg/l	<0.0020		0.0047		<0.002		<0.002		<0.002		0.0268	
6020	Selenium	mg/l	<0.0020		0.0027		0.0022		0.0025		0.0023		0.0039	
6010/6020	Thallium	mg/l	<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
6020	Zinc	mg/l	<0.025		0.0453		<0.025		<0.025		<0.025		0.14	
6020/6010	Arsenic	mg/l	<0.0020		<0.01		<0.01		<0.01		<0.01		0.012	
6010B	Barium	mg/l	0.0694		0.11		0.0786		0.0764		0.0824		0.369	
6010B	Calcium	mg/l	75.3		106		75.7		77.1		NA		86.3	
6010B	Chromium	mg/l	<0.010		<0.01		<0.01		<0.01		<0.01		0.0145	
6010B	Cobalt	mg/l	<0.010		<0.01		<0.01		<0.01		<0.01		0.0101	
6010B	Magnesium	mg/l	23.5		26.9		25.2		25		25.5		30.4	
6010B	Nickel	mg/l	<0.020		<0.01		<0.01		<0.01		<0.01		0.0148	
6010B	Potassium	mg/l	8.64		8.4		9.72		8.64		9.27		11.1	
6010B	Silver	mg/l	<0.10		<0.005		<0.005		<0.005		<0.005		<0.005	
6010B	Sodium	mg/l	120		127		122		119	V	117		117	
6010B	Vanadium	mg/l	<0.010		<0.02		<0.02		<0.02		<0.02		0.0337	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002		<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.05		<0.05		<0.05		<0.05		<0.05	

Sample ID			MW-1		MW-1		MW-1	
Collect Date			6/29/2017		9/22/2017		1/4/2018	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	NA		196		162	
9056	Nitrate	mg/l	9.63		0.134		7.16	
9056	Nitrite	mg/l	<0.1		<0.1		<0.1	
9056	Sulfate	mg/l	119		303		131	
2320B	Alkalinity	mg/l	251		152		199	
2320B	Alkalinity,Bicarbonate	mg/l	251		152		<20	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		199	
9040C	pH	su	7.29	T8	7.17	T8	6.98	T8
9050A	Specific Conductance	umhos/cm	1190		1560		1220	
9060A	TOC (Total Organic Carbon)	mg/l	1.9	B	5.3		2.06	
6020	Antimony	mg/l	<0.002		<0.002		<0.002	
6020	Beryllium	mg/l	<0.002		<0.002		<0.002	
6020	Cadmium	mg/l	<0.001		0.007		<0.001	
6020	Copper	mg/l	<0.005		0.0103	B	0.0417	
6020	Lead	mg/l	<0.002		0.0034		0.0437	
6020	Selenium	mg/l	0.0027		<0.002		0.0046	
6010/6020	Thallium	mg/l	<0.002		<0.002		<0.002	
6020	Zinc	mg/l	<0.025		0.0415		0.188	
6020/6010	Arsenic	mg/l	<0.01		0.0075		0.0118	
6010B	Barium	mg/l	0.0851		0.197		0.318	
6010B	Calcium	mg/l	83.5		85.4		92.6	
6010B	Chromium	mg/l	<0.01		<0.01		0.013	
6010B	Cobalt	mg/l	<0.01		<0.01		<0.01	
6010B	Magnesium	mg/l	26.2		22.7		30.3	
6010B	Nickel	mg/l	<0.01		<0.01		0.0158	
6010B	Potassium	mg/l	8.88		12.6		11.6	
6010B	Silver	mg/l	<0.005		<0.005		<0.005	
6010B	Sodium	mg/l	111		195		114	
6010B	Vanadium	mg/l	<0.02		<0.02		0.0282	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.05		<0.05		<0.05	

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Sample ID			MW-2		MW-2		MW-2		MW-2		MW-2		MW-2	
Collect Date			8/18/2010		9/29/2010		12/14/2010		4/5/2011		10/17/2011		4/24/2012	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	150		160		130		160		160		180	
9056	Nitrate	mg/l	<0.10		<0.10		<0.10		0.17		<0.10		0.12	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Sulfate	mg/l	190		190		180		230		210		230	
2320B	Alkalinity	mg/l	190		200		200		160		160		160	
2320B	Alkalinity,Bicarbonate	mg/l	190		200		200		160		160		160	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20	
9040C	pH	su	7.4	T8	7.7	T8	7.4	T8	7.1	T8	7.7	T8	7.5	T8
9050A	Specific Conductance	umhos/cm	1200		1200		1200		1200		1200		1200	
9060A	TOC (Total Organic Carbon)	mg/l	4.9		6.3		4.5		5.3		6.1		7.4	
6020	Antimony	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Beryllium	mg/l	0.0023		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Cadmium	mg/l	0.0016		0.0013		0.0012		0.0008		0.005		<0.0005	
6020	Copper	mg/l	0.063		0.018		0.022		0.009		0.028		<0.0020	
6020	Lead	mg/l	0.066		0.014		0.016		0.0046		0.017		<0.0010	
6020	Selenium	mg/l	<0.0050	O	0.0049		0.0032		0.0039		0.0036		0.002	
6010/6020	Thallium	mg/l	0.0012		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Zinc	mg/l	0.26		0.071		0.082		0.023		0.054		<0.010	
6010/6020	Arsenic	mg/l	0.0085		0.0048		0.0052		0.0069		0.0064		0.0032	
6010B	Barium	mg/l	0.82		0.25		0.34		0.23		0.25		0.13	
6010B	Calcium	mg/l	76		70		75		66		87		71	
6010B	Chromium	mg/l	0.083		0.011		0.023		<0.010		0.014		<0.010	
6010B	Cobalt	mg/l	0.028		<0.010		0.012		<0.010		<0.010		<0.010	
6010B	Magnesium	mg/l	34		24		26		20		21		21	
6010B	Nickel	mg/l	0.054		<0.020		<0.020		<0.020		<0.020		<0.020	
6010B	Potassium	mg/l	33		14		14		9.8		13		9.9	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Sodium	mg/l	160		140		160		150		110		180	
6010B	Vanadium	mg/l	0.15		<0.010		0.033		<0.01		0.025		<0.010	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002		<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Sample ID			MW-2		MW-2		MW-2		MW-2		MW-2		MW-2	
Collect Date			10/24/2012		4/30/2013		11/26/2013		5/5/2014		11/19/2014		4/29/2015	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	180		190		180		190		190		247	
9056	Nitrate	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Sulfate	mg/l	200		250		270		280		280		322	
2320B	Alkalinity	mg/l	210		170		150		120		140		130	
2320B	Alkalinity,Bicarbonate	mg/l	210		170		150		120		140		130	
2320B	Alkalinity,Carbonate	mg/l	<100		<20		<20		<20		<20		<20	
9040C	pH	su	7.5	T8	7.6	T8	7.6	T8	7.4	T8	7.7	T8	7.2	T8
9050A	Specific Conductance	umhos/cm	1300		1400		1500		1400		1400		1400	
9060A	TOC (Total Organic Carbon)	mg/l	5.5		8		5.6		6.5		5		5.8	
6020	Antimony	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0020		<0.0020	
6020	Beryllium	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0020		<0.0020	
6020	Cadmium	mg/l	0.0014		0.0024		<0.0005		0.0006		<0.001		<0.001	
6020	Copper	mg/l	0.007		0.021		0.0056		0.0056		<0.005		<0.005	
6020	Lead	mg/l	0.0031		0.01		0.0019		0.002		<0.0020		<0.0020	
6020	Selenium	mg/l	0.0036		0.0031		0.0036		0.0021		<0.0020		<0.0020	
6010/6020	Thallium	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.002		<0.002	
6020	Zinc	mg/l	0.018		0.046		<0.010		0.012		<0.025		<0.025	
6010/6020	Arsenic	mg/l	0.0064		0.01		0.014		0.016		<0.0020		0.0031	
6010B	Barium	mg/l	0.18		0.4		0.31		0.42		0.1		0.13	
6010B	Calcium	mg/l	70		79		71		78		120		69	
6010B	Chromium	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Cobalt	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Magnesium	mg/l	21		24		20		23		17		21	
6010B	Nickel	mg/l	<0.020		<0.020		<0.020		<0.020		<0.020		<0.020	
6010B	Potassium	mg/l	11		13		10		12		1.6		12	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Sodium	mg/l	170		190		200		210		6.8		200	
6010B	Vanadium	mg/l	<0.010		0.019		<0.010		<0.010		<0.010		<0.010	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002		<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Sample ID			MW-2		MW-2		MW-2		MW-2		MW-2		MW-2	
Collect Date			11/10/2015		04/25/2016		06/29/2016		09/21/2016		12/28/2016		3/27/2017	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	180		166		178		180		189		188	
9056	Nitrate	mg/l	<0.10		<0.1		0.148		<0.1		<0.1		<0.1	
9056	Nitrite	mg/l	<0.10		<0.1		<0.1		<0.1		<0.1		<0.1	
9056	Sulfate	mg/l	303		273		289		276		320		300	
2320B	Alkalinity	mg/l	165		115		NA		139		122		131	
2320B	Alkalinity,Bicarbonate	mg/l	165		115		143		139		122		131	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20	
9040C	pH	su	7.44	T8	7.03	T8	7.2	T8	7.51	T8	7.41	T8	7.59	T8
9050A	Specific Conductance	umhos/cm	1510		1380		1420		1430		1440		1480	
9060A	TOC (Total Organic Carbon)	mg/l	6.02		4.67		8.7		5.32		4.72		4.49	
6020	Antimony	mg/l	<0.0020		<0.002		<0.002		<0.002		<0.002		<0.002	
6020	Beryllium	mg/l	<0.0020		<0.002		<0.002		<0.002		<0.002		<0.002	
6020	Cadmium	mg/l	<0.001		<0.001		0.0021		<0.001		<0.001		<0.001	
6020	Copper	mg/l	<0.005		<0.005		0.0119		<0.005		<0.005		<0.005	
6020	Lead	mg/l	<0.0020		<0.002		0.0227		<0.002		<0.002		<0.002	
6020	Selenium	mg/l	<0.0020		<0.002		<0.002		<0.002		<0.002		<0.002	
6010/6020	Thallium	mg/l	<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
6020	Zinc	mg/l	<0.025		<0.025		0.0425		<0.025		<0.025		<0.025	
6010/6020	Arsenic	mg/l	0.0043		<0.01		<0.01		<0.01		<0.01		<0.01	
6010B	Barium	mg/l	0.134		0.119		0.311		0.135		0.129		0.127	
6010B	Calcium	mg/l	79.1		70.1		76.4		72		NA		75.7	
6010B	Chromium	mg/l	<0.010		<0.01		0.0219		<0.01		<0.01		<0.01	
6010B	Cobalt	mg/l	<0.010		<0.01		<0.01		<0.01		<0.01		<0.01	
6010B	Magnesium	mg/l	22.3		20.4		22		20.9		21.8		22.2	
6010B	Nickel	mg/l	<0.020		<0.01		0.0121		<0.01		<0.01		<0.01	
6010B	Potassium	mg/l	11.9		12		14.8		12.5		11.4		10.3	
6010B	Silver	mg/l	<0.010		<0.005		<0.005		<0.005		<0.005		<0.005	
6010B	Sodium	mg/l	191	V	191	V	188		194		196		193	
6010B	Vanadium	mg/l	<0.010		<0.02		<0.02		<0.02		<0.02		<0.02	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002		<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.05		<0.05		<0.05		<0.05		<0.05	

Sample ID			MW-2		MW-2		MW-2	
Collect Date			6/29/2017		9/22/2017		1/4/2018	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	NA		153		206	
9056	Nitrate	mg/l	<0.1		9.69		<0.1	
9056	Nitrite	mg/l	<0.1		<0.1		<0.1	
9056	Sulfate	mg/l	297		119		417	
2320B	Alkalinity	mg/l	164		207		131	
2320B	Alkalinity,Bicarbonate	mg/l	164		207		<20	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		131	
9040C	pH	su	7.41	T8	7.37	T8	7.31	T8
9050A	Specific Conductance	umhos/cm	1550		1200		1580	
9060A	TOC (Total Organic Carbon)	mg/l	4.74		3.48		5.17	
6020	Antimony	mg/l	<0.002		<0.002		<0.002	
6020	Beryllium	mg/l	<0.002		<0.002		<0.002	
6020	Cadmium	mg/l	<0.001		0.0013		0.0019	
6020	Copper	mg/l	<0.005		0.0059	B	0.0161	
6020	Lead	mg/l	<0.002		<0.002		0.0063	B
6020	Selenium	mg/l	<0.002		0.0026		<0.002	
6010/6020	Thallium	mg/l	<0.002		<0.002		<0.002	
6020	Zinc	mg/l	<0.025		0.0296		0.0537	
6010/6020	Arsenic	mg/l	<0.01		<0.002		0.0037	
6010B	Barium	mg/l	0.141		0.0909		0.205	
6010B	Calcium	mg/l	78.7		85.9		91	
6010B	Chromium	mg/l	<0.01		<0.01		<0.01	
6010B	Cobalt	mg/l	<0.01		<0.01		<0.01	
6010B	Magnesium	mg/l	21.5		26.5		26.4	
6010B	Nickel	mg/l	<0.01		<0.01		<0.01	
6010B	Potassium	mg/l	13.4		8.85		14.5	
6010B	Silver	mg/l	<0.005		<0.005		<0.005	
6010B	Sodium	mg/l	195		110		207	
6010B	Vanadium	mg/l	<0.02		<0.02		<0.02	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.05		<0.05		<0.05	

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Sample ID			MW-3		MW-3		MW-3		MW-3		MW-3		MW-3	
Collect Date			8/18/2010		9/29/2010		12/14/2010		4/5/2011		10/17/2011		4/24/2012	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	110		130		76		120		120		110	
9056	Nitrate	mg/l	15		19		12		15		15		17	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Sulfate	mg/l	110		140		60		120		130		140	
2320B	Alkalinity	mg/l	180		220		150		170		170		160	
2320B	Alkalinity,Bicarbonate	mg/l	180		220		150		170		170		160	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20	
9040C	pH	su	7.2	T8	7.4	T8	7.5	T8	6.9	T8	7.8	T8	7	T8
9050A	Specific Conductance	umhos/cm	1000		1200		950		1100		1100		1000	
9060A	TOC (Total Organic Carbon)	mg/l	2.2		4		3.6		2.8		2.4		3.4	
6020	Antimony	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Beryllium	mg/l	0.0032		0.0026		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Cadmium	mg/l	0.001		0.001		<0.0005		0.0006		0.0023		<0.0005	
6020	Copper	mg/l	0.077		0.043		0.016		0.011		0.012		0.0064	
6020	Lead	mg/l	0.14		0.069		0.019		0.012		0.012		0.006	
6020	Selenium	mg/l	<0.0050	O	0.0061		0.0043		0.0068		0.0044		0.004	
6020/6010	Thallium	mg/l	0.0015		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Zinc	mg/l	0.32		0.18		0.064		0.039		0.028		0.021	
6020/6010	Arsenic	mg/l	0.012		0.0097		0.0037		0.0036		0.0033		0.0023	
6010B	Barium	mg/l	1.8		0.81		0.27		0.26		0.092		0.14	
6010B	Calcium	mg/l	110		100		75		96		68		83	
6010B	Chromium	mg/l	0.082		0.027		0.015		0.012		<0.010		<0.010	
6010B	Cobalt	mg/l	0.043		0.017		<0.010		<0.010		<0.010		<0.010	
6010B	Magnesium	mg/l	36		29		19		23		22		19	
6010B	Nickel	mg/l	0.065		0.031		<0.020		<0.020		<0.020		<0.020	
6010B	Potassium	mg/l	32		16		13		13		8.4		8.1	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Sodium	mg/l	100		95		96		92		120		110	
6010B	Vanadium	mg/l	0.15		0.031		0.029		<0.010		<0.010		<0.010	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002		<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Sample ID			MW-3		MW-3		MW-3		MW-3		MW-3		MW-3	
Collect Date			10/24/2012		4/30/2013		11/26/2013		5/5/2014		11/19/2014		4/29/2015	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	140		130		110		94		110		190	
9056	Nitrate	mg/l	15		15		17		12		12		10	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Sulfate	mg/l	140		110		120		120		140		160	
2320B	Alkalinity	mg/l	180		160		160		130		170		190	
2320B	Alkalinity,Bicarbonate	mg/l	180		160		160		130		170		190	
2320B	Alkalinity,Carbonate	mg/l	<100		<20		<20		<20		<20		<20	
9040C	pH	su	7.3	T8	7.2	T8	7.3	T8	7.3	T8	7.3	T8	6.8	T8
9050A	Specific Conductance	umhos/cm	1000		1100		1100		950		1100		1100	
9060A	TOC (Total Organic Carbon)	mg/l	2.8		2.6		2.1		1.9		1.6		2.4	
6020	Antimony	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0020		<0.0020	
6020	Beryllium	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0020		<0.0020	
6020	Cadmium	mg/l	<0.0005		0.0013		<0.0005		<0.0005		<0.001		<0.001	
6020	Copper	mg/l	0.0052		0.0079		0.0066		0.0057		<0.005		<0.005	
6020	Lead	mg/l	0.0033		0.0064		0.0041		0.0045		<0.0020		<0.0020	
6020	Selenium	mg/l	0.0052		0.0042		0.0041		0.004		<0.0020		0.0032	
6020/6010	Thallium	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.002		<0.002	
6020	Zinc	mg/l	0.013		0.02		0.013		0.032		<0.025		<0.025	
6020/6010	Arsenic	mg/l	0.0023		0.0015		0.0011		0.0014		<0.0020		<0.0020	
6010B	Barium	mg/l	0.095		0.13		0.09		0.098		0.16		0.057	
6010B	Calcium	mg/l	75		84		77		81		71		96	
6010B	Chromium	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Cobalt	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Magnesium	mg/l	17		18		18		18		14		20	
6010B	Nickel	mg/l	<0.020		<0.020		<0.020		<0.020		<0.020		<0.020	
6010B	Potassium	mg/l	10		12		12		11		60		7.7	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Sodium	mg/l	100		100		100		100		27		110	
6010B	Vanadium	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002		<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Sample ID			MW-3		MW-3		MW-3		MW-3		MW-3		MW-3	
Collect Date			11/10/2015		04/25/2016		06/29/2016		09/21/2016		12/28/2016		3/27/2017	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	117		118		119		150		157		138	
9056	Nitrate	mg/l	11.2		10.7		13.2		10.5		9.1		9.64	
9056	Nitrite	mg/l	<0.10		<0.1		<0.1		<0.1		<0.1		<0.1	
9056	Sulfate	mg/l	101		112		135		112		121		141	
2320B	Alkalinity	mg/l	159		158		NA		163		169		182	
2320B	Alkalinity,Bicarbonate	mg/l	159		158		191		163		169		182	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20	
9040C	pH	su	7.07	T8	6.48	T8	6.87	T8	7.08	T8	7	T8	7.11	T8
9050A	Specific Conductance	umhos/cm	988		1100		1080		1140		1160		1170	
9060A	TOC (Total Organic Carbon)	mg/l	2.29		1.71		2.67		2.53		2.17		1.68	
6020	Antimony	mg/l	<0.0020		<0.002		<0.002		<0.002		<0.002		<0.002	
6020	Beryllium	mg/l	<0.0020		<0.002		<0.002		<0.002		<0.002		<0.002	
6020	Cadmium	mg/l	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001	
6020	Copper	mg/l	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	
6020	Lead	mg/l	0.0022		<0.002		<0.002		<0.002		<0.002		<0.002	
6020	Selenium	mg/l	0.0022		0.002		<0.002		0.0022		0.0023		0.003	
6020/6010	Thallium	mg/l	<0.002		<0.002		<0.002		<0.002		<0.002		<0.002	
6020	Zinc	mg/l	<0.025		<0.025		<0.025		<0.025		<0.025		<0.025	
6020/6010	Arsenic	mg/l	<0.0020		<0.01		<0.01		<0.01		<0.01		<0.01	
6010B	Barium	mg/l	0.0709		0.0786		0.0835		0.0662		0.0753		0.0798	
6010B	Calcium	mg/l	78.4		96.7		97.1		94.9		NA		101	
6010B	Chromium	mg/l	<0.010		<0.01		<0.01		<0.01		<0.01		<0.01	
6010B	Cobalt	mg/l	<0.010		<0.01		<0.01		<0.01		<0.01		<0.01	
6010B	Magnesium	mg/l	16.5		20.2		21.8		20.8		21.6		22	
6010B	Nickel	mg/l	<0.020		<0.01		<0.01		<0.01		<0.01		<0.01	
6010B	Potassium	mg/l	8.18		8.52		8.77		7.74		8.35		7.56	
6010B	Silver	mg/l	<0.010		<0.005		<0.005		<0.005		<0.005		<0.005	
6010B	Sodium	mg/l	92		99.2		99.7	V	103		108		104	
6010B	Vanadium	mg/l	<0.010		<0.02		<0.02		<0.02		<0.02		<0.02	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002		<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.05		<0.05		<0.05		<0.05		<0.05	

Sample ID			MW-3		MW-3		MW-3	
Collect Date			6/29/2017		9/22/2017		1/4/2018	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	NA		180		151	
9056	Nitrate	mg/l	9.81		10.5		8.79	
9056	Nitrite	mg/l	<0.1		<0.1		<0.1	
9056	Sulfate	mg/l	140		141		138	
2320B	Alkalinity	mg/l	207		207		197	
2320B	Alkalinity,Bicarbonate	mg/l	207		207		<20	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		197	
9040C	pH	su	7.09	T8	7.01	T8	6.92	T8
9050A	Specific Conductance	umhos/cm	1260		1330		1200	
9060A	TOC (Total Organic Carbon)	mg/l	1.77		2.34		2.43	
6020	Antimony	mg/l	<0.002		<0.002		<0.002	
6020	Beryllium	mg/l	<0.002		<0.002		0.0032	
6020	Cadmium	mg/l	<0.001		<0.001		<0.001	
6020	Copper	mg/l	0.0084		<0.005		0.0546	
6020	Lead	mg/l	0.0096		<0.002		0.0771	
6020	Selenium	mg/l	0.0028		0.0027		0.0071	
6020/6010	Thallium	mg/l	<0.002		<0.002		<0.002	
6020	Zinc	mg/l	0.032		<0.025		0.258	
6020/6010	Arsenic	mg/l	<0.01		<0.002		0.0174	
6010B	Barium	mg/l	0.176		0.0943		0.49	
6010B	Calcium	mg/l	107		115		111	
6010B	Chromium	mg/l	<0.01		<0.01		0.0244	
6010B	Cobalt	mg/l	<0.01		<0.01		0.0169	
6010B	Magnesium	mg/l	22.9		23.9		27	
6010B	Nickel	mg/l	<0.01		<0.01		0.0267	
6010B	Potassium	mg/l	9.3		8.32		16.1	
6010B	Silver	mg/l	<0.005		<0.005		<0.005	
6010B	Sodium	mg/l	108		113		111	
6010B	Vanadium	mg/l	<0.02		<0.02		0.0506	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.05		<0.05		<0.05	

Appendix I
Field Data Sheets

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

Well No. MW-1	Date: 3/27/17	Time: 14:00	Personnel: Molen/Salmon
Weather: Sunny		Well Condition: Good	

Casing Diam. 2"		Field Calibrated : ___ Yes X No		
Casing Stick-up: (ft) 2.32	Sampling Kit: ESC Provided			
Total Well Depth: (from TOC) (ft) 36.03		Sample Tag	Time Sampled	Comment
Static Water Level: (from TOC) (ft) 8.45	Purging Equip. Bilge pump Volume Purged: 13.5 gal	Carb/BiCarb	14:20	Non-Preserved
Saturated Thickness:(ft) 27.58	Sampling Equip. Bailer	Nitrite/ Nitrate		Non-Preserved
Casing Volume: (gal) 4.41		pH/Cond.		Non-Preserved
		Metals		Preserved HNO3
		TOC		Preserved HCl
		VOC		Non-Preserved

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
14:12		8	6.83	1.04	17.3	0.52	no odor, clear
		9	6.85	1.04	16.3	0.52	no odor, slightly turbid
		10	6.89	1.04	16.3	0.52	" " " "
		11	6.94	1.04	16.0	0.52	" " " "

Remarks and/or Well Condition: _____

	LEL	$\%CH_4$	$\%O_2$	%CO	$\%H_2S$	Time	Comment
GP ___							N/A

Checked by: _____ Collected by: _____

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

Well No. MW-2	Date: 3/27/17	Time: 15:00	Personnel: Molen/Salmon
Weather: Cloudy to partly cloudy		Well Condition: Good	

Casing Diam. 2"		Field Calibrated : ___ Yes X No		
Casing Stick-up: (ft) 2.51	Sampling Kit: ESC Provided			
Total Well Depth: (from TOC) (ft) 27.17		Sample Tag	Time Sampled	Comment
		Carb/BiCarb	15:20	Non-Preserved
Static Water Level: (from TOC) (ft) 8.42	Purging Equip. bilge pump	Nitrite/ Nitrate	↓	Non-Preserved
	Volume Purged: 9 gal	pH/Cond.		Non-Preserved
Saturated Thickness:(ft) 18.75	Sampling Equip. Bailer	Metals		Preserved HNO3
		TOC		Preserved HCl
Casing Volume: (gal) 3.0		VOC		Non-Preserved

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
15:10		6	6.99	1.31	11.3	0.64	clear, no odor
		7	7.05	1.31	10.3	0.65	↓
		8	7.15	1.31	10.3	0.65	
		9	7.18	1.30	10.3	0.65	

Remarks and/or Well Condition: _____

	LEL	%CH_4	%O_2	%CO	%H_2S	Time	Comment
GP ___							N/A

Checked by: _____ Collected by: _____

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

Well No. MW-3	Date: 3/27/17	Time: 14:35	Personnel: Molen/Salmon
Weather: Slightly overcast		Well Condition: Good	
Casing Diam. 2"		Field Calibrated : ___ Yes _X_ No	
Casing Stick-up: (ft) 3.66	Sampling Kit: ESC Provided		
Total Well Depth: (from TOC) (ft) 38.10		Sample Tag	Time Sampled / Comment
Static Water Level: (from TOC) (ft) 16.02	Purging Equip. Bilge Pump	Carb/BiCarb	14:50 Non-Preserved
Saturated Thickness:(ft) 22.08	Volume Purged: 10.5	Nitrite/ Nitrate	Non-Preserved
Casing Volume: (gal) 3.53	Sampling Equip. Bailer	pH/Cond.	Non-Preserved
		Metals	Preserved HNO3
		TOC	Preserved HCl
		VOC	Non-Preserved

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
14:45		6	6.46	1.04	16.3		clear
		7	6.56	1.05	15.8		
		8	6.60	1.05	15.7		
		9	6.62	1.05	15.8		

Remarks and/or Well Condition: _____

	LEL	$\%CH_4$	$\%O_2$	%CO	$\%H_2S$	Time	Comment
GP ___							N/A

Checked by: _____ Collected by: _____

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

Well No. MW-1	Date: 6/29/17	Time: 12:57	Personnel: Salmon
Weather: Sunny/hot		Well Condition: Good	

Casing Diam. 2"		Field Calibrated : ___ Yes X No		
Casing Stick-up: (ft) 2.32	Sampling Kit: ESC Provided			
Total Well Depth: (from TOC) (ft) 36.22		Sample Tag	Time Sampled	Comment
		Carb/BiCarb	13:25	Non-Preserved
Static Water Level: (from TOC) (ft) 6.72	Purging Equip. Bilge pump	Nitrite/ Nitrate		Non-Preserved
	Volume Purged: 14 gal	pH/Cond.		Non-Preserved
Saturated Thickness:(ft) 29.5	Sampling Equip: Bailer	Metals		Preserved HNO3
		TOC		Preserved HCl
Casing Volume: (gal) 4.72		VOC		Non-Preserved

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
		7	6.64	20.0	1.00	0.50	clear, no odor
		8	6.75	18.9	1.01	0.50	" " "
		10	6.74	19.3	1.00	0.50	" " "
		12	6.70	20.1	0.95	0.49	" " "

Remarks and/or Well Condition: _____

	LEL	$\%CH_4$	$\%O_2$	%CO	$\%H_2S$	Time	Comment
GP___							N/A

Checked by: _____ Collected by: _____

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

Well No. MW-2	Date: 6/29/17	Time: 13:45	Personnel: Salmon
Weather: Sunny, hot		Well Condition: Good	

Casing Diam. 2"		Meter Calibration: Calibration by US Environmental (rental company) Field Calibrated : ____ Yes X No		
Casing Stick-up: (ft) 2.51	Sampling Kit: ESC Provided			
Total Well Depth: (from TOC) (ft) 27.3		Sample Tag	Time Sampled	Comment
		Carb/BiCarb	14:10	Non-Preserved
Static Water Level: (from TOC) (ft) 7.59	Purging Equip. Bilge pump Volume Purged: 9.5 gal	Nitrite/ Nitrate		Non-Preserved
		pH/Cond.		Non-Preserved
Saturated Thickness:(ft) 19.71	Sampling Equip. Bailer	Metals		Preserved HNO3
		TOC		Preserved HCl
Casing Volume: (gal) 3.15		VOC		Non-Preserved

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
		4	6.92	20.3	1.32	0.66	clear, no odor
		6	7.00	20.3	1.31	0.65	" " "
		7	7.04	19.9	1.32	0.66	" " "
		9	6.99	20.1	1.33	0.67	" " "

Remarks and/or Well Condition: _____

	LEL	%CH_4	%O_2	%CO	%H_2S	Time	Comment
GP ____							

Checked by: _____ Collected by: _____

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

Well No. MW-3	Date: 6/29/17	Time: 14:40	Personnel: Salmon
Weather: Overcast, warm		Well Condition: Good	

Casing Diam. 2"		Field Calibrated : ___ Yes X No		
Casing Stick-up: (ft) 3.66	Sampling Kit: ESC Provided			
Total Well Depth: (from TOC) (ft) 37.95		Sample Tag	Time Sampled	Comment
		Carb/BiCarb	16:00	Non-Preserved
Static Water Level: (from TOC) (ft) 15.09	Purging Equip. Bilge pump	Nitrite/ Nitrate		Non-Preserved
	Volume Purged: 11 g	pH/Cond.		Non-Preserved
Saturated Thickness:(ft) 22.86	Sampling Equip. bailer	Metals		Preserved HNO3
		TOC		Preserved HCl
Casing Volume: (gal) 3.66		VOC		Non-Preserved

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
		5	6.63	1.06	19.3	0.53	slightly turbid, no odor
		6	6.64	1.07	19.2	0.53	" " " "
		7	6.69	1.08	17.9	0.54	" " " "
		9	6.59	1.01	20.2	0.54	" " " "

Remarks and/or Well Condition: _____

	LEL	%CH_4	%O_2	%CO	%H_2S	Time	Comment
GP ___							N/A

Checked by: _____ Collected by: _____

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

Well No. MW-1	Date: 9/22/17	Time: 7:15	Personnel: Molen
Weather: Clear		Well Condition: Good	

Casing Diam. 2"		Field Calibrated : ___ Yes X No		
Casing Stick-up: (ft) 2.32	Sampling Kit: ESC Provided			
Total Well Depth: (from TOC) (ft) 36.02		Sample Tag	Time Sampled	Comment
		Carb/BiCarb	10:30	Non-Preserved
Static Water Level: (from TOC) (ft) 6.65	Purging Equip. Bilge Pump	Nitrite/ Nitrate		Non-Preserved
	Volume Purged: 14 gal	pH/Cond.		Non-Preserved
Saturated Thickness:(ft) 29.37	Sampling Equip. Bailer	Metals		Preserved HNO3
		TOC		Preserved HCl
Casing Volume: (gal) 4.7		VOC		Non-Preserved

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
8:20		7	6.74	1.02	14.3	0.51	clear, no odor
8:23		9	6.79	1.02	14.3	0.51	
8:28		12	6.81	1.02	14.2	0.51	
8:35		14	6.81	1.02	14.3	0.51	

Remarks and/or Well Condition: _____

	LEL	$\%CH_4$	$\%O_2$	%CO	$\%H_2S$	Time	Comment
GP ___							N/A

Checked by: _____ Collected by: Mark Molen

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

Well No. MW-2	Date: 9/22/17	Time: 10:00	Personnel: Molen
Weather: Clear, Sunny		Well Condition: Good	

Casing Diam. 2"		Field Calibrated : ___ Yes ___X___ No		
Casing Stick-up: (ft) 2.51	Sampling Kit: ESC Provided			
Total Well Depth: (from TOC) (ft) 27.40		Sample Tag	Time Sampled	Comment
		Carb/BiCarb	12:00	Non-Preserved
Static Water Level: (from TOC) (ft) 5.80	Purging Equip. Bilge Pump	Nitrite/ Nitrate		Non-Preserved
	Volume Purged: 10.5 gal	pH/Cond.		Non-Preserved
Saturated Thickness:(ft) 21.6	Sampling Equip. Bailer	Metals		Preserved HNO3
		TOC		Preserved HCl
Casing Volume: (gal) 3.46		VOC		Non-Preserved

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
10:10		6	6.88	1.30	19.3	0.65	clear, no odor
10:12		8	6.92	1.38	19.4	0.69	"
10:15		9	6.96	1.38	19.3	0.69	
10:16		10	6.97	1.38	19.3	0.69	

Remarks and/or Well Condition: _____

	LEL	$\%CH_4$	$\%O_2$	%CO	$\%H_2S$	Time	Comment
GP ___							

Checked by: _____ Collected by: Mark A Molen

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

Well No. MW-3	Date: 9/22/17	Time: 8:45	Personnel: Molen
Weather: Clear, warming		Well Condition: Good	
Casing Diam. 2"		Field Calibrated : ___ Yes X No	
Casing Stick-up: (ft) 3.66	Sampling Kit: ESC Provided		
Total Well Depth: (from TOC) (ft) 38.00		Sample Tag / Time Sampled / Comment	
Static Water Level: (from TOC) (ft) 15.12	Purging Equip. Bilge Pump Volume Purged: 11 gal	Carb/BiCarb: 9:30 — Non-Preserved	
Saturated Thickness:(ft) 22.88	Sampling Equip. Bailer	Nitrite/Nitrate — Non-Preserved	
Casing Volume: (gal) 3.66		pH/Cond. — Non-Preserved	
		Metals — Preserved HNO3	
		TOC — Preserved HCl	
		VOC — Non-Preserved	

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
9:10		7	6.39	1.10	16.8	0.59	clear
9:15		8	6.43	1.15	16.5	0.57	clear
9:20		9	6.55	1.16	16.3	0.57	clear
9:25		10	6.57	1.16	16.3	0.57	

Remarks and/or Well Condition: _____

	LEL	$\%CH_4$	$\%O_2$	%CO	$\%H_2S$	Time	Comment
GP ___							N/A

Checked by: _____ Collected by: Mark A Molen

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

Well No. MW-1	Date: 1/4/2018	Time: 13:15	Personnel: Salmon
Weather: Sunny, cool		Well Condition: Good	
Casing Diam. 2"		Field Calibrated : ___ Yes X No	
Casing Stick-up: (ft) 2.32	Sampling Kit: ESC Provided		
Total Well Depth: (from TOC) (ft) 36.14			
Static Water Level: (from TOC) (ft) 8.71	Purging Equip. Bailer		
Saturated Thickness:(ft) 27.43	Volume Purged: 13 gal		
Casing Volume: (gal) 4.39	Sampling Equip. Bailer		

Sample Tag	Time Sampled	Comment
Carb/BiCarb	13:45	Non-Preserved
Nitrite/ Nitrate		Non-Preserved
pH/Cond.		Non-Preserved
Metals		Preserved HNO3
TOC		Preserved HCl
VOC		Non-Preserved

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
		9	6.66	/	14.3		slightly turbid, no odor
		10	6.73	/	14.1		" " " "
		11	6.81	/	14.0		" " " "
		12	6.81	/	14.2		" " " "

Remarks and/or Well Condition: pH meter not reading TDS/conductivity

	LEL	%CH_4	%O_2	%CO	%H_2S	Time	Comment
GP___							N/A

Checked by: _____ Collected by: _____

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill
PROJECT Groundwater Monitoring PROJECT NO. 10-0133
SITE AI - Platte Valley Pit

Well No. MW-2	Date: 1/4/18	Time: 14:15	Personnel: Salmon
Weather: Sunny, cool		Well Condition:	
Casing Diam. 2"		Field Calibrated : ___ Yes X No	
Casing Stick-up: (ft) 2.51	Sampling Kit: ESC Provided		
Total Well Depth: (from TOC) (ft) 27.41		Sample Tag / Time Sampled / Comment	
Static Water Level: (from TOC) (ft) 8.74	Purging Equip. bailer Volume Purged: 9 gal	Carb/BiCarb — 14:45 — Non-Preserved	
Saturated Thickness:(ft) 18.67	Sampling Equip.	Nitrite/ Nitrate — Non-Preserved	
Casing Volume: (gal) 2.99		pH/Cond. — Non-Preserved	
		Metals — Preserved HNO3	
		TOC — Preserved HCl	
		VOC — Non-Preserved	

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
		6	6.81		11.0		clear, no odor
		7	6.90		10.7		" " "
		8	6.87		11.0		" " "
		9	6.88		11.1		" " "

Remarks and/or Well Condition: pH meter not reading conductivity / TDS

	LEL	%CH_4	%O_2	%CO	%H_2S	Time	Comment
GP___							N/A

Checked by: _____ Collected by: _____

GROUND WATER SAMPLING FIELD DATA SHEET

CLIENT Broda's Inert Fill

PROJECT Groundwater Monitoring PROJECT NO. 10-0133

SITE AI - Platte Valley Pit

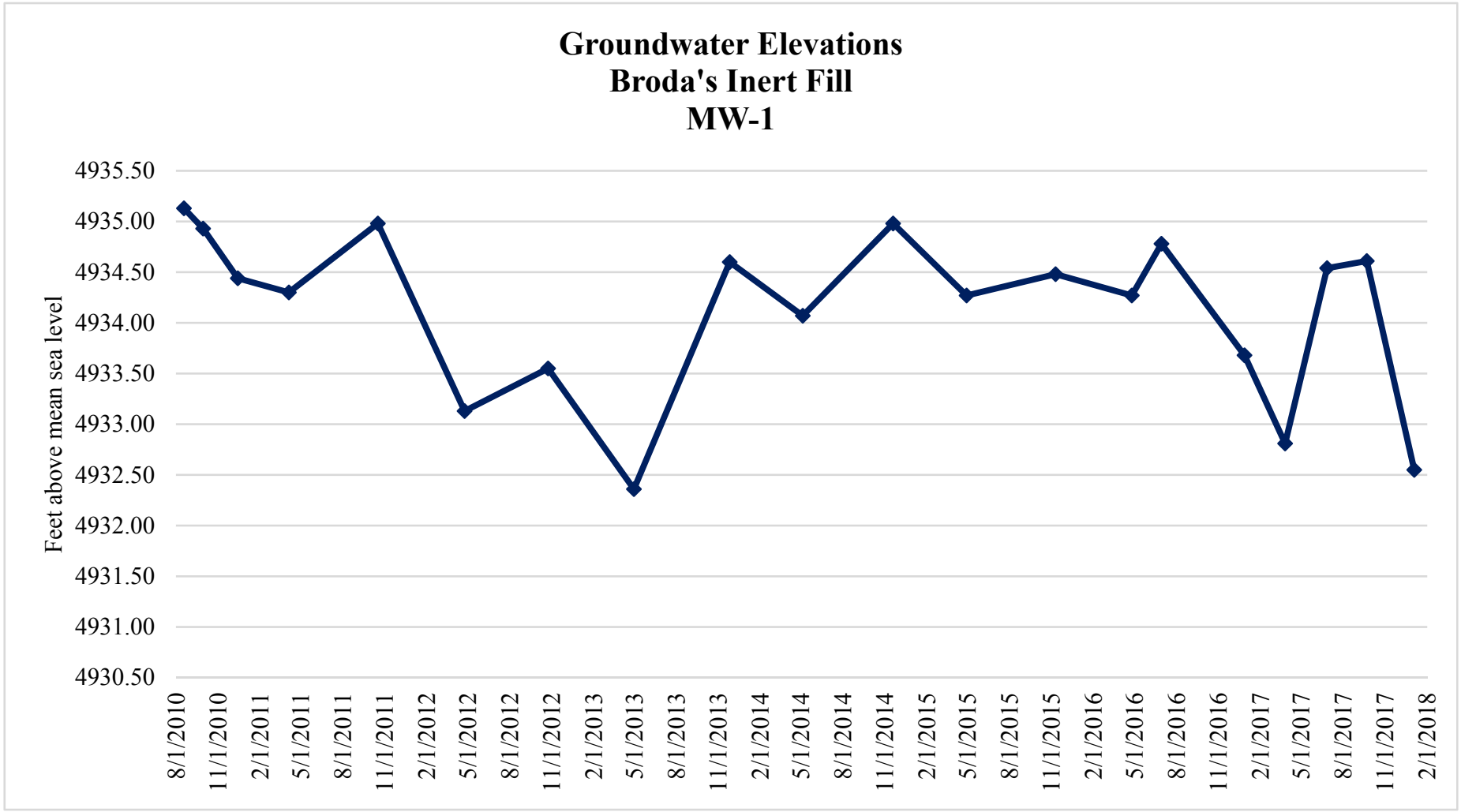
Well No. MW-3	Date: 1/4/2018	Time: 15:15	Personnel: Salmon
Weather: Sunny, cold		Well Condition: Good	
Casing Diam. 2"		Field Calibrated : ___ Yes X No	
Casing Stick-up: (ft) 3.66	Sampling Kit: ESC Provided		
Total Well Depth: (from TOC) (ft) 38.05		Sample Tag / Time Sampled / Comment	
Static Water Level: (from TOC) (ft) 15.41	Purging Equip. Bailer	Carb/BiCarb — 15:40 — Non-Preserved	
	Volume Purged: 11 g	Nitrite/ Nitrate — Non-Preserved	
Saturated Thickness:(ft) 22.64	Sampling Equip. Bailer	pH/Cond. — Non-Preserved	
Casing Volume: (gal) 3.6		Metals — Preserved HNO3	
		TOC — Preserved HCl	
		VOC — Non-Preserved	

Time	Bailer Numbers	Gallons Purged	pH	Cond	Temp. (°C)	TDS	Comments odor, color, appearance
		6	6.32		14.3		turbid, no odor
		7	6.41		14.1		" " "
		8	6.39		14.1		" " "
		9	6.37		14.0		" " "

Remarks and/or Well Condition: pH meter not reading conductivity/TDS

	LEL	%CH_4	%O_2	%CO	%H_2S	Time	Comment
GP ___							N/A

Appendix II
Groundwater Elevation Charts


Groundwater Elevations
Broda's Inert Fill
MW-1
Feet above mean sea level
4935.50
4935.00
4934.50
4934.00
4933.50
4933.00
4932.50
4932.00
4931.50
4931.00
4930.50
8/1/2010
11/1/2010
2/1/2011
5/1/2011
8/1/2011
11/1/2011
2/1/2012
5/1/2012
8/1/2012
11/1/2012
2/1/2013
5/1/2013
8/1/2013
11/1/2013
2/1/2014
5/1/2014
8/1/2014
11/1/2014
2/1/2015
5/1/2015
8/1/2015
11/1/2015
2/1/2016
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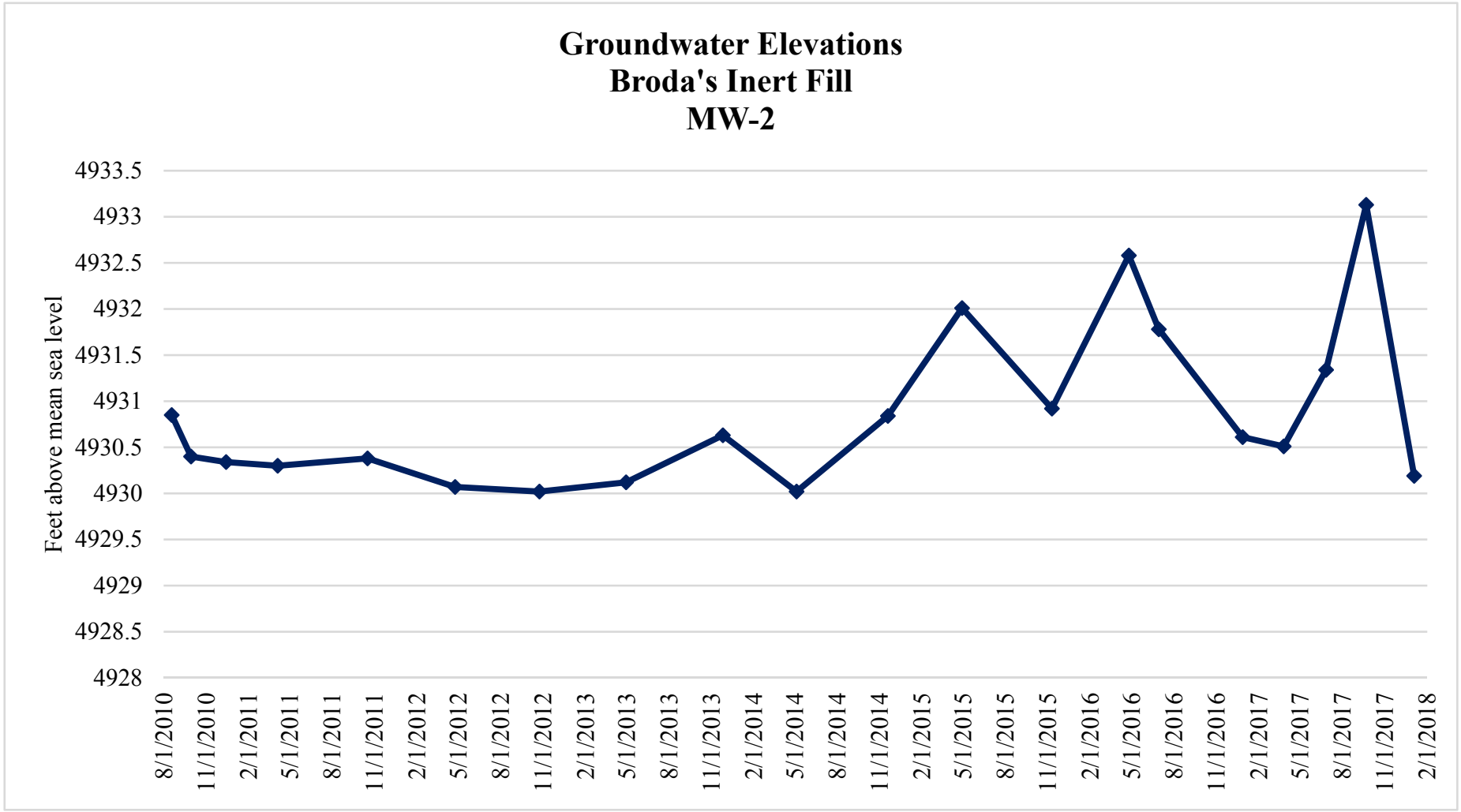
8/1/2016
11/1/2016
2/1/2017
5/1/2017
8/1/2017
11/1/2017
2/1/2018


Groundwater Elevations
Broda's Inert Fill
MW-2
Feet above mean sea level
4933.5
4933
4932.5
4932
4931.5
4931
4930.5
4930
4929.5
4929
4928.5
4928
8/1/2010
11/1/2010
2/1/2011
5/1/2011
8/1/2011
11/1/2011
2/1/2012
5/1/2012
8/1/2012
11/1/2012
2/1/2013
5/1/2013
8/1/2013
11/1/2013
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8/1/2014
11/1/2014
2/1/2015
5/1/2015
8/1/2015
11/1/2015
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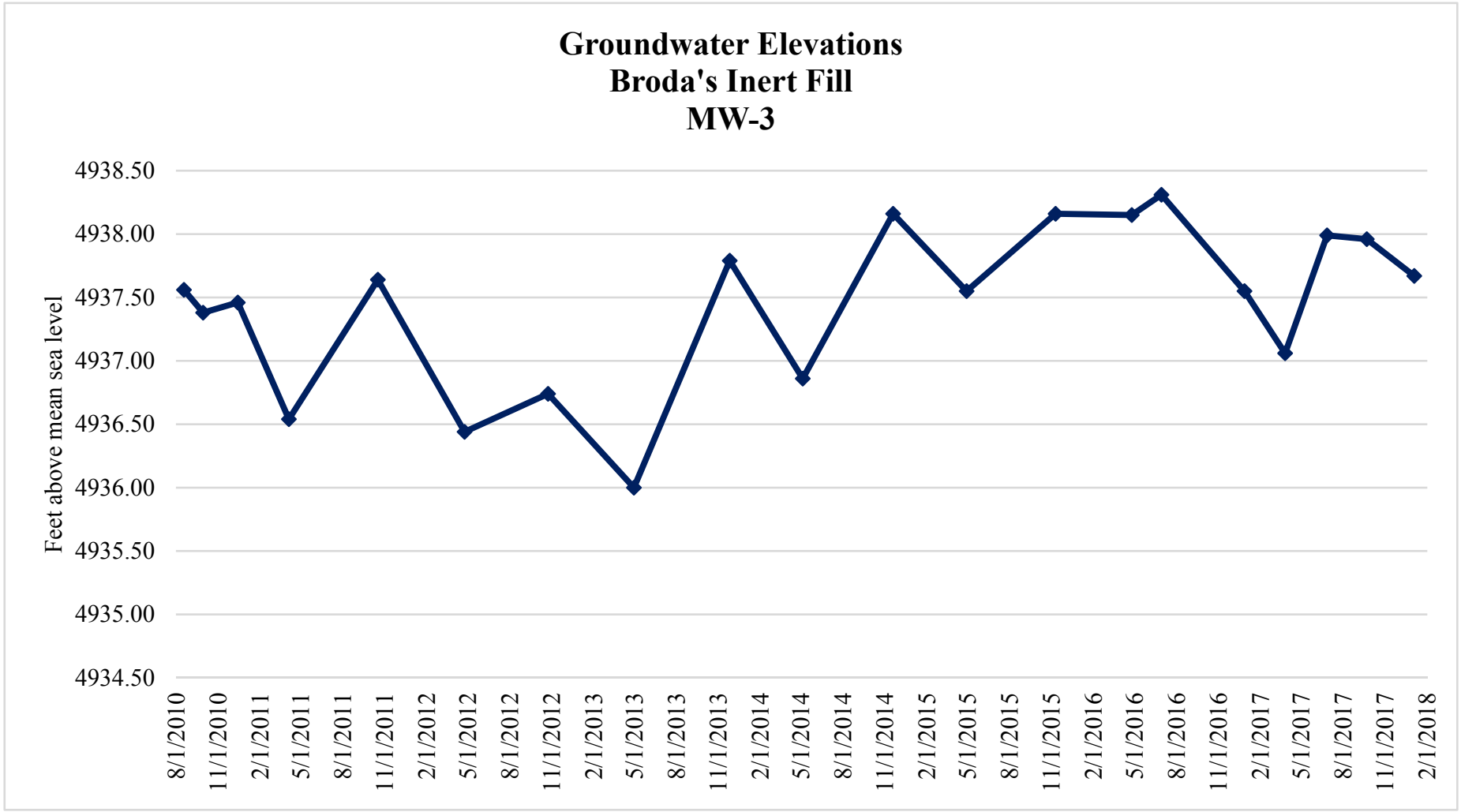
11/1/2017
2/1/2018


Groundwater Elevations
Broda's Inert Fill
MW-3
Feet above mean sea level
4938.50
4938.00
4937.50
4937.00
4936.50
4936.00
4935.50
4935.00
4934.50
8/1/2010
11/1/2010
2/1/2011
5/1/2011
8/1/2011
11/1/2011
2/1/2012
5/1/2012
8/1/2012
11/1/2012
2/1/2013
5/1/2013
8/1/2013
11/1/2013
2/1/2014
5/1/2014
8/1/2014
11/1/2014
2/1/2015
5/1/2015
8/1/2015
11/1/2015
2/1/2016
5/1/2016
8/1/2016
11/1/2016
2/1/2017
5/1/2017
8/1/2017
11/1/2017
2/1/2018

Appendix III
ESC Laboratory Reports

ANALYTICAL REPORT

April 04, 2017

Molen & Associates, LLC

Sample Delivery Group:	L898515
Samples Received:	03/28/2017
Project Number:	10-0133
Description:	Broda Al Inert Fill
Site:	BRODA AL
Report To:	Mark Molen 2090 East 104th Avenue Suite #205 Thornton, CO 80223

Entire Report Reviewed By:

Daphne R Richards

Daphne Richards
Technical Service Representative

TABLE OF CONTENTS

MW-1 L898515-01 GW

Collected by: MArk A Molen
Collected date/time: 03/27/17 14:20
Received date/time: 03/28/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG964734	1	03/28/17 15:08	03/28/17 15:08	AMC
Wet Chemistry by Method 9040C	WG965040	1	03/29/17 09:10	03/29/17 09:10	MA
Wet Chemistry by Method 9050A	WG965087	1	03/28/17 23:24	03/28/17 23:24	MZ
Wet Chemistry by Method 9056A	WG964797	1	03/28/17 14:08	03/28/17 14:08	SAM
Wet Chemistry by Method 9056A	WG964797	5	03/28/17 14:23	03/28/17 14:23	SAM
Wet Chemistry by Method 9060A	WG965719	1	03/31/17 21:52	03/31/17 21:52	CSU
Mercury by Method 7470A	WG965137	1	03/29/17 17:52	03/30/17 11:40	NJB
Metals (ICP) by Method 6010B	WG965505	1	03/31/17 08:25	03/31/17 12:03	LTB
Metals (ICPMS) by Method 6020	WG965283	1	03/30/17 13:33	03/30/17 16:32	VSS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG966262	1	04/02/17 13:41	04/02/17 13:41	JAH

MW-2 L898515-02 GW

Collected by: MArk A Molen
Collected date/time: 03/27/17 14:50
Received date/time: 03/28/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG964734	1	03/28/17 15:15	03/28/17 15:15	AMC
Wet Chemistry by Method 9040C	WG965040	1	03/29/17 09:10	03/29/17 09:10	MA
Wet Chemistry by Method 9050A	WG965087	1	03/28/17 23:24	03/28/17 23:24	MZ
Wet Chemistry by Method 9056A	WG964797	1	03/28/17 14:39	03/28/17 14:39	SAM
Wet Chemistry by Method 9056A	WG964797	5	03/28/17 14:54	03/28/17 14:54	SAM
Wet Chemistry by Method 9060A	WG965719	1	03/31/17 23:14	03/31/17 23:14	CSU
Mercury by Method 7470A	WG965137	1	03/29/17 17:52	03/30/17 11:43	NJB
Metals (ICP) by Method 6010B	WG965505	1	03/31/17 08:25	03/31/17 12:06	LTB
Metals (ICPMS) by Method 6020	WG965283	1	03/30/17 13:33	03/30/17 16:36	VSS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG966262	1	04/02/17 13:56	04/02/17 13:56	JAH

MW-3 L898515-03 GW

Collected by: MArk A Molen
Collected date/time: 03/27/17 15:20
Received date/time: 03/28/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG964734	1	03/28/17 15:22	03/28/17 15:22	AMC
Wet Chemistry by Method 9040C	WG965040	1	03/29/17 09:10	03/29/17 09:10	MA
Wet Chemistry by Method 9050A	WG965087	1	03/28/17 23:24	03/28/17 23:24	MZ
Wet Chemistry by Method 9056A	WG964797	1	03/28/17 15:10	03/28/17 15:10	SAM
Wet Chemistry by Method 9056A	WG964797	5	03/28/17 15:28	03/28/17 15:28	SAM
Wet Chemistry by Method 9060A	WG965719	1	03/31/17 23:37	03/31/17 23:37	CSU
Mercury by Method 7470A	WG965447	1	03/30/17 10:02	03/30/17 16:40	TRB
Metals (ICP) by Method 6010B	WG965505	1	03/31/17 08:25	03/31/17 12:09	LTB
Metals (ICPMS) by Method 6020	WG965283	1	03/30/17 13:33	03/30/17 16:39	VSS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG966262	1	04/02/17 14:11	04/02/17 14:11	JAH

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.

