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

September 14, 2017

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

Re: 2016 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 2016.

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 through 2015 and in 2016 quarterly sampling has been done. The deliveries of inert materials are based upon the local economy and the volume received in 2016 is above 2015 by approximately 1300 cubic yards. 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 2016 is 21,305 cubic yards.

Testing and Monitoring Reports:
Groundwater monitoring wells MW-1, MW-2, and MW-3 were sampled on 4/25/2016, 6/29/16, 9/21/16, and 12/28/16 and the lake was sampled on 5/10/16 and 6/29/16. The monitoring wells were analyzed for parameters listed in Appendix IA and IB of CDPHE regulations. Mud truck samples were taken on 5/19/16 and 7/20/16.

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 in 2016. 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. Correspondence with CDPHE in 2016 is attached. In a February 3, 2016 Compliance Advisory Conference (CAC) meeting with David Snapp, CDPHE, it was 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 2016 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 deliveries and analyzed according to the Design and Operations Plan. Only two mud samples were taken in 2016 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 2016 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 sodium, sulfate, arsenic, chloride, 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 2010-2015
A2 Recycling Form for 2014

Molen & Associates, LLC
Environmental Consultants

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

September 14, 2017

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 2016

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 2016. Data from the period from August 2010 through November 2015 was provided in the 2015 groundwater monitoring report dated February 26, 2016. This report includes data from 2016 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 results summaries and laboratory reports from each of the past sampling events
- Statistical evaluation results (including appropriate Shewart-CUSUM charts and time series plots) related to groundwater monitoring data from facility monitoring network wells.
- Laboratory Analytical Reports for all sample events in 2016
- Field data sheets for 2016 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 quarterly in 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.

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.

Sample Analysis and Results

A summary of the all laboratory analytical results for each facility monitoring well is presented in Table 1, with complete laboratory reports provided in Appendix I. 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.

Groundwater Level Monitoring Results

The depth to groundwater at facility monitoring network wells has remained relatively consistent in the 2016 monitoring period, with levels recorded generally deviating less than one foot. Groundwater elevation data related to monitoring at the three monitoring network wells is presented in Table 2.

Groundwater Analytical Data Statistical Evaluation

Analytical results from facility monitoring network wells MW-1, MW-2, and MW-3 for 2016 were entered into ChemStat® statistical software. Analytical results include the majority of Appendix IA indicator parameters and some metals from the Appendix IB inorganic constituents. Metals constituent data exhibiting a significant number of non-detectable values were not entered into the software, as the statistical evaluation of data sets with a majority of non-detectable concentration values is not appropriate. Since there has been no detection of volatile organic compounds (with the exception discussed above), the statistical evaluation of Appendix IB organic constituents is likewise not appropriate. The statistical analysis has been completed using inter-well statistical techniques, statistically comparing down-gradient wells (MW-1 and MW-2) data to up-gradient well (MW-3) data.

Analytical data was initially evaluated for statistical outliers using Dixon's outlier test. None of the outliers identified were rejected for use in the statistical analysis, because their use did not substantially alter the statistical analysis results.

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 Shewart 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. If one-half the detection limit is used in the statistical analysis, cadmium in in control using the CUSUM. Cadmium does not show statistical significance using Wilcoxon Non-Parametric Rank Test. Alkalinity, bicarbonate, magnesium, sodium and sulfate are all shown to be statistically significant using Wilcoxon Non-Parametric Rank Test, however the concentrations are not trending up. This is evident looking at the Time Series Charts and is confirmed using Mann-Kendall Trend Analysis and are the reason that they are not shown to be out of control using the Shewhart CUSUM control charts.
- MW-2 exhibits out of control Shewhart CUSUM control charts for chloride, sodium, sulfate and total organic carbon (TOC). Chloride, sodium, and sulfate show an upward trend confirmed by Mann-Kendall Trend Analysis, while TOC does not show a trend. Wilcoxon Non-Parametric Rank Test for chloride, sodium, sulfate, and TOC are all statistically significant along with barium. Barium exhibits a downward trend confirmed by the Mann-Kendall Trend Analysis and is the reason it is not shown to be out of control using Shewhart CUSUM.
- MW-3 is a background well.
- Lake Samples were included in the background but are not significant because there are only two samples.

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 and quarterly from April 2016 forward.

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, and the lake receiving run-off water from adjacent highway and mining activities.

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

Yours truly,
MOLEN & ASSOCIATES, LLC

Mark A Molen

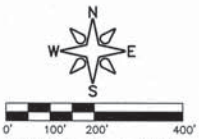
Figure 1: Map of Groundwater Well Locations
Table 1: All Sample Event Analytical Results Summary
Table 2: Groundwater Elevation Measurements
Table 3: Shewhart – CUSUM Data Summary
Table 4: Additional Statistical Evaluations

Appendix I: ESC Laboratory Reports
Appendix II: Shewhart – CUSUM Charts and Time Series Graphs

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

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: 1"=200'	DATE: DEC. 21, 2010	DRW BY: S.J.M.	CKD BY: R.B.	PROJ NO: 2010–144
			BOOK: 655	PAGE: 73	FILE NO: 30–1N66–89L		SHEET NO: 1 OF 1

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Results of Detected Values

Client Sample ID			MW-1		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		10/24/2012	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	140		130		110		130		110		120		110	
9056	Nitrate	mg/l	6.3		5.9		5.2		4.3		4.5		3.6		3.9	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Sulfate	mg/l	190		180		180		180		180		180		170	
2320B	Alkalinity	mg/l	170		180		180		170		160		160		220	
2320B	Alkalinity,Bicarbonate	mg/l	170		180		180		170		160		160		220	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20		<100	
9040C	pH	su	7.3	T8	7.5	T8	7.1	T8	7	T8	7.5	T8	7.3	T8	7.6	T8
9050A	Specific Conductance	umhos/cm	1200		1200		1100		1100		1100		1000		1000	
9060A	TOC (Total Organic Carbon)	mg/l	3.7		3.6		2.8	P1	1		3		2.8		2.8	
6020	Antimony	mg/l	<0.0010		0.0013		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Beryllium	mg/l	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
6020	Cadmium	mg/l	<0.00050		<0.00050		<0.00050		<0.0005		0.00085		<0.00050		<0.00050	
6020	Copper	mg/l	0.009		0.017		0.0048		0.0072		0.0044		<0.0020		0.0034	
6020	Lead	mg/l	<0.0050		0.011		0.0029		0.0033		0.0028		<0.0010		0.0012	
6020	Selenium	mg/l	0.0032		0.0043		0.0038		0.0046		0.0034		0.0022		0.0036	
6010/6020	Thallium	mg/l	<0.0010		<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		<0.010	
6020/6010	Arsenic	mg/l	0.0018		0.0032		0.0014		0.0038		0.0019		0.0013		0.0023	
6010B	Barium	mg/l	0.15		0.15		0.094		0.11		0.35		0.074		0.076	
6010B	Calcium	mg/l	79		81		75		67		68		63		62	
6010B	Chromium	mg/l	<0.010		<0.010		<0.010		<0.01		0.025		<0.010		<0.010	
6010B	Cobalt	mg/l	<0.010		<0.010		<0.010		<0.01		0.01		<0.010		<0.010	
6010B	Magnesium	mg/l	22		22		22		21		25		20		21	
6010B	Nickel	mg/l	<0.020		<0.020		<0.020		<0.02		0.022		<0.020		<0.020	
6010B	Potassium	mg/l	10		8.7		9.5		8.5		17		7.3		8	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Sodium	mg/l	140		120		140		120		160		120		120	
6010B	Vanadium	mg/l	0.015		<0.010		<0.010		<0.01		0.047		<0.010		<0.010	
7470A	Mercury	mg/l	<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.00020	
8260B	Acetone	mg/l	<0.050		<0.050		0.095		<0.050		<0.050		<0.050		<0.050	

Notes

NA	Not analyzed
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to re
V:	(ESC) The sample concentration is too high to evaluate accurate spike recoveries
J6	(ESC) The sample matrix interfered with the ability to make any accurate determination; spike value too low

GROUNDWATER MONITORING RESULTS

Results of Detected Values

Client Sample ID			MW-1		MW-1		MW-1		MW-1		MW-1		MW-1		MW-1	
Collect Date			4/30/2013		11/26/2013		5/5/2014		11/19/2014		4/29/2015		11/10/2015		04/25/2016	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	110		110		110		110		180		120		118	
9056	Nitrate	mg/l	4.1		3.3		4.3		4.5		5.8		6.58		8.94	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.1	
9056	Sulfate	mg/l	180		160		160		160		170		88.4		128	
2320B	Alkalinity	mg/l	180		170		160		170		180		194		184	J6
2320B	Alkalinity,Bicarbonate	mg/l	180		170		160		170		180		194		184	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20		<20	
9040C	pH	su	7.3	T8	7.8	T8	7.4	T8	7.8	T8	6.9	T8	7.29	T8	6.67	T8
9050A	Specific Conductance	umhos/cm	1100		1000		1000		1100		1100		1130		1130	
9060A	TOC (Total Organic Carbon)	mg/l	3.8		2.6		2		2.3		2.8		2.23		1.61	
6020	Antimony	mg/l	<0.0010		<0.0010		<0.0010		<0.0020		<0.0020		<0.0020		<0.002	
6020	Beryllium	mg/l	<0.0010		<0.0010		<0.0010		<0.0020		<0.0020		<0.0020		<0.002	
6020	Cadmium	mg/l	0.0016		0.00069		0.00098		<0.001		<0.001		<0.001		0.00468	
6020	Copper	mg/l	0.014		0.0094		0.012		<0.005		<0.005		<0.005		0.0108	
6020	Lead	mg/l	0.0044		0.0023		0.0047		<0.0020		0.004		<0.0020		0.00465	
6020	Selenium	mg/l	0.0033		0.0033		0.0021		<0.0020		<0.0020		<0.0020		0.00265	
6010/6020	Thallium	mg/l	<0.0010		<0.0010		<0.0010		<0.002		<0.002		<0.002		<0.002	
6020	Zinc	mg/l	0.026		0.011		0.039		<0.025		<0.025		<0.025		0.0453	
6020/6010	Arsenic	mg/l	0.0013		0.0012		0.0012		<0.0020		<0.0020		<0.0020		<0.01	
6010B	Barium	mg/l	0.11		0.072		0.12		0.052		0.11		0.0694		0.11	
6010B	Calcium	mg/l	74		60		69		130		71		75.3		106	
6010B	Chromium	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.01	
6010B	Cobalt	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.01	
6010B	Magnesium	mg/l	23		21		23		7.2		23		23.5		26.9	
6010B	Nickel	mg/l	<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.01	
6010B	Potassium	mg/l	7.9		8.6		9.1		<0.010		9.3		8.64		8.4	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.10		<0.10		<0.10		<0.005	
6010B	Sodium	mg/l	120		120		120		6.4		120		120		127	
6010B	Vanadium	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.02	
7470A	Mercury	mg/l	<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.05	

Notes

NA	Not analyzed
T8	(ESC) - Additional method/sample informa
P1	RPD value not applicable for sample conc
O	(ESC) Sample diluted due to matrix interfe flect the necessary dilution.
V:	(ESC) The sample concentration is too hig
J6	(ESC) The sample matrix interfered with th

Results of Detected Values

Client Sample ID			MW-1		MW-1		MW-1	
Collect Date			06/29/2016		09/21/2016		12/28/2016	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	129		128		135	
9056	Nitrate	mg/l	9.08		8.84		8.96	
9056	Nitrite	mg/l	<0.1		<0.1		<0.1	
9056	Sulfate	mg/l	124		118		126	
2320B	Alkalinity	mg/l	NA		167		189	
2320B	Alkalinity,Bicarbonate	mg/l	218		167		189	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20	
9040C	pH	su	7.09	T8	7.33	T8	7.36	T8
9050A	Specific Conductance	umhos/cm	1120		1120		1130	
9060A	TOC (Total Organic Carbon)	mg/l	1.97		2.04		2.17	
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		<0.001		<0.001	
6020	Copper	mg/l	<0.005		<0.005		<0.005	
6020	Lead	mg/l	<0.002		<0.002		<0.002	
6020	Selenium	mg/l	0.00223		0.00251		0.0023	
6010/6020	Thallium	mg/l	<0.002		<0.002		<0.002	
6020	Zinc	mg/l	<0.025		<0.025		<0.025	
6020/6010	Arsenic	mg/l	<0.01		<0.01		<0.01	
6010B	Barium	mg/l	0.0786		0.0764		0.0824	
6010B	Calcium	mg/l	75.7		77.1		NA	
6010B	Chromium	mg/l	<0.01		<0.01		<0.01	
6010B	Cobalt	mg/l	<0.01		<0.01		<0.01	
6010B	Magnesium	mg/l	25.2		25		25.5	
6010B	Nickel	mg/l	<0.01		<0.01		<0.01	
6010B	Potassium	mg/l	9.72		8.64		9.27	
6010B	Silver	mg/l	<0.005		<0.005		<0.005	
6010B	Sodium	mg/l	122		119	V	117	
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	

Notes

NA	Not analyzed
T8	(ESC) - Additional method/sample informat
P1	RPD value not applicable for sample conce
O	(ESC) Sample diluted due to matrix interfe
V:	(ESC) The sample concentration is too hig
J6	(ESC) The sample matrix interfered with th

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GROUNDWATER MONITORING RESULTS

Results of Detected Values

Client Sample ID			MW-2		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		10/24/2012	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	150		160		130		160		160		180		180	
9056	Nitrate	mg/l	<0.10		<0.10		<0.10		0.17		<0.10		0.12		<0.10	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Sulfate	mg/l	190		190		180		230		210		230		200	
2320B	Alkalinity	mg/l	190		200		200		160		160		160		210	
2320B	Alkalinity,Bicarbonate	mg/l	190		200		200		160		160		160		210	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20		<100	
9040C	pH	su	7.4	T8	7.7	T8	7.4	T8	7.1	T8	7.7	T8	7.5	T8	7.5	T8
9050A	Specific Conductance	umhos/cm	1200		1200		1200		1200		1200		1200		1300	
9060A	TOC (Total Organic Carbon)	mg/l	4.9		6.3		4.5		5.3		6.1		7.4		5.5	
6020	Antimony	mg/l	<0.0010		<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		<0.0010	
6020	Cadmium	mg/l	0.0016		0.0013		0.0012		0.00081		0.005		<0.00050		0.0014	
6020	Copper	mg/l	0.063		0.018		0.022		0.009		0.028		<0.0020		0.007	
6020	Lead	mg/l	0.066		0.014		0.016		0.0046		0.017		<0.0010		0.0031	
6020	Selenium	mg/l	<0.0050	O	0.0049		0.0032		0.0039		0.0036		0.002		0.0036	
6010/6020	Thallium	mg/l	0.0012		<0.0010		<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		0.018	
6010/6020	Arsenic	mg/l	0.0085		0.0048		0.0052		0.0069		0.0064		0.0032		0.0064	
6010B	Barium	mg/l	0.82		0.25		0.34		0.23		0.25		0.13		0.18	
6010B	Calcium	mg/l	76		70		75		66		87		71		70	
6010B	Chromium	mg/l	0.083		0.011		0.023		<0.010		0.014		<0.010		<0.010	
6010B	Cobalt	mg/l	0.028		<0.010		0.012		<0.010		<0.010		<0.010		<0.010	
6010B	Magnesium	mg/l	34		24		26		20		21		21		21	
6010B	Nickel	mg/l	0.054		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020	
6010B	Potassium	mg/l	33		14		14		9.8		13		9.9		11	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Sodium	mg/l	160		140		160		150		110		180		170	
6010B	Vanadium	mg/l	0.15		<0.010		0.033		<0.01		0.025		<0.010		<0.010	
7470A	Mercury	mg/l	<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.00020	
8260B	Acetone	mg/l	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	

Notes

NA	Not analyzed
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to refl
V:	(ESC) The sample concentration is too high to evaluate accurate spike recoveries
J6	(ESC) The sample matrix interfered with the ability to make any accurate determination; spike value too low

Results of Detected Values

Client Sample ID			MW-2		MW-2		MW-2		MW-2		MW-2		MW-2		MW-2	
Collect Date			4/30/2013		11/26/2013		5/5/2014		11/19/2014		4/29/2015		11/10/2015		04/25/2016	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	190		180		190		190		247		180		166	
9056	Nitrate	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.1	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.1	
9056	Sulfate	mg/l	250		270		280		280		322		303		273	
2320B	Alkalinity	mg/l	170		150		120		140		130		165		115	
2320B	Alkalinity,Bicarbonate	mg/l	170		150		120		140		130		165		115	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20		<20	
9040C	pH	su	7.6	T8	7.6	T8	7.4	T8	7.7	T8	7.2	T8	7.44	T8	7.03	T8
9050A	Specific Conductance	umhos/cm	1400		1500		1400		1400		1400		1510		1380	
9060A	TOC (Total Organic Carbon)	mg/l	8		5.6		6.5		5		5.8		6.02		4.67	
6020	Antimony	mg/l	<0.0010		<0.0010		<0.0010		<0.0020		<0.0020		<0.0020		<0.002	
6020	Beryllium	mg/l	<0.0010		<0.0010		<0.0010		<0.0020		<0.0020		<0.0020		<0.002	
6020	Cadmium	mg/l	0.0024		<0.00050		0.00057		<0.001		<0.001		<0.001		<0.001	
6020	Copper	mg/l	0.021		0.0056		0.0056		<0.005		<0.005		<0.005		<0.005	
6020	Lead	mg/l	0.01		0.0019		0.002		<0.0020		<0.0020		<0.0020		<0.002	
6020	Selenium	mg/l	0.0031		0.0036		0.0021		<0.0020		<0.0020		<0.0020		<0.002	
6010/6020	Thallium	mg/l	<0.0010		<0.0010		<0.0010		<0.002		<0.002		<0.002		<0.002	
6020	Zinc	mg/l	0.046		<0.010		0.012		<0.025		<0.025		<0.025		<0.025	
6010/6020	Arsenic	mg/l	0.01		0.014		0.016		<0.0020		0.0031		0.00432		<0.01	
6010B	Barium	mg/l	0.4		0.31		0.42		0.1		0.13		0.134		0.119	
6010B	Calcium	mg/l	79		71		78		120		69		79.1		70.1	
6010B	Chromium	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.01	
6010B	Cobalt	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.01	
6010B	Magnesium	mg/l	24		20		23		17		21		22.3		20.4	
6010B	Nickel	mg/l	<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.01	
6010B	Potassium	mg/l	13		10		12		1.6		12		11.9		12	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.005	
6010B	Sodium	mg/l	190		200		210		6.8		200		191	V	191	V
6010B	Vanadium	mg/l	0.019		<0.010		<0.010		<0.010		<0.010		<0.010		<0.02	
7470A	Mercury	mg/l	<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.0002	
8260B	Acetone	mg/l	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.05	

Notes

NA	Not analyzed
T8	(ESC) - Additional method/sample informa
P1	RPD value not applicable for sample conc
O	(ESC) Sample diluted due to matrix interfelect the necessary dilution.
V:	(ESC) The sample concentration is too hig
J6	(ESC) The sample matrix interfered with th

Results of Detected Values

Client Sample ID			MW-2		MW-2		MW-2	
Collect Date			06/29/2016		09/21/2016		12/28/2016	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	178		180		189	
9056	Nitrate	mg/l	0.148		<0.1		<0.1	
9056	Nitrite	mg/l	<0.1		<0.1		<0.1	
9056	Sulfate	mg/l	289		276		320	
2320B	Alkalinity	mg/l	NA		139		122	
2320B	Alkalinity,Bicarbonate	mg/l	143		139		122	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20	
9040C	pH	su	7.2	T8	7.51	T8	7.41	T8
9050A	Specific Conductance	umhos/cm	1420		1430		1440	
9060A	TOC (Total Organic Carbon)	mg/l	8.7		5.32		4.72	
6020	Antimony	mg/l	<0.002		<0.002		<0.002	
6020	Beryllium	mg/l	<0.002		<0.002		<0.002	
6020	Cadmium	mg/l	0.00205		<0.001		<0.001	
6020	Copper	mg/l	0.0119		<0.005		<0.005	
6020	Lead	mg/l	0.0227		<0.002		<0.002	
6020	Selenium	mg/l	<0.002		<0.002		<0.002	
6010/6020	Thallium	mg/l	<0.002		<0.002		<0.002	
6020	Zinc	mg/l	0.0425		<0.025		<0.025	
6010/6020	Arsenic	mg/l	<0.01		<0.01		<0.01	
6010B	Barium	mg/l	0.311		0.135		0.129	
6010B	Calcium	mg/l	76.4		72		NA	
6010B	Chromium	mg/l	0.0219		<0.01		<0.01	
6010B	Cobalt	mg/l	<0.01		<0.01		<0.01	
6010B	Magnesium	mg/l	22		20.9		21.8	
6010B	Nickel	mg/l	0.0121		<0.01		<0.01	
6010B	Potassium	mg/l	14.8		12.5		11.4	
6010B	Silver	mg/l	<0.005		<0.005		<0.005	
6010B	Sodium	mg/l	188		194		196	
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	

Notes

NA	Not analyzed
T8	(ESC) - Additional method/sample informat
P1	RPD value not applicable for sample conce
O	(ESC) Sample diluted due to matrix interfe
V:	(ESC) The sample concentration is too hig
J6	(ESC) The sample matrix interfered with th

GROUNDWATER MONITORING RESULTS

Results of Detected Values

Client Sample ID			MW-3		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		10/24/2012	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	110		130		76		120		120		110		140	
9056	Nitrate	mg/l	15		19		12		15		15		17		15	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Sulfate	mg/l	110		140		60		120		130		140		140	
2320B	Alkalinity	mg/l	180		220		150		170		170		160		180	
2320B	Alkalinity,Bicarbonate	mg/l	180		220		150		170		170		160		180	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20		<100	
9040C	pH	su	7.2	T8	7.4	T8	7.5	T8	6.9	T8	7.8	T8	7	T8	7.3	T8
9050A	Specific Conductance	umhos/cm	1000		1200		950		1100		1100		1000		1000	
9060A	TOC (Total Organic Carbon)	mg/l	2.2		4		3.6		2.8		2.4		3.4		2.8	
6020	Antimony	mg/l	<0.0010		<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		<0.0010	
6020	Cadmium	mg/l	0.001		0.00097		<0.00050		0.00064		0.0023		<0.00050		<0.00050	
6020	Copper	mg/l	0.077		0.043		0.016		0.011		0.012		0.0064		0.0052	
6020	Lead	mg/l	0.14		0.069		0.019		0.012		0.012		0.006		0.0033	
6020	Selenium	mg/l	<0.0050	O	0.0061		0.0043		0.0068		0.0044		0.004		0.0052	
6020/6010	Thallium	mg/l	0.0015		<0.0010		<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		0.013	
6020/6010	Arsenic	mg/l	0.012		0.0097		0.0037		0.0036		0.0033		0.0023		0.0023	
6010B	Barium	mg/l	1.8		0.81		0.27		0.26		0.092		0.14		0.095	
6010B	Calcium	mg/l	110		100		75		96		68		83		75	
6010B	Chromium	mg/l	0.082		0.027		0.015		0.012		<0.010		<0.010		<0.010	
6010B	Cobalt	mg/l	0.043		0.017		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Magnesium	mg/l	36		29		19		23		22		19		17	
6010B	Nickel	mg/l	0.065		0.031		<0.020		<0.020		<0.020		<0.020		<0.020	
6010B	Potassium	mg/l	32		16		13		13		8.4		8.1		10	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Sodium	mg/l	100		95		96		92		120		110		100	
6010B	Vanadium	mg/l	0.15		0.031		0.029		<0.010		<0.010		<0.010		<0.010	
7470A	Mercury	mg/l	<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.00020	
8260B	Acetone	mg/l	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	

Notes

NA	Not analyzed
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to refle
V:	(ESC) The sample concentration is too high to evaluate accurate spike recoveries
J6	(ESC) The sample matrix interfered with the ability to make any accurate determination; spike value too low

GROUNDWATER MONITORING RESULTS

Results of Detected Values

Client Sample ID			MW-3		MW-3		MW-3		MW-3		MW-3		MW-3	
Collect Date			4/30/2013		11/26/2013		5/5/2014		11/19/2014		4/29/2015		11/10/2015	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	130		110		94		110		190		117	
9056	Nitrate	mg/l	15		17		12		12		10		11.2	
9056	Nitrite	mg/l	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
9056	Sulfate	mg/l	110		120		120		140		160		101	
2320B	Alkalinity	mg/l	160		160		130		170		190		159	
2320B	Alkalinity,Bicarbonate	mg/l	160		160		130		170		190		159	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20		<20		<20	
9040C	pH	su	7.2	T8	7.3	T8	7.3	T8	7.3	T8	6.8	T8	7.07	T8
9050A	Specific Conductance	umhos/cm	1100		1100		950		1100		1100		988	
9060A	TOC (Total Organic Carbon)	mg/l	2.6		2.1		1.9		1.6		2.4		2.29	
6020	Antimony	mg/l	<0.0010		<0.0010		<0.0010		<0.0020		<0.0020		<0.0020	
6020	Beryllium	mg/l	<0.0010		<0.0010		<0.0010		<0.0020		<0.0020		<0.0020	
6020	Cadmium	mg/l	0.0013		<0.00050		<0.00050		<0.001		<0.001		<0.001	
6020	Copper	mg/l	0.0079		0.0066		0.0057		<0.005		<0.005		<0.005	
6020	Lead	mg/l	0.0064		0.0041		0.0045		<0.0020		<0.0020		0.00217	
6020	Selenium	mg/l	0.0042		0.0041		0.004		<0.0020		0.0032		0.0022	
6020/6010	Thallium	mg/l	<0.0010		<0.0010		<0.0010		<0.002		<0.002		<0.002	
6020	Zinc	mg/l	0.02		0.013		0.032		<0.025		<0.025		<0.025	
6020/6010	Arsenic	mg/l	0.0015		0.0011		0.0014		<0.0020		<0.0020		<0.0020	
6010B	Barium	mg/l	0.13		0.09		0.098		0.16		0.057		0.0709	
6010B	Calcium	mg/l	84		77		81		71		96		78.4	
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	18		18		18		14		20		16.5	
6010B	Nickel	mg/l	<0.020		<0.020		<0.020		<0.020		<0.020		<0.020	
6010B	Potassium	mg/l	12		12		11		60		7.7		8.18	
6010B	Silver	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
6010B	Sodium	mg/l	100		100		100		27		110		92	
6010B	Vanadium	mg/l	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
7470A	Mercury	mg/l	<0.00020		<0.00020		<0.00020		<0.00020		<0.00020		<0.00020	
8260B	Acetone	mg/l	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	

Notes

NA	Not analyzed
T8	(ESC) - Additional method/sample informat
P1	RPD value not applicable for sample conce
O	(ESC) Sample diluted due to matrix interfer ct the necessary dilution.
V:	(ESC) The sample concentration is too higl
J6	(ESC) The sample matrix interfered with th

BRODA AI INERT FILL
GROUNDWATER MONITORING RESULTS

Results of Detected Values

Client Sample ID			MW-3		MW-3		MW-3		MW-3	
Collect Date			04/25/2016		06/29/2016		09/21/2016		12/28/2016	
Method	Parameter	Units	Value	Qual	Value	Qual	Value	Qual	Value	Qual
9056	Chloride	mg/l	118		119		150		157	
9056	Nitrate	mg/l	10.7		13.2		10.5		9.1	
9056	Nitrite	mg/l	<0.1		<0.1		<0.1		<0.1	
9056	Sulfate	mg/l	112		135		112		121	
2320B	Alkalinity	mg/l	158		NA		163		169	
2320B	Alkalinity,Bicarbonate	mg/l	158		191		163		169	
2320B	Alkalinity,Carbonate	mg/l	<20		<20		<20		<20	
9040C	pH	su	6.48	T8	6.87	T8	7.08	T8	7	T8
9050A	Specific Conductance	umhos/cm	1100		1080		1140		1160	
9060A	TOC (Total Organic Carbon)	mg/l	1.71		2.67		2.53		2.17	
6020	Antimony	mg/l	<0.002		<0.002		<0.002		<0.002	
6020	Beryllium	mg/l	<0.002		<0.002		<0.002		<0.002	
6020	Cadmium	mg/l	<0.001		<0.001		<0.001		<0.001	
6020	Copper	mg/l	<0.005		<0.005		<0.005		<0.005	
6020	Lead	mg/l	<0.002		<0.002		<0.002		<0.002	
6020	Selenium	mg/l	0.00203		<0.002		0.00223		0.00226	
6020/6010	Thallium	mg/l	<0.002		<0.002		<0.002		<0.002	
6020	Zinc	mg/l	<0.025		<0.025		<0.025		<0.025	
6020/6010	Arsenic	mg/l	<0.01		<0.01		<0.01		<0.01	
6010B	Barium	mg/l	0.0786		0.0835		0.0662		0.0753	
6010B	Calcium	mg/l	96.7		97.1		94.9		NA	
6010B	Chromium	mg/l	<0.01		<0.01		<0.01		<0.01	
6010B	Cobalt	mg/l	<0.01		<0.01		<0.01		<0.01	
6010B	Magnesium	mg/l	20.2		21.8		20.8		21.6	
6010B	Nickel	mg/l	<0.01		<0.01		<0.01		<0.01	
6010B	Potassium	mg/l	8.52		8.77		7.74		8.35	
6010B	Silver	mg/l	<0.005		<0.005		<0.005		<0.005	
6010B	Sodium	mg/l	99.2		99.7	V	103		108	
6010B	Vanadium	mg/l	<0.02		<0.02		<0.02		<0.02	
7470A	Mercury	mg/l	<0.0002		<0.0002		<0.0002		<0.0002	
8260B	Acetone	mg/l	<0.05		<0.05		<0.05		<0.05	

Notes

NA	Not analyzed
T8	(ESC) - Additional method/sample informat
P1	RPD value not applicable for sample conce
O	(ESC) Sample diluted due to matrix interfer
V:	(ESC) The sample concentration is too hig
J6	(ESC) The sample matrix interfered with th

Groundwater Elevation Measurements

Well ID	Sampling Date	Total Depth in Feet	Static Water Level in Feet	Surveyed Casing Stickup in Feet	Groundwater Elevation	Water Column in Feet
MW-1	6/17/2010	Well Installed				
	9/29/2010	36.28	6.33	2.32	4934.93	29.95
	8/18/2010	36.28	6.13	2.32	4935.13	30.15
	12/14/2010	36.27	6.82	2.32	4934.44	29.45
	4/5/2011	36.18	6.96	2.32	4934.30	29.22
	10/17/2011	36.11	6.28	2.32	4934.98	29.83
	4/24/2012	36.11	8.13	2.32	4933.13	27.98
	10/24/2012	36.00	7.71	2.32	4933.55	28.29
	4/30/2013	35.96	8.90	2.32	4932.36	27.06
	11/26/2013	36.03	6.66	2.32	4934.60	29.37
	5/5/2014	36.03	7.19	2.32	4934.07	28.84
	11/19/2014	36.00	6.28	2.32	4934.98	29.72
	4/29/2015	36.03	6.99	2.32	4934.27	29.04
	11/10/2015	36.03	6.78	2.32	4934.48	29.25
	4/25/2016	36.03	6.99	2.32	4934.27	29.04
	6/29/2016	36.03	6.48	2.32	4934.78	29.55
	12/28/2016	36.03	7.58	2.32	4933.68	28.45
MW-2	6/17/2010	Well Installed				
	9/29/2010	27.51	8.53	2.51	4930.40	18.98
	8/18/2010	27.90	8.08	2.51	4930.85	19.82
	12/14/2010	27.49	8.59	2.51	4930.34	18.90
	4/5/2011	27.72	8.63	2.51	4930.30	19.09
	10/17/2011	27.08	8.55	2.51	4930.38	18.53
	4/24/2012	27.34	8.86	2.51	4930.07	18.48
	10/24/2012	27.83	8.91	2.51	4930.02	18.92
	4/30/2013	27.15	8.81	2.51	4930.12	18.34
	11/26/2013	27.17	8.30	2.51	4930.63	18.87
	5/5/2014	27.17	8.91	2.51	4930.02	18.26
	11/19/2014	27.17	8.09	2.51	4930.84	19.08
	4/29/2015	27.17	6.92	2.51	4932.01	20.25
	11/10/2015	27.17	8.01	2.51	4930.92	19.16
	4/25/2016	27.17	6.35	2.51	4932.58	20.82
	6/29/2016	27.17	7.15	2.51	4931.78	20.02
	12/28/2016	27.17	8.32	2.51	4930.61	18.85
MW-3	6/17/2010	Well Installed				
	9/29/2010	39.90	14.58	2.52	4937.38	25.32
	8/18/2010	40.00	14.40	2.52	4937.56	25.60
	12/14/2010	39.50	14.50	2.52	4937.46	25.00
	4/5/2011	39.58	15.42	2.52	4936.54	24.16
	10/17/2011	39.11	14.32	2.52	4937.64	24.79
	4/24/2012	39.35	15.52	2.52	4936.44	23.83
	10/24/2012	39.06	15.22	2.52	4936.74	23.84
	4/30/2013	39.03	15.96	2.52	4936.00	23.07
	11/26/2013	38.99	14.17	2.52	4937.79	24.82
	5/5/2014	38.99	15.10	2.52	4936.86	23.89
	11/19/2014	38.99	13.80	2.52	4938.16	25.19
	4/29/2015	38.99	14.41	2.52	4937.55	24.58
	11/10/2015	37.27	13.80	2.52	4938.16	23.47
	4/25/2016	38.10	14.93	3.66	4938.17	23.17
	6/29/2016	38.10	14.77	3.66	4938.33	23.33
	12/28/2016	38.10	15.53	3.66	4937.57	22.57

Note: Decreasing measured well depths indicates sediment accumulating at the bottom of the wells.

Table 3: Evaluation of Shewhart – CUSUM Control Chart Data
August 2010 – December 2016

Parameter	MW-1	MW-2
Alkalinity Bicarbonate		
Antimony		
Arsenic		
Barium		
Beryllium		
Cadmium	OUT	
Calcium		
Chloride		OUT
Chromium		
Cobalt		
Copper		
Lead		
Magnesium		
Nickel		
Nitrate		
Nitrite		
Potassium		
Selenium		
Silver		
Sodium		OUT
Sulfate		OUT
Thallium		
TOC		OUT
Vanadium		
Zinc		

OUT = Out of Control using CUSUM

NOTES:
MW-3 is a background well and results are not shown because interwell analysis selected

MW-1: Cadmium OUT of control and in control when ½ detection limit is selected

Table 4: Wilcoxon Non-Parametric Rank Test Data
August 2010 – December 2016

Parameter	MW-1	MW-2
Alkalinity bicarbonate	SS	
Antimony		
Arsenic		
Barium		SS
Beryllium		
Cadmium		
Calcium		
Chloride		SS
Chromium		
Cobalt		
Copper		
Lead		
Magnesium	SS	
Nickel		
Nitrate		
Nitrite		
Potassium		
Selenium		
Silver		
Sodium	SS	SS
Sulfate	SS	SS
Thallium		
TOC		SS
Vanadium		
Zinc		

SS = Statistical Significance at 1% Level

Appendix I
ESC Laboratory Reports

ANALYTICAL REPORT

May 04, 2016

Molen & Associates, LLC

Sample Delivery Group:	L831484
Samples Received:	04/26/2016
Project Number:	10-0133
Description:	Broda AI Inert Fill
Site:	BORDA AI
Report To:	Mark Molen 2090 East 104th Avenue Suite #205 Thornton, CO 80233

Entire Report Reviewed By:

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.

MW-1 L831484-01 GW

Collected by: Mark Molen
Collected date/time: 04/25/16 14:50
Received date/time: 04/26/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG867687	1	04/26/16 18:32	04/27/16 10:10	NJB
Metals (ICP) by Method 6010B	WG867848	1	04/26/16 20:47	04/27/16 15:17	ST
Metals (ICPMS) by Method 6020	WG867860	1	04/27/16 12:33	04/29/16 15:04	JDG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG867711	1	04/26/16 19:39	04/26/16 19:39	ACG
Wet Chemistry by Method 2320 B-2011	WG867988	1	05/02/16 09:27	05/02/16 09:27	MCG
Wet Chemistry by Method 9040C	WG867619	1	04/26/16 15:03	04/26/16 15:03	MAJ
Wet Chemistry by Method 9050A	WG868072	1	04/28/16 08:33	04/28/16 08:33	AMC
Wet Chemistry by Method 9056A	WG867571	1	04/26/16 12:03	04/26/16 12:03	SAM
Wet Chemistry by Method 9056A	WG867571	5	04/26/16 11:17	04/26/16 11:17	SAM
Wet Chemistry by Method 9060A	WG868039	1	04/28/16 11:25	04/28/16 11:25	AS

MW-2 L831484-02 GW

Collected by: Mark Molen
Collected date/time: 04/25/16 15:20
Received date/time: 04/26/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG867687	1	04/26/16 18:32	04/27/16 10:01	NJB
Metals (ICP) by Method 6010B	WG867848	1	04/26/16 20:47	04/27/16 15:06	ST
Metals (ICPMS) by Method 6020	WG867860	1	04/27/16 12:33	04/29/16 15:06	JDG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG867711	1	04/27/16 07:53	04/27/16 07:53	ACG
Wet Chemistry by Method 2320 B-2011	WG867988	1	05/02/16 09:50	05/02/16 09:50	MCG
Wet Chemistry by Method 9040C	WG867619	1	04/26/16 15:03	04/26/16 15:03	MAJ
Wet Chemistry by Method 9050A	WG868072	1	04/28/16 08:33	04/28/16 08:33	AMC
Wet Chemistry by Method 9056A	WG867571	1	04/26/16 12:34	04/26/16 12:34	SAM
Wet Chemistry by Method 9056A	WG867571	10	04/26/16 12:19	04/26/16 12:19	SAM
Wet Chemistry by Method 9060A	WG868039	1	04/28/16 11:38	04/28/16 11:38	AS

MW-3 L831484-03 GW

Collected by: Mark Molen
Collected date/time: 04/25/16 16:15
Received date/time: 04/26/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG867687	1	04/26/16 18:32	04/27/16 10:12	NJB
Metals (ICP) by Method 6010B	WG867848	1	04/26/16 20:47	04/27/16 15:20	ST
Metals (ICPMS) by Method 6020	WG867860	1	04/27/16 12:33	04/29/16 15:09	JDG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG867711	1	04/27/16 08:17	04/27/16 08:17	ACG
Wet Chemistry by Method 2320 B-2011	WG867988	1	05/02/16 10:07	05/02/16 10:07	MCG
Wet Chemistry by Method 9040C	WG867619	1	04/26/16 15:03	04/26/16 15:03	MAJ
Wet Chemistry by Method 9050A	WG868072	1	04/28/16 08:33	04/28/16 08:33	AMC
Wet Chemistry by Method 9056A	WG867571	1	04/26/16 13:05	04/26/16 13:05	SAM
Wet Chemistry by Method 9056A	WG867571	10	04/26/16 12:49	04/26/16 12:49	SAM
Wet Chemistry by Method 9060A	WG868039	1	04/28/16 11:54	04/28/16 11:54	AS

LAKE 1 L831484-04 GW

Collected by: Mark Molen
Collected date/time: 04/25/16 15:45
Received date/time: 04/26/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG867687	1	04/26/16 18:32	04/27/16 10:15	NJB
Metals (ICP) by Method 6010B	WG867848	1	04/26/16 20:47	04/27/16 15:23	ST
Metals (ICPMS) by Method 6020	WG867860	1	04/27/16 12:33	04/29/16 15:17	JDG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG867711	1	04/27/16 08:41	04/27/16 08:41	ACG
Wet Chemistry by Method 2320 B-2011	WG867988	1	05/02/16 11:12	05/02/16 11:12	MCG
Wet Chemistry by Method 9040C	WG867619	1	04/26/16 15:03	04/26/16 15:03	MAJ
Wet Chemistry by Method 9050A	WG868072	1	04/28/16 08:33	04/28/16 08:33	AMC

LAKE 1 L831484-04 GW

Collected by: Mark Molen
Collected date/time: 04/25/16 15:45
Received date/time: 04/26/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG867571	1	04/26/16 13:20	04/26/16 13:20	SAM
Wet Chemistry by Method 9056A	WG867571	20	04/26/16 19:30	04/26/16 19:30	SAM
Wet Chemistry by Method 9060A	WG868039	1	04/28/16 12:54	04/28/16 12:54	AS

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

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
L831484-01	MW-1	9040C
L831484-02	MW-2	9040C
L831484-03	MW-3	9040C
L831484-04	LAKE 1	9040C

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	184	J6	20.0	1	05/02/2016 09:27	WG867988
Alkalinity,Bicarbonate	184		20.0	1	05/02/2016 09:27	WG867988
Alkalinity,Carbonate	ND		20.0	1	05/02/2016 09:27	WG867988

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.67		1	04/26/2016 15:03	WG867619

Sample Narrative:

9040C L831484-01 WG867619: 6.67 at 12.9c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1130		1	04/28/2016 08:33	WG868072

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	118		5.00	5	04/26/2016 11:17	WG867571
Nitrate as (N)	8.94		0.100	1	04/26/2016 12:03	WG867571
Nitrite as (N)	ND		0.100	1	04/26/2016 12:03	WG867571
Sulfate	128		25.0	5	04/26/2016 11:17	WG867571

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1.61		1.00	1	04/28/2016 11:25	WG868039

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	04/27/2016 10:10	WG867687

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.0100	1	04/27/2016 15:17	WG867848
Barium	0.110		0.00500	1	04/27/2016 15:17	WG867848
Calcium	106		1.00	1	04/27/2016 15:17	WG867848
Chromium	ND		0.0100	1	04/27/2016 15:17	WG867848
Cobalt	ND		0.0100	1	04/27/2016 15:17	WG867848
Magnesium	26.9		1.00	1	04/27/2016 15:17	WG867848
Nickel	ND		0.0100	1	04/27/2016 15:17	WG867848
Potassium	8.40		1.00	1	04/27/2016 15:17	WG867848
Silver	ND		0.00500	1	04/27/2016 15:17	WG867848
Sodium	127		1.00	1	04/27/2016 15:17	WG867848
Vanadium	ND		0.0200	1	04/27/2016 15:17	WG867848

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	04/29/2016 15:04	WG867860
Beryllium	ND		0.00200	1	04/29/2016 15:04	WG867860
Cadmium	0.00468		0.00100	1	04/29/2016 15:04	WG867860
Copper	0.0108		0.00500	1	04/29/2016 15:04	WG867860
Lead	0.00465		0.00200	1	04/29/2016 15:04	WG867860
Selenium	0.00265		0.00200	1	04/29/2016 15:04	WG867860
Thallium	ND		0.00200	1	04/29/2016 15:04	WG867860
Zinc	0.0453		0.0250	1	04/29/2016 15:04	WG867860

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	04/26/2016 19:39	WG867711
Acrylonitrile	ND		0.0100	1	04/26/2016 19:39	WG867711
Benzene	ND		0.00100	1	04/26/2016 19:39	WG867711
Bromochloromethane	ND		0.00100	1	04/26/2016 19:39	WG867711
Bromodichloromethane	ND		0.00100	1	04/26/2016 19:39	WG867711
Bromoform	ND		0.00100	1	04/26/2016 19:39	WG867711
Bromomethane	ND		0.00500	1	04/26/2016 19:39	WG867711
Carbon disulfide	ND		0.00100	1	04/26/2016 19:39	WG867711
Carbon tetrachloride	ND		0.00100	1	04/26/2016 19:39	WG867711
Chlorobenzene	ND		0.00100	1	04/26/2016 19:39	WG867711
Chlorodibromomethane	ND		0.00100	1	04/26/2016 19:39	WG867711
Chloroethane	ND		0.00500	1	04/26/2016 19:39	WG867711
Chloroform	ND		0.00500	1	04/26/2016 19:39	WG867711
Chloromethane	ND		0.00250	1	04/26/2016 19:39	WG867711
Dibromomethane	ND		0.00100	1	04/26/2016 19:39	WG867711
1,2-Dichlorobenzene	ND		0.00100	1	04/26/2016 19:39	WG867711
1,4-Dichlorobenzene	ND		0.00100	1	04/26/2016 19:39	WG867711
trans-1,4-Dichloro-2-butene	ND		0.00250	1	04/26/2016 19:39	WG867711
1,1-Dichloroethane	ND		0.00100	1	04/26/2016 19:39	WG867711
1,2-Dichloroethane	ND		0.00100	1	04/26/2016 19:39	WG867711
1,1-Dichloroethene	ND		0.00100	1	04/26/2016 19:39	WG867711
cis-1,2-Dichloroethene	ND		0.00100	1	04/26/2016 19:39	WG867711
trans-1,2-Dichloroethene	ND		0.00100	1	04/26/2016 19:39	WG867711
1,2-Dichloropropane	ND		0.00100	1	04/26/2016 19:39	WG867711
cis-1,3-Dichloropropene	ND		0.00100	1	04/26/2016 19:39	WG867711
trans-1,3-Dichloropropene	ND		0.00100	1	04/26/2016 19:39	WG867711
Ethylbenzene	ND		0.00100	1	04/26/2016 19:39	WG867711
2-Hexanone	ND		0.0100	1	04/26/2016 19:39	WG867711
Iodomethane	ND		0.0100	1	04/26/2016 19:39	WG867711
2-Butanone (MEK)	ND		0.0100	1	04/26/2016 19:39	WG867711
Methylene Chloride	ND		0.00500	1	04/26/2016 19:39	WG867711
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	04/26/2016 19:39	WG867711
Styrene	ND		0.00100	1	04/26/2016 19:39	WG867711
1,1,1,2-Tetrachloroethane	ND		0.00100	1	04/26/2016 19:39	WG867711
1,1,2,2-Tetrachloroethane	ND		0.00100	1	04/26/2016 19:39	WG867711
Tetrachloroethene	ND		0.00100	1	04/26/2016 19:39	WG867711
Toluene	ND		0.00500	1	04/26/2016 19:39	WG867711
1,1,1-Trichloroethane	ND		0.00100	1	04/26/2016 19:39	WG867711
1,1,2-Trichloroethane	ND		0.00100	1	04/26/2016 19:39	WG867711
Trichloroethene	ND		0.00100	1	04/26/2016 19:39	WG867711
Trichlorofluoromethane	ND		0.00500	1	04/26/2016 19:39	WG867711
1,2,3-Trichloropropane	ND		0.00250	1	04/26/2016 19:39	WG867711
Vinyl acetate	ND		0.0100	1	04/26/2016 19:39	WG867711
Vinyl chloride	ND		0.00100	1	04/26/2016 19:39	WG867711

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

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	04/26/2016 19:39	WG867711
(S) Toluene-d8	*106*		*90.0-115*		*04/26/2016 19:39*	WG867711
(S) Dibromofluoromethane	*108*		*79.0-121*		*04/26/2016 19:39*	WG867711
(S) a,a,a-Trifluorotoluene	*99.5*		*90.4-116*		*04/26/2016 19:39*	WG867711
(S) 4-Bromofluorobenzene	*103*		*80.1-120*		*04/26/2016 19:39*	WG867711

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	115		20.0	1	05/02/2016 09:50	WG867988
Alkalinity,Bicarbonate	115		20.0	1	05/02/2016 09:50	WG867988
Alkalinity,Carbonate	ND		20.0	1	05/02/2016 09:50	WG867988

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.03		1	04/26/2016 15:03	WG867619

Sample Narrative:

9040C L831484-02 WG867619: 7.03 at 13.4c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1380		1	04/28/2016 08:33	WG868072

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	166		10.0	10	04/26/2016 12:19	WG867571
Nitrate as (N)	ND		0.100	1	04/26/2016 12:34	WG867571
Nitrite as (N)	ND		0.100	1	04/26/2016 12:34	WG867571
Sulfate	273		50.0	10	04/26/2016 12:19	WG867571

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	4.67		1.00	1	04/28/2016 11:38	WG868039

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	04/27/2016 10:01	WG867687

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	04/27/2016 15:06	WG867848
Barium	0.119		0.00500	1	04/27/2016 15:06	WG867848
Calcium	70.1		1.00	1	04/27/2016 15:06	WG867848
Chromium	ND		0.0100	1	04/27/2016 15:06	WG867848
Cobalt	ND		0.0100	1	04/27/2016 15:06	WG867848
Magnesium	20.4		1.00	1	04/27/2016 15:06	WG867848
Nickel	ND		0.0100	1	04/27/2016 15:06	WG867848
Potassium	12.0		1.00	1	04/27/2016 15:06	WG867848
Silver	ND		0.00500	1	04/27/2016 15:06	WG867848
Sodium	191	V	1.00	1	04/27/2016 15:06	WG867848
Vanadium	ND		0.0200	1	04/27/2016 15:06	WG867848

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	04/29/2016 15:06	WG867860
Beryllium	ND		0.00200	1	04/29/2016 15:06	WG867860
Cadmium	ND		0.00100	1	04/29/2016 15:06	WG867860
Copper	ND		0.00500	1	04/29/2016 15:06	WG867860
Lead	ND		0.00200	1	04/29/2016 15:06	WG867860
Selenium	ND		0.00200	1	04/29/2016 15:06	WG867860
Thallium	ND		0.00200	1	04/29/2016 15:06	WG867860
Zinc	ND		0.0250	1	04/29/2016 15:06	WG867860

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	04/27/2016 07:53	WG867711
Acrylonitrile	ND		0.0100	1	04/27/2016 07:53	WG867711
Benzene	ND		0.00100	1	04/27/2016 07:53	WG867711
Bromochloromethane	ND		0.00100	1	04/27/2016 07:53	WG867711
Bromodichloromethane	ND		0.00100	1	04/27/2016 07:53	WG867711
Bromoform	ND		0.00100	1	04/27/2016 07:53	WG867711
Bromomethane	ND		0.00500	1	04/27/2016 07:53	WG867711
Carbon disulfide	ND		0.00100	1	04/27/2016 07:53	WG867711
Carbon tetrachloride	ND		0.00100	1	04/27/2016 07:53	WG867711
Chlorobenzene	ND		0.00100	1	04/27/2016 07:53	WG867711
Chlorodibromomethane	ND		0.00100	1	04/27/2016 07:53	WG867711
Chloroethane	ND		0.00500	1	04/27/2016 07:53	WG867711
Chloroform	ND		0.00500	1	04/27/2016 07:53	WG867711
Chloromethane	ND		0.00250	1	04/27/2016 07:53	WG867711
Dibromomethane	ND		0.00100	1	04/27/2016 07:53	WG867711
1,2-Dichlorobenzene	ND		0.00100	1	04/27/2016 07:53	WG867711
1,4-Dichlorobenzene	ND		0.00100	1	04/27/2016 07:53	WG867711
trans-1,4-Dichloro-2-butene	ND		0.00250	1	04/27/2016 07:53	WG867711
1,1-Dichloroethane	ND		0.00100	1	04/27/2016 07:53	WG867711
1,2-Dichloroethane	ND		0.00100	1	04/27/2016 07:53	WG867711
1,1-Dichloroethene	ND		0.00100	1	04/27/2016 07:53	WG867711
cis-1,2-Dichloroethene	ND		0.00100	1	04/27/2016 07:53	WG867711
trans-1,2-Dichloroethene	ND		0.00100	1	04/27/2016 07:53	WG867711
1,2-Dichloropropane	ND		0.00100	1	04/27/2016 07:53	WG867711
cis-1,3-Dichloropropene	ND		0.00100	1	04/27/2016 07:53	WG867711
trans-1,3-Dichloropropene	ND		0.00100	1	04/27/2016 07:53	WG867711
Ethylbenzene	ND		0.00100	1	04/27/2016 07:53	WG867711
2-Hexanone	ND		0.0100	1	04/27/2016 07:53	WG867711
Iodomethane	ND		0.0100	1	04/27/2016 07:53	WG867711
2-Butanone (MEK)	ND		0.0100	1	04/27/2016 07:53	WG867711
Methylene Chloride	ND		0.00500	1	04/27/2016 07:53	WG867711
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	04/27/2016 07:53	WG867711
Styrene	ND		0.00100	1	04/27/2016 07:53	WG867711
1,1,1,2-Tetrachloroethane	ND		0.00100	1	04/27/2016 07:53	WG867711
1,1,2,2-Tetrachloroethane	ND		0.00100	1	04/27/2016 07:53	WG867711
Tetrachloroethene	ND		0.00100	1	04/27/2016 07:53	WG867711
Toluene	ND		0.00500	1	04/27/2016 07:53	WG867711
1,1,1-Trichloroethane	ND		0.00100	1	04/27/2016 07:53	WG867711
1,1,2-Trichloroethane	ND		0.00100	1	04/27/2016 07:53	WG867711
Trichloroethene	ND		0.00100	1	04/27/2016 07:53	WG867711
Trichlorofluoromethane	ND		0.00500	1	04/27/2016 07:53	WG867711
1,2,3-Trichloropropane	ND		0.00250	1	04/27/2016 07:53	WG867711
Vinyl acetate	ND		0.0100	1	04/27/2016 07:53	WG867711
Vinyl chloride	ND		0.00100	1	04/27/2016 07:53	WG867711

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	04/27/2016 07:53	WG867711
(S) Toluene-d8	*105*		*90.0-115*		*04/27/2016 07:53*	WG867711
(S) Dibromofluoromethane	*107*		*79.0-121*		*04/27/2016 07:53*	WG867711
(S) a,a,a-Trifluorotoluene	*97.2*		*90.4-116*		*04/27/2016 07:53*	WG867711
(S) 4-Bromofluorobenzene	*101*		*80.1-120*		*04/27/2016 07:53*	WG867711

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	158		20.0	1	05/02/2016 10:07	WG867988
Alkalinity,Bicarbonate	158		20.0	1	05/02/2016 10:07	WG867988
Alkalinity,Carbonate	ND		20.0	1	05/02/2016 10:07	WG867988

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	6.48		1	04/26/2016 15:03	WG867619

Sample Narrative:

9040C L831484-03 WG867619: 6.48 at 12.2c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1100		1	04/28/2016 08:33	WG868072

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	118		10.0	10	04/26/2016 12:49	WG867571
Nitrate as (N)	10.7		1.00	10	04/26/2016 12:49	WG867571
Nitrite as (N)	ND		0.100	1	04/26/2016 13:05	WG867571
Sulfate	112		50.0	10	04/26/2016 12:49	WG867571

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	1.71		1.00	1	04/28/2016 11:54	WG868039

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	04/27/2016 10:12	WG867687

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	04/27/2016 15:20	WG867848
Barium	0.0786		0.00500	1	04/27/2016 15:20	WG867848
Calcium	96.7		1.00	1	04/27/2016 15:20	WG867848
Chromium	ND		0.0100	1	04/27/2016 15:20	WG867848
Cobalt	ND		0.0100	1	04/27/2016 15:20	WG867848
Magnesium	20.2		1.00	1	04/27/2016 15:20	WG867848
Nickel	ND		0.0100	1	04/27/2016 15:20	WG867848
Potassium	8.52		1.00	1	04/27/2016 15:20	WG867848
Silver	ND		0.00500	1	04/27/2016 15:20	WG867848
Sodium	99.2		1.00	1	04/27/2016 15:20	WG867848
Vanadium	ND		0.0200	1	04/27/2016 15:20	WG867848

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	04/29/2016 15:09	WG867860
Beryllium	ND		0.00200	1	04/29/2016 15:09	WG867860
Cadmium	ND		0.00100	1	04/29/2016 15:09	WG867860
Copper	ND		0.00500	1	04/29/2016 15:09	WG867860
Lead	ND		0.00200	1	04/29/2016 15:09	WG867860
Selenium	0.00203		0.00200	1	04/29/2016 15:09	WG867860
Thallium	ND		0.00200	1	04/29/2016 15:09	WG867860
Zinc	ND		0.0250	1	04/29/2016 15:09	WG867860

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	04/27/2016 08:17	WG867711
Acrylonitrile	ND		0.0100	1	04/27/2016 08:17	WG867711
Benzene	ND		0.00100	1	04/27/2016 08:17	WG867711
Bromochloromethane	ND		0.00100	1	04/27/2016 08:17	WG867711
Bromodichloromethane	ND		0.00100	1	04/27/2016 08:17	WG867711
Bromoform	ND		0.00100	1	04/27/2016 08:17	WG867711
Bromomethane	ND		0.00500	1	04/27/2016 08:17	WG867711
Carbon disulfide	ND		0.00100	1	04/27/2016 08:17	WG867711
Carbon tetrachloride	ND		0.00100	1	04/27/2016 08:17	WG867711
Chlorobenzene	ND		0.00100	1	04/27/2016 08:17	WG867711
Chlorodibromomethane	ND		0.00100	1	04/27/2016 08:17	WG867711
Chloroethane	ND		0.00500	1	04/27/2016 08:17	WG867711
Chloroform	ND		0.00500	1	04/27/2016 08:17	WG867711
Chloromethane	ND		0.00250	1	04/27/2016 08:17	WG867711
Dibromomethane	ND		0.00100	1	04/27/2016 08:17	WG867711
1,2-Dichlorobenzene	ND		0.00100	1	04/27/2016 08:17	WG867711
1,4-Dichlorobenzene	ND		0.00100	1	04/27/2016 08:17	WG867711
trans-1,4-Dichloro-2-butene	ND		0.00250	1	04/27/2016 08:17	WG867711
1,1-Dichloroethane	ND		0.00100	1	04/27/2016 08:17	WG867711
1,2-Dichloroethane	ND		0.00100	1	04/27/2016 08:17	WG867711
1,1-Dichloroethene	ND		0.00100	1	04/27/2016 08:17	WG867711
cis-1,2-Dichloroethene	ND		0.00100	1	04/27/2016 08:17	WG867711
trans-1,2-Dichloroethene	ND		0.00100	1	04/27/2016 08:17	WG867711
1,2-Dichloropropane	ND		0.00100	1	04/27/2016 08:17	WG867711
cis-1,3-Dichloropropene	ND		0.00100	1	04/27/2016 08:17	WG867711
trans-1,3-Dichloropropene	ND		0.00100	1	04/27/2016 08:17	WG867711
Ethylbenzene	ND		0.00100	1	04/27/2016 08:17	WG867711
2-Hexanone	ND		0.0100	1	04/27/2016 08:17	WG867711
Iodomethane	ND		0.0100	1	04/27/2016 08:17	WG867711
2-Butanone (MEK)	ND		0.0100	1	04/27/2016 08:17	WG867711
Methylene Chloride	ND		0.00500	1	04/27/2016 08:17	WG867711
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	04/27/2016 08:17	WG867711
Styrene	ND		0.00100	1	04/27/2016 08:17	WG867711
1,1,1,2-Tetrachloroethane	ND		0.00100	1	04/27/2016 08:17	WG867711
1,1,2,2-Tetrachloroethane	ND		0.00100	1	04/27/2016 08:17	WG867711
Tetrachloroethene	ND		0.00100	1	04/27/2016 08:17	WG867711
Toluene	ND		0.00500	1	04/27/2016 08:17	WG867711
1,1,1-Trichloroethane	ND		0.00100	1	04/27/2016 08:17	WG867711
1,1,2-Trichloroethane	ND		0.00100	1	04/27/2016 08:17	WG867711
Trichloroethene	ND		0.00100	1	04/27/2016 08:17	WG867711
Trichlorofluoromethane	ND		0.00500	1	04/27/2016 08:17	WG867711
1,2,3-Trichloropropane	ND		0.00250	1	04/27/2016 08:17	WG867711
Vinyl acetate	ND		0.0100	1	04/27/2016 08:17	WG867711
Vinyl chloride	ND		0.00100	1	04/27/2016 08:17	WG867711

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

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	04/27/2016 08:17	WG867711
(S) Toluene-d8	*106*		*90.0-115*		*04/27/2016 08:17*	WG867711
(S) Dibromofluoromethane	*106*		*79.0-121*		*04/27/2016 08:17*	WG867711
(S) a,a,a-Trifluorotoluene	*98.7*		*90.4-116*		*04/27/2016 08:17*	WG867711
(S) 4-Bromofluorobenzene	*103*		*80.1-120*		*04/27/2016 08:17*	WG867711

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	108		20.0	1	05/02/2016 11:12	WG867988
Alkalinity,Bicarbonate	105		20.0	1	05/02/2016 11:12	WG867988
Alkalinity,Carbonate	ND		20.0	1	05/02/2016 11:12	WG867988

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.87		1	04/26/2016 15:03	WG867619

Sample Narrative:

9040C L831484-04 WG867619: 6.87 at 12.8c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1340		1	04/28/2016 08:33	WG868072

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	165		20.0	20	04/26/2016 19:30	WG867571
Nitrate as (N)	0.180		0.100	1	04/26/2016 13:20	WG867571
Nitrite as (N)	ND		0.100	1	04/26/2016 13:20	WG867571
Sulfate	266		100	20	04/26/2016 19:30	WG867571

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	6.73		1.00	1	04/28/2016 12:54	WG868039

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	04/27/2016 10:15	WG867687

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.0100	1	04/27/2016 15:23	WG867848
Barium	0.0768		0.00500	1	04/27/2016 15:23	WG867848
Calcium	67.6		1.00	1	04/27/2016 15:23	WG867848
Chromium	ND		0.0100	1	04/27/2016 15:23	WG867848
Cobalt	ND		0.0100	1	04/27/2016 15:23	WG867848
Magnesium	19.8		1.00	1	04/27/2016 15:23	WG867848
Nickel	ND		0.0100	1	04/27/2016 15:23	WG867848
Potassium	12.8		1.00	1	04/27/2016 15:23	WG867848
Silver	ND		0.00500	1	04/27/2016 15:23	WG867848
Sodium	187		1.00	1	04/27/2016 15:23	WG867848
Vanadium	ND		0.0200	1	04/27/2016 15:23	WG867848

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	04/29/2016 15:17	WG867860
Beryllium	ND		0.00200	1	04/29/2016 15:17	WG867860
Cadmium	ND		0.00100	1	04/29/2016 15:17	WG867860
Copper	ND		0.00500	1	04/29/2016 15:17	WG867860
Lead	ND		0.00200	1	04/29/2016 15:17	WG867860
Selenium	0.00266		0.00200	1	04/29/2016 15:17	WG867860
Thallium	ND		0.00200	1	04/29/2016 15:17	WG867860
Zinc	ND		0.0250	1	04/29/2016 15:17	WG867860