Daphne R Richards

Daphne Richards
Technical Service Representative

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	195		20.0	1	03/28/2017 15:08	WG964734
Alkalinity,Bicarbonate	195		20.0	1	03/28/2017 15:08	WG964734
Alkalinity,Carbonate	ND		20.0	1	03/28/2017 15:08	WG964734

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.23	T8	1	03/29/2017 09:10	WG965040

Sample Narrative:

9040C L898515-01 WG965040: 7.23 at 14.0c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1170		1	03/28/2017 23:24	WG965087

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	140		5.00	5	03/28/2017 14:23	WG964797
Nitrate as (N)	9.66		0.100	1	03/28/2017 14:08	WG964797
Nitrite as (N)	ND		0.100	1	03/28/2017 14:08	WG964797
Sulfate	122		25.0	5	03/28/2017 14:23	WG964797

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1.81		1.00	1	03/31/2017 21:52	WG965719

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	03/30/2017 11:40	WG965137

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	0.0120		0.0100	1	03/31/2017 12:03	WG965505
Barium	0.369		0.00500	1	03/31/2017 12:03	WG965505
Calcium	86.3		1.00	1	03/31/2017 12:03	WG965505
Chromium	0.0145		0.0100	1	03/31/2017 12:03	WG965505
Cobalt	0.0101		0.0100	1	03/31/2017 12:03	WG965505
Magnesium	30.4		1.00	1	03/31/2017 12:03	WG965505
Nickel	0.0148		0.0100	1	03/31/2017 12:03	WG965505
Potassium	11.1		1.00	1	03/31/2017 12:03	WG965505
Silver	ND		0.00500	1	03/31/2017 12:03	WG965505
Sodium	117		1.00	1	03/31/2017 12:03	WG965505
Vanadium	0.0337		0.0200	1	03/31/2017 12:03	WG965505

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	03/30/2017 16:32	WG965283
Beryllium	ND		0.00200	1	03/30/2017 16:32	WG965283
Cadmium	ND		0.00100	1	03/30/2017 16:32	WG965283
Copper	0.0266		0.00500	1	03/30/2017 16:32	WG965283
Lead	0.0268		0.00200	1	03/30/2017 16:32	WG965283
Selenium	0.00390		0.00200	1	03/30/2017 16:32	WG965283
Thallium	ND		0.00200	1	03/30/2017 16:32	WG965283
Zinc	0.140		0.0250	1	03/30/2017 16:32	WG965283

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	04/02/2017 13:41	WG966262
Acrylonitrile	ND		0.0100	1	04/02/2017 13:41	WG966262
Benzene	ND		0.00100	1	04/02/2017 13:41	WG966262
Bromochloromethane	ND		0.00100	1	04/02/2017 13:41	WG966262
Bromodichloromethane	ND		0.00100	1	04/02/2017 13:41	WG966262
Bromoform	ND		0.00100	1	04/02/2017 13:41	WG966262
Bromomethane	ND		0.00500	1	04/02/2017 13:41	WG966262
Carbon disulfide	ND		0.00100	1	04/02/2017 13:41	WG966262
Carbon tetrachloride	ND		0.00100	1	04/02/2017 13:41	WG966262
Chlorobenzene	ND		0.00100	1	04/02/2017 13:41	WG966262
Chlorodibromomethane	ND		0.00100	1	04/02/2017 13:41	WG966262
Chloroethane	ND		0.00500	1	04/02/2017 13:41	WG966262
Chloroform	ND		0.00500	1	04/02/2017 13:41	WG966262
Chloromethane	ND		0.00250	1	04/02/2017 13:41	WG966262
Dibromomethane	ND		0.00100	1	04/02/2017 13:41	WG966262
1,2-Dichlorobenzene	ND		0.00100	1	04/02/2017 13:41	WG966262
1,4-Dichlorobenzene	ND		0.00100	1	04/02/2017 13:41	WG966262
trans-1,4-Dichloro-2-butene	ND		0.00250	1	04/02/2017 13:41	WG966262
1,1-Dichloroethane	ND		0.00100	1	04/02/2017 13:41	WG966262
1,2-Dichloroethane	ND		0.00100	1	04/02/2017 13:41	WG966262
1,1-Dichloroethene	ND		0.00100	1	04/02/2017 13:41	WG966262
cis-1,2-Dichloroethene	ND		0.00100	1	04/02/2017 13:41	WG966262
trans-1,2-Dichloroethene	ND		0.00100	1	04/02/2017 13:41	WG966262
1,2-Dichloropropane	ND		0.00100	1	04/02/2017 13:41	WG966262
cis-1,3-Dichloropropene	ND		0.00100	1	04/02/2017 13:41	WG966262
trans-1,3-Dichloropropene	ND		0.00100	1	04/02/2017 13:41	WG966262
Ethylbenzene	ND		0.00100	1	04/02/2017 13:41	WG966262
2-Hexanone	ND		0.0100	1	04/02/2017 13:41	WG966262
Iodomethane	ND		0.0100	1	04/02/2017 13:41	WG966262
2-Butanone (MEK)	ND		0.0100	1	04/02/2017 13:41	WG966262
Methylene Chloride	ND		0.00500	1	04/02/2017 13:41	WG966262
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	04/02/2017 13:41	WG966262
Styrene	ND		0.00100	1	04/02/2017 13:41	WG966262
1,1,1,2-Tetrachloroethane	ND		0.00100	1	04/02/2017 13:41	WG966262
1,1,2,2-Tetrachloroethane	ND		0.00100	1	04/02/2017 13:41	WG966262
Tetrachloroethene	ND		0.00100	1	04/02/2017 13:41	WG966262
Toluene	ND		0.00100	1	04/02/2017 13:41	WG966262
1,1,1-Trichloroethane	ND		0.00100	1	04/02/2017 13:41	WG966262
1,1,2-Trichloroethane	ND		0.00100	1	04/02/2017 13:41	WG966262
Trichloroethene	ND		0.00100	1	04/02/2017 13:41	WG966262
Trichlorofluoromethane	ND		0.00500	1	04/02/2017 13:41	WG966262
1,2,3-Trichloropropane	ND		0.00250	1	04/02/2017 13:41	WG966262
Vinyl acetate	ND		0.0100	1	04/02/2017 13:41	WG966262
Vinyl chloride	ND		0.00100	1	04/02/2017 13:41	WG966262

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Xylenes, Total	ND		0.00300	1	04/02/2017 13:41	WG966262
(S) Toluene-d8	*102*		*80.0-120*		*04/02/2017 13:41*	WG966262
(S) Dibromofluoromethane	*100*		*76.0-123*		*04/02/2017 13:41*	WG966262
(S) a,a,a-Trifluorotoluene	*99.6*		*80.0-120*		*04/02/2017 13:41*	WG966262
(S) 4-Bromofluorobenzene	*98.4*		*80.0-120*		*04/02/2017 13:41*	WG966262

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	131		20.0	1	03/28/2017 15:15	WG964734
Alkalinity,Bicarbonate	131		20.0	1	03/28/2017 15:15	WG964734
Alkalinity,Carbonate	ND		20.0	1	03/28/2017 15:15	WG964734

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.59	T8	1	03/29/2017 09:10	WG965040

Sample Narrative:

9040C L898515-02 WG965040: 7.59 at 15.6c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1480		1	03/28/2017 23:24	WG965087

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	188		5.00	5	03/28/2017 14:54	WG964797
Nitrate as (N)	ND		0.100	1	03/28/2017 14:39	WG964797
Nitrite as (N)	ND		0.100	1	03/28/2017 14:39	WG964797
Sulfate	300		25.0	5	03/28/2017 14:54	WG964797

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	4.49		1.00	1	03/31/2017 23:14	WG965719

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	03/30/2017 11:43	WG965137

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.0100	1	03/31/2017 12:06	WG965505
Barium	0.127		0.00500	1	03/31/2017 12:06	WG965505
Calcium	75.7		1.00	1	03/31/2017 12:06	WG965505
Chromium	ND		0.0100	1	03/31/2017 12:06	WG965505
Cobalt	ND		0.0100	1	03/31/2017 12:06	WG965505
Magnesium	22.2		1.00	1	03/31/2017 12:06	WG965505
Nickel	ND		0.0100	1	03/31/2017 12:06	WG965505
Potassium	10.3		1.00	1	03/31/2017 12:06	WG965505
Silver	ND		0.00500	1	03/31/2017 12:06	WG965505
Sodium	193		1.00	1	03/31/2017 12:06	WG965505
Vanadium	ND		0.0200	1	03/31/2017 12:06	WG965505

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	03/30/2017 16:36	WG965283
Beryllium	ND		0.00200	1	03/30/2017 16:36	WG965283
Cadmium	ND		0.00100	1	03/30/2017 16:36	WG965283
Copper	ND		0.00500	1	03/30/2017 16:36	WG965283
Lead	ND		0.00200	1	03/30/2017 16:36	WG965283
Selenium	ND		0.00200	1	03/30/2017 16:36	WG965283
Thallium	ND		0.00200	1	03/30/2017 16:36	WG965283
Zinc	ND		0.0250	1	03/30/2017 16:36	WG965283

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	04/02/2017 13:56	WG966262
Acrylonitrile	ND		0.0100	1	04/02/2017 13:56	WG966262
Benzene	ND		0.00100	1	04/02/2017 13:56	WG966262
Bromochloromethane	ND		0.00100	1	04/02/2017 13:56	WG966262
Bromodichloromethane	ND		0.00100	1	04/02/2017 13:56	WG966262
Bromoform	ND		0.00100	1	04/02/2017 13:56	WG966262
Bromomethane	ND		0.00500	1	04/02/2017 13:56	WG966262
Carbon disulfide	ND		0.00100	1	04/02/2017 13:56	WG966262
Carbon tetrachloride	ND		0.00100	1	04/02/2017 13:56	WG966262
Chlorobenzene	ND		0.00100	1	04/02/2017 13:56	WG966262
Chlorodibromomethane	ND		0.00100	1	04/02/2017 13:56	WG966262
Chloroethane	ND		0.00500	1	04/02/2017 13:56	WG966262
Chloroform	ND		0.00500	1	04/02/2017 13:56	WG966262
Chloromethane	ND		0.00250	1	04/02/2017 13:56	WG966262
Dibromomethane	ND		0.00100	1	04/02/2017 13:56	WG966262
1,2-Dichlorobenzene	ND		0.00100	1	04/02/2017 13:56	WG966262
1,4-Dichlorobenzene	ND		0.00100	1	04/02/2017 13:56	WG966262
trans-1,4-Dichloro-2-butene	ND		0.00250	1	04/02/2017 13:56	WG966262
1,1-Dichloroethane	ND		0.00100	1	04/02/2017 13:56	WG966262
1,2-Dichloroethane	ND		0.00100	1	04/02/2017 13:56	WG966262
1,1-Dichloroethene	ND		0.00100	1	04/02/2017 13:56	WG966262
cis-1,2-Dichloroethene	ND		0.00100	1	04/02/2017 13:56	WG966262
trans-1,2-Dichloroethene	ND		0.00100	1	04/02/2017 13:56	WG966262
1,2-Dichloropropane	ND		0.00100	1	04/02/2017 13:56	WG966262
cis-1,3-Dichloropropene	ND		0.00100	1	04/02/2017 13:56	WG966262
trans-1,3-Dichloropropene	ND		0.00100	1	04/02/2017 13:56	WG966262
Ethylbenzene	ND		0.00100	1	04/02/2017 13:56	WG966262
2-Hexanone	ND		0.0100	1	04/02/2017 13:56	WG966262
Iodomethane	ND		0.0100	1	04/02/2017 13:56	WG966262
2-Butanone (MEK)	ND		0.0100	1	04/02/2017 13:56	WG966262
Methylene Chloride	ND		0.00500	1	04/02/2017 13:56	WG966262
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	04/02/2017 13:56	WG966262
Styrene	ND		0.00100	1	04/02/2017 13:56	WG966262
1,1,1,2-Tetrachloroethane	ND		0.00100	1	04/02/2017 13:56	WG966262
1,1,2,2-Tetrachloroethane	ND		0.00100	1	04/02/2017 13:56	WG966262
Tetrachloroethene	ND		0.00100	1	04/02/2017 13:56	WG966262
Toluene	ND		0.00100	1	04/02/2017 13:56	WG966262
1,1,1-Trichloroethane	ND		0.00100	1	04/02/2017 13:56	WG966262
1,1,2-Trichloroethane	ND		0.00100	1	04/02/2017 13:56	WG966262
Trichloroethene	ND		0.00100	1	04/02/2017 13:56	WG966262
Trichlorofluoromethane	ND		0.00500	1	04/02/2017 13:56	WG966262
1,2,3-Trichloropropane	ND		0.00250	1	04/02/2017 13:56	WG966262
Vinyl acetate	ND		0.0100	1	04/02/2017 13:56	WG966262
Vinyl chloride	ND		0.00100	1	04/02/2017 13:56	WG966262

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Xylenes, Total	ND		0.00300	1	04/02/2017 13:56	WG966262
(S) Toluene-d8	*102*		*80.0-120*		*04/02/2017 13:56*	WG966262
(S) Dibromofluoromethane	*99.8*		*76.0-123*		*04/02/2017 13:56*	WG966262
(S) a,a,a-Trifluorotoluene	*99.8*		*80.0-120*		*04/02/2017 13:56*	WG966262
(S) 4-Bromofluorobenzene	*98.7*		*80.0-120*		*04/02/2017 13:56*	WG966262

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	182		20.0	1	03/28/2017 15:22	WG964734
Alkalinity,Bicarbonate	182		20.0	1	03/28/2017 15:22	WG964734
Alkalinity,Carbonate	ND		20.0	1	03/28/2017 15:22	WG964734

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.11	T8	1	03/29/2017 09:10	WG965040

Sample Narrative:

9040C L898515-03 WG965040: 7.11 at 18.4c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1170		1	03/28/2017 23:24	WG965087

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	138		5.00	5	03/28/2017 15:28	WG964797
Nitrate as (N)	9.64		0.500	5	03/28/2017 15:28	WG964797
Nitrite as (N)	ND		0.100	1	03/28/2017 15:10	WG964797
Sulfate	141		25.0	5	03/28/2017 15:28	WG964797

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1.68		1.00	1	03/31/2017 23:37	WG965719

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	03/30/2017 16:40	WG965447

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.0100	1	03/31/2017 12:09	WG965505
Barium	0.0798		0.00500	1	03/31/2017 12:09	WG965505
Calcium	101		1.00	1	03/31/2017 12:09	WG965505
Chromium	ND		0.0100	1	03/31/2017 12:09	WG965505
Cobalt	ND		0.0100	1	03/31/2017 12:09	WG965505
Magnesium	22.0		1.00	1	03/31/2017 12:09	WG965505
Nickel	ND		0.0100	1	03/31/2017 12:09	WG965505
Potassium	7.56		1.00	1	03/31/2017 12:09	WG965505
Silver	ND		0.00500	1	03/31/2017 12:09	WG965505
Sodium	104		1.00	1	03/31/2017 12:09	WG965505
Vanadium	ND		0.0200	1	03/31/2017 12:09	WG965505

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	03/30/2017 16:39	WG965283
Beryllium	ND		0.00200	1	03/30/2017 16:39	WG965283
Cadmium	ND		0.00100	1	03/30/2017 16:39	WG965283
Copper	ND		0.00500	1	03/30/2017 16:39	WG965283
Lead	ND		0.00200	1	03/30/2017 16:39	WG965283
Selenium	0.00297		0.00200	1	03/30/2017 16:39	WG965283
Thallium	ND		0.00200	1	03/30/2017 16:39	WG965283
Zinc	ND		0.0250	1	03/30/2017 16:39	WG965283

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	04/02/2017 14:11	WG966262
Acrylonitrile	ND		0.0100	1	04/02/2017 14:11	WG966262
Benzene	ND		0.00100	1	04/02/2017 14:11	WG966262
Bromochloromethane	ND		0.00100	1	04/02/2017 14:11	WG966262
Bromodichloromethane	ND		0.00100	1	04/02/2017 14:11	WG966262
Bromoform	ND		0.00100	1	04/02/2017 14:11	WG966262
Bromomethane	ND		0.00500	1	04/02/2017 14:11	WG966262
Carbon disulfide	ND		0.00100	1	04/02/2017 14:11	WG966262
Carbon tetrachloride	ND		0.00100	1	04/02/2017 14:11	WG966262
Chlorobenzene	ND		0.00100	1	04/02/2017 14:11	WG966262
Chlorodibromomethane	ND		0.00100	1	04/02/2017 14:11	WG966262
Chloroethane	ND		0.00500	1	04/02/2017 14:11	WG966262
Chloroform	ND		0.00500	1	04/02/2017 14:11	WG966262
Chloromethane	ND		0.00250	1	04/02/2017 14:11	WG966262
Dibromomethane	ND		0.00100	1	04/02/2017 14:11	WG966262
1,2-Dichlorobenzene	ND		0.00100	1	04/02/2017 14:11	WG966262
1,4-Dichlorobenzene	ND		0.00100	1	04/02/2017 14:11	WG966262
trans-1,4-Dichloro-2-butene	ND		0.00250	1	04/02/2017 14:11	WG966262
1,1-Dichloroethane	ND		0.00100	1	04/02/2017 14:11	WG966262
1,2-Dichloroethane	ND		0.00100	1	04/02/2017 14:11	WG966262
1,1-Dichloroethene	ND		0.00100	1	04/02/2017 14:11	WG966262
cis-1,2-Dichloroethene	ND		0.00100	1	04/02/2017 14:11	WG966262
trans-1,2-Dichloroethene	ND		0.00100	1	04/02/2017 14:11	WG966262
1,2-Dichloropropane	ND		0.00100	1	04/02/2017 14:11	WG966262
cis-1,3-Dichloropropene	ND		0.00100	1	04/02/2017 14:11	WG966262
trans-1,3-Dichloropropene	ND		0.00100	1	04/02/2017 14:11	WG966262
Ethylbenzene	ND		0.00100	1	04/02/2017 14:11	WG966262
2-Hexanone	ND		0.0100	1	04/02/2017 14:11	WG966262
Iodomethane	ND		0.0100	1	04/02/2017 14:11	WG966262
2-Butanone (MEK)	ND		0.0100	1	04/02/2017 14:11	WG966262
Methylene Chloride	ND		0.00500	1	04/02/2017 14:11	WG966262
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	04/02/2017 14:11	WG966262
Styrene	ND		0.00100	1	04/02/2017 14:11	WG966262
1,1,1,2-Tetrachloroethane	ND		0.00100	1	04/02/2017 14:11	WG966262
1,1,2,2-Tetrachloroethane	ND		0.00100	1	04/02/2017 14:11	WG966262
Tetrachloroethene	ND		0.00100	1	04/02/2017 14:11	WG966262
Toluene	ND		0.00100	1	04/02/2017 14:11	WG966262
1,1,1-Trichloroethane	ND		0.00100	1	04/02/2017 14:11	WG966262
1,1,2-Trichloroethane	ND		0.00100	1	04/02/2017 14:11	WG966262
Trichloroethene	ND		0.00100	1	04/02/2017 14:11	WG966262
Trichlorofluoromethane	ND		0.00500	1	04/02/2017 14:11	WG966262
1,2,3-Trichloropropane	ND		0.00250	1	04/02/2017 14:11	WG966262
Vinyl acetate	ND		0.0100	1	04/02/2017 14:11	WG966262
Vinyl chloride	ND		0.00100	1	04/02/2017 14:11	WG966262

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Xylenes, Total	ND		0.00300	1	04/02/2017 14:11	WG966262
(S) Toluene-d8	*103*		*80.0-120*		*04/02/2017 14:11*	WG966262
(S) Dibromofluoromethane	*99.1*		*76.0-123*		*04/02/2017 14:11*	WG966262
(S) a,a,a-Trifluorotoluene	*99.8*		*80.0-120*		*04/02/2017 14:11*	WG966262
(S) 4-Bromofluorobenzene	*99.3*		*80.0-120*		*04/02/2017 14:11*	WG966262

Method Blank (MB)

(MB) R3206451-2 03/28/17 13:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	3.68	J	2.71	20.0
Alkalinity,Bicarbonate	3.68	J	2.71	20.0
Alkalinity,Carbonate	U		2.71	20.0

L898272-03 Original Sample (OS) • Duplicate (DUP)

(OS) L898272-03 03/28/17 16:56 • (DUP) R3206451-7 03/28/17 17:03

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	166	162	1	3.00		20

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

(LCS) R3206451-5 03/28/17 14:43 • (LCSD) R3206451-6 03/28/17 16:18

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 %
Alkalinity	100	102	92.5	102	93.0	85.0-115			10.0	20

L898148-01 Original Sample (OS) • Duplicate (DUP)

(OS) L898148-01 03/29/17 09:10 • (DUP) WG965040-3 03/29/17 09:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.57	7.55	1	0.265	T8	1

L898532-01 Original Sample (OS) • Duplicate (DUP)

(OS) L898532-01 03/29/17 09:10 • (DUP) WG965040-4 03/29/17 09:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.64	7.60	1	0.525	T8	1

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

(LCS) WG965040-1 03/29/17 09:10 • (LCSD) WG965040-2 03/29/17 09:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	7.50	7.47	7.46	99.6	99.5	98.7-101			0.134	1

Method Blank (MB)

(MB) WG965087-1 03/28/17 23:24

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	1.62			

L898677-01 Original Sample (OS) • Duplicate (DUP)

(OS) L898677-01 03/28/17 23:24 • (DUP) WG965087-4 03/28/17 23:24

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2900	2900	1	0.103		20

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

(LCS) WG965087-2 03/28/17 23:24 • (LCSD) WG965087-3 03/28/17 23:24

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCSD Result umhos/cm	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Specific Conductance	542	542	542	100	100	90.0-110			0.000	20

Method Blank (MB)

(MB) R3206584-1 03/28/17 07:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Nitrate	U		0.0227	0.100
Nitrite	U		0.0277	0.100
Sulfate	U		0.0774	5.00

L898514-01 Original Sample (OS) • Duplicate (DUP)

(OS) L898514-01 03/28/17 11:50 • (DUP) R3206584-4 03/28/17 12:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	1.76	1.76	1	0		15
Nitrite	ND	0.000	1	0		15

L898516-06 Original Sample (OS) • Duplicate (DUP)

(OS) L898516-06 03/28/17 17:46 • (DUP) R3206584-6 03/28/17 18:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	24.2	24.2	1	0		15
Nitrate	U	0.000	1	0		15
Nitrite	U	0.000	1	0		15
Sulfate	55.8	55.9	1	0		15

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

(LCS) R3206584-2 03/28/17 07:16 • (LCSD) R3206584-3 03/28/17 07:31

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	39.4	39.4	98	99	80-120			0	15
Nitrate	8.00	8.05	8.06	101	101	80-120			0	15
Nitrite	8.00	7.91	7.91	99	99	80-120			0	15
Sulfate	40.0	40.3	40.2	101	101	80-120			0	15

L898514-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L898514-02 03/28/17 12:20 • (MS) R3206584-5 03/28/17 12:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5.00	ND	4.99	100	1	80-120	
Nitrite	5.00	ND	5.14	103	1	80-120	

L898540-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L898540-04 03/28/17 21:06 • (MS) R3206584-7 03/28/17 21:22 • (MSD) R3206584-8 03/28/17 21:37

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 %
Chloride	50.0	5.31	56.4	56.0	102	101	1	80-120			1	15
Nitrate	5.00	ND	4.97	5.03	99	101	1	80-120			1	15
Nitrite	5.00	ND	5.14	5.16	103	103	1	80-120			0	15
Sulfate	50.0	ND	50.5	50.6	101	101	1	80-120			0	15

Method Blank (MB)

(MB) R3207556-1 03/31/17 12:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
TOC (Total Organic Carbon)	U		0.102	1.00

L898246-04 Original Sample (OS) • Duplicate (DUP)

(OS) L898246-04 03/31/17 20:33 • (DUP) R3207556-4 03/31/17 20:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC (Total Organic Carbon)	ND	0.517	1	0		20

L898516-06 Original Sample (OS) • Duplicate (DUP)

(OS) L898516-06 04/01/17 00:37 • (DUP) R3207556-7 04/01/17 00:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC (Total Organic Carbon)	20.0	19.9	1	1		20

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

(LCS) R3207556-2 03/31/17 16:20 • (LCSD) R3207556-3 03/31/17 18:41

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	%	%	%			%	%
TOC (Total Organic Carbon)	75.0	73.1	73.0	98	97	85-115			0	20

L898246-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L898246-05 03/31/17 21:01 • (MS) R3207556-5 03/31/17 21:19 • (MSD) R3207556-6 03/31/17 21:37

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	%	%		%			%	%
TOC (Total Organic Carbon)	50.0	ND	47.0	46.7	93	92	1	80-120			1	20

Method Blank (MB)

(MB) R3206996-1 03/30/17 11:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Mercury	U		0.000049	0.000200

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

(LCS) R3206996-2 03/30/17 11:24 • (LCSD) R3206996-3 03/30/17 11:26

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	0.00283	0.00293	94	98	80-120			3	20

L898774-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L898774-01 03/30/17 11:29 • (MS) R3206996-4 03/30/17 11:31 • (MSD) R3206996-5 03/30/17 11:38

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	0.00284	0.00299	95	100	1	75-125			5	20

Method Blank (MB)

(MB) R3207155-1 03/30/17 16:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Mercury	U		0.000049	0.000200

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

(LCS) R3207155-2 03/30/17 16:14 • (LCSD) R3207155-3 03/30/17 16:17

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	%	%	%			%	%
Mercury	0.00300	0.00261	0.00255	87	85	80-120			3	20

L899034-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L899034-05 03/30/17 16:19 • (MS) R3207155-4 03/30/17 16:21 • (MSD) R3207155-5 03/30/17 16:24

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	0.00299	0.00292	100	97	1	75-125			3	20

Method Blank (MB)

(MB) R3207354-1 03/31/17 11:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.0065	0.0100
Barium	U		0.0017	0.00500
Calcium	U		0.0463	1.00
Chromium	U		0.0014	0.0100
Cobalt	U		0.0023	0.0100
Magnesium	U		0.0111	1.00
Nickel	U		0.0049	0.0100
Potassium	0.23	J	0.102	1.00
Silver	U		0.0028	0.00500
Sodium	0.381	J	0.0985	1.00
Vanadium	0.00269	J	0.0024	0.0200

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

(LCS) R3207354-2 03/31/17 11:47 • (LCSD) R3207354-3 03/31/17 11:50

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 %
Arsenic	1.00	0.998	1.00	100	100	80-120			0	20
Barium	1.00	1.02	1.02	102	102	80-120			0	20
Calcium	10.0	9.49	9.44	95	94	80-120			0	20
Chromium	1.00	0.955	0.960	96	96	80-120			0	20
Cobalt	1.00	1.02	1.03	102	103	80-120			1	20
Magnesium	10.0	10.1	10.2	101	102	80-120			1	20
Nickel	1.00	1.00	1.01	100	101	80-120			1	20
Potassium	10.0	9.32	9.24	93	92	80-120			1	20
Silver	0.200	0.176	0.177	88	89	80-120			1	20
Sodium	10.0	9.76	9.75	98	97	80-120			0	20
Vanadium	1.00	0.998	0.998	100	100	80-120			0	20

L898793-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L898793-02 03/31/17 11:52 • (MS) R3207354-5 03/31/17 11:58 • (MSD) R3207354-6 03/31/17 12:00

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 %
Arsenic	1.00	0.00731	1.06	1.03	105	103	1	75-125			2	20
Barium	1.00	0.0760	1.10	1.07	102	99	1	75-125			3	20
Calcium	10.0	106	116	113	95	67	1	75-125		V	2	20
Chromium	1.00	0.00219	0.965	0.947	96	95	1	75-125			2	20
Cobalt	1.00	U	1.06	1.03	106	103	1	75-125			3	20

L898793-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L898793-02 03/31/17 11:52 • (MS) R3207354-5 03/31/17 11:58 • (MSD) R3207354-6 03/31/17 12:00

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 %
Magnesium	10.0	36.1	45.7	44.5	97	84	1	75-125			3	20
Nickel	1.00	U	1.03	1.01	103	101	1	75-125			3	20
Potassium	10.0	1.36	10.7	10.3	93	90	1	75-125			3	20
Silver	0.200	U	0.184	0.179	92	90	1	75-125			3	20
Sodium	10.0	115	122	120	77	51	1	75-125		V	2	20
Vanadium	1.00	0.0111	1.02	0.992	101	98	1	75-125			3	20

Method Blank (MB)

(MB) R3207108-1 03/30/17 14:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.000754	0.00200
Beryllium	U		0.00012	0.00200
Cadmium	U		0.00016	0.00100
Copper	U		0.00052	0.00500
Lead	U		0.00024	0.00200
Selenium	U		0.00038	0.00200
Thallium	U		0.00019	0.00200
Zinc	U		0.00256	0.0250

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

(LCS) R3207108-2 03/30/17 14:51 • (LCSD) R3207108-3 03/30/17 14:54

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	0.0500	0.0480	0.0474	96	95	80-120			1	20
Beryllium	0.0500	0.0483	0.0487	97	97	80-120			1	20
Cadmium	0.0500	0.0501	0.0507	100	101	80-120			1	20
Copper	0.0500	0.0521	0.0526	104	105	80-120			1	20
Lead	0.0500	0.0484	0.0488	97	98	80-120			1	20
Selenium	0.0500	0.0495	0.0497	99	99	80-120			0	20
Thallium	0.0500	0.0481	0.0483	96	97	80-120			1	20
Zinc	0.0500	0.0502	0.0496	100	99	80-120			1	20

L897834-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L897834-02 03/30/17 14:58 • (MS) R3207108-5 03/30/17 15:05 • (MSD) R3207108-6 03/30/17 15:09

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 %
Antimony	0.0500	ND	0.0487	0.0486	97	97	1	75-125			0	20
Beryllium	0.0500	ND	0.0485	0.0478	97	96	1	75-125			1	20
Cadmium	0.0500	ND	0.0512	0.0524	102	105	1	75-125			2	20
Copper	0.0500	ND	0.0527	0.0531	104	105	1	75-125			1	20
Lead	0.0500	ND	0.0483	0.0490	97	98	1	75-125			1	20
Selenium	0.0500	ND	0.0492	0.0505	98	101	1	75-125			3	20
Thallium	0.0500	ND	0.0488	0.0487	98	97	1	75-125			0	20
Zinc	0.0500	ND	0.0544	0.0531	97	94	1	75-125			2	20

Method Blank (MB)

(MB) R3208114-3 04/02/17 11:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromochloromethane	U		0.000520	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
Carbon disulfide	U		0.000275	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
trans-1,4-Dichloro-2-butene	U		0.000866	0.00250
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
2-Hexanone	U		0.00382	0.0100
Iodomethane	U		0.00171	0.0100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100

Method Blank (MB)

(MB) R3208114-3 04/02/17 11:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
Vinyl acetate	U		0.00163	0.0100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*102*			*80.0-120*
(S) Dibromofluoromethane	*97.5*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*101*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.0*			*80.0-120*

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

(LCS) R3208114-1 04/02/17 10:48 • (LCSD) R3208114-2 04/02/17 11:04

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	0.123	0.125	98.6	99.9	10.0-160			1.25	23
Acrylonitrile	0.125	0.118	0.120	94.7	95.6	60.0-142			1.01	20
Benzene	0.0250	0.0203	0.0199	81.3	79.6	69.0-123			2.06	20
Bromodichloromethane	0.0250	0.0227	0.0228	90.8	91.2	76.0-120			0.450	20
Bromochloromethane	0.0250	0.0214	0.0213	85.6	85.1	76.0-122			0.630	20
Bromoform	0.0250	0.0236	0.0238	94.2	95.0	67.0-132			0.870	20
Bromomethane	0.0250	0.0300	0.0292	120	117	18.0-160			2.82	20
Carbon disulfide	0.0250	0.0195	0.0190	78.0	76.0	55.0-127			2.64	20
Carbon tetrachloride	0.0250	0.0197	0.0192	78.7	76.7	63.0-122			2.61	20
Chlorobenzene	0.0250	0.0249	0.0246	99.7	98.3	79.0-121			1.35	20
Chlorodibromomethane	0.0250	0.0253	0.0253	101	101	75.0-125			0.230	20
Chloroethane	0.0250	0.0244	0.0248	97.8	99.2	47.0-152			1.46	20
Chloroform	0.0250	0.0228	0.0228	91.2	91.0	72.0-121			0.220	20
Chloromethane	0.0250	0.0199	0.0193	79.6	77.1	48.0-139			3.14	20
Dibromomethane	0.0250	0.0208	0.0211	83.2	84.3	78.0-120			1.33	20
1,2-Dichlorobenzene	0.0250	0.0251	0.0250	101	100	80.0-120			0.380	20
1,4-Dichlorobenzene	0.0250	0.0246	0.0247	98.4	98.9	77.0-120			0.560	20
trans-1,4-Dichloro-2-butene	0.0250	0.0213	0.0215	85.2	85.9	55.0-134			0.880	20
1,1-Dichloroethane	0.0250	0.0228	0.0224	91.2	89.6	70.0-126			1.81	20
1,2-Dichloroethane	0.0250	0.0219	0.0218	87.7	87.3	67.0-126			0.440	20
1,1-Dichloroethene	0.0250	0.0229	0.0220	91.6	88.1	64.0-129			3.86	20
cis-1,2-Dichloroethene	0.0250	0.0227	0.0225	90.7	89.8	73.0-120			1.00	20
trans-1,2-Dichloroethene	0.0250	0.0226	0.0218	90.4	87.4	71.0-121			3.43	20
1,2-Dichloropropane	0.0250	0.0234	0.0234	93.8	93.8	75.0-125			0.0300	20

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

(LCS) R3208114-1 04/02/17 10:48 • (LCSD) R3208114-2 04/02/17 11:04

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 %
cis-1,3-Dichloropropene	0.0250	0.0244	0.0244	97.5	97.6	79.0-123			0.0900	20
trans-1,3-Dichloropropene	0.0250	0.0240	0.0242	96.2	97.0	74.0-127			0.850	20
Ethylbenzene	0.0250	0.0215	0.0211	86.2	84.4	77.0-120			2.13	20
2-Hexanone	0.125	0.124	0.126	99.5	101	58.0-147			1.34	20
Iodomethane	0.125	0.104	0.103	83.3	82.7	57.0-140			0.720	20
2-Butanone (MEK)	0.125	0.121	0.123	96.4	98.6	37.0-158			2.24	20
Methylene Chloride	0.0250	0.0219	0.0217	87.5	86.9	66.0-121			0.710	20
4-Methyl-2-pentanone (MIBK)	0.125	0.127	0.131	102	105	59.0-143			3.08	20
Styrene	0.0250	0.0222	0.0219	88.8	87.7	78.0-124			1.26	20
1,1,1,2-Tetrachloroethane	0.0250	0.0248	0.0247	99.3	98.8	75.0-122			0.460	20
1,1,2,2-Tetrachloroethane	0.0250	0.0237	0.0238	94.9	95.3	71.0-122			0.490	20
Tetrachloroethene	0.0250	0.0235	0.0232	94.2	92.6	70.0-127			1.68	20
Toluene	0.0250	0.0208	0.0206	83.3	82.4	77.0-120			1.06	20
1,1,1-Trichloroethane	0.0250	0.0226	0.0223	90.3	89.1	68.0-122			1.30	20
1,1,2-Trichloroethane	0.0250	0.0241	0.0237	96.2	95.0	78.0-120			1.34	20
Trichloroethene	0.0250	0.0226	0.0220	90.3	87.9	78.0-120			2.71	20
Trichlorofluoromethane	0.0250	0.0220	0.0214	88.2	85.7	56.0-137			2.78	20
1,2,3-Trichloropropane	0.0250	0.0234	0.0234	93.5	93.5	72.0-124			0.0400	20
Vinyl acetate	0.125	0.134	0.137	108	110	46.0-160			1.87	20
Vinyl chloride	0.0250	0.0202	0.0197	80.7	78.7	64.0-133			2.51	20
Xylenes, Total	0.0750	0.0658	0.0645	87.7	86.0	77.0-120			2.00	20
(S) Toluene-d8				*102*	*102*	*80.0-120*				
(S) Dibromofluoromethane				*96.8*	*97.8*	*76.0-123*				
(S) α,α,α-Trifluorotoluene				*100*	*99.9*	*80.0-120*				
(S) 4-Bromofluorobenzene				*101*	*102*	*80.0-120*				

L898689-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L898689-01 04/02/17 18:08 • (MS) R3208114-4 04/02/17 19:22 • (MSD) R3208114-5 04/02/17 19:38

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	ND	5.50	5.37	88.0	85.9	50	10.0-139			2.45	25
Acrylonitrile	0.125	ND	7.25	7.03	116	113	50	46.0-159			3.03	23
Benzene	0.0250	0.187	1.36	1.35	93.5	92.7	50	34.0-147			0.830	20
Bromodichloromethane	0.0250	ND	1.33	1.32	106	106	50	52.0-135			0.140	20
Bromochloromethane	0.0250	ND	1.26	1.27	101	102	50	53.0-138			0.780	20
Bromoform	0.0250	ND	1.42	1.40	113	112	50	50.0-146			0.870	20
Bromomethane	0.0250	ND	1.90	1.80	152	144	50	10.0-160			5.31	23
Carbon disulfide	0.0250	ND	1.24	1.20	99.2	96.2	50	10.0-147			3.03	20

L898689-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L898689-01 04/02/17 18:08 • (MS) R3208114-4 04/02/17 19:22 • (MSD) R3208114-5 04/02/17 19:38

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 %
Carbon tetrachloride	0.0250	ND	1.15	1.10	92.0	88.3	50	41.0-138			4.03	20
Chlorobenzene	0.0250	ND	1.43	1.43	115	114	50	52.0-141			0.310	20
Chlorodibromomethane	0.0250	ND	1.47	1.47	118	118	50	54.0-142			0.0700	20
Chloroethane	0.0250	ND	1.53	1.47	122	117	50	23.0-160			4.27	20
Chloroform	0.0250	ND	1.34	1.33	108	106	50	50.0-139			1.47	20
Chloromethane	0.0250	ND	1.30	1.22	104	97.4	50	14.0-151			6.36	20
Dibromomethane	0.0250	ND	1.22	1.22	97.7	97.4	50	53.0-138			0.310	20
1,2-Dichlorobenzene	0.0250	ND	1.56	1.44	125	115	50	56.0-139			8.08	20
1,4-Dichlorobenzene	0.0250	ND	1.40	1.42	112	113	50	53.0-136			0.810	20
trans-1,4-Dichloro-2-butene	0.0250	ND	1.11	0.907	89.1	72.6	50	40.0-150			20.5	21
1,1-Dichloroethane	0.0250	ND	1.34	1.32	107	105	50	47.0-143			1.67	20
1,2-Dichloroethane	0.0250	ND	1.30	1.28	104	102	50	47.0-141			1.86	20
1,1-Dichloroethene	0.0250	ND	1.35	1.34	108	107	50	31.0-148			0.520	20
cis-1,2-Dichloroethene	0.0250	ND	1.32	1.32	106	106	50	43.0-142			0.260	20
trans-1,2-Dichloroethene	0.0250	ND	1.33	1.31	107	104	50	36.0-141			2.08	20
1,2-Dichloropropane	0.0250	ND	1.35	1.36	108	109	50	51.0-141			0.540	20
cis-1,3-Dichloropropene	0.0250	ND	1.42	1.41	114	112	50	53.0-139			1.21	20
trans-1,3-Dichloropropene	0.0250	ND	1.56	1.39	125	111	50	51.0-143			11.5	20
Ethylbenzene	0.0250	0.403	2.13	1.64	138	99.0	50	42.0-147		J3	26.0	20
2-Hexanone	0.125	ND	6.90	6.71	110	107	50	36.0-145			2.74	23
Iodomethane	0.125	ND	6.19	6.19	99.1	99.1	50	30.0-151			0.0100	20
2-Butanone (MEK)	0.125	ND	6.53	6.28	104	100	50	12.0-149			3.87	24
Methylene Chloride	0.0250	ND	1.29	1.29	104	103	50	42.0-135			0.670	20
4-Methyl-2-pentanone (MIBK)	0.125	ND	7.85	7.45	126	119	50	44.0-160			5.15	22
Styrene	0.0250	ND	1.36	1.28	109	102	50	47.0-147			6.27	20
1,1,1,2-Tetrachloroethane	0.0250	ND	1.45	1.43	116	114	50	52.0-140			1.31	20
1,1,2,2-Tetrachloroethane	0.0250	ND	1.43	1.38	114	111	50	46.0-149			3.25	20
Tetrachloroethene	0.0250	ND	1.36	1.33	109	107	50	38.0-147			1.62	20
Toluene	0.0250	ND	1.38	1.20	111	96.0	50	42.0-141			14.3	20
1,1,1-Trichloroethane	0.0250	ND	1.34	1.31	107	105	50	46.0-140			1.85	20
1,1,2-Trichloroethane	0.0250	ND	1.39	1.39	111	111	50	54.0-139			0.170	20
Trichloroethene	0.0250	ND	1.29	1.26	104	101	50	32.0-156			2.77	20
Trichlorofluoromethane	0.0250	ND	1.53	1.32	123	106	50	32.0-152			14.9	20
1,2,3-Trichloropropane	0.0250	ND	1.72	1.36	138	109	50	54.0-143		J3	23.6	21
Vinyl acetate	0.125	ND	8.97	8.82	143	141	50	30.0-160			1.61	20
Vinyl chloride	0.0250	ND	1.26	1.24	101	99.4	50	24.0-153			1.61	20
Xylenes, Total	0.0750	0.338	4.14	4.09	101	100	50	41.0-148			1.22	20
(S) Toluene-d8					*102*	*102*		*80.0-120*				
(S) Dibromofluoromethane					*97.4*	*97.8*		*76.0-123*				
(S) a,a,a-Trifluorotoluene					*99.8*	*99.7*		*80.0-120*				

L898689-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L898689-01 04/02/17 18:08 • (MS) R3208114-4 04/02/17 19:22 • (MSD) R3208114-5 04/02/17 19:38

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 %
(S) 4-Bromofluorobenzene					*102*	*101*		*80.0-120*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.

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.
T8	Sample(s) received past/too close to holding time expiration.
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
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

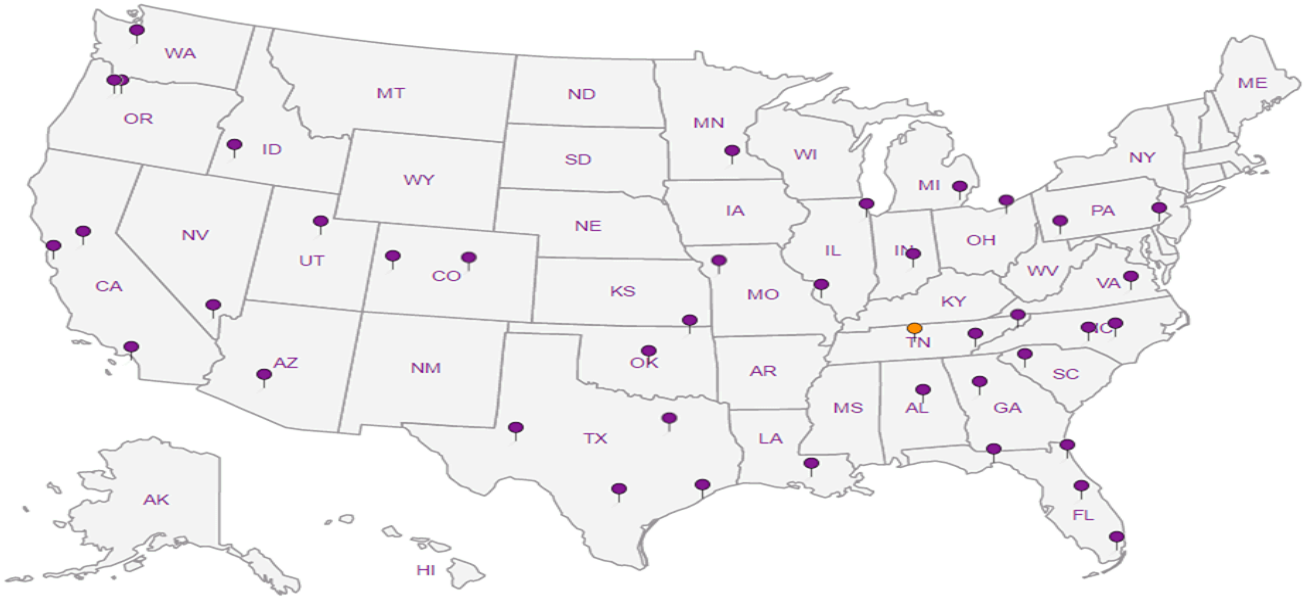
Third Party & Federal Accreditations

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

[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.**



Company Name/Address:
Molen & Associates, LLC
2090 E. 104th Suite 205
Thornton, CO 80223

Billing Information:

Report to: **Mark Molen**

Email To: **molenassociates@gmail.com**

Project Description: **Broda Al Inert Fill**

City/State Collected:

Phone: **303.450.1600**
Fax: **303.452.4515**

Client Project # **10-0133**

Lab Project #

Collected by (print): MARK A MOLEN

Site/Facility ID # **Broda Al**

P.O. #

Collected by (signature): Mark A Molen

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

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Mg, Na, K, Ca+AP1 Metals 250ml HDPE w/HN03 (1)	CARB, BICARB: ALK 1L HDPE No Pres	Nitrate, Nitrite, Sulfate, Chloride 500ml HDPE	SPCON, pH 250ml HDPE No Pres	TOC - 250ml Amber w/HCl (2)	V8260AP1 (3) 40ml Amber No Pres	Rem./Contaminant	Sample # (lab only)
MW-1	Grab	GW		3/27/17	1420	8	X	X	X	X	X	X		01
MW-2	Grab	GW			1450	8	X	X	X	X	X	X		02
MW-3	Grab	GW		↓	1520	8	X	X	X	X	X	X		03

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Mark A Molen	3/27/17	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 3.1 °C Bottles Received: 24

Date: 3-28-17 Time: 845

Chain of Custody Page ___ of ___

ESC LABORATORY 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# 898515

H063

Acctnum: MOLENTCO
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Hold #

Condition: (lab use only) NT

COC Seal Intact: ✓ Y ___N ___NA

pH Checked: NCF:

ESC LAB SCIENCES
Cooler Receipt Form

Client:	Molentco	SDG#	89855
Cooler Received/Opened On: 3/ /17		Temperature:	3.1
Received By: Nadiar Yakob			
Signature:			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?		✓	
Preservation Correct / Checked?		✓	

ANALYTICAL REPORT

July 10, 2017

Molen & Associates, LLC

Sample Delivery Group:	L919576
Samples Received:	06/30/2017
Project Number:	10-0133
Description:	Broda Al Inert Fill
Site:	BRODA AL
Report To:	Mark Molen 2090 East 104th Avenue Suite #205 Thornton, CO 80223

Entire Report Reviewed By:

Daphne R Richards

Daphne Richards
Technical Service Representative

TABLE OF CONTENTS

MW-1 L919576-01 GW

Collected by: Olivia Salmon
Collected date/time: 06/29/17 13:25
Received date/time: 06/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG997108	1	07/09/17 13:30	07/09/17 13:30	MCG
Wet Chemistry by Method 9040C	WG993869	1	07/05/17 15:33	07/05/17 15:33	MA
Wet Chemistry by Method 9050A	WG994856	1	06/30/17 21:38	06/30/17 21:38	MZ
Wet Chemistry by Method 9056A	WG994612	1	06/30/17 16:13	06/30/17 16:13	SAM
Wet Chemistry by Method 9056A	WG994612	5	06/30/17 16:28	06/30/17 16:28	SAM
Wet Chemistry by Method 9060A	WG995857	1	07/06/17 21:27	07/06/17 21:27	CSU
Mercury by Method 7470A	WG994619	1	06/30/17 15:05	06/30/17 18:22	EL
Metals (ICP) by Method 6010B	WG994798	1	07/06/17 10:52	07/06/17 14:17	ST
Metals (ICPMS) by Method 6020	WG995344	1	07/05/17 14:44	07/06/17 04:05	LAT
Metals (ICPMS) by Method 6020	WG995344	1	07/05/17 14:44	07/06/17 12:41	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG996583	1	07/07/17 16:19	07/07/17 16:19	BMB

MW-2 L919576-02 GW

Collected by: Olivia Salmon
Collected date/time: 06/29/17 14:10
Received date/time: 06/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG997108	1	07/09/17 13:38	07/09/17 13:38	MCG
Wet Chemistry by Method 9040C	WG993869	1	07/05/17 15:33	07/05/17 15:33	MA
Wet Chemistry by Method 9050A	WG994856	1	06/30/17 21:38	06/30/17 21:38	MZ
Wet Chemistry by Method 9056A	WG994612	1	06/30/17 16:44	06/30/17 16:44	SAM
Wet Chemistry by Method 9056A	WG996906	10	07/08/17 09:13	07/08/17 09:13	SAM
Wet Chemistry by Method 9060A	WG995857	1	07/06/17 21:38	07/06/17 21:38	CSU
Mercury by Method 7470A	WG994619	1	06/30/17 15:05	06/30/17 18:24	EL
Metals (ICP) by Method 6010B	WG994798	1	07/06/17 10:52	07/06/17 14:20	ST
Metals (ICP) by Method 6010B	WG994798	5	07/06/17 10:52	07/06/17 22:07	ST
Metals (ICPMS) by Method 6020	WG995344	1	07/05/17 14:44	07/06/17 04:09	LAT
Metals (ICPMS) by Method 6020	WG995344	1	07/05/17 14:44	07/06/17 12:45	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG996583	1	07/07/17 16:37	07/07/17 16:37	BMB

MW-3 L919576-03 GW

Collected by: Olivia Salmon
Collected date/time: 06/29/17 16:00
Received date/time: 06/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG997108	1	07/09/17 13:45	07/09/17 13:45	MCG
Wet Chemistry by Method 9040C	WG993869	1	07/05/17 15:33	07/05/17 15:33	MA
Wet Chemistry by Method 9050A	WG994856	1	06/30/17 21:38	06/30/17 21:38	MZ
Wet Chemistry by Method 9056A	WG994612	1	06/30/17 17:48	06/30/17 17:48	SAM
Wet Chemistry by Method 9056A	WG994932	5	07/01/17 09:49	07/01/17 09:49	SAM
Wet Chemistry by Method 9060A	WG996343	1	07/07/17 00:23	07/07/17 00:23	CSU
Mercury by Method 7470A	WG994619	1	06/30/17 15:05	06/30/17 18:26	EL
Metals (ICP) by Method 6010B	WG994798	1	07/06/17 10:52	07/06/17 14:23	ST
Metals (ICPMS) by Method 6020	WG995344	1	07/05/17 14:44	07/06/17 04:12	LAT
Metals (ICPMS) by Method 6020	WG995344	1	07/05/17 14:44	07/06/17 12:48	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG996583	1	07/07/17 16:55	07/07/17 16:55	BMB

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.

Daphne R Richards

Daphne Richards
Technical Service Representative

Sample Handling and Receiving

VOC pH outside of method requirement.

ESC Sample ID	Project Sample ID	Method
L919576-01	MW-1	8260B
L919576-02	MW-2	8260B
L919576-03	MW-3	8260B

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	251		20.0	1	07/09/2017 13:30	WG997108
Alkalinity,Bicarbonate	251		20.0	1	07/09/2017 13:30	WG997108
Alkalinity,Carbonate	ND		20.0	1	07/09/2017 13:30	WG997108

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.29	T8	1	07/05/2017 15:33	WG993869

Sample Narrative:

L919576-01 WG993869: 7.29 at 20.9c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1190		1	06/30/2017 21:38	WG994856

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrate as (N)	9.63		0.100	1	06/30/2017 16:13	WG994612
Nitrite as (N)	ND		0.100	1	06/30/2017 16:13	WG994612
Sulfate	119		25.0	5	06/30/2017 16:28	WG994612

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1.90	B	1.00	1	07/06/2017 21:27	WG995857

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	06/30/2017 18:22	WG994619

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.0100	1	07/06/2017 14:17	WG994798
Barium	0.0851		0.00500	1	07/06/2017 14:17	WG994798
Calcium	83.5		1.00	1	07/06/2017 14:17	WG994798
Chromium	ND		0.0100	1	07/06/2017 14:17	WG994798
Cobalt	ND		0.0100	1	07/06/2017 14:17	WG994798
Magnesium	26.2		1.00	1	07/06/2017 14:17	WG994798
Nickel	ND		0.0100	1	07/06/2017 14:17	WG994798
Potassium	8.88		1.00	1	07/06/2017 14:17	WG994798
Silver	ND		0.00500	1	07/06/2017 14:17	WG994798
Sodium	111		1.00	1	07/06/2017 14:17	WG994798
Vanadium	ND		0.0200	1	07/06/2017 14:17	WG994798

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	07/06/2017 12:41	WG995344
Beryllium	ND		0.00200	1	07/06/2017 04:05	WG995344
Cadmium	ND		0.00100	1	07/06/2017 04:05	WG995344
Copper	ND		0.00500	1	07/06/2017 04:05	WG995344
Lead	ND		0.00200	1	07/06/2017 04:05	WG995344
Selenium	0.00270		0.00200	1	07/06/2017 04:05	WG995344
Thallium	ND		0.00200	1	07/06/2017 04:05	WG995344
Zinc	ND		0.0250	1	07/06/2017 04:05	WG995344

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	07/07/2017 16:19	WG996583
Acrylonitrile	ND		0.0100	1	07/07/2017 16:19	WG996583
Benzene	ND		0.00100	1	07/07/2017 16:19	WG996583
Bromochloromethane	ND		0.00100	1	07/07/2017 16:19	WG996583
Bromodichloromethane	ND		0.00100	1	07/07/2017 16:19	WG996583
Bromoform	ND		0.00100	1	07/07/2017 16:19	WG996583
Bromomethane	ND	J4	0.00500	1	07/07/2017 16:19	WG996583
Carbon disulfide	ND		0.00100	1	07/07/2017 16:19	WG996583
Carbon tetrachloride	ND		0.00100	1	07/07/2017 16:19	WG996583
Chlorobenzene	ND		0.00100	1	07/07/2017 16:19	WG996583
Chlorodibromomethane	ND		0.00100	1	07/07/2017 16:19	WG996583
Chloroethane	ND		0.00500	1	07/07/2017 16:19	WG996583
Chloroform	ND		0.00500	1	07/07/2017 16:19	WG996583
Chloromethane	ND		0.00250	1	07/07/2017 16:19	WG996583
Dibromomethane	ND		0.00100	1	07/07/2017 16:19	WG996583
1,2-Dichlorobenzene	ND		0.00100	1	07/07/2017 16:19	WG996583
1,4-Dichlorobenzene	ND		0.00100	1	07/07/2017 16:19	WG996583
trans-1,4-Dichloro-2-butene	ND		0.00250	1	07/07/2017 16:19	WG996583
1,1-Dichloroethane	ND		0.00100	1	07/07/2017 16:19	WG996583
1,2-Dichloroethane	ND		0.00100	1	07/07/2017 16:19	WG996583
1,1-Dichloroethene	ND		0.00100	1	07/07/2017 16:19	WG996583
cis-1,2-Dichloroethene	ND		0.00100	1	07/07/2017 16:19	WG996583
trans-1,2-Dichloroethene	ND		0.00100	1	07/07/2017 16:19	WG996583
1,2-Dichloropropane	ND		0.00100	1	07/07/2017 16:19	WG996583
cis-1,3-Dichloropropene	ND		0.00100	1	07/07/2017 16:19	WG996583
trans-1,3-Dichloropropene	ND		0.00100	1	07/07/2017 16:19	WG996583
Ethylbenzene	ND		0.00100	1	07/07/2017 16:19	WG996583
2-Hexanone	ND		0.0100	1	07/07/2017 16:19	WG996583
Iodomethane	ND		0.0100	1	07/07/2017 16:19	WG996583
2-Butanone (MEK)	ND		0.0100	1	07/07/2017 16:19	WG996583
Methylene Chloride	ND		0.00500	1	07/07/2017 16:19	WG996583
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/07/2017 16:19	WG996583
Styrene	ND		0.00100	1	07/07/2017 16:19	WG996583
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/07/2017 16:19	WG996583
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/07/2017 16:19	WG996583
Tetrachloroethene	ND		0.00100	1	07/07/2017 16:19	WG996583
Toluene	ND		0.00100	1	07/07/2017 16:19	WG996583
1,1,1-Trichloroethane	ND		0.00100	1	07/07/2017 16:19	WG996583
1,1,2-Trichloroethane	ND		0.00100	1	07/07/2017 16:19	WG996583
Trichloroethene	ND		0.00100	1	07/07/2017 16:19	WG996583
Trichlorofluoromethane	ND		0.00500	1	07/07/2017 16:19	WG996583
1,2,3-Trichloropropane	ND		0.00250	1	07/07/2017 16:19	WG996583
Vinyl acetate	ND		0.0100	1	07/07/2017 16:19	WG996583
Vinyl chloride	ND		0.00100	1	07/07/2017 16:19	WG996583

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Xylenes, Total	ND		0.00300	1	07/07/2017 16:19	WG996583
(S) Toluene-d8	*106*		*80.0-120*		*07/07/2017 16:19*	WG996583
(S) Dibromofluoromethane	*91.1*		*76.0-123*		*07/07/2017 16:19*	WG996583
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*07/07/2017 16:19*	WG996583
(S) 4-Bromofluorobenzene	*90.0*		*80.0-120*		*07/07/2017 16:19*	WG996583

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	164		20.0	1	07/09/2017 13:38	WG997108
Alkalinity,Bicarbonate	164		20.0	1	07/09/2017 13:38	WG997108
Alkalinity,Carbonate	ND		20.0	1	07/09/2017 13:38	WG997108

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.41	T8	1	07/05/2017 15:33	WG993869

Sample Narrative:

L919576-02 WG993869: 7.41 at 21.0c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1550		1	06/30/2017 21:38	WG994856

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrate as (N)	ND		0.100	1	06/30/2017 16:44	WG994612
Nitrite as (N)	ND		0.100	1	06/30/2017 16:44	WG994612
Sulfate	297		50.0	10	07/08/2017 09:13	WG996906

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	4.74		1.00	1	07/06/2017 21:38	WG995857

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	06/30/2017 18:24	WG994619

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.0100	1	07/06/2017 14:20	WG994798
Barium	0.141		0.00500	1	07/06/2017 14:20	WG994798
Calcium	78.7		1.00	1	07/06/2017 14:20	WG994798
Chromium	ND		0.0100	1	07/06/2017 14:20	WG994798
Cobalt	ND		0.0100	1	07/06/2017 14:20	WG994798
Magnesium	21.5		1.00	1	07/06/2017 14:20	WG994798
Nickel	ND		0.0100	1	07/06/2017 14:20	WG994798
Potassium	13.4		5.00	5	07/06/2017 22:07	WG994798
Silver	ND		0.00500	1	07/06/2017 14:20	WG994798
Sodium	195		1.00	1	07/06/2017 14:20	WG994798
Vanadium	ND		0.0200	1	07/06/2017 14:20	WG994798

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	07/06/2017 12:45	WG995344
Beryllium	ND		0.00200	1	07/06/2017 04:09	WG995344
Cadmium	ND		0.00100	1	07/06/2017 04:09	WG995344
Copper	ND		0.00500	1	07/06/2017 04:09	WG995344
Lead	ND		0.00200	1	07/06/2017 04:09	WG995344
Selenium	ND		0.00200	1	07/06/2017 04:09	WG995344
Thallium	ND		0.00200	1	07/06/2017 04:09	WG995344
Zinc	ND		0.0250	1	07/06/2017 04:09	WG995344

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	07/07/2017 16:37	WG996583
Acrylonitrile	ND		0.0100	1	07/07/2017 16:37	WG996583
Benzene	ND		0.00100	1	07/07/2017 16:37	WG996583
Bromochloromethane	ND		0.00100	1	07/07/2017 16:37	WG996583
Bromodichloromethane	ND		0.00100	1	07/07/2017 16:37	WG996583
Bromoform	ND		0.00100	1	07/07/2017 16:37	WG996583
Bromomethane	ND	J4	0.00500	1	07/07/2017 16:37	WG996583
Carbon disulfide	ND		0.00100	1	07/07/2017 16:37	WG996583
Carbon tetrachloride	ND		0.00100	1	07/07/2017 16:37	WG996583
Chlorobenzene	ND		0.00100	1	07/07/2017 16:37	WG996583
Chlorodibromomethane	ND		0.00100	1	07/07/2017 16:37	WG996583
Chloroethane	ND		0.00500	1	07/07/2017 16:37	WG996583
Chloroform	ND		0.00500	1	07/07/2017 16:37	WG996583
Chloromethane	ND		0.00250	1	07/07/2017 16:37	WG996583
Dibromomethane	ND		0.00100	1	07/07/2017 16:37	WG996583
1,2-Dichlorobenzene	ND		0.00100	1	07/07/2017 16:37	WG996583
1,4-Dichlorobenzene	ND		0.00100	1	07/07/2017 16:37	WG996583
trans-1,4-Dichloro-2-butene	ND		0.00250	1	07/07/2017 16:37	WG996583
1,1-Dichloroethane	ND		0.00100	1	07/07/2017 16:37	WG996583
1,2-Dichloroethane	ND		0.00100	1	07/07/2017 16:37	WG996583
1,1-Dichloroethene	ND		0.00100	1	07/07/2017 16:37	WG996583
cis-1,2-Dichloroethene	ND		0.00100	1	07/07/2017 16:37	WG996583
trans-1,2-Dichloroethene	ND		0.00100	1	07/07/2017 16:37	WG996583
1,2-Dichloropropane	ND		0.00100	1	07/07/2017 16:37	WG996583
cis-1,3-Dichloropropene	ND		0.00100	1	07/07/2017 16:37	WG996583
trans-1,3-Dichloropropene	ND		0.00100	1	07/07/2017 16:37	WG996583
Ethylbenzene	ND		0.00100	1	07/07/2017 16:37	WG996583
2-Hexanone	ND		0.0100	1	07/07/2017 16:37	WG996583
Iodomethane	ND		0.0100	1	07/07/2017 16:37	WG996583
2-Butanone (MEK)	ND		0.0100	1	07/07/2017 16:37	WG996583
Methylene Chloride	ND		0.00500	1	07/07/2017 16:37	WG996583
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/07/2017 16:37	WG996583
Styrene	ND		0.00100	1	07/07/2017 16:37	WG996583
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/07/2017 16:37	WG996583
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/07/2017 16:37	WG996583
Tetrachloroethene	ND		0.00100	1	07/07/2017 16:37	WG996583
Toluene	ND		0.00100	1	07/07/2017 16:37	WG996583
1,1,1-Trichloroethane	ND		0.00100	1	07/07/2017 16:37	WG996583
1,1,2-Trichloroethane	ND		0.00100	1	07/07/2017 16:37	WG996583
Trichloroethene	ND		0.00100	1	07/07/2017 16:37	WG996583
Trichlorofluoromethane	ND		0.00500	1	07/07/2017 16:37	WG996583
1,2,3-Trichloropropane	ND		0.00250	1	07/07/2017 16:37	WG996583
Vinyl acetate	ND		0.0100	1	07/07/2017 16:37	WG996583
Vinyl chloride	ND		0.00100	1	07/07/2017 16:37	WG996583

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Xylenes, Total	ND		0.00300	1	07/07/2017 16:37	WG996583
(S) Toluene-d8	*106*		*80.0-120*		*07/07/2017 16:37*	WG996583
(S) Dibromofluoromethane	*91.0*		*76.0-123*		*07/07/2017 16:37*	WG996583
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*07/07/2017 16:37*	WG996583
(S) 4-Bromofluorobenzene	*89.7*		*80.0-120*		*07/07/2017 16:37*	WG996583

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	207		20.0	1	07/09/2017 13:45	WG997108
Alkalinity,Bicarbonate	207		20.0	1	07/09/2017 13:45	WG997108
Alkalinity,Carbonate	ND		20.0	1	07/09/2017 13:45	WG997108

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.09	T8	1	07/05/2017 15:33	WG993869

Sample Narrative:

L919576-03 WG993869: 7.09 at 21.0c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1260		1	06/30/2017 21:38	WG994856

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrate as (N)	9.81		0.500	5	07/01/2017 09:49	WG994932
Nitrite as (N)	ND		0.100	1	06/30/2017 17:48	WG994612
Sulfate	140		25.0	5	07/01/2017 09:49	WG994932

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1.77		1.00	1	07/07/2017 00:23	WG996343

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	06/30/2017 18:26	WG994619

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.0100	1	07/06/2017 14:23	WG994798
Barium	0.176		0.00500	1	07/06/2017 14:23	WG994798
Calcium	107		1.00	1	07/06/2017 14:23	WG994798
Chromium	ND		0.0100	1	07/06/2017 14:23	WG994798
Cobalt	ND		0.0100	1	07/06/2017 14:23	WG994798
Magnesium	22.9		1.00	1	07/06/2017 14:23	WG994798
Nickel	ND		0.0100	1	07/06/2017 14:23	WG994798
Potassium	9.30		1.00	1	07/06/2017 14:23	WG994798
Silver	ND		0.00500	1	07/06/2017 14:23	WG994798
Sodium	108		1.00	1	07/06/2017 14:23	WG994798
Vanadium	ND		0.0200	1	07/06/2017 14:23	WG994798

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	07/06/2017 12:48	WG995344
Beryllium	ND		0.00200	1	07/06/2017 04:12	WG995344
Cadmium	ND		0.00100	1	07/06/2017 04:12	WG995344
Copper	0.00836		0.00500	1	07/06/2017 04:12	WG995344
Lead	0.00964		0.00200	1	07/06/2017 04:12	WG995344
Selenium	0.00284		0.00200	1	07/06/2017 04:12	WG995344
Thallium	ND		0.00200	1	07/06/2017 04:12	WG995344
Zinc	0.0320		0.0250	1	07/06/2017 04:12	WG995344

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	07/07/2017 16:55	WG996583
Acrylonitrile	ND		0.0100	1	07/07/2017 16:55	WG996583
Benzene	ND		0.00100	1	07/07/2017 16:55	WG996583
Bromochloromethane	ND		0.00100	1	07/07/2017 16:55	WG996583
Bromodichloromethane	ND		0.00100	1	07/07/2017 16:55	WG996583
Bromoform	ND		0.00100	1	07/07/2017 16:55	WG996583
Bromomethane	ND	J4	0.00500	1	07/07/2017 16:55	WG996583
Carbon disulfide	ND		0.00100	1	07/07/2017 16:55	WG996583
Carbon tetrachloride	ND		0.00100	1	07/07/2017 16:55	WG996583
Chlorobenzene	ND		0.00100	1	07/07/2017 16:55	WG996583
Chlorodibromomethane	ND		0.00100	1	07/07/2017 16:55	WG996583
Chloroethane	ND		0.00500	1	07/07/2017 16:55	WG996583
Chloroform	ND		0.00500	1	07/07/2017 16:55	WG996583
Chloromethane	ND		0.00250	1	07/07/2017 16:55	WG996583
Dibromomethane	ND		0.00100	1	07/07/2017 16:55	WG996583
1,2-Dichlorobenzene	ND		0.00100	1	07/07/2017 16:55	WG996583
1,4-Dichlorobenzene	ND		0.00100	1	07/07/2017 16:55	WG996583
trans-1,4-Dichloro-2-butene	ND		0.00250	1	07/07/2017 16:55	WG996583
1,1-Dichloroethane	ND		0.00100	1	07/07/2017 16:55	WG996583
1,2-Dichloroethane	ND		0.00100	1	07/07/2017 16:55	WG996583
1,1-Dichloroethene	ND		0.00100	1	07/07/2017 16:55	WG996583
cis-1,2-Dichloroethene	ND		0.00100	1	07/07/2017 16:55	WG996583
trans-1,2-Dichloroethene	ND		0.00100	1	07/07/2017 16:55	WG996583
1,2-Dichloropropane	ND		0.00100	1	07/07/2017 16:55	WG996583
cis-1,3-Dichloropropene	ND		0.00100	1	07/07/2017 16:55	WG996583
trans-1,3-Dichloropropene	ND		0.00100	1	07/07/2017 16:55	WG996583
Ethylbenzene	ND		0.00100	1	07/07/2017 16:55	WG996583
2-Hexanone	ND		0.0100	1	07/07/2017 16:55	WG996583
Iodomethane	ND		0.0100	1	07/07/2017 16:55	WG996583
2-Butanone (MEK)	ND		0.0100	1	07/07/2017 16:55	WG996583
Methylene Chloride	ND		0.00500	1	07/07/2017 16:55	WG996583
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/07/2017 16:55	WG996583
Styrene	ND		0.00100	1	07/07/2017 16:55	WG996583
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/07/2017 16:55	WG996583
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/07/2017 16:55	WG996583
Tetrachloroethene	ND		0.00100	1	07/07/2017 16:55	WG996583
Toluene	ND		0.00100	1	07/07/2017 16:55	WG996583
1,1,1-Trichloroethane	ND		0.00100	1	07/07/2017 16:55	WG996583
1,1,2-Trichloroethane	ND		0.00100	1	07/07/2017 16:55	WG996583
Trichloroethene	ND		0.00100	1	07/07/2017 16:55	WG996583
Trichlorofluoromethane	ND		0.00500	1	07/07/2017 16:55	WG996583
1,2,3-Trichloropropane	ND		0.00250	1	07/07/2017 16:55	WG996583
Vinyl acetate	ND		0.0100	1	07/07/2017 16:55	WG996583
Vinyl chloride	ND		0.00100	1	07/07/2017 16:55	WG996583

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Xylenes, Total	ND		0.00300	1	07/07/2017 16:55	WG996583
(S) Toluene-d8	*105*		*80.0-120*		*07/07/2017 16:55*	WG996583
(S) Dibromofluoromethane	*93.7*		*76.0-123*		*07/07/2017 16:55*	WG996583
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*07/07/2017 16:55*	WG996583
(S) 4-Bromofluorobenzene	*90.9*		*80.0-120*		*07/07/2017 16:55*	WG996583

Method Blank (MB)

(MB) R3232000-1 07/09/17 12:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	3.45	J	2.71	20.0
Alkalinity,Bicarbonate	3.45	J	2.71	20.0
Alkalinity,Carbonate	U		2.71	20.0

L919761-11 Original Sample (OS) • Duplicate (DUP)

(OS) L919761-11 07/09/17 12:46 • (DUP) R3232000-2 07/09/17 12:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	75.8	77.1	1	2.00		20

L919777-08 Original Sample (OS) • Duplicate (DUP)

(OS) L919777-08 07/09/17 16:14 • (DUP) R3232000-7 07/09/17 16:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	19.0	17.4	1	9.00	J	20

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

(LCS) R3232000-5 07/09/17 13:52 • (LCSD) R3232000-6 07/09/17 15:12

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 %
Alkalinity	100	109	109	109	109	85.0-115			0.000	20

L919022-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919022-01 07/05/17 15:33 • (DUP) WG993869-3 07/05/17 15:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	9.15	9.16	1	0.109	T8	1

Sample Narrative:

OS: 9.15 at 18.2c

DUP: 9.16 at 18.3c

L919598-02 Original Sample (OS) • Duplicate (DUP)

(OS) L919598-02 07/05/17 15:33 • (DUP) WG993869-4 07/05/17 15:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.20	8.18	1	0.244	T8	1

Sample Narrative:

OS: 8.20 at 20.4c

DUP: 8.18 at 20.3c

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

(LCS) WG993869-1 07/05/17 15:33 • (LCSD) WG993869-2 07/05/17 15:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	6.38	6.39	6.42	100	101	98.4-102			0.468	1

Sample Narrative:

LCS: 6.39 at 21.3c

LCSD: 6.42 at 21.2c

Method Blank (MB)

(MB) WG994856-1 06/30/17 21:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	umhos/cm		umhos/cm	umhos/cm
Specific Conductance	1.34			

L919576-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919576-01 06/30/17 21:38 • (DUP) WG994856-4 06/30/17 21:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	1190	1190	1	0.337		20

L919724-04 Original Sample (OS) • Duplicate (DUP)

(OS) L919724-04 06/30/17 21:38 • (DUP) WG994856-5 06/30/17 21:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	543	543	1	0.000		20

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

(LCS) WG994856-2 06/30/17 21:38 • (LCSD) WG994856-3 06/30/17 21:38

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	umhos/cm	umhos/cm	umhos/cm	%	%	%			%	%
Specific Conductance	1070	1070	1070	100	100	90.0-110			0.000	20

Method Blank (MB)

(MB) R3230449-1 06/30/17 07:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate	U		0.0227	0.100
Nitrite	U		0.0277	0.100
Sulfate	U		0.0774	5.00

L919588-04 Original Sample (OS) • Duplicate (DUP)

(OS) L919588-04 06/30/17 12:11 • (DUP) R3230449-4 06/30/17 12:27

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	0.0479	0.0731	1	42	J P1	15
Nitrite	U	0.000	1	0		15
Sulfate	4.84	4.97	1	3	J	15

L919576-02 Original Sample (OS) • Duplicate (DUP)

(OS) L919576-02 06/30/17 16:44 • (DUP) R3230449-6 06/30/17 17:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	ND	0.000	1	0		15
Nitrite	ND	0.000	1	0		15

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

(LCS) R3230449-2 06/30/17 07:22 • (LCSD) R3230449-3 06/30/17 07:38

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 %
Nitrate	8.00	8.40	8.39	105	105	80-120			0	15
Nitrite	8.00	8.30	8.33	104	104	80-120			0	15
Sulfate	40.0	41.4	41.4	103	103	80-120			0	15

L919588-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L919588-05 06/30/17 12:43 • (MS) R3230449-5 06/30/17 12:59

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5.00	0.0796	5.10	100	1	80-120	
Nitrite	5.00	U	5.31	106	1	80-120	
Sulfate	50.0	4.92	57.5	105	1	80-120	

L919576-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919576-02 06/30/17 16:44 • (MS) R3230449-7 06/30/17 17:16 • (MSD) R3230449-8 06/30/17 17:32

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 %
Nitrate	5.00	ND	4.56	4.77	91	95	1	80-120			4	15
Nitrite	5.00	ND	4.85	4.91	97	98	1	80-120			1	15

Method Blank (MB)

(MB) R3231149-1 07/01/17 06:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Nitrate	U		0.0227	0.100
Sulfate	U		0.0774	5.00

L919909-03 Original Sample (OS) • Duplicate (DUP)

(OS) L919909-03 07/01/17 16:16 • (DUP) R3231149-5 07/01/17 16:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	U	0.000	1	0		15
Sulfate	1.70	1.87	1	10	J	15

L919912-02 Original Sample (OS) • Duplicate (DUP)

(OS) L919912-02 07/01/17 18:11 • (DUP) R3231149-7 07/01/17 19:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	1.54	1.58	1	2		15
Sulfate	39.9	40.2	1	1		15

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

(LCS) R3231149-2 07/01/17 06:47 • (LCSD) R3231149-3 07/01/17 07:01

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	%	%	%			%	%
Nitrate	8.00	8.05	8.06	101	101	80-120			0	15
Sulfate	40.0	40.5	40.5	101	101	80-120			0	15

L919909-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L919909-04 07/01/17 15:18 • (MS) R3231149-4 07/01/17 16:01

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Nitrate	5.00	U	1.99	40	1	80-120	J6

L919912-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919912-01 07/01/17 17:42 • (MS) R3231149-9 07/01/17 20:21 • (MSD) R3231149-10 07/01/17 20:35

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 %
Nitrate	5.00	ND	4.98	4.82	100	96	1	80-120			3	15

Method Blank (MB)

(MB) R3231820-1 07/08/17 07:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfate	U		0.0774	5.00

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

(LCS) R3231820-2 07/08/17 07:21 • (LCSD) R3231820-3 07/08/17 07:36

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 %
Sulfate	40.0	40.0	39.8	100	100	80-120			0	15

Method Blank (MB)

(MB) R3231654-1 07/06/17 10:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	0.219	J	0.102	1.00

L919460-03 Original Sample (OS) • Duplicate (DUP)

(OS) L919460-03 07/06/17 15:07 • (DUP) R3231654-6 07/06/17 15:18

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	4.16	4.21	1	1		20

L919576-02 Original Sample (OS) • Duplicate (DUP)

(OS) L919576-02 07/06/17 21:38 • (DUP) R3231654-7 07/06/17 21:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	4.74	4.78	1	1		20

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

(LCS) R3231654-2 07/06/17 11:23 • (LCSD) R3231654-3 07/06/17 11:37

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 %
TOC (Total Organic Carbon)	75.0	74.7	74.3	100	99	85-115			1	20

L919460-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919460-02 07/06/17 14:28 • (MS) R3231654-4 07/06/17 14:42 • (MSD) R3231654-5 07/06/17 14:55

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 %
TOC (Total Organic Carbon)	50.0	13.3	63.2	62.9	100	99	1	80-120			0	20

Method Blank (MB)

(MB) R3231655-1 07/06/17 23:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
TOC (Total Organic Carbon)	U		0.102	1.00

L919856-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919856-01 07/07/17 01:09 • (DUP) R3231655-4 07/07/17 01:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC (Total Organic Carbon)	1.26	1.12	1	12		20

L920271-04 Original Sample (OS) • Duplicate (DUP)

(OS) L920271-04 07/07/17 06:00 • (DUP) R3231655-7 07/07/17 06:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC (Total Organic Carbon)	5.53	5.60	1	1		20

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

(LCS) R3231655-5 07/07/17 01:34 • (LCSD) R3231655-6 07/07/17 04:09

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	%	%	%			%	%
TOC (Total Organic Carbon)	75.0	75.1	74.2	100	99	85-115			1	20

L919576-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919576-03 07/07/17 00:23 • (MS) R3231655-2 07/07/17 00:37 • (MSD) R3231655-3 07/07/17 00:57

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	%	%		%			%	%
TOC (Total Organic Carbon)	50.0	1.77	50.5	50.4	97	97	1	80-120			0	20

Method Blank (MB)

(MB) R3230417-1 06/30/17 17:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Mercury	U		0.000049	0.000200

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

(LCS) R3230417-2 06/30/17 17:25 • (LCSD) R3230417-3 06/30/17 17:27

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	0.00308	0.00302	103	101	80-120			2	20

L919460-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919460-01 06/30/17 17:29 • (MS) R3230417-4 06/30/17 17:36 • (MSD) R3230417-5 06/30/17 17:38

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	0.00289	0.00283	96	94	1	75-125			2	20

Method Blank (MB)

(MB) R3231475-1 07/06/17 13:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.0065	0.0100
Barium	U		0.0017	0.00500
Calcium	U		0.0463	1.00
Chromium	U		0.0014	0.0100
Cobalt	U		0.0023	0.0100
Magnesium	0.0279	J	0.0111	1.00
Nickel	U		0.0049	0.0100
Potassium	0.138	J	0.102	1.00
Silver	U		0.0028	0.00500
Sodium	0.13	J	0.0985	1.00
Vanadium	U		0.0024	0.0200

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

(LCS) R3231475-2 07/06/17 14:01 • (LCSD) R3231475-3 07/06/17 14:04

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 %
Arsenic	1.00	0.996	1.01	100	101	80-120			2	20
Barium	1.00	1.04	1.05	104	105	80-120			1	20
Calcium	10.0	9.78	9.84	98	98	80-120			1	20
Chromium	1.00	0.992	1.00	99	100	80-120			1	20
Cobalt	1.00	1.03	1.04	103	104	80-120			1	20
Magnesium	10.0	9.93	9.87	99	99	80-120			1	20
Nickel	1.00	1.01	1.02	101	102	80-120			1	20
Potassium	10.0	9.75	9.85	97	99	80-120			1	20
Silver	0.200	0.194	0.197	97	98	80-120			1	20
Sodium	10.0	9.79	9.90	98	99	80-120			1	20
Vanadium	1.00	0.995	1.00	100	100	80-120			1	20

L919666-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919666-01 07/06/17 14:06 • (MS) R3231475-5 07/06/17 14:12 • (MSD) R3231475-6 07/06/17 14:15

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 %
Arsenic	1.00	ND	1.03	1.01	103	101	1	75-125			2	20
Barium	1.00	0.167	1.20	1.19	103	102	1	75-125			1	20
Calcium	10.0	83.9	92.1	92.9	82	90	1	75-125			1	20
Chromium	1.00	ND	0.994	0.973	99	97	1	75-125			2	20
Cobalt	1.00	ND	1.04	1.02	104	102	1	75-125			2	20

L919666-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919666-01 07/06/17 14:06 • (MS) R3231475-5 07/06/17 14:12 • (MSD) R3231475-6 07/06/17 14:15

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 %
Magnesium	10.0	19.5	28.9	28.9	94	93	1	75-125			0	20
Nickel	1.00	ND	1.02	1.00	102	100	1	75-125			2	20
Potassium	10.0	8.25	18.1	18.0	98	98	1	75-125			0	20
Silver	0.200	ND	0.201	0.197	100	98	1	75-125			2	20
Sodium	10.0	5.21	15.0	14.9	98	97	1	75-125			1	20
Vanadium	1.00	ND	1.00	0.995	100	100	1	75-125			1	20

Method Blank (MB)

(MB) R3231221-1 07/06/17 03:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Beryllium	U		0.00012	0.00200
Cadmium	U		0.00016	0.00100
Copper	U		0.00052	0.00500
Lead	U		0.00024	0.00200
Selenium	U		0.00038	0.00200
Thallium	U		0.00019	0.00200
Zinc	U		0.00256	0.0250

Method Blank (MB)

(MB) R3231313-1 07/06/17 12:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.000754	0.00200

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

(LCS) R3231221-2 07/06/17 03:15 • (LCSD) R3231221-3 07/06/17 03:19

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	0.0500	0.0455	0.0454	91	91	80-120			0	20
Cadmium	0.0500	0.0489	0.0492	98	98	80-120			0	20
Copper	0.0500	0.0482	0.0481	96	96	80-120			2	20
Lead	0.0500	0.0478	0.0484	96	97	80-120			1	20
Selenium	0.0500	0.0484	0.0500	97	100	80-120			3	20
Thallium	0.0500	0.0492	0.0497	98	99	80-120			1	20
Zinc	0.0500	0.0493	0.0488	99	98	80-120			1	20

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

(LCS) R3231313-2 07/06/17 12:20 • (LCSD) R3231313-3 07/06/17 12:23

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	0.0497	0.0497	99	99	80-120			0	20

L919852-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919852-05 07/06/17 03:22 • (MS) R3231221-5 07/06/17 03:29 • (MSD) R3231221-6 07/06/17 03:33

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	0.0500	ND	0.0460	0.0459	92	92	1	75-125			0	20
Cadmium	0.0500	ND	0.0488	0.0503	98	101	1	75-125			3	20
Copper	0.0500	ND	0.0470	0.0468	94	94	1	75-125			1	20
Lead	0.0500	ND	0.0476	0.0475	95	95	1	75-125			0	20
Selenium	0.0500	ND	0.0511	0.0508	100	99	1	75-125			1	20
Thallium	0.0500	ND	0.0492	0.0491	98	98	1	75-125			0	20
Zinc	0.0500	ND	0.0479	0.0487	96	97	1	75-125			2	20

L919852-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919852-05 07/06/17 12:27 • (MS) R3231313-5 07/06/17 12:34 • (MSD) R3231313-6 07/06/17 12:38

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	ND	0.0512	0.0504	102	101	1	75-125			1	20

Method Blank (MB)

(MB) R3231835-3 07/07/17 10:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromochloromethane	U		0.000520	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
Carbon disulfide	U		0.000275	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
trans-1,4-Dichloro-2-butene	U		0.000866	0.00250
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
2-Hexanone	U		0.00382	0.0100
Iodomethane	U		0.00171	0.0100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100

Method Blank (MB)

(MB) R3231835-3 07/07/17 10:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
Vinyl acetate	U		0.00163	0.0100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*105*			*80.0-120*
(S) Dibromofluoromethane	*90.9*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*102*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.7*			*80.0-120*

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

(LCS) R3231835-1 07/07/17 08:44 • (LCSD) R3231835-2 07/07/17 09:02

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	0.0925	0.0929	74.0	74.3	10.0-160			0.430	23
Acrylonitrile	0.125	0.121	0.116	96.4	92.5	60.0-142			4.20	20
Benzene	0.0250	0.0214	0.0217	85.8	86.9	69.0-123			1.29	20
Bromodichloromethane	0.0250	0.0227	0.0227	90.8	90.9	76.0-120			0.140	20
Bromochloromethane	0.0250	0.0231	0.0232	92.4	92.8	76.0-122			0.420	20
Bromoform	0.0250	0.0235	0.0234	93.9	93.5	67.0-132			0.330	20
Bromomethane	0.0250	0.0504	0.0534	202	214	18.0-160	J4	J4	5.83	20
Carbon disulfide	0.0250	0.0188	0.0194	75.2	77.5	55.0-127			2.97	20
Carbon tetrachloride	0.0250	0.0213	0.0217	85.2	86.7	63.0-122			1.66	20
Chlorobenzene	0.0250	0.0243	0.0252	97.1	101	79.0-121			3.81	20
Chlorodibromomethane	0.0250	0.0247	0.0250	98.6	100	75.0-125			1.42	20
Chloroethane	0.0250	0.0280	0.0256	112	103	47.0-152			8.96	20
Chloroform	0.0250	0.0202	0.0207	81.0	82.7	72.0-121			2.13	20
Chloromethane	0.0250	0.0214	0.0222	85.5	88.7	48.0-139			3.71	20
Dibromomethane	0.0250	0.0234	0.0237	93.6	94.7	78.0-120			1.16	20
1,2-Dichlorobenzene	0.0250	0.0224	0.0227	89.6	91.0	80.0-120			1.59	20
1,4-Dichlorobenzene	0.0250	0.0227	0.0230	90.8	91.9	77.0-120			1.22	20
trans-1,4-Dichloro-2-butene	0.0250	0.0187	0.0185	75.0	73.9	55.0-134			1.50	20
1,1-Dichloroethane	0.0250	0.0211	0.0212	84.3	85.0	70.0-126			0.830	20
1,2-Dichloroethane	0.0250	0.0204	0.0201	81.5	80.4	67.0-126			1.32	20
1,1-Dichloroethene	0.0250	0.0209	0.0215	83.7	86.0	64.0-129			2.69	20
cis-1,2-Dichloroethene	0.0250	0.0206	0.0214	82.3	85.8	73.0-120			4.13	20
trans-1,2-Dichloroethene	0.0250	0.0206	0.0214	82.4	85.4	71.0-121			3.60	20
1,2-Dichloropropane	0.0250	0.0237	0.0238	94.7	95.1	75.0-125			0.410	20

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

(LCS) R3231835-1 07/07/17 08:44 • (LCSD) R3231835-2 07/07/17 09:02

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 %
cis-1,3-Dichloropropene	0.0250	0.0232	0.0242	92.8	96.8	79.0-123			4.26	20
trans-1,3-Dichloropropene	0.0250	0.0234	0.0245	93.7	97.9	74.0-127			4.45	20
Ethylbenzene	0.0250	0.0242	0.0254	96.7	102	77.0-120			4.98	20
2-Hexanone	0.125	0.112	0.115	89.2	91.8	58.0-147			2.91	20
Iodomethane	0.125	0.0943	0.101	75.4	80.9	57.0-140			6.98	20
2-Butanone (MEK)	0.125	0.0994	0.100	79.6	80.1	37.0-158			0.630	20
Methylene Chloride	0.0250	0.0201	0.0208	80.4	83.3	66.0-121			3.55	20
4-Methyl-2-pentanone (MIBK)	0.125	0.117	0.121	93.2	96.7	59.0-143			3.61	20
Styrene	0.0250	0.0227	0.0226	90.6	90.2	78.0-124			0.490	20
1,1,1,2-Tetrachloroethane	0.0250	0.0240	0.0244	96.0	97.6	75.0-122			1.65	20
1,1,2,2-Tetrachloroethane	0.0250	0.0224	0.0224	89.5	89.5	71.0-122			0.0400	20
Tetrachloroethene	0.0250	0.0256	0.0270	102	108	70.0-127			5.40	20
Toluene	0.0250	0.0232	0.0242	92.9	96.7	77.0-120			4.01	20
1,1,1-Trichloroethane	0.0250	0.0216	0.0218	86.3	87.0	68.0-122			0.840	20
1,1,2-Trichloroethane	0.0250	0.0232	0.0243	92.7	97.4	78.0-120			4.93	20
Trichloroethene	0.0250	0.0248	0.0254	99.0	102	78.0-120			2.62	20
Trichlorofluoromethane	0.0250	0.0223	0.0231	89.3	92.3	56.0-137			3.29	20
1,2,3-Trichloropropane	0.0250	0.0237	0.0231	94.7	92.6	72.0-124			2.26	20
Vinyl acetate	0.125	0.109	0.107	86.9	85.4	46.0-160			1.78	20
Vinyl chloride	0.0250	0.0275	0.0279	110	112	64.0-133			1.64	20
Xylenes, Total	0.0750	0.0715	0.0747	95.3	99.6	77.0-120			4.38	20
(S) Toluene-d8				*102*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*88.7*	*88.5*	*76.0-123*				
(S) α,α,α-Trifluorotoluene				*101*	*101*	*80.0-120*				
(S) 4-Bromofluorobenzene				*90.5*	*90.1*	*80.0-120*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
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.
T8	Sample(s) received past/too close to holding time expiration.

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.**
* 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		

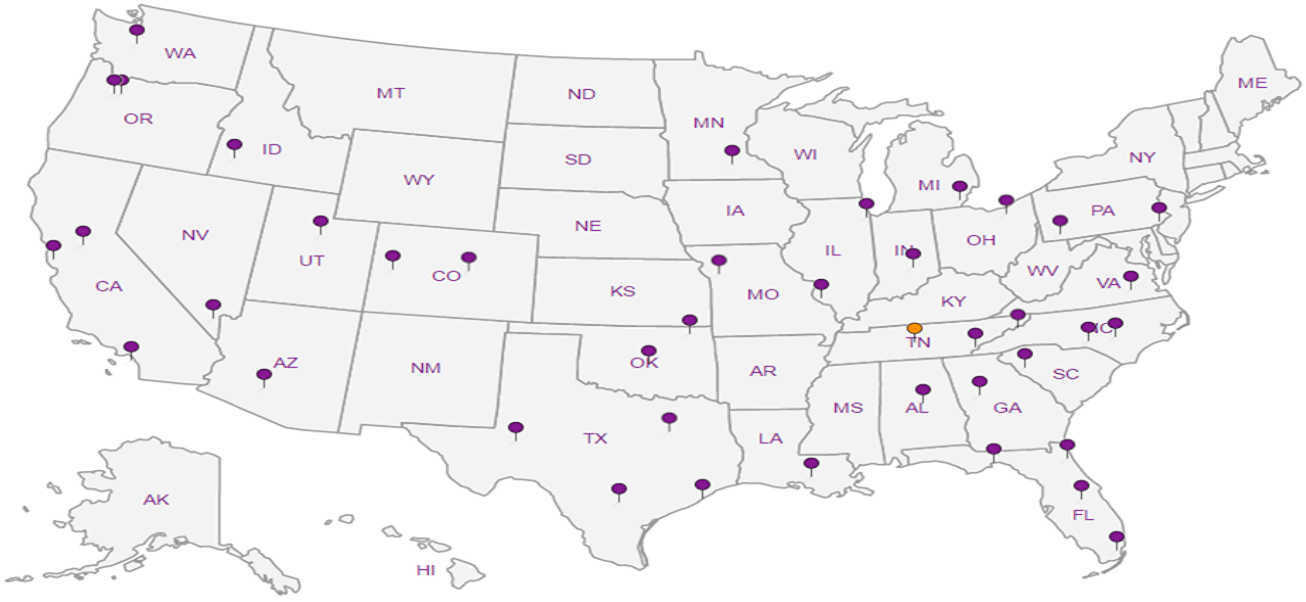
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	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.**



Company Name/Address:
Molen & Associates, LLC
2090 E. 104th Suite 205
Thornton, CO 80223

Billing Information:

Report to: **Mark Molen**

Email To: **molenassociates@gmail.com**

Project Description: **Broda Al Inert Fill**

City/State Collected:

Phone: **303.450.1600**
Fax: **303.452.4515**

Client Project # **10-0133**

Lab Project #

Collected by (print): Olivia Salmon

Site/Facility ID # **Broda Al**

P.O. #

Collected by (signature):

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

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Mg, Na, K, Ca+AP1 Metals 250ml HDPE w/HN03	CARB, BICARB: ALK 1L HDPE No Pres	Nitrate, Nitrite, Sulfate, Chloride 500ml HDPE	SPCON, pH 250ml HDPE No Pres	TOC - 250ml Amber w/HCl	V8260AP1 (3) 40ml Amber No Pres	Rem./Contaminant	Sample # (lab only)
MW-1	Grab	GW		6/29/17	13:25	8	X	X	X	X	X	X		01
MW-2	Grab	GW			14:10	8	X	X	X	X	X	X		02
MW-3	Grab	GW		↓	16:00	8	X	X	X	X	X	X		03

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Chain of Custody Page ___ of ___

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

L# 919576
D234

Acctnum: **MOLENTCO**
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Hold #

Condition: (lab use only) a

COC Seal Intact: ___Y ___N ___NA

pH Checked: 62 NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	6/29/17	17:30	7384 4199 1698
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 1.7 °C Bottles Received: 24

Date: 6-30-17 Time: 0845

ESC LAB SCIENCES
Cooler Receipt Form

Client: Molantco	SDG#	915576	
Cooler Received/Opened On: 6/ 30 / 2017	Temperature:	1.7	
Received By: Jon Deboard			
Signature: Jon Deboard			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	/		
COC Signed / Accurate?		/	
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable			
VOA Zero headspace?		/	
Preservation Correct / Checked?			