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	04/27/2016 08:41	WG867711
Acrylonitrile	ND		0.0100	1	04/27/2016 08:41	WG867711
Benzene	ND		0.00100	1	04/27/2016 08:41	WG867711
Bromochloromethane	ND		0.00100	1	04/27/2016 08:41	WG867711
Bromodichloromethane	ND		0.00100	1	04/27/2016 08:41	WG867711
Bromoform	ND		0.00100	1	04/27/2016 08:41	WG867711
Bromomethane	ND		0.00500	1	04/27/2016 08:41	WG867711
Carbon disulfide	ND		0.00100	1	04/27/2016 08:41	WG867711
Carbon tetrachloride	ND		0.00100	1	04/27/2016 08:41	WG867711
Chlorobenzene	ND		0.00100	1	04/27/2016 08:41	WG867711
Chlorodibromomethane	ND		0.00100	1	04/27/2016 08:41	WG867711
Chloroethane	ND		0.00500	1	04/27/2016 08:41	WG867711
Chloroform	ND		0.00500	1	04/27/2016 08:41	WG867711
Chloromethane	ND		0.00250	1	04/27/2016 08:41	WG867711
Dibromomethane	ND		0.00100	1	04/27/2016 08:41	WG867711
1,2-Dichlorobenzene	ND		0.00100	1	04/27/2016 08:41	WG867711
1,4-Dichlorobenzene	ND		0.00100	1	04/27/2016 08:41	WG867711
trans-1,4-Dichloro-2-butene	ND		0.00250	1	04/27/2016 08:41	WG867711
1,1-Dichloroethane	ND		0.00100	1	04/27/2016 08:41	WG867711
1,2-Dichloroethane	ND		0.00100	1	04/27/2016 08:41	WG867711
1,1-Dichloroethene	ND		0.00100	1	04/27/2016 08:41	WG867711
cis-1,2-Dichloroethene	ND		0.00100	1	04/27/2016 08:41	WG867711
trans-1,2-Dichloroethene	ND		0.00100	1	04/27/2016 08:41	WG867711
1,2-Dichloropropane	ND		0.00100	1	04/27/2016 08:41	WG867711
cis-1,3-Dichloropropene	ND		0.00100	1	04/27/2016 08:41	WG867711
trans-1,3-Dichloropropene	ND		0.00100	1	04/27/2016 08:41	WG867711
Ethylbenzene	ND		0.00100	1	04/27/2016 08:41	WG867711
2-Hexanone	ND		0.0100	1	04/27/2016 08:41	WG867711
Iodomethane	ND		0.0100	1	04/27/2016 08:41	WG867711
2-Butanone (MEK)	ND		0.0100	1	04/27/2016 08:41	WG867711
Methylene Chloride	ND		0.00500	1	04/27/2016 08:41	WG867711
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	04/27/2016 08:41	WG867711
Styrene	ND		0.00100	1	04/27/2016 08:41	WG867711
1,1,1,2-Tetrachloroethane	ND		0.00100	1	04/27/2016 08:41	WG867711
1,1,2,2-Tetrachloroethane	ND		0.00100	1	04/27/2016 08:41	WG867711
Tetrachloroethene	ND		0.00100	1	04/27/2016 08:41	WG867711
Toluene	ND		0.00500	1	04/27/2016 08:41	WG867711
1,1,1-Trichloroethane	ND		0.00100	1	04/27/2016 08:41	WG867711
1,1,2-Trichloroethane	ND		0.00100	1	04/27/2016 08:41	WG867711
Trichloroethene	ND		0.00100	1	04/27/2016 08:41	WG867711
Trichlorofluoromethane	ND		0.00500	1	04/27/2016 08:41	WG867711
1,2,3-Trichloropropane	ND		0.00250	1	04/27/2016 08:41	WG867711
Vinyl acetate	ND		0.0100	1	04/27/2016 08:41	WG867711
Vinyl chloride	ND		0.00100	1	04/27/2016 08:41	WG867711

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	04/27/2016 08:41	WG867711
(S) Toluene-d8	*106*		*90.0-115*		*04/27/2016 08:41*	WG867711
(S) Dibromofluoromethane	*108*		*79.0-121*		*04/27/2016 08:41*	WG867711
(S) a,a,a-Trifluorotoluene	*99.4*		*90.4-116*		*04/27/2016 08:41*	WG867711
(S) 4-Bromofluorobenzene	*103*		*80.1-120*		*04/27/2016 08:41*	WG867711

Method Blank (MB)

(MB) R3133013-2 05/02/16 07:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	2.98		2.71	20.0
Alkalinity,Bicarbonate	2.98		2.71	20.0
Alkalinity,Carbonate	U		2.71	20.0

Original Sample (OS) • Duplicate (DUP)

(OS) L831157-01 05/02/16 07:18 • (DUP) R3133013-3 05/02/16 07:25

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	56.5	57.5	1	2.00		20

Original Sample (OS) • Duplicate (DUP)

(OS) L831484-04 05/02/16 11:12 • (DUP) R3133013-8 05/02/16 11:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	108	108	1	0.000		20
Alkalinity,Bicarbonate	105	106	1	1.00		20
Alkalinity,Carbonate	ND	ND	1	0.000		20

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

(LCS) R3133013-4 05/02/16 08:31 • (LCSD) R3133013-7 05/02/16 09:57

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	95.0	92.6	95.0	93.0	85.0-115			3.00	20

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831484-01 05/02/16 09:27 • (MS) R3133013-5 05/02/16 09:34 • (MSD) R3133013-6 05/02/16 09:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Alkalinity	100	184	254	256	70.0	72.0	1	80.0-120	J6	J6	1.00	20

Original Sample (OS) • Duplicate (DUP)

(OS) L831484-01 04/26/16 15:03 • (DUP) WG867619-1 04/26/16 15:03

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.67	6.67	1	0.000		1

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

(LCS) WG867619-2 04/26/16 15:03 • (LCSD) WG867619-3 04/26/16 15:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	6.43	6.36	6.37	98.9	99.1	98.5-102			0.157	1

Method Blank (MB)

(MB) WG868072-15 04/28/16 08:33

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	2.00			

Original Sample (OS) • Duplicate (DUP)

(OS) L831005-01 04/28/16 08:33 • (DUP) WG868072-11 04/28/16 08:33

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1130	1140	1	0.530		20

Original Sample (OS) • Duplicate (DUP)

(OS) L831666-01 04/28/16 08:33 • (DUP) WG868072-12 04/28/16 08:33

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	360	362	1	0.554		20

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

(LCS) WG868072-13 04/28/16 08:33 • (LCSD) WG868072-14 04/28/16 08:33

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	653	663	665	102	102	90.0-110			0.301	20

Method Blank (MB)

(MB) R3131775-1 04/26/16 06:30

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

Original Sample (OS) • Duplicate (DUP)

(OS) L831522-02 04/26/16 15:08 • (DUP) R3131775-5 04/26/16 15:24

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	14.4	14.4	1	0		15
Nitrate	3.57	3.42	1	4		15
Nitrite	0.0335	0.0333	1	0		15
Sulfate	16.9	17.0	1	0		15

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

(LCS) R3131775-2 04/26/16 06:46 • (LCSD) R3131775-3 04/26/16 07:01

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 %
Chloride	40.0	40.3	40.3	101	101	80-120			0	15
Nitrate	8.00	8.34	8.34	104	104	80-120			0	15
Nitrite	8.00	8.06	8.06	101	101	80-120			0	15
Sulfate	40.0	40.5	40.6	101	101	80-120			0	15

Original Sample (OS) • Matrix Spike (MS)

(OS) L831484-04 04/26/16 13:20 • (MS) R3131775-4 04/26/16 13:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5.00	0.180	4.88	94	1	80-120	
Nitrite	5.00	ND	5.05	101	1	80-120	

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831522-05 04/26/16 16:10 • (MS) R3131775-6 04/26/16 16:25 • (MSD) R3131775-7 04/26/16 16:41

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 %
Chloride	50.0	12.9	61.5	61.2	97	97	1	80-120			0	15
Nitrate	5.00	ND	4.89	4.89	98	98	1	80-120			0	15
Nitrite	5.00	ND	4.97	4.97	99	99	1	80-120			0	15
Sulfate	50.0	9.86	58.4	58.3	97	97	1	80-120			0	15

Method Blank (MB)

(MB) R3132519-1 04/28/16 09:30

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

Original Sample (OS) • Duplicate (DUP)

(OS) L831484-04 04/28/16 12:54 • (DUP) R3132519-4 04/28/16 13:11

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC	6.73	6.52	1	3.00		20

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

(LCS) R3132519-2 04/28/16 10:15 • (LCSD) R3132519-3 04/28/16 10:34

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	75.0	80.3	81.2	107	108	85.0-115			1.00	20

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831762-01 04/28/16 14:49 • (MS) R3132519-5 04/28/16 15:58 • (MSD) R3132519-6 04/28/16 16:20

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 %
TOC	50.0	37.5	86.1	91.1	97.0	107	1	80.0-120			6.00	20

Method Blank (MB)

(MB) R3131849-1 04/27/16 09:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	0.0000718		0.000049	0.000200

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

(LCS) R3131849-2 04/27/16 09:56 • (LCSD) R3131849-3 04/27/16 09:59

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 %
Mercury	0.00300	0.00278	0.00243	93	81	80-120			14	20

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831484-02 04/27/16 10:01 • (MS) R3131849-4 04/27/16 10:03 • (MSD) R3131849-5 04/27/16 10:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.0000177	0.00331	0.00323	110	108	1	75-125			2	20

Method Blank (MB)

(MB) R3132069-1 04/27/16 14:57

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	0.00399		0.0014	0.0100
Cobalt	U		0.0023	0.0100
Magnesium	U		0.0111	1.00
Nickel	U		0.0049	0.0100
Potassium	U		0.102	1.00
Silver	U		0.0028	0.00500
Sodium	U		0.0985	1.00
Vanadium	U		0.0024	0.0200

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

(LCS) R3132069-2 04/27/16 15:01 • (LCSD) R3132069-3 04/27/16 15:04

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	1.02	1.02	102	102	80-120			1	20
Barium	1.00	1.04	1.04	104	104	80-120			0	20
Calcium	10.0	10.4	10.5	104	105	80-120			0	20
Chromium	1.00	1.00	1.01	100	101	80-120			0	20
Cobalt	1.00	1.06	1.06	106	106	80-120			1	20
Magnesium	10.0	10.2	10.2	102	102	80-120			0	20
Nickel	1.00	1.05	1.06	105	106	80-120			1	20
Potassium	10.0	10.1	10.1	101	101	80-120			0	20
Silver	1.00	1.02	1.02	102	102	80-120			0	20
Sodium	10.0	10.1	10.1	101	101	80-120			1	20
Vanadium	1.00	1.03	1.04	103	104	80-120			0	20

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831484-02 04/27/16 15:06 • (MS) R3132069-5 04/27/16 15:12 • (MSD) R3132069-6 04/27/16 15:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	1.00	0.00607	1.05	1.06	105	106	1	75-125			1	20

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831484-02 04/27/16 15:06 • (MS) R3132069-5 04/27/16 15:12 • (MSD) R3132069-6 04/27/16 15:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	1.00	0.119	1.12	1.13	100	101	1	75-125			1	20
Calcium	10.0	70.1	79.7	79.9	96	98	1	75-125			0	20
Chromium	1.00	0.000496	0.990	0.987	99	99	1	75-125			0	20
Cobalt	1.00	0.00107	1.08	1.08	108	108	1	75-125			0	20
Magnesium	10.0	20.4	30.2	30.2	98	98	1	75-125			0	20
Nickel	1.00	0.00347	1.07	1.08	107	108	1	75-125			0	20
Potassium	10.0	12.0	21.7	21.9	97	99	1	75-125			1	20
Silver	1.00	0.0000512	1.04	1.04	104	104	1	75-125			0	20
Sodium	10.0	191	197	198	55	61	1	75-125	V	V	0	20
Vanadium	1.00	0.000247	1.02	1.03	102	103	1	75-125			1	20

Method Blank (MB)

(MB) R3132673-1 04/29/16 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.00021	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) R3132673-2 04/29/16 14:47 • (LCSD) R3132673-3 04/29/16 14:50

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 %
Antimony	0.0500	0.0515	0.0506	103	101	80-120			2	20
Beryllium	0.0500	0.0558	0.0532	112	106	80-120			5	20
Cadmium	0.0500	0.0498	0.0484	100	97	80-120			3	20
Copper	0.0500	0.0524	0.0533	105	107	80-120			2	20
Lead	0.0500	0.0513	0.0505	103	101	80-120			2	20
Selenium	0.0500	0.0520	0.0479	104	96	80-120			8	20
Thallium	0.0500	0.0504	0.0499	101	100	80-120			1	20
Zinc	0.0500	0.0492	0.0495	98	99	80-120			1	20

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831679-02 04/29/16 14:53 • (MS) R3132673-5 04/29/16 14:58 • (MSD) R3132673-6 04/29/16 15:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.000166	0.0531	0.0496	106	99	1	75-125			7	20
Beryllium	0.0500	0.000148	0.0564	0.0548	113	109	1	75-125			3	20
Cadmium	0.0500	0.0000778	0.0519	0.0490	104	98	1	75-125			6	20
Copper	0.0500	0.000864	0.0529	0.0500	104	98	1	75-125			6	20
Lead	0.0500	0.000156	0.0502	0.0498	100	100	1	75-125			1	20
Selenium	0.0500	0.000283	0.0542	0.0454	108	91	1	75-125			18	20
Thallium	0.0500	0.0000845	0.0505	0.0486	101	97	1	75-125			4	20
Zinc	0.0500	0.0155	0.0632	0.0605	95	90	1	75-125			4	20

Method Blank (MB)

(MB) R3131825-3 04/26/16 16:18

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
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Styrene	U		0.000307	0.00100
Toluene	U		0.000780	0.00500

Method Blank (MB)

(MB) R3131825-3 04/26/16 16:18

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,1,2-Tetrachloroethane	U		0.000385	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
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*			*90.0-115*
(S) Dibromofluoromethane	*108*			*79.0-121*
(S) a,a,a-Trifluorotoluene	*98.9*			*90.4-116*
(S) 4-Bromofluorobenzene	*103*			*80.1-120*

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

(LCS) R3131825-1 04/26/16 14:18 • (LCSD) R3131825-2 04/26/16 14:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.132	0.119	105	95.2	28.7-175			10.0	20.9
Acrylonitrile	0.125	0.135	0.127	108	102	58.2-145			5.49	20
Benzene	0.0250	0.0239	0.0238	95.8	95.0	73.0-122			0.800	20
Bromodichloromethane	0.0250	0.0236	0.0236	94.3	94.4	75.5-121			0.110	20
Bromochloromethane	0.0250	0.0249	0.0247	99.5	98.7	78.9-123			0.850	20
Bromomethane	0.0250	0.0278	0.0274	111	110	22.4-187			1.35	20
Bromoform	0.0250	0.0250	0.0247	100	98.9	71.5-131			1.11	20
Carbon disulfide	0.0250	0.0188	0.0186	75.2	74.5	53.0-134			0.950	20
Carbon tetrachloride	0.0250	0.0222	0.0214	88.6	85.8	70.9-129			3.26	20
Chlorobenzene	0.0250	0.0229	0.0227	91.6	90.8	79.7-122			0.830	20
Chlorodibromomethane	0.0250	0.0240	0.0236	95.8	94.5	78.2-124			1.34	20
Chloroethane	0.0250	0.0265	0.0257	106	103	41.2-153			3.25	20
Chloroform	0.0250	0.0241	0.0241	96.3	96.6	73.2-125			0.310	20
Chloromethane	0.0250	0.0238	0.0235	95.1	93.9	55.8-134			1.27	20
Dibromomethane	0.0250	0.0259	0.0260	103	104	79.5-118			0.490	20
1,2-Dichlorobenzene	0.0250	0.0241	0.0243	96.5	97.1	84.7-118			0.580	20
1,4-Dichlorobenzene	0.0250	0.0237	0.0238	94.9	95.1	82.2-114			0.210	20

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

(LCS) R3131825-1 04/26/16 14:18 • (LCSD) R3131825-2 04/26/16 14:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,4-Dichloro-2-butene	0.0250	0.0230	0.0221	92.2	88.5	58.3-129			4.03	20
1,1-Dichloroethane	0.0250	0.0245	0.0239	97.8	95.6	71.7-127			2.25	20
1,2-Dichloroethane	0.0250	0.0242	0.0246	96.7	98.3	65.3-126			1.69	20
1,1-Dichloroethene	0.0250	0.0214	0.0210	85.7	83.8	59.9-137			2.17	20
trans-1,2-Dichloroethene	0.0250	0.0223	0.0214	89.2	85.5	72.6-125			4.29	20
cis-1,2-Dichloroethene	0.0250	0.0241	0.0229	96.4	91.6	77.3-122			5.10	20
1,2-Dichloropropane	0.0250	0.0259	0.0259	103	104	77.4-125			0.370	20
cis-1,3-Dichloropropene	0.0250	0.0261	0.0270	104	108	77.7-124			3.30	20
trans-1,3-Dichloropropene	0.0250	0.0266	0.0264	106	106	73.5-127			0.570	20
Ethylbenzene	0.0250	0.0220	0.0219	88.1	87.7	80.9-121			0.530	20
2-Hexanone	0.125	0.139	0.135	111	108	59.4-151			2.31	20
Iodomethane	0.125	0.113	0.114	90.4	91.3	64.6-137			1.01	20
Methylene Chloride	0.0250	0.0232	0.0230	92.8	92.1	69.5-120			0.770	20
2-Butanone (MEK)	0.125	0.144	0.136	115	109	46.4-155			6.00	20
4-Methyl-2-pentanone (MIBK)	0.125	0.141	0.141	113	113	63.3-138			0.410	20
Styrene	0.0250	0.0248	0.0243	99.3	97.0	79.9-124			2.37	20
1,1,2,2-Tetrachloroethane	0.0250	0.0260	0.0261	104	104	79.3-123			0.310	20
1,1,1,2-Tetrachloroethane	0.0250	0.0227	0.0231	90.9	92.2	78.5-125			1.45	20
Tetrachloroethene	0.0250	0.0202	0.0199	81.0	79.6	73.5-130			1.72	20
Toluene	0.0250	0.0229	0.0230	91.6	91.8	77.9-116			0.210	20
1,1,1-Trichloroethane	0.0250	0.0223	0.0217	89.3	87.0	71.1-129			2.67	20
1,1,2-Trichloroethane	0.0250	0.0245	0.0248	98.1	99.1	81.6-120			1.02	20
Trichloroethene	0.0250	0.0224	0.0224	89.6	89.7	79.5-121			0.0900	20
Trichlorofluoromethane	0.0250	0.0250	0.0243	100	97.1	49.1-157			3.02	20
1,2,3-Trichloropropane	0.0250	0.0234	0.0228	93.4	91.1	74.9-124			2.54	20
Vinyl acetate	0.125	0.134	0.126	107	101	41.7-159			6.20	20
Vinyl chloride	0.0250	0.0255	0.0248	102	99.1	61.5-134			3.01	20
Xylenes, Total	0.0750	0.0676	0.0672	90.2	89.6	79.2-122			0.680	20
(S) Toluene-d8				*107*	*108*	*90.0-115*				
(S) Dibromofluoromethane				*108*	*106*	*79.0-121*				
(S) α,α,α-Trifluorotoluene				*99.7*	*99.8*	*90.4-116*				
(S) 4-Bromofluorobenzene				*102*	*102*	*80.1-120*				

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831484-01 04/26/16 19:39 • (MS) R3131825-4 04/26/16 20:03 • (MSD) R3131825-5 04/26/16 20:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.0146	0.103	0.108	71.1	74.5	1	25.0-156			4.11	21.5
Acrylonitrile	0.125	ND	0.136	0.138	109	110	1	55.9-161			1.48	20
Benzene	0.0250	ND	0.0230	0.0237	92.0	94.8	1	58.6-133			2.97	20
Bromodichloromethane	0.0250	ND	0.0233	0.0240	93.2	96.0	1	69.2-127			2.95	20
Bromochloromethane	0.0250	ND	0.0241	0.0247	96.3	99.0	1	74.4-128			2.70	20
Bromomethane	0.0250	ND	0.0228	0.0241	91.1	96.6	1	16.6-183			5.87	20.5
Bromoform	0.0250	ND	0.0243	0.0249	97.0	99.7	1	66.3-140			2.78	20
Carbon disulfide	0.0250	ND	0.0141	0.0145	56.4	57.9	1	34.9-138			2.63	20
Carbon tetrachloride	0.0250	ND	0.0213	0.0220	85.3	88.1	1	60.6-139			3.19	20
Chlorobenzene	0.0250	ND	0.0224	0.0224	89.4	89.8	1	70.1-130			0.400	20
Chlorodibromomethane	0.0250	ND	0.0234	0.0240	93.6	95.9	1	71.6-132			2.46	20
Chloroethane	0.0250	ND	0.0221	0.0227	88.4	90.8	1	33.3-155			2.60	20
Chloroform	0.0250	ND	0.0240	0.0244	96.1	97.8	1	66.1-133			1.70	20
Chloromethane	0.0250	ND	0.0187	0.0192	74.7	76.8	1	40.7-139			2.84	20
Dibromomethane	0.0250	ND	0.0250	0.0252	99.9	101	1	72.8-127			1.12	20
1,2-Dichlorobenzene	0.0250	ND	0.0236	0.0246	94.4	98.3	1	77.4-127			4.02	20
1,4-Dichlorobenzene	0.0250	ND	0.0232	0.0242	92.7	96.8	1	74.4-123			4.25	20
trans-1,4-Dichloro-2-butene	0.0250	ND	0.0234	0.0243	93.6	97.4	1	57.6-136			3.93	20
1,1-Dichloroethane	0.0250	ND	0.0240	0.0245	96.0	97.9	1	64.0-134			2.02	20
1,2-Dichloroethane	0.0250	ND	0.0242	0.0252	96.8	101	1	60.7-132			4.27	20
1,1-Dichloroethene	0.0250	ND	0.0210	0.0213	84.2	85.2	1	48.8-144			1.21	20
trans-1,2-Dichloroethene	0.0250	ND	0.0209	0.0213	83.5	85.0	1	61.0-132			1.84	20
cis-1,2-Dichloroethene	0.0250	ND	0.0234	0.0228	93.7	91.4	1	60.6-136			2.51	20
1,2-Dichloropropane	0.0250	ND	0.0249	0.0255	99.8	102	1	69.7-130			2.33	20
cis-1,3-Dichloropropene	0.0250	ND	0.0260	0.0263	104	105	1	71.1-129			1.32	20
trans-1,3-Dichloropropene	0.0250	ND	0.0257	0.0264	103	106	1	66.3-136			2.64	20
Ethylbenzene	0.0250	ND	0.0220	0.0220	88.2	87.9	1	62.7-136			0.300	20
2-Hexanone	0.125	ND	0.132	0.135	106	108	1	59.4-154			1.88	20.1
Iodomethane	0.125	ND	0.105	0.108	84.1	86.7	1	55.2-140			3.07	20
2-Butanone (MEK)	0.125	ND	0.134	0.141	107	113	1	45.0-156			4.99	20.8
Methylene Chloride	0.0250	ND	0.0226	0.0227	90.6	90.8	1	61.5-125			0.190	20
4-Methyl-2-pentanone (MIBK)	0.125	ND	0.145	0.150	116	120	1	60.7-150			3.64	20
Styrene	0.0250	ND	0.0242	0.0245	96.9	98.0	1	68.2-133			1.15	20
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0264	0.0267	106	107	1	64.9-145			1.04	20
1,1,1,2-Tetrachloroethane	0.0250	ND	0.0220	0.0230	88.0	92.1	1	70.5-132			4.52	20
Tetrachloroethene	0.0250	ND	0.0188	0.0194	75.1	77.4	1	57.4-141			3.06	20

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L831484-01 04/26/16 19:39 • (MS) R3131825-4 04/26/16 20:03 • (MSD) R3131825-5 04/26/16 20:27

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 %
Toluene	0.0250	ND	0.0231	0.0225	92.2	90.1	1	67.8-124			2.30	20
1,1,1-Trichloroethane	0.0250	ND	0.0222	0.0227	89.0	90.7	1	58.7-134			1.97	20
1,1,2-Trichloroethane	0.0250	ND	0.0238	0.0245	95.3	98.2	1	74.1-130			2.94	20
Trichloroethene	0.0250	ND	0.0209	0.0214	83.6	85.5	1	48.9-148			2.16	20
Trichlorofluoromethane	0.0250	ND	0.0231	0.0230	92.3	92.1	1	39.9-165			0.150	20
1,2,3-Trichloropropane	0.0250	ND	0.0235	0.0236	94.0	94.5	1	71.5-134			0.510	20
Vinyl acetate	0.125	ND	0.160	0.166	128	132	1	42.8-181			3.69	20
Vinyl chloride	0.0250	ND	0.0212	0.0211	84.7	84.5	1	44.3-143			0.200	20
Xylenes, Total	0.0750	ND	0.0681	0.0669	90.9	89.1	1	65.6-133			1.90	20
(S) Toluene-d8					*107*	*108*		*90.0-115*				
(S) Dibromofluoromethane					*107*	*107*		*79.0-121*				
(S) a,a,a-Trifluorotoluene					*100*	*99.9*		*90.4-116*				
(S) 4-Bromofluorobenzene					*102*	*100*		*80.1-120*				

Abbreviations and Definitions

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

Qualifier	Description
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** 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 [14]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

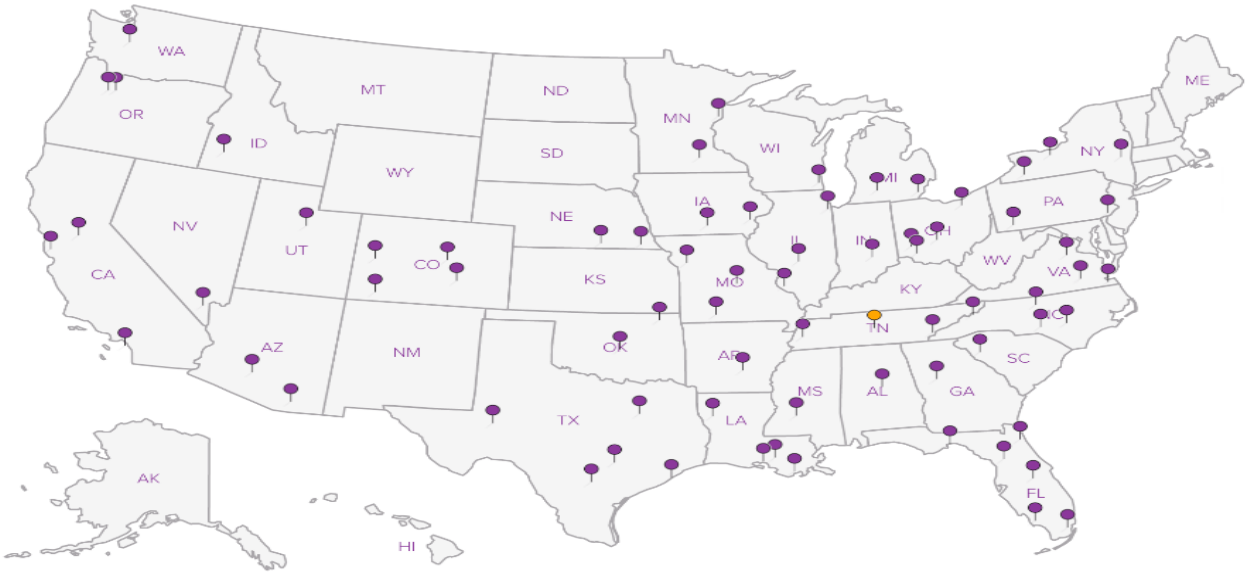
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address

Molen & Associates, LLC

2090 East 104th Ave Suite 205
Thorton, CO 80223

Alternate Billing

Report to: **Mark Molen**

E-mail to: mark@molenandassociates.com

Project Description: **Broda Al Inert Fill**

PHONE: 303.450.1600
FAX: 303.452.4515

Client Project No. **10-0133**

Lab Project #

Collected by:

Site/Facility ID# **Broda Al**

P.O.#

Collected by(signature): Mark D Molen

Packed on Ice N___ Y✓

Rush? (Lab MUST be Notified)
_____Same Day.....200%
_____Next Day.....100%
_____Two Day.....50%

Date Results Needed

Email?___No___Yes
FAX?___No___Yes

Analysis/Container/Preservative

Chain of Custody
Page___of___

Prepared by: **A105**

ENVIRONMENTAL Science corp
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Template/Prelogin

Shipped Via: Denver Service Center

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No of Cntrs	Mg, Na, K, Ca + AP1 Metals - 500ml HDPE w/HN03	CARB, BICARB: ALK - 1L HDPE No Pres	Nitrate, Nitrite, Sulfate, Chloride - 500ml HDPE No Pres	SPCON, pH - 250ml HDPE No Pres	TOC - 250ml Amb w/HCl	V8260AP1 - (3)40ml No Pres			Remarks/contaminant	Sample # (lab only)
MW-1	Grab	gw		4/25/16	1450	8	X	X	X	X	X	X				831484.01
MW-2	Grab	gw		"	1520	8	X	X	X	X	X	X				02
MW-3	Grab	gw		"	1615	8	X	X	X	X	X	X				03
Lab 1	Grab	gw		"	1545	8	X	X	X	X	X	X				01

*Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT- Other_____

pH_____ Temp_____

Remarks:

Flow_____ Other_____

Relinquisher by:(Signature)	Date:	Time:	Received by:(Signature)	Samples returned via: FedEx X UPS__Other__	Condition (lab use only)
Mark D Molen	4/25/16	1730			GOOD
Relinquisher by:(Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.1	Bottles Received: 32
Relinquisher by:(Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/26/16	Time: 900
					pH Checked: NCF:

ANALYTICAL REPORT

July 18, 2016

Molen & Associates, LLC

Sample Delivery Group:	L844388
Samples Received:	06/30/2016
Project Number:	10-0133
Description:	Broda AI Inert Fill
Site:	BRODA AI
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.

MW-1 L844388-01 GW

Collected by: Salmon
Collected date/time: 06/29/16 14:55
Received date/time: 06/30/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG884871	1	06/30/16 16:42	07/01/16 12:24	TRB
Metals (ICP) by Method 6010B	WG885357	1	07/01/16 20:24	07/02/16 01:40	BRJ
Metals (ICPMS) by Method 6020	WG885874	1	07/07/16 09:01	07/16/16 00:42	JDG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG885045	1	07/01/16 01:16	07/01/16 01:16	DAH
Wet Chemistry by Method 2320 B-2011	WG884927	1	07/05/16 16:23	07/05/16 16:23	MCG
Wet Chemistry by Method 9040C	WG884851	1	07/01/16 10:37	07/01/16 10:37	KK
Wet Chemistry by Method 9050A	WG884830	1	06/30/16 15:20	06/30/16 15:20	AMC
Wet Chemistry by Method 9056A	WG884843	1	06/30/16 15:21	06/30/16 15:21	SAM
Wet Chemistry by Method 9056A	WG884843	5	06/30/16 15:36	06/30/16 15:36	SAM
Wet Chemistry by Method 9060A	WG886016	1	07/08/16 20:39	07/08/16 20:39	AS

MW-2 L844388-02 GW

Collected by: Salmon
Collected date/time: 06/29/16 15:25
Received date/time: 06/30/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG884871	1	06/30/16 16:42	07/01/16 12:27	TRB
Metals (ICP) by Method 6010B	WG885357	1	07/01/16 20:24	07/02/16 01:48	BRJ
Metals (ICPMS) by Method 6020	WG885874	1	07/07/16 09:01	07/16/16 00:44	JDG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG885045	1	07/01/16 01:36	07/01/16 01:36	DAH
Wet Chemistry by Method 2320 B-2011	WG884927	1	07/05/16 16:32	07/05/16 16:32	MCG
Wet Chemistry by Method 9040C	WG884851	1	07/01/16 10:37	07/01/16 10:37	KK
Wet Chemistry by Method 9050A	WG884955	1	07/01/16 12:47	07/01/16 12:47	MAJ
Wet Chemistry by Method 9056A	WG884843	1	06/30/16 15:50	06/30/16 15:50	SAM
Wet Chemistry by Method 9056A	WG884843	5	06/30/16 16:05	06/30/16 16:05	SAM
Wet Chemistry by Method 9060A	WG886016	1	07/08/16 20:51	07/08/16 20:51	AS

MW-3 L844388-03 GW

Collected by: Salmon
Collected date/time: 06/29/16 16:10
Received date/time: 06/30/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG884871	1	06/30/16 16:42	07/01/16 12:29	TRB
Metals (ICP) by Method 6010B	WG885357	1	07/01/16 20:24	07/02/16 00:51	BRJ
Metals (ICPMS) by Method 6020	WG885874	1	07/07/16 09:01	07/16/16 00:46	JDG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG885045	1	07/01/16 01:55	07/01/16 01:55	DAH
Wet Chemistry by Method 2320 B-2011	WG884927	1	07/05/16 16:39	07/05/16 16:39	MCG
Wet Chemistry by Method 9040C	WG884851	1	07/01/16 10:37	07/01/16 10:37	KK
Wet Chemistry by Method 9050A	WG884955	1	07/01/16 12:47	07/01/16 12:47	MAJ
Wet Chemistry by Method 9056A	WG884843	1	06/30/16 16:19	06/30/16 16:19	SAM
Wet Chemistry by Method 9056A	WG884843	5	06/30/16 16:34	06/30/16 16:34	SAM
Wet Chemistry by Method 9060A	WG886016	1	07/08/16 21:02	07/08/16 21:02	AS

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

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
L844388-01	MW-1	9040C
L844388-02	MW-2	9040C
L844388-03	MW-3	9040C

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	218		20.0	1	07/05/2016 16:23	WG884927
Alkalinity,Carbonate	ND		20.0	1	07/05/2016 16:23	WG884927

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.09		1	07/01/2016 10:37	WG884851

Sample Narrative:

9040C L844388-01 WG884851: 7.09 at 12.1c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1120		1	06/30/2016 15:20	WG884830

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	129		5.00	5	06/30/2016 15:36	WG884843
Nitrate as (N)	9.08		0.100	1	06/30/2016 15:21	WG884843
Nitrite as (N)	ND		0.100	1	06/30/2016 15:21	WG884843
Sulfate	124		25.0	5	06/30/2016 15:36	WG884843

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1.97		1.00	1	07/08/2016 20:39	WG886016

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	07/01/2016 12:24	WG884871

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.0100	1	07/02/2016 01:40	WG885357
Barium	0.0786		0.00500	1	07/02/2016 01:40	WG885357
Calcium	75.7		1.00	1	07/02/2016 01:40	WG885357
Chromium	ND		0.0100	1	07/02/2016 01:40	WG885357
Cobalt	ND		0.0100	1	07/02/2016 01:40	WG885357
Magnesium	25.2		1.00	1	07/02/2016 01:40	WG885357
Nickel	ND		0.0100	1	07/02/2016 01:40	WG885357
Potassium	9.72		1.00	1	07/02/2016 01:40	WG885357
Silver	ND		0.00500	1	07/02/2016 01:40	WG885357
Sodium	122		1.00	1	07/02/2016 01:40	WG885357
Vanadium	ND		0.0200	1	07/02/2016 01:40	WG885357

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	07/16/2016 00:42	WG885874
Beryllium	ND		0.00200	1	07/16/2016 00:42	WG885874
Cadmium	ND		0.00100	1	07/16/2016 00:42	WG885874
Copper	ND		0.00500	1	07/16/2016 00:42	WG885874
Lead	ND		0.00200	1	07/16/2016 00:42	WG885874
Selenium	0.00223		0.00200	1	07/16/2016 00:42	WG885874
Thallium	ND		0.00200	1	07/16/2016 00:42	WG885874
Zinc	ND		0.0250	1	07/16/2016 00:42	WG885874

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	07/01/2016 01:16	WG885045
Acrylonitrile	ND		0.0100	1	07/01/2016 01:16	WG885045
Benzene	ND		0.00100	1	07/01/2016 01:16	WG885045
Bromochloromethane	ND		0.00100	1	07/01/2016 01:16	WG885045
Bromodichloromethane	ND		0.00100	1	07/01/2016 01:16	WG885045
Bromoform	ND		0.00100	1	07/01/2016 01:16	WG885045
Bromomethane	ND		0.00500	1	07/01/2016 01:16	WG885045
Carbon disulfide	ND		0.00100	1	07/01/2016 01:16	WG885045
Carbon tetrachloride	ND		0.00100	1	07/01/2016 01:16	WG885045
Chlorobenzene	ND		0.00100	1	07/01/2016 01:16	WG885045
Chlorodibromomethane	ND		0.00100	1	07/01/2016 01:16	WG885045
Chloroethane	ND		0.00500	1	07/01/2016 01:16	WG885045
Chloroform	ND		0.00500	1	07/01/2016 01:16	WG885045
Chloromethane	ND		0.00250	1	07/01/2016 01:16	WG885045
Dibromomethane	ND		0.00100	1	07/01/2016 01:16	WG885045
1,2-Dichlorobenzene	ND		0.00100	1	07/01/2016 01:16	WG885045
1,4-Dichlorobenzene	ND		0.00100	1	07/01/2016 01:16	WG885045
trans-1,4-Dichloro-2-butene	ND		0.00250	1	07/01/2016 01:16	WG885045
1,1-Dichloroethane	ND		0.00100	1	07/01/2016 01:16	WG885045
1,2-Dichloroethane	ND		0.00100	1	07/01/2016 01:16	WG885045
1,1-Dichloroethene	ND		0.00100	1	07/01/2016 01:16	WG885045
cis-1,2-Dichloroethene	ND		0.00100	1	07/01/2016 01:16	WG885045
trans-1,2-Dichloroethene	ND		0.00100	1	07/01/2016 01:16	WG885045
1,2-Dichloropropane	ND		0.00100	1	07/01/2016 01:16	WG885045
cis-1,3-Dichloropropene	ND		0.00100	1	07/01/2016 01:16	WG885045
trans-1,3-Dichloropropene	ND		0.00100	1	07/01/2016 01:16	WG885045
Ethylbenzene	ND		0.00100	1	07/01/2016 01:16	WG885045
2-Hexanone	ND		0.0100	1	07/01/2016 01:16	WG885045
Iodomethane	ND		0.0100	1	07/01/2016 01:16	WG885045
2-Butanone (MEK)	ND		0.0100	1	07/01/2016 01:16	WG885045
Methylene Chloride	ND		0.00500	1	07/01/2016 01:16	WG885045
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/01/2016 01:16	WG885045
Styrene	ND		0.00100	1	07/01/2016 01:16	WG885045
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/01/2016 01:16	WG885045
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/01/2016 01:16	WG885045
Tetrachloroethene	ND		0.00100	1	07/01/2016 01:16	WG885045
Toluene	ND		0.00500	1	07/01/2016 01:16	WG885045
1,1,1-Trichloroethane	ND		0.00100	1	07/01/2016 01:16	WG885045
1,1,2-Trichloroethane	ND		0.00100	1	07/01/2016 01:16	WG885045
Trichloroethene	ND		0.00100	1	07/01/2016 01:16	WG885045
Trichlorofluoromethane	ND		0.00500	1	07/01/2016 01:16	WG885045
1,2,3-Trichloropropane	ND		0.00250	1	07/01/2016 01:16	WG885045
Vinyl acetate	ND		0.0100	1	07/01/2016 01:16	WG885045
Vinyl chloride	ND		0.00100	1	07/01/2016 01:16	WG885045

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	07/01/2016 01:16	WG885045
(S) Toluene-d8	*104*		*90.0-115*		*07/01/2016 01:16*	WG885045
(S) Dibromofluoromethane	*114*		*79.0-121*		*07/01/2016 01:16*	WG885045
(S) a,a,a-Trifluorotoluene	*101*		*90.4-116*		*07/01/2016 01:16*	WG885045
(S) 4-Bromofluorobenzene	*101*		*80.1-120*		*07/01/2016 01:16*	WG885045

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	143		20.0	1	07/05/2016 16:32	WG884927
Alkalinity,Carbonate	ND		20.0	1	07/05/2016 16:32	WG884927

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.20		1	07/01/2016 10:37	WG884851

Sample Narrative:

9040C L844388-02 WG884851: 7.20 at 11.4c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1420		1	07/01/2016 12:47	WG884955

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	178		5.00	5	06/30/2016 16:05	WG884843
Nitrate as (N)	0.148		0.100	1	06/30/2016 15:50	WG884843
Nitrite as (N)	ND		0.100	1	06/30/2016 15:50	WG884843
Sulfate	289		25.0	5	06/30/2016 16:05	WG884843

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	8.70		1.00	1	07/08/2016 20:51	WG886016

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	07/01/2016 12:27	WG884871

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.0100	1	07/02/2016 01:48	WG885357
Barium	0.311		0.00500	1	07/02/2016 01:48	WG885357
Calcium	76.4		1.00	1	07/02/2016 01:48	WG885357
Chromium	0.0219		0.0100	1	07/02/2016 01:48	WG885357
Cobalt	ND		0.0100	1	07/02/2016 01:48	WG885357
Magnesium	22.0		1.00	1	07/02/2016 01:48	WG885357
Nickel	0.0121		0.0100	1	07/02/2016 01:48	WG885357
Potassium	14.8		1.00	1	07/02/2016 01:48	WG885357
Silver	ND		0.00500	1	07/02/2016 01:48	WG885357
Sodium	188		1.00	1	07/02/2016 01:48	WG885357
Vanadium	ND		0.0200	1	07/02/2016 01:48	WG885357

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	07/16/2016 00:44	WG885874
Beryllium	ND		0.00200	1	07/16/2016 00:44	WG885874
Cadmium	0.00205		0.00100	1	07/16/2016 00:44	WG885874
Copper	0.0119		0.00500	1	07/16/2016 00:44	WG885874
Lead	0.0227		0.00200	1	07/16/2016 00:44	WG885874
Selenium	ND		0.00200	1	07/16/2016 00:44	WG885874
Thallium	ND		0.00200	1	07/16/2016 00:44	WG885874
Zinc	0.0425		0.0250	1	07/16/2016 00:44	WG885874

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	07/01/2016 01:36	WG885045
Acrylonitrile	ND		0.0100	1	07/01/2016 01:36	WG885045
Benzene	ND		0.00100	1	07/01/2016 01:36	WG885045
Bromochloromethane	ND		0.00100	1	07/01/2016 01:36	WG885045
Bromodichloromethane	ND		0.00100	1	07/01/2016 01:36	WG885045
Bromoform	ND		0.00100	1	07/01/2016 01:36	WG885045
Bromomethane	ND		0.00500	1	07/01/2016 01:36	WG885045
Carbon disulfide	ND		0.00100	1	07/01/2016 01:36	WG885045
Carbon tetrachloride	ND		0.00100	1	07/01/2016 01:36	WG885045
Chlorobenzene	ND		0.00100	1	07/01/2016 01:36	WG885045
Chlorodibromomethane	ND		0.00100	1	07/01/2016 01:36	WG885045
Chloroethane	ND		0.00500	1	07/01/2016 01:36	WG885045
Chloroform	ND		0.00500	1	07/01/2016 01:36	WG885045
Chloromethane	ND		0.00250	1	07/01/2016 01:36	WG885045
Dibromomethane	ND		0.00100	1	07/01/2016 01:36	WG885045
1,2-Dichlorobenzene	ND		0.00100	1	07/01/2016 01:36	WG885045
1,4-Dichlorobenzene	ND		0.00100	1	07/01/2016 01:36	WG885045
trans-1,4-Dichloro-2-butene	ND		0.00250	1	07/01/2016 01:36	WG885045
1,1-Dichloroethane	ND		0.00100	1	07/01/2016 01:36	WG885045
1,2-Dichloroethane	ND		0.00100	1	07/01/2016 01:36	WG885045
1,1-Dichloroethene	ND		0.00100	1	07/01/2016 01:36	WG885045
cis-1,2-Dichloroethene	ND		0.00100	1	07/01/2016 01:36	WG885045
trans-1,2-Dichloroethene	ND		0.00100	1	07/01/2016 01:36	WG885045
1,2-Dichloropropane	ND		0.00100	1	07/01/2016 01:36	WG885045
cis-1,3-Dichloropropene	ND		0.00100	1	07/01/2016 01:36	WG885045
trans-1,3-Dichloropropene	ND		0.00100	1	07/01/2016 01:36	WG885045
Ethylbenzene	ND		0.00100	1	07/01/2016 01:36	WG885045
2-Hexanone	ND		0.0100	1	07/01/2016 01:36	WG885045
Iodomethane	ND		0.0100	1	07/01/2016 01:36	WG885045
2-Butanone (MEK)	ND		0.0100	1	07/01/2016 01:36	WG885045
Methylene Chloride	ND		0.00500	1	07/01/2016 01:36	WG885045
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/01/2016 01:36	WG885045
Styrene	ND		0.00100	1	07/01/2016 01:36	WG885045
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/01/2016 01:36	WG885045
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/01/2016 01:36	WG885045
Tetrachloroethene	ND		0.00100	1	07/01/2016 01:36	WG885045
Toluene	ND		0.00500	1	07/01/2016 01:36	WG885045
1,1,1-Trichloroethane	ND		0.00100	1	07/01/2016 01:36	WG885045
1,1,2-Trichloroethane	ND		0.00100	1	07/01/2016 01:36	WG885045
Trichloroethene	ND		0.00100	1	07/01/2016 01:36	WG885045
Trichlorofluoromethane	ND		0.00500	1	07/01/2016 01:36	WG885045
1,2,3-Trichloropropane	ND		0.00250	1	07/01/2016 01:36	WG885045
Vinyl acetate	ND		0.0100	1	07/01/2016 01:36	WG885045
Vinyl chloride	ND		0.00100	1	07/01/2016 01:36	WG885045

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	07/01/2016 01:36	WG885045
(S) Toluene-d8	*103*		*90.0-115*		*07/01/2016 01:36*	WG885045
(S) Dibromofluoromethane	*113*		*79.0-121*		*07/01/2016 01:36*	WG885045
(S) a,a,a-Trifluorotoluene	*102*		*90.4-116*		*07/01/2016 01:36*	WG885045
(S) 4-Bromofluorobenzene	*99.9*		*80.1-120*		*07/01/2016 01:36*	WG885045

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	191		20.0	1	07/05/2016 16:39	WG884927
Alkalinity,Carbonate	ND		20.0	1	07/05/2016 16:39	WG884927

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.87		1	07/01/2016 10:37	WG884851

Sample Narrative:

9040C L844388-03 WG884851: 6.87 at 11.1c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1080		1	07/01/2016 12:47	WG884955

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	119		5.00	5	06/30/2016 16:34	WG884843
Nitrate as (N)	13.2		0.500	5	06/30/2016 16:34	WG884843
Nitrite as (N)	ND		0.100	1	06/30/2016 16:19	WG884843
Sulfate	135		25.0	5	06/30/2016 16:34	WG884843

Wet Chemistry by Method 9060A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	2.67		1.00	1	07/08/2016 21:02	WG886016

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	07/01/2016 12:29	WG884871

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.0100	1	07/02/2016 00:51	WG885357
Barium	0.0835		0.00500	1	07/02/2016 00:51	WG885357
Calcium	97.1		1.00	1	07/02/2016 00:51	WG885357
Chromium	ND		0.0100	1	07/02/2016 00:51	WG885357
Cobalt	ND		0.0100	1	07/02/2016 00:51	WG885357
Magnesium	21.8		1.00	1	07/02/2016 00:51	WG885357
Nickel	ND		0.0100	1	07/02/2016 00:51	WG885357
Potassium	8.77		1.00	1	07/02/2016 00:51	WG885357
Silver	ND		0.00500	1	07/02/2016 00:51	WG885357
Sodium	99.7	V	1.00	1	07/02/2016 00:51	WG885357
Vanadium	ND		0.0200	1	07/02/2016 00:51	WG885357

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	07/16/2016 00:46	WG885874
Beryllium	ND		0.00200	1	07/16/2016 00:46	WG885874
Cadmium	ND		0.00100	1	07/16/2016 00:46	WG885874
Copper	ND		0.00500	1	07/16/2016 00:46	WG885874
Lead	ND		0.00200	1	07/16/2016 00:46	WG885874
Selenium	ND		0.00200	1	07/16/2016 00:46	WG885874
Thallium	ND		0.00200	1	07/16/2016 00:46	WG885874
Zinc	ND		0.0250	1	07/16/2016 00:46	WG885874

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	07/01/2016 01:55	WG885045
Acrylonitrile	ND		0.0100	1	07/01/2016 01:55	WG885045
Benzene	ND		0.00100	1	07/01/2016 01:55	WG885045
Bromochloromethane	ND		0.00100	1	07/01/2016 01:55	WG885045
Bromodichloromethane	ND		0.00100	1	07/01/2016 01:55	WG885045
Bromoform	ND		0.00100	1	07/01/2016 01:55	WG885045
Bromomethane	ND		0.00500	1	07/01/2016 01:55	WG885045
Carbon disulfide	ND		0.00100	1	07/01/2016 01:55	WG885045
Carbon tetrachloride	ND		0.00100	1	07/01/2016 01:55	WG885045
Chlorobenzene	ND		0.00100	1	07/01/2016 01:55	WG885045
Chlorodibromomethane	ND		0.00100	1	07/01/2016 01:55	WG885045
Chloroethane	ND		0.00500	1	07/01/2016 01:55	WG885045
Chloroform	ND		0.00500	1	07/01/2016 01:55	WG885045
Chloromethane	ND		0.00250	1	07/01/2016 01:55	WG885045
Dibromomethane	ND		0.00100	1	07/01/2016 01:55	WG885045
1,2-Dichlorobenzene	ND		0.00100	1	07/01/2016 01:55	WG885045
1,4-Dichlorobenzene	ND		0.00100	1	07/01/2016 01:55	WG885045
trans-1,4-Dichloro-2-butene	ND		0.00250	1	07/01/2016 01:55	WG885045
1,1-Dichloroethane	ND		0.00100	1	07/01/2016 01:55	WG885045
1,2-Dichloroethane	ND		0.00100	1	07/01/2016 01:55	WG885045
1,1-Dichloroethene	ND		0.00100	1	07/01/2016 01:55	WG885045
cis-1,2-Dichloroethene	ND		0.00100	1	07/01/2016 01:55	WG885045
trans-1,2-Dichloroethene	ND		0.00100	1	07/01/2016 01:55	WG885045
1,2-Dichloropropane	ND		0.00100	1	07/01/2016 01:55	WG885045
cis-1,3-Dichloropropene	ND		0.00100	1	07/01/2016 01:55	WG885045
trans-1,3-Dichloropropene	ND		0.00100	1	07/01/2016 01:55	WG885045
Ethylbenzene	ND		0.00100	1	07/01/2016 01:55	WG885045
2-Hexanone	ND		0.0100	1	07/01/2016 01:55	WG885045
Iodomethane	ND		0.0100	1	07/01/2016 01:55	WG885045
2-Butanone (MEK)	ND		0.0100	1	07/01/2016 01:55	WG885045
Methylene Chloride	ND		0.00500	1	07/01/2016 01:55	WG885045
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/01/2016 01:55	WG885045
Styrene	ND		0.00100	1	07/01/2016 01:55	WG885045
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/01/2016 01:55	WG885045
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/01/2016 01:55	WG885045
Tetrachloroethene	ND		0.00100	1	07/01/2016 01:55	WG885045
Toluene	ND		0.00500	1	07/01/2016 01:55	WG885045
1,1,1-Trichloroethane	ND		0.00100	1	07/01/2016 01:55	WG885045
1,1,2-Trichloroethane	ND		0.00100	1	07/01/2016 01:55	WG885045
Trichloroethene	ND		0.00100	1	07/01/2016 01:55	WG885045
Trichlorofluoromethane	ND		0.00500	1	07/01/2016 01:55	WG885045
1,2,3-Trichloropropane	ND		0.00250	1	07/01/2016 01:55	WG885045
Vinyl acetate	ND		0.0100	1	07/01/2016 01:55	WG885045
Vinyl chloride	ND		0.00100	1	07/01/2016 01:55	WG885045

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

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	07/01/2016 01:55	WG885045
(S) Toluene-d8	*103*		*90.0-115*		*07/01/2016 01:55*	WG885045
(S) Dibromofluoromethane	*114*		*79.0-121*		*07/01/2016 01:55*	WG885045
(S) a,a,a-Trifluorotoluene	*99.2*		*90.4-116*		*07/01/2016 01:55*	WG885045
(S) 4-Bromofluorobenzene	*101*		*80.1-120*		*07/01/2016 01:55*	WG885045

Method Blank (MB)

(MB) R3147776-1 07/05/16 12:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity,Bicarbonate	3.84	B J	2.71	20.0
Alkalinity,Carbonate	U		2.71	20.0

L844388-01 Original Sample (OS) • Duplicate (DUP)

(OS) L844388-01 07/01/16 10:37 • (DUP) WG884851-3 07/01/16 10:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.09	7.14	1	0.703		1

L844462-03 Original Sample (OS) • Duplicate (DUP)

(OS) L844462-03 07/01/16 10:37 • (DUP) WG884851-4 07/01/16 10:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.52	6.51	1	0.153		1

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

(LCS) WG884851-1 07/01/16 10:37 • (LCSD) WG884851-2 07/01/16 10:37

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	6.12	6.03	6.03	98.5	98.5	98.4-102			0.000	1

Method Blank (MB)

(MB) WG884830-5 06/30/16 15:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	umhos/cm		umhos/cm	umhos/cm
Specific Conductance	2.00			

L844086-01 Original Sample (OS) • Duplicate (DUP)

(OS) L844086-01 06/30/16 15:20 • (DUP) WG884830-1 06/30/16 15:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	114	1130	1	0.873		20

L844388-01 Original Sample (OS) • Duplicate (DUP)

(OS) L844388-01 06/30/16 15:20 • (DUP) WG884830-2 06/30/16 15:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	1120	1130	1	0.445		20

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

(LCS) WG884830-3 06/30/16 15:20 • (LCSD) WG884830-4 06/30/16 15:20

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	653	670	670	103	103	90.0-110			0.000	20

L844388-02 Original Sample (OS) • Duplicate (DUP)

(OS) L844388-02 07/01/16 12:47 • (DUP) WG884955-1 07/01/16 12:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	1420	1420	1	0.353		20

L844533-02 Original Sample (OS) • Duplicate (DUP)

(OS) L844533-02 07/01/16 12:47 • (DUP) WG884955-4 07/01/16 12:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	27700	27700	1	0.0722		20

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

(LCS) WG884955-2 07/01/16 12:47 • (LCSD) WG884955-3 07/01/16 12:47

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	653	669	670	102	103	90.0-110			0.149	20

Method Blank (MB)

(MB) R3147010-1 06/30/16 06:45

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

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

(LCS) R3147010-2 06/30/16 06:59 • (LCSD) R3147010-3 06/30/16 07:14

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 %
Chloride	40.0	39.8	39.7	99	99	80-120			0	15
Nitrate	8.00	8.22	8.21	103	103	80-120			0	15
Nitrite	8.00	8.00	8.00	100	100	80-120			0	15
Sulfate	40.0	40.3	40.1	101	100	80-120			0	15

L844406-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L844406-04 06/30/16 23:03 • (MS) R3147010-4 06/30/16 23:17 • (MSD) R3147010-5 06/30/16 23:32

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 %
Chloride	50.0	27.4	76.3	77.2	98	100	1	80-120			1	15
Nitrate	5.00	U	4.87	5.03	97	101	1	80-120			3	15
Nitrite	5.00	U	5.11	5.21	102	104	1	80-120			2	15

Method Blank (MB)

(MB) R3148565-1 07/08/16 09:21

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

L844329-03 Original Sample (OS) • Duplicate (DUP)

(OS) L844329-03 07/08/16 16:44 • (DUP) R3148565-4 07/08/16 16:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC	0.932	ND	1	10.0	J	20

L844475-01 Original Sample (OS) • Duplicate (DUP)

(OS) L844475-01 07/08/16 22:58 • (DUP) R3148565-7 07/08/16 23:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC	11.6	1.78	1	147	J3	20

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

(LCS) R3148565-2 07/08/16 09:58 • (LCSD) R3148565-3 07/08/16 10:15

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	75.0	79.5	78.7	106	105	85.0-115			1.00	20

L844329-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L844329-04 07/08/16 17:06 • (MS) R3148565-5 07/08/16 17:59 • (MSD) R3148565-6 07/08/16 18:14

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	50.0	0.870	51.5	51.4	101	101	1	80.0-120			0.000	20

Method Blank (MB)

(MB) R3147220-1 07/01/16 11:38

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) R3147220-2 07/01/16 11:40 • (LCSD) R3147220-3 07/01/16 11:48

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	0.00303	0.00248	101	83	80-120			20	20

L844309-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L844309-01 07/01/16 11:51 • (MS) R3147220-4 07/01/16 11:53 • (MSD) R3147220-5 07/01/16 11:56

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	0.00202	0.00204	67	68	1	75-125	J6	J6	1	20

Method Blank (MB)

(MB) R3147251-1 07/02/16 00:43

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	0.113	J	0.0463	1.00
Chromium	0.00213	J	0.0014	0.0100
Cobalt	U		0.0023	0.0100
Magnesium	0.0487	J	0.0111	1.00
Nickel	U		0.0049	0.0100
Potassium	0.124	J	0.102	1.00
Silver	U		0.0028	0.00500
Sodium	U		0.0985	1.00
Vanadium	0.00277	J	0.0024	0.0200

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

(LCS) R3147251-2 07/02/16 00:46 • (LCSD) R3147251-3 07/02/16 00:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	1.00	1.04	1.05	104	105	80-120			0	20
Barium	1.00	1.04	1.04	104	104	80-120			1	20
Calcium	10.0	10.6	10.4	106	104	80-120			2	20
Chromium	1.00	1.07	1.07	107	107	80-120			0	20
Cobalt	1.00	1.06	1.06	106	106	80-120			0	20
Magnesium	10.0	10.9	10.8	109	108	80-120			1	20
Nickel	1.00	1.05	1.06	105	106	80-120			0	20
Potassium	10.0	10.1	10.2	101	102	80-120			0	20
Silver	1.00	1.02	1.03	102	103	80-120			1	20
Sodium	10.0	10.3	10.2	103	102	80-120			0	20
Vanadium	1.00	1.04	1.03	104	103	80-120			0	20

L844388-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L844388-03 07/02/16 00:51 • (MS) R3147251-5 07/02/16 00:56 • (MSD) R3147251-6 07/02/16 00:59

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	1.06	1.05	106	105	1	75-125			0	20
Barium	1.00	0.0835	1.08	1.08	100	100	1	75-125			0	20
Calcium	10.0	97.1	105	106	83	89	1	75-125			1	20
Chromium	1.00	ND	1.03	1.04	102	103	1	75-125			1	20
Cobalt	1.00	ND	1.05	1.05	105	105	1	75-125			0	20

L844388-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L844388-03 07/02/16 00:51 • (MS) R3147251-5 07/02/16 00:56 • (MSD) R3147251-6 07/02/16 00:59

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	21.8	31.0	31.3	92	95	1	75-125			1	20
Nickel	1.00	ND	1.04	1.04	104	104	1	75-125			0	20
Potassium	10.0	8.77	18.1	18.3	94	95	1	75-125			1	20
Silver	1.00	ND	1.01	1.02	101	102	1	75-125			1	20
Sodium	10.0	99.7	107	107	68	68	1	75-125	V	V	0	20
Vanadium	1.00	ND	1.01	1.01	100	101	1	75-125			0	20

Method Blank (MB)

(MB) R3150277-1 07/16/16 00:09

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) R3150277-2 07/16/16 00:11 • (LCSD) R3150277-3 07/16/16 00:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	0.0579	0.0601	0.0599	104	103	80-120			0	20
Beryllium	0.0500	0.0484	0.0490	97	98	80-120			1	20
Cadmium	0.0500	0.0534	0.0534	107	107	80-120			0	20
Copper	0.0500	0.0542	0.0536	108	107	80-120			1	20
Lead	0.0500	0.0510	0.0505	102	101	80-120			1	20
Selenium	0.0500	0.0494	0.0511	99	102	80-120			4	20
Thallium	0.0500	0.0496	0.0497	99	99	80-120			0	20
Zinc	0.0500	0.0504	0.0506	101	101	80-120			0	20

L844344-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L844344-02 07/16/16 00:15 • (MS) R3150277-5 07/16/16 00:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Antimony	0.0579	ND	0.0610	105	1	75-125	
Beryllium	0.0500	ND	0.0507	101	1	75-125	
Cadmium	0.0500	ND	0.0519	104	1	75-125	
Copper	0.0500	ND	0.0509	102	1	75-125	
Lead	0.0500	ND	0.0511	102	1	75-125	
Selenium	0.0500	ND	0.0526	105	1	75-125	
Thallium	0.0500	ND	0.0502	100	1	75-125	
Zinc	0.0500	ND	0.0485	97	1	75-125	

Method Blank (MB)

(MB) R3146967-3 06/30/16 20:46

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
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
Toluene	U		0.000780	0.00500
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) R3146967-3 06/30/16 20:46

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 chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
Vinyl acetate	U		0.00163	0.0100
(S) Toluene-d8	*102*			*90.0-115*
(S) Dibromofluoromethane	*113*			*79.0-121*
(S) a,a,a-Trifluorotoluene	*101*			*90.4-116*
(S) 4-Bromofluorobenzene	*103*			*80.1-120*

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

(LCS) R3146967-1 06/30/16 19:04 • (LCSD) R3146967-2 06/30/16 19:23

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 %
Acetone	0.125	0.130	0.128	104	102	28.7-175			1.70	20.9
Acrylonitrile	0.125	0.121	0.121	96.5	96.7	58.2-145			0.230	20
Benzene	0.0250	0.0245	0.0244	98.0	97.5	73.0-122			0.480	20
Bromodichloromethane	0.0250	0.0240	0.0243	96.0	97.2	75.5-121			1.19	20
Bromochloromethane	0.0250	0.0244	0.0244	97.7	97.5	78.9-123			0.190	20
Bromoform	0.0250	0.0236	0.0235	94.4	94.2	71.5-131			0.260	20
Bromomethane	0.0250	0.0360	0.0355	144	142	22.4-187			1.62	20
Carbon disulfide	0.0250	0.0224	0.0221	89.7	88.2	53.0-134			1.62	20
Carbon tetrachloride	0.0250	0.0274	0.0272	109	109	70.9-129			0.630	20
Chlorobenzene	0.0250	0.0246	0.0248	98.5	99.4	79.7-122			0.830	20
Chlorodibromomethane	0.0250	0.0254	0.0252	102	101	78.2-124			0.900	20
Chloroethane	0.0250	0.0305	0.0295	122	118	41.2-153			3.30	20
Chloroform	0.0250	0.0246	0.0246	98.5	98.3	73.2-125			0.150	20
Chloromethane	0.0250	0.0277	0.0272	111	109	55.8-134			2.00	20
1,2-Dichlorobenzene	0.0250	0.0245	0.0246	98.0	98.3	84.7-118			0.390	20
Dibromomethane	0.0250	0.0231	0.0234	92.5	93.4	79.5-118			0.980	20
1,4-Dichlorobenzene	0.0250	0.0235	0.0235	93.9	93.9	82.2-114			0.0500	20
trans-1,4-Dichloro-2-butene	0.0250	0.0229	0.0225	91.6	90.2	58.3-129			1.54	20
1,1-Dichloroethane	0.0250	0.0259	0.0259	103	104	71.7-127			0.220	20
1,2-Dichloroethane	0.0250	0.0257	0.0258	103	103	65.3-126			0.470	20
1,1-Dichloroethene	0.0250	0.0250	0.0250	100	99.9	59.9-137			0.320	20
cis-1,2-Dichloroethene	0.0250	0.0244	0.0240	97.5	95.9	77.3-122			1.63	20
trans-1,2-Dichloroethene	0.0250	0.0260	0.0251	104	100	72.6-125			3.36	20
1,2-Dichloropropane	0.0250	0.0247	0.0247	98.7	98.6	77.4-125			0.0200	20