ANALYTICAL REPORT

October 06, 2017

Molen & Associates, LLC

Sample Delivery Group:	L938676
Samples Received:	09/23/2017
Project Number:	10-0133
Description:	Broda Al Inert Fill
Site:	BRODA AL
Report To:	Mark Molen 2090 East 104th Avenue Suite #205 Thornton, CO 80233

Entire Report Reviewed By:

Daphne R Richards

Daphne Richards
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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MW-1 L938676-01 GW

Collected by	Collected date/time	Received date/time
Mark A Molan	09/22/17 10:30	09/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1026741	1	10/02/17 12:18	10/02/17 12:18	MCG
Wet Chemistry by Method 9040C	WG1023949	1	09/25/17 09:11	09/25/17 09:11	TH
Wet Chemistry by Method 9050A	WG1026197	1	09/29/17 18:16	09/29/17 18:16	JLJ
Wet Chemistry by Method 9056A	WG1023849	1	09/23/17 16:28	09/23/17 16:28	NJM
Wet Chemistry by Method 9056A	WG1023849	5	09/23/17 17:13	09/23/17 17:13	NJM
Wet Chemistry by Method 9060A	WG1025928	1	09/29/17 16:40	09/29/17 16:40	SJM
Mercury by Method 7470A	WG1024420	1	10/01/17 18:51	10/03/17 11:18	ABL
Metals (ICP) by Method 6010B	WG1025617	1	09/28/17 18:16	09/28/17 20:10	ST
Metals (ICPMS) by Method 6020	WG1026102	1	09/30/17 05:17	09/30/17 18:09	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1025352	1	09/27/17 21:50	09/27/17 21:50	ACG

MW-2 L938676-02 GW

Collected by	Collected date/time	Received date/time
Mark A Molan	09/22/17 12:00	09/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1026741	1	10/02/17 12:31	10/02/17 12:31	MCG
Wet Chemistry by Method 9040C	WG1023949	1	09/25/17 09:11	09/25/17 09:11	TH
Wet Chemistry by Method 9050A	WG1026197	1	09/29/17 18:16	09/29/17 18:16	JLJ
Wet Chemistry by Method 9056A	WG1023849	1	09/23/17 17:28	09/23/17 17:28	NJM
Wet Chemistry by Method 9056A	WG1023849	5	09/23/17 17:43	09/23/17 17:43	NJM
Wet Chemistry by Method 9060A	WG1025928	1	09/29/17 16:51	09/29/17 16:51	SJM
Mercury by Method 7470A	WG1024420	1	10/01/17 18:51	10/03/17 11:20	ABL
Metals (ICP) by Method 6010B	WG1025617	1	09/28/17 18:16	09/28/17 20:13	ST
Metals (ICPMS) by Method 6020	WG1026102	1	09/30/17 05:17	09/30/17 18:23	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1025352	1	09/27/17 22:11	09/27/17 22:11	ACG

MW-3 L938676-03 GW

Collected by	Collected date/time	Received date/time
Mark A Molan	09/22/17 09:30	09/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1026741	1	10/02/17 12:38	10/02/17 12:38	MCG
Wet Chemistry by Method 9040C	WG1023949	1	09/25/17 09:11	09/25/17 09:11	TH
Wet Chemistry by Method 9050A	WG1026197	1	09/29/17 18:16	09/29/17 18:16	JLJ
Wet Chemistry by Method 9056A	WG1023849	1	09/23/17 17:57	09/23/17 17:57	NJM
Wet Chemistry by Method 9056A	WG1023849	5	09/23/17 18:12	09/23/17 18:12	NJM
Wet Chemistry by Method 9060A	WG1025928	1	09/29/17 17:33	09/29/17 17:33	SJM
Mercury by Method 7470A	WG1024420	1	10/01/17 18:51	10/03/17 11:22	ABL
Metals (ICP) by Method 6010B	WG1025617	1	09/28/17 18:16	09/28/17 20:15	ST
Metals (ICPMS) by Method 6020	WG1026102	1	09/30/17 05:17	09/30/17 18:27	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1025352	1	09/27/17 22:31	09/27/17 22:31	ACG

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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

Daphne R Richards

Daphne Richards
Technical Service Representative

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	152		20.0	1	10/02/2017 12:18	WG1026741
Alkalinity,Bicarbonate	152		20.0	1	10/02/2017 12:18	WG1026741
Alkalinity,Carbonate	ND		20.0	1	10/02/2017 12:18	WG1026741

Sample Narrative:

L938676-01 WG1026741: Endpoint pH 4.5

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.17	T8	1	09/25/2017 09:11	WG1023949

Sample Narrative:

L938676-01 WG1023949: 7.17 at 11.2c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1560		1	09/29/2017 18:16	WG1026197

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	196		5.00	5	09/23/2017 17:13	WG1023849
Nitrate as (N)	0.134		0.100	1	09/23/2017 16:28	WG1023849
Nitrite as (N)	ND		0.100	1	09/23/2017 16:28	WG1023849
Sulfate	303		25.0	5	09/23/2017 17:13	WG1023849

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	5.30		1.00	1	09/29/2017 16:40	WG1025928

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/03/2017 11:18	WG1024420

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Barium	0.197		0.00500	1	09/28/2017 20:10	WG1025617
Calcium	85.4		1.00	1	09/28/2017 20:10	WG1025617
Chromium	ND		0.0100	1	09/28/2017 20:10	WG1025617
Cobalt	ND		0.0100	1	09/28/2017 20:10	WG1025617
Magnesium	22.7		1.00	1	09/28/2017 20:10	WG1025617
Nickel	ND		0.0100	1	09/28/2017 20:10	WG1025617
Potassium	12.6		1.00	1	09/28/2017 20:10	WG1025617
Silver	ND		0.00500	1	09/28/2017 20:10	WG1025617
Sodium	195		1.00	1	09/28/2017 20:10	WG1025617
Vanadium	ND		0.0200	1	09/28/2017 20:10	WG1025617

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	09/30/2017 18:09	WG1026102
Arsenic	0.00748		0.00200	1	09/30/2017 18:09	WG1026102
Beryllium	ND		0.00200	1	09/30/2017 18:09	WG1026102
Cadmium	0.00696		0.00100	1	09/30/2017 18:09	WG1026102
Copper	0.0103	B	0.00500	1	09/30/2017 18:09	WG1026102
Lead	0.00337		0.00200	1	09/30/2017 18:09	WG1026102
Selenium	ND		0.00200	1	09/30/2017 18:09	WG1026102
Thallium	ND		0.00200	1	09/30/2017 18:09	WG1026102
Zinc	0.0415		0.0250	1	09/30/2017 18:09	WG1026102

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	09/27/2017 21:50	WG1025352
Acrylonitrile	ND		0.0100	1	09/27/2017 21:50	WG1025352
Benzene	ND		0.00100	1	09/27/2017 21:50	WG1025352
Bromochloromethane	ND		0.00100	1	09/27/2017 21:50	WG1025352
Bromodichloromethane	ND		0.00100	1	09/27/2017 21:50	WG1025352
Bromoform	ND		0.00100	1	09/27/2017 21:50	WG1025352
Bromomethane	ND		0.00500	1	09/27/2017 21:50	WG1025352
Carbon disulfide	ND		0.00100	1	09/27/2017 21:50	WG1025352
Carbon tetrachloride	ND		0.00100	1	09/27/2017 21:50	WG1025352
Chlorobenzene	ND		0.00100	1	09/27/2017 21:50	WG1025352
Chlorodibromomethane	ND		0.00100	1	09/27/2017 21:50	WG1025352
Chloroethane	ND		0.00500	1	09/27/2017 21:50	WG1025352
Chloroform	ND		0.00500	1	09/27/2017 21:50	WG1025352
Chloromethane	ND		0.00250	1	09/27/2017 21:50	WG1025352
Dibromomethane	ND		0.00100	1	09/27/2017 21:50	WG1025352
1,2-Dichlorobenzene	ND		0.00100	1	09/27/2017 21:50	WG1025352
1,4-Dichlorobenzene	ND		0.00100	1	09/27/2017 21:50	WG1025352
trans-1,4-Dichloro-2-butene	ND		0.00250	1	09/27/2017 21:50	WG1025352
1,1-Dichloroethane	ND		0.00100	1	09/27/2017 21:50	WG1025352
1,2-Dichloroethane	ND		0.00100	1	09/27/2017 21:50	WG1025352
1,1-Dichloroethene	ND		0.00100	1	09/27/2017 21:50	WG1025352
cis-1,2-Dichloroethene	ND		0.00100	1	09/27/2017 21:50	WG1025352
trans-1,2-Dichloroethene	ND		0.00100	1	09/27/2017 21:50	WG1025352
1,2-Dichloropropane	ND		0.00100	1	09/27/2017 21:50	WG1025352
cis-1,3-Dichloropropene	ND		0.00100	1	09/27/2017 21:50	WG1025352
trans-1,3-Dichloropropene	ND		0.00100	1	09/27/2017 21:50	WG1025352
Ethylbenzene	ND		0.00100	1	09/27/2017 21:50	WG1025352
2-Hexanone	ND	J4	0.0100	1	09/27/2017 21:50	WG1025352
Iodomethane	ND	J4	0.0100	1	09/27/2017 21:50	WG1025352
2-Butanone (MEK)	ND	J4	0.0100	1	09/27/2017 21:50	WG1025352
Methylene Chloride	ND		0.00500	1	09/27/2017 21:50	WG1025352
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0100	1	09/27/2017 21:50	WG1025352
Styrene	ND		0.00100	1	09/27/2017 21:50	WG1025352
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/27/2017 21:50	WG1025352
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/27/2017 21:50	WG1025352
Tetrachloroethene	ND		0.00100	1	09/27/2017 21:50	WG1025352
Toluene	ND		0.00100	1	09/27/2017 21:50	WG1025352
1,1,1-Trichloroethane	ND		0.00100	1	09/27/2017 21:50	WG1025352
1,1,2-Trichloroethane	ND		0.00100	1	09/27/2017 21:50	WG1025352
Trichloroethene	ND		0.00100	1	09/27/2017 21:50	WG1025352
Trichlorofluoromethane	ND		0.00500	1	09/27/2017 21:50	WG1025352
1,2,3-Trichloropropane	ND	J4	0.00250	1	09/27/2017 21:50	WG1025352
Vinyl acetate	ND		0.0100	1	09/27/2017 21:50	WG1025352

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Vinyl chloride	ND		0.00100	1	09/27/2017 21:50	WG1025352
Xylenes, Total	ND		0.00300	1	09/27/2017 21:50	WG1025352
(S) Toluene-d8	*109*		*80.0-120*		*09/27/2017 21:50*	WG1025352
(S) Dibromofluoromethane	*91.9*		*76.0-123*		*09/27/2017 21:50*	WG1025352
(S) a,a,a-Trifluorotoluene	*99.2*		*80.0-120*		*09/27/2017 21:50*	WG1025352
(S) 4-Bromofluorobenzene	*98.0*		*80.0-120*		*09/27/2017 21:50*	WG1025352

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	207		20.0	1	10/02/2017 12:31	WG1026741
Alkalinity,Bicarbonate	207		20.0	1	10/02/2017 12:31	WG1026741
Alkalinity,Carbonate	ND		20.0	1	10/02/2017 12:31	WG1026741

Sample Narrative:
L938676-02 WG1026741: Endpoint pH 4.5

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.37	T8	1	09/25/2017 09:11	WG1023949

Sample Narrative:
L938676-02 WG1023949: 7.37 at 10.6c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1200		1	09/29/2017 18:16	WG1026197

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	153		5.00	5	09/23/2017 17:43	WG1023849
Nitrate as (N)	9.69		0.100	1	09/23/2017 17:28	WG1023849
Nitrite as (N)	ND		0.100	1	09/23/2017 17:28	WG1023849
Sulfate	119		25.0	5	09/23/2017 17:43	WG1023849

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	3.48		1.00	1	09/29/2017 16:51	WG1025928

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/03/2017 11:20	WG1024420

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Barium	0.0909		0.00500	1	09/28/2017 20:13	WG1025617
Calcium	85.9		1.00	1	09/28/2017 20:13	WG1025617
Chromium	ND		0.0100	1	09/28/2017 20:13	WG1025617
Cobalt	ND		0.0100	1	09/28/2017 20:13	WG1025617
Magnesium	26.5		1.00	1	09/28/2017 20:13	WG1025617
Nickel	ND		0.0100	1	09/28/2017 20:13	WG1025617
Potassium	8.85		1.00	1	09/28/2017 20:13	WG1025617
Silver	ND		0.00500	1	09/28/2017 20:13	WG1025617
Sodium	110		1.00	1	09/28/2017 20:13	WG1025617
Vanadium	ND		0.0200	1	09/28/2017 20:13	WG1025617

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	09/30/2017 18:23	WG1026102
Arsenic	ND		0.00200	1	09/30/2017 18:23	WG1026102
Beryllium	ND		0.00200	1	09/30/2017 18:23	WG1026102
Cadmium	0.00134		0.00100	1	09/30/2017 18:23	WG1026102
Copper	0.00594	B	0.00500	1	09/30/2017 18:23	WG1026102
Lead	ND		0.00200	1	09/30/2017 18:23	WG1026102
Selenium	0.00258		0.00200	1	09/30/2017 18:23	WG1026102
Thallium	ND		0.00200	1	09/30/2017 18:23	WG1026102
Zinc	0.0296		0.0250	1	09/30/2017 18:23	WG1026102

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	09/27/2017 22:11	WG1025352
Acrylonitrile	ND		0.0100	1	09/27/2017 22:11	WG1025352
Benzene	ND		0.00100	1	09/27/2017 22:11	WG1025352
Bromochloromethane	ND		0.00100	1	09/27/2017 22:11	WG1025352
Bromodichloromethane	ND		0.00100	1	09/27/2017 22:11	WG1025352
Bromoform	ND		0.00100	1	09/27/2017 22:11	WG1025352
Bromomethane	ND		0.00500	1	09/27/2017 22:11	WG1025352
Carbon disulfide	ND		0.00100	1	09/27/2017 22:11	WG1025352
Carbon tetrachloride	ND		0.00100	1	09/27/2017 22:11	WG1025352
Chlorobenzene	ND		0.00100	1	09/27/2017 22:11	WG1025352
Chlorodibromomethane	ND		0.00100	1	09/27/2017 22:11	WG1025352
Chloroethane	ND		0.00500	1	09/27/2017 22:11	WG1025352
Chloroform	ND		0.00500	1	09/27/2017 22:11	WG1025352
Chloromethane	ND		0.00250	1	09/27/2017 22:11	WG1025352
Dibromomethane	ND		0.00100	1	09/27/2017 22:11	WG1025352
1,2-Dichlorobenzene	ND		0.00100	1	09/27/2017 22:11	WG1025352
1,4-Dichlorobenzene	ND		0.00100	1	09/27/2017 22:11	WG1025352
trans-1,4-Dichloro-2-butene	ND		0.00250	1	09/27/2017 22:11	WG1025352
1,1-Dichloroethane	ND		0.00100	1	09/27/2017 22:11	WG1025352
1,2-Dichloroethane	ND		0.00100	1	09/27/2017 22:11	WG1025352
1,1-Dichloroethene	ND		0.00100	1	09/27/2017 22:11	WG1025352
cis-1,2-Dichloroethene	ND		0.00100	1	09/27/2017 22:11	WG1025352
trans-1,2-Dichloroethene	ND		0.00100	1	09/27/2017 22:11	WG1025352
1,2-Dichloropropane	ND		0.00100	1	09/27/2017 22:11	WG1025352
cis-1,3-Dichloropropene	ND		0.00100	1	09/27/2017 22:11	WG1025352
trans-1,3-Dichloropropene	ND		0.00100	1	09/27/2017 22:11	WG1025352
Ethylbenzene	ND		0.00100	1	09/27/2017 22:11	WG1025352
2-Hexanone	ND	J4	0.0100	1	09/27/2017 22:11	WG1025352
Iodomethane	ND	J4	0.0100	1	09/27/2017 22:11	WG1025352
2-Butanone (MEK)	ND	J4	0.0100	1	09/27/2017 22:11	WG1025352
Methylene Chloride	ND		0.00500	1	09/27/2017 22:11	WG1025352
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0100	1	09/27/2017 22:11	WG1025352
Styrene	ND		0.00100	1	09/27/2017 22:11	WG1025352
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/27/2017 22:11	WG1025352
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/27/2017 22:11	WG1025352
Tetrachloroethene	ND		0.00100	1	09/27/2017 22:11	WG1025352
Toluene	ND		0.00100	1	09/27/2017 22:11	WG1025352
1,1,1-Trichloroethane	ND		0.00100	1	09/27/2017 22:11	WG1025352
1,1,2-Trichloroethane	ND		0.00100	1	09/27/2017 22:11	WG1025352
Trichloroethene	ND		0.00100	1	09/27/2017 22:11	WG1025352
Trichlorofluoromethane	ND		0.00500	1	09/27/2017 22:11	WG1025352
1,2,3-Trichloropropane	ND	J4	0.00250	1	09/27/2017 22:11	WG1025352
Vinyl acetate	ND		0.0100	1	09/27/2017 22:11	WG1025352

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Vinyl chloride	ND		0.00100	1	09/27/2017 22:11	WG1025352
Xylenes, Total	ND		0.00300	1	09/27/2017 22:11	WG1025352
(S) Toluene-d8	*107*		*80.0-120*		*09/27/2017 22:11*	WG1025352
(S) Dibromofluoromethane	*91.8*		*76.0-123*		*09/27/2017 22:11*	WG1025352
(S) a,a,a-Trifluorotoluene	*102*		*80.0-120*		*09/27/2017 22:11*	WG1025352
(S) 4-Bromofluorobenzene	*97.8*		*80.0-120*		*09/27/2017 22:11*	WG1025352

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	207		20.0	1	10/02/2017 12:38	WG1026741
Alkalinity,Bicarbonate	207		20.0	1	10/02/2017 12:38	WG1026741
Alkalinity,Carbonate	ND		20.0	1	10/02/2017 12:38	WG1026741

Sample Narrative:

L938676-03 WG1026741: Endpoint pH 4.5

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.01	T8	1	09/25/2017 09:11	WG1023949

Sample Narrative:

L938676-03 WG1023949: 7.01 at 10.4c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1330		1	09/29/2017 18:16	WG1026197

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	180		5.00	5	09/23/2017 18:12	WG1023849
Nitrate as (N)	10.5		0.500	5	09/23/2017 18:12	WG1023849
Nitrite as (N)	ND		0.100	1	09/23/2017 17:57	WG1023849
Sulfate	141		25.0	5	09/23/2017 18:12	WG1023849

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	2.34		1.00	1	09/29/2017 17:33	WG1025928

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/03/2017 11:22	WG1024420

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Barium	0.0943		0.00500	1	09/28/2017 20:15	WG1025617
Calcium	115		1.00	1	09/28/2017 20:15	WG1025617
Chromium	ND		0.0100	1	09/28/2017 20:15	WG1025617
Cobalt	ND		0.0100	1	09/28/2017 20:15	WG1025617
Magnesium	23.9		1.00	1	09/28/2017 20:15	WG1025617
Nickel	ND		0.0100	1	09/28/2017 20:15	WG1025617
Potassium	8.32		1.00	1	09/28/2017 20:15	WG1025617
Silver	ND		0.00500	1	09/28/2017 20:15	WG1025617
Sodium	113		1.00	1	09/28/2017 20:15	WG1025617
Vanadium	ND		0.0200	1	09/28/2017 20:15	WG1025617

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	09/30/2017 18:27	WG1026102
Arsenic	ND		0.00200	1	09/30/2017 18:27	WG1026102
Beryllium	ND		0.00200	1	09/30/2017 18:27	WG1026102
Cadmium	ND		0.00100	1	09/30/2017 18:27	WG1026102
Copper	ND		0.00500	1	09/30/2017 18:27	WG1026102
Lead	ND		0.00200	1	09/30/2017 18:27	WG1026102
Selenium	0.00273		0.00200	1	09/30/2017 18:27	WG1026102
Thallium	ND		0.00200	1	09/30/2017 18:27	WG1026102
Zinc	ND		0.0250	1	09/30/2017 18:27	WG1026102

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	09/27/2017 22:31	WG1025352
Acrylonitrile	ND		0.0100	1	09/27/2017 22:31	WG1025352
Benzene	ND		0.00100	1	09/27/2017 22:31	WG1025352
Bromochloromethane	ND		0.00100	1	09/27/2017 22:31	WG1025352
Bromodichloromethane	ND		0.00100	1	09/27/2017 22:31	WG1025352
Bromoform	ND		0.00100	1	09/27/2017 22:31	WG1025352
Bromomethane	ND		0.00500	1	09/27/2017 22:31	WG1025352
Carbon disulfide	ND		0.00100	1	09/27/2017 22:31	WG1025352
Carbon tetrachloride	ND		0.00100	1	09/27/2017 22:31	WG1025352
Chlorobenzene	ND		0.00100	1	09/27/2017 22:31	WG1025352
Chlorodibromomethane	ND		0.00100	1	09/27/2017 22:31	WG1025352
Chloroethane	ND		0.00500	1	09/27/2017 22:31	WG1025352
Chloroform	ND		0.00500	1	09/27/2017 22:31	WG1025352
Chloromethane	ND		0.00250	1	09/27/2017 22:31	WG1025352
Dibromomethane	ND		0.00100	1	09/27/2017 22:31	WG1025352
1,2-Dichlorobenzene	ND		0.00100	1	09/27/2017 22:31	WG1025352
1,4-Dichlorobenzene	ND		0.00100	1	09/27/2017 22:31	WG1025352
trans-1,4-Dichloro-2-butene	ND		0.00250	1	09/27/2017 22:31	WG1025352
1,1-Dichloroethane	ND		0.00100	1	09/27/2017 22:31	WG1025352
1,2-Dichloroethane	ND		0.00100	1	09/27/2017 22:31	WG1025352
1,1-Dichloroethene	ND		0.00100	1	09/27/2017 22:31	WG1025352
cis-1,2-Dichloroethene	ND		0.00100	1	09/27/2017 22:31	WG1025352
trans-1,2-Dichloroethene	ND		0.00100	1	09/27/2017 22:31	WG1025352
1,2-Dichloropropane	ND		0.00100	1	09/27/2017 22:31	WG1025352
cis-1,3-Dichloropropene	ND		0.00100	1	09/27/2017 22:31	WG1025352
trans-1,3-Dichloropropene	ND		0.00100	1	09/27/2017 22:31	WG1025352
Ethylbenzene	ND		0.00100	1	09/27/2017 22:31	WG1025352
2-Hexanone	ND	J4	0.0100	1	09/27/2017 22:31	WG1025352
Iodomethane	ND	J4	0.0100	1	09/27/2017 22:31	WG1025352
2-Butanone (MEK)	ND	J4	0.0100	1	09/27/2017 22:31	WG1025352
Methylene Chloride	ND		0.00500	1	09/27/2017 22:31	WG1025352
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0100	1	09/27/2017 22:31	WG1025352
Styrene	ND		0.00100	1	09/27/2017 22:31	WG1025352
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/27/2017 22:31	WG1025352
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/27/2017 22:31	WG1025352
Tetrachloroethene	ND		0.00100	1	09/27/2017 22:31	WG1025352
Toluene	ND		0.00100	1	09/27/2017 22:31	WG1025352
1,1,1-Trichloroethane	ND		0.00100	1	09/27/2017 22:31	WG1025352
1,1,2-Trichloroethane	ND		0.00100	1	09/27/2017 22:31	WG1025352
Trichloroethene	ND		0.00100	1	09/27/2017 22:31	WG1025352
Trichlorofluoromethane	ND		0.00500	1	09/27/2017 22:31	WG1025352
1,2,3-Trichloropropane	ND	J4	0.00250	1	09/27/2017 22:31	WG1025352
Vinyl acetate	ND		0.0100	1	09/27/2017 22:31	WG1025352

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Vinyl chloride	ND		0.00100	1	09/27/2017 22:31	WG1025352
Xylenes, Total	ND		0.00300	1	09/27/2017 22:31	WG1025352
(S) Toluene-d8	*108*		*80.0-120*		*09/27/2017 22:31*	WG1025352
(S) Dibromofluoromethane	*92.2*		*76.0-123*		*09/27/2017 22:31*	WG1025352
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*09/27/2017 22:31*	WG1025352
(S) 4-Bromofluorobenzene	*98.7*		*80.0-120*		*09/27/2017 22:31*	WG1025352

Method Blank (MB)

(MB) R3254058-1 10/02/17 10:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		2.71	20.0
Alkalinity,Bicarbonate	U		2.71	20.0
Alkalinity,Carbonate	U		2.71	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L938676-01 Original Sample (OS) • Duplicate (DUP)

(OS) L938676-01 10/02/17 12:18 • (DUP) R3254058-7 10/02/17 12:25

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	152	153	1	1.00		20
Alkalinity,Bicarbonate	152	153	1	1.00		20
Alkalinity,Carbonate	ND	0.000	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

L939185-01 Original Sample (OS) • Duplicate (DUP)

(OS) L939185-01 10/02/17 13:31 • (DUP) R3254058-9 10/02/17 13:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	268	269	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

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

(LCS) R3254058-6 10/02/17 12:08 • (LCSD) R3254058-8 10/02/17 13:20

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 %
Alkalinity	100	107	109	107	109	85.0-115			2.00	20

Sample Narrative:

LCS: Endpoint pH 4.5

LCSD: Endpoint pH 4.5

L937949-01 Original Sample (OS) • Duplicate (DUP)

(OS) L937949-01 09/25/17 09:11 • (DUP) WG1023949-3 09/25/17 09:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.42	7.41	1	0.135	T8	1

Sample Narrative:

OS: 7.42 at 10.9c

DUP: 7.41 at 10.9c

L938759-02 Original Sample (OS) • Duplicate (DUP)

(OS) L938759-02 09/25/17 09:11 • (DUP) WG1023949-4 09/25/17 09:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.95	7.96	1	0.126	T8	1

Sample Narrative:

OS: 7.95 at 18.9c

DUP: 7.96 at 18.9c

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

(LCS) WG1023949-1 09/25/17 09:11 • (LCSD) WG1023949-2 09/25/17 09:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	10.0	9.90	9.91	99.0	99.1	98.4-102			0.101	1

Sample Narrative:

LCS: 9.90 at 20.1c

LCSD: 9.91 at 20.0c

Method Blank (MB)

(MB) WG1026197-1 09/29/17 18:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	umhos/cm		umhos/cm	umhos/cm
Specific Conductance	1.68			

L938676-01 Original Sample (OS) • Duplicate (DUP)

(OS) L938676-01 09/29/17 18:16 • (DUP) WG1026197-4 09/29/17 18:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	1560	1570	1	0.320		20

L939305-04 Original Sample (OS) • Duplicate (DUP)

(OS) L939305-04 09/29/17 18:16 • (DUP) WG1026197-5 09/29/17 18:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	1200	1200	1	0.250		20

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

(LCS) WG1026197-2 09/29/17 18:16 • (LCSD) WG1026197-3 09/29/17 18:16

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	umhos/cm	umhos/cm	umhos/cm	%	%	%			%	%
Specific Conductance	559	559	559	100	100	90.0-110			0.000	20

Method Blank (MB)

(MB) R3251928-1 09/23/17 10:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.0888	J	0.0519	1.00
Nitrate	U		0.0227	0.100
Nitrite	U		0.0277	0.100
Sulfate	U		0.0774	5.00

L938666-01 Original Sample (OS) • Duplicate (DUP)

(OS) L938666-01 09/23/17 14:44 • (DUP) R3251928-4 09/23/17 14:59

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3.34	3.29	1	1		15
Nitrate	U	0.000	1	0		15
Nitrite	U	0.000	1	0		15

L937051-01 Original Sample (OS) • Duplicate (DUP)

(OS) L937051-01 09/23/17 18:27 • (DUP) R3251928-7 09/23/17 18:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	U	0.000	1	0		15
Nitrite	U	0.000	1	0		15
Sulfate	19.1	19.0	1	1		15

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

(LCS) R3251928-2 09/23/17 10:44 • (LCSD) R3251928-3 09/23/17 10:59

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	39.2	39.2	98	98	80-120			0	15
Nitrate	8.00	7.98	8.01	100	100	80-120			0	15
Nitrite	8.00	7.81	7.81	98	98	80-120			0	15
Sulfate	40.0	39.6	39.6	99	99	80-120			0	15

L938666-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938666-01 09/23/17 14:44 • (MS) R3251928-5 09/23/17 15:13 • (MSD) R3251928-6 09/23/17 15:28

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	3.34	54.3	54.6	102	103	1	80-120			1	15
Nitrate	5.00	U	5.04	5.10	101	102	1	80-120			1	15
Nitrite	5.00	U	5.19	5.22	104	104	1	80-120			1	15

L937051-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L937051-01 09/23/17 18:27 • (MS) R3251928-8 09/23/17 18:57

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5.00	U	4.85	97	1	80-120	
Nitrite	5.00	U	4.98	100	1	80-120	
Sulfate	50.0	19.1	68.7	99	1	80-120	

Method Blank (MB)

(MB) R3253466-1 09/29/17 08:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.102	1.00

L939305-04 Original Sample (OS) • Duplicate (DUP)

(OS) L939305-04 09/29/17 21:13 • (DUP) R3253466-6 09/29/17 21:24

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	ND	0.138	1	0		20

L937984-01 Original Sample (OS) • Duplicate (DUP)

(OS) L937984-01 09/29/17 14:42 • (DUP) R3253466-7 09/29/17 14:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	2.21	2.16	1	2		20

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

(LCS) R3253466-2 09/29/17 09:49 • (LCSD) R3253466-3 09/29/17 13:14

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 %
TOC (Total Organic Carbon)	75.0	73.1	72.8	97	97	85-115			0	20

L938676-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938676-02 09/29/17 16:51 • (MS) R3253466-4 09/29/17 17:06 • (MSD) R3253466-5 09/29/17 17:22

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 %
TOC (Total Organic Carbon)	50.0	3.48	47.5	47.5	88	88	1	80-120			0	20

Method Blank (MB)

(MB) R3254304-1 10/03/17 11:04

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Mercury	U		0.000049	0.000200

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

(LCS) R3254304-2 10/03/17 11:06 • (LCSD) R3254304-3 10/03/17 11:08

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	%	%	%			%	%
Mercury	0.00300	0.00330	0.00345	110	115	80-120			4	20

L938726-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938726-01 10/03/17 11:11 • (MS) R3254304-4 10/03/17 11:13 • (MSD) R3254304-5 10/03/17 11:15

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	U	0.00318	0.00339	106	113	1	75-125			7	20

Method Blank (MB)

(MB) R3253264-1 09/28/17 19:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Barium	U		0.0017	0.00500
Calcium	U		0.0463	1.00
Chromium	U		0.0014	0.0100
Cobalt	U		0.0023	0.0100
Magnesium	0.0169	J	0.0111	1.00
Nickel	U		0.0049	0.0100
Potassium	U		0.102	1.00
Silver	U		0.0028	0.00500
Sodium	0.101	J	0.0985	1.00
Vanadium	U		0.0024	0.0200

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

(LCS) R3253264-2 09/28/17 19:28 • (LCSD) R3253264-3 09/28/17 19:31

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 %
Barium	1.00	0.994	0.996	99	100	80-120			0	20
Calcium	10.0	9.70	9.69	97	97	80-120			0	20
Chromium	1.00	0.956	0.962	96	96	80-120			1	20
Cobalt	1.00	0.997	1.00	100	100	80-120			0	20
Magnesium	10.0	10.1	10.0	101	100	80-120			0	20
Nickel	1.00	0.978	0.983	98	98	80-120			1	20
Potassium	10.0	9.39	9.36	94	94	80-120			0	20
Silver	0.200	0.178	0.180	89	90	80-120			1	20
Sodium	10.0	9.79	9.79	98	98	80-120			0	20
Vanadium	1.00	0.976	0.971	98	97	80-120			1	20

L938692-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938692-01 09/28/17 19:33 • (MS) R3253264-5 09/28/17 19:39 • (MSD) R3253264-6 09/28/17 19:41

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 %
Barium	1.00	0.634	1.61	1.62	98	98	1	75-125			1	20
Calcium	10.0	20.2	29.5	29.6	93	94	1	75-125			0	20
Chromium	1.00	ND	0.962	0.966	96	96	1	75-125			0	20
Cobalt	1.00	ND	1.00	1.01	100	101	1	75-125			1	20
Magnesium	10.0	7.97	17.9	17.7	99	98	1	75-125			1	20
Nickel	1.00	0.0172	1.00	1.01	98	99	1	75-125			1	20
Potassium	10.0	5.73	15.0	15.1	93	94	1	75-125			1	20

L938692-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938692-01 09/28/17 19:33 • (MS) R3253264-5 09/28/17 19:39 • (MSD) R3253264-6 09/28/17 19:41

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 %
Silver	0.200	ND	0.180	0.181	90	91	1	75-125			1	20
Sodium	10.0	14.7	24.0	23.9	93	92	1	75-125			0	20
Vanadium	1.00	ND	0.971	0.992	96	99	1	75-125			2	20

Method Blank (MB)

(MB) R3253828-1 09/30/17 17:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.000754	0.00200
Arsenic	U		0.00025	0.00200
Beryllium	U		0.00012	0.00200
Cadmium	U		0.00016	0.00100
Copper	0.00332	J	0.00052	0.00500
Lead	U		0.00024	0.00200
Selenium	U		0.00038	0.00200
Thallium	U		0.00019	0.00200
Zinc	U		0.00256	0.0250

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

(LCS) R3253828-2 09/30/17 18:02 • (LCSD) R3253828-3 09/30/17 18:06

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	0.0519	0.0526	104	105	80-120			1	20
Arsenic	0.0500	0.0510	0.0498	102	100	80-120			2	20
Beryllium	0.0500	0.0482	0.0483	96	97	80-120			0	20
Cadmium	0.0500	0.0506	0.0511	101	102	80-120			1	20
Copper	0.0500	0.0509	0.0507	102	101	80-120			0	20
Lead	0.0500	0.0502	0.0499	100	100	80-120			0	20
Selenium	0.0500	0.0493	0.0502	99	100	80-120			2	20
Thallium	0.0500	0.0500	0.0503	100	101	80-120			1	20
Zinc	0.0500	0.0502	0.0492	100	98	80-120			2	20

L938676-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938676-01 09/30/17 18:09 • (MS) R3253828-5 09/30/17 18:16 • (MSD) R3253828-6 09/30/17 18:20

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	ND	0.0534	0.0513	105	101	1	75-125			4	20
Arsenic	0.0500	0.00748	0.0576	0.0575	100	100	1	75-125			0	20
Beryllium	0.0500	ND	0.0469	0.0477	94	95	1	75-125			2	20
Cadmium	0.0500	0.00696	0.0591	0.0582	104	103	1	75-125			2	20
Copper	0.0500	0.0103	0.0590	0.0587	97	97	1	75-125			1	20
Lead	0.0500	0.00337	0.0533	0.0523	100	98	1	75-125			2	20
Selenium	0.0500	ND	0.0504	0.0514	101	103	1	75-125			2	20
Thallium	0.0500	ND	0.0495	0.0487	99	97	1	75-125			2	20
Zinc	0.0500	0.0415	0.0867	0.0831	90	83	1	75-125			4	20

Method Blank (MB)

(MB) R3253732-3 09/27/17 20:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromochloromethane	U		0.000520	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
Carbon disulfide	U		0.000275	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
trans-1,4-Dichloro-2-butene	U		0.000866	0.00250
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
2-Hexanone	U		0.00382	0.0100
Iodomethane	U		0.00171	0.0100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100

Method Blank (MB)

(MB) R3253732-3 09/27/17 20:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
Vinyl acetate	U		0.00163	0.0100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*91.8*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*102*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.8*			*80.0-120*

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

(LCS) R3253732-1 09/27/17 19:35 • (LCSD) R3253732-2 09/27/17 20:10

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	0.163	0.142	131	113	10.0-160			14.1	23
Acrylonitrile	0.125	0.169	0.152	135	122	60.0-142			10.3	20
Benzene	0.0250	0.0211	0.0193	84.4	77.4	69.0-123			8.67	20
Bromodichloromethane	0.0250	0.0217	0.0201	87.0	80.5	76.0-120			7.76	20
Bromochloromethane	0.0250	0.0215	0.0198	86.1	79.1	76.0-122			8.51	20
Bromoform	0.0250	0.0285	0.0254	114	102	67.0-132			11.4	20
Bromomethane	0.0250	0.0179	0.0151	71.5	60.6	18.0-160			16.5	20
Carbon disulfide	0.0250	0.0201	0.0191	80.3	76.3	55.0-127			5.02	20
Carbon tetrachloride	0.0250	0.0215	0.0196	85.9	78.6	63.0-122			8.88	20
Chlorobenzene	0.0250	0.0241	0.0231	96.5	92.3	79.0-121			4.49	20
Chlorodibromomethane	0.0250	0.0262	0.0244	105	97.7	75.0-125			6.90	20
Chloroethane	0.0250	0.0220	0.0200	87.9	80.0	47.0-152			9.43	20
Chloroform	0.0250	0.0214	0.0194	85.6	77.5	72.0-121			9.93	20
Chloromethane	0.0250	0.0166	0.0162	66.3	65.0	48.0-139			2.07	20
Dibromomethane	0.0250	0.0237	0.0215	94.7	86.0	78.0-120			9.58	20
1,2-Dichlorobenzene	0.0250	0.0245	0.0225	98.1	89.9	80.0-120			8.73	20
1,4-Dichlorobenzene	0.0250	0.0225	0.0211	89.9	84.5	77.0-120			6.23	20
trans-1,4-Dichloro-2-butene	0.0250	0.0275	0.0248	110	99.4	55.0-134			10.1	20
1,1-Dichloroethane	0.0250	0.0208	0.0189	83.1	75.4	70.0-126			9.75	20
1,2-Dichloroethane	0.0250	0.0216	0.0197	86.3	78.8	67.0-126			9.14	20
1,1-Dichloroethene	0.0250	0.0212	0.0196	84.7	78.4	64.0-129			7.71	20
cis-1,2-Dichloroethene	0.0250	0.0209	0.0193	83.8	77.4	73.0-120			7.94	20
trans-1,2-Dichloroethene	0.0250	0.0213	0.0195	85.2	78.0	71.0-121			8.85	20
1,2-Dichloropropane	0.0250	0.0225	0.0207	89.9	82.9	75.0-125			8.03	20

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

(LCS) R3253732-1 09/27/17 19:35 • (LCSD) R3253732-2 09/27/17 20:10

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 %
cis-1,3-Dichloropropene	0.0250	0.0234	0.0225	93.7	89.8	79.0-123			4.28	20
trans-1,3-Dichloropropene	0.0250	0.0224	0.0214	89.5	85.7	74.0-127			4.35	20
Ethylbenzene	0.0250	0.0240	0.0234	96.2	93.4	77.0-120			2.91	20
2-Hexanone	0.125	0.223	0.211	179	169	58.0-147	J4	J4	5.59	20
Iodomethane	0.125	0.0608	0.0697	48.7	55.8	57.0-140	J4	J4	13.6	20
2-Butanone (MEK)	0.125	0.217	0.192	174	154	37.0-158	J4		12.1	20
Methylene Chloride	0.0250	0.0200	0.0185	80.2	74.2	66.0-121			7.80	20
4-Methyl-2-pentanone (MIBK)	0.125	0.196	0.182	156	145	59.0-143	J4	J4	7.34	20
Styrene	0.0250	0.0242	0.0224	97.0	89.4	78.0-124			8.13	20
1,1,1,2-Tetrachloroethane	0.0250	0.0239	0.0229	95.5	91.7	75.0-122			4.12	20
1,1,2,2-Tetrachloroethane	0.0250	0.0288	0.0261	115	104	71.0-122			9.97	20
Tetrachloroethene	0.0250	0.0248	0.0240	99.1	95.9	70.0-127			3.33	20
Toluene	0.0250	0.0228	0.0217	91.1	86.7	77.0-120			4.90	20
1,1,1-Trichloroethane	0.0250	0.0220	0.0201	88.2	80.5	68.0-122			9.05	20
1,1,2-Trichloroethane	0.0250	0.0260	0.0243	104	97.2	78.0-120			6.59	20
Trichloroethene	0.0250	0.0242	0.0224	96.7	89.7	78.0-120			7.51	20
Trichlorofluoromethane	0.0250	0.0253	0.0233	101	93.2	56.0-137			8.23	20
1,2,3-Trichloropropane	0.0250	0.0316	0.0289	126	116	72.0-124	J4		8.88	20
Vinyl acetate	0.125	0.108	0.103	86.5	82.0	46.0-160			5.25	20
Vinyl chloride	0.0250	0.0204	0.0188	81.7	75.2	64.0-133			8.23	20
Xylenes, Total	0.0750	0.0734	0.0700	97.9	93.3	77.0-120			4.74	20
(S) Toluene-d8				*103*	*107*	*80.0-120*				
(S) Dibromofluoromethane				*92.2*	*90.7*	*76.0-123*				
(S) α,α,α-Trifluorotoluene				*102*	*101*	*80.0-120*				
(S) 4-Bromofluorobenzene				*99.5*	*98.7*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	Sample(s) received past/too close to holding time expiration.

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		

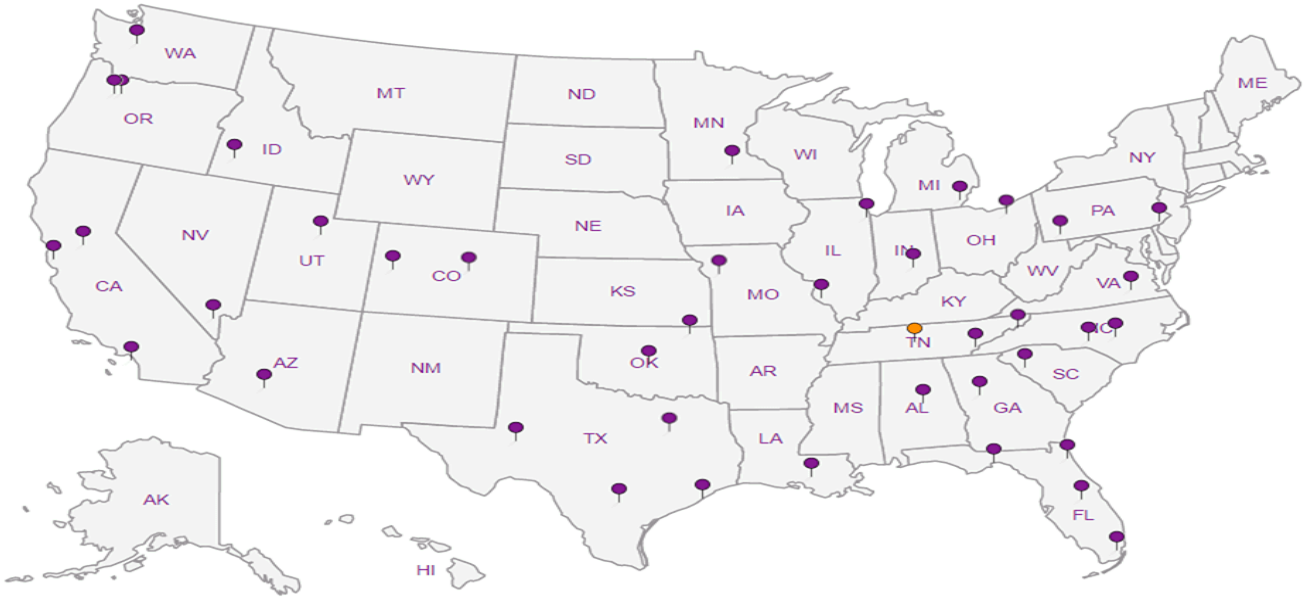
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	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.**



L2 L2

Chain of Custody Page ___ of ___

ESC LABORATORY 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 # L938676

E089

Acctnum: MOLENTCO
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Company Name/Address:
Molen & Associates, LLC
2090 E. 104th Suite 205
Thornton, CO 80223

Billing Information:

Report to: **Mark Molen**

Email To: **molenassociates@gmail.com**

Project Description: **Broda AI Inert Fill**

City/State Collected:

Phone: **303.450.1600**
Fax: **303.452.4515**

Client Project # **10-0133**

Lab Project #

Collected by (print): MARK A MOLEN

Site/Facility ID # **Broda AI**

P.O. #

Collected by (signature): Mark A Molen

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 ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Mg, Na, K, Ca+AP1 Metals 250ml HDPE w/HN03	CARB, BICARB: ALK 1L HDPE No Pres	Nitrate, Nitrite, Sulfate, Chloride 500ml HDPE	SPCON, pH 250ml HDPE No Pres	TOC - 250ml Amber w/HCl	V8260AP1 (3) 40ml Amber No Pres	Rem./Contaminant	Sample # (lab only)
MW-1	Grab	GW		9/22/17 1030	1030	8	X	X	X	X	X	X		-01
MW-2	Grab	GW		9/22/17	1200	8	X	X	X	X	X	X		02
MW-3	Grab	GW		9/22/17	930	8	X	X	X	X	X	X		03

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

Remarks: ESCDEN 7176 9007 1918

pH ___ Temp ___
Flow ___ Other ___
Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ___
Temp: 1.3 °C Bottles Received: 24
Date: 9/23/17 Time: 0845

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Mark A Molen	9/22/17	1400	
Relinquished by : (Signature)	Date: 9/22	Time: 1700	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

ESC LAB SCIENCES
Cooler Receipt Form

Client: MOLENTCO	SDG#	L938676
Cooler Received/Opened On: 9/23/17	Temperature:	1.5C
Received by: Ian White		
Signature: Ian		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?		✓	
Preservation Correct / Checked?		✓	

ANALYTICAL REPORT

January 12, 2018

Molen & Associates, LLC

Sample Delivery Group:	L961185
Samples Received:	01/05/2018
Project Number:	10-0133
Description:	Broda AL Inert Fill
Site:	BRODA AL
Report To:	Mark Molen 2090 East 104th Avenue Suite #205 Thornton, CO 80223

Entire Report Reviewed By:

Daphne R Richards

Daphne Richards
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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MW-1 L961185-01 GW

Collected by	Collected date/time	Received date/time
Olivia Salmon	01/04/18 13:45	01/05/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1060497	1	01/08/18 20:20	01/08/18 20:20	MCG
Wet Chemistry by Method 9040C	WG1060052	1	01/05/18 15:33	01/05/18 15:33	ER
Wet Chemistry by Method 9050A	WG1059461	1	01/07/18 13:28	01/07/18 13:28	MZ
Wet Chemistry by Method 9056A	WG1059886	1	01/05/18 12:16	01/05/18 12:16	MAJ
Wet Chemistry by Method 9056A	WG1059886	10	01/05/18 12:31	01/05/18 12:31	MAJ
Wet Chemistry by Method 9060A	WG1061175	1	01/10/18 12:52	01/10/18 12:52	SJM
Mercury by Method 7470A	WG1059876	1	01/07/18 23:19	01/08/18 11:11	ABL
Metals (ICP) by Method 6010B	WG1059568	1	01/06/18 09:38	01/08/18 04:19	CCE
Metals (ICPMS) by Method 6020	WG1059939	1	01/08/18 16:16	01/09/18 18:26	JPD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1059941	1	01/05/18 18:36	01/05/18 18:36	BMB

MW-2 L961185-02 GW

Collected by	Collected date/time	Received date/time
Olivia Salmon	01/04/18 14:45	01/05/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1060497	1	01/08/18 20:27	01/08/18 20:27	MCG
Wet Chemistry by Method 9040C	WG1060052	1	01/05/18 15:33	01/05/18 15:33	ER
Wet Chemistry by Method 9050A	WG1059461	1	01/07/18 13:28	01/07/18 13:28	MZ
Wet Chemistry by Method 9056A	WG1059886	1	01/05/18 13:13	01/05/18 13:13	MAJ
Wet Chemistry by Method 9056A	WG1059886	10	01/05/18 13:27	01/05/18 13:27	MAJ
Wet Chemistry by Method 9060A	WG1060502	1	01/08/18 16:01	01/08/18 16:01	EG
Mercury by Method 7470A	WG1059876	1	01/07/18 23:19	01/08/18 10:49	ABL
Metals (ICP) by Method 6010B	WG1059568	1	01/06/18 09:38	01/08/18 04:22	CCE
Metals (ICPMS) by Method 6020	WG1059939	1	01/08/18 16:16	01/09/18 18:29	JPD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1060339	1	01/06/18 23:53	01/06/18 23:53	JAH

MW-3 L961185-03 GW

Collected by	Collected date/time	Received date/time
Olivia Salmon	01/04/18 15:40	01/05/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1060497	1	01/08/18 20:33	01/08/18 20:33	MCG
Wet Chemistry by Method 9040C	WG1060052	1	01/05/18 15:33	01/05/18 15:33	ER
Wet Chemistry by Method 9050A	WG1059461	1	01/07/18 13:28	01/07/18 13:28	MZ
Wet Chemistry by Method 9056A	WG1059886	1	01/05/18 13:41	01/05/18 13:41	MAJ
Wet Chemistry by Method 9056A	WG1059886	10	01/05/18 13:55	01/05/18 13:55	MAJ
Wet Chemistry by Method 9060A	WG1060502	1	01/08/18 16:17	01/08/18 16:17	EG
Mercury by Method 7470A	WG1059876	1	01/07/18 23:19	01/08/18 11:14	ABL
Metals (ICP) by Method 6010B	WG1059568	1	01/06/18 09:38	01/08/18 04:26	CCE
Metals (ICPMS) by Method 6020	WG1059939	1	01/08/18 16:16	01/09/18 18:46	JPD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1060339	1	01/06/18 23:33	01/06/18 23:33	JAH

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

Daphne R Richards

Daphne Richards
Technical Service Representative

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	199		20.0	1	01/08/2018 20:20	WG1060497
Alkalinity,Bicarbonate	199		20.0	1	01/08/2018 20:20	WG1060497
Alkalinity,Carbonate	ND		20.0	1	01/08/2018 20:20	WG1060497

Sample Narrative:

L961185-01 WG1060497: Endpoint pH 4.5

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	6.98	T8	1	01/05/2018 15:33	WG1060052

Sample Narrative:

L961185-01 WG1060052: 6.98 at 8.4C

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	1220		10.0	1	01/07/2018 13:28	WG1059461

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	162		10.0	10	01/05/2018 12:31	WG1059886
Nitrate as (N)	7.16		0.100	1	01/05/2018 12:16	WG1059886
Nitrite as (N)	ND		0.100	1	01/05/2018 12:16	WG1059886
Sulfate	131		50.0	10	01/05/2018 12:31	WG1059886

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	2.06		1.00	1	01/10/2018 12:52	WG1061175

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	01/08/2018 11:11	WG1059876

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Barium	0.318		0.00500	1	01/08/2018 04:19	WG1059568
Calcium	92.6		1.00	1	01/08/2018 04:19	WG1059568
Chromium	0.0130		0.0100	1	01/08/2018 04:19	WG1059568
Cobalt	ND		0.0100	1	01/08/2018 04:19	WG1059568
Magnesium	30.3		1.00	1	01/08/2018 04:19	WG1059568
Nickel	0.0158		0.0100	1	01/08/2018 04:19	WG1059568
Potassium	11.6		1.00	1	01/08/2018 04:19	WG1059568
Silver	ND		0.00500	1	01/08/2018 04:19	WG1059568
Sodium	114		1.00	1	01/08/2018 04:19	WG1059568
Vanadium	0.0282		0.0200	1	01/08/2018 04:19	WG1059568

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	01/09/2018 18:26	WG1059939
Arsenic	0.0118		0.00200	1	01/09/2018 18:26	WG1059939
Beryllium	ND		0.00200	1	01/09/2018 18:26	WG1059939
Cadmium	ND		0.00100	1	01/09/2018 18:26	WG1059939
Copper	0.0417		0.00500	1	01/09/2018 18:26	WG1059939
Lead	0.0437		0.00200	1	01/09/2018 18:26	WG1059939
Selenium	0.00456		0.00200	1	01/09/2018 18:26	WG1059939
Thallium	ND		0.00200	1	01/09/2018 18:26	WG1059939
Zinc	0.188		0.0250	1	01/09/2018 18:26	WG1059939

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	01/05/2018 18:36	WG1059941
Acrylonitrile	ND		0.0100	1	01/05/2018 18:36	WG1059941
Benzene	ND		0.00100	1	01/05/2018 18:36	WG1059941
Bromochloromethane	ND		0.00100	1	01/05/2018 18:36	WG1059941
Bromodichloromethane	ND		0.00100	1	01/05/2018 18:36	WG1059941
Bromoform	ND		0.00100	1	01/05/2018 18:36	WG1059941
Bromomethane	ND		0.00500	1	01/05/2018 18:36	WG1059941
Carbon disulfide	ND		0.00100	1	01/05/2018 18:36	WG1059941
Carbon tetrachloride	ND		0.00100	1	01/05/2018 18:36	WG1059941
Chlorobenzene	ND		0.00100	1	01/05/2018 18:36	WG1059941
Chlorodibromomethane	ND		0.00100	1	01/05/2018 18:36	WG1059941
Chloroethane	ND		0.00500	1	01/05/2018 18:36	WG1059941
Chloroform	ND		0.00500	1	01/05/2018 18:36	WG1059941
Chloromethane	ND		0.00250	1	01/05/2018 18:36	WG1059941
Dibromomethane	ND		0.00100	1	01/05/2018 18:36	WG1059941
1,2-Dichlorobenzene	ND		0.00100	1	01/05/2018 18:36	WG1059941
1,4-Dichlorobenzene	ND		0.00100	1	01/05/2018 18:36	WG1059941
trans-1,4-Dichloro-2-butene	ND		0.00250	1	01/05/2018 18:36	WG1059941
1,1-Dichloroethane	ND		0.00100	1	01/05/2018 18:36	WG1059941
1,2-Dichloroethane	ND		0.00100	1	01/05/2018 18:36	WG1059941
1,1-Dichloroethene	ND		0.00100	1	01/05/2018 18:36	WG1059941
cis-1,2-Dichloroethene	ND		0.00100	1	01/05/2018 18:36	WG1059941
trans-1,2-Dichloroethene	ND		0.00100	1	01/05/2018 18:36	WG1059941
1,2-Dichloropropane	ND		0.00100	1	01/05/2018 18:36	WG1059941
cis-1,3-Dichloropropene	ND		0.00100	1	01/05/2018 18:36	WG1059941
trans-1,3-Dichloropropene	ND		0.00100	1	01/05/2018 18:36	WG1059941
Ethylbenzene	ND		0.00100	1	01/05/2018 18:36	WG1059941
2-Hexanone	ND		0.0100	1	01/05/2018 18:36	WG1059941
Iodomethane	ND		0.0100	1	01/05/2018 18:36	WG1059941
2-Butanone (MEK)	ND		0.0100	1	01/05/2018 18:36	WG1059941
Methylene Chloride	ND		0.00500	1	01/05/2018 18:36	WG1059941
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	01/05/2018 18:36	WG1059941
Styrene	ND		0.00100	1	01/05/2018 18:36	WG1059941
1,1,1,2-Tetrachloroethane	ND		0.00100	1	01/05/2018 18:36	WG1059941
1,1,2,2-Tetrachloroethane	ND		0.00100	1	01/05/2018 18:36	WG1059941
Tetrachloroethene	ND		0.00100	1	01/05/2018 18:36	WG1059941
Toluene	ND		0.00100	1	01/05/2018 18:36	WG1059941
1,1,1-Trichloroethane	ND		0.00100	1	01/05/2018 18:36	WG1059941
1,1,2-Trichloroethane	ND		0.00100	1	01/05/2018 18:36	WG1059941
Trichloroethene	ND		0.00100	1	01/05/2018 18:36	WG1059941
Trichlorofluoromethane	ND		0.00500	1	01/05/2018 18:36	WG1059941
1,2,3-Trichloropropane	ND		0.00250	1	01/05/2018 18:36	WG1059941
Vinyl acetate	ND		0.0100	1	01/05/2018 18:36	WG1059941

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Vinyl chloride	ND		0.00100	1	01/05/2018 18:36	WG1059941
Xylenes, Total	ND		0.00300	1	01/05/2018 18:36	WG1059941
(S) Toluene-d8	*111*		*80.0-120*		*01/05/2018 18:36*	WG1059941
(S) Dibromofluoromethane	*78.3*		*76.0-123*		*01/05/2018 18:36*	WG1059941
(S) a,a,a-Trifluorotoluene	*106*		*80.0-120*		*01/05/2018 18:36*	WG1059941
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*01/05/2018 18:36*	WG1059941

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	131		20.0	1	01/08/2018 20:27	WG1060497
Alkalinity,Bicarbonate	131		20.0	1	01/08/2018 20:27	WG1060497
Alkalinity,Carbonate	ND		20.0	1	01/08/2018 20:27	WG1060497

Sample Narrative:
L961185-02 WG1060497: Endpoint pH 4.5

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.31	T8	1	01/05/2018 15:33	WG1060052

Sample Narrative:
L961185-02 WG1060052: 7.31 at 8C

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	1580		10.0	1	01/07/2018 13:28	WG1059461

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	206		10.0	10	01/05/2018 13:27	WG1059886
Nitrate as (N)	ND		0.100	1	01/05/2018 13:13	WG1059886
Nitrite as (N)	ND		0.100	1	01/05/2018 13:13	WG1059886
Sulfate	417		50.0	10	01/05/2018 13:27	WG1059886

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	5.17		1.00	1	01/08/2018 16:01	WG1060502

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	01/08/2018 10:49	WG1059876

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Barium	0.205		0.00500	1	01/08/2018 04:22	WG1059568
Calcium	91.0		1.00	1	01/08/2018 04:22	WG1059568
Chromium	ND		0.0100	1	01/08/2018 04:22	WG1059568
Cobalt	ND		0.0100	1	01/08/2018 04:22	WG1059568
Magnesium	26.4		1.00	1	01/08/2018 04:22	WG1059568
Nickel	ND		0.0100	1	01/08/2018 04:22	WG1059568
Potassium	14.5		1.00	1	01/08/2018 04:22	WG1059568
Silver	ND		0.00500	1	01/08/2018 04:22	WG1059568
Sodium	207		1.00	1	01/08/2018 04:22	WG1059568
Vanadium	ND		0.0200	1	01/08/2018 04:22	WG1059568

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	01/09/2018 18:29	WG1059939
Arsenic	0.00365		0.00200	1	01/09/2018 18:29	WG1059939
Beryllium	ND		0.00200	1	01/09/2018 18:29	WG1059939
Cadmium	0.00188		0.00100	1	01/09/2018 18:29	WG1059939
Copper	0.0161		0.00500	1	01/09/2018 18:29	WG1059939
Lead	0.00632	B	0.00200	1	01/09/2018 18:29	WG1059939
Selenium	ND		0.00200	1	01/09/2018 18:29	WG1059939
Thallium	ND		0.00200	1	01/09/2018 18:29	WG1059939
Zinc	0.0537		0.0250	1	01/09/2018 18:29	WG1059939

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	01/06/2018 23:53	WG1060339
Acrylonitrile	ND		0.0100	1	01/06/2018 23:53	WG1060339
Benzene	ND		0.00100	1	01/06/2018 23:53	WG1060339
Bromochloromethane	ND		0.00100	1	01/06/2018 23:53	WG1060339
Bromodichloromethane	ND		0.00100	1	01/06/2018 23:53	WG1060339
Bromoform	ND		0.00100	1	01/06/2018 23:53	WG1060339
Bromomethane	ND		0.00500	1	01/06/2018 23:53	WG1060339
Carbon disulfide	ND		0.00100	1	01/06/2018 23:53	WG1060339
Carbon tetrachloride	ND		0.00100	1	01/06/2018 23:53	WG1060339
Chlorobenzene	ND		0.00100	1	01/06/2018 23:53	WG1060339
Chlorodibromomethane	ND		0.00100	1	01/06/2018 23:53	WG1060339
Chloroethane	ND		0.00500	1	01/06/2018 23:53	WG1060339
Chloroform	ND		0.00500	1	01/06/2018 23:53	WG1060339
Chloromethane	ND		0.00250	1	01/06/2018 23:53	WG1060339
Dibromomethane	ND		0.00100	1	01/06/2018 23:53	WG1060339
1,2-Dichlorobenzene	ND		0.00100	1	01/06/2018 23:53	WG1060339
1,4-Dichlorobenzene	ND		0.00100	1	01/06/2018 23:53	WG1060339
trans-1,4-Dichloro-2-butene	ND		0.00250	1	01/06/2018 23:53	WG1060339
1,1-Dichloroethane	ND		0.00100	1	01/06/2018 23:53	WG1060339
1,2-Dichloroethane	ND		0.00100	1	01/06/2018 23:53	WG1060339
1,1-Dichloroethene	ND		0.00100	1	01/06/2018 23:53	WG1060339
cis-1,2-Dichloroethene	ND		0.00100	1	01/06/2018 23:53	WG1060339
trans-1,2-Dichloroethene	ND		0.00100	1	01/06/2018 23:53	WG1060339
1,2-Dichloropropane	ND		0.00100	1	01/06/2018 23:53	WG1060339
cis-1,3-Dichloropropene	ND		0.00100	1	01/06/2018 23:53	WG1060339
trans-1,3-Dichloropropene	ND		0.00100	1	01/06/2018 23:53	WG1060339
Ethylbenzene	ND		0.00100	1	01/06/2018 23:53	WG1060339
2-Hexanone	ND		0.0100	1	01/06/2018 23:53	WG1060339
Iodomethane	ND		0.0100	1	01/06/2018 23:53	WG1060339
2-Butanone (MEK)	ND		0.0100	1	01/06/2018 23:53	WG1060339
Methylene Chloride	ND		0.00500	1	01/06/2018 23:53	WG1060339
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	01/06/2018 23:53	WG1060339
Styrene	ND		0.00100	1	01/06/2018 23:53	WG1060339
1,1,1,2-Tetrachloroethane	ND		0.00100	1	01/06/2018 23:53	WG1060339
1,1,2,2-Tetrachloroethane	ND		0.00100	1	01/06/2018 23:53	WG1060339
Tetrachloroethene	ND		0.00100	1	01/06/2018 23:53	WG1060339
Toluene	ND		0.00100	1	01/06/2018 23:53	WG1060339
1,1,1-Trichloroethane	ND		0.00100	1	01/06/2018 23:53	WG1060339
1,1,2-Trichloroethane	ND		0.00100	1	01/06/2018 23:53	WG1060339
Trichloroethene	ND		0.00100	1	01/06/2018 23:53	WG1060339
Trichlorofluoromethane	ND		0.00500	1	01/06/2018 23:53	WG1060339
1,2,3-Trichloropropane	ND		0.00250	1	01/06/2018 23:53	WG1060339
Vinyl acetate	ND		0.0100	1	01/06/2018 23:53	WG1060339

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Vinyl chloride	ND		0.00100	1	01/06/2018 23:53	WG1060339
Xylenes, Total	ND		0.00300	1	01/06/2018 23:53	WG1060339
(S) Toluene-d8	*109*		*80.0-120*		*01/06/2018 23:53*	WG1060339
(S) Dibromofluoromethane	*90.3*		*76.0-123*		*01/06/2018 23:53*	WG1060339
(S) a,a,a-Trifluorotoluene	*112*		*80.0-120*		*01/06/2018 23:53*	WG1060339
(S) 4-Bromofluorobenzene	*90.6*		*80.0-120*		*01/06/2018 23:53*	WG1060339

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	197		20.0	1	01/08/2018 20:33	WG1060497
Alkalinity,Bicarbonate	197		20.0	1	01/08/2018 20:33	WG1060497
Alkalinity,Carbonate	ND		20.0	1	01/08/2018 20:33	WG1060497

Sample Narrative:

L961185-03 WG1060497: Endpoint pH 4.5

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	6.92	T8	1	01/05/2018 15:33	WG1060052

Sample Narrative:

L961185-03 WG1060052: 6.92 at 8.6C

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	umhos/cm		umhos/cm		date / time	
Specific Conductance	1200		10.0	1	01/07/2018 13:28	WG1059461

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	151		10.0	10	01/05/2018 13:55	WG1059886
Nitrate as (N)	8.79		0.100	1	01/05/2018 13:41	WG1059886
Nitrite as (N)	ND		0.100	1	01/05/2018 13:41	WG1059886
Sulfate	138		50.0	10	01/05/2018 13:55	WG1059886

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	2.43		1.00	1	01/08/2018 16:17	WG1060502

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	01/08/2018 11:14	WG1059876

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Barium	0.490		0.00500	1	01/08/2018 04:26	WG1059568
Calcium	111		1.00	1	01/08/2018 04:26	WG1059568
Chromium	0.0244		0.0100	1	01/08/2018 04:26	WG1059568
Cobalt	0.0169		0.0100	1	01/08/2018 04:26	WG1059568
Magnesium	27.0		1.00	1	01/08/2018 04:26	WG1059568
Nickel	0.0267		0.0100	1	01/08/2018 04:26	WG1059568
Potassium	16.1		1.00	1	01/08/2018 04:26	WG1059568
Silver	ND		0.00500	1	01/08/2018 04:26	WG1059568
Sodium	111		1.00	1	01/08/2018 04:26	WG1059568
Vanadium	0.0506		0.0200	1	01/08/2018 04:26	WG1059568

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	01/09/2018 18:46	WG1059939
Arsenic	0.0174		0.00200	1	01/09/2018 18:46	WG1059939
Beryllium	0.00320		0.00200	1	01/09/2018 18:46	WG1059939
Cadmium	ND		0.00100	1	01/09/2018 18:46	WG1059939
Copper	0.0546		0.00500	1	01/09/2018 18:46	WG1059939
Lead	0.0771		0.00200	1	01/09/2018 18:46	WG1059939
Selenium	0.00705		0.00200	1	01/09/2018 18:46	WG1059939
Thallium	ND		0.00200	1	01/09/2018 18:46	WG1059939
Zinc	0.258		0.0250	1	01/09/2018 18:46	WG1059939

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	01/06/2018 23:33	WG1060339
Acrylonitrile	ND		0.0100	1	01/06/2018 23:33	WG1060339
Benzene	ND		0.00100	1	01/06/2018 23:33	WG1060339
Bromochloromethane	ND		0.00100	1	01/06/2018 23:33	WG1060339
Bromodichloromethane	ND		0.00100	1	01/06/2018 23:33	WG1060339
Bromoform	ND		0.00100	1	01/06/2018 23:33	WG1060339
Bromomethane	ND		0.00500	1	01/06/2018 23:33	WG1060339
Carbon disulfide	ND		0.00100	1	01/06/2018 23:33	WG1060339
Carbon tetrachloride	ND		0.00100	1	01/06/2018 23:33	WG1060339
Chlorobenzene	ND		0.00100	1	01/06/2018 23:33	WG1060339
Chlorodibromomethane	ND		0.00100	1	01/06/2018 23:33	WG1060339
Chloroethane	ND		0.00500	1	01/06/2018 23:33	WG1060339
Chloroform	ND		0.00500	1	01/06/2018 23:33	WG1060339
Chloromethane	ND		0.00250	1	01/06/2018 23:33	WG1060339
Dibromomethane	ND		0.00100	1	01/06/2018 23:33	WG1060339
1,2-Dichlorobenzene	ND		0.00100	1	01/06/2018 23:33	WG1060339
1,4-Dichlorobenzene	ND		0.00100	1	01/06/2018 23:33	WG1060339
trans-1,4-Dichloro-2-butene	ND		0.00250	1	01/06/2018 23:33	WG1060339
1,1-Dichloroethane	ND		0.00100	1	01/06/2018 23:33	WG1060339
1,2-Dichloroethane	ND		0.00100	1	01/06/2018 23:33	WG1060339
1,1-Dichloroethene	ND		0.00100	1	01/06/2018 23:33	WG1060339
cis-1,2-Dichloroethene	ND		0.00100	1	01/06/2018 23:33	WG1060339
trans-1,2-Dichloroethene	ND		0.00100	1	01/06/2018 23:33	WG1060339
1,2-Dichloropropane	ND		0.00100	1	01/06/2018 23:33	WG1060339
cis-1,3-Dichloropropene	ND		0.00100	1	01/06/2018 23:33	WG1060339
trans-1,3-Dichloropropene	ND		0.00100	1	01/06/2018 23:33	WG1060339
Ethylbenzene	ND		0.00100	1	01/06/2018 23:33	WG1060339
2-Hexanone	ND		0.0100	1	01/06/2018 23:33	WG1060339
Iodomethane	ND		0.0100	1	01/06/2018 23:33	WG1060339
2-Butanone (MEK)	ND		0.0100	1	01/06/2018 23:33	WG1060339
Methylene Chloride	ND		0.00500	1	01/06/2018 23:33	WG1060339
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	01/06/2018 23:33	WG1060339
Styrene	ND		0.00100	1	01/06/2018 23:33	WG1060339
1,1,1,2-Tetrachloroethane	ND		0.00100	1	01/06/2018 23:33	WG1060339
1,1,2,2-Tetrachloroethane	ND		0.00100	1	01/06/2018 23:33	WG1060339
Tetrachloroethene	ND		0.00100	1	01/06/2018 23:33	WG1060339
Toluene	ND		0.00100	1	01/06/2018 23:33	WG1060339
1,1,1-Trichloroethane	ND		0.00100	1	01/06/2018 23:33	WG1060339
1,1,2-Trichloroethane	ND		0.00100	1	01/06/2018 23:33	WG1060339
Trichloroethene	ND		0.00100	1	01/06/2018 23:33	WG1060339
Trichlorofluoromethane	ND		0.00500	1	01/06/2018 23:33	WG1060339
1,2,3-Trichloropropane	ND		0.00250	1	01/06/2018 23:33	WG1060339
Vinyl acetate	ND		0.0100	1	01/06/2018 23:33	WG1060339

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Vinyl chloride	ND		0.00100	1	01/06/2018 23:33	WG1060339
Xylenes, Total	ND		0.00300	1	01/06/2018 23:33	WG1060339
(S) Toluene-d8	*106*		*80.0-120*		*01/06/2018 23:33*	WG1060339
(S) Dibromofluoromethane	*92.8*		*76.0-123*		*01/06/2018 23:33*	WG1060339
(S) a,a,a-Trifluorotoluene	*112*		*80.0-120*		*01/06/2018 23:33*	WG1060339
(S) 4-Bromofluorobenzene	*90.1*		*80.0-120*		*01/06/2018 23:33*	WG1060339

L960343-01 Original Sample (OS) • Duplicate (DUP)

(OS) L960343-01 01/08/18 18:23 • (DUP) R3278113-1 01/08/18 18:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	168	170	1	1.46		20
Alkalinity,Bicarbonate	168	170	1	1.46		20
Alkalinity,Carbonate	ND	0.000	1	0.000		20

Sample Narrative:
OS: Endpoint pH 4.5
DUP: Endpoint pH 4.5

L961088-02 Original Sample (OS) • Duplicate (DUP)

(OS) L961088-02 01/08/18 20:07 • (DUP) R3278113-4 01/08/18 20:14

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	268	270	1	0.472		20
Alkalinity,Bicarbonate	268	270	1	0.472		20
Alkalinity,Carbonate	U	0.000	1	0.000		20

Sample Narrative:
OS: Endpoint pH 4.5
DUP: Endpoint pH 4.5

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

(LCS) R3278113-3 01/08/18 19:28 • (LCSD) R3278113-6 01/08/18 20:39

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 %
Alkalinity	100	104	105	104	105	85.0-115			1.53	20

Sample Narrative:
LCS: Endpoint pH 4.5
LCSD: Endpoint pH 4.5

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

L961185-01 Original Sample (OS) • Duplicate (DUP)

(OS) L961185-01 01/05/18 15:33 • (DUP) R3277712-3 01/05/18 15:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.98	6.99	1	0.143		1

Sample Narrative:

OS: 6.98 at 8.4C

DUP: 6.99 at 9C

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

(LCS) R3277712-1 01/05/18 15:33 • (LCSD) R3277712-2 01/05/18 15:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	6.38	6.31	6.31	98.9	98.9	98.4-102			0.000	1

Sample Narrative:

LCS: 6.31 at 20C

LCSD: 6.31 at 20C

Method Blank (MB)

(MB) WG1059461-1 01/07/18 13:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	umhos/cm		umhos/cm	umhos/cm
Specific Conductance	U		10.0	10.0

L960727-01 Original Sample (OS) • Duplicate (DUP)

(OS) L960727-01 01/07/18 13:28 • (DUP) WG1059461-4 01/07/18 13:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	2230	2230	1	0.000		20

L961465-05 Original Sample (OS) • Duplicate (DUP)

(OS) L961465-05 01/07/18 13:28 • (DUP) WG1059461-5 01/07/18 13:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	1090	1090	1	0.000		20

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

(LCS) WG1059461-2 01/07/18 13:28 • (LCSD) WG1059461-3 01/07/18 13:28

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	umhos/cm	umhos/cm	umhos/cm	%	%	%			%	%
Specific Conductance	559	556	556	99.5	99.5	85.0-115			0.000	20

Method Blank (MB)

(MB) R3277746-1 01/05/18 06:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Nitrate	U		0.0227	0.100
Nitrite	U		0.0277	0.100
Sulfate	U		0.0774	5.00

L961002-01 Original Sample (OS) • Duplicate (DUP)

(OS) L961002-01 01/05/18 16:33 • (DUP) R3277746-4 01/05/18 16:48

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	9.42	9.17	1	3		15
Nitrate	0.482	0.504	1	5		15
Nitrite	ND	0.000	1	0		15
Sulfate	ND	4.53	1	0		15

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

(LCS) R3277746-2 01/05/18 06:57 • (LCSD) R3277746-3 01/05/18 07:11

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 %
Chloride	40.0	39.3	39.4	98	99	80-120			0	15
Nitrate	8.00	8.15	8.26	102	103	80-120			1	15
Nitrite	8.00	7.87	7.89	98	99	80-120			0	15
Sulfate	40.0	39.5	40.1	99	100	80-120			1	15

L961002-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L961002-01 01/05/18 16:33 • (MS) R3277746-5 01/05/18 17:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	9.42	61.5	104	1	80-120	
Nitrate	5.00	0.482	5.41	99	1	80-120	
Nitrite	5.00	ND	5.11	102	1	80-120	
Sulfate	50.0	ND	55.2	101	1	80-120	

Method Blank (MB)

(MB) R3278163-1 01/08/18 10:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.102	1.00

L960758-03 Original Sample (OS) • Duplicate (DUP)

(OS) L960758-03 01/08/18 12:18 • (DUP) R3278163-3 01/08/18 12:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	ND	0.683	1	0		20

L961302-03 Original Sample (OS) • Duplicate (DUP)

(OS) L961302-03 01/08/18 17:12 • (DUP) R3278163-5 01/08/18 17:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	96.8	96.5	1	0.372		20

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

(LCS) R3278163-2 01/08/18 11:23 • (LCSD) R3278163-4 01/08/18 13:50

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 %
TOC (Total Organic Carbon)	75.0	75.5	79.8	101	106	85-115			5.53	20

Method Blank (MB)

(MB) R3278672-1 01/10/18 10:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
TOC (Total Organic Carbon)	U		0.102	1.00

L961525-03 Original Sample (OS) • Duplicate (DUP)

(OS) L961525-03 01/10/18 13:49 • (DUP) R3278672-5 01/10/18 14:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC (Total Organic Carbon)	3.04	2.96	1	2.53		20

L962141-08 Original Sample (OS) • Duplicate (DUP)

(OS) L962141-08 01/10/18 22:19 • (DUP) R3278672-7 01/10/18 22:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC (Total Organic Carbon)	0.632	0.655	1	3.47	J	20

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

(LCS) R3278672-2 01/10/18 12:17 • (LCSD) R3278672-6 01/10/18 15:59

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	%	%	%			%	%
TOC (Total Organic Carbon)	75.0	78.7	78.6	105	105	85-115			0.178	20

L961185-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961185-01 01/10/18 12:52 • (MS) R3278672-3 01/10/18 13:10 • (MSD) R3278672-4 01/10/18 13:29

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	%	%		%			%	%
TOC (Total Organic Carbon)	50.0	2.06	48.4	48.2	92.7	92.2	1	80-120			0.538	20

Method Blank (MB)

(MB) R3277974-1 01/08/18 10:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	0.0000589	J	0.000049	0.000200

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

(LCS) R3277974-2 01/08/18 10:43 • (LCSD) R3277974-6 01/08/18 12:01

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	0.00266	0.00305	88.6	102	80-120			13.7	20

L961185-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961185-02 01/08/18 10:49 • (MS) R3277974-4 01/08/18 10:51 • (MSD) R3277974-5 01/08/18 10:54

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	ND	0.00334	0.00333	108	108	1	75-125			0.28	20

Method Blank (MB)

(MB) R3277914-1 01/08/18 03:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Barium	U		0.0017	0.00500
Calcium	U		0.0463	1.00
Chromium	U		0.0014	0.0100
Cobalt	U		0.0023	0.0100
Magnesium	0.0168	J	0.0111	1.00
Nickel	U		0.0049	0.0100
Potassium	0.481	J	0.102	1.00
Silver	U		0.0028	0.00500
Sodium	0.281	J	0.0985	1.00
Vanadium	U		0.0024	0.0200

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

(LCS) R3277914-2 01/08/18 03:35 • (LCSD) R3277914-3 01/08/18 03:38

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 %
Barium	1.00	0.995	1.00	99.5	100	80-120			0.996	20
Calcium	10.0	9.82	9.95	98.2	99.5	80-120			1.38	20
Chromium	1.00	0.978	0.988	97.8	98.8	80-120			1.1	20
Cobalt	1.00	1.01	1.02	101	102	80-120			1.29	20
Magnesium	10.0	10.0	10.1	100	101	80-120			1.08	20
Nickel	1.00	0.942	0.949	94.2	94.9	80-120			0.835	20
Potassium	10.0	10.2	10.6	102	106	80-120			4.08	20
Silver	0.200	0.190	0.194	95.2	96.9	80-120			1.77	20
Sodium	10.0	10.0	10.3	100	103	80-120			2.73	20
Vanadium	1.00	0.927	0.948	92.7	94.8	80-120			2.26	20

L961252-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961252-03 01/08/18 03:41 • (MS) R3277914-5 01/08/18 03:47 • (MSD) R3277914-6 01/08/18 03:51

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 %
Barium	1.00	0.0828	1.07	1.06	98.6	98.2	1	75-125			0.382	20
Calcium	10.0	162	169	168	71.4	66.3	1	75-125	V	V	0.302	20
Chromium	1.00	U	0.981	0.979	98.1	97.9	1	75-125			0.147	20
Cobalt	1.00	U	1.05	1.04	105	104	1	75-125			0.779	20
Magnesium	10.0	40.6	50.0	49.9	93.6	92.2	1	75-125			0.281	20
Nickel	1.00	0.00689	0.983	0.980	97.7	97.3	1	75-125			0.316	20
Potassium	10.0	3.96	14.4	14.0	104	101	1	75-125			2.38	20

L961252-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961252-03 01/08/18 03:41 • (MS) R3277914-5 01/08/18 03:47 • (MSD) R3277914-6 01/08/18 03:51

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 %
Silver	0.200	U	0.200	0.199	99.8	99.6	1	75-125			0.186	20
Sodium	10.0	107	115	114	85.1	70.8	1	75-125		V	1.25	20
Vanadium	1.00	U	0.948	0.938	94.8	93.8	1	75-125			1.07	20

Method Blank (MB)

(MB) R3278471-1 01/09/18 17:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.000754	0.00200
Arsenic	U		0.00025	0.00200
Beryllium	U		0.00012	0.00200
Cadmium	U		0.00016	0.00100
Copper	U		0.00052	0.00500
Lead	0.000766	J	0.00024	0.00200
Selenium	U		0.00038	0.00200
Thallium	U		0.00019	0.00200
Zinc	U		0.00256	0.0250

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

(LCS) R3278471-2 01/09/18 18:03 • (LCSD) R3278471-3 01/09/18 18:06

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	0.0456	0.0460	91.2	92	80-120			0.804	20
Arsenic	0.0500	0.0464	0.0466	92.8	93.3	80-120			0.553	20
Beryllium	0.0500	0.0447	0.0445	89.5	89	80-120			0.516	20
Cadmium	0.0500	0.0494	0.0491	98.8	98.2	80-120			0.667	20
Copper	0.0500	0.0471	0.0481	94.2	96.2	80-120			2.01	20
Lead	0.0500	0.0467	0.0476	93.3	95.3	80-120			2.06	20
Selenium	0.0500	0.0490	0.0504	97.9	101	80-120			2.98	20
Thallium	0.0500	0.0463	0.0471	92.6	94.2	80-120			1.75	20
Zinc	0.0500	0.0482	0.0478	96.4	95.5	80-120			0.938	20

L961231-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961231-01 01/09/18 18:10 • (MS) R3278471-5 01/09/18 18:18 • (MSD) R3278471-6 01/09/18 18:22

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	ND	0.0477	0.0478	95.3	95.7	1	75-125			0.395	20
Arsenic	0.0500	ND	0.0472	0.0478	92.2	93.2	1	75-125			1.09	20
Beryllium	0.0500	ND	0.0441	0.0446	87.4	88.5	1	75-125			1.24	20
Cadmium	0.0500	ND	0.0505	0.0491	101	98.2	1	75-125			2.84	20
Copper	0.0500	ND	0.0471	0.0481	92	94.1	1	75-125			2.22	20
Lead	0.0500	ND	0.0465	0.0478	91.1	93.6	1	75-125			2.69	20
Selenium	0.0500	ND	0.0490	0.0506	94.1	97.3	1	75-125			3.27	20
Thallium	0.0500	ND	0.0469	0.0474	93.1	94.1	1	75-125			1.06	20
Zinc	0.0500	ND	0.0548	0.0524	90.9	86.1	1	75-125			4.47	20

Method Blank (MB)

(MB) R3277843-2 01/05/18 12:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromochloromethane	U		0.000520	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
Carbon disulfide	U		0.000275	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
trans-1,4-Dichloro-2-butene	U		0.000866	0.00250
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
2-Hexanone	U		0.00382	0.0100
Iodomethane	U		0.00171	0.0100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100

Method Blank (MB)

(MB) R3277843-2 01/05/18 12:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
Vinyl acetate	U		0.00163	0.0100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*106*			*80.0-120*
(S) Dibromofluoromethane	*89.3*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*107*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3277843-1 01/05/18 10:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.125	0.108	86.7	10.0-160	
Acrylonitrile	0.125	0.132	106	60.0-142	
Benzene	0.0250	0.0237	94.7	69.0-123	
Bromodichloromethane	0.0250	0.0266	106	76.0-120	
Bromochloromethane	0.0250	0.0242	96.8	76.0-122	
Bromoform	0.0250	0.0301	120	67.0-132	
Bromomethane	0.0250	0.00830	33.2	18.0-160	
Carbon disulfide	0.0250	0.0222	88.8	55.0-127	
Carbon tetrachloride	0.0250	0.0225	89.8	63.0-122	
Chlorobenzene	0.0250	0.0258	103	79.0-121	
Chlorodibromomethane	0.0250	0.0282	113	75.0-125	
Chloroethane	0.0250	0.0121	48.3	47.0-152	
Chloroform	0.0250	0.0229	91.5	72.0-121	
Chloromethane	0.0250	0.0240	96.0	48.0-139	
Dibromomethane	0.0250	0.0258	103	78.0-120	
1,2-Dichlorobenzene	0.0250	0.0270	108	80.0-120	
1,4-Dichlorobenzene	0.0250	0.0259	104	77.0-120	
trans-1,4-Dichloro-2-butene	0.0250	0.0302	121	55.0-134	
1,1-Dichloroethane	0.0250	0.0236	94.6	70.0-126	
1,2-Dichloroethane	0.0250	0.0224	89.8	67.0-126	
1,1-Dichloroethene	0.0250	0.0230	92.0	64.0-129	
cis-1,2-Dichloroethene	0.0250	0.0219	87.4	73.0-120	
trans-1,2-Dichloroethene	0.0250	0.0229	91.6	71.0-121	
1,2-Dichloropropane	0.0250	0.0273	109	75.0-125	

Laboratory Control Sample (LCS)

(LCS) R3277843-1 01/05/18 10:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
cis-1,3-Dichloropropene	0.0250	0.0290	116	79.0-123	
trans-1,3-Dichloropropene	0.0250	0.0290	116	74.0-127	
Ethylbenzene	0.0250	0.0257	103	77.0-120	
2-Hexanone	0.125	0.151	121	58.0-147	
Iodomethane	0.125	0.0874	69.9	57.0-140	
2-Butanone (MEK)	0.125	0.123	98.8	37.0-158	
Methylene Chloride	0.0250	0.0226	90.5	66.0-121	
4-Methyl-2-pentanone (MIBK)	0.125	0.145	116	59.0-143	
Styrene	0.0250	0.0277	111	78.0-124	
1,1,1,2-Tetrachloroethane	0.0250	0.0284	114	75.0-122	
1,1,2,2-Tetrachloroethane	0.0250	0.0294	118	71.0-122	
Tetrachloroethene	0.0250	0.0253	101	70.0-127	
Toluene	0.0250	0.0252	101	77.0-120	
1,1,1-Trichloroethane	0.0250	0.0226	90.4	68.0-122	
1,1,2-Trichloroethane	0.0250	0.0274	110	78.0-120	
Trichloroethene	0.0250	0.0243	97.3	78.0-120	
Trichlorofluoromethane	0.0250	0.0153	61.2	56.0-137	
1,2,3-Trichloropropane	0.0250	0.0290	116	72.0-124	
Vinyl acetate	0.125	0.137	110	46.0-160	
Vinyl chloride	0.0250	0.0228	91.1	64.0-133	
Xylenes, Total	0.0750	0.0770	103	77.0-120	
(S) Toluene-d8			*102*	*80.0-120*	
(S) Dibromofluoromethane			*87.3*	*76.0-123*	
(S) α,α,α-Trifluorotoluene			*101*	*80.0-120*	
(S) 4-Bromofluorobenzene			*104*	*80.0-120*	

Method Blank (MB)

(MB) R3278003-2 01/06/18 16:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromochloromethane	U		0.000520	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
Carbon disulfide	U		0.000275	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
trans-1,4-Dichloro-2-butene	U		0.000866	0.00250
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
2-Hexanone	U		0.00382	0.0100
Iodomethane	U		0.00171	0.0100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100

Method Blank (MB)

(MB) R3278003-2 01/06/18 16:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
Vinyl acetate	U		0.00163	0.0100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*92.2*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*110*			*80.0-120*
(S) 4-Bromofluorobenzene	*92.6*			*80.0-120*

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

(LCS) R3278003-1 01/06/18 15:32 • (LCSD) R3278003-3 01/06/18 16:52

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	0.0861	0.0722	68.9	57.8	10.0-160			17.5	23
Acrylonitrile	0.125	0.0959	0.0879	76.8	70.3	60.0-142			8.77	20
Benzene	0.0250	0.0202	0.0206	81.0	82.3	69.0-123			1.68	20
Bromodichloromethane	0.0250	0.0224	0.0232	89.8	92.8	76.0-120			3.30	20
Bromochloromethane	0.0250	0.0223	0.0226	89.2	90.3	76.0-122			1.33	20
Bromoform	0.0250	0.0238	0.0241	95.1	96.3	67.0-132			1.26	20
Bromomethane	0.0250	0.0216	0.0207	86.2	82.9	18.0-160			3.97	20
Carbon disulfide	0.0250	0.0186	0.0188	74.5	75.2	55.0-127			0.863	20
Carbon tetrachloride	0.0250	0.0210	0.0228	83.8	91.1	63.0-122			8.25	20
Chlorobenzene	0.0250	0.0258	0.0261	103	105	79.0-121			1.43	20
Chlorodibromomethane	0.0250	0.0266	0.0274	106	109	75.0-125			2.87	20
Chloroethane	0.0250	0.0190	0.0190	75.9	76.1	47.0-152			0.288	20
Chloroform	0.0250	0.0214	0.0216	85.5	86.5	72.0-121			1.23	20
Chloromethane	0.0250	0.0204	0.0212	81.7	84.8	48.0-139			3.73	20
Dibromomethane	0.0250	0.0228	0.0237	91.2	94.6	78.0-120			3.63	20
1,2-Dichlorobenzene	0.0250	0.0236	0.0245	94.3	97.9	80.0-120			3.80	20
1,4-Dichlorobenzene	0.0250	0.0227	0.0232	90.7	92.9	77.0-120			2.42	20
trans-1,4-Dichloro-2-butene	0.0250	0.0167	0.0169	66.8	67.7	55.0-134			1.42	20
1,1-Dichloroethane	0.0250	0.0202	0.0206	80.9	82.5	70.0-126			1.90	20
1,2-Dichloroethane	0.0250	0.0204	0.0211	81.7	84.4	67.0-126			3.24	20
1,1-Dichloroethene	0.0250	0.0207	0.0217	82.9	86.8	64.0-129			4.56	20
cis-1,2-Dichloroethene	0.0250	0.0207	0.0224	82.7	89.5	73.0-120			7.87	20
trans-1,2-Dichloroethene	0.0250	0.0210	0.0219	84.0	87.5	71.0-121			4.02	20
1,2-Dichloropropane	0.0250	0.0219	0.0222	87.5	88.9	75.0-125			1.61	20

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

(LCS) R3278003-1 01/06/18 15:32 • (LCSD) R3278003-3 01/06/18 16:52

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 %
cis-1,3-Dichloropropene	0.0250	0.0242	0.0248	96.6	99.4	79.0-123			2.81	20
trans-1,3-Dichloropropene	0.0250	0.0259	0.0266	104	106	74.0-127			2.56	20
Ethylbenzene	0.0250	0.0257	0.0263	103	105	77.0-120			2.49	20
2-Hexanone	0.125	0.119	0.121	95.3	97.1	58.0-147			1.92	20
Iodomethane	0.125	0.105	0.110	83.9	87.8	57.0-140			4.50	20
2-Butanone (MEK)	0.125	0.0991	0.0970	79.3	77.6	37.0-158			2.24	20
Methylene Chloride	0.0250	0.0203	0.0208	81.3	83.3	66.0-121			2.34	20
4-Methyl-2-pentanone (MIBK)	0.125	0.109	0.113	87.1	90.0	59.0-143			3.27	20
Styrene	0.0250	0.0199	0.0197	79.7	78.9	78.0-124			1.06	20
1,1,1,2-Tetrachloroethane	0.0250	0.0262	0.0272	105	109	75.0-122			3.93	20
1,1,2,2-Tetrachloroethane	0.0250	0.0192	0.0193	76.9	77.2	71.0-122			0.427	20
Tetrachloroethene	0.0250	0.0269	0.0279	108	111	70.0-127			3.39	20
Toluene	0.0250	0.0238	0.0247	95.3	98.6	77.0-120			3.44	20
1,1,1-Trichloroethane	0.0250	0.0229	0.0231	91.7	92.5	68.0-122			0.923	20
1,1,2-Trichloroethane	0.0250	0.0244	0.0253	97.5	101	78.0-120			3.58	20
Trichloroethene	0.0250	0.0242	0.0247	96.6	98.9	78.0-120			2.31	20
Trichlorofluoromethane	0.0250	0.0243	0.0255	97.3	102	56.0-137			4.63	20
1,2,3-Trichloropropane	0.0250	0.0207	0.0208	82.8	83.3	72.0-124			0.644	20
Vinyl acetate	0.125	0.102	0.0928	81.7	74.3	46.0-160			9.54	20
Vinyl chloride	0.0250	0.0202	0.0205	80.9	82.0	64.0-133			1.46	20
Xylenes, Total	0.0750	0.0792	0.0811	106	108	77.0-120			2.37	20
(S) Toluene-d8				*106*	*107*	*80.0-120*				
(S) Dibromofluoromethane				*90.7*	*90.1*	*76.0-123*				
(S) α,α,α-Trifluorotoluene				*109*	*110*	*80.0-120*				
(S) 4-Bromofluorobenzene				*92.4*	*91.1*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
T8	Sample(s) received past/too close to holding time expiration.
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
Connecticut	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		

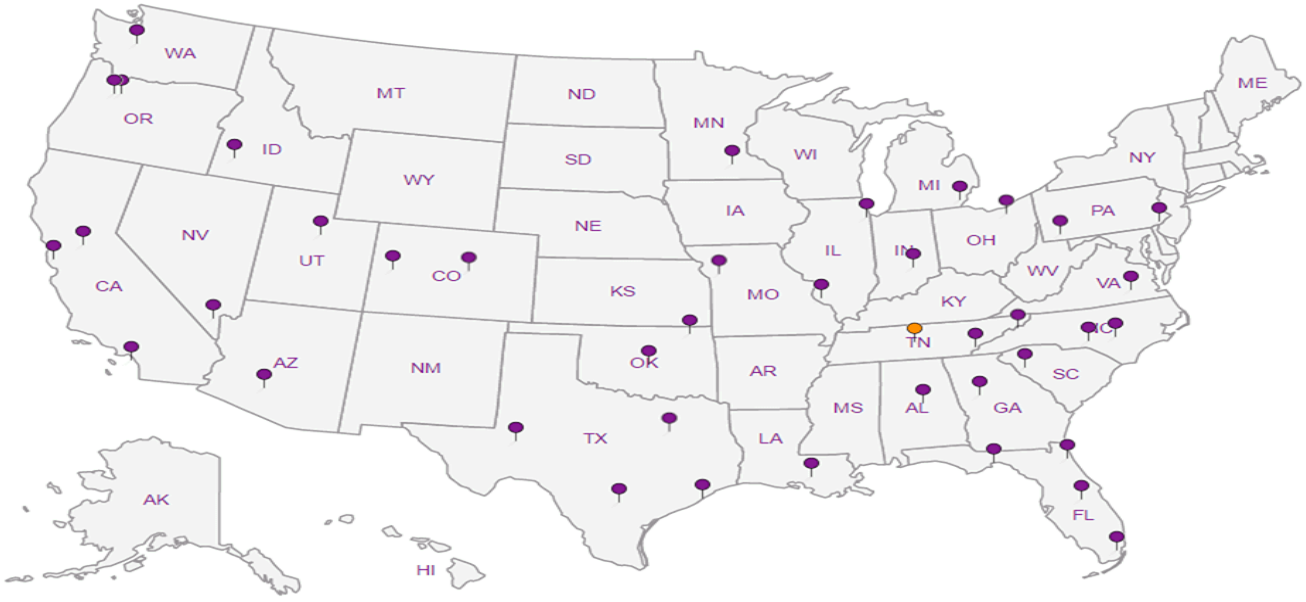
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	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.**



Company Name/Address:
Molen & Associates, LLC
2090 E. 104th Suite 205
Thornton, CO 80223

Billing Information:

Report to: **Mark Molen**

Email To: **molenassociates@gmail.com**

Project Description: **Broda AI Inert Fill**

City/State Collected:

Phone: **303.450.1600**
Fax: **303.452.4515**

Client Project # **10-0133**

Lab Project #

Collected by (print): Olivia Salmon

Site/Facility ID # **Broda AI**

P.O. #

Collected by (signature):

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

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Mg, Na, K, Ca+AP1 Metals 250ml HDPE w/HN03	CARB, BICARB: ALK 1L HDPE No Pres	Nitrate, Nitrite, Sulfate, Chloride 500ml HDPE	SPCON, pH 250ml HDPE No Pres	TOC - 250ml Amber w/HCl	V8260AP1 (3) 40ml Amber No Pres					Rem./Contaminant	Sample # (lab only)
MW-1	Grab	GW		1/4/18	13:45	8	X	X	X	X	X	X						01
MW-2	Grab	GW		↓	14:45	8	X	X	X	X	X	X						02
MW-3	Grab	GW		↓	15:40	8	X	X	X	X	X	X						03

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Chain of Custody Page ___ of ___

ESC LABORATORY 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# L961185
F174

Acctnum: **MOLENTCO**
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	1/4/18	17:00	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			834

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Temp: 0.4 °C Bottles Received: 24
Date: 1-5-18 Time: 0845

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

ESC LAB SCIENCES
Cooler Receipt Form

Client:	MOLENTCO	SDG#	L961185
Cooler Received/Opened On: 01/5/18	Temperature:	0.4	°C
Received by : David Riggin			
Signature:			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?		✓	
Preservation Correct / Checked?		✓	

Appendix IV
Concentrations of Parameters and Non-Detects

Parameter: Alkalinity,Bicarbonate

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

Total Measurements: 63
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	0 (0%)	8/18/2010	180000	180000
			9/29/2010	220000	220000
			12/14/2010	150000	150000
			4/5/2011	170000	170000
			10/17/2011	170000	170000
			4/24/2012	160000	160000
			10/24/2012	180000	180000
			4/30/2013	160000	160000
			11/26/2013	160000	160000
			5/5/2014	130000	130000
			11/19/2014	170000	170000
			4/29/2015	190000	190000
			11/10/2015	159000	159000
			4/25/2016	158000	158000
			6/29/2016	191000	191000
			9/21/2016	163000	163000
			12/28/2016	169000	169000
			3/27/2017	182000	182000
			6/29/2017	207000	207000
			9/22/2017	207000	207000
			1/4/2018	197000	197000

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	0 (0%)	8/18/2010	170000	170000
			9/29/2010	180000	180000
			12/14/2010	180000	180000
			4/5/2011	170000	170000
			10/17/2011	160000	160000
			4/24/2012	160000	160000
			10/24/2012	220000	220000
			4/30/2013	180000	180000
			11/26/2013	170000	170000
			5/5/2014	160000	160000
			11/19/2014	170000	170000
			4/29/2015	180000	180000
			11/10/2015	194000	194000
			4/25/2016	184000	184000
			6/29/2016	218000	218000
			9/21/2016	167000	167000
			12/28/2016	189000	189000
			3/27/2017	195000	195000
			6/29/2017	251000	251000
			9/22/2017	152000	152000
			1/4/2018	199000	199000
MW-2	21	0 (0%)	8/18/2010	190000	190000
			9/29/2010	200000	200000
			12/14/2010	200000	200000
			4/5/2011	160000	160000
			10/17/2011	160000	160000
			4/24/2012	160000	160000
			10/24/2012	210000	210000
			4/30/2013	170000	170000
			11/26/2013	150000	150000
			5/5/2014	120000	120000
			11/19/2014	140000	140000
			4/29/2015	130000	130000
			11/10/2015	165000	165000
			4/25/2016	115000	115000
			6/29/2016	143000	143000
			9/21/2016	139000	139000
			12/28/2016	122000	122000
			3/27/2017	131000	131000
			6/29/2017	164000	164000
			9/22/2017	207000	207000
			1/4/2018	131000	131000

Parameter: Alkalinity,Carbonate

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

Total Measurements: 63
Total Non-Detect: 63
Percent Non-Detects: 100%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	21 (100%)	8/18/2010	ND<20000	ND<20000
			9/29/2010	ND<20000	ND<20000
			12/14/2010	ND<20000	ND<20000
			4/5/2011	ND<20000	ND<20000
			10/17/2011	ND<20000	ND<20000
			4/24/2012	ND<20000	ND<20000
			10/24/2012	ND<100000	ND<100000
			4/30/2013	ND<20000	ND<20000
			11/26/2013	ND<20000	ND<20000
			5/5/2014	ND<20000	ND<20000
			11/19/2014	ND<20000	ND<20000
			4/29/2015	ND<20000	ND<20000
			11/10/2015	ND<20000	ND<20000
			4/25/2016	ND<20000	ND<20000
			6/29/2016	ND<20000	ND<20000
			9/21/2016	ND<20000	ND<20000
			12/28/2016	ND<20000	ND<20000
			3/27/2017	ND<20000	ND<20000
			6/29/2017	ND<20000	ND<20000
			9/22/2017	ND<20000	ND<20000
			1/4/2018	ND<20000	ND<20000

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	21 (100%)	8/18/2010	ND<20000	ND<20000
			9/29/2010	ND<20000	ND<20000
			12/14/2010	ND<20000	ND<20000
			4/5/2011	ND<20000	ND<20000
			10/17/2011	ND<20000	ND<20000
			4/24/2012	ND<20000	ND<20000
			10/24/2012	ND<100000	ND<100000
			4/30/2013	ND<20000	ND<20000
			11/26/2013	ND<20000	ND<20000
			5/5/2014	ND<20000	ND<20000
			11/19/2014	ND<20000	ND<20000
			4/29/2015	ND<20000	ND<20000
			11/10/2015	ND<20000	ND<20000
			4/25/2016	ND<20000	ND<20000
			6/29/2016	ND<20000	ND<20000
			9/21/2016	ND<20000	ND<20000
			12/28/2016	ND<20000	ND<20000
			3/27/2017	ND<20000	ND<20000
			6/29/2017	ND<20000	ND<20000
			9/22/2017	ND<20000	ND<20000
			1/4/2018	ND<20000	ND<20000
MW-2	21	21 (100%)	8/18/2010	ND<20000	ND<20000
			9/29/2010	ND<20000	ND<20000
			12/14/2010	ND<20000	ND<20000
			4/5/2011	ND<20000	ND<20000
			10/17/2011	ND<20000	ND<20000
			4/24/2012	ND<20000	ND<20000
			10/24/2012	ND<100000	ND<100000
			4/30/2013	ND<20000	ND<20000
			11/26/2013	ND<20000	ND<20000
			5/5/2014	ND<20000	ND<20000
			11/19/2014	ND<20000	ND<20000
			4/29/2015	ND<20000	ND<20000
			11/10/2015	ND<20000	ND<20000
			4/25/2016	ND<20000	ND<20000
			6/29/2016	ND<20000	ND<20000
			9/21/2016	ND<20000	ND<20000
			12/28/2016	ND<20000	ND<20000
			3/27/2017	ND<20000	ND<20000
			6/29/2017	ND<20000	ND<20000
			9/22/2017	ND<20000	ND<20000
			1/4/2018	ND<20000	ND<20000

Parameter: Antimony

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

Total Measurements: 63
Total Non-Detect: 62
Percent Non-Detects: 98.4127%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	21 (100%)	8/18/2010	ND<1	ND<1
			9/29/2010	ND<1	ND<1
			12/14/2010	ND<1	ND<1
			4/5/2011	ND<1	ND<1
			10/17/2011	ND<1	ND<1
			4/24/2012	ND<1	ND<1
			10/24/2012	ND<1	ND<1
			4/30/2013	ND<1	ND<1
			11/26/2013	ND<1	ND<1
			5/5/2014	ND<1	ND<1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	ND<2	ND<2
			1/4/2018	ND<2	ND<2

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	20 (95.2381%)	8/18/2010	ND<1	ND<1
			9/29/2010	1.3	1.3
			12/14/2010	ND<1	ND<1
			4/5/2011	ND<1	ND<1
			10/17/2011	ND<1	ND<1
			4/24/2012	ND<1	ND<1
			10/24/2012	ND<1	ND<1
			4/30/2013	ND<1	ND<1
			11/26/2013	ND<1	ND<1
			5/5/2014	ND<1	ND<1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	ND<2	ND<2
			1/4/2018	ND<2	ND<2
MW-2	21	21 (100%)	8/18/2010	ND<1	ND<1
			9/29/2010	ND<1	ND<1
			12/14/2010	ND<1	ND<1
			4/5/2011	ND<1	ND<1
			10/17/2011	ND<1	ND<1
			4/24/2012	ND<1	ND<1
			10/24/2012	ND<1	ND<1
			4/30/2013	ND<1	ND<1
			11/26/2013	ND<1	ND<1
			5/5/2014	ND<1	ND<1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	ND<2	ND<2
			1/4/2018	ND<2	ND<2

Parameter: Arsenic

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

Total Measurements: 63
Total Non-Detect: 26
Percent Non-Detects: 41.2698%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	10 (47.619%)	8/18/2010	12	12
			9/29/2010	9.7	9.7
			12/14/2010	3.7	3.7
			4/5/2011	3.6	3.6
			10/17/2011	3.3	3.3
			4/24/2012	2.3	2.3
			10/24/2012	2.3	2.3
			4/30/2013	1.5	1.5
			11/26/2013	1.1	1.1
			5/5/2014	1.4	1.4
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<10	ND<10
			6/29/2016	ND<10	ND<10
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	ND<10	ND<10
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<2	ND<2
			1/4/2018	17.4	17.4

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	8 (38.0952%)	8/18/2010	1.8	1.8
			9/29/2010	3.2	3.2
			12/14/2010	1.4	1.4
			4/5/2011	3.8	3.8
			10/17/2011	1.9	1.9
			4/24/2012	1.3	1.3
			10/24/2012	2.3	2.3
			4/30/2013	1.3	1.3
			11/26/2013	1.2	1.2
			5/5/2014	1.2	1.2
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<10	ND<10
			6/29/2016	ND<10	ND<10
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	12	12
			6/29/2017	ND<10	ND<10
			9/22/2017	7.48	7.48
			1/4/2018	11.8	11.8
MW-2	21	8 (38.0952%)	8/18/2010	8.5	8.5
			9/29/2010	4.8	4.8
			12/14/2010	5.2	5.2
			4/5/2011	6.9	6.9
			10/17/2011	6.4	6.4
			4/24/2012	3.2	3.2
			10/24/2012	6.4	6.4
			4/30/2013	10	10
			11/26/2013	14	14
			5/5/2014	16	16
			11/19/2014	ND<2	ND<2
			4/29/2015	3.1	3.1
			11/10/2015	4.32	4.32
			4/25/2016	ND<10	ND<10
			6/29/2016	ND<10	ND<10
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	ND<10	ND<10
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<2	ND<2
			1/4/2018	3.65	3.65