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

(LCS) R3146967-1 06/30/16 19:04 • (LCSD) R3146967-2 06/30/16 19:23

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 %
cis-1,3-Dichloropropene	0.0250	0.0243	0.0241	97.2	96.3	77.7-124			0.900	20
trans-1,3-Dichloropropene	0.0250	0.0243	0.0237	97.2	94.9	73.5-127			2.40	20
Ethylbenzene	0.0250	0.0250	0.0245	100	98.1	80.9-121			2.01	20
2-Hexanone	0.125	0.126	0.125	101	99.9	59.4-151			0.810	20
Iodomethane	0.125	0.141	0.136	113	109	64.6-137			3.33	20
2-Butanone (MEK)	0.125	0.124	0.123	99.5	98.7	46.4-155			0.710	20
Methylene Chloride	0.0250	0.0240	0.0235	95.9	93.8	69.5-120			2.18	20
4-Methyl-2-pentanone (MIBK)	0.125	0.121	0.121	96.5	96.5	63.3-138			0.0600	20
Styrene	0.0250	0.0249	0.0247	99.5	98.7	79.9-124			0.780	20
1,1,1,2-Tetrachloroethane	0.0250	0.0237	0.0237	94.6	94.9	78.5-125			0.300	20
1,1,2,2-Tetrachloroethane	0.0250	0.0218	0.0216	87.3	86.4	79.3-123			1.02	20
Tetrachloroethene	0.0250	0.0243	0.0243	97.1	97.2	73.5-130			0.160	20
Toluene	0.0250	0.0241	0.0239	96.5	95.7	77.9-116			0.830	20
1,1,1-Trichloroethane	0.0250	0.0261	0.0261	104	104	71.1-129			0.120	20
1,1,2-Trichloroethane	0.0250	0.0233	0.0230	93.2	92.1	81.6-120			1.14	20
Trichloroethene	0.0250	0.0246	0.0246	98.3	98.3	79.5-121			0.0800	20
Trichlorofluoromethane	0.0250	0.0296	0.0293	119	117	49.1-157			1.35	20
1,2,3-Trichloropropane	0.0250	0.0223	0.0226	89.1	90.5	74.9-124			1.54	20
Vinyl acetate	0.125	0.135	0.133	108	106	41.7-159			1.66	20
Vinyl chloride	0.0250	0.0276	0.0275	110	110	61.5-134			0.410	20
Xylenes, Total	0.0750	0.0728	0.0723	97.1	96.4	79.2-122			0.730	20
(S) Toluene-d8				*106*	*105*	*90.0-115*				
(S) Dibromofluoromethane				*110*	*110*	*79.0-121*				
(S) α,α,α-Trifluorotoluene				*101*	*100*	*90.4-116*				
(S) 4-Bromofluorobenzene				*106*	*107*	*80.1-120*				

L843386-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L843386-01 06/30/16 23:21 • (MS) R3146967-4 06/30/16 22:04 • (MSD) R3146967-5 06/30/16 22:23

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	ND	0.0596	0.0623	47.7	49.8	1	25.0-156			4.44	21.5
Acrylonitrile	0.125	ND	0.117	0.123	93.5	98.6	1	55.9-161			5.31	20
Benzene	0.0250	ND	0.0247	0.0248	98.7	99.3	1	58.6-133			0.690	20
Bromodichloromethane	0.0250	ND	0.0245	0.0252	98.2	101	1	69.2-127			2.52	20
Bromochloromethane	0.0250	ND	0.0233	0.0234	93.0	93.5	1	74.4-128			0.500	20
Bromoform	0.0250	ND	0.0231	0.0246	92.6	98.4	1	66.3-140			6.06	20
Bromomethane	0.0250	ND	0.0323	0.0322	129	129	1	16.6-183			0.340	20.5
Carbon disulfide	0.0250	ND	0.0186	0.0187	74.5	74.8	1	34.9-138			0.450	20

L843386-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L843386-01 06/30/16 23:21 • (MS) R3146967-4 06/30/16 22:04 • (MSD) R3146967-5 06/30/16 22:23

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.0250	ND	0.0267	0.0266	107	106	1	60.6-139			0.330	20
Chlorobenzene	0.0250	ND	0.0241	0.0249	96.5	99.6	1	70.1-130			3.10	20
Chlorodibromomethane	0.0250	ND	0.0250	0.0260	99.9	104	1	71.6-132			4.03	20
Chloroethane	0.0250	ND	0.0277	0.0271	111	108	1	33.3-155			2.53	20
Chloroform	0.0250	ND	0.0250	0.0255	95.1	97.3	1	66.1-133			2.12	20
Chloromethane	0.0250	ND	0.0239	0.0236	95.8	94.6	1	40.7-139			1.28	20
1,2-Dichlorobenzene	0.0250	ND	0.0241	0.0246	96.5	98.3	1	77.4-127			1.85	20
Dibromomethane	0.0250	ND	0.0234	0.0240	93.4	96.2	1	72.8-127			2.92	20
1,4-Dichlorobenzene	0.0250	ND	0.0230	0.0234	92.2	93.5	1	74.4-123			1.45	20
trans-1,4-Dichloro-2-butene	0.0250	ND	0.0222	0.0239	88.9	95.4	1	57.6-136			7.07	20
1,1-Dichloroethane	0.0250	ND	0.0251	0.0254	100	102	1	64.0-134			1.28	20
1,2-Dichloroethane	0.0250	ND	0.0251	0.0255	100	102	1	60.7-132			1.81	20
1,1-Dichloroethene	0.0250	ND	0.0238	0.0237	93.2	92.7	1	48.8-144			0.530	20
cis-1,2-Dichloroethene	0.0250	0.0951	0.111	0.111	63.5	62.0	1	60.6-136			0.360	20
trans-1,2-Dichloroethene	0.0250	0.00250	0.0264	0.0266	95.5	96.5	1	61.0-132			0.920	20
1,2-Dichloropropane	0.0250	ND	0.0250	0.0250	100	99.9	1	69.7-130			0.160	20
cis-1,3-Dichloropropene	0.0250	ND	0.0245	0.0249	97.9	99.7	1	71.1-129			1.83	20
trans-1,3-Dichloropropene	0.0250	ND	0.0235	0.0241	93.9	96.3	1	66.3-136			2.52	20
Ethylbenzene	0.0250	0.00420	0.0279	0.0289	94.9	98.8	1	62.7-136			3.39	20
2-Hexanone	0.125	ND	0.0977	0.106	78.1	84.4	1	59.4-154			7.76	20.1
Iodomethane	0.125	ND	0.126	0.128	101	102	1	55.2-140			1.55	20
2-Butanone (MEK)	0.125	ND	0.0836	0.0886	66.9	70.9	1	45.0-156			5.83	20.8
Methylene Chloride	0.0250	ND	0.0231	0.0228	92.4	91.0	1	61.5-125			1.43	20
4-Methyl-2-pentanone (MIBK)	0.125	ND	0.119	0.127	95.2	101	1	60.7-150			6.25	20
Styrene	0.0250	ND	0.0243	0.0249	97.3	99.6	1	68.2-133			2.35	20
1,1,1,2-Tetrachloroethane	0.0250	ND	0.0236	0.0242	94.3	96.6	1	70.5-132			2.44	20
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0214	0.0224	85.7	89.6	1	64.9-145			4.39	20
Tetrachloroethene	0.0250	0.0694	0.0859	0.0874	66.0	72.1	1	57.4-141			1.74	20
Toluene	0.0250	ND	0.0243	0.0248	97.0	99.1	1	67.8-124			2.13	20
1,1,1-Trichloroethane	0.0250	ND	0.0257	0.0258	103	103	1	58.7-134			0.480	20
1,1,2-Trichloroethane	0.0250	ND	0.0230	0.0242	92.2	96.6	1	74.1-130			4.69	20
Trichloroethene	0.0250	0.0721	0.0926	0.0924	82.0	81.4	1	48.9-148			0.170	20
Trichlorofluoromethane	0.0250	ND	0.0274	0.0277	110	111	1	39.9-165			0.880	20
1,2,3-Trichloropropane	0.0250	ND	0.0221	0.0233	88.4	93.4	1	71.5-134			5.50	20
Vinyl acetate	0.125	ND	0.142	0.145	114	116	1	42.8-181			2.16	20
Vinyl chloride	0.0250	0.00122	0.0258	0.0256	98.4	97.5	1	44.3-143			0.880	20
Xylenes, Total	0.0750	ND	0.0712	0.0737	94.9	98.2	1	65.6-133			3.48	20
(S) Toluene-d8					*108*	*108*		*90.0-115*				
(S) Dibromofluoromethane					*109*	*109*		*79.0-121*				
(S) a,a,a-Trifluorotoluene					*104*	*103*		*90.4-116*				

L843386-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L843386-01 06/30/16 23:21 • (MS) R3146967-4 06/30/16 22:04 • (MSD) R3146967-5 06/30/16 22:23

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 4-Bromofluorobenzene					*107*	*108*		*80.1-120*				

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.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

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

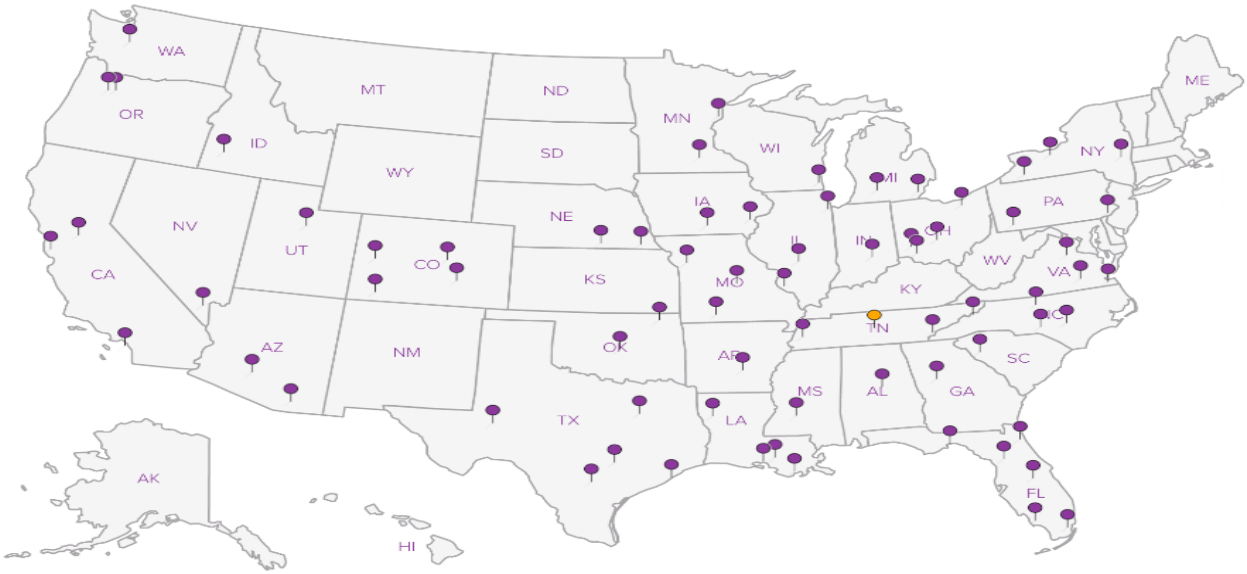
Third Party & Federal Accreditations

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

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

Our Locations

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



J225

Company Name/Address

Molen & Associates, LLC

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Alternate Billing

Report to: **Mark Molen**

E-mail to: mark@molenandassociates.com

Project Description: **Broda AI Inert Fill**

PHONE: 303.450.1600
FAX: 303.452.4515

Client Project No. **10-0133**

Lab Project #

Collected by: Eliza Salmon

Site/Facility ID# **Broda AI**

P.O.#

Collected by(signature):

Packed on Ice N___ Y_X_

Rush? (Lab MUST be Notified)
_____Same Day.....200%
_____Next Day.....100%
_____Two Day.....50%

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 - 500ml HDPE w/HN03 <2	CARB, BICARB: ALK - 1L HDPE No Pres	Nitrate, Nitrite, Sulfate, Chloride - 500ml HDPE No Pres	SPCON, pH - 250ml HDPE No Pres	TOC - 250ml Amb w/HCl	V8260AP1 - (3)40ml (No Pres - bottles delivered with HCl → field rinsed w/ DI prior to sampling)			Remarks/contaminant	Sample # (lab only)
MW-1	Grab	gw		6/29/16	14:55	8	X	X	X	X	X	X				-01
MW-2	Grab	gw		6/29/16	15:25	8	X	X	X	X	X	X				-02
MW-3	Grab	gw		6/29/16	16:10	8	X	X	X	X	X	X				-03

Chain of Custody
Page___of___

Prepared by:

ENVIRONMENTAL Science corp
12065 Lebanon Road
Mt. Juliet TN 37122

Phone (615)758-5858
Phone (800) 767-5859
FAX (615)758-5859

CoCode (lab use only)
MOLENTCO
Template/Prelogin
L844388

Shipped Via: Denver Service Center

*Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT- Other_____

Remarks:

pH_____ Temp_____
Flow_____ Other_____

Relinquisher by:(Signature	Date:	Time:	Received by:(Signature)
	6/29/16	17:55	
Relinquisher by:(Signature	Date:	Time:	Received by: (Signature)
Relinquisher by:(Signature	Date:	Time:	Received for lab by: (Signature)

Samples returned via: FedEx X UPS__Other__

Temp: 2.1°C | Bottles Received: 24

Date: 6-30-16 | Time: 0900

Condition (lab use only): TD11 OK

pH Checked: NCF:

6777 0092 0730

ANALYTICAL REPORT

October 04, 2016

Molen & Associates, LLC

Sample Delivery Group:	L861137
Samples Received:	09/22/2016
Project Number:	10-0133
Description:	Broda AI Inert Fill
Site:	BRODA AI
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.

MW-1 L861137-01 GW

Collected by: Olivia Salmon
Collected date/time: 09/21/16 14:00
Received date/time: 09/22/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG910306	1	09/22/16 15:51	09/23/16 12:19	TRB
Metals (ICP) by Method 6010B	WG910455	1	09/22/16 17:49	09/23/16 00:46	LTB
Metals (ICPMS) by Method 6020	WG911793	1	09/28/16 14:34	09/29/16 02:00	LAT
Metals (ICPMS) by Method 6020	WG911793	1	09/28/16 14:34	09/29/16 11:01	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG911145	1	09/27/16 01:15	09/27/16 01:15	ACG
Wet Chemistry by Method 2320 B-2011	WG910659	1	09/28/16 18:26	09/28/16 18:26	MCG
Wet Chemistry by Method 9040C	WG910243	1	09/24/16 13:00	09/24/16 13:00	MAJ
Wet Chemistry by Method 9050A	WG911584	1	09/27/16 19:10	09/27/16 19:10	JLJ
Wet Chemistry by Method 9056A	WG910272	1	09/22/16 16:11	09/22/16 16:11	CM
Wet Chemistry by Method 9056A	WG910272	10	09/22/16 16:25	09/22/16 16:25	CM
Wet Chemistry by Method 9060A	WG911774	1	10/03/16 13:24	10/03/16 13:24	SJM

MW-2 L861137-02 GW

Collected by: Olivia Salmon
Collected date/time: 09/21/16 14:35
Received date/time: 09/22/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG910306	1	09/22/16 15:51	09/23/16 12:22	TRB
Metals (ICP) by Method 6010B	WG910455	1	09/22/16 17:49	09/23/16 01:16	LTB
Metals (ICPMS) by Method 6020	WG911793	1	09/28/16 14:34	09/29/16 02:03	LAT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG911145	1	09/27/16 01:36	09/27/16 01:36	ACG
Wet Chemistry by Method 2320 B-2011	WG910659	1	09/28/16 18:40	09/28/16 18:40	MCG
Wet Chemistry by Method 9040C	WG910243	1	09/24/16 13:00	09/24/16 13:00	MAJ
Wet Chemistry by Method 9050A	WG911584	1	09/27/16 19:10	09/27/16 19:10	JLJ
Wet Chemistry by Method 9056A	WG910272	1	09/22/16 16:40	09/22/16 16:40	CM
Wet Chemistry by Method 9056A	WG910272	10	09/22/16 16:54	09/22/16 16:54	CM
Wet Chemistry by Method 9060A	WG911774	1	10/03/16 13:51	10/03/16 13:51	SJM

MW-3 L861137-03 GW

Collected by: Olivia Salmon
Collected date/time: 09/21/16 15:10
Received date/time: 09/22/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG910306	1	09/22/16 15:51	09/23/16 12:25	TRB
Metals (ICP) by Method 6010B	WG910455	1	09/22/16 17:49	09/23/16 01:19	LTB
Metals (ICPMS) by Method 6020	WG911793	1	09/28/16 14:34	09/29/16 02:06	LAT
Metals (ICPMS) by Method 6020	WG911793	1	09/28/16 14:34	09/29/16 14:29	JDG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG911145	1	09/27/16 01:56	09/27/16 01:56	ACG
Wet Chemistry by Method 2320 B-2011	WG910659	1	09/28/16 18:47	09/28/16 18:47	MCG
Wet Chemistry by Method 9040C	WG910243	1	09/24/16 13:00	09/24/16 13:00	MAJ
Wet Chemistry by Method 9050A	WG911584	1	09/27/16 19:10	09/27/16 19:10	JLJ
Wet Chemistry by Method 9056A	WG910272	1	09/22/16 17:08	09/22/16 17:08	CM
Wet Chemistry by Method 9056A	WG910272	10	09/22/16 17:51	09/22/16 17:51	CM
Wet Chemistry by Method 9060A	WG911774	1	10/03/16 14:04	10/03/16 14:04	SJM

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

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
L861137-01	MW-1	9040C
L861137-02	MW-2	9040C
L861137-03	MW-3	9040C

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	167		20.0	1	09/28/2016 18:26	WG910659
Alkalinity,Bicarbonate	167		20.0	1	09/28/2016 18:26	WG910659
Alkalinity,Carbonate	ND		20.0	1	09/28/2016 18:26	WG910659

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.33		1	09/24/2016 13:00	WG910243

Sample Narrative:

9040C L861137-01 WG910243: 7.33 at 15.6c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1120		1	09/27/2016 19:10	WG911584

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	128		10.0	10	09/22/2016 16:25	WG910272
Nitrate as (N)	8.84		0.100	1	09/22/2016 16:11	WG910272
Nitrite as (N)	ND		0.100	1	09/22/2016 16:11	WG910272
Sulfate	118		50.0	10	09/22/2016 16:25	WG910272

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	2.04		1.00	1	10/03/2016 13:24	WG911774

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	09/23/2016 12:19	WG910306

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	09/23/2016 00:46	WG910455
Barium	0.0764		0.00500	1	09/23/2016 00:46	WG910455
Calcium	77.1		1.00	1	09/23/2016 00:46	WG910455
Chromium	ND		0.0100	1	09/23/2016 00:46	WG910455
Cobalt	ND		0.0100	1	09/23/2016 00:46	WG910455
Magnesium	25.0		1.00	1	09/23/2016 00:46	WG910455
Nickel	ND		0.0100	1	09/23/2016 00:46	WG910455
Potassium	8.64		1.00	1	09/23/2016 00:46	WG910455
Silver	ND		0.00500	1	09/23/2016 00:46	WG910455
Sodium	119	V	1.00	1	09/23/2016 00:46	WG910455
Vanadium	ND		0.0200	1	09/23/2016 00:46	WG910455

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	09/29/2016 02:00	WG911793
Beryllium	ND		0.00200	1	09/29/2016 02:00	WG911793
Cadmium	ND		0.00100	1	09/29/2016 02:00	WG911793
Copper	ND		0.00500	1	09/29/2016 02:00	WG911793
Lead	ND		0.00200	1	09/29/2016 02:00	WG911793
Selenium	0.00251		0.00200	1	09/29/2016 11:01	WG911793
Thallium	ND		0.00200	1	09/29/2016 02:00	WG911793
Zinc	ND		0.0250	1	09/29/2016 02:00	WG911793

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	09/27/2016 01:15	WG911145
Acrylonitrile	ND		0.0100	1	09/27/2016 01:15	WG911145
Benzene	ND		0.00100	1	09/27/2016 01:15	WG911145
Bromochloromethane	ND		0.00100	1	09/27/2016 01:15	WG911145
Bromodichloromethane	ND		0.00100	1	09/27/2016 01:15	WG911145
Bromoform	ND		0.00100	1	09/27/2016 01:15	WG911145
Bromomethane	ND	J3	0.00500	1	09/27/2016 01:15	WG911145
Carbon disulfide	ND		0.00100	1	09/27/2016 01:15	WG911145
Carbon tetrachloride	ND		0.00100	1	09/27/2016 01:15	WG911145
Chlorobenzene	ND		0.00100	1	09/27/2016 01:15	WG911145
Chlorodibromomethane	ND		0.00100	1	09/27/2016 01:15	WG911145
Chloroethane	ND		0.00500	1	09/27/2016 01:15	WG911145
Chloroform	ND		0.00500	1	09/27/2016 01:15	WG911145
Chloromethane	ND		0.00250	1	09/27/2016 01:15	WG911145
Dibromomethane	ND		0.00100	1	09/27/2016 01:15	WG911145
1,2-Dichlorobenzene	ND	J4	0.00100	1	09/27/2016 01:15	WG911145
1,4-Dichlorobenzene	ND	J4	0.00100	1	09/27/2016 01:15	WG911145
trans-1,4-Dichloro-2-butene	ND		0.00250	1	09/27/2016 01:15	WG911145
1,1-Dichloroethane	ND		0.00100	1	09/27/2016 01:15	WG911145
1,2-Dichloroethane	ND		0.00100	1	09/27/2016 01:15	WG911145
1,1-Dichloroethene	ND	J3	0.00100	1	09/27/2016 01:15	WG911145
cis-1,2-Dichloroethene	ND		0.00100	1	09/27/2016 01:15	WG911145
trans-1,2-Dichloroethene	ND		0.00100	1	09/27/2016 01:15	WG911145
1,2-Dichloropropane	ND		0.00100	1	09/27/2016 01:15	WG911145
cis-1,3-Dichloropropene	ND		0.00100	1	09/27/2016 01:15	WG911145
trans-1,3-Dichloropropene	ND		0.00100	1	09/27/2016 01:15	WG911145
Ethylbenzene	ND		0.00100	1	09/27/2016 01:15	WG911145
2-Hexanone	ND		0.0100	1	09/27/2016 01:15	WG911145
Iodomethane	ND	J4	0.0100	1	09/27/2016 01:15	WG911145
2-Butanone (MEK)	ND		0.0100	1	09/27/2016 01:15	WG911145
Methylene Chloride	ND		0.00500	1	09/27/2016 01:15	WG911145
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/27/2016 01:15	WG911145
Styrene	ND		0.00100	1	09/27/2016 01:15	WG911145
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/27/2016 01:15	WG911145
1,1,2,2-Tetrachloroethane	ND	J4	0.00100	1	09/27/2016 01:15	WG911145
Tetrachloroethene	ND		0.00100	1	09/27/2016 01:15	WG911145
Toluene	ND		0.00500	1	09/27/2016 01:15	WG911145
1,1,1-Trichloroethane	ND		0.00100	1	09/27/2016 01:15	WG911145
1,1,2-Trichloroethane	ND		0.00100	1	09/27/2016 01:15	WG911145
Trichloroethene	ND		0.00100	1	09/27/2016 01:15	WG911145
Trichlorofluoromethane	ND		0.00500	1	09/27/2016 01:15	WG911145
1,2,3-Trichloropropane	ND		0.00250	1	09/27/2016 01:15	WG911145
Vinyl acetate	ND	J3	0.0100	1	09/27/2016 01:15	WG911145
Vinyl chloride	ND		0.00100	1	09/27/2016 01:15	WG911145

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	09/27/2016 01:15	WG911145
(S) Toluene-d8	*98.1*		*90.0-115*		*09/27/2016 01:15*	WG911145
(S) Dibromofluoromethane	*88.1*		*79.0-121*		*09/27/2016 01:15*	WG911145
(S) a,a,a-Trifluorotoluene	*101*		*90.4-116*		*09/27/2016 01:15*	WG911145
(S) 4-Bromofluorobenzene	*103*		*80.1-120*		*09/27/2016 01:15*	WG911145

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	139		20.0	1	09/28/2016 18:40	WG910659
Alkalinity,Bicarbonate	139		20.0	1	09/28/2016 18:40	WG910659
Alkalinity,Carbonate	ND		20.0	1	09/28/2016 18:40	WG910659

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.51		1	09/24/2016 13:00	WG910243

Sample Narrative:

9040C L861137-02 WG910243: 7.51 at 15.8c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1430		1	09/27/2016 19:10	WG911584

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	180		10.0	10	09/22/2016 16:54	WG910272
Nitrate as (N)	ND		0.100	1	09/22/2016 16:40	WG910272
Nitrite as (N)	ND		0.100	1	09/22/2016 16:40	WG910272
Sulfate	276		50.0	10	09/22/2016 16:54	WG910272

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	5.32		1.00	1	10/03/2016 13:51	WG911774

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	09/23/2016 12:22	WG910306

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	09/23/2016 01:16	WG910455
Barium	0.135		0.00500	1	09/23/2016 01:16	WG910455
Calcium	72.0		1.00	1	09/23/2016 01:16	WG910455
Chromium	ND		0.0100	1	09/23/2016 01:16	WG910455
Cobalt	ND		0.0100	1	09/23/2016 01:16	WG910455
Magnesium	20.9		1.00	1	09/23/2016 01:16	WG910455
Nickel	ND		0.0100	1	09/23/2016 01:16	WG910455
Potassium	12.5		1.00	1	09/23/2016 01:16	WG910455
Silver	ND		0.00500	1	09/23/2016 01:16	WG910455
Sodium	194		1.00	1	09/23/2016 01:16	WG910455
Vanadium	ND		0.0200	1	09/23/2016 01:16	WG910455

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	09/29/2016 02:03	WG911793
Beryllium	ND		0.00200	1	09/29/2016 02:03	WG911793
Cadmium	ND		0.00100	1	09/29/2016 02:03	WG911793
Copper	ND		0.00500	1	09/29/2016 02:03	WG911793
Lead	ND		0.00200	1	09/29/2016 02:03	WG911793
Selenium	ND		0.00200	1	09/29/2016 02:03	WG911793
Thallium	ND		0.00200	1	09/29/2016 02:03	WG911793
Zinc	ND		0.0250	1	09/29/2016 02:03	WG911793

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	09/27/2016 01:36	WG911145
Acrylonitrile	ND		0.0100	1	09/27/2016 01:36	WG911145
Benzene	ND		0.00100	1	09/27/2016 01:36	WG911145
Bromochloromethane	ND		0.00100	1	09/27/2016 01:36	WG911145
Bromodichloromethane	ND		0.00100	1	09/27/2016 01:36	WG911145
Bromoform	ND		0.00100	1	09/27/2016 01:36	WG911145
Bromomethane	ND	J3	0.00500	1	09/27/2016 01:36	WG911145
Carbon disulfide	ND		0.00100	1	09/27/2016 01:36	WG911145
Carbon tetrachloride	ND		0.00100	1	09/27/2016 01:36	WG911145
Chlorobenzene	ND		0.00100	1	09/27/2016 01:36	WG911145
Chlorodibromomethane	ND		0.00100	1	09/27/2016 01:36	WG911145
Chloroethane	ND		0.00500	1	09/27/2016 01:36	WG911145
Chloroform	ND		0.00500	1	09/27/2016 01:36	WG911145
Chloromethane	ND		0.00250	1	09/27/2016 01:36	WG911145
Dibromomethane	ND		0.00100	1	09/27/2016 01:36	WG911145
1,2-Dichlorobenzene	ND	J4	0.00100	1	09/27/2016 01:36	WG911145
1,4-Dichlorobenzene	ND	J4	0.00100	1	09/27/2016 01:36	WG911145
trans-1,4-Dichloro-2-butene	ND		0.00250	1	09/27/2016 01:36	WG911145
1,1-Dichloroethane	ND		0.00100	1	09/27/2016 01:36	WG911145
1,2-Dichloroethane	ND		0.00100	1	09/27/2016 01:36	WG911145
1,1-Dichloroethene	ND	J3	0.00100	1	09/27/2016 01:36	WG911145
cis-1,2-Dichloroethene	ND		0.00100	1	09/27/2016 01:36	WG911145
trans-1,2-Dichloroethene	ND		0.00100	1	09/27/2016 01:36	WG911145
1,2-Dichloropropane	ND		0.00100	1	09/27/2016 01:36	WG911145
cis-1,3-Dichloropropene	ND		0.00100	1	09/27/2016 01:36	WG911145
trans-1,3-Dichloropropene	ND		0.00100	1	09/27/2016 01:36	WG911145
Ethylbenzene	ND		0.00100	1	09/27/2016 01:36	WG911145
2-Hexanone	ND		0.0100	1	09/27/2016 01:36	WG911145
Iodomethane	ND	J4	0.0100	1	09/27/2016 01:36	WG911145
2-Butanone (MEK)	ND		0.0100	1	09/27/2016 01:36	WG911145
Methylene Chloride	ND		0.00500	1	09/27/2016 01:36	WG911145
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/27/2016 01:36	WG911145
Styrene	ND		0.00100	1	09/27/2016 01:36	WG911145
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/27/2016 01:36	WG911145
1,1,2,2-Tetrachloroethane	ND	J4	0.00100	1	09/27/2016 01:36	WG911145
Tetrachloroethene	ND		0.00100	1	09/27/2016 01:36	WG911145
Toluene	ND		0.00500	1	09/27/2016 01:36	WG911145
1,1,1-Trichloroethane	ND		0.00100	1	09/27/2016 01:36	WG911145
1,1,2-Trichloroethane	ND		0.00100	1	09/27/2016 01:36	WG911145
Trichloroethene	ND		0.00100	1	09/27/2016 01:36	WG911145
Trichlorofluoromethane	ND		0.00500	1	09/27/2016 01:36	WG911145
1,2,3-Trichloropropane	ND		0.00250	1	09/27/2016 01:36	WG911145
Vinyl acetate	ND	J3	0.0100	1	09/27/2016 01:36	WG911145
Vinyl chloride	ND		0.00100	1	09/27/2016 01:36	WG911145

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	09/27/2016 01:36	WG911145
(S) Toluene-d8	*98.1*		*90.0-115*		*09/27/2016 01:36*	WG911145
(S) Dibromofluoromethane	*87.4*		*79.0-121*		*09/27/2016 01:36*	WG911145
(S) a,a,a-Trifluorotoluene	*100*		*90.4-116*		*09/27/2016 01:36*	WG911145
(S) 4-Bromofluorobenzene	*104*		*80.1-120*		*09/27/2016 01:36*	WG911145

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	163		20.0	1	09/28/2016 18:47	WG910659
Alkalinity,Bicarbonate	163		20.0	1	09/28/2016 18:47	WG910659
Alkalinity,Carbonate	ND		20.0	1	09/28/2016 18:47	WG910659

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.08		1	09/24/2016 13:00	WG910243

Sample Narrative:

9040C L861137-03 WG910243: 7.08 at 15.5c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1140		1	09/27/2016 19:10	WG911584

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	150		10.0	10	09/22/2016 17:51	WG910272
Nitrate as (N)	10.5		1.00	10	09/22/2016 17:51	WG910272
Nitrite as (N)	ND		0.100	1	09/22/2016 17:08	WG910272
Sulfate	112		50.0	10	09/22/2016 17:51	WG910272

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	2.53		1.00	1	10/03/2016 14:04	WG911774

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	09/23/2016 12:25	WG910306

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	09/23/2016 01:19	WG910455
Barium	0.0662		0.00500	1	09/23/2016 01:19	WG910455
Calcium	94.9		1.00	1	09/23/2016 01:19	WG910455
Chromium	ND		0.0100	1	09/23/2016 01:19	WG910455
Cobalt	ND		0.0100	1	09/23/2016 01:19	WG910455
Magnesium	20.8		1.00	1	09/23/2016 01:19	WG910455
Nickel	ND		0.0100	1	09/23/2016 01:19	WG910455
Potassium	7.74		1.00	1	09/23/2016 01:19	WG910455
Silver	ND		0.00500	1	09/23/2016 01:19	WG910455
Sodium	103		1.00	1	09/23/2016 01:19	WG910455
Vanadium	ND		0.0200	1	09/23/2016 01:19	WG910455