Parameter: Barium

Concentrations (ppb)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 63
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	0 (0%)	8/18/2010	1800	1800
			9/29/2010	810	810
			12/14/2010	270	270
			4/5/2011	260	260
			10/17/2011	92	92
			4/24/2012	140	140
			10/24/2012	95	95
			4/30/2013	130	130
			11/26/2013	90	90
			5/5/2014	98	98
			11/19/2014	160	160
			4/29/2015	57	57
			11/10/2015	70.9	70.9
			4/25/2016	78.6	78.6
			6/29/2016	83.5	83.5
			9/21/2016	66.2	66.2
			12/28/2016	75.3	75.3
			3/27/2017	79.8	79.8
			6/29/2017	176	176
			9/22/2017	94.3	94.3
			1/4/2018	490	490

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	0 (0%)	8/18/2010	150	150
			9/29/2010	150	150
			12/14/2010	94	94
			4/5/2011	110	110
			10/17/2011	350	350
			4/24/2012	74	74
			10/24/2012	76	76
			4/30/2013	110	110
			11/26/2013	72	72
			5/5/2014	120	120
			11/19/2014	52	52
			4/29/2015	110	110
			11/10/2015	694	694
			4/25/2016	110	110
			6/29/2016	78.6	78.6
			9/21/2016	76.4	76.4
			12/28/2016	82.4	82.4
			3/27/2017	369	369
			6/29/2017	85.1	85.1
			9/22/2017	197	197
			1/4/2018	318	318
MW-2	21	0 (0%)	8/18/2010	820	820
			9/29/2010	250	250
			12/14/2010	340	340
			4/5/2011	230	230
			10/17/2011	250	250
			4/24/2012	130	130
			10/24/2012	180	180
			4/30/2013	400	400
			11/26/2013	310	310
			5/5/2014	420	420
			11/19/2014	10	10
			4/29/2015	130	130
			11/10/2015	134	134
			4/25/2016	119	119
			6/29/2016	311	311
			9/21/2016	135	135
			12/28/2016	129	129
			3/27/2017	127	127
			6/29/2017	141	141
			9/22/2017	90.9	90.9
			1/4/2018	205	205

Parameter: Beryllium

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

Total Measurements: 63
Total Non-Detect: 59
Percent Non-Detects: 93.6508%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	18 (85.7143%)	8/18/2010	3.2	3.2
			9/29/2010	2.6	2.6
			12/14/2010	ND<1	ND<1
			4/5/2011	ND<1	ND<1
			10/17/2011	ND<1	ND<1
			4/24/2012	ND<1	ND<1
			10/24/2012	ND<1	ND<1
			4/30/2013	ND<1	ND<1
			11/26/2013	ND<1	ND<1
			5/5/2014	ND<1	ND<1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	ND<2	ND<2
			1/4/2018	3.2	3.2

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	21 (100%)	8/18/2010	ND<1	ND<1
			9/29/2010	ND<1	ND<1
			12/14/2010	ND<1	ND<1
			4/5/2011	ND<1	ND<1
			10/17/2011	ND<1	ND<1
			4/24/2012	ND<1	ND<1
			10/24/2012	ND<1	ND<1
			4/30/2013	ND<1	ND<1
			11/26/2013	ND<1	ND<1
			5/5/2014	ND<1	ND<1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	ND<2	ND<2
			1/4/2018	ND<2	ND<2
MW-2	21	20 (95.2381%)	8/18/2010	2.3	2.3
			9/29/2010	ND<1	ND<1
			12/14/2010	ND<1	ND<1
			4/5/2011	ND<1	ND<1
			10/17/2011	ND<1	ND<1
			4/24/2012	ND<1	ND<1
			10/24/2012	ND<1	ND<1
			4/30/2013	ND<1	ND<1
			11/26/2013	ND<1	ND<1
			5/5/2014	ND<1	ND<1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	ND<2	ND<2
			1/4/2018	ND<2	ND<2

Parameter: Cadmium

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

Total Measurements: 63
Total Non-Detect: 41
Percent Non-Detects: 65.0794%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	16 (76.1905%)	8/18/2010	1	1
			9/29/2010	0.97	0.97
			12/14/2010	ND<0.5	ND<0.5
			4/5/2011	0.64	0.64
			10/17/2011	2.3	2.3
			4/24/2012	ND<0.5	ND<0.5
			10/24/2012	ND<0.5	ND<0.5
			4/30/2013	1.3	1.3
			11/26/2013	ND<0.5	ND<0.5
			5/5/2014	ND<0.5	ND<0.5
			11/19/2014	ND<1	ND<1
			4/29/2015	ND<1	ND<1
			11/10/2015	ND<1	ND<1
			4/25/2016	ND<1	ND<1
			6/29/2016	ND<1	ND<1
			9/21/2016	ND<1	ND<1
			12/28/2016	ND<1	ND<1
			3/27/2017	ND<1	ND<1
			6/29/2017	ND<1	ND<1
			9/22/2017	ND<1	ND<1
			1/4/2018	ND<1	ND<1

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	15 (71.4286%)	8/18/2010	ND<0.5	ND<0.5
			9/29/2010	ND<0.5	ND<0.5
			12/14/2010	ND<0.5	ND<0.5
			4/5/2011	ND<0.5	ND<0.5
			10/17/2011	0.85	0.85
			4/24/2012	ND<0.5	ND<0.5
			10/24/2012	ND<0.5	ND<0.5
			4/30/2013	1.6	1.6
			11/26/2013	0.69	0.69
			5/5/2014	0.98	0.98
			11/19/2014	ND<1	ND<1
			4/29/2015	ND<1	ND<1
			11/10/2015	ND<1	ND<1
			4/25/2016	4.68	4.68
			6/29/2016	ND<1	ND<1
			9/21/2016	ND<1	ND<1
			12/28/2016	ND<1	ND<1
			3/27/2017	ND<1	ND<1
			6/29/2017	ND<1	ND<1
			9/22/2017	6.96	6.96
			1/4/2018	ND<1	ND<1
MW-2	21	10 (47.619%)	8/18/2010	1.6	1.6
			9/29/2010	1.3	1.3
			12/14/2010	1.2	1.2
			4/5/2011	0.81	0.81
			10/17/2011	5	5
			4/24/2012	ND<0.5	ND<0.5
			10/24/2012	1.4	1.4
			4/30/2013	2.4	2.4
			11/26/2013	ND<0.5	ND<0.5
			5/5/2014	0.57	0.57
			11/19/2014	ND<1	ND<1
			4/29/2015	ND<1	ND<1
			11/10/2015	ND<1	ND<1
			4/25/2016	ND<1	ND<1
			6/29/2016	2.05	2.05
			9/21/2016	ND<1	ND<1
			12/28/2016	ND<1	ND<1
			3/27/2017	ND<1	ND<1
			6/29/2017	ND<1	ND<1
			9/22/2017	1.34	1.34
			1/4/2018	1.88	1.88

Parameter: Calcium

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

Total Measurements: 57
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 19
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	19	0 (0%)	8/18/2010	110000	110000
			9/29/2010	100000	100000
			12/14/2010	75000	75000
			4/5/2011	96000	96000
			4/24/2012	83000	83000
			10/24/2012	75000	75000
			4/30/2013	84000	84000
			11/26/2013	77000	77000
			5/5/2014	81000	81000
			11/19/2014	71000	71000
			4/29/2015	96000	96000
			11/10/2015	78400	78400
			4/25/2016	96700	96700
			6/29/2016	97100	97100
			9/21/2016	94900	94900
			3/27/2017	101000	101000
			6/29/2017	107000	107000
			9/22/2017	115000	115000
			1/4/2018	111000	111000

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	19	0 (0%)	8/18/2010	79000	79000
			9/29/2010	81000	81000
			12/14/2010	75000	75000
			4/5/2011	67000	67000
			4/24/2012	63000	63000
			10/24/2012	62000	62000
			4/30/2013	74000	74000
			11/26/2013	60000	60000
			5/5/2014	69000	69000
			11/19/2014	130000	130000
			4/29/2015	71000	71000
			11/10/2015	75300	75300
			4/25/2016	106000	106000
			6/29/2016	75700	75700
			9/21/2016	77100	77100
			3/27/2017	86300	86300
			6/29/2017	83500	83500
			9/22/2017	85400	85400
			1/4/2018	92600	92600
MW-2	19	0 (0%)	8/18/2010	76000	76000
			9/29/2010	70000	70000
			12/14/2010	75000	75000
			4/5/2011	66000	66000
			4/24/2012	71000	71000
			10/24/2012	70000	70000
			4/30/2013	79000	79000
			11/26/2013	71000	71000
			5/5/2014	78000	78000
			11/19/2014	120000	120000
			4/29/2015	69000	69000
			11/10/2015	79100	79100
			4/25/2016	70100	70100
			6/29/2016	76400	76400
			9/21/2016	72000	72000
			3/27/2017	75700	75700
			6/29/2017	78700	78700
			9/22/2017	85900	85900
			1/4/2018	91000	91000

Parameter: Chloride

Concentrations (ppb)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 60
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 20
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	20	0 (0%)	8/18/2010	110000	110000
			9/29/2010	130000	130000
			12/14/2010	76000	76000
			4/5/2011	120000	120000
			10/17/2011	120000	120000
			4/24/2012	110000	110000
			10/24/2012	140000	140000
			4/30/2013	130000	130000
			11/26/2013	110000	110000
			5/5/2014	94000	94000
			11/19/2014	110000	110000
			4/29/2015	190000	190000
			11/10/2015	117000	117000
			4/25/2016	118000	118000
			6/29/2016	119000	119000
			9/21/2016	150000	150000
			12/28/2016	157000	157000
			3/27/2017	138000	138000
			9/22/2017	180000	180000
			1/4/2018	151000	151000

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	20	0 (0%)	8/18/2010	140000	140000
			9/29/2010	130000	130000
			12/14/2010	110000	110000
			4/5/2011	130000	130000
			10/17/2011	110000	110000
			4/24/2012	120000	120000
			10/24/2012	110000	110000
			4/30/2013	110000	110000
			11/26/2013	110000	110000
			5/5/2014	110000	110000
			11/19/2014	110000	110000
			4/29/2015	180000	180000
			11/10/2015	120000	120000
			4/25/2016	118000	118000
			6/29/2016	129000	129000
			9/21/2016	128000	128000
			12/28/2016	135000	135000
			3/27/2017	140000	140000
			9/22/2017	196000	196000
			1/4/2018	162000	162000
MW-2	20	0 (0%)	8/18/2010	150000	150000
			9/29/2010	160000	160000
			12/14/2010	130000	130000
			4/5/2011	160000	160000
			10/17/2011	160000	160000
			4/24/2012	180000	180000
			10/24/2012	180000	180000
			4/30/2013	190000	190000
			11/26/2013	180000	180000
			5/5/2014	190000	190000
			11/19/2014	190000	190000
			4/29/2015	247000	247000
			11/10/2015	180000	180000
			4/25/2016	166000	166000
			6/29/2016	178000	178000
			9/21/2016	180000	180000
			12/28/2016	189000	189000
			3/27/2017	188000	188000
			9/22/2017	153000	153000
			1/4/2018	206000	206000

Parameter: Chromium

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

Total Measurements: 63
Total Non-Detect: 50
Percent Non-Detects: 79.3651%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	16 (76.1905%)	8/18/2010	82	82
			9/29/2010	27	27
			12/14/2010	15	15
			4/5/2011	12	12
			10/17/2011	ND<10	ND<10
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<10	ND<10
			4/25/2016	ND<10	ND<10
			6/29/2016	ND<10	ND<10
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	ND<10	ND<10
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<10	ND<10
			1/4/2018	24.4	24.4

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	18 (85.7143%)	8/18/2010	ND<10	ND<10
			9/29/2010	ND<10	ND<10
			12/14/2010	ND<10	ND<10
			4/5/2011	ND<10	ND<10
			10/17/2011	25	25
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<10	ND<10
			4/25/2016	ND<10	ND<10
			6/29/2016	ND<10	ND<10
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	14.5	14.5
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<10	ND<10
			1/4/2018	13	13
MW-2	21	16 (76.1905%)	8/18/2010	83	83
			9/29/2010	11	11
			12/14/2010	23	23
			4/5/2011	ND<10	ND<10
			10/17/2011	14	14
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<10	ND<10
			4/25/2016	ND<10	ND<10
			6/29/2016	21.9	21.9
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	ND<10	ND<10
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<10	ND<10
			1/4/2018	ND<10	ND<10

Parameter: Cobalt

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

Total Measurements: 63
Total Non-Detect: 56
Percent Non-Detects: 88.8889%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	18 (85.7143%)	8/18/2010	43	43
			9/29/2010	17	17
			12/14/2010	ND<10	ND<10
			4/5/2011	ND<10	ND<10
			10/17/2011	ND<10	ND<10
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<10	ND<10
			4/25/2016	ND<10	ND<10
			6/29/2016	ND<10	ND<10
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	ND<10	ND<10
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<10	ND<10
			1/4/2018	16.9	16.9

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	19 (90.4762%)	8/18/2010	ND<10	ND<10
			9/29/2010	ND<10	ND<10
			12/14/2010	ND<10	ND<10
			4/5/2011	ND<10	ND<10
			10/17/2011	10	10
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<10	ND<10
			4/25/2016	ND<10	ND<10
			6/29/2016	ND<10	ND<10
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	10.1	10.1
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<10	ND<10
			1/4/2018	ND<10	ND<10
MW-2	21	19 (90.4762%)	8/18/2010	28	28
			9/29/2010	ND<10	ND<10
			12/14/2010	12	12
			4/5/2011	ND<10	ND<10
			10/17/2011	ND<10	ND<10
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<10	ND<10
			4/25/2016	ND<10	ND<10
			6/29/2016	ND<10	ND<10
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	ND<10	ND<10
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<10	ND<10
			1/4/2018	ND<10	ND<10

Parameter: Copper

Concentrations (ppb)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 63
Total Non-Detect: 26
Percent Non-Detects: 41.2698%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	9 (42.8571%)	8/18/2010	77	77
			9/29/2010	43	43
			12/14/2010	16	16
			4/5/2011	11	11
			10/17/2011	12	12
			4/24/2012	6.4	6.4
			10/24/2012	5.2	5.2
			4/30/2013	7.9	7.9
			11/26/2013	6.6	6.6
			5/5/2014	5.7	5.7
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<5	ND<5
			11/10/2015	ND<5	ND<5
			4/25/2016	ND<5	ND<5
			6/29/2016	ND<5	ND<5
			9/21/2016	ND<5	ND<5
			12/28/2016	ND<5	ND<5
			3/27/2017	ND<5	ND<5
			6/29/2017	8.36	8.36
			9/22/2017	ND<5	ND<5
			1/4/2018	54.6	54.6

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	8 (38.0952%)	8/18/2010	36	36
			9/29/2010	1.7	1.7
			12/14/2010	4.8	4.8
			4/5/2011	7.2	7.2
			10/17/2011	4.4	4.4
			4/24/2012	ND<2	ND<2
			10/24/2012	3.4	3.4
			4/30/2013	14	14
			11/26/2013	9.4	9.4
			5/5/2014	12	12
			11/19/2014	ND<5	ND<5
			4/29/2015	ND<5	ND<5
			11/10/2015	ND<5	ND<5
			4/25/2016	10.8	10.8
			6/29/2016	ND<5	ND<5
			9/21/2016	ND<5	ND<5
			12/28/2016	ND<5	ND<5
			3/27/2017	26.6	26.6
			6/29/2017	ND<5	ND<5
			9/22/2017	10.3	10.3
			1/4/2018	41.7	41.7
MW-2	21	9 (42.8571%)	8/18/2010	63	63
			9/29/2010	18	18
			12/14/2010	22	22
			4/5/2011	9	9
			10/17/2011	28	28
			4/24/2012	ND<2	ND<2
			10/24/2012	7	7
			4/30/2013	21	21
			11/26/2013	5.6	5.6
			5/5/2014	5.6	5.6
			11/19/2014	ND<5	ND<5
			4/29/2015	ND<5	ND<5
			11/10/2015	ND<5	ND<5
			4/25/2016	ND<5	ND<5
			6/29/2016	11.9	11.9
			9/21/2016	ND<5	ND<5
			12/28/2016	ND<5	ND<5
			3/27/2017	ND<5	ND<5
			6/29/2017	ND<5	ND<5
			9/22/2017	5.94	5.94
			1/4/2018	16.1	16.1

Parameter: Lead

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

Total Measurements: 63
Total Non-Detect: 25
Percent Non-Detects: 39.6825%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	8 (38.0952%)	8/18/2010	140	140
			9/29/2010	69	69
			12/14/2010	19	19
			4/5/2011	12	12
			10/17/2011	12	12
			4/24/2012	6	6
			10/24/2012	3.3	3.3
			4/30/2013	6.4	6.4
			11/26/2013	4.1	4.1
			5/5/2014	4.5	4.5
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	2.17	2.17
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	9.64	9.64
			9/22/2017	ND<2	ND<2
			1/4/2018	77.1	77.1

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	7 (33.3333%)	8/18/2010	65	65
			9/29/2010	11	11
			12/14/2010	2.9	2.9
			4/5/2011	3.3	3.3
			10/17/2011	2.8	2.8
			4/24/2012	ND<1	ND<1
			10/24/2012	1.2	1.2
			4/30/2013	4.4	4.4
			11/26/2013	2.3	2.3
			5/5/2014	4.7	4.7
			11/19/2014	ND<2	ND<2
			4/29/2015	4	4
			11/10/2015	ND<2	ND<2
			4/25/2016	4.65	4.65
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	26.8	26.8
			6/29/2017	ND<2	ND<2
			9/22/2017	3.37	3.37
			1/4/2018	43.7	43.7
MW-2	21	10 (47.619%)	8/18/2010	66	66
			9/29/2010	1.4	1.4
			12/14/2010	16	16
			4/5/2011	4.6	4.6
			10/17/2011	17	17
			4/24/2012	ND<1	ND<1
			10/24/2012	3.1	3.1
			4/30/2013	10	10
			11/26/2013	1.9	1.9
			5/5/2014	2	2
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	22.7	22.7
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	ND<2	ND<2
			1/4/2018	6.32	6.32

Parameter: Magnesium

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

Total Measurements: 63
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	0 (0%)	8/18/2010	36000	36000
			9/29/2010	29000	29000
			12/14/2010	19000	19000
			4/5/2011	23000	23000
			10/17/2011	22000	22000
			4/24/2012	19000	19000
			10/24/2012	17000	17000
			4/30/2013	18000	18000
			11/26/2013	18000	18000
			5/5/2014	18000	18000
			11/19/2014	14000	14000
			4/29/2015	20000	20000
			11/10/2015	16500	16500
			4/25/2016	20200	20200
			6/29/2016	21800	21800
			9/21/2016	20800	20800
			12/28/2016	21600	21600
			3/27/2017	22000	22000
			6/29/2017	22900	22900
			9/22/2017	23900	23900
			1/4/2018	27000	27000

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	0 (0%)	8/18/2010	22000	22000
			9/29/2010	22000	22000
			12/14/2010	22000	22000
			4/5/2011	21000	21000
			10/17/2011	25000	25000
			4/24/2012	20000	20000
			10/24/2012	21000	21000
			4/30/2013	23000	23000
			11/26/2013	21000	21000
			5/5/2014	23000	23000
			11/19/2014	7200	7200
			4/29/2015	23000	23000
			11/10/2015	23500	23500
			4/25/2016	26900	26900
			6/29/2016	25200	25200
			9/21/2016	25000	25000
			12/28/2016	25500	25500
			3/27/2017	30400	30400
			6/29/2017	26200	26200
			9/22/2017	22700	22700
			1/4/2018	30300	30300
MW-2	21	0 (0%)	8/18/2010	34000	34000
			9/29/2010	24000	24000
			12/14/2010	26000	26000
			4/5/2011	20000	20000
			10/17/2011	21000	21000
			4/24/2012	21000	21000
			10/24/2012	21000	21000
			4/30/2013	24000	24000
			11/26/2013	20000	20000
			5/5/2014	23000	23000
			11/19/2014	17000	17000
			4/29/2015	21000	21000
			11/10/2015	22300	22300
			4/25/2016	20400	20400
			6/29/2016	22000	22000
			9/21/2016	20900	20900
			12/28/2016	21800	21800
			3/27/2017	22200	22200
			6/29/2017	21500	21500
			9/22/2017	26500	26500
			1/4/2018	26400	26400

Parameter: Mercury

Concentrations (ppb)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 63
Total Non-Detect: 63
Percent Non-Detects: 100%
Total Background Measurements: 20
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	20	20 (100%)	8/18/2010	ND<0.2	ND<0.2
			9/29/2010	ND<0.2	ND<0.2
			12/14/2010	ND<0.2	ND<0.2
			4/5/2011	ND<0.2	ND<0.2
			10/17/2011	ND<0.2	ND<0.2
			4/24/2012	ND<0.2	ND<0.2
			10/24/2012	ND<0.2	ND<0.2
			4/30/2013	ND<0.2	ND<0.2
			5/5/2014	ND<0.2	ND<0.2
			11/19/2014	ND<0.2	ND<0.2
			4/29/2015	ND<0.2	ND<0.2
			11/10/2015	ND<0.2	ND<0.2
			4/25/2016	ND<0.2	ND<0.2
			6/29/2016	ND<0.2	ND<0.2
			9/21/2016	ND<0.2	ND<0.2
			12/28/2016	ND<0.2	ND<0.2
			3/27/2017	ND<0.2	ND<0.2
			6/29/2017	ND<0.2	ND<0.2
			9/22/2017	ND<0.2	ND<0.2
			1/4/2018	ND<0.2	ND<0.2

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	22	22 (100%)	8/18/2010	ND<0.2	ND<0.2
			9/29/2010	ND<0.2	ND<0.2
			12/14/2010	ND<0.2	ND<0.2
			4/5/2011	ND<0.2	ND<0.2
			10/17/2011	ND<0.2	ND<0.2
			4/24/2012	ND<0.2	ND<0.2
			10/24/2012	ND<0.2	ND<0.2
			4/30/2013	ND<0.2	ND<0.2
			11/26/2013	ND<0.2	ND<0.2
			11/26/2013	ND<0.2	ND<0.2
			5/5/2014	ND<0.2	ND<0.2
			11/19/2014	ND<0.2	ND<0.2
			4/29/2015	ND<0.2	ND<0.2
			11/10/2015	ND<0.2	ND<0.2
			4/25/2016	ND<0.2	ND<0.2
			6/29/2016	ND<0.2	ND<0.2
			9/21/2016	ND<0.2	ND<0.2
			12/28/2016	ND<0.2	ND<0.2
			3/27/2017	ND<0.2	ND<0.2
			6/29/2017	ND<0.2	ND<0.2
			9/22/2017	ND<0.2	ND<0.2
			1/4/2018	ND<0.2	ND<0.2
MW-2	21	21 (100%)	8/18/2010	ND<0.2	ND<0.2
			9/29/2010	ND<0.2	ND<0.2
			12/14/2010	ND<0.2	ND<0.2
			4/5/2011	ND<0.2	ND<0.2
			10/17/2011	ND<0.2	ND<0.2
			4/24/2012	ND<0.2	ND<0.2
			10/24/2012	ND<0.2	ND<0.2
			4/30/2013	ND<0.2	ND<0.2
			11/26/2013	ND<0.2	ND<0.2
			5/5/2014	ND<0.2	ND<0.2
			11/19/2014	ND<0.2	ND<0.2
			4/29/2015	ND<0.2	ND<0.2
			11/10/2015	ND<0.2	ND<0.2
			4/25/2016	ND<0.2	ND<0.2
			6/29/2016	ND<0.2	ND<0.2
			9/21/2016	ND<0.2	ND<0.2
			12/28/2016	ND<0.2	ND<0.2
			3/27/2017	ND<0.2	ND<0.2
			6/29/2017	ND<0.2	ND<0.2
			9/22/2017	ND<0.2	ND<0.2
			1/4/2018	ND<0.2	ND<0.2

Parameter: Nickel

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

Total Measurements: 63
Total Non-Detect: 55
Percent Non-Detects: 87.3016%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	18 (85.7143%)	8/18/2010	65	65
			9/29/2010	31	31
			12/14/2010	ND<20	ND<20
			4/5/2011	ND<20	ND<20
			10/17/2011	ND<20	ND<20
			4/24/2012	ND<20	ND<20
			10/24/2012	ND<20	ND<20
			4/30/2013	ND<20	ND<20
			11/26/2013	ND<20	ND<20
			5/5/2014	ND<20	ND<20
			11/19/2014	ND<20	ND<20
			4/29/2015	ND<20	ND<20
			11/10/2015	ND<20	ND<20
			4/25/2016	ND<10	ND<10
			6/29/2016	ND<10	ND<10
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	ND<10	ND<10
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<10	ND<10
			1/4/2018	26.7	26.7

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	18 (85.7143%)	8/18/2010	ND<20	ND<20
			9/29/2010	ND<20	ND<20
			12/14/2010	ND<20	ND<20
			4/5/2011	ND<20	ND<20
			10/17/2011	22	22
			4/24/2012	ND<20	ND<20
			10/24/2012	ND<20	ND<20
			4/30/2013	ND<20	ND<20
			11/26/2013	ND<20	ND<20
			5/5/2014	ND<20	ND<20
			11/19/2014	ND<20	ND<20
			4/29/2015	ND<20	ND<20
			11/10/2015	ND<20	ND<20
			4/25/2016	ND<10	ND<10
			6/29/2016	ND<10	ND<10
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	14.8	14.8
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<10	ND<10
			1/4/2018	15.8	15.8
MW-2	21	19 (90.4762%)	8/18/2010	54	54
			9/29/2010	ND<20	ND<20
			12/14/2010	ND<20	ND<20
			4/5/2011	ND<20	ND<20
			10/17/2011	ND<20	ND<20
			4/24/2012	ND<20	ND<20
			10/24/2012	ND<20	ND<20
			4/30/2013	ND<20	ND<20
			11/26/2013	ND<20	ND<20
			5/5/2014	ND<20	ND<20
			11/19/2014	ND<20	ND<20
			4/29/2015	ND<20	ND<20
			11/10/2015	ND<20	ND<20
			4/25/2016	ND<10	ND<10
			6/29/2016	12.1	12.1
			9/21/2016	ND<10	ND<10
			12/28/2016	ND<10	ND<10
			3/27/2017	ND<10	ND<10
			6/29/2017	ND<10	ND<10
			9/22/2017	ND<10	ND<10
			1/4/2018	ND<10	ND<10

Parameter: Nitrate

Concentrations (ppb)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 63
Total Non-Detect: 17
Percent Non-Detects: 26.9841%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	0 (0%)	8/18/2010	15000	15000
			9/29/2010	19000	19000
			12/14/2010	12000	12000
			4/5/2011	15000	15000
			10/17/2011	15000	15000
			4/24/2012	17000	17000
			10/24/2012	15000	15000
			4/30/2013	15000	15000
			11/26/2013	17000	17000
			5/5/2014	12000	12000
			11/19/2014	12000	12000
			4/29/2015	10000	10000
			11/10/2015	11200	11200
			4/25/2016	10700	10700
			6/29/2016	13200	13200
			9/21/2016	10500	10500
			12/28/2016	9100	9100
			3/27/2017	9640	9640
			6/29/2017	9810	9810
			9/22/2017	10500	10500
			1/4/2018	8790	8790

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	0 (0%)	8/18/2010	6300	6300
			9/29/2010	5900	5900
			12/14/2010	5200	5200
			4/5/2011	4300	4300
			10/17/2011	4500	4500
			4/24/2012	3600	3600
			10/24/2012	3900	3900
			4/30/2013	4100	4100
			11/26/2013	3300	3300
			5/5/2014	4300	4300
			11/19/2014	4500	4500
			4/29/2015	5800	5800
			11/10/2015	6580	6580
			4/25/2016	8940	8940
			6/29/2016	9080	9080
			9/21/2016	8840	8840
			12/28/2016	8960	8960
			3/27/2017	9660	9660
			6/29/2017	9630	9630
			9/22/2017	134	134
			1/4/2018	7160	7160
MW-2	21	17 (80.9524%)	8/18/2010	ND<100	ND<100
			9/29/2010	ND<100	ND<100
			12/14/2010	ND<100	ND<100
			4/5/2011	170	170
			10/17/2011	ND<100	ND<100
			4/24/2012	120	120
			10/24/2012	ND<100	ND<100
			4/30/2013	ND<100	ND<100
			11/26/2013	ND<100	ND<100
			5/5/2014	ND<100	ND<100
			11/19/2014	ND<100	ND<100
			4/29/2015	ND<100	ND<100
			11/10/2015	ND<100	ND<100
			4/25/2016	ND<100	ND<100
			6/29/2016	148	148
			9/21/2016	ND<100	ND<100
			12/28/2016	ND<100	ND<100
			3/27/2017	ND<100	ND<100
			6/29/2017	ND<100	ND<100
			9/22/2017	9690	9690
			1/4/2018	ND<100	ND<100

Parameter: Nitrite

Concentrations (ppb)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 63
Total Non-Detect: 63
Percent Non-Detects: 100%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	21 (100%)	8/18/2010	ND<100	ND<100
			9/29/2010	ND<100	ND<100
			12/14/2010	ND<100	ND<100
			4/5/2011	ND<100	ND<100
			10/17/2011	ND<100	ND<100
			4/24/2012	ND<100	ND<100
			10/24/2012	ND<100	ND<100
			4/30/2013	ND<100	ND<100
			11/26/2013	ND<100	ND<100
			5/5/2014	ND<100	ND<100
			11/19/2014	ND<100	ND<100
			4/29/2015	ND<100	ND<100
			11/10/2015	ND<100	ND<100
			4/25/2016	ND<100	ND<100
			6/29/2016	ND<100	ND<100
			9/21/2016	ND<100	ND<100
			12/28/2016	ND<100	ND<100
			3/27/2017	ND<100	ND<100
			6/29/2017	ND<100	ND<100
			9/22/2017	ND<100	ND<100
			1/4/2018	ND<100	ND<100

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	21 (100%)	8/18/2010	ND<100	ND<100
			9/29/2010	ND<100	ND<100
			12/14/2010	ND<100	ND<100
			4/5/2011	ND<100	ND<100
			10/17/2011	ND<100	ND<100
			4/24/2012	ND<100	ND<100
			10/24/2012	ND<100	ND<100
			4/30/2013	ND<100	ND<100
			11/26/2013	ND<100	ND<100
			5/5/2014	ND<100	ND<100
			11/19/2014	ND<100	ND<100
			4/29/2015	ND<100	ND<100
			11/10/2015	ND<100	ND<100
			4/25/2016	ND<100	ND<100
			6/29/2016	ND<100	ND<100
			9/21/2016	ND<100	ND<100
			12/28/2016	ND<100	ND<100
			3/27/2017	ND<100	ND<100
			6/29/2017	ND<100	ND<100
			9/22/2017	ND<100	ND<100
			1/4/2018	ND<100	ND<100
MW-2	21	21 (100%)	8/18/2010	ND<100	ND<100
			9/29/2010	ND<100	ND<100
			12/14/2010	ND<100	ND<100
			4/5/2011	ND<100	ND<100
			10/17/2011	ND<100	ND<100
			4/24/2012	ND<100	ND<100
			10/24/2012	ND<100	ND<100
			4/30/2013	ND<100	ND<100
			11/26/2013	ND<100	ND<100
			5/5/2014	ND<100	ND<100
			11/19/2014	ND<100	ND<100
			4/29/2015	ND<100	ND<100
			11/10/2015	ND<100	ND<100
			4/25/2016	ND<100	ND<100
			6/29/2016	ND<100	ND<100
			9/21/2016	ND<100	ND<100
			12/28/2016	ND<100	ND<100
			3/27/2017	ND<100	ND<100
			6/29/2017	ND<100	ND<100
			9/22/2017	ND<100	ND<100
			1/4/2018	ND<100	ND<100

Parameter: pH

Concentrations (ppb)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 63
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	0 (0%)	8/18/2010	7.2	7.2
			9/29/2010	7.4	7.4
			12/14/2010	7.5	7.5
			4/5/2011	6.9	6.9
			10/17/2011	7.8	7.8
			4/24/2012	7	7
			10/24/2012	7.3	7.3
			4/30/2013	7.2	7.2
			11/26/2013	7.3	7.3
			5/5/2014	7.3	7.3
			11/19/2014	7.3	7.3
			4/29/2015	6.8	6.8
			11/10/2015	7.07	7.07
			4/25/2016	6.48	6.48
			6/29/2016	6.87	6.87
			9/21/2016	7.08	7.08
			12/28/2016	7	7
			3/27/2017	7.11	7.11
			6/29/2017	7.09	7.09
			9/22/2017	7.01	7.01
			1/4/2018	6.92	6.92

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	0 (0%)	8/18/2010	7.3	7.3
			9/29/2010	7.5	7.5
			12/14/2010	7.1	7.1
			4/5/2011	7	7
			10/17/2011	7.5	7.5
			4/24/2012	7.3	7.3
			10/24/2012	7.6	7.6
			4/30/2013	7.3	7.3
			11/26/2013	7.8	7.8
			5/5/2014	7.4	7.4
			11/19/2014	7.8	7.8
			4/29/2015	6.9	6.9
			11/10/2015	7.29	7.29
			4/25/2016	6.67	6.67
			6/29/2016	7.09	7.09
			9/21/2016	7.33	7.33
			12/28/2016	7.36	7.36
			3/27/2017	7.23	7.23
			6/29/2017	7.29	7.29
			9/22/2017	7.17	7.17
			1/4/2018	6.98	6.98
MW-2	21	0 (0%)	8/18/2010	7.4	7.4
			9/29/2010	7.7	7.7
			12/14/2010	7.4	7.4
			4/5/2011	7.1	7.1
			10/17/2011	7.7	7.7
			4/24/2012	7.5	7.5
			10/24/2012	7.5	7.5
			4/30/2013	7.6	7.6
			11/26/2013	7.6	7.6
			5/5/2014	7.4	7.4
			11/19/2014	7.7	7.7
			4/29/2015	7.2	7.2
			11/10/2015	7.44	7.44
			4/25/2016	7.03	7.03
			6/29/2016	7.2	7.2
			9/21/2016	7.51	7.51
			12/28/2016	7.41	7.41
			3/27/2017	7.59	7.59
			6/29/2017	7.41	7.41
			9/22/2017	7.37	7.37
			1/4/2018	7.31	7.31

Parameter: Potassium

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

Total Measurements: 63
Total Non-Detect: 1
Percent Non-Detects: 1.5873%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	0 (0%)	8/18/2010	32000	32000
			9/29/2010	16000	16000
			12/14/2010	13000	13000
			4/5/2011	13000	13000
			10/17/2011	8400	8400
			4/24/2012	8100	8100
			10/24/2012	10000	10000
			4/30/2013	12000	12000
			11/26/2013	12000	12000
			5/5/2014	11000	11000
			11/19/2014	60000	60000
			4/29/2015	7700	7700
			11/10/2015	8180	8180
			4/25/2016	8520	8520
			6/29/2016	8770	8770
			9/21/2016	7740	7740
			12/28/2016	8350	8350
			3/27/2017	7560	7560
			6/29/2017	9300	9300
			9/22/2017	8320	8320
			1/4/2018	16100	16100

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	1 (4.7619%)	8/18/2010	10000	10000
			9/29/2010	8700	8700
			12/14/2010	9500	9500
			4/5/2011	8500	8500
			10/17/2011	17000	17000
			4/24/2012	7300	7300
			10/24/2012	8000	8000
			4/30/2013	7900	7900
			11/26/2013	8600	8600
			5/5/2014	9100	9100
			11/19/2014	ND<1000	ND<1000
			4/29/2015	9300	9300
			11/10/2015	8640	8640
			4/25/2016	8400	8400
			6/29/2016	9720	9720
			9/21/2016	8640	8640
			12/28/2016	9270	9270
			3/27/2017	11100	11100
			6/29/2017	8880	8880
			9/22/2017	12600	12600
			1/4/2018	11600	11600
MW-2	21	0 (0%)	8/18/2010	33000	33000
			9/29/2010	14000	14000
			12/14/2010	14000	14000
			4/5/2011	9800	9800
			10/17/2011	13000	13000
			4/24/2012	9900	9900
			10/24/2012	11000	11000
			4/30/2013	13000	13000
			11/26/2013	10000	10000
			5/5/2014	12000	12000
			11/19/2014	1600	1600
			4/29/2015	12000	12000
			11/10/2015	11900	11900
			4/25/2016	12000	12000
			6/29/2016	14800	14800
			9/21/2016	12500	12500
			12/28/2016	11400	11400
			3/27/2017	10300	10300
			6/29/2017	13400	13400
			9/22/2017	8850	8850
			1/4/2018	14500	14500

Parameter: Selenium

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

Total Measurements: 63
Total Non-Detect: 18
Percent Non-Detects: 28.5714%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	3 (14.2857%)	8/18/2010	ND<5	ND<5
			9/29/2010	6.1	6.1
			12/14/2010	4.3	4.3
			4/5/2011	6.8	6.8
			10/17/2011	4.4	4.4
			4/24/2012	4	4
			10/24/2012	5.2	5.2
			4/30/2013	4.2	4.2
			11/26/2013	4.1	4.1
			5/5/2014	4	4
			11/19/2014	ND<2	ND<2
			4/29/2015	3.2	3.2
			11/10/2015	2.2	2.2
			4/25/2016	2.03	2.03
			6/29/2016	ND<2	ND<2
			9/21/2016	2.23	2.23
			12/28/2016	2.26	2.26
			3/27/2017	2.97	2.97
			6/29/2017	2.84	2.84
			9/22/2017	2.73	2.73
			1/4/2018	7.05	7.05

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	4 (19.0476%)	8/18/2010	3.2	3.2
			9/29/2010	4.3	4.3
			12/14/2010	38	38
			4/5/2011	4.6	4.6
			10/17/2011	3.4	3.4
			4/24/2012	2.2	2.2
			10/24/2012	3.6	3.6
			4/30/2013	3.3	3.3
			11/26/2013	3.3	3.3
			5/5/2014	2.1	2.1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	2.65	2.65
			6/29/2016	2.23	2.23
			9/21/2016	2.51	2.51
			12/28/2016	2.3	2.3
			3/27/2017	3.9	3.9
			6/29/2017	2.7	2.7
			9/22/2017	ND<2	ND<2
			1/4/2018	4.56	4.56
MW-2	21	11 (52.381%)	8/18/2010	ND<5	ND<5
			9/29/2010	4.9	4.9
			12/14/2010	3.2	3.2
			4/5/2011	3.9	3.9
			10/17/2011	3.6	3.6
			4/24/2012	2	2
			10/24/2012	3.6	3.6
			4/30/2013	3.1	3.1
			11/26/2013	3.6	3.6
			5/5/2014	2.1	2.1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	2.58	2.58
			1/4/2018	ND<2	ND<2

Parameter: Silver

Concentrations (ppb)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 63
Total Non-Detect: 63
Percent Non-Detects: 100%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	21 (100%)	8/18/2010	ND<10	ND<10
			9/29/2010	ND<10	ND<10
			12/14/2010	ND<10	ND<10
			4/5/2011	ND<10	ND<10
			10/17/2011	ND<10	ND<10
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<5	ND<5
			4/25/2016	ND<5	ND<5
			6/29/2016	ND<5	ND<5
			9/21/2016	ND<5	ND<5
			12/28/2016	ND<5	ND<5
			3/27/2017	ND<5	ND<5
			6/29/2017	ND<5	ND<5
			9/22/2017	ND<5	ND<5
			1/4/2018	ND<5	ND<5

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	21 (100%)	8/18/2010	ND<10	ND<10
			9/29/2010	ND<10	ND<10
			12/14/2010	ND<10	ND<10
			4/5/2011	ND<10	ND<10
			10/17/2011	ND<10	ND<10
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<5	ND<5
			4/25/2016	ND<5	ND<5
			6/29/2016	ND<5	ND<5
			9/21/2016	ND<5	ND<5
			12/28/2016	ND<5	ND<5
			3/27/2017	ND<5	ND<5
			6/29/2017	ND<5	ND<5
			9/22/2017	ND<5	ND<5
			1/4/2018	ND<5	ND<5
MW-2	21	21 (100%)	8/18/2010	ND<10	ND<10
			9/29/2010	ND<10	ND<10
			12/14/2010	ND<10	ND<10
			4/5/2011	ND<10	ND<10
			10/17/2011	ND<10	ND<10
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<5	ND<5
			4/25/2016	ND<5	ND<5
			6/29/2016	ND<5	ND<5
			9/21/2016	ND<5	ND<5
			12/28/2016	ND<5	ND<5
			3/27/2017	ND<5	ND<5
			6/29/2017	ND<5	ND<5
			9/22/2017	ND<5	ND<5
			1/4/2018	ND<5	ND<5

Parameter: Sodium

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

Total Measurements: 63
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	0 (0%)	8/18/2010	100000	100000
			9/29/2010	95000	95000
			12/14/2010	96000	96000
			4/5/2011	92000	92000
			10/17/2011	120000	120000
			4/24/2012	110000	110000
			10/24/2012	100000	100000
			4/30/2013	100000	100000
			11/26/2013	100000	100000
			5/5/2014	100000	100000
			11/19/2014	27000	27000
			4/29/2015	110000	110000
			11/10/2015	92000	92000
			4/25/2016	99200	99200
			6/29/2016	99700	99700
			9/21/2016	103000	103000
			12/28/2016	108000	108000
			3/27/2017	104000	104000
			6/29/2017	108000	108000
			9/22/2017	113000	113000
			1/4/2018	111000	111000

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	0 (0%)	8/18/2010	140000	140000
			9/29/2010	120000	120000
			12/14/2010	140000	140000
			4/5/2011	120000	120000
			10/17/2011	160000	160000
			4/24/2012	120000	120000
			10/24/2012	120000	120000
			4/30/2013	120000	120000
			11/26/2013	120000	120000
			5/5/2014	120000	120000
			11/19/2014	6400	6400
			4/29/2015	120000	120000
			11/10/2015	120000	120000
			4/25/2016	127000	127000
			6/29/2016	122000	122000
			9/21/2016	119000	119000
			12/28/2016	117000	117000
			3/27/2017	117000	117000
			6/29/2017	111000	111000
			9/22/2017	195000	195000
			1/4/2018	114000	114000
MW-2	21	0 (0%)	8/18/2010	160000	160000
			9/29/2010	140000	140000
			12/14/2010	160000	160000
			4/5/2011	150000	150000
			10/17/2011	110000	110000
			4/24/2012	180000	180000
			10/24/2012	170000	170000
			4/30/2013	190000	190000
			11/26/2013	200000	200000
			5/5/2014	210000	210000
			11/19/2014	6800	6800
			4/29/2015	200000	200000
			11/10/2015	191000	191000
			4/25/2016	191000	191000
			6/29/2016	188000	188000
			9/21/2016	194000	194000
			12/28/2016	196000	196000
			3/27/2017	193000	193000
			6/29/2017	195000	195000
			9/22/2017	110000	110000
			1/4/2018	207000	207000

Parameter: Specific Conductance

Concentrations (ppb)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 63
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	0 (0%)	8/18/2010	1000	1000
			9/29/2010	1200	1200
			12/14/2010	950	950
			4/5/2011	1100	1100
			10/17/2011	1100	1100
			4/24/2012	1000	1000
			10/24/2012	1000	1000
			4/30/2013	1100	1100
			11/26/2013	1100	1100
			5/5/2014	950	950
			11/19/2014	1100	1100
			4/29/2015	1100	1100
			11/10/2015	988	988
			4/25/2016	1100	1100
			6/29/2016	1080	1080
			9/21/2016	1140	1140
			12/28/2016	1160	1160
			3/27/2017	1170	1170
			6/29/2017	1260	1260
			9/22/2017	1330	1330
			1/4/2018	1200	1200

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	0 (0%)	8/18/2010	1200	1200
			9/29/2010	1200	1200
			12/14/2010	1100	1100
			4/5/2011	1100	1100
			10/17/2011	1100	1100
			4/24/2012	1000	1000
			10/24/2012	1000	1000
			4/30/2013	1100	1100
			11/26/2013	1000	1000
			5/5/2014	1000	1000
			11/19/2014	1100	1100
			4/29/2015	1100	1100
			11/10/2015	1130	1130
			4/25/2016	1130	1130
			6/29/2016	1120	1120
			9/21/2016	1120	1120
			12/28/2016	1130	1130
			3/27/2017	1170	1170
			6/29/2017	1190	1190
			9/22/2017	1560	1560
			1/4/2018	1220	1220
MW-2	21	0 (0%)	8/18/2010	1200	1200
			9/29/2010	1200	1200
			12/14/2010	1200	1200
			4/5/2011	1200	1200
			10/17/2011	1200	1200
			4/24/2012	1200	1200
			10/24/2012	1300	1300
			4/30/2013	1400	1400
			11/26/2013	1500	1500
			5/5/2014	1400	1400
			11/19/2014	1400	1400
			4/29/2015	1400	1400
			11/10/2015	1510	1510
			4/25/2016	1380	1380
			6/29/2016	1420	1420
			9/21/2016	1430	1430
			12/28/2016	1440	1440
			3/27/2017	1480	1480
			6/29/2017	1550	1550
			9/22/2017	1200	1200
			1/4/2018	1580	1580

Parameter: Sulfate

Concentrations (ppb)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 63
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	0 (0%)	8/18/2010	110000	110000
			9/29/2010	140000	140000
			12/14/2010	60000	60000
			4/5/2011	120000	120000
			10/17/2011	130000	130000
			4/24/2012	140000	140000
			10/24/2012	140000	140000
			4/30/2013	110000	110000
			11/26/2013	120000	120000
			5/5/2014	120000	120000
			11/19/2014	140000	140000
			4/29/2015	160000	160000
			11/10/2015	101000	101000
			4/25/2016	112000	112000
			6/29/2016	135000	135000
			9/21/2016	112000	112000
			12/28/2016	121000	121000
			3/27/2017	141000	141000
			6/29/2017	140000	140000
			9/22/2017	141000	141000
			1/4/2018	138000	138000

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	0 (0%)	8/18/2010	190000	190000
			9/29/2010	110	110
			12/14/2010	180000	180000
			4/5/2011	180000	180000
			10/17/2011	180000	180000
			4/24/2012	180000	180000
			10/24/2012	170000	170000
			4/30/2013	180000	180000
			11/26/2013	160000	160000
			5/5/2014	160000	160000
			11/19/2014	160000	160000
			4/29/2015	170000	170000
			11/10/2015	88400	88400
			4/25/2016	128000	128000
			6/29/2016	124000	124000
			9/21/2016	118000	118000
			12/28/2016	126000	126000
			3/27/2017	122000	122000
			6/29/2017	119000	119000
			9/22/2017	303000	303000
			1/4/2018	131000	131000
MW-2	21	0 (0%)	8/18/2010	190000	190000
			9/29/2010	190000	190000
			12/14/2010	180000	180000
			4/5/2011	230000	230000
			10/17/2011	210000	210000
			4/24/2012	230000	230000
			10/24/2012	200000	200000
			4/30/2013	250000	250000
			11/26/2013	270000	270000
			5/5/2014	280000	280000
			11/19/2014	280000	280000
			4/29/2015	322000	322000
			11/10/2015	303000	303000
			4/25/2016	273000	273000
			6/29/2016	289000	289000
			9/21/2016	276000	276000
			12/28/2016	320000	320000
			3/27/2017	300000	300000
			6/29/2017	297000	297000
			9/22/2017	119000	119000
			1/4/2018	417000	417000

Parameter: Thallium

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

Total Measurements: 63
Total Non-Detect: 61
Percent Non-Detects: 96.8254%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	20 (95.2381%)	8/18/2010	1.5	1.5
			9/29/2010	ND<1	ND<1
			12/14/2010	ND<1	ND<1
			4/5/2011	ND<1	ND<1
			10/17/2011	ND<1	ND<1
			4/24/2012	ND<1	ND<1
			10/24/2012	ND<1	ND<1
			4/30/2013	ND<1	ND<1
			11/26/2013	ND<1	ND<1
			5/5/2014	ND<1	ND<1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	ND<2	ND<2
			1/4/2018	ND<2	ND<2

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	21 (100%)	8/18/2010	ND<1	ND<1
			9/29/2010	ND<1	ND<1
			12/14/2010	ND<1	ND<1
			4/5/2011	ND<1	ND<1
			10/17/2011	ND<1	ND<1
			4/24/2012	ND<1	ND<1
			10/24/2012	ND<1	ND<1
			4/30/2013	ND<1	ND<1
			11/26/2013	ND<1	ND<1
			5/5/2014	ND<1	ND<1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	ND<2	ND<2
			1/4/2018	ND<2	ND<2
MW-2	21	20 (95.2381%)	8/18/2010	1.2	1.2
			9/29/2010	ND<1	ND<1
			12/14/2010	ND<1	ND<1
			4/5/2011	ND<1	ND<1
			10/17/2011	ND<1	ND<1
			4/24/2012	ND<1	ND<1
			10/24/2012	ND<1	ND<1
			4/30/2013	ND<1	ND<1
			11/26/2013	ND<1	ND<1
			5/5/2014	ND<1	ND<1
			11/19/2014	ND<2	ND<2
			4/29/2015	ND<2	ND<2
			11/10/2015	ND<2	ND<2
			4/25/2016	ND<2	ND<2
			6/29/2016	ND<2	ND<2
			9/21/2016	ND<2	ND<2
			12/28/2016	ND<2	ND<2
			3/27/2017	ND<2	ND<2
			6/29/2017	ND<2	ND<2
			9/22/2017	ND<2	ND<2
			1/4/2018	ND<2	ND<2

Parameter: TOC (Total Organic Carbon)

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

Total Measurements: 63
Total Non-Detect: 0
Percent Non-Detects: 0%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	0 (0%)	8/18/2010	2200	2200
			9/29/2010	4000	4000
			12/14/2010	3600	3600
			4/5/2011	2800	2800
			10/17/2011	2400	2400
			4/24/2012	3400	3400
			10/24/2012	2800	2800
			4/30/2013	2600	2600
			11/26/2013	2100	2100
			5/5/2014	1900	1900
			11/19/2014	1600	1600
			4/29/2015	5800	5800
			11/10/2015	2290	2290
			4/25/2016	1710	1710
			6/29/2016	2670	2670
			9/21/2016	2530	2530
			12/28/2016	2170	2170
			3/27/2017	1680	1680
			6/29/2017	1770	1770
			9/22/2017	2340	2340
			1/4/2018	2430	2430

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	0 (0%)	8/18/2010	3700	3700
			9/29/2010	3600	3600
			12/14/2010	2800	2800
			4/5/2011	1000	1000
			10/17/2011	3000	3000
			4/24/2012	2800	2800
			10/24/2012	2800	2800
			4/30/2013	3800	3800
			11/26/2013	2600	2600
			5/5/2014	2000	2000
			11/19/2014	2300	2300
			4/29/2015	2800	2800
			11/10/2015	2230	2230
			4/25/2016	1610	1610
			6/29/2016	1970	1970
			9/21/2016	2040	2040
			12/28/2016	2170	2170
			3/27/2017	1810	1810
			6/29/2017	1900	1900
			9/22/2017	5300	5300
			1/4/2018	2060	2060
MW-2	21	0 (0%)	8/18/2010	4900	4900
			9/29/2010	6300	6300
			12/14/2010	4500	4500
			4/5/2011	5300	5300
			10/17/2011	6100	6100
			4/24/2012	7400	7400
			10/24/2012	5500	5500
			4/30/2013	8000	8000
			11/26/2013	5600	5600
			5/5/2014	6500	6500
			11/19/2014	5000	5000
			4/29/2015	5800	5800
			11/10/2015	6020	6020
			4/25/2016	4670	4670
			6/29/2016	8700	8700
			9/21/2016	5320	5320
			12/28/2016	4720	4720
			3/27/2017	4490	4490
			6/29/2017	4740	4740
			9/22/2017	3480	3480
			1/4/2018	5170	5170

Parameter: Vanadium

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

Total Measurements: 63
Total Non-Detect: 51
Percent Non-Detects: 80.9524%
Total Background Measurements: 21
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	17 (80.9524%)	8/18/2010	150	150
			9/29/2010	31	31
			12/14/2010	29	29
			4/5/2011	ND<10	ND<10
			10/17/2011	ND<10	ND<10
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<10	ND<10
			4/25/2016	ND<20	ND<20
			6/29/2016	ND<20	ND<20
			9/21/2016	ND<20	ND<20
			12/28/2016	ND<20	ND<20
			3/27/2017	ND<20	ND<20
			6/29/2017	ND<20	ND<20
			9/22/2017	ND<20	ND<20
			1/4/2018	50.6	50.6

There are 2 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	17 (80.9524%)	8/18/2010	15	15
			9/29/2010	ND<10	ND<10
			12/14/2010	ND<10	ND<10
			4/5/2011	ND<10	ND<10
			10/17/2011	47	47
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	ND<10	ND<10
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<10	ND<10
			4/25/2016	ND<20	ND<20
			6/29/2016	ND<20	ND<20
			9/21/2016	ND<20	ND<20
			12/28/2016	ND<20	ND<20
			3/27/2017	33.7	33.7
			6/29/2017	ND<20	ND<20
			9/22/2017	ND<20	ND<20
			1/4/2018	28.2	28.2
MW-2	21	17 (80.9524%)	8/18/2010	150	150
			9/29/2010	ND<10	ND<10
			12/14/2010	33	33
			4/5/2011	ND<10	ND<10
			10/17/2011	25	25
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	19	19
			11/26/2013	ND<10	ND<10
			5/5/2014	ND<10	ND<10
			11/19/2014	ND<10	ND<10
			4/29/2015	ND<10	ND<10
			11/10/2015	ND<10	ND<10
			4/25/2016	ND<20	ND<20
			6/29/2016	ND<20	ND<20
			9/21/2016	ND<20	ND<20
			12/28/2016	ND<20	ND<20
			3/27/2017	ND<20	ND<20
			6/29/2017	ND<20	ND<20
			9/22/2017	ND<20	ND<20
			1/4/2018	ND<20	ND<20

Parameter: Zinc

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

Total Measurements: 63
Total Non-Detect: 29
Percent Non-Detects: 46.0317%
Total Background Measurements: 21
There is 1 background location

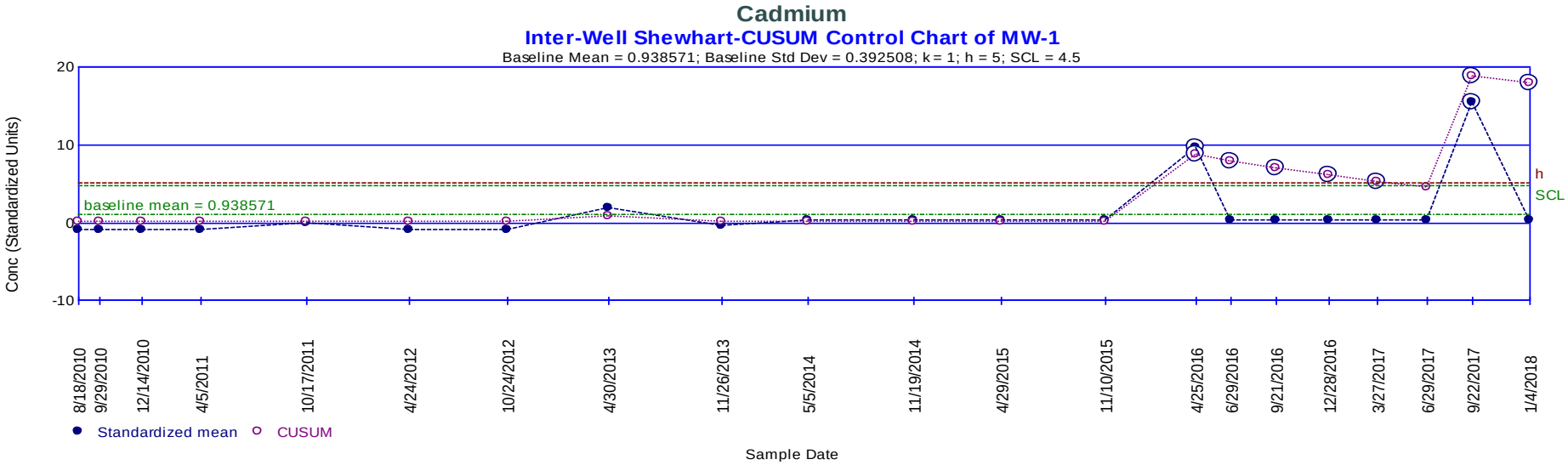
Loc.	Meas.	ND	Date	Conc.	Original
MW-3	21	9 (42.8571%)	8/18/2010	320	320
			9/29/2010	180	180
			12/14/2010	64	64
			4/5/2011	39	39
			10/17/2011	28	28
			4/24/2012	21	21
			10/24/2012	13	13
			4/30/2013	20	20
			11/26/2013	13	13
			5/5/2014	32	32
			11/19/2014	ND<25	ND<25
			4/29/2015	ND<25	ND<25
			11/10/2015	ND<25	ND<25
			4/25/2016	ND<25	ND<25
			6/29/2016	ND<25	ND<25
			9/21/2016	ND<25	ND<25
			12/28/2016	ND<25	ND<25
			3/27/2017	ND<25	ND<25
			6/29/2017	32	32
			9/22/2017	ND<25	ND<25
			1/4/2018	258	258

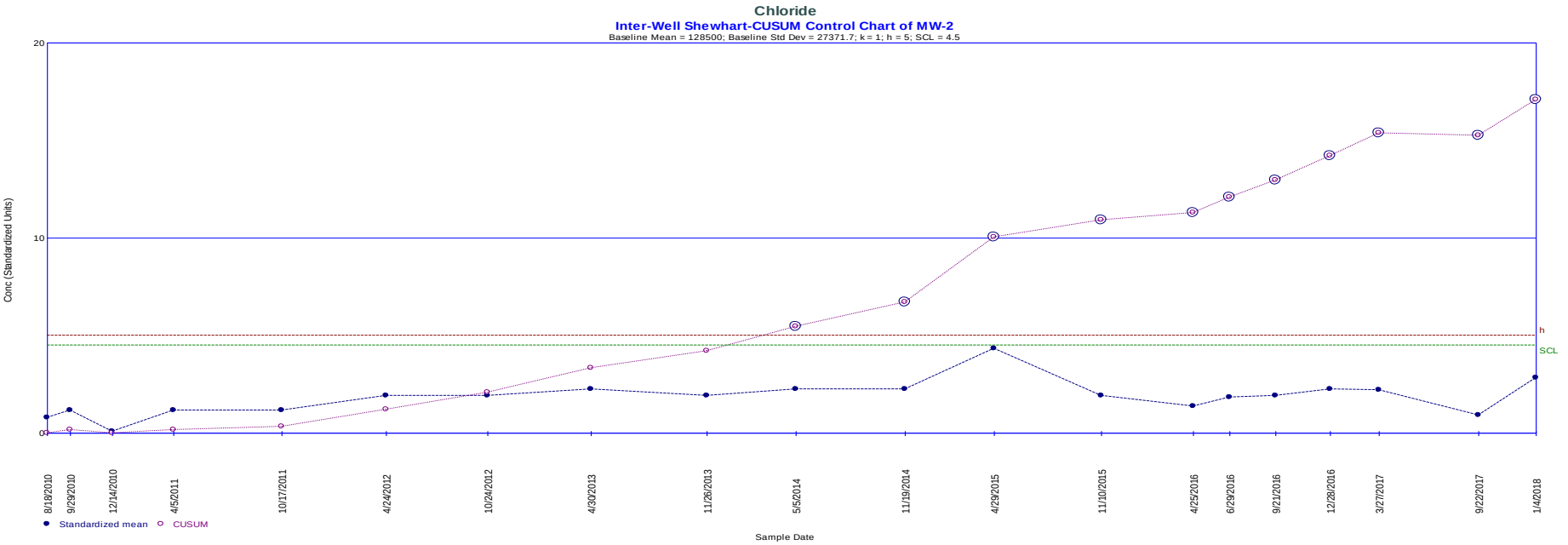
There are 2 compliance locations

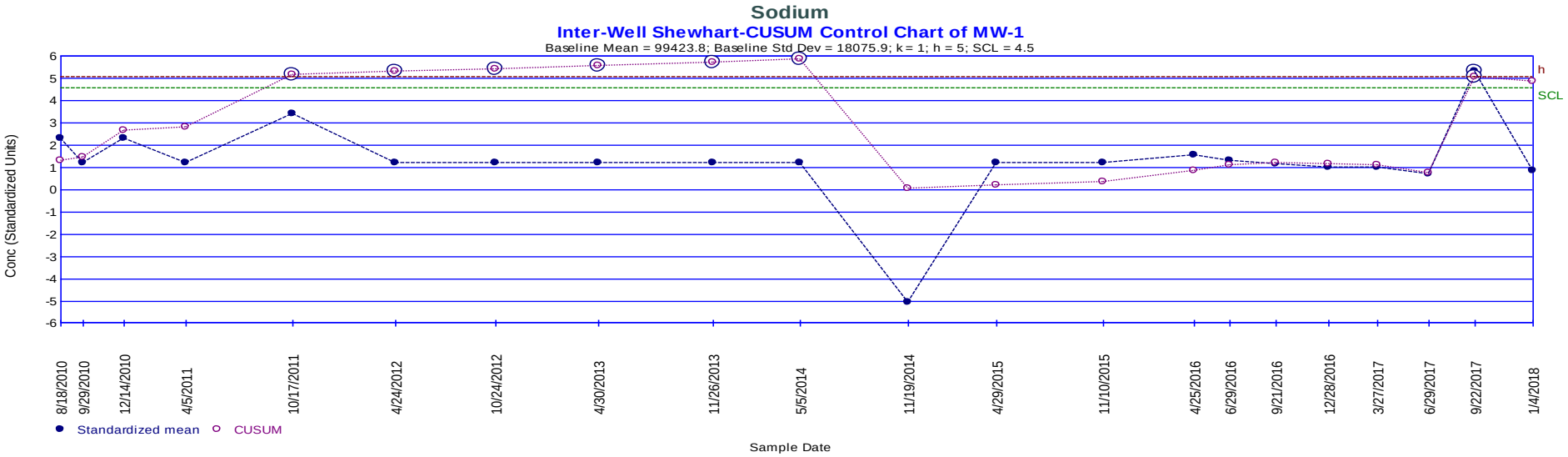
Loc.	Meas.	ND	Date	Conc.	Original
MW-1	21	10 (47.619%)	8/18/2010	27	27
			9/29/2010	50	50
			12/14/2010	14	14
			4/5/2011	19	19
			10/17/2011	ND<10	ND<10
			4/24/2012	ND<10	ND<10
			10/24/2012	ND<10	ND<10
			4/30/2013	26	26
			11/26/2013	11	11
			5/5/2014	39	39
			11/19/2014	ND<25	ND<25
			4/29/2015	ND<25	ND<25
			11/10/2015	ND<25	ND<25
			4/25/2016	45.3	45.3
			6/29/2016	ND<25	ND<25
			9/21/2016	ND<25	ND<25
			12/28/2016	ND<25	ND<25
			3/27/2017	140	140
			6/29/2017	ND<25	ND<25
			9/22/2017	41.5	41.5
			1/4/2018	188	188
MW-2	21	10 (47.619%)	8/18/2010	260	260
			9/29/2010	71	71
			12/14/2010	82	82
			4/5/2011	23	23
			10/17/2011	54	54
			4/24/2012	ND<10	ND<10
			10/24/2012	18	18
			4/30/2013	46	46
			11/26/2013	ND<10	ND<10
			5/5/2014	12	12
			11/19/2014	ND<25	ND<25
			4/29/2015	ND<25	ND<25
			11/10/2015	ND<25	ND<25
			4/25/2016	ND<25	ND<25
			6/29/2016	42.5	42.5
			9/21/2016	ND<25	ND<25
			12/28/2016	ND<25	ND<25
			3/27/2017	ND<25	ND<25
			6/29/2017	ND<25	ND<25
			9/22/2017	29.6	29.6
			1/4/2018	53.7	53.7

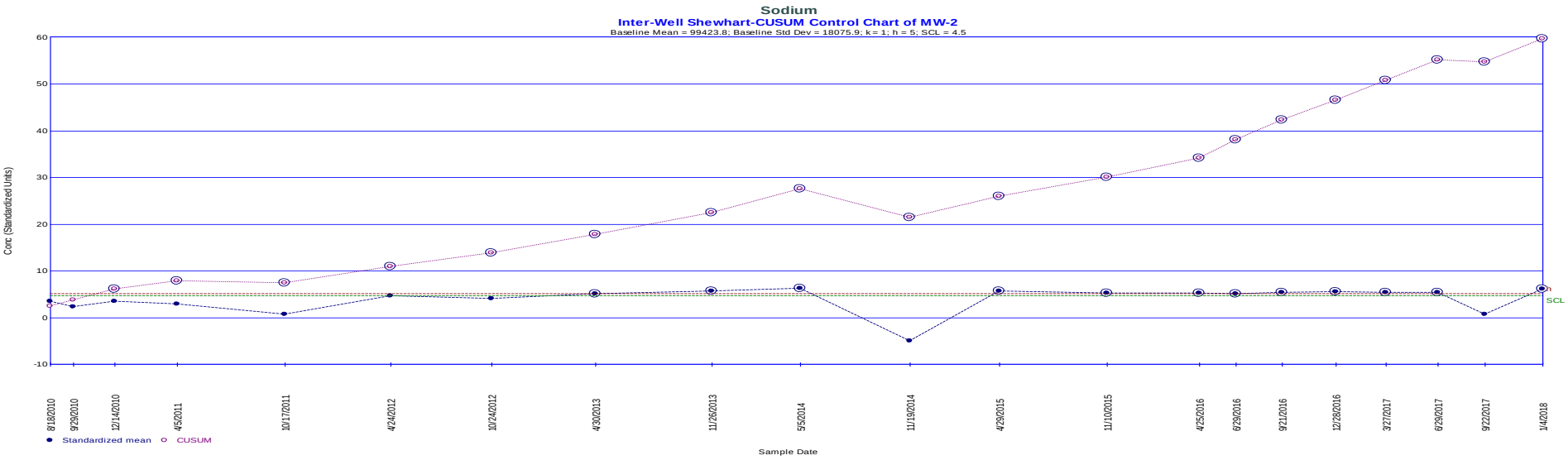
Appendix V

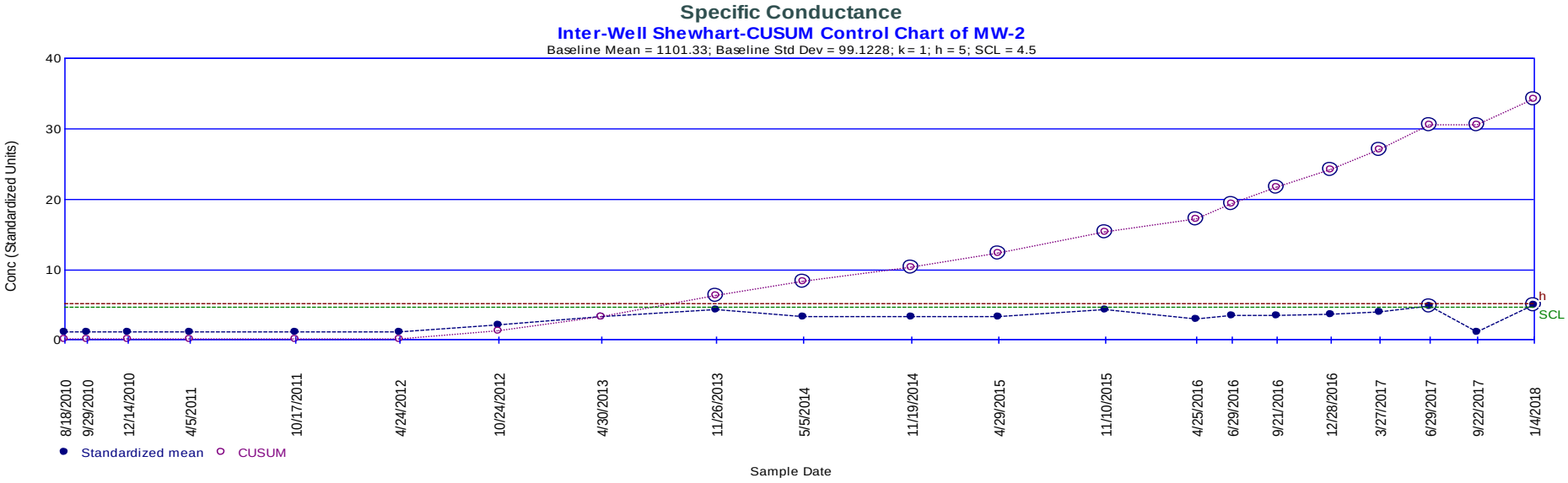
Shewhart CUSUM Charts and Time Series Graphs

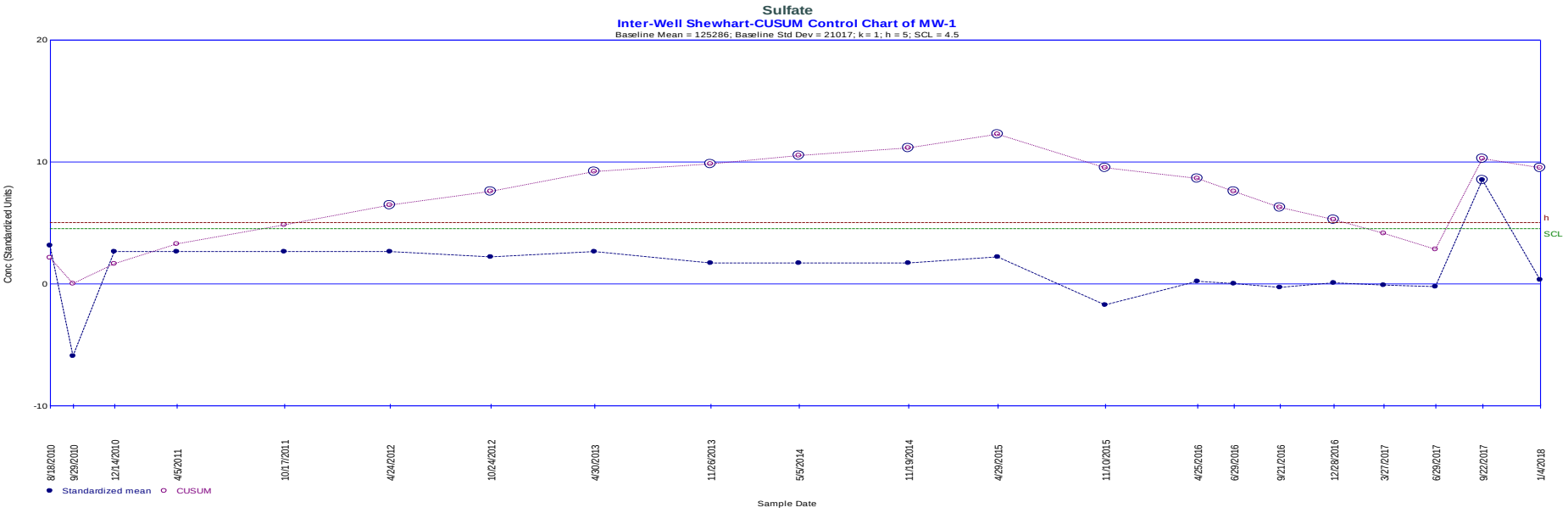

Cadmium
Inter-Well Shewhart-CUSUM Control Chart of MW-1
Baseline Mean = 0.938571; Baseline Std Dev = 0.392508; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
20
10
0
-10
baseline mean = 0.938571
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
3/27/2017
6/29/2017
9/22/2017
1/4/2018
Standardized mean
CUSUM
Sample Date

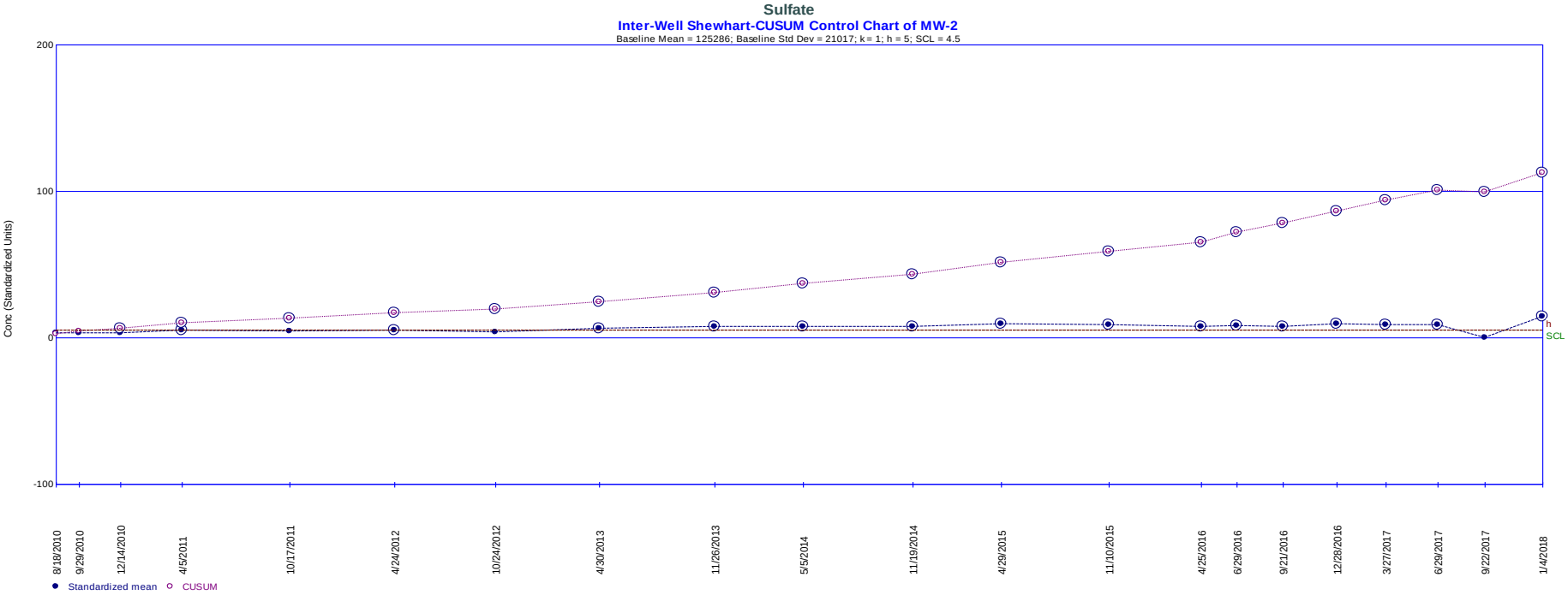

Chloride
Inter-Well Shewhart-CUSUM Control Chart of MW-2
Baseline Mean = 128500; Baseline Std Dev = 27371.7; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
20
10
0
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
3/27/2017
9/22/2017
1/4/2018
Standardized mean
CUSUM
Sample Date

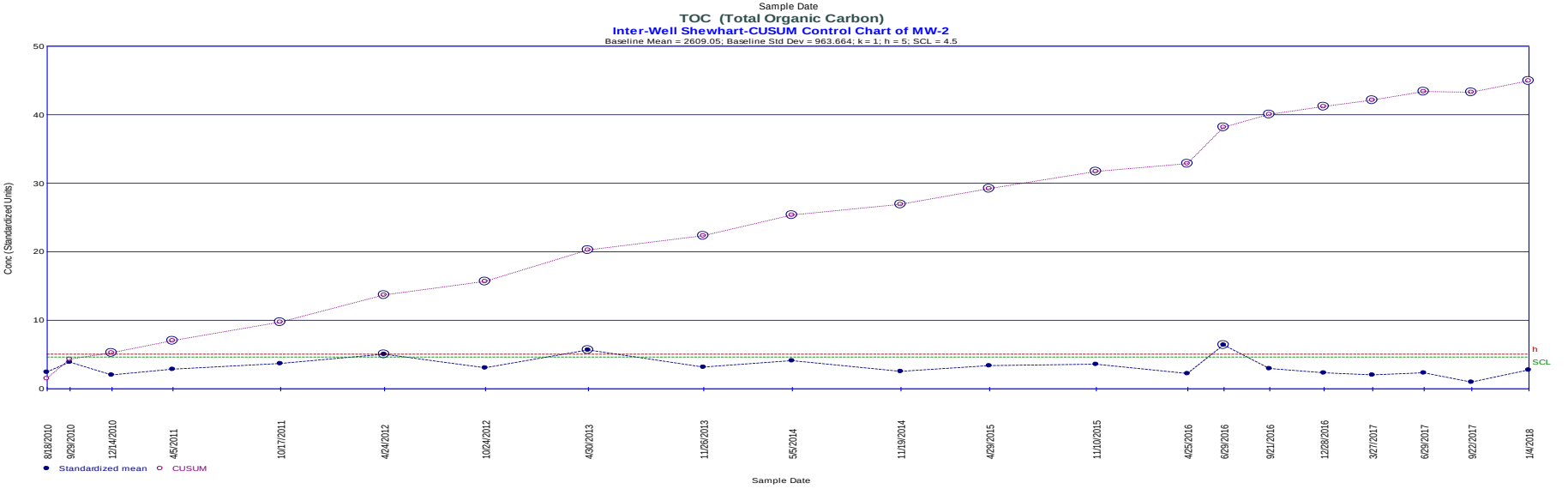

Sodium
Inter-Well Shewhart-CUSUM Control Chart of MW-1
Baseline Mean = 99423.8; Baseline Std Dev = 18075.9; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
3/27/2017
6/29/2017
9/22/2017
1/4/2018
Standardized mean
CUSUM
Sample Date

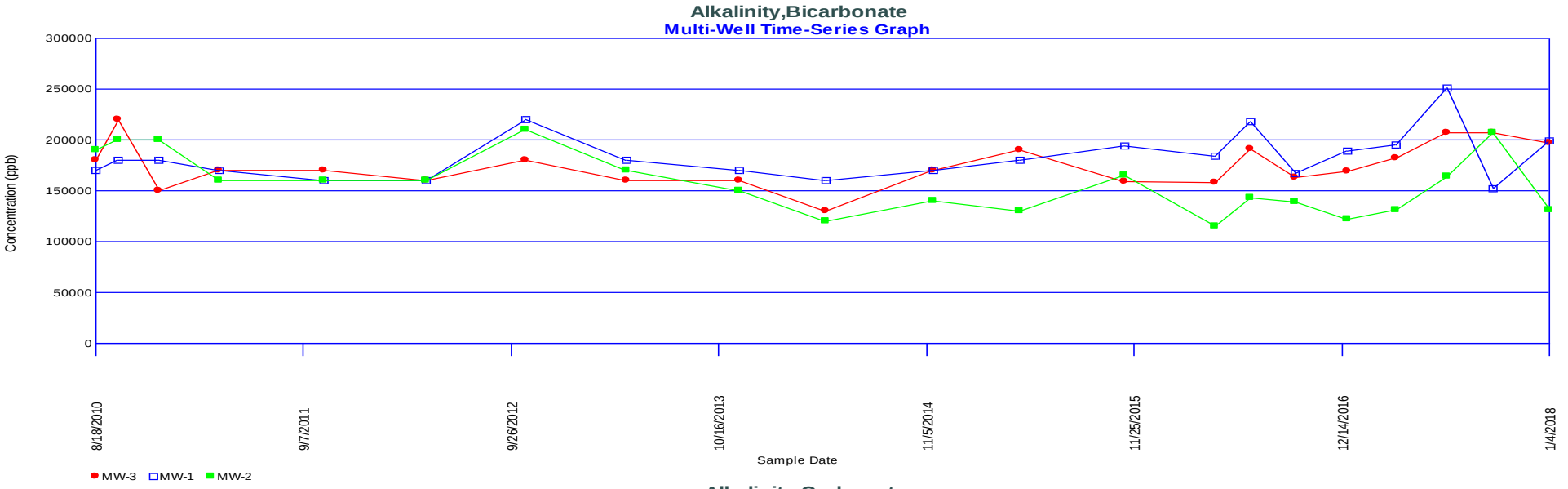

Sodium
Inter-Well Shewhart-CUSUM Control Chart of MW-2
Baseline Mean = 99423.8; Baseline Std Dev = 18075.9; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
3/27/2017
6/29/2017
9/22/2017
1/4/2018
Standardized mean
CUSUM
Sample Date

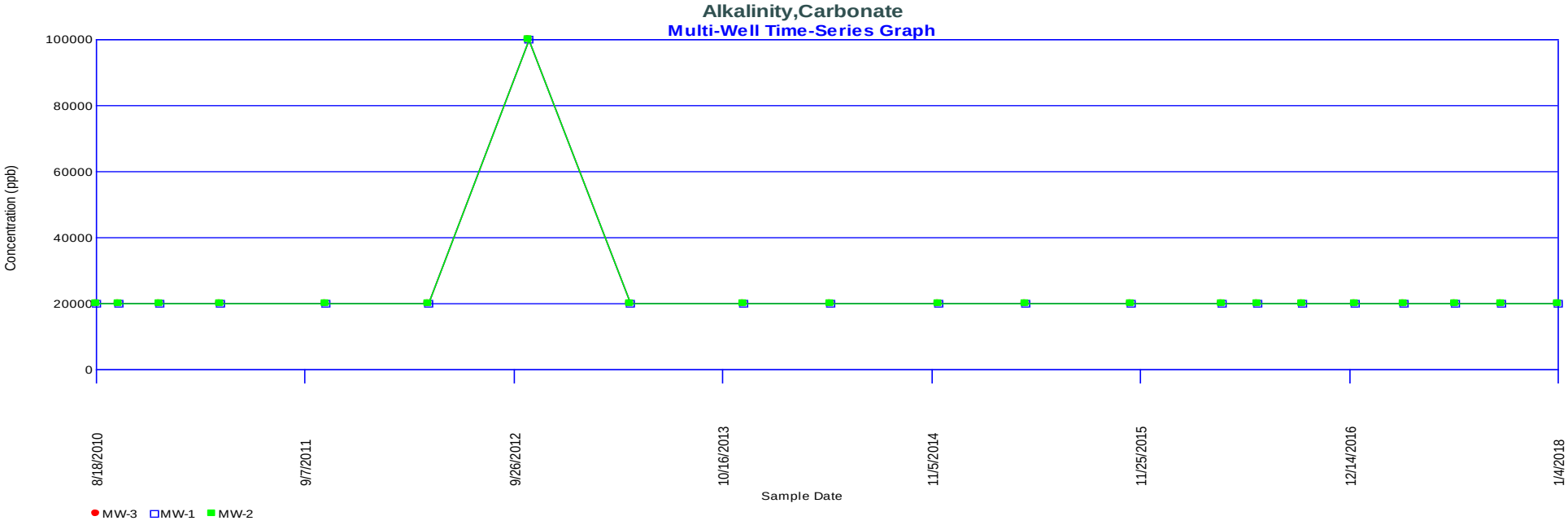

Specific Conductance
Inter-Well Shewhart-CUSUM Control Chart of MW-2
Baseline Mean = 1101.33; Baseline Std Dev = 99.1228; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
40
30
20
10
0
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
3/27/2017
6/29/2017
9/22/2017
1/4/2018
Standardized mean
CUSUM
Sample Date

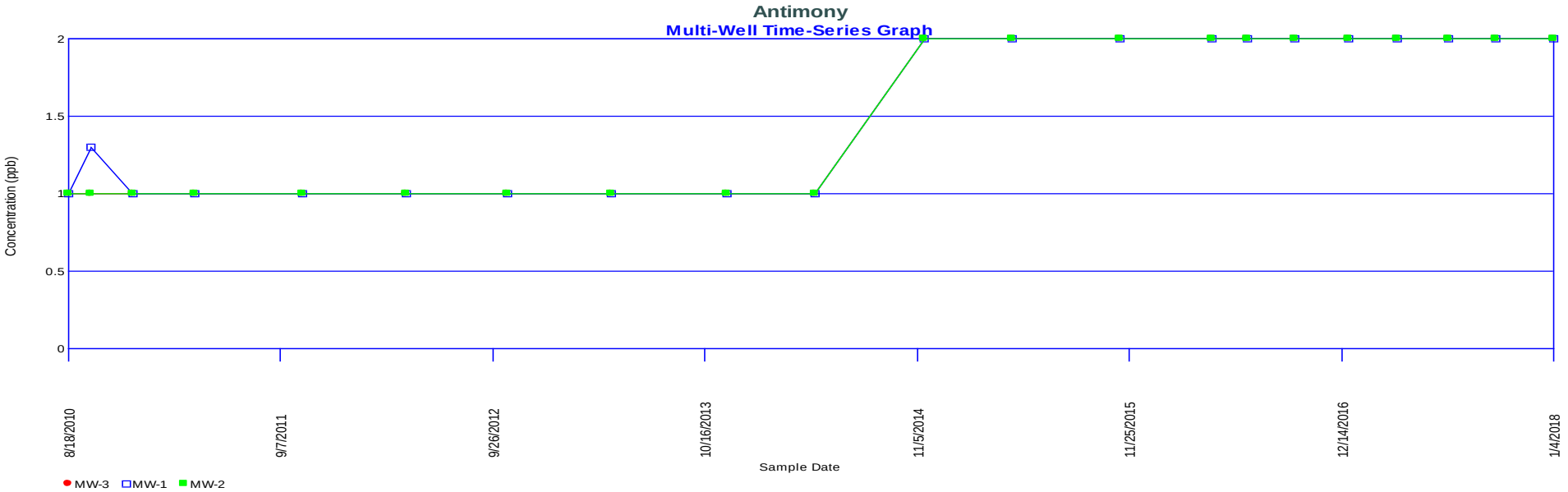

Sulfate
Inter-Well Shewhart-CUSUM Control Chart of MW-1
Baseline Mean = 125286; Baseline Std Dev = 21017; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
20
10
0
-10
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
3/27/2017
6/29/2017
9/22/2017
1/4/2018
Standardized mean
CUSUM
Sample Date

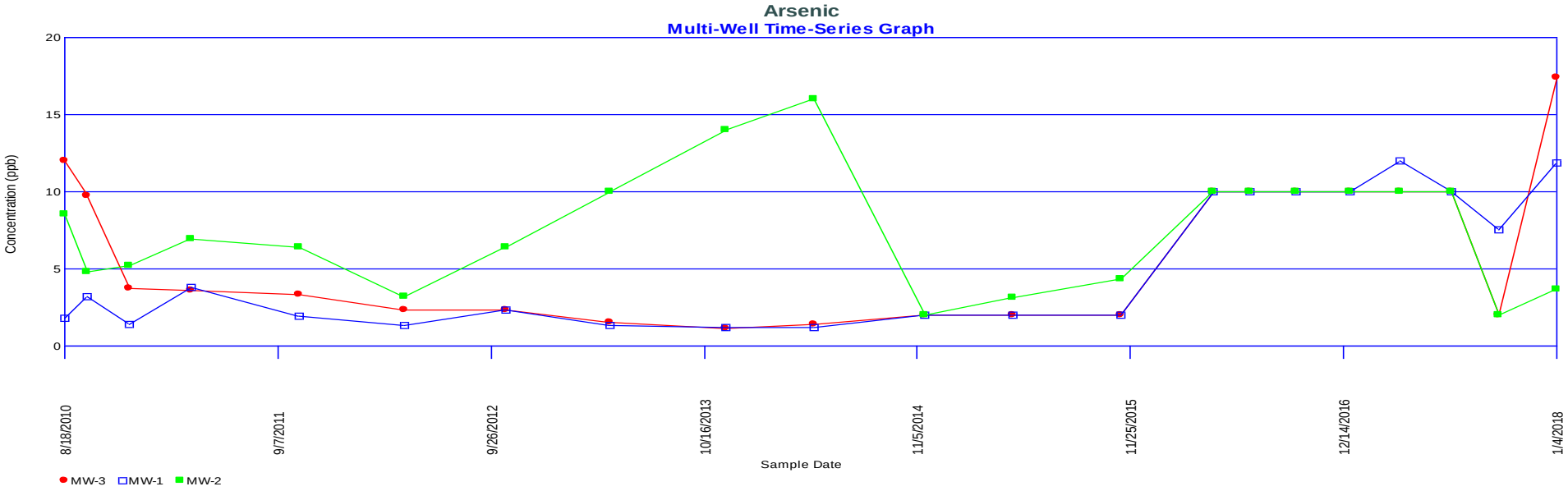

Sulfate
Inter-Well Shewhart-CUSUM Control Chart of MW-2
Baseline Mean = 125286; Baseline Std Dev = 21017; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
200
100
0
-100
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
3/27/2017
6/29/2017
9/22/2017
1/4/2018
Standardized mean
CUSUM
Sample Date

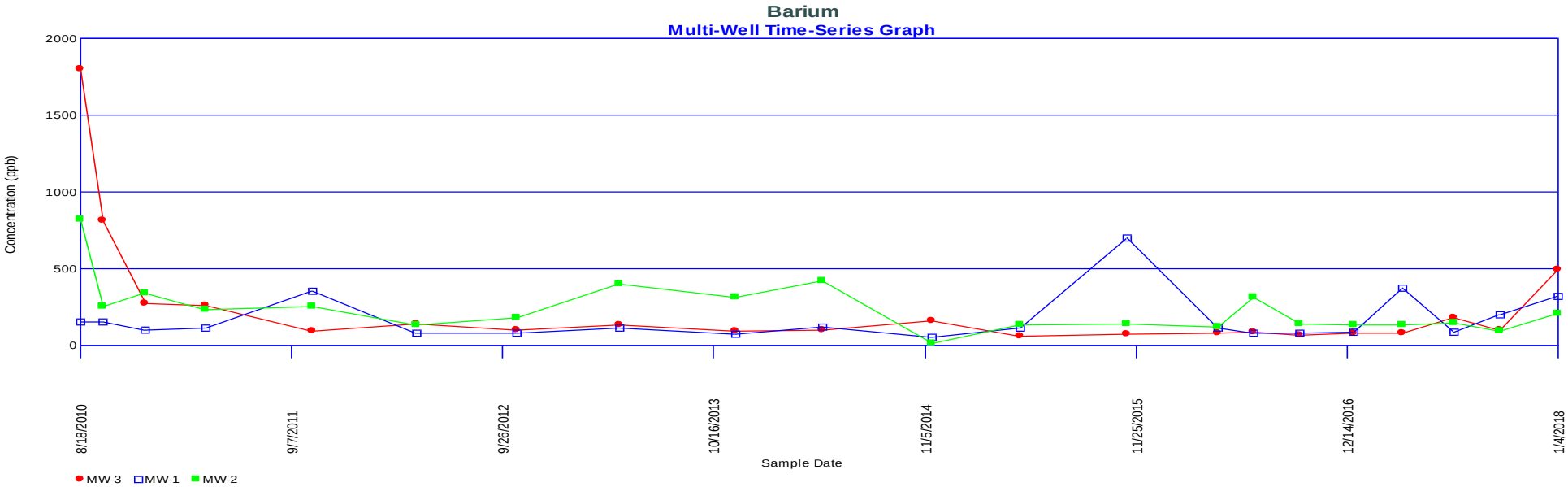

TOC (Total Organic Carbon)
Inter-Well Shewhart-CUSUM Control Chart of MW-2
Baseline Mean = 2609.05; Baseline Std Dev = 963.664; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
50
40
30
20
10
0
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
3/27/2017
6/29/2017
9/22/2017
1/4/2018
Standardized mean
CUSUM
Sample Date

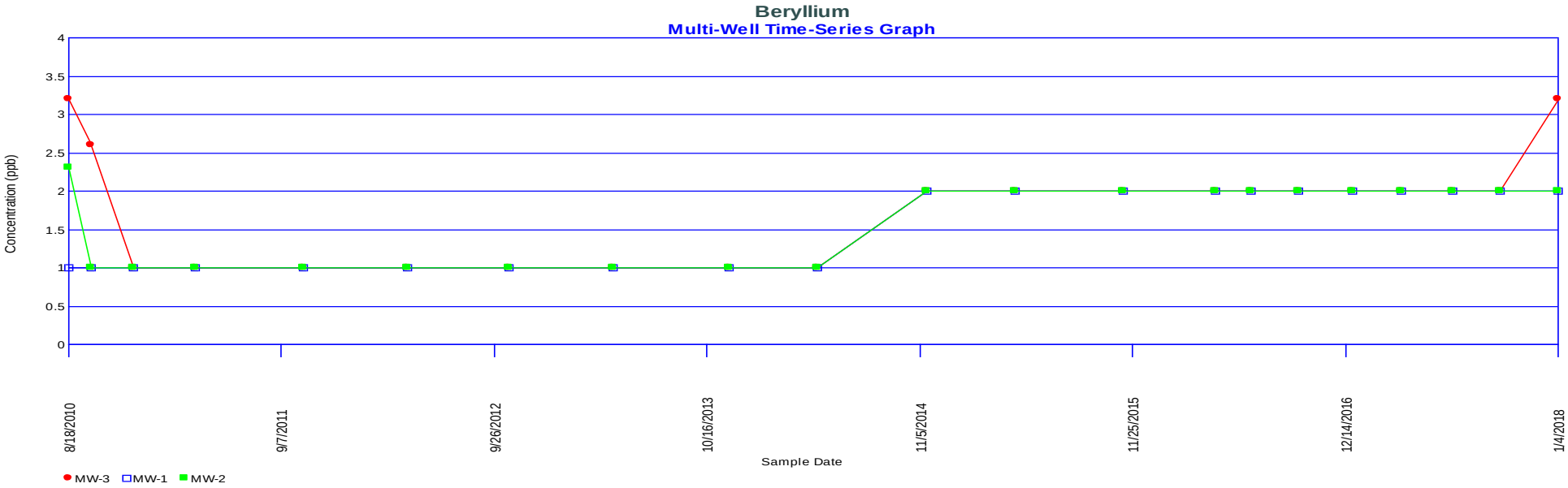

Alkalinity,Bicarbonate
Multi-Well Time-Series Graph
Concentration (ppb)
300000
250000
200000
150000
100000
50000
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

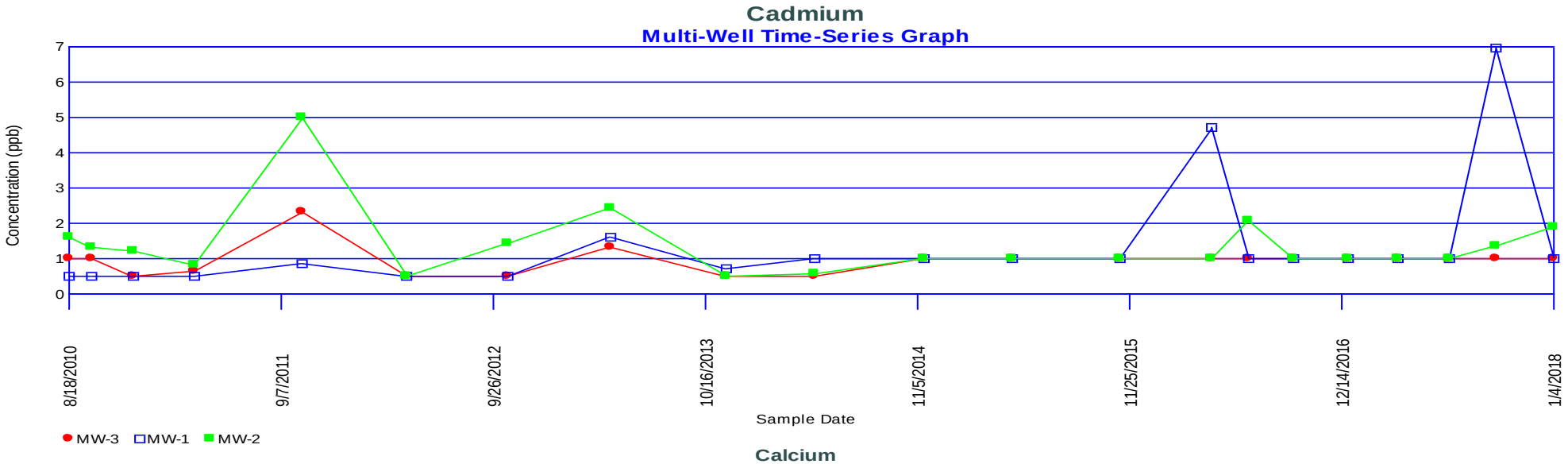

Alkalinity,Carbonate
Multi-Well Time-Series Graph
Concentration (ppb)
100000
80000
60000
40000
20000
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

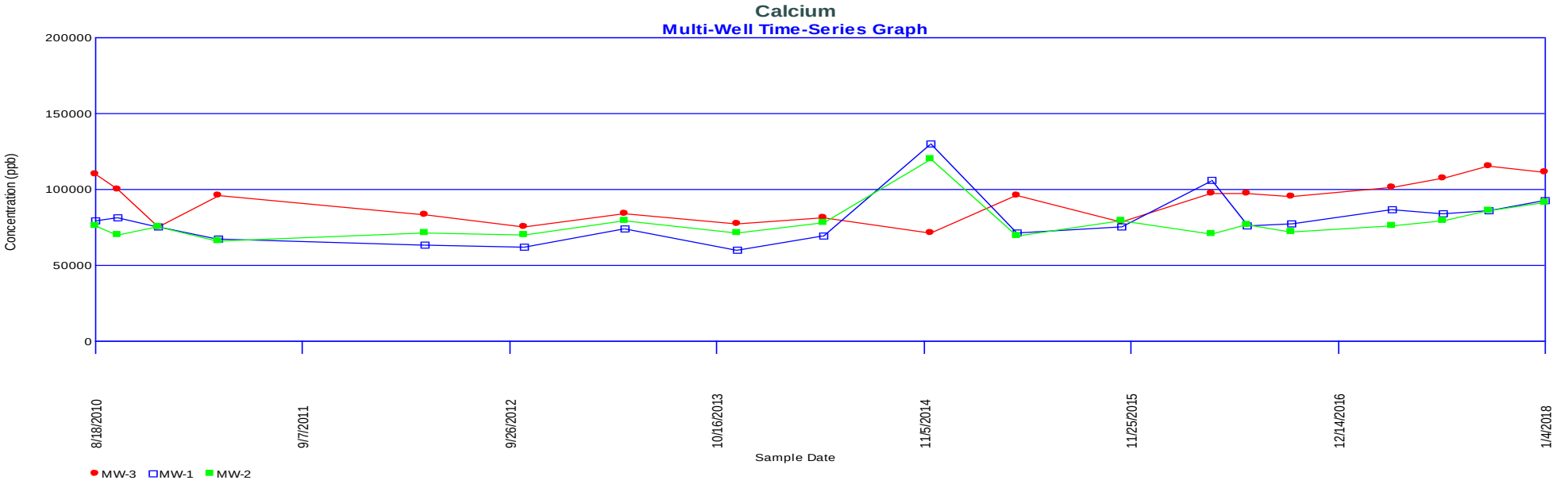

Antimony
Multi-Well Time-Series Graph
Concentration (ppb)
2
1.5
1
0.5
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

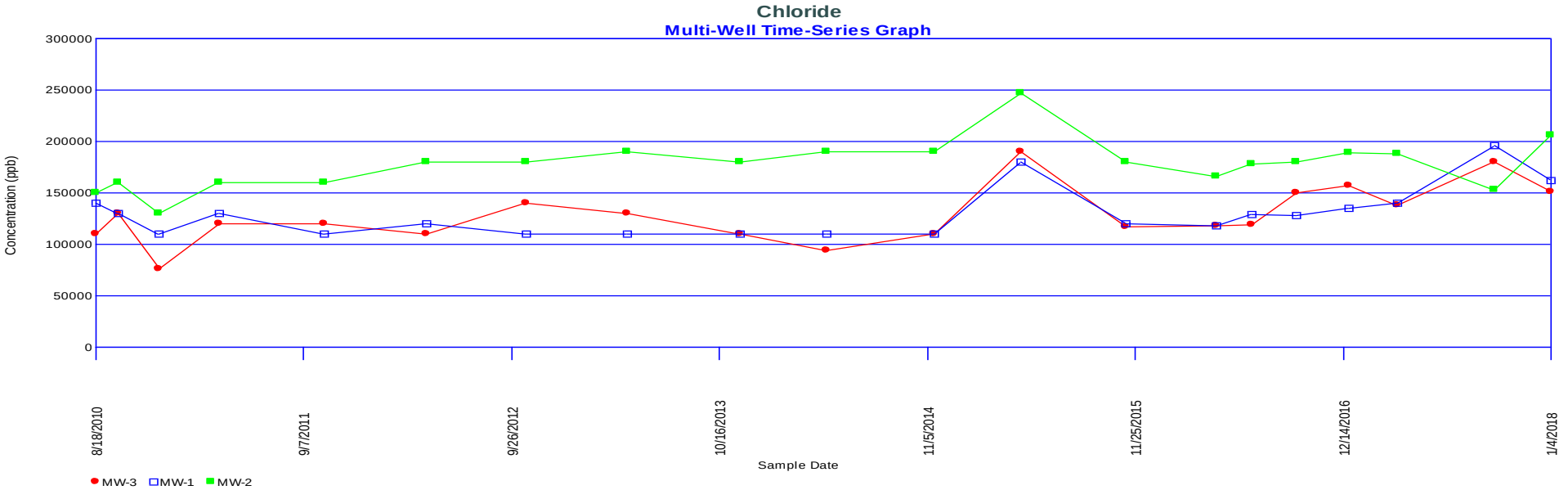

Arsenic
Multi-Well Time-Series Graph
Concentration (ppb)
20
15
10
5
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