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	09/29/2016 02:06	WG911793
Beryllium	ND		0.00200	1	09/29/2016 02:06	WG911793
Cadmium	ND		0.00100	1	09/29/2016 02:06	WG911793
Copper	ND		0.00500	1	09/29/2016 02:06	WG911793
Lead	ND		0.00200	1	09/29/2016 02:06	WG911793
Selenium	0.00223		0.00200	1	09/29/2016 14:29	WG911793
Thallium	ND		0.00200	1	09/29/2016 02:06	WG911793
Zinc	ND		0.0250	1	09/29/2016 02:06	WG911793

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	09/27/2016 01:56	WG911145
Acrylonitrile	ND		0.0100	1	09/27/2016 01:56	WG911145
Benzene	ND		0.00100	1	09/27/2016 01:56	WG911145
Bromochloromethane	ND		0.00100	1	09/27/2016 01:56	WG911145
Bromodichloromethane	ND		0.00100	1	09/27/2016 01:56	WG911145
Bromoform	ND		0.00100	1	09/27/2016 01:56	WG911145
Bromomethane	ND	J3	0.00500	1	09/27/2016 01:56	WG911145
Carbon disulfide	ND		0.00100	1	09/27/2016 01:56	WG911145
Carbon tetrachloride	ND		0.00100	1	09/27/2016 01:56	WG911145
Chlorobenzene	ND		0.00100	1	09/27/2016 01:56	WG911145
Chlorodibromomethane	ND		0.00100	1	09/27/2016 01:56	WG911145
Chloroethane	ND		0.00500	1	09/27/2016 01:56	WG911145
Chloroform	ND		0.00500	1	09/27/2016 01:56	WG911145
Chloromethane	ND		0.00250	1	09/27/2016 01:56	WG911145
Dibromomethane	ND		0.00100	1	09/27/2016 01:56	WG911145
1,2-Dichlorobenzene	ND	J4	0.00100	1	09/27/2016 01:56	WG911145
1,4-Dichlorobenzene	ND	J4	0.00100	1	09/27/2016 01:56	WG911145
trans-1,4-Dichloro-2-butene	ND		0.00250	1	09/27/2016 01:56	WG911145
1,1-Dichloroethane	ND		0.00100	1	09/27/2016 01:56	WG911145
1,2-Dichloroethane	ND		0.00100	1	09/27/2016 01:56	WG911145
1,1-Dichloroethene	ND	J3	0.00100	1	09/27/2016 01:56	WG911145
cis-1,2-Dichloroethene	ND		0.00100	1	09/27/2016 01:56	WG911145
trans-1,2-Dichloroethene	ND		0.00100	1	09/27/2016 01:56	WG911145
1,2-Dichloropropane	ND		0.00100	1	09/27/2016 01:56	WG911145
cis-1,3-Dichloropropene	ND		0.00100	1	09/27/2016 01:56	WG911145
trans-1,3-Dichloropropene	ND		0.00100	1	09/27/2016 01:56	WG911145
Ethylbenzene	ND		0.00100	1	09/27/2016 01:56	WG911145
2-Hexanone	ND		0.0100	1	09/27/2016 01:56	WG911145
Iodomethane	ND	J4	0.0100	1	09/27/2016 01:56	WG911145
2-Butanone (MEK)	ND		0.0100	1	09/27/2016 01:56	WG911145
Methylene Chloride	ND		0.00500	1	09/27/2016 01:56	WG911145
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/27/2016 01:56	WG911145
Styrene	ND		0.00100	1	09/27/2016 01:56	WG911145
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/27/2016 01:56	WG911145
1,1,2,2-Tetrachloroethane	ND	J4	0.00100	1	09/27/2016 01:56	WG911145
Tetrachloroethene	ND		0.00100	1	09/27/2016 01:56	WG911145
Toluene	ND		0.00500	1	09/27/2016 01:56	WG911145
1,1,1-Trichloroethane	ND		0.00100	1	09/27/2016 01:56	WG911145
1,1,2-Trichloroethane	ND		0.00100	1	09/27/2016 01:56	WG911145
Trichloroethene	ND		0.00100	1	09/27/2016 01:56	WG911145
Trichlorofluoromethane	ND		0.00500	1	09/27/2016 01:56	WG911145
1,2,3-Trichloropropane	ND		0.00250	1	09/27/2016 01:56	WG911145
Vinyl acetate	ND	J3	0.0100	1	09/27/2016 01:56	WG911145
Vinyl chloride	ND		0.00100	1	09/27/2016 01:56	WG911145

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	09/27/2016 01:56	WG911145
(S) Toluene-d8	*98.4*		*90.0-115*		*09/27/2016 01:56*	WG911145
(S) Dibromofluoromethane	*89.2*		*79.0-121*		*09/27/2016 01:56*	WG911145
(S) a,a,a-Trifluorotoluene	*101*		*90.4-116*		*09/27/2016 01:56*	WG911145
(S) 4-Bromofluorobenzene	*107*		*80.1-120*		*09/27/2016 01:56*	WG911145

Method Blank (MB)

(MB) R3166878-1 09/28/16 15:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Alkalinity	7.00	J	2.71	20.0
Alkalinity,Bicarbonate	U		2.71	20.0
Alkalinity,Carbonate	U		2.71	20.0

L861107-07 Original Sample (OS) • Duplicate (DUP)

(OS) L861107-07 09/28/16 17:11 • (DUP) R3166878-9 09/28/16 17:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Alkalinity	166	153	1	8.00		20

L861137-01 Original Sample (OS) • Duplicate (DUP)

(OS) L861137-01 09/28/16 18:26 • (DUP) R3166878-11 09/28/16 18:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Alkalinity	167	183	1	9.00		20
Alkalinity,Bicarbonate	167	183	1	9.00		20
Alkalinity,Carbonate	ND	ND	1	0.000		20

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

(LCS) R3166878-10 09/28/16 17:49 • (LCSD) R3166878-12 09/28/16 19:22

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	%	%	%			%	%
Alkalinity	100	95.1	97.8	95.0	98.0	85.0-115			3.00	20

L861175-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L861175-05 09/28/16 19:50 • (MS) R3166878-13 09/28/16 19:58 • (MSD) R3166878-14 09/28/16 20:07

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	%	%		%			%	%
Alkalinity	100	495	542	543	48.0	48.0	1	80.0-120	V	V	0.000	20

L861082-01 Original Sample (OS) • Duplicate (DUP)

(OS) L861082-01 09/24/16 13:00 • (DUP) WG910243-1 09/24/16 13:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.30	8.31	1	0.120		1

L861220-02 Original Sample (OS) • Duplicate (DUP)

(OS) L861220-02 09/24/16 13:00 • (DUP) WG910243-2 09/24/16 13:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.48	6.47	1	0.154		1

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

(LCS) WG910243-3 09/24/16 13:00 • (LCSD) WG910243-4 09/24/16 13:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	7.00	6.95	6.96	99.3	99.4	98.4-102			0.144	1

Method Blank (MB)

(MB) WG911584-1 09/27/16 19:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	umhos/cm		umhos/cm	umhos/cm
Specific Conductance	1.19			

L861194-01 Original Sample (OS) • Duplicate (DUP)

(OS) L861194-01 09/27/16 19:10 • (DUP) WG911584-4 09/27/16 19:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	342	343	1	0.292		20

L861220-05 Original Sample (OS) • Duplicate (DUP)

(OS) L861220-05 09/27/16 19:10 • (DUP) WG911584-5 09/27/16 19:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	3350	3350	1	0.000		20

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

(LCS) WG911584-2 09/27/16 19:10 • (LCSD) WG911584-3 09/27/16 19:10

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	542	549	548	101	101	90.0-110			0.182	20

Method Blank (MB)

(MB) R3165559-1 09/22/16 07:28

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

L861155-05 Original Sample (OS) • Duplicate (DUP)

(OS) L861155-05 09/22/16 14:01 • (DUP) R3165559-4 09/22/16 14:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	33.3	33.1	1	1		15
Nitrate	0.732	0.730	1	0		15
Nitrite	ND	0.000	1	0		15
Sulfate	7.42	7.38	1	0		15

L861155-01 Original Sample (OS) • Duplicate (DUP)

(OS) L861155-01 09/22/16 18:06 • (DUP) R3165559-6 09/22/16 18:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6.24	6.39	1	2		15
Nitrate	0.968	0.974	1	1		15
Nitrite	ND	0.000	1	0		15
Sulfate	ND	0.140	1	0		15

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

(LCS) R3165559-2 09/22/16 07:45 • (LCSD) R3165559-3 09/22/16 07:59

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	38.9	39.0	97	97	80-120			0	15
Nitrate	8.00	8.01	8.02	100	100	80-120			0	15
Nitrite	8.00	7.82	7.81	98	98	80-120			0	15
Sulfate	40.0	39.2	39.2	98	98	80-120			0	15

L861155-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L861155-02 09/22/16 15:27 • (MS) R3165559-5 09/22/16 15:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	10.8	60.4	99	1	80-120	
Nitrate	5.00	2.38	7.48	102	1	80-120	
Nitrite	5.00	ND	4.99	100	1	80-120	
Sulfate	50.0	ND	51.1	100	1	80-120	

L861155-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L861155-06 09/22/16 18:34 • (MS) R3165559-7 09/22/16 18:49 • (MSD) R3165559-8 09/22/16 19:03

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	6.40	56.5	56.1	100	99	1	80-120			1	15
Nitrate	5.00	0.103	5.15	4.92	101	96	1	80-120			5	15
Nitrite	5.00	ND	5.05	4.98	101	100	1	80-120			1	15
Sulfate	50.0	ND	51.0	51.2	100	100	1	80-120			0	15

Method Blank (MB)

(MB) R3167873-1 10/03/16 10:28

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

L861137-01 Original Sample (OS) • Duplicate (DUP)

(OS) L861137-01 10/03/16 13:24 • (DUP) R3167873-4 10/03/16 13:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC (Total Organic Carbon)	2.04	2.01	1	1.00		20

L861220-03 Original Sample (OS) • Duplicate (DUP)

(OS) L861220-03 10/03/16 19:07 • (DUP) R3167873-7 10/03/16 19:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC (Total Organic Carbon)	6.13	5.95	1	3.00		20

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

(LCS) R3167873-2 10/03/16 11:18 • (LCSD) R3167873-3 10/03/16 11:44

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	74.6	74.8	99.0	100	85.0-115			0.000	20

L861175-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L861175-02 10/03/16 15:41 • (MS) R3167873-5 10/03/16 16:05 • (MSD) R3167873-6 10/03/16 16:28

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	3.68	51.2	51.9	95.0	96.0	1	80.0-120			1.00	20

Method Blank (MB)

(MB) R3165806-1 09/23/16 11:23

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) R3165806-2 09/23/16 11:26 • (LCSD) R3165806-3 09/23/16 11:29

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	0.00323	0.00283	108	94	80-120			13	20

L861065-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L861065-01 09/23/16 11:32 • (MS) R3165806-4 09/23/16 11:35 • (MSD) R3165806-5 09/23/16 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	0.00251	0.00242	84	81	1	75-125			4	20

Method Blank (MB)

(MB) R3165545-1 09/23/16 00:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Arsenic	U		0.0065	0.0100
Barium	U		0.0017	0.00500
Calcium	U		0.0463	1.00
Chromium	0.00252	J	0.0014	0.0100
Cobalt	U		0.0023	0.0100
Magnesium	U		0.0111	1.00
Nickel	U		0.0049	0.0100
Potassium	0.297	J	0.102	1.00
Silver	U		0.0028	0.00500
Sodium	0.986	J	0.0985	1.00
Vanadium	0.00363	J	0.0024	0.0200

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

(LCS) R3165545-2 09/23/16 00:41 • (LCSD) R3165545-3 09/23/16 00:43

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	%	%	%			%	%
Arsenic	1.00	1.02	1.02	102	102	80-120			0	20
Barium	1.00	1.04	1.05	104	105	80-120			0	20
Calcium	10.0	10.2	10.2	102	102	80-120			0	20
Chromium	1.00	1.01	1.02	101	102	80-120			0	20
Cobalt	1.00	1.05	1.05	105	105	80-120			0	20
Magnesium	10.0	10.5	10.6	105	106	80-120			0	20
Nickel	1.00	1.04	1.04	104	104	80-120			0	20
Potassium	10.0	10.0	9.95	100	100	80-120			1	20
Silver	1.00	1.01	1.01	101	101	80-120			0	20
Sodium	10.0	10.2	10.2	102	102	80-120			0	20
Vanadium	1.00	1.03	1.04	103	104	80-120			1	20

L861137-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L861137-01 09/23/16 00:46 • (MS) R3165545-5 09/23/16 00:51 • (MSD) R3165545-6 09/23/16 00:54

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	%	%		%			%	%
Arsenic	1.00	ND	1.04	1.06	104	106	1	75-125			2	20
Barium	1.00	0.0764	1.09	1.11	102	103	1	75-125			1	20
Calcium	10.0	77.1	85.9	86.1	88	90	1	75-125			0	20
Chromium	1.00	ND	0.995	1.00	99	100	1	75-125			1	20
Cobalt	1.00	ND	1.07	1.08	107	108	1	75-125			1	20

L861137-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L861137-01 09/23/16 00:46 • (MS) R3165545-5 09/23/16 00:51 • (MSD) R3165545-6 09/23/16 00:54

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 %
Magnesium	10.0	25.0	34.9	35.0	99	100	1	75-125			0	20
Nickel	1.00	ND	1.05	1.06	105	106	1	75-125			1	20
Potassium	10.0	8.64	18.3	18.2	96	96	1	75-125			0	20
Silver	1.00	ND	1.02	1.03	102	103	1	75-125			1	20
Sodium	10.0	119	127	126	76	67	1	75-125		V	1	20
Vanadium	1.00	ND	1.03	1.05	103	104	1	75-125			1	20

Method Blank (MB)

(MB) R3166913-1 09/29/16 01:30

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) R3166913-2 09/29/16 01:33 • (LCSD) R3166913-3 09/29/16 01:37

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 %
Antimony	0.0579	0.0537	0.0538	93	93	80-120			0	20
Beryllium	0.0500	0.0469	0.0481	94	96	80-120			3	20
Cadmium	0.0500	0.0496	0.0512	99	102	80-120			3	20
Copper	0.0500	0.0505	0.0512	101	102	80-120			1	20
Lead	0.0500	0.0495	0.0499	99	100	80-120			1	20
Selenium	0.0500	0.0508	0.0514	102	103	80-120			1	20
Thallium	0.0500	0.0497	0.0499	99	100	80-120			0	20
Zinc	0.0500	0.0498	0.0496	100	99	80-120			0	20

L861271-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L861271-04 09/29/16 01:40 • (MS) R3166913-5 09/29/16 01:46 • (MSD) R3166913-6 09/29/16 01:50

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	0.0579	ND	0.0543	0.0537	94	93	1	75-125			1	20
Beryllium	0.0500	ND	0.0467	0.0465	93	93	1	75-125			0	20
Cadmium	0.0500	ND	0.0512	0.0500	102	100	1	75-125			2	20
Copper	0.0500	ND	0.0514	0.0509	101	100	1	75-125			1	20
Lead	0.0500	ND	0.0499	0.0498	100	100	1	75-125			0	20
Selenium	0.0500	ND	0.0509	0.0509	102	102	1	75-125			0	20
Thallium	0.0500	ND	0.0498	0.0501	100	100	1	75-125			1	20
Zinc	0.0500	ND	0.0519	0.0494	104	99	1	75-125			5	20

Method Blank (MB)

(MB) R3166331-3 09/26/16 19:32

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		0.000780	0.00500
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) R3166331-3 09/26/16 19:32

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	*97.8*			*90.0-115*
(S) Dibromofluoromethane	*88.7*			*79.0-121*
(S) a,a,a-Trifluorotoluene	*99.4*			*90.4-116*
(S) 4-Bromofluorobenzene	*103*			*80.1-120*

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

(LCS) R3166331-1 09/26/16 18:30 • (LCSD) R3166331-4 09/26/16 20:12

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 %
Acetone	0.125	0.125	0.106	99.8	85.1	28.7-175			16.0	20.9
Acrylonitrile	0.125	0.115	0.103	91.9	82.4	58.2-145			10.9	20
Benzene	0.0250	0.0220	0.0197	88.0	78.9	73.0-122			10.9	20
Bromodichloromethane	0.0250	0.0218	0.0196	87.2	78.4	75.5-121			10.6	20
Bromochloromethane	0.0250	0.0214	0.0210	85.6	84.2	78.9-123			1.65	20
Bromoform	0.0250	0.0226	0.0197	90.5	78.7	71.5-131			13.9	20
Bromomethane	0.0250	0.0186	0.0144	74.5	57.4	22.4-187		J3	26.0	20
Carbon disulfide	0.0250	0.0217	0.0187	86.6	74.8	53.0-134			14.6	20
Carbon tetrachloride	0.0250	0.0207	0.0185	82.7	74.0	70.9-129			11.1	20
Chlorobenzene	0.0250	0.0248	0.0216	99.4	86.6	79.7-122			13.8	20
Chlorodibromomethane	0.0250	0.0238	0.0209	95.3	83.5	78.2-124			13.2	20
Chloroethane	0.0250	0.0211	0.0186	84.5	74.3	41.2-153			12.8	20
Chloroform	0.0250	0.0213	0.0193	85.3	77.2	73.2-125			9.95	20
Chloromethane	0.0250	0.0167	0.0153	66.8	61.1	55.8-134			8.99	20
Dibromomethane	0.0250	0.0237	0.0212	94.8	84.7	79.5-118			11.2	20
1,2-Dichlorobenzene	0.0250	0.0238	0.0211	95.3	84.4	84.7-118		J4	12.1	20
1,4-Dichlorobenzene	0.0250	0.0227	0.0202	90.9	80.8	82.2-114		J4	11.7	20
trans-1,4-Dichloro-2-butene	0.0250	0.0240	0.0204	95.9	81.7	58.3-129			15.9	20
1,1-Dichloroethane	0.0250	0.0222	0.0202	88.7	80.7	71.7-127			9.47	20
1,2-Dichloroethane	0.0250	0.0214	0.0195	85.5	78.0	65.3-126			9.19	20
1,1-Dichloroethene	0.0250	0.0227	0.0181	90.6	72.3	59.9-137		J3	22.5	20
cis-1,2-Dichloroethene	0.0250	0.0221	0.0200	88.3	80.1	77.3-122			9.84	20
trans-1,2-Dichloroethene	0.0250	0.0227	0.0202	90.7	80.7	72.6-125			11.7	20
1,2-Dichloropropane	0.0250	0.0240	0.0215	95.9	86.0	77.4-125			10.9	20

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

(LCS) R3166331-1 09/26/16 18:30 • (LCSD) R3166331-4 09/26/16 20:12

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 %
cis-1,3-Dichloropropene	0.0250	0.0231	0.0208	92.5	83.4	77.7-124			10.4	20
trans-1,3-Dichloropropene	0.0250	0.0225	0.0202	90.1	80.9	73.5-127			10.8	20
Ethylbenzene	0.0250	0.0250	0.0214	100	85.6	80.9-121			15.7	20
2-Hexanone	0.125	0.129	0.110	103	87.9	59.4-151			16.2	20
Iodomethane	0.125	0.0909	0.0770	72.7	61.6	64.6-137		J4	16.6	20
2-Butanone (MEK)	0.125	0.0987	0.0938	78.9	75.1	46.4-155			5.02	20
Methylene Chloride	0.0250	0.0202	0.0186	81.0	74.4	69.5-120			8.50	20
4-Methyl-2-pentanone (MIBK)	0.125	0.108	0.0950	86.8	76.0	63.3-138			13.2	20
Styrene	0.0250	0.0256	0.0224	103	89.4	79.9-124			13.7	20
1,1,1,2-Tetrachloroethane	0.0250	0.0246	0.0213	98.2	85.2	78.5-125			14.2	20
1,1,2,2-Tetrachloroethane	0.0250	0.0226	0.0190	90.3	75.9	79.3-123		J4	17.3	20
Tetrachloroethene	0.0250	0.0243	0.0205	97.3	82.1	73.5-130			17.0	20
Toluene	0.0250	0.0232	0.0206	92.9	82.2	77.9-116			12.2	20
1,1,1-Trichloroethane	0.0250	0.0214	0.0191	85.7	76.4	71.1-129			11.4	20
1,1,2-Trichloroethane	0.0250	0.0238	0.0206	95.1	82.2	81.6-120			14.5	20
Trichloroethene	0.0250	0.0242	0.0218	96.6	87.3	79.5-121			10.1	20
Trichlorofluoromethane	0.0250	0.0220	0.0198	88.2	79.1	49.1-157			10.9	20
1,2,3-Trichloropropane	0.0250	0.0244	0.0214	97.5	85.7	74.9-124			13.0	20
Vinyl acetate	0.125	0.0870	0.0675	69.6	54.0	41.7-159		J3	25.3	20
Vinyl chloride	0.0250	0.0216	0.0197	86.5	78.9	61.5-134			9.22	20
Xylenes, Total	0.0750	0.0749	0.0644	99.9	85.8	79.2-122			15.2	20
(S) Toluene-d8				*100*	*99.3*	*90.0-115*				
(S) Dibromofluoromethane				*89.1*	*92.2*	*79.0-121*				
(S) α,α,α-Trifluorotoluene				*101*	*99.9*	*90.4-116*				
(S) 4-Bromofluorobenzene				*105*	*105*	*80.1-120*				

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.
J4	The associated batch QC was outside the established quality control range for accuracy.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

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

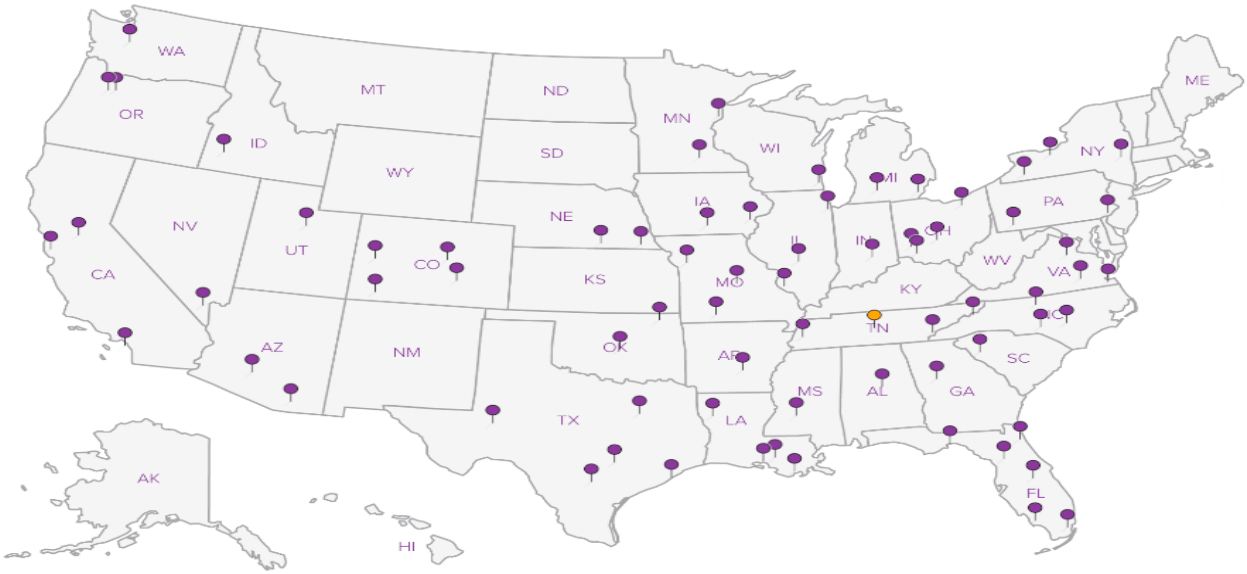
Third Party & Federal Accreditations

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

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

Our Locations

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



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

Billing Information:

Report to: **Mark Molen**

Email To: mark@molenandassociates.com
~~molenassociates@gmail.com~~

Project Description: **Broda AI Inert Fill**

City/State Collected: Brighton, CO

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 X Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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Mount Juliet, TN 37122
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Phone: 800-767-5859
Fax: 615-758-5859

L# 861137
1236

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Mg, Na, K, Ca+AP1 Metals 250ml HDPE w/HN03 <2	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		9/21/16	14:00	8	X	X	X	X	X	X		01
MW-2	Grab	GW			14:35	8	X	X	X	X	X	X		02
MW-3	Grab	GW			15:10	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 _____

6827 1109 8951

Hold #

Condition: DB9 (lab use only) 4

COC Seal Intact: ___Y ___N ___NA

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9/21/16	17:00	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Mint

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

Temp: 3.1 °C Bottles Received: 24

Date: 9-22-16 Time: 0900

pH Checked: <2 NCF:

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

Cooler Receipt Form

Client:	MOLENTCO	SDG#	961137
Cooler Received/Opened On: 9/22/16		Temperature Upon Receipt:	3.1 °c
Received By: Michael Witherspoon			
Signature: MWit			

Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?			✓
Were custody papers properly filled out?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)	✓		
If applicable, was an observable VOA headspace present?		✓	✗ MW 9-22-16
Non Conformance Generated. (If yes see attached NCF)			

ANALYTICAL REPORT

January 06, 2017

Molen & Associates, LLC

Sample Delivery Group:	L881226
Samples Received:	12/29/2016
Project Number:	10-0133
Description:	Broda AI Inert Fill
Site:	BRODA AI
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.

MW-1 L881226-01 GW

Collected by: Olivia Salmon
Collected date/time: 12/28/16 13:00
Received date/time: 12/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG939382	1	12/29/16 15:48	12/30/16 09:43	NJB
Metals (ICP) by Method 6010B	WG939428	1	12/29/16 18:28	12/30/16 13:03	LTB
Metals (ICPMS) by Method 6020	WG939602	1	12/30/16 07:06	12/30/16 10:50	JPD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG939512	1	12/31/16 17:41	12/31/16 17:41	BMB
Wet Chemistry by Method 2320 B-2011	WG939733	1	01/04/17 08:41	01/04/17 08:41	AMC
Wet Chemistry by Method 9040C	WG939688	1	12/31/16 14:35	12/31/16 14:35	MCG
Wet Chemistry by Method 9050A	WG939722	1	01/03/17 12:57	01/03/17 12:57	MAJ
Wet Chemistry by Method 9056A	WG939391	1	12/29/16 16:08	12/29/16 16:08	KCF
Wet Chemistry by Method 9056A	WG939391	10	12/29/16 16:23	12/29/16 16:23	KCF
Wet Chemistry by Method 9060A	WG939903	1	01/05/17 12:04	01/05/17 12:04	AS

MW-2 L881226-02 GW

Collected by: Olivia Salmon
Collected date/time: 12/28/16 13:45
Received date/time: 12/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG939382	1	12/29/16 15:48	12/30/16 09:47	NJB
Metals (ICP) by Method 6010B	WG939428	1	12/29/16 18:28	12/30/16 13:16	LTB
Metals (ICPMS) by Method 6020	WG939602	1	12/30/16 07:06	12/30/16 10:53	JPD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG939512	1	12/31/16 18:04	12/31/16 18:04	BMB
Wet Chemistry by Method 2320 B-2011	WG939733	1	01/04/17 09:31	01/04/17 09:31	AMC
Wet Chemistry by Method 9040C	WG939688	1	12/31/16 14:35	12/31/16 14:35	MCG
Wet Chemistry by Method 9050A	WG939722	1	01/03/17 12:57	01/03/17 12:57	MAJ
Wet Chemistry by Method 9056A	WG939391	1	12/29/16 16:38	12/29/16 16:38	KCF
Wet Chemistry by Method 9056A	WG939391	10	12/29/16 16:53	12/29/16 16:53	KCF
Wet Chemistry by Method 9060A	WG939903	1	01/05/17 12:40	01/05/17 12:40	AS

MW-3 L881226-03 GW

Collected by: Olivia Salmon
Collected date/time: 12/28/16 14:15
Received date/time: 12/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG939382	1	12/29/16 15:48	12/30/16 09:49	NJB
Metals (ICP) by Method 6010B	WG939428	1	12/29/16 18:28	12/30/16 13:19	LTB
Metals (ICPMS) by Method 6020	WG939602	1	12/30/16 07:06	12/30/16 10:57	JPD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG939512	1	12/31/16 18:28	12/31/16 18:28	BMB
Wet Chemistry by Method 2320 B-2011	WG939733	1	01/04/17 09:49	01/04/17 09:49	AMC
Wet Chemistry by Method 9040C	WG939688	1	12/31/16 14:35	12/31/16 14:35	MCG
Wet Chemistry by Method 9050A	WG939722	1	01/03/17 12:57	01/03/17 12:57	MAJ
Wet Chemistry by Method 9056A	WG939391	1	12/29/16 17:08	12/29/16 17:08	KCF
Wet Chemistry by Method 9056A	WG939391	10	12/29/16 17:23	12/29/16 17:23	KCF
Wet Chemistry by Method 9060A	WG939903	1	01/05/17 12:58	01/05/17 12:58	AS

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

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
L881226-01	MW-1	9040C
L881226-02	MW-2	9040C
L881226-03	MW-3	9040C

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	189		20.0	1	01/04/2017 08:41	WG939733
Alkalinity,Bicarbonate	189		20.0	1	01/04/2017 08:41	WG939733
Alkalinity,Carbonate	ND		20.0	1	01/04/2017 08:41	WG939733

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.36		1	12/31/2016 14:35	WG939688

Sample Narrative:

9040C L881226-01 WG939688: 7.36 at 12.5c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1130		1	01/03/2017 12:57	WG939722

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	135		10.0	10	12/29/2016 16:23	WG939391
Nitrate as (N)	8.96		0.100	1	12/29/2016 16:08	WG939391
Nitrite as (N)	ND		0.100	1	12/29/2016 16:08	WG939391
Sulfate	126		50.0	10	12/29/2016 16:23	WG939391

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	2.17		1.00	1	01/05/2017 12:04	WG939903

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	12/30/2016 09:43	WG939382

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	12/30/2016 13:03	WG939428
Barium	0.0824		0.00500	1	12/30/2016 13:03	WG939428
Chromium	ND		0.0100	1	12/30/2016 13:03	WG939428
Cobalt	ND		0.0100	1	12/30/2016 13:03	WG939428
Magnesium	25.5		1.00	1	12/30/2016 13:03	WG939428
Nickel	ND		0.0100	1	12/30/2016 13:03	WG939428
Potassium	9.27		1.00	1	12/30/2016 13:03	WG939428
Silver	ND		0.00500	1	12/30/2016 13:03	WG939428
Sodium	117		1.00	1	12/30/2016 13:03	WG939428
Vanadium	ND		0.0200	1	12/30/2016 13:03	WG939428

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	12/30/2016 10:50	WG939602
Beryllium	ND		0.00200	1	12/30/2016 10:50	WG939602
Cadmium	ND		0.00100	1	12/30/2016 10:50	WG939602
Copper	ND		0.00500	1	12/30/2016 10:50	WG939602
Lead	ND		0.00200	1	12/30/2016 10:50	WG939602
Selenium	0.00230		0.00200	1	12/30/2016 10:50	WG939602
Thallium	ND		0.00200	1	12/30/2016 10:50	WG939602
Zinc	ND		0.0250	1	12/30/2016 10:50	WG939602