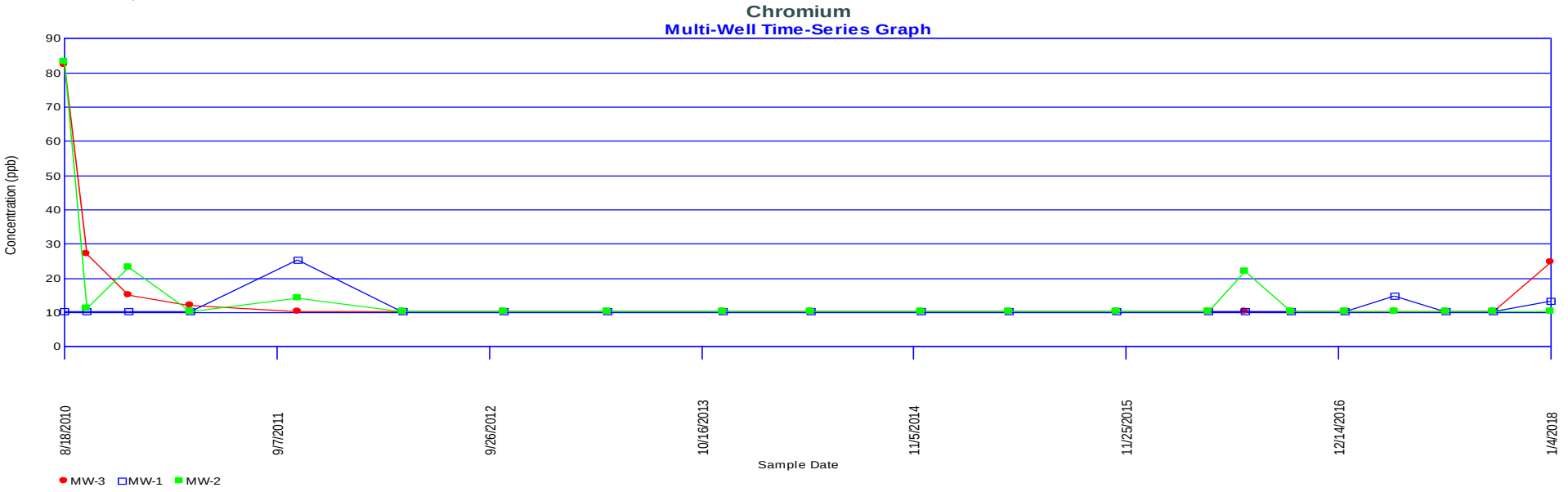

Barium
Multi-Well Time-Series Graph
Concentration (ppb)
2000
1500
1000
500
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

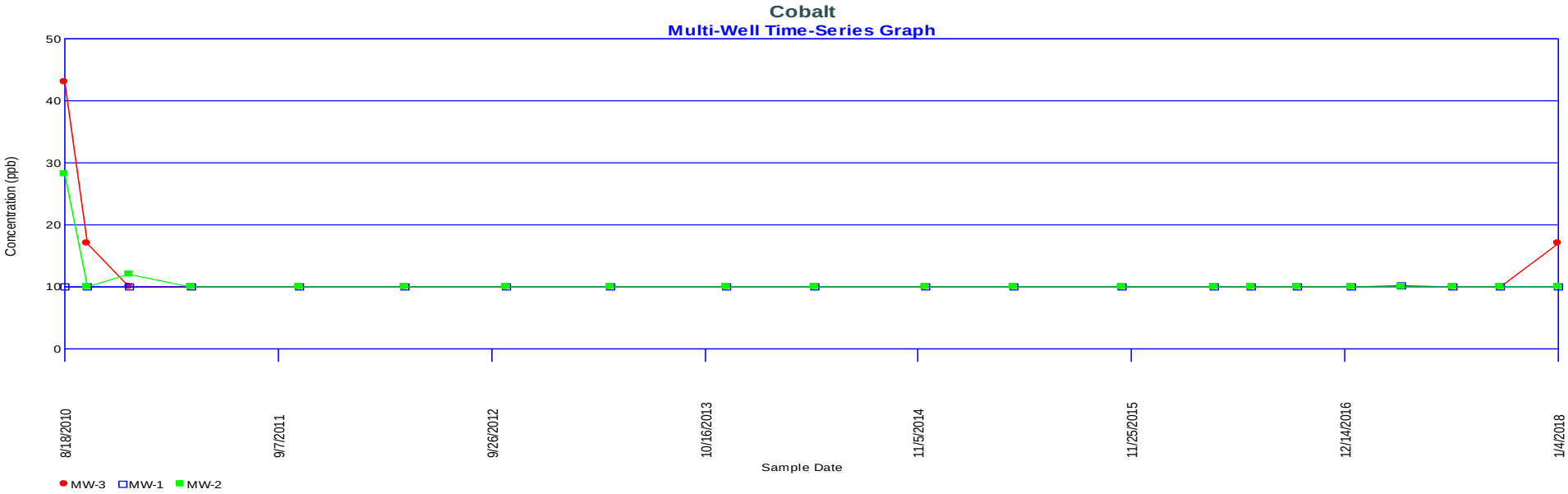

Beryllium
Multi-Well Time-Series Graph
Concentration (ppb)
4
3.5
3
2.5
2
1.5
1
0.5
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

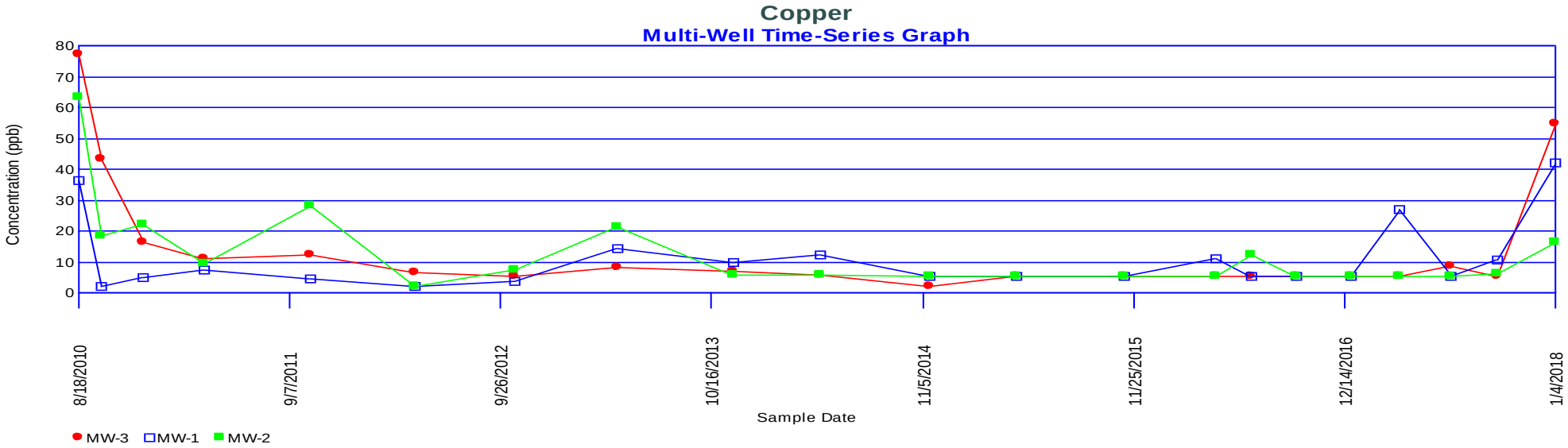

Cadmium
Multi-Well Time-Series Graph
Concentration (ppb)
0
1
2
3
4
5
6
7
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

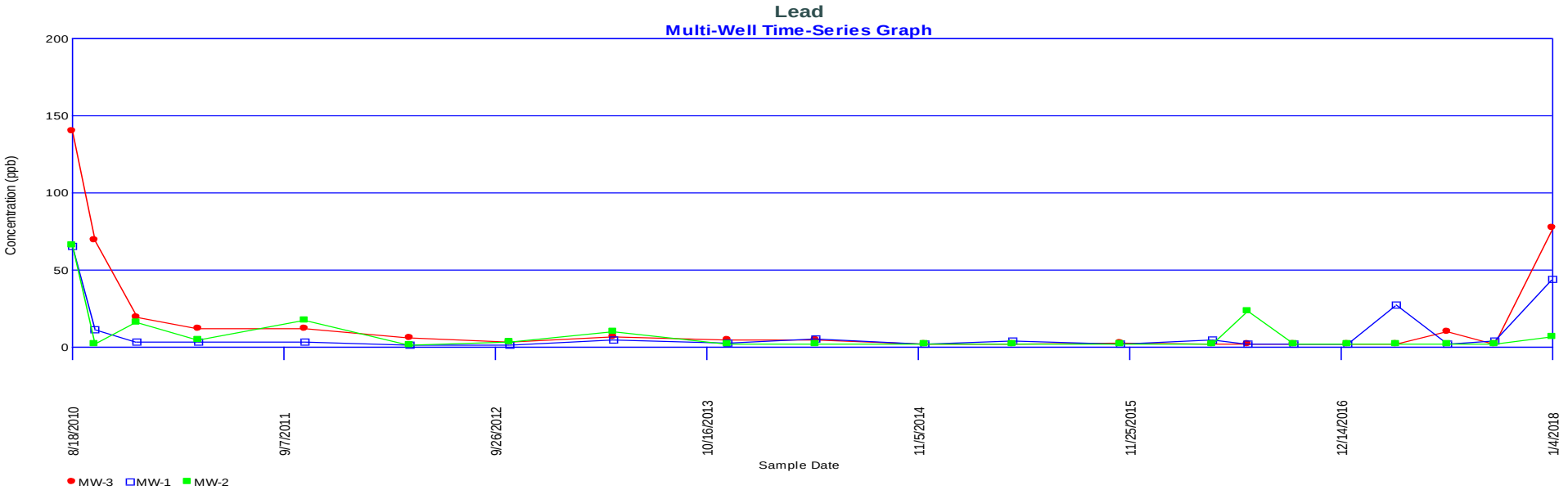

Calcium
Multi-Well Time-Series Graph
Concentration (ppb)
0
50000
100000
150000
200000
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

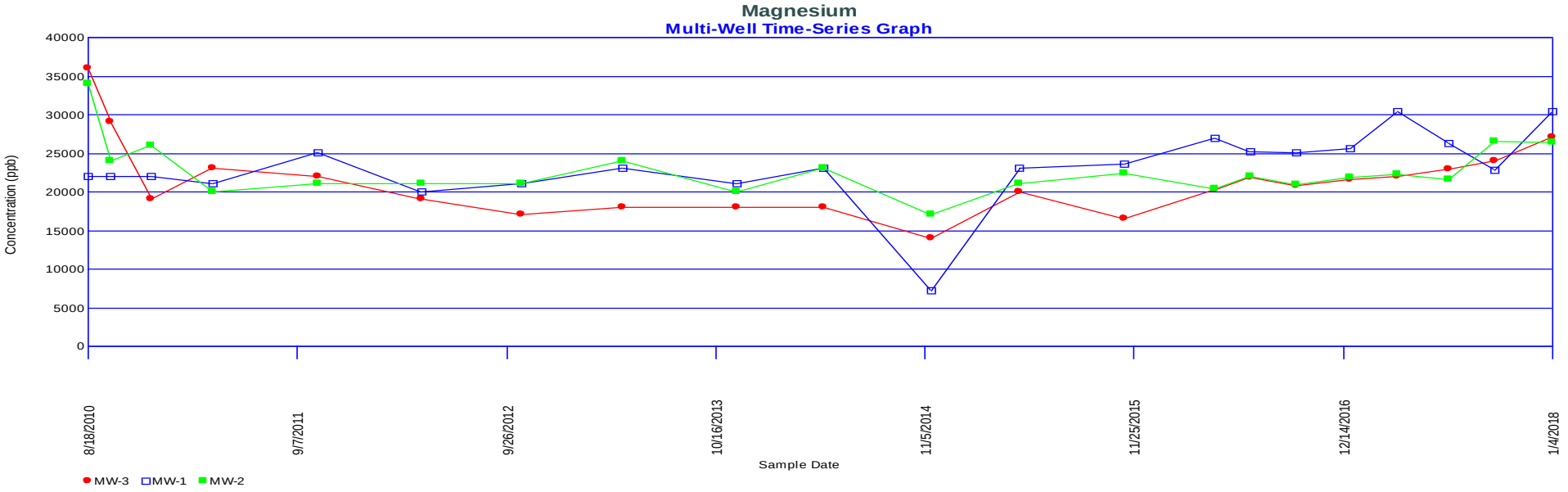

Chloride
Multi-Well Time-Series Graph
Concentration (ppb)
300000
250000
200000
150000
100000
50000
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

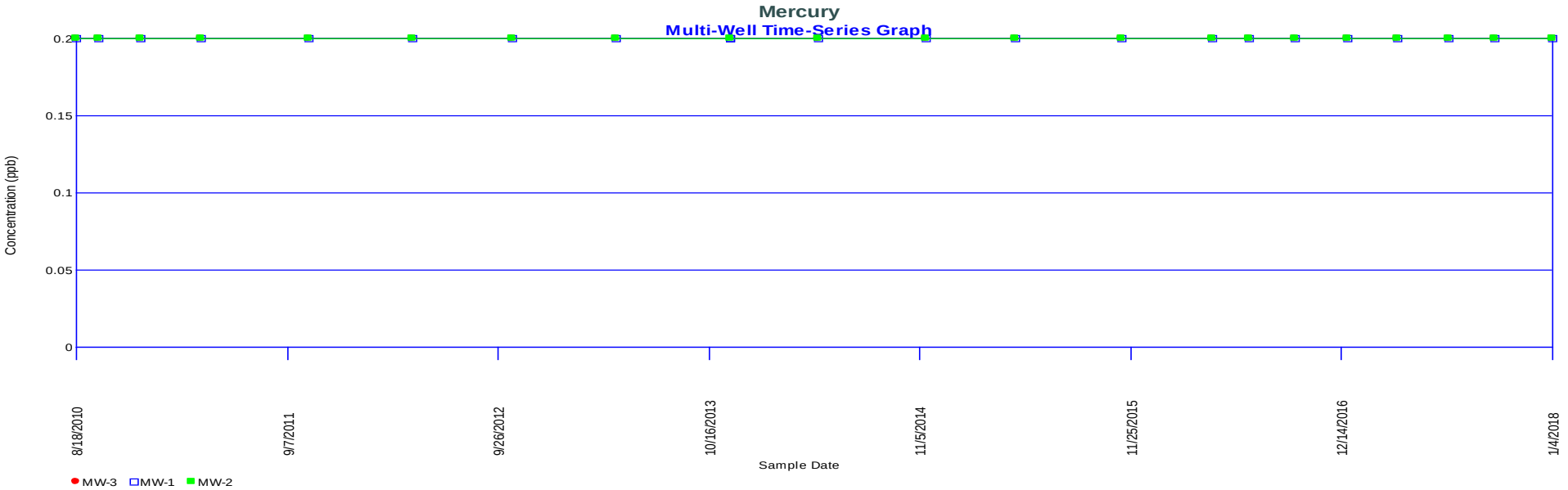

Chromium
Multi-Well Time-Series Graph
Concentration (ppb)
90
80
70
60
50
40
30
20
10
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

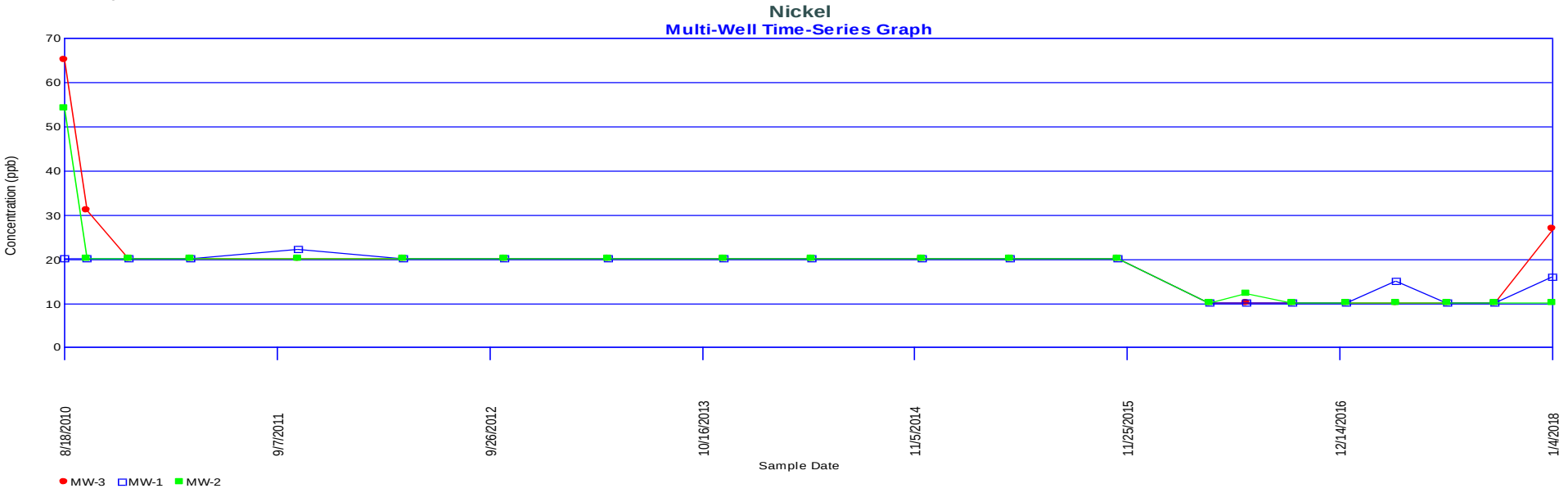

Cobalt
Multi-Well Time-Series Graph
Concentration (ppb)
50
40
30
20
10
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

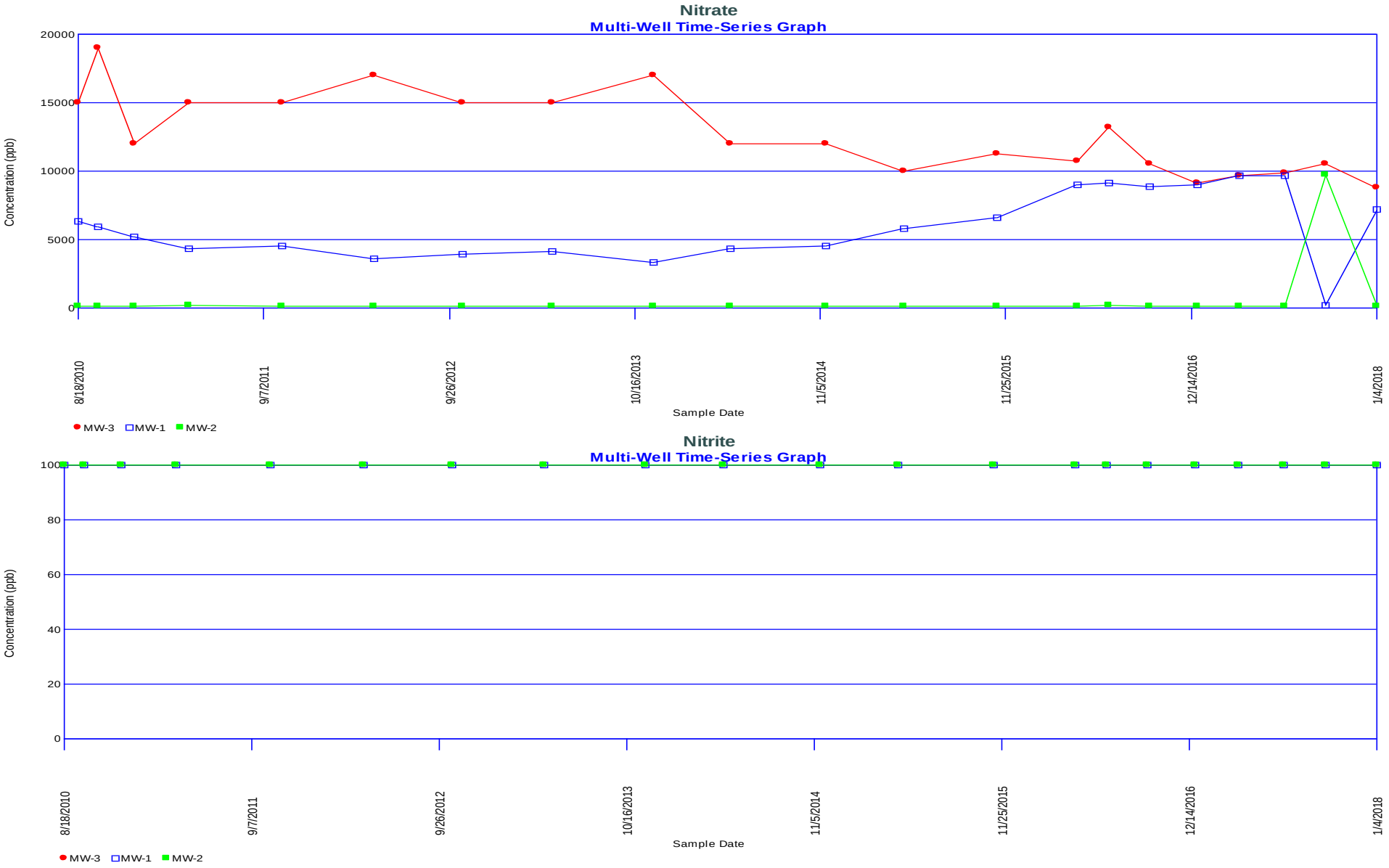

Copper
Multi-Web Time-Series Graph
Concentration (ppb)
80
70
60
50
40
30
20
10
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

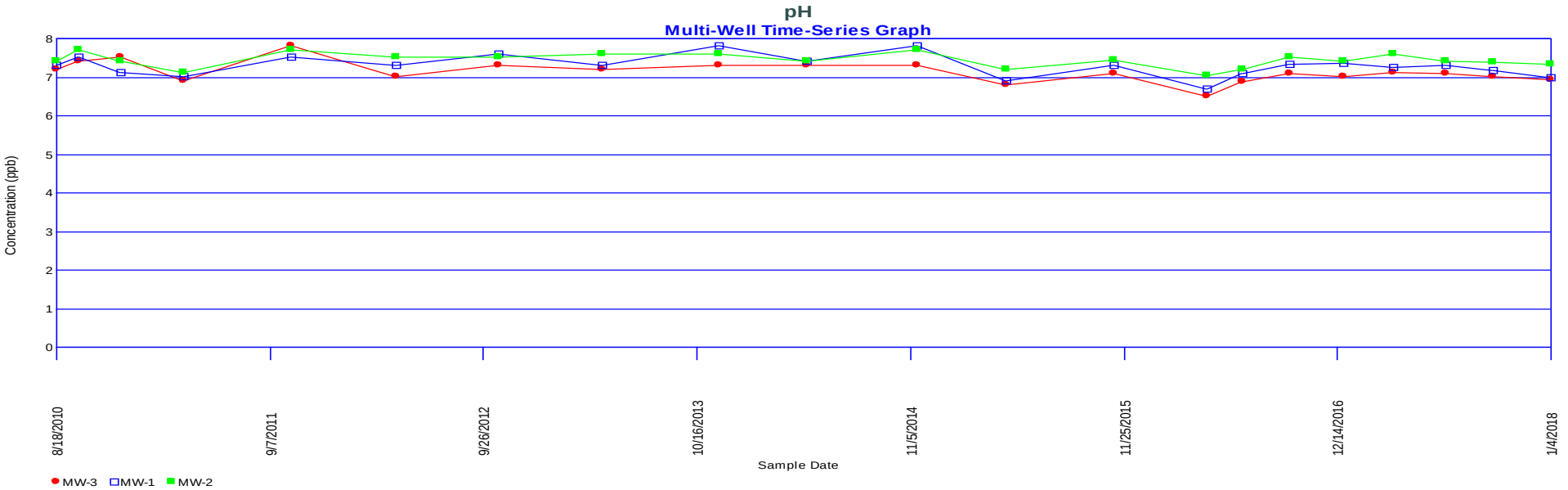

Lead
Multi-Well Time-Series Graph
Concentration (ppb)
200
150
100
50
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

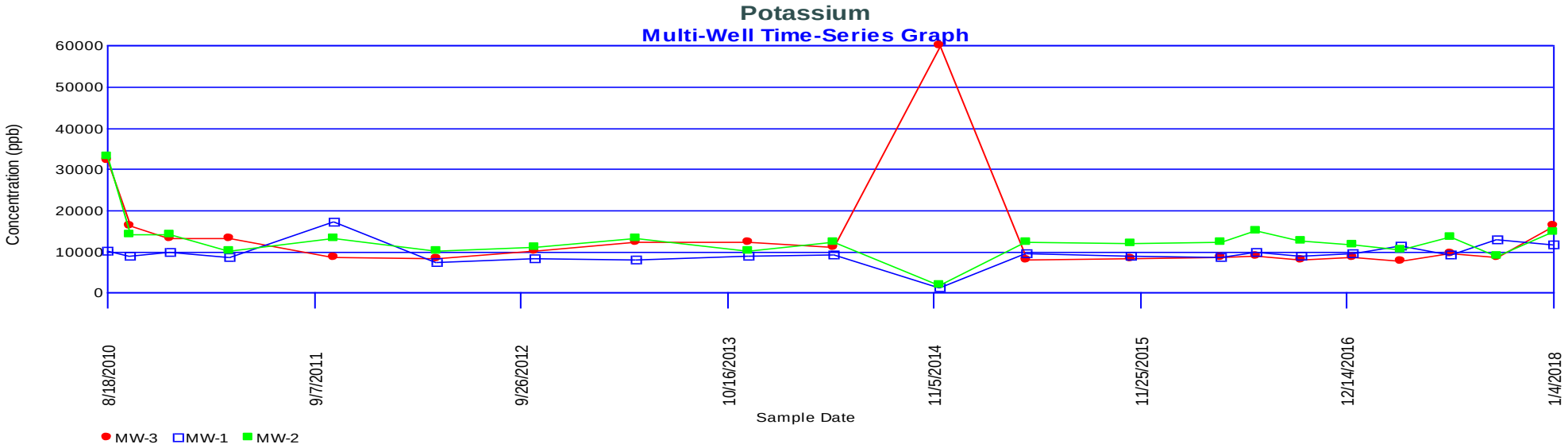

Magnesium
Multi-Well Time-Series Graph
Concentration (ppb)
40000
35000
30000
25000
20000
15000
10000
5000
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

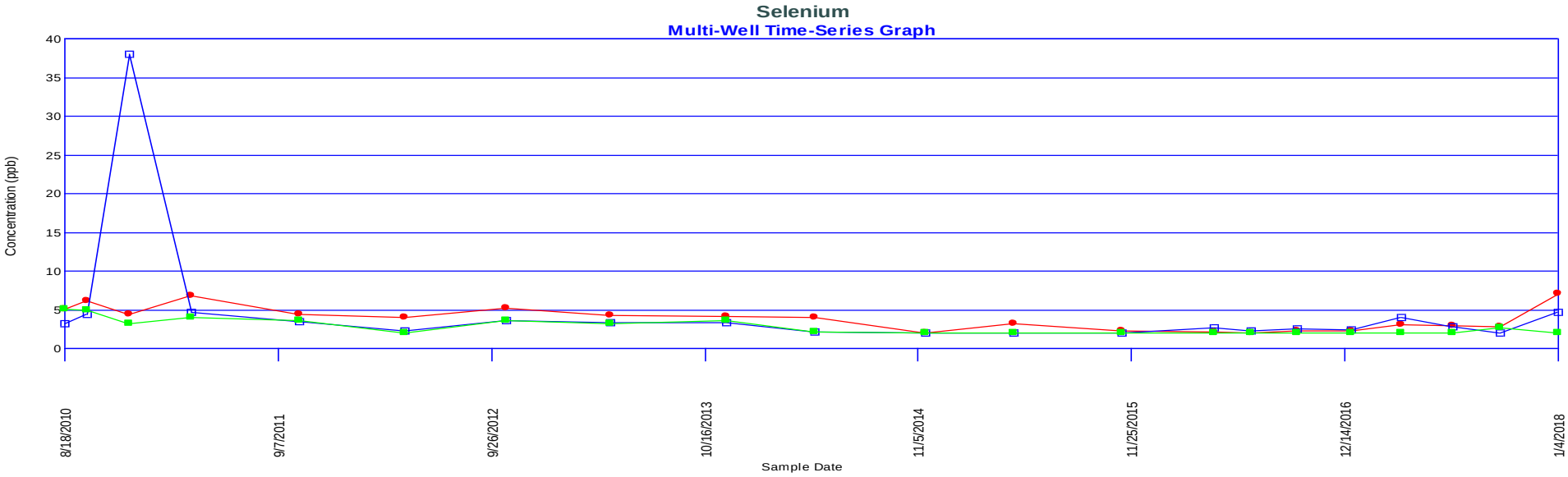

Mercury
Multi-Well Time-Series Graph
Concentration (ppb)
0.2
0.15
0.1
0.05
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

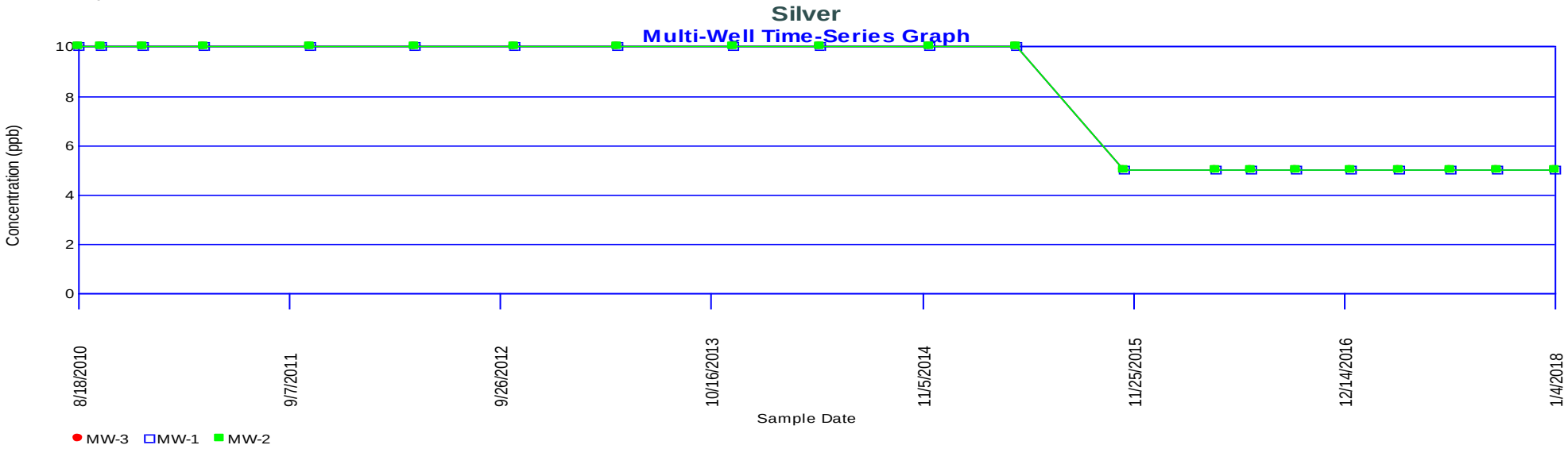

Nickel
Multi-Well Time-Series Graph
Concentration (ppb)
70
60
50
40
30
20
10
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

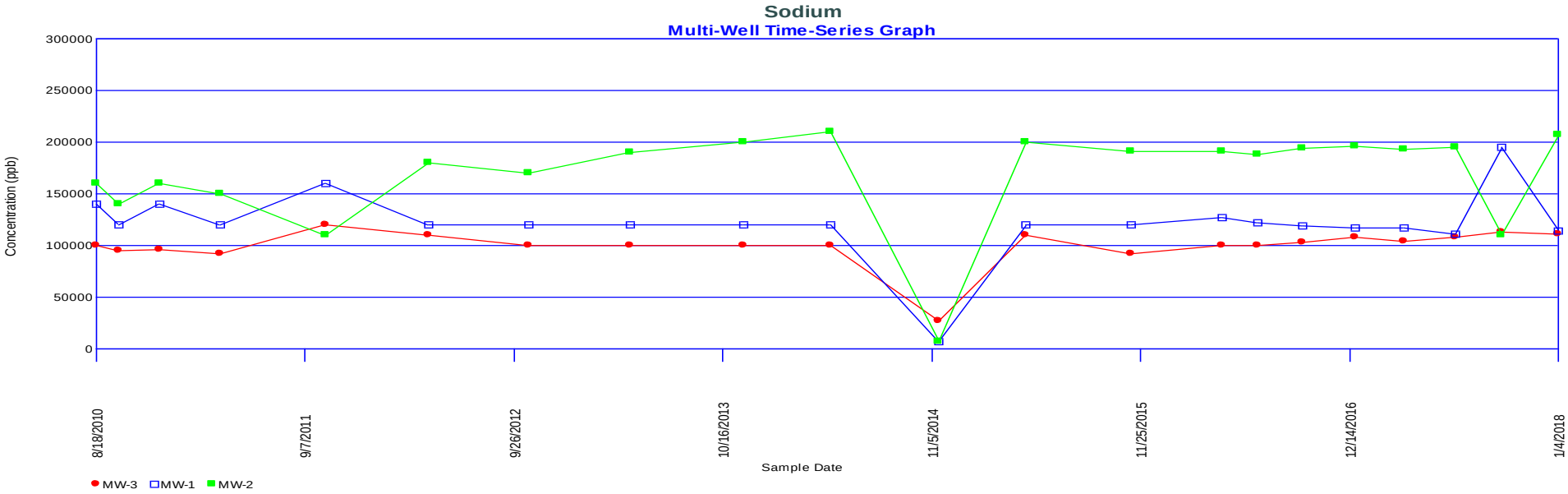

Nitrate
Multi-Well Time-Series Graph
Concentration (ppb)
20000
15000
10000
5000
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2
Nitrite
Multi-Well Time-Series Graph
Concentration (ppb)
100
80
60
40
20
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

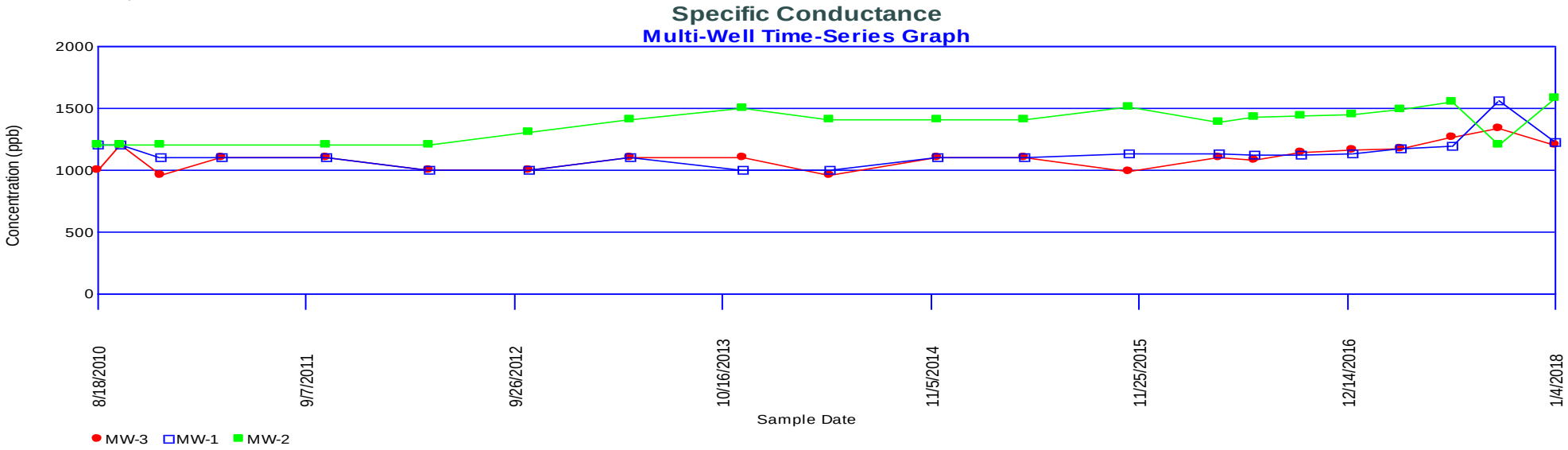

pH
Multi-Well Time-Series Graph
Concentration (ppb)
0
1
2
3
4
5
6
7
8
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

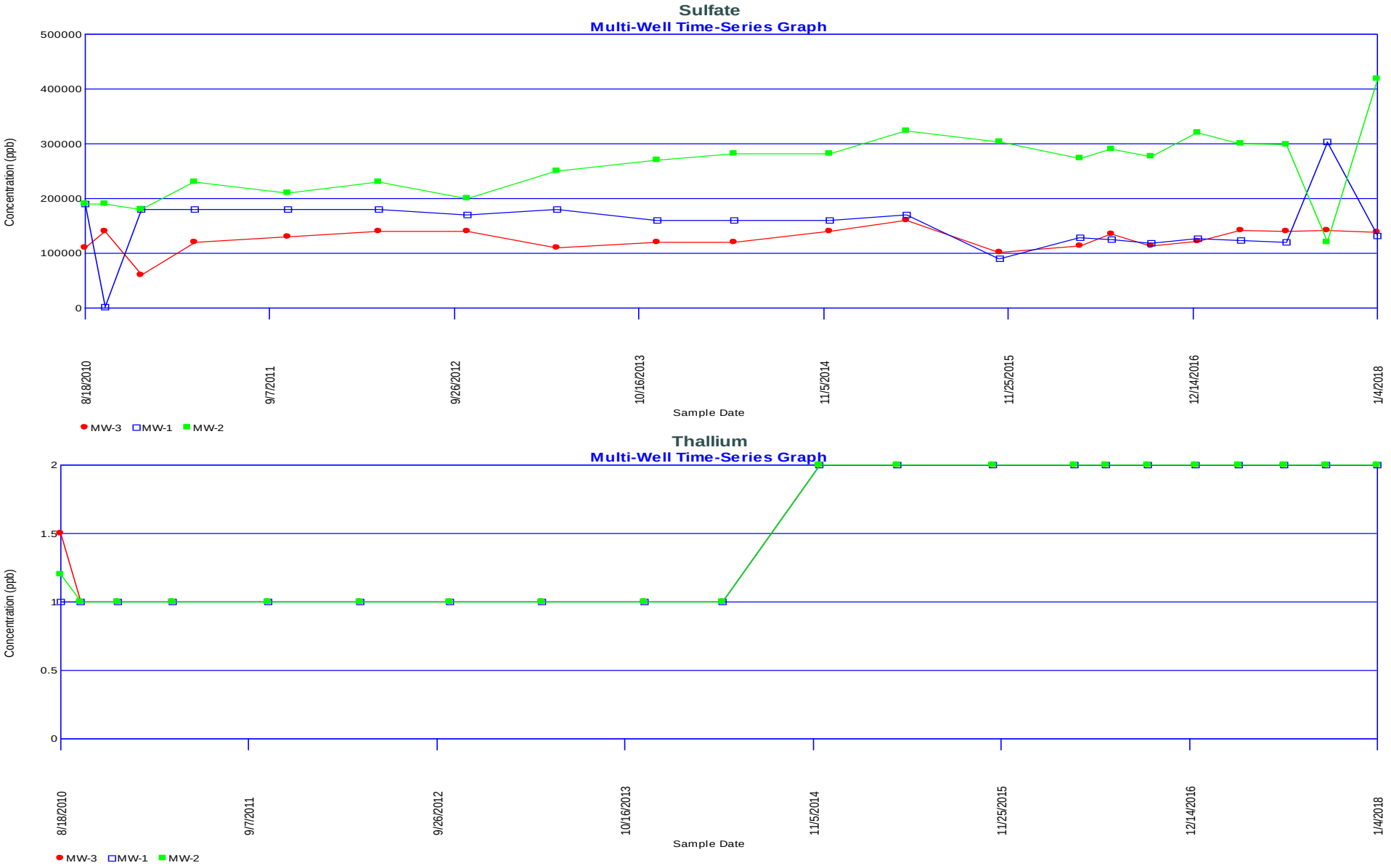

Potassium
Multi-Well Time-Series Graph
Concentration (ppb)
0
10000
20000
30000
40000
50000
60000
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

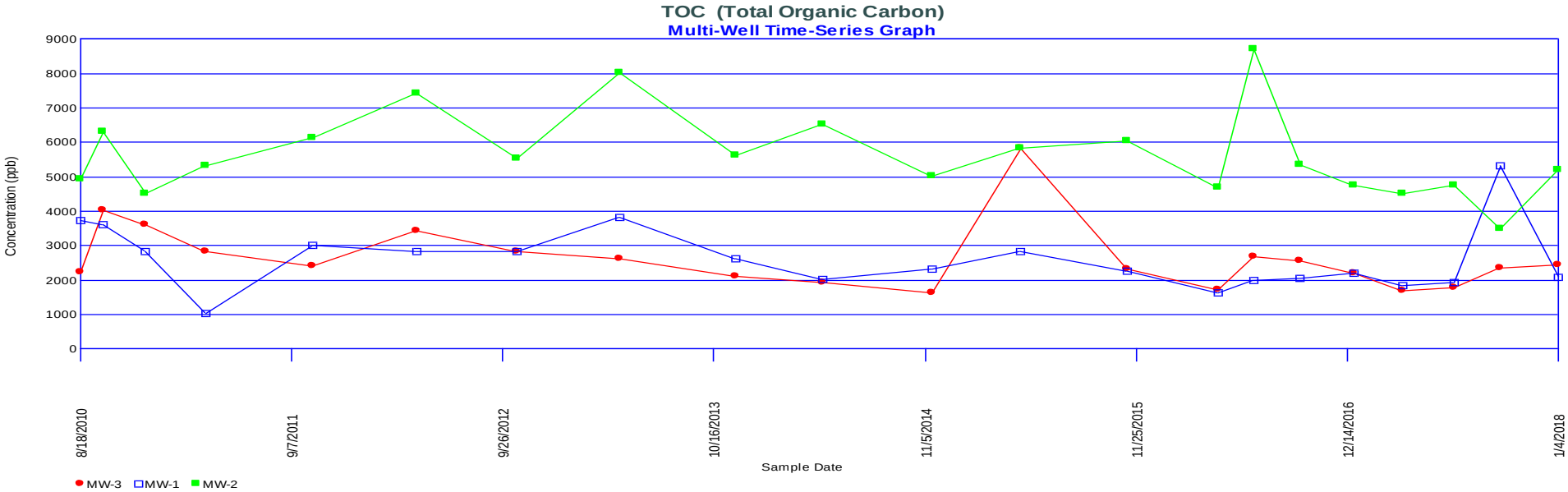

Selenium
Multi-Well Time-Series Graph
Concentration (ppb)
40
35
30
25
20
15
10
5
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

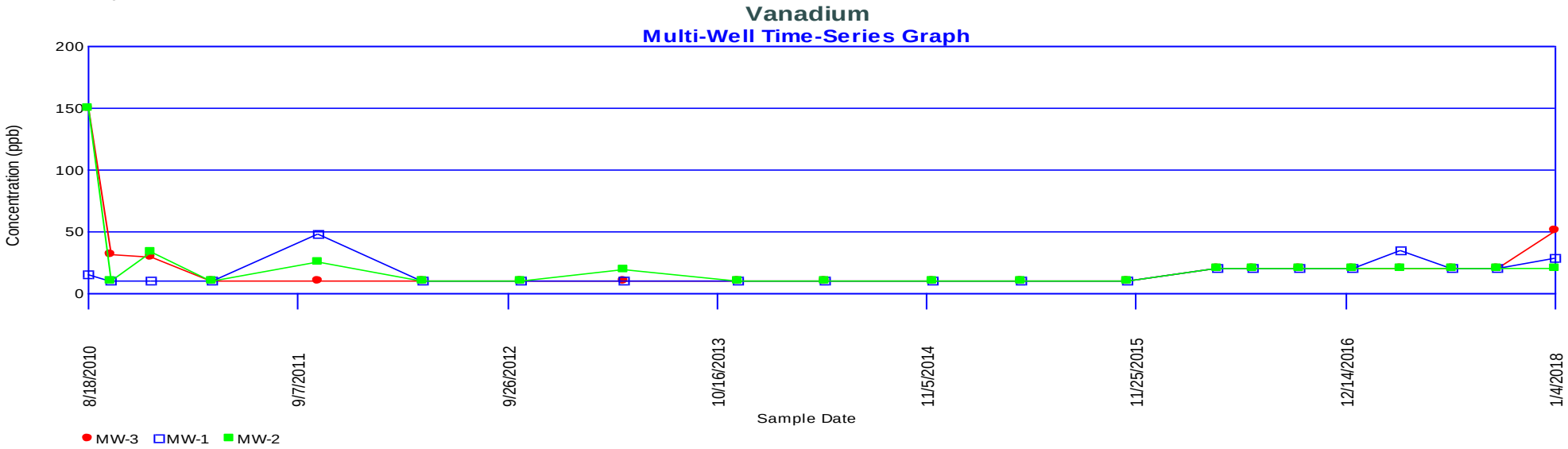

Silver
Multi-Well Time-Series Graph
Concentration (ppb)
10
8
6
4
2
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

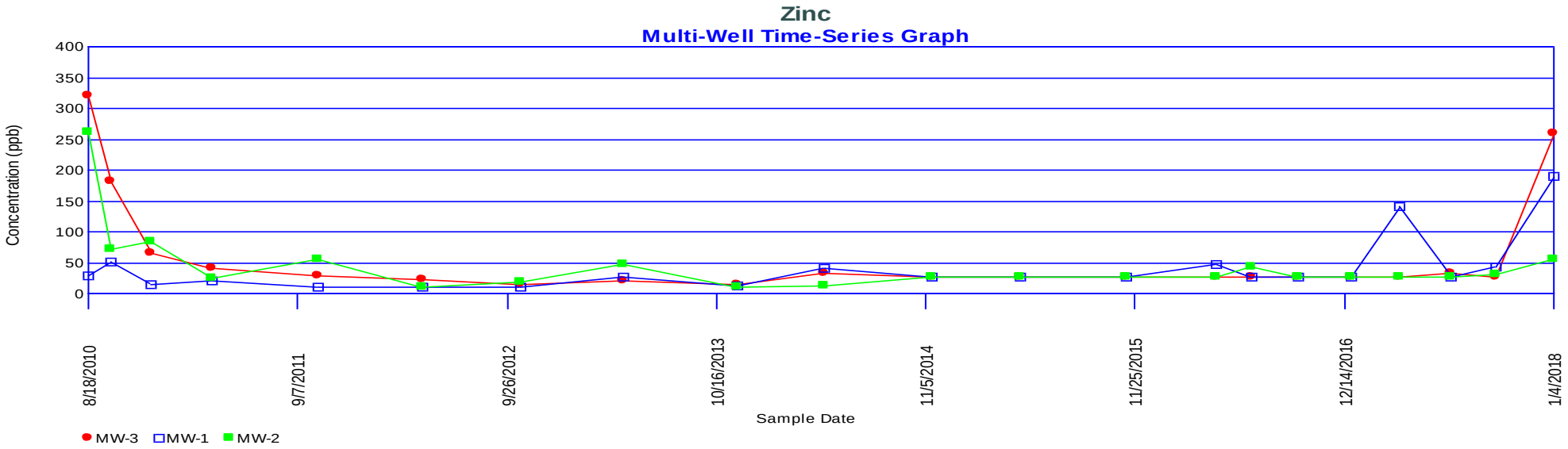

Sodium
Multi-Well Time-Series Graph
Concentration (ppb)
300000
250000
200000
150000
100000
50000
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2


Specific Conductance
Multi-Well Time-Series Graph
Concentration (ppb)
2000
1500
1000
500
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2


Sulfate
Multi-Well Time-Series Graph
Concentration (ppb)
500000
400000
300000
200000
100000
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2
Thallium
Multi-Well Time-Series Graph
Concentration (ppb)
2
1.5
1
0.5
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2


TOC (Total Organic Carbon)
Multi-Well Time-Series Graph
Concentration (ppb)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2


Vanadium
Multi-Well Time-Series Graph
Concentration (ppb)
200
150
100
50
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2


Zinc
Multi-Well Time-Series Graph
Concentration (ppb)
400
350
300
250
200
150
100
50
0
8/18/2010
9/7/2011
9/26/2012
10/16/2013
11/5/2014
11/25/2015
12/14/2016
1/4/2018
Sample Date
MW-3
MW-1
MW-2

Colorado Department of Public Health & Environment

Recycling Facility Annual Reporting Form

Reporting form must be submitted by March 1, 2018

Name of Facility: Broda's Inert Fill - Al Platte Valley Pit
Address: 1859 Hwy 85
City: Brighton
ZIP code: 80603
Mailing Address: Same
# of Recycling Employees: 2
Contact person: Harrison Broda
Phone: 720-323-2003
E-mail: brodaharrison@aol.com
Reporting Period: **Calendar Year 2017**

Instructions

Save a copy of this file to your computer. Enter data and email the completed form to: cdphe.hmrecycling@state.co.us or print and mail to:

Materials Management Unit
CDPHE HMWMD-SW-B2
4300 Cherry Creek Dr. South
Denver, CO 80246

Any records in our possession identified as "confidential business information" or as a "trade secret" **will not be disclosed** without giving the party raising the claim notice of the request and an opportunity to contest the release of the information. The burden of proving that the information is protected as a trade secret is on the party raising the claim. In order to claim this protection, you must meet the following requirements:

1. you must show that you have taken reasonable measures to protect the confidentiality of the information, and that you intend to continue to take such measures;
2. the information is not, and has not been, reasonably obtainable without your consent by other persons using legitimate means;
3. either:
i. you have satisfactorily shown that disclosure of the information is likely to cause substantial harm to your competitive position; or
ii. the information is voluntarily submitted information and its disclosure would be likely to impair the Government's ability to obtain necessary information in the future;

the Government's ability to obtain necessary information in the future;
4. no statute specifically requires disclosure of the information; and
5. you have to assert a claim of business confidentiality in writing. You may do so by checking the box below, adding your facility information and submitting along with your reporting forms.

I have read Items 1-5 and am hereby requesting that information submitted on my Recycling Facility Reporting Forms be kept as confidential information.

☐ **Yes. (Box MUST be checked to claim privilege)**

Facility Name:
Street Address: City: Zip Code:
Telephone: County:
Submitted By: Date:

Submit only one confidentiality form per facility. Applies only to facility identified above.

****Account for Materials actually Diverted to viable Resource Recovery End Use****

Select Facility Type: *Industrial Recycling 8.5* or circle one of the following:
(MRF, End User, Recyclable Material Generator, Industrial Recycler)

Materials within each General Commodity grouping are organized by Sub-category, and futher to Individual Commodity. Please provide data in the most specific categories possible.

General Commodity	Sub-category	Individual Commodity		Amount Received	Remaining On-site (end of year)	Amount Sent Off-site	to: (Facility Name, State)	Unit of Measure
Paper			Total:	0	0	0	Not Available Aggregate Industries uses	
	Paper (All Mixed)			0	0	0		
	Cardboard (& Paperboard)			0	0	0		
Metals			Total:	0	0	0		
Batteries			Total:	0	0	0		
Plastics	(#1 -#7 Mixed)		Total:	0	0	0		

Organics		Total:	0	0	0		
Aggregates		Total:	29800	29800	0	None - left on site for beneficial use	Cubic Yards
Coal Combustion Products		Total:	0	0	0		
Textiles		Total:	0	0	0		
Glass		Total:	0	0	0		
Scrap Tires / Rubber		Total:	0	0	0		
Used Oil		Total:	0	0	0		
Anti-Freeze		Total:	0	0	0		
Cooking Oils		Total:	0	0	0		
Electronics		Total:	0	0	0		
Construction & Demo. Materials		Total:	0	0	0		
Single Stream Recyclables		Total:	0	0	0		
List materials in your Single Stream collection	…						
	…						
Other Materials		Total:	755	755	700		
	Crushed concrete		330	30	300	Sold to Aggregate Industries Customers by Aggregate Industries	tons
	Crushed asphalt		425	25	400	Sold to Aggregate Industries Customers by Aggregate Industries	tons
	Write in…						
	Write in…						

If you have questions regarding this form, please contact Wolf Kray at (303) 692-3337.