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	12/31/2016 17:41	WG939512
Acrylonitrile	ND		0.0100	1	12/31/2016 17:41	WG939512
Benzene	ND		0.00100	1	12/31/2016 17:41	WG939512
Bromochloromethane	ND		0.00100	1	12/31/2016 17:41	WG939512
Bromodichloromethane	ND		0.00100	1	12/31/2016 17:41	WG939512
Bromoform	ND		0.00100	1	12/31/2016 17:41	WG939512
Bromomethane	ND	J3	0.00500	1	12/31/2016 17:41	WG939512
Carbon disulfide	ND		0.00100	1	12/31/2016 17:41	WG939512
Carbon tetrachloride	ND		0.00100	1	12/31/2016 17:41	WG939512
Chlorobenzene	ND		0.00100	1	12/31/2016 17:41	WG939512
Chlorodibromomethane	ND		0.00100	1	12/31/2016 17:41	WG939512
Chloroethane	ND		0.00500	1	12/31/2016 17:41	WG939512
Chloroform	ND		0.00500	1	12/31/2016 17:41	WG939512
Chloromethane	ND		0.00250	1	12/31/2016 17:41	WG939512
Dibromomethane	ND		0.00100	1	12/31/2016 17:41	WG939512
1,2-Dichlorobenzene	ND		0.00100	1	12/31/2016 17:41	WG939512
1,4-Dichlorobenzene	ND		0.00100	1	12/31/2016 17:41	WG939512
trans-1,4-Dichloro-2-butene	ND		0.00250	1	12/31/2016 17:41	WG939512
1,1-Dichloroethane	ND		0.00100	1	12/31/2016 17:41	WG939512
1,2-Dichloroethane	ND		0.00100	1	12/31/2016 17:41	WG939512
1,1-Dichloroethene	ND		0.00100	1	12/31/2016 17:41	WG939512
cis-1,2-Dichloroethene	ND		0.00100	1	12/31/2016 17:41	WG939512
trans-1,2-Dichloroethene	ND		0.00100	1	12/31/2016 17:41	WG939512
1,2-Dichloropropane	ND		0.00100	1	12/31/2016 17:41	WG939512
cis-1,3-Dichloropropene	ND		0.00100	1	12/31/2016 17:41	WG939512
trans-1,3-Dichloropropene	ND		0.00100	1	12/31/2016 17:41	WG939512
Ethylbenzene	ND		0.00100	1	12/31/2016 17:41	WG939512
2-Hexanone	ND		0.0100	1	12/31/2016 17:41	WG939512
Iodomethane	ND		0.0100	1	12/31/2016 17:41	WG939512
2-Butanone (MEK)	ND		0.0100	1	12/31/2016 17:41	WG939512
Methylene Chloride	ND		0.00500	1	12/31/2016 17:41	WG939512
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0100	1	12/31/2016 17:41	WG939512
Styrene	ND		0.00100	1	12/31/2016 17:41	WG939512
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/31/2016 17:41	WG939512
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/31/2016 17:41	WG939512
Tetrachloroethene	ND		0.00100	1	12/31/2016 17:41	WG939512
Toluene	ND		0.00100	1	12/31/2016 17:41	WG939512
1,1,1-Trichloroethane	ND		0.00100	1	12/31/2016 17:41	WG939512
1,1,2-Trichloroethane	ND		0.00100	1	12/31/2016 17:41	WG939512
Trichloroethene	ND		0.00100	1	12/31/2016 17:41	WG939512
Trichlorofluoromethane	ND		0.00500	1	12/31/2016 17:41	WG939512
1,2,3-Trichloropropane	ND		0.00250	1	12/31/2016 17:41	WG939512
Vinyl acetate	ND		0.0100	1	12/31/2016 17:41	WG939512
Vinyl chloride	ND		0.00100	1	12/31/2016 17:41	WG939512

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	12/31/2016 17:41	WG939512
(S) Toluene-d8	*101*		*90.0-115*		*12/31/2016 17:41*	WG939512
(S) Dibromofluoromethane	*98.4*		*79.0-121*		*12/31/2016 17:41*	WG939512
(S) a,a,a-Trifluorotoluene	*106*		*90.4-116*		*12/31/2016 17:41*	WG939512
(S) 4-Bromofluorobenzene	*100*		*80.1-120*		*12/31/2016 17:41*	WG939512

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	122		20.0	1	01/04/2017 09:31	WG939733
Alkalinity,Bicarbonate	122		20.0	1	01/04/2017 09:31	WG939733
Alkalinity,Carbonate	ND		20.0	1	01/04/2017 09:31	WG939733

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.41		1	12/31/2016 14:35	WG939688

Sample Narrative:

9040C L881226-02 WG939688: 7.41 at 12.4c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1440		1	01/03/2017 12:57	WG939722

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	189		10.0	10	12/29/2016 16:53	WG939391
Nitrate as (N)	ND		0.100	1	12/29/2016 16:38	WG939391
Nitrite as (N)	ND		0.100	1	12/29/2016 16:38	WG939391
Sulfate	320		50.0	10	12/29/2016 16:53	WG939391

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	4.72		1.00	1	01/05/2017 12:40	WG939903

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	12/30/2016 09:47	WG939382

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	12/30/2016 13:16	WG939428
Barium	0.129		0.00500	1	12/30/2016 13:16	WG939428
Chromium	ND		0.0100	1	12/30/2016 13:16	WG939428
Cobalt	ND		0.0100	1	12/30/2016 13:16	WG939428
Magnesium	21.8		1.00	1	12/30/2016 13:16	WG939428
Nickel	ND		0.0100	1	12/30/2016 13:16	WG939428
Potassium	11.4		1.00	1	12/30/2016 13:16	WG939428
Silver	ND		0.00500	1	12/30/2016 13:16	WG939428
Sodium	196		1.00	1	12/30/2016 13:16	WG939428
Vanadium	ND		0.0200	1	12/30/2016 13:16	WG939428

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	12/30/2016 10:53	WG939602
Beryllium	ND		0.00200	1	12/30/2016 10:53	WG939602
Cadmium	ND		0.00100	1	12/30/2016 10:53	WG939602
Copper	ND		0.00500	1	12/30/2016 10:53	WG939602
Lead	ND		0.00200	1	12/30/2016 10:53	WG939602
Selenium	ND		0.00200	1	12/30/2016 10:53	WG939602
Thallium	ND		0.00200	1	12/30/2016 10:53	WG939602
Zinc	ND		0.0250	1	12/30/2016 10:53	WG939602

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	12/31/2016 18:04	WG939512
Acrylonitrile	ND		0.0100	1	12/31/2016 18:04	WG939512
Benzene	ND		0.00100	1	12/31/2016 18:04	WG939512
Bromochloromethane	ND		0.00100	1	12/31/2016 18:04	WG939512
Bromodichloromethane	ND		0.00100	1	12/31/2016 18:04	WG939512
Bromoform	ND		0.00100	1	12/31/2016 18:04	WG939512
Bromomethane	ND	J3	0.00500	1	12/31/2016 18:04	WG939512
Carbon disulfide	ND		0.00100	1	12/31/2016 18:04	WG939512
Carbon tetrachloride	ND		0.00100	1	12/31/2016 18:04	WG939512
Chlorobenzene	ND		0.00100	1	12/31/2016 18:04	WG939512
Chlorodibromomethane	ND		0.00100	1	12/31/2016 18:04	WG939512
Chloroethane	ND		0.00500	1	12/31/2016 18:04	WG939512
Chloroform	ND		0.00500	1	12/31/2016 18:04	WG939512
Chloromethane	ND		0.00250	1	12/31/2016 18:04	WG939512
Dibromomethane	ND		0.00100	1	12/31/2016 18:04	WG939512
1,2-Dichlorobenzene	ND		0.00100	1	12/31/2016 18:04	WG939512
1,4-Dichlorobenzene	ND		0.00100	1	12/31/2016 18:04	WG939512
trans-1,4-Dichloro-2-butene	ND		0.00250	1	12/31/2016 18:04	WG939512
1,1-Dichloroethane	ND		0.00100	1	12/31/2016 18:04	WG939512
1,2-Dichloroethane	ND		0.00100	1	12/31/2016 18:04	WG939512
1,1-Dichloroethene	ND		0.00100	1	12/31/2016 18:04	WG939512
cis-1,2-Dichloroethene	ND		0.00100	1	12/31/2016 18:04	WG939512
trans-1,2-Dichloroethene	ND		0.00100	1	12/31/2016 18:04	WG939512
1,2-Dichloropropane	ND		0.00100	1	12/31/2016 18:04	WG939512
cis-1,3-Dichloropropene	ND		0.00100	1	12/31/2016 18:04	WG939512
trans-1,3-Dichloropropene	ND		0.00100	1	12/31/2016 18:04	WG939512
Ethylbenzene	ND		0.00100	1	12/31/2016 18:04	WG939512
2-Hexanone	ND		0.0100	1	12/31/2016 18:04	WG939512
Iodomethane	ND		0.0100	1	12/31/2016 18:04	WG939512
2-Butanone (MEK)	ND		0.0100	1	12/31/2016 18:04	WG939512
Methylene Chloride	ND		0.00500	1	12/31/2016 18:04	WG939512
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0100	1	12/31/2016 18:04	WG939512
Styrene	ND		0.00100	1	12/31/2016 18:04	WG939512
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/31/2016 18:04	WG939512
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/31/2016 18:04	WG939512
Tetrachloroethene	ND		0.00100	1	12/31/2016 18:04	WG939512
Toluene	ND		0.00100	1	12/31/2016 18:04	WG939512
1,1,1-Trichloroethane	ND		0.00100	1	12/31/2016 18:04	WG939512
1,1,2-Trichloroethane	ND		0.00100	1	12/31/2016 18:04	WG939512
Trichloroethene	ND		0.00100	1	12/31/2016 18:04	WG939512
Trichlorofluoromethane	ND		0.00500	1	12/31/2016 18:04	WG939512
1,2,3-Trichloropropane	ND		0.00250	1	12/31/2016 18:04	WG939512
Vinyl acetate	ND		0.0100	1	12/31/2016 18:04	WG939512
Vinyl chloride	ND		0.00100	1	12/31/2016 18:04	WG939512

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	12/31/2016 18:04	WG939512
(S) Toluene-d8	*100*		*90.0-115*		*12/31/2016 18:04*	WG939512
(S) Dibromofluoromethane	*102*		*79.0-121*		*12/31/2016 18:04*	WG939512
(S) a,a,a-Trifluorotoluene	*105*		*90.4-116*		*12/31/2016 18:04*	WG939512
(S) 4-Bromofluorobenzene	*100*		*80.1-120*		*12/31/2016 18:04*	WG939512

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	169		20.0	1	01/04/2017 09:49	WG939733
Alkalinity,Bicarbonate	169		20.0	1	01/04/2017 09:49	WG939733
Alkalinity,Carbonate	ND		20.0	1	01/04/2017 09:49	WG939733

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.00		1	12/31/2016 14:35	WG939688

Sample Narrative:

9040C L881226-03 WG939688: 7.00 at 13.5c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	umhos/cm			date / time	
Specific Conductance	1160		1	01/03/2017 12:57	WG939722

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	157		10.0	10	12/29/2016 17:23	WG939391
Nitrate as (N)	9.10		1.00	10	12/29/2016 17:23	WG939391
Nitrite as (N)	ND		0.100	1	12/29/2016 17:08	WG939391
Sulfate	121		50.0	10	12/29/2016 17:23	WG939391

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TOC (Total Organic Carbon)	2.17		1.00	1	01/05/2017 12:58	WG939903

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	12/30/2016 09:49	WG939382

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	12/30/2016 13:19	WG939428
Barium	0.0753		0.00500	1	12/30/2016 13:19	WG939428
Chromium	ND		0.0100	1	12/30/2016 13:19	WG939428
Cobalt	ND		0.0100	1	12/30/2016 13:19	WG939428
Magnesium	21.6		1.00	1	12/30/2016 13:19	WG939428
Nickel	ND		0.0100	1	12/30/2016 13:19	WG939428
Potassium	8.35		1.00	1	12/30/2016 13:19	WG939428
Silver	ND		0.00500	1	12/30/2016 13:19	WG939428
Sodium	108		1.00	1	12/30/2016 13:19	WG939428
Vanadium	ND		0.0200	1	12/30/2016 13:19	WG939428

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	12/30/2016 10:57	WG939602
Beryllium	ND		0.00200	1	12/30/2016 10:57	WG939602
Cadmium	ND		0.00100	1	12/30/2016 10:57	WG939602
Copper	ND		0.00500	1	12/30/2016 10:57	WG939602
Lead	ND		0.00200	1	12/30/2016 10:57	WG939602
Selenium	0.00226		0.00200	1	12/30/2016 10:57	WG939602
Thallium	ND		0.00200	1	12/30/2016 10:57	WG939602
Zinc	ND		0.0250	1	12/30/2016 10:57	WG939602

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	12/31/2016 18:28	WG939512
Acrylonitrile	ND		0.0100	1	12/31/2016 18:28	WG939512
Benzene	ND		0.00100	1	12/31/2016 18:28	WG939512
Bromochloromethane	ND		0.00100	1	12/31/2016 18:28	WG939512
Bromodichloromethane	ND		0.00100	1	12/31/2016 18:28	WG939512
Bromoform	ND		0.00100	1	12/31/2016 18:28	WG939512
Bromomethane	ND	J3	0.00500	1	12/31/2016 18:28	WG939512
Carbon disulfide	ND		0.00100	1	12/31/2016 18:28	WG939512
Carbon tetrachloride	ND		0.00100	1	12/31/2016 18:28	WG939512
Chlorobenzene	ND		0.00100	1	12/31/2016 18:28	WG939512
Chlorodibromomethane	ND		0.00100	1	12/31/2016 18:28	WG939512
Chloroethane	ND		0.00500	1	12/31/2016 18:28	WG939512
Chloroform	ND		0.00500	1	12/31/2016 18:28	WG939512
Chloromethane	ND		0.00250	1	12/31/2016 18:28	WG939512
Dibromomethane	ND		0.00100	1	12/31/2016 18:28	WG939512
1,2-Dichlorobenzene	ND		0.00100	1	12/31/2016 18:28	WG939512
1,4-Dichlorobenzene	ND		0.00100	1	12/31/2016 18:28	WG939512
trans-1,4-Dichloro-2-butene	ND		0.00250	1	12/31/2016 18:28	WG939512
1,1-Dichloroethane	ND		0.00100	1	12/31/2016 18:28	WG939512
1,2-Dichloroethane	ND		0.00100	1	12/31/2016 18:28	WG939512
1,1-Dichloroethene	ND		0.00100	1	12/31/2016 18:28	WG939512
cis-1,2-Dichloroethene	ND		0.00100	1	12/31/2016 18:28	WG939512
trans-1,2-Dichloroethene	ND		0.00100	1	12/31/2016 18:28	WG939512
1,2-Dichloropropane	ND		0.00100	1	12/31/2016 18:28	WG939512
cis-1,3-Dichloropropene	ND		0.00100	1	12/31/2016 18:28	WG939512
trans-1,3-Dichloropropene	ND		0.00100	1	12/31/2016 18:28	WG939512
Ethylbenzene	ND		0.00100	1	12/31/2016 18:28	WG939512
2-Hexanone	ND		0.0100	1	12/31/2016 18:28	WG939512
Iodomethane	ND		0.0100	1	12/31/2016 18:28	WG939512
2-Butanone (MEK)	ND		0.0100	1	12/31/2016 18:28	WG939512
Methylene Chloride	ND		0.00500	1	12/31/2016 18:28	WG939512
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0100	1	12/31/2016 18:28	WG939512
Styrene	ND		0.00100	1	12/31/2016 18:28	WG939512
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/31/2016 18:28	WG939512
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/31/2016 18:28	WG939512
Tetrachloroethene	ND		0.00100	1	12/31/2016 18:28	WG939512
Toluene	ND		0.00100	1	12/31/2016 18:28	WG939512
1,1,1-Trichloroethane	ND		0.00100	1	12/31/2016 18:28	WG939512
1,1,2-Trichloroethane	ND		0.00100	1	12/31/2016 18:28	WG939512
Trichloroethene	ND		0.00100	1	12/31/2016 18:28	WG939512
Trichlorofluoromethane	ND		0.00500	1	12/31/2016 18:28	WG939512
1,2,3-Trichloropropane	ND		0.00250	1	12/31/2016 18:28	WG939512
Vinyl acetate	ND		0.0100	1	12/31/2016 18:28	WG939512
Vinyl chloride	ND		0.00100	1	12/31/2016 18:28	WG939512

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	12/31/2016 18:28	WG939512
(S) Toluene-d8	*99.2*		*90.0-115*		*12/31/2016 18:28*	WG939512
(S) Dibromofluoromethane	*99.6*		*79.0-121*		*12/31/2016 18:28*	WG939512
(S) α,α,α-Trifluorotoluene	*104*		*90.4-116*		*12/31/2016 18:28*	WG939512
(S) 4-Bromofluorobenzene	*97.7*		*80.1-120*		*12/31/2016 18:28*	WG939512

Method Blank (MB)

(MB) R3188965-1 01/04/17 08:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	3.65	J	2.71	20.0
Alkalinity,Bicarbonate	3.65	J	2.71	20.0
Alkalinity,Carbonate	U		2.71	20.0

L881367-09 Original Sample (OS) • Duplicate (DUP)

(OS) L881367-09 01/04/17 11:40 • (DUP) R3188965-5 01/04/17 11:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	1230	979	1	22.0	J3	20

L881226-01 Original Sample (OS) • Duplicate (DUP)

(OS) L881226-01 01/04/17 08:41 • (DUP) R3188965-2 01/04/17 08:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	189	192	1	2.00		20
Alkalinity,Bicarbonate	189	192	1	2.00		20
Alkalinity,Carbonate	ND	ND	1	0.000		20

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

(LCS) R3188965-3 01/04/17 09:38 • (LCSD) R3188965-4 01/04/17 10:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Alkalinity	100	97.3	94.5	97.0	95.0	85.0-115			3.00	20

L880923-05 Original Sample (OS) • Duplicate (DUP)

(OS) L880923-05 12/31/16 14:35 • (DUP) WG939688-3 12/31/16 14:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.00	7.08	1	1.14		1

L881373-03 Original Sample (OS) • Duplicate (DUP)

(OS) L881373-03 12/31/16 14:35 • (DUP) WG939688-4 12/31/16 14:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	2.64	2.64	1	0.000		1

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

(LCS) WG939688-1 12/31/16 14:35 • (LCSD) WG939688-2 12/31/16 14:35

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	6.07	6.09	6.09	100	100	98.4-102			0.000	1

Method Blank (MB)

(MB) WG939722-5 01/03/17 12:57

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	umhos/cm		umhos/cm	umhos/cm
Specific Conductance	0.900			

L880987-01 Original Sample (OS) • Duplicate (DUP)

(OS) L880987-01 01/03/17 12:57 • (DUP) WG939722-1 01/03/17 12:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	128	129	1	0.390		20

L881405-01 Original Sample (OS) • Duplicate (DUP)

(OS) L881405-01 01/03/17 12:57 • (DUP) WG939722-4 01/03/17 12:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	893	889	1	0.449		20

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

(LCS) WG939722-2 01/03/17 12:57 • (LCSD) WG939722-3 01/03/17 12:57

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	542	552	552	102	102	90.0-110			0.000	20

Method Blank (MB)

(MB) R3188155-1 12/29/16 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

L881199-01 Original Sample (OS) • Duplicate (DUP)

(OS) L881199-01 12/29/16 15:09 • (DUP) R3188155-5 12/29/16 15:24

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	43.1	43.0	1	0		15
Nitrate	0.692	0.686	1	1		15
Nitrite	0.111	0.112	1	1		15

L881266-08 Original Sample (OS) • Duplicate (DUP)

(OS) L881266-08 12/29/16 20:22 • (DUP) R3188155-6 12/29/16 20:37

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	12.9	12.9	1	0		15
Nitrate	0.814	0.824	1	1		15
Nitrite	ND	0.000	1	0		15
Sulfate	11.9	11.9	1	0		15

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

(LCS) R3188155-2 12/29/16 07:15 • (LCSD) R3188155-3 12/29/16 07:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	39.0	39.1	97	98	80-120			0	15
Nitrate	8.00	8.02	8.06	100	101	80-120			0	15
Nitrite	8.00	7.82	7.84	98	98	80-120			0	15
Sulfate	40.0	39.2	39.3	98	98	80-120			0	15

L881199-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L881199-02 12/29/16 14:10 • (MS) R3188155-4 12/29/16 14:24

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	53.3	101	95	1	80-120	E
Nitrate	5.00	5.62	10.3	94	1	80-120	E
Nitrite	5.00	0.383	5.42	101	1	80-120	

L881266-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L881266-09 12/29/16 20:52 • (MS) R3188155-7 12/29/16 21:37 • (MSD) R3188155-8 12/29/16 21:51

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 %
Chloride	50.0	14.1	63.8	63.6	100	99	1	80-120			0	15
Nitrate	5.00	2.84	8.08	7.86	105	100	1	80-120			3	15
Nitrite	5.00	ND	5.07	5.01	101	100	1	80-120			1	15
Sulfate	50.0	5.04	55.5	54.9	101	100	1	80-120			1	15

Method Blank (MB)

(MB) R3189178-1 01/05/17 09:48

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

L881226-01 Original Sample (OS) • Duplicate (DUP)

(OS) L881226-01 01/05/17 12:04 • (DUP) R3189178-3 01/05/17 12:21

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	2.17	1.94	1	11		20

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

(LCS) R3189178-2 01/05/17 10:50 • (LCSD) R3189178-4 01/05/17 13:26

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	75.8	71.7	101	96	85-115			6	20

Method Blank (MB)

(MB) R3188181-1 12/30/16 09:12

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) R3188181-2 12/30/16 09:14 • (LCSD) R3188181-3 12/30/16 09:16

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	0.00298	0.00271	99	90	80-120			9	20

L881133-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L881133-01 12/30/16 09:18 • (MS) R3188181-4 12/30/16 09:21 • (MSD) R3188181-5 12/30/16 09:23

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	0.00301	0.00293	100	98	1	75-125			3	20

Method Blank (MB)

(MB) R3188463-1 12/30/16 12:55

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
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	U		0.102	1.00
Silver	U		0.0028	0.00500
Sodium	U		0.0985	1.00
Vanadium	U		0.0024	0.0200

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

(LCS) R3188463-2 12/30/16 12:58 • (LCSD) R3188463-3 12/30/16 13:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	1.00	1.04	1.04	104	104	80-120			0	20
Barium	1.00	1.03	1.03	103	103	80-120			0	20
Chromium	1.00	1.00	1.01	100	101	80-120			0	20
Cobalt	1.00	1.03	1.03	103	103	80-120			0	20
Magnesium	10.0	10.3	10.4	103	104	80-120			1	20
Nickel	1.00	1.05	1.04	105	104	80-120			1	20
Potassium	10.0	10.2	10.2	102	102	80-120			0	20
Silver	0.200	0.183	0.184	92	92	80-120			1	20
Sodium	10.0	10.3	10.3	103	103	80-120			0	20
Vanadium	1.00	1.04	1.04	104	104	80-120			0	20

L881226-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L881226-01 12/30/16 13:03 • (MS) R3188463-5 12/30/16 13:08 • (MSD) R3188463-6 12/30/16 13:11

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	1.11	1.10	111	110	1	75-125			1	20
Barium	1.00	0.0824	1.11	1.10	103	102	1	75-125			1	20
Chromium	1.00	ND	1.01	1.01	101	100	1	75-125			1	20
Cobalt	1.00	ND	1.08	1.07	108	107	1	75-125			1	20
Magnesium	10.0	25.5	35.4	35.5	99	100	1	75-125			0	20
Nickel	1.00	ND	1.09	1.08	109	108	1	75-125			1	20
Potassium	10.0	9.27	19.2	19.2	100	100	1	75-125			0	20

L881226-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L881226-01 12/30/16 13:03 • (MS) R3188463-5 12/30/16 13:08 • (MSD) R3188463-6 12/30/16 13:11

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	0.191	0.190	95	95	1	75-125			1	20
Sodium	10.0	117	125	126	75	86	1	75-125			1	20
Vanadium	1.00	ND	1.07	1.06	107	106	1	75-125			1	20

Method Blank (MB)

(MB) R3188215-1 12/30/16 09:54

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) R3188215-2 12/30/16 09:57 • (LCSD) R3188215-3 12/30/16 10:01

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 %
Antimony	0.0579	0.0485	0.0480	84	83	80-120			1	20
Beryllium	0.0500	0.0418	0.0414	84	83	80-120			1	20
Cadmium	0.0500	0.0484	0.0489	97	98	80-120			1	20
Copper	0.0500	0.0516	0.0505	103	101	80-120			2	20
Lead	0.0500	0.0470	0.0478	94	96	80-120			2	20
Selenium	0.0500	0.0469	0.0472	94	94	80-120			1	20
Thallium	0.0500	0.0466	0.0459	93	92	80-120			2	20
Zinc	0.0500	0.0510	0.0503	102	101	80-120			1	20

L881241-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L881241-01 12/30/16 10:04 • (MS) R3188215-5 12/30/16 10:11 • (MSD) R3188215-6 12/30/16 10:15

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 %
Antimony	0.0579	U	0.0517	0.0517	89	89	1	75-125			0	20
Beryllium	0.0500	U	0.0434	0.0425	87	85	1	75-125			2	20
Cadmium	0.0500	U	0.0485	0.0484	97	97	1	75-125			0	20
Copper	0.0500	0.00203	0.0497	0.0495	95	95	1	75-125			1	20
Lead	0.0500	0.000395	0.0479	0.0479	95	95	1	75-125			0	20
Selenium	0.0500	0.0120	0.0607	0.0598	98	96	1	75-125			1	20
Thallium	0.0500	U	0.0473	0.0478	95	96	1	75-125			1	20
Zinc	0.0500	0.00609	0.0534	0.0534	95	95	1	75-125			0	20

Method Blank (MB)

(MB) R3188559-3 12/31/16 14:13

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
Tetrachloroethene	U		0.000372	0.00100
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
Toluene	U		0.000412	0.00100
Trichloroethene	U		0.000398	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100

Method Blank (MB)

(MB) R3188559-3 12/31/16 14:13

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	*101*			*90.0-115*
(S) Dibromofluoromethane	*97.8*			*79.0-121*
(S) 4-Bromofluorobenzene	*100*			*80.1-120*
(S) a,a,a-Trifluorotoluene	*106*			*90.4-116*

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

(LCS) R3188559-1 12/31/16 12:38 • (LCSD) R3188559-2 12/31/16 13:02

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	0.0638	0.0625	51.0	50.0	28.7-175			2.00	20.9
Acrylonitrile	0.125	0.0856	0.0967	68.5	77.3	58.2-145			12.1	20
Benzene	0.0250	0.0226	0.0256	90.5	102	73.0-122			12.4	20
Bromodichloromethane	0.0250	0.0218	0.0244	87.1	97.6	75.5-121			11.4	20
Bromochloromethane	0.0250	0.0243	0.0279	97.0	112	78.9-123			14.0	20
Bromoform	0.0250	0.0223	0.0241	89.3	96.4	71.5-131			7.62	20
Bromomethane	0.0250	0.0261	0.0327	104	131	22.4-187		J3	22.7	20
Carbon disulfide	0.0250	0.0180	0.0203	72.2	81.3	53.0-134			11.9	20
Carbon tetrachloride	0.0250	0.0241	0.0273	96.4	109	70.9-129			12.4	20
Chlorobenzene	0.0250	0.0262	0.0293	105	117	79.7-122			10.9	20
Chlorodibromomethane	0.0250	0.0242	0.0271	96.9	108	78.2-124			11.3	20
Chloroethane	0.0250	0.0274	0.0312	110	125	41.2-153			13.1	20
Chloroform	0.0250	0.0227	0.0256	90.7	103	73.2-125			12.3	20
Chloromethane	0.0250	0.0192	0.0218	76.8	87.2	55.8-134			12.7	20
Dibromomethane	0.0250	0.0222	0.0249	88.8	99.7	79.5-118			11.5	20
1,2-Dichlorobenzene	0.0250	0.0228	0.0251	91.4	101	84.7-118			9.53	20
1,4-Dichlorobenzene	0.0250	0.0225	0.0253	90.1	101	82.2-114			11.6	20
trans-1,4-Dichloro-2-butene	0.0250	0.0189	0.0204	75.6	81.8	58.3-129			7.81	20
1,1-Dichloroethane	0.0250	0.0221	0.0247	88.5	98.8	71.7-127			10.9	20
1,2-Dichloroethane	0.0250	0.0209	0.0236	83.6	94.4	65.3-126			12.2	20
1,1-Dichloroethene	0.0250	0.0188	0.0216	75.1	86.3	59.9-137			13.8	20
cis-1,2-Dichloroethene	0.0250	0.0222	0.0251	88.6	100	77.3-122			12.4	20
trans-1,2-Dichloroethene	0.0250	0.0232	0.0262	92.8	105	72.6-125			12.3	20
1,2-Dichloropropane	0.0250	0.0218	0.0248	87.3	99.3	77.4-125			12.8	20

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

(LCS) R3188559-1 12/31/16 12:38 • (LCSD) R3188559-2 12/31/16 13:02

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	0.0221	0.0250	88.5	100	77.7-124			12.4	20
trans-1,3-Dichloropropene	0.0250	0.0208	0.0232	83.2	92.9	73.5-127			11.0	20
Ethylbenzene	0.0250	0.0263	0.0290	105	116	80.9-121			9.72	20
2-Hexanone	0.125	0.0773	0.0808	61.8	64.6	59.4-151			4.45	20
Iodomethane	0.125	0.124	0.140	98.8	112	64.6-137			12.8	20
2-Butanone (MEK)	0.125	0.0717	0.0737	57.3	59.0	46.4-155			2.83	20
Methylene Chloride	0.0250	0.0205	0.0233	82.0	93.2	69.5-120			12.8	20
4-Methyl-2-pentanone (MIBK)	0.125	0.0726	0.0818	58.0	65.4	63.3-138	J4		12.0	20
Styrene	0.0250	0.0246	0.0273	98.4	109	79.9-124			10.4	20
1,1,1,2-Tetrachloroethane	0.0250	0.0245	0.0274	98.1	110	78.5-125			11.2	20
1,1,2,2-Tetrachloroethane	0.0250	0.0202	0.0216	80.9	86.5	79.3-123			6.74	20
Tetrachloroethene	0.0250	0.0272	0.0300	109	120	73.5-130			9.90	20
Toluene	0.0250	0.0238	0.0268	95.2	107	77.9-116			11.9	20
1,1,1-Trichloroethane	0.0250	0.0236	0.0265	94.6	106	71.1-129			11.4	20
1,1,2-Trichloroethane	0.0250	0.0228	0.0256	91.0	102	81.6-120			11.8	20
Trichloroethene	0.0250	0.0251	0.0282	100	113	79.5-121			11.7	20
Trichlorofluoromethane	0.0250	0.0265	0.0305	106	122	49.1-157			14.0	20
1,2,3-Trichloropropane	0.0250	0.0211	0.0236	84.4	94.4	74.9-124			11.1	20
Vinyl acetate	0.125	0.106	0.120	84.8	95.9	41.7-159			12.3	20
Vinyl chloride	0.0250	0.0229	0.0265	91.5	106	61.5-134			14.6	20
Xylenes, Total	0.0750	0.0775	0.0859	103	115	79.2-122			10.3	20
(S) Toluene-d8				*99.1*	*98.9*	*90.0-115*				
(S) Dibromofluoromethane				*95.8*	*97.9*	*79.0-121*				
(S) 4-Bromofluorobenzene				*103*	*101*	*80.1-120*				
(S) α,α,α-Trifluorotoluene				*103*	*104*	*90.4-116*				

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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.

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

State Accreditations

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

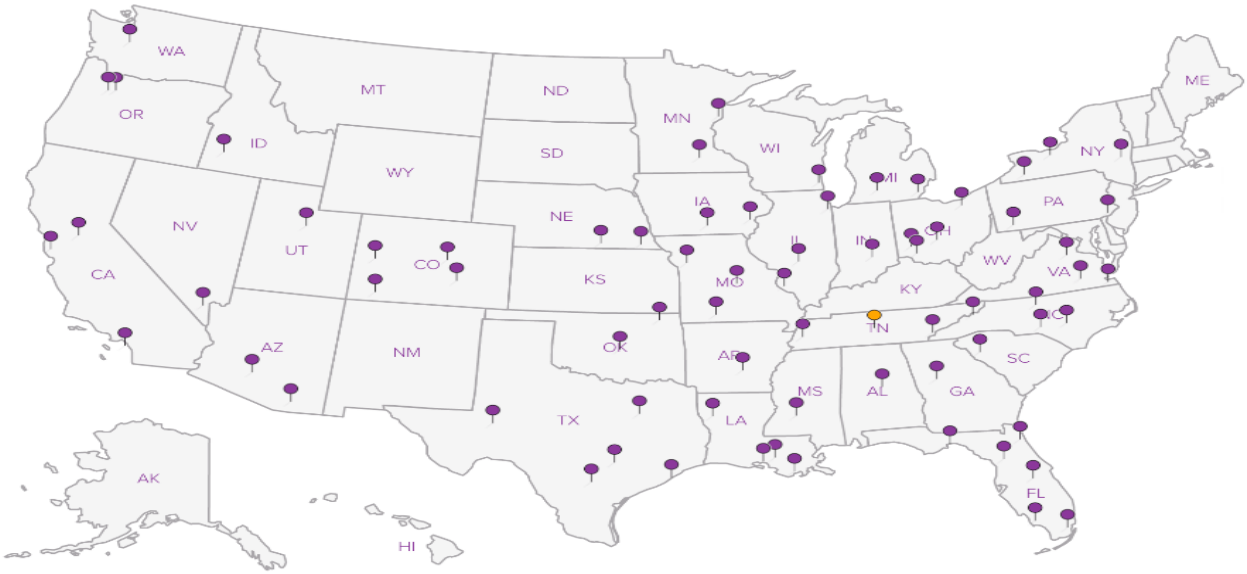
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:
Molen & Associates, LLC
2190 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: Brighton, CO

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

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		12/28/16	13:00	8	X	X	X	X	X	X						-01
MW-2	Grab	GW			13:45	8	X	X	X	X	X	X						02
MW-3	Grab	GW		↓	14:15	8	X	X	X	X	X	X						03

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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

L# L881226
J113

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

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

pH ___ Temp ___

7136 2067 0934

Remarks:

Flow ___ Other ___

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/28/16	16:30	
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: 2.1 °C Bottles Received: 24

Date: 12-29-16 Time: 0900

Condition: (lab use only) JW7 OK ✓

COC Seal Intact: ___Y ___N ___NA

pH Checked: <2 NCF:

ESC
LAB SCIENCES
YOUR LAB OF CHOICE

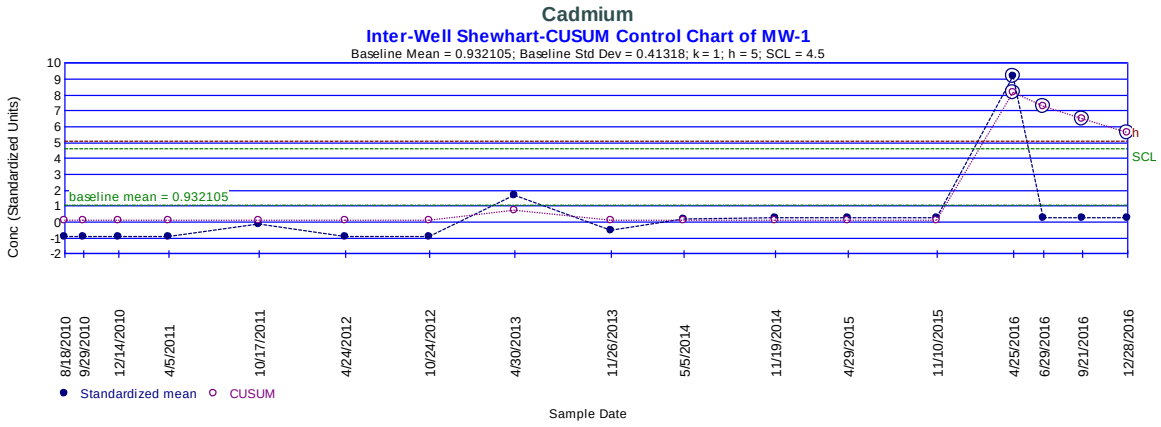
Cooler Receipt Form

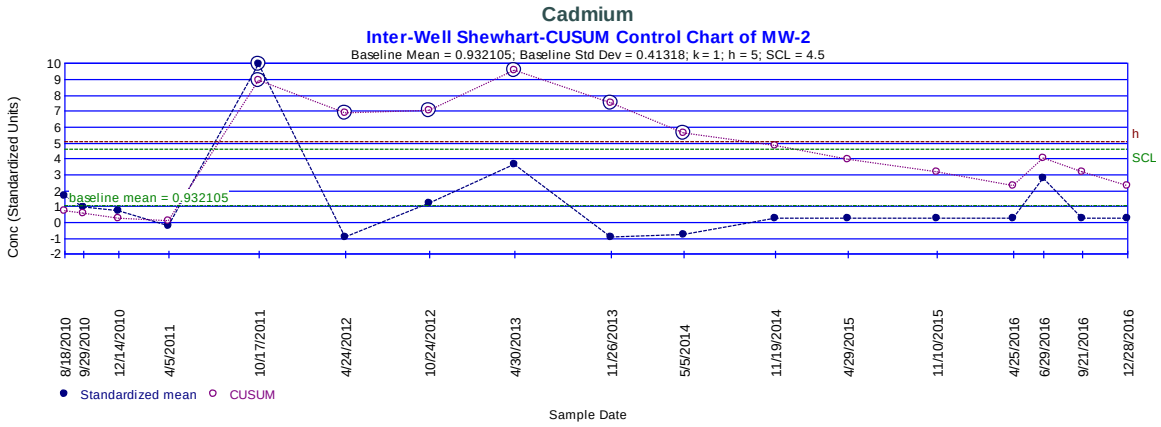
Client:	MOLENTCO	SDG#	L881226
Cooler Received/Opened On: 12/29/16		Temperature Upon Receipt:	2.1 °c
Received By: Richard Hughes			
Signature:			

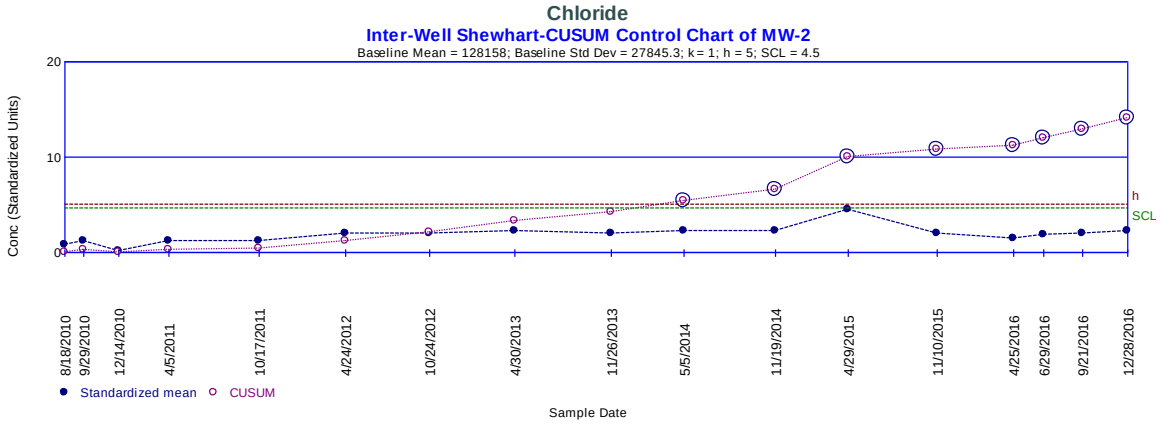
Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?			–
Were custody papers properly filled out?	–		
Did all bottles arrive in good condition?	–		
Were correct bottles used for the analyses requested?	–		
Was sufficient amount of sample sent in each bottle?	–		
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)	–		
If applicable, was an observable VOA headspace present?			–
Non Conformance Generated. (If yes see attached NCF)			

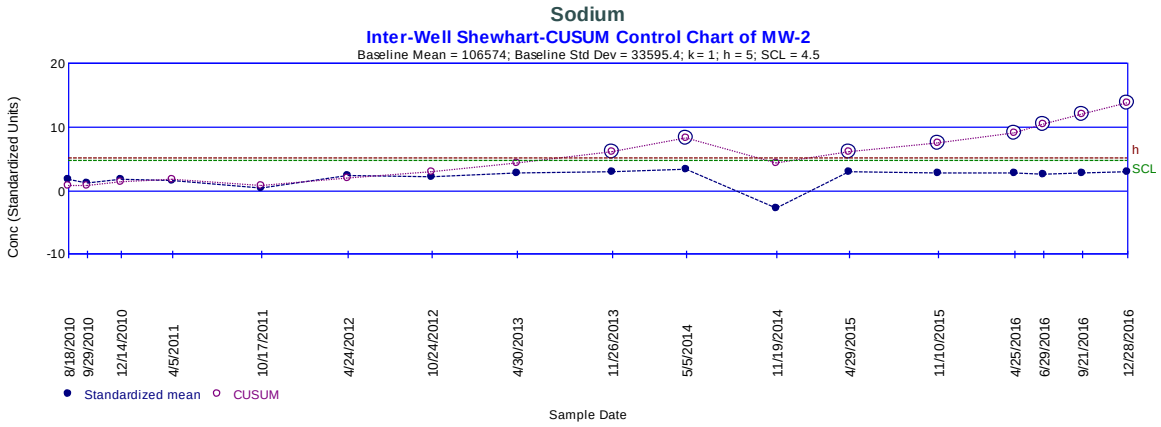
Appendix II

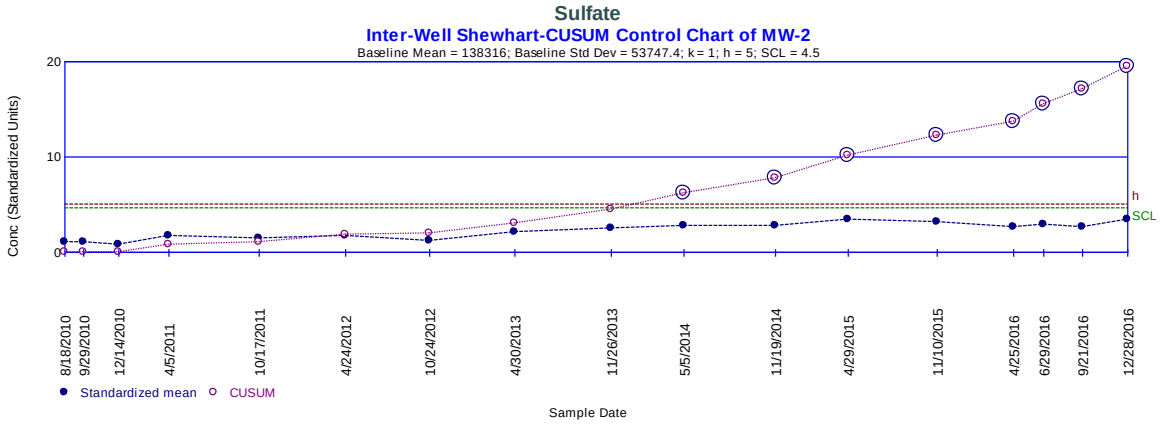
Shewhart CUSUM Charts and Time Series Graphs

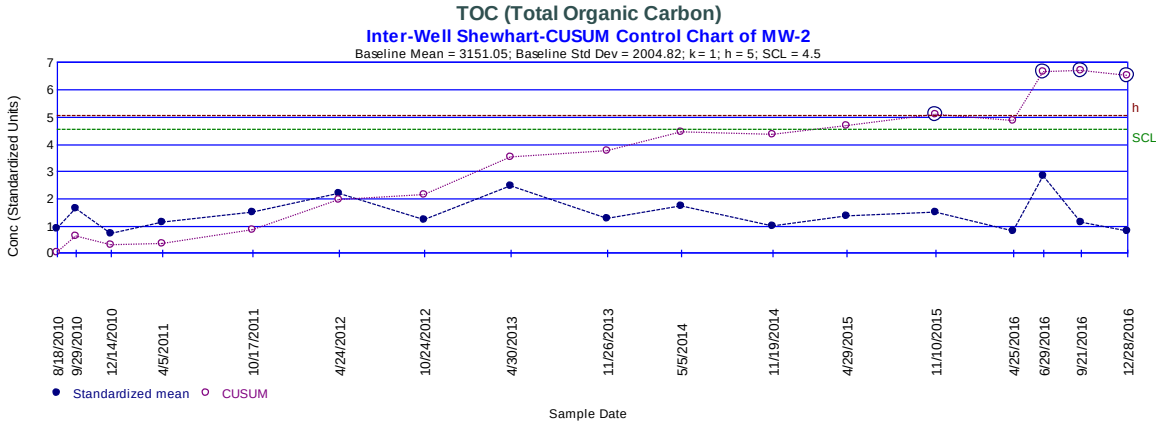

Cadmium
Inter-Well Shewhart-CUSUM Control Chart of MW-1
Baseline Mean = 0.932105; Baseline Std Dev = 0.41318; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
baseline mean = 0.932105
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Standardized mean
CUSUM
Sample Date

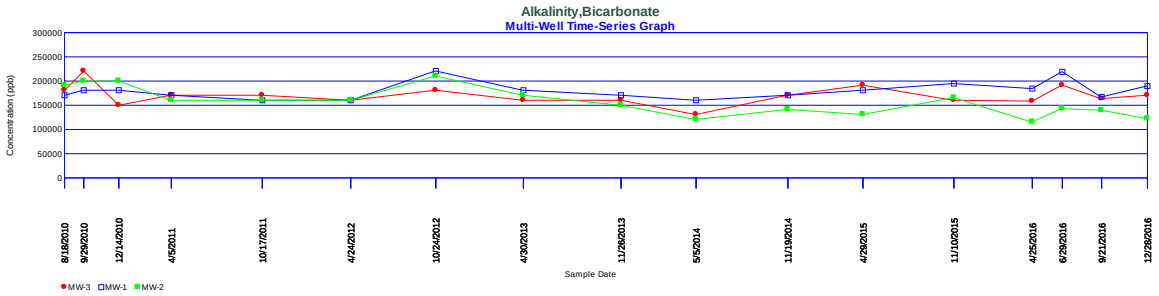

Cadmium
Inter-Well Shewhart-CUSUM Control Chart of MW-2
Baseline Mean = 0.932105; Baseline Std Dev = 0.41318; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
baseline mean = 0.932105
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Standardized mean
CUSUM
Sample Date

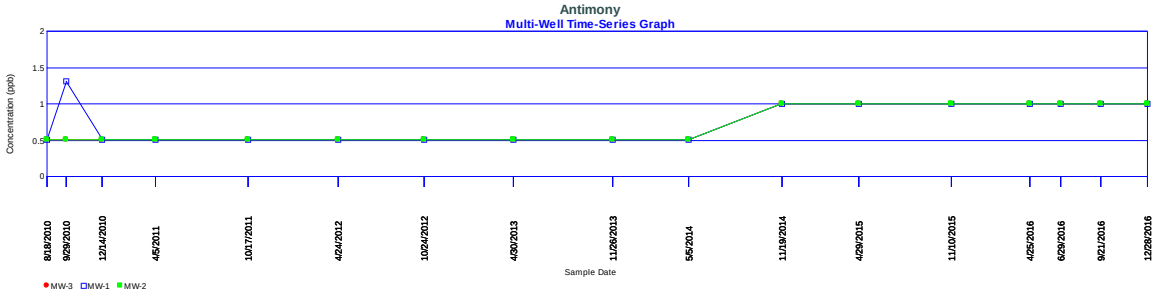

Chloride
Inter-Well Shewhart-CUSUM Control Chart of MW-2
Baseline Mean = 128158; Baseline Std Dev = 27845.3; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Standardized mean
CUSUM
Sample Date

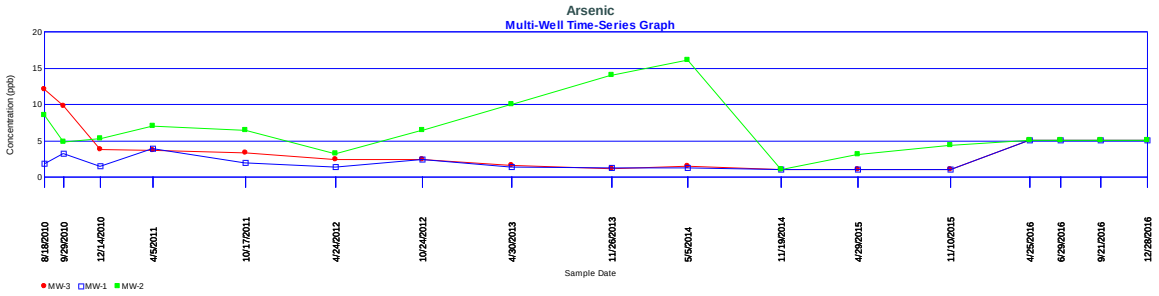

Sodium
Inter-Well Shewhart-CUSUM Control Chart of MW-2
Baseline Mean = 106574; Baseline Std Dev = 33595.4; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
20
10
0
-10
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Standardized mean
CUSUM
Sample Date

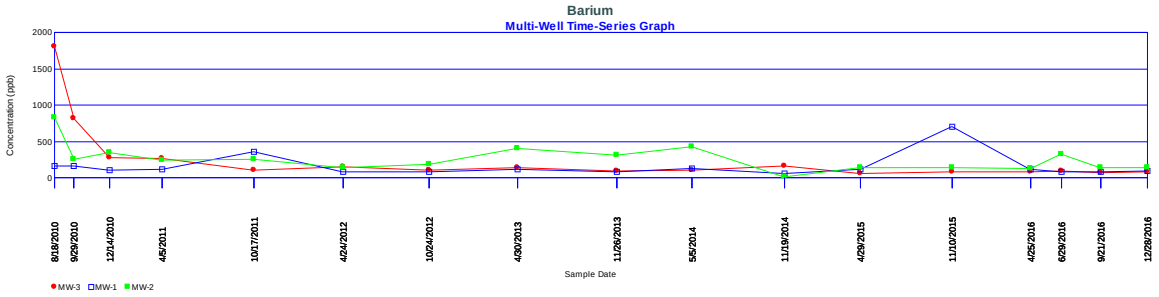

Sulfate
Inter-Well Shewhart-CUSUM Control Chart of MW-2
Baseline Mean = 138316; Baseline Std Dev = 53747.4; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
20
10
0
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Standardized mean
CUSUM
Sample Date

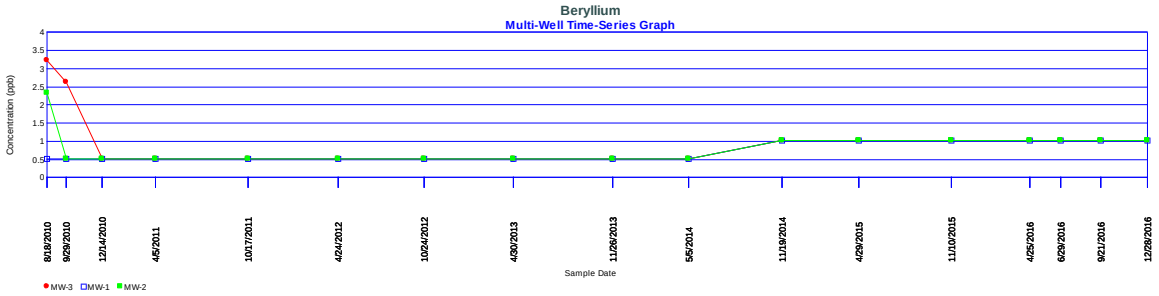

TOC (Total Organic Carbon)
Inter-Well Shewhart-CUSUM Control Chart of MW-2
Baseline Mean = 3151.05; Baseline Std Dev = 2004.82; k = 1; h = 5; SCL = 4.5
Conc (Standardized Units)
7
6
5
4
3
2
1
0
h
SCL
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Standardized mean
CUSUM
Sample Date

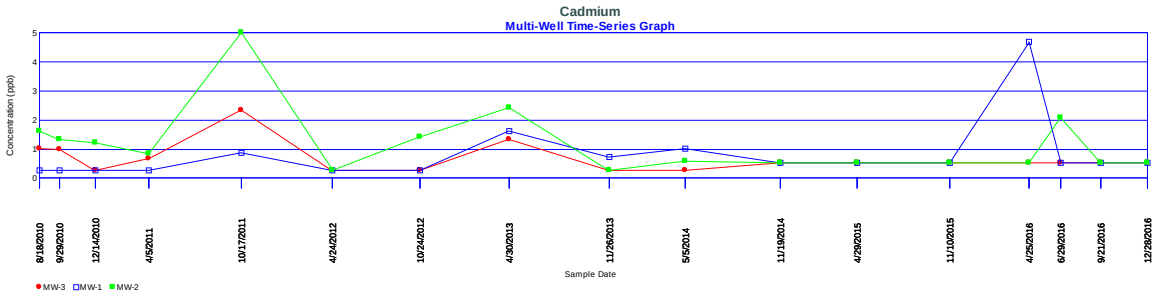

Alkalinity,Bicarbonate
Multi-Well Time-Series Graph
Concentration (ppb)
300000
250000
200000
150000
100000
50000
0
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Sample Date
MW-3 MW-1 MW-2

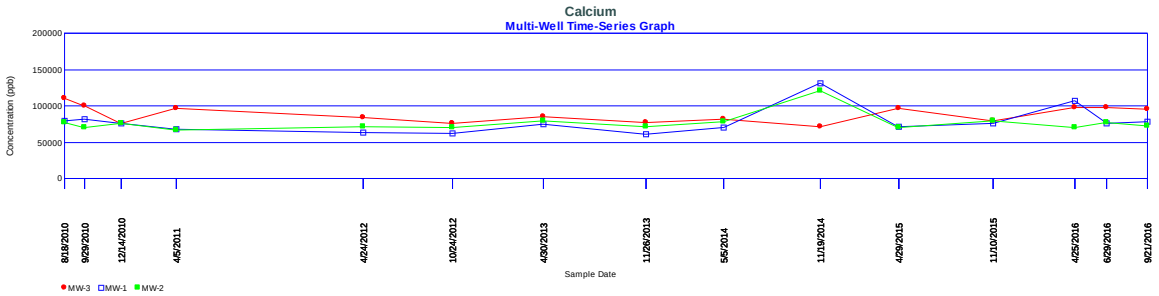

Antimony
Multi-Well Time-Series Graph
Concentration (ppb)
2
1.5
1
0.5
0
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Sample Date
MW-3 MW-1 MW-2

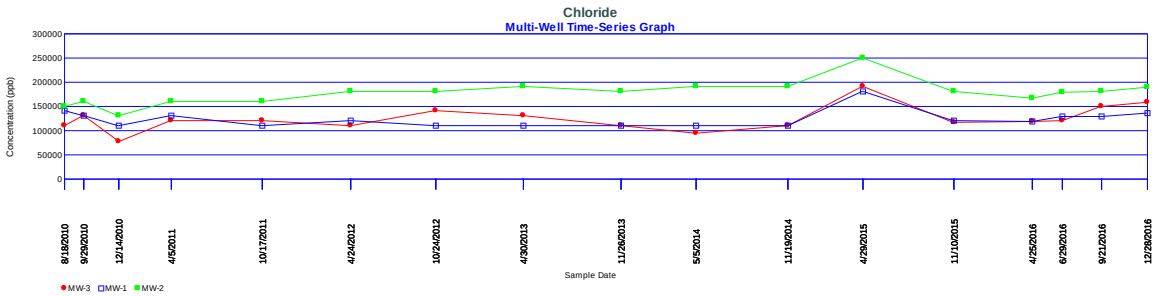

Arsenic
Multi-Well Time-Series Graph
Concentration (ppb)
20
15
10
5
0
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Sample Date
MW-3 MW-1 MW-2

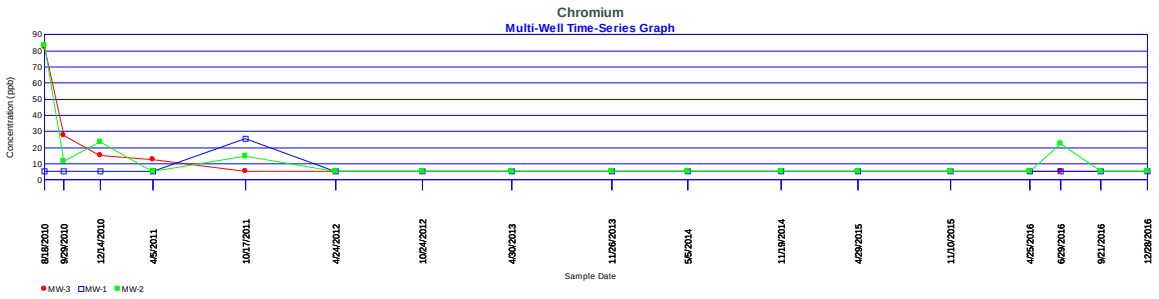

Barium
Multi-Well Time-Series Graph
Concentration (ppb)
2000
1500
1000
500
0
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Sample Date
MW-3 MW-1 MW-2

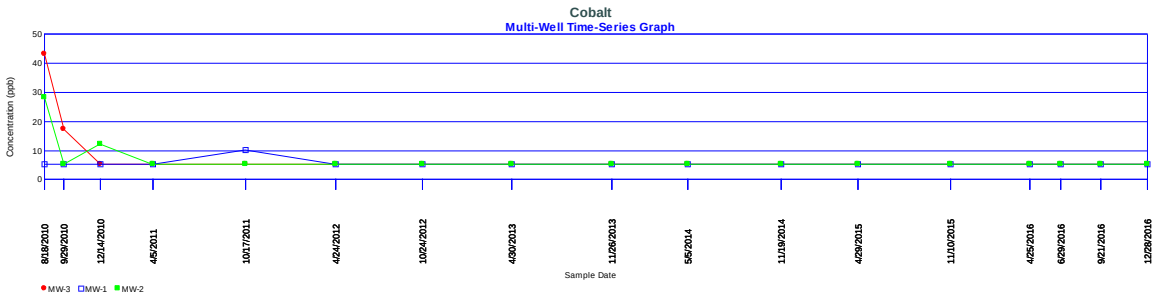

Beryllium
Multi-Well Time-Series Graph
Concentration (ppb)
4
3.5
3
2.5
2
1.5
1
0.5
0
8/18/2010
9/29/2010
12/14/2010
4/5/2011
10/17/2011
4/24/2012
10/24/2012
4/30/2013
11/26/2013
5/5/2014
11/19/2014
4/29/2015
11/10/2015
4/25/2016
6/29/2016
9/21/2016
12/28/2016
Sample Date
MW-3 MW-1 MW-2

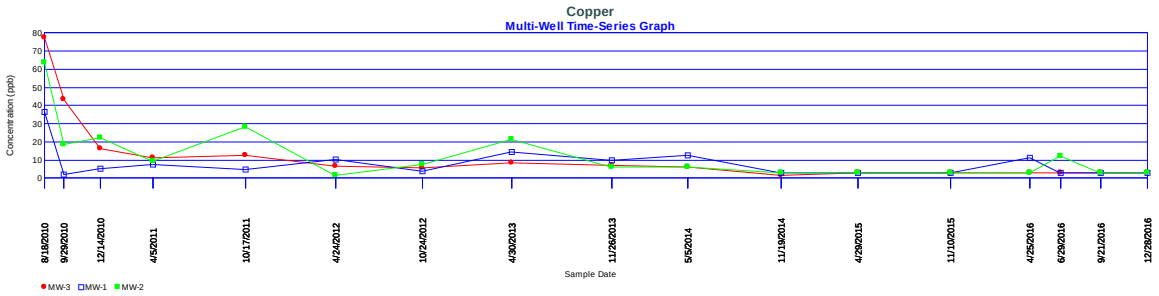

Cadmium
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

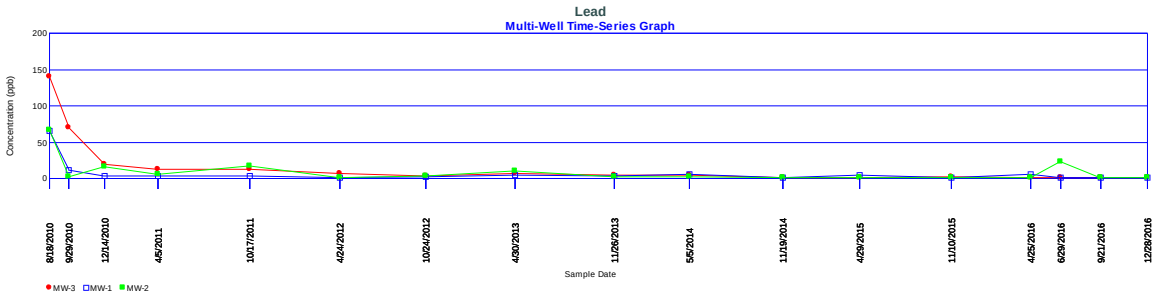

Calcium
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

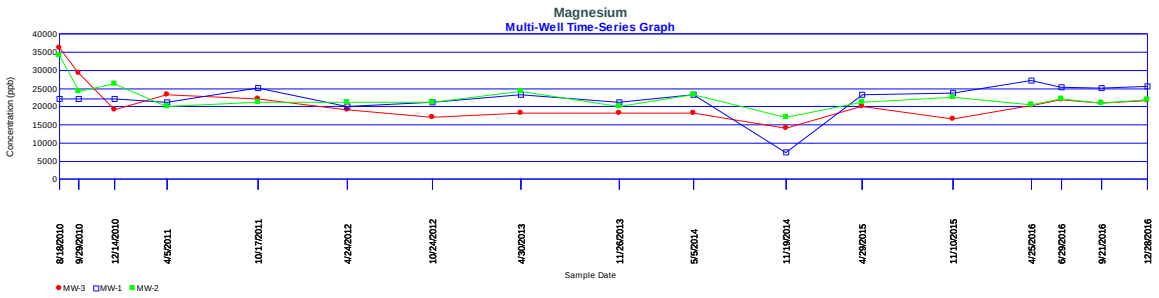

Chloride
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

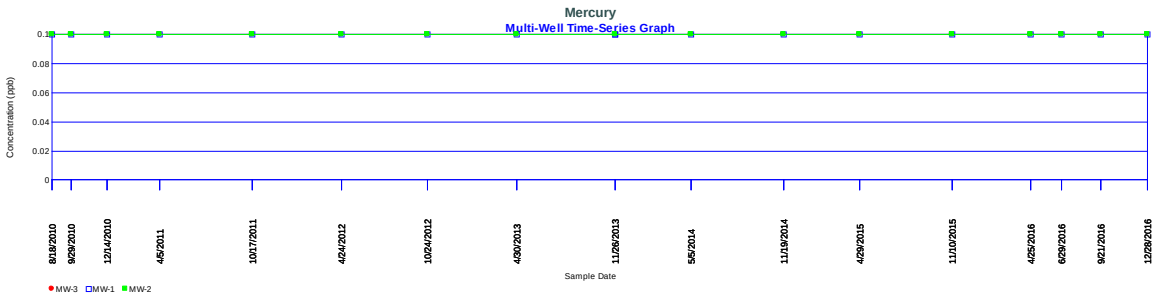

Chromium
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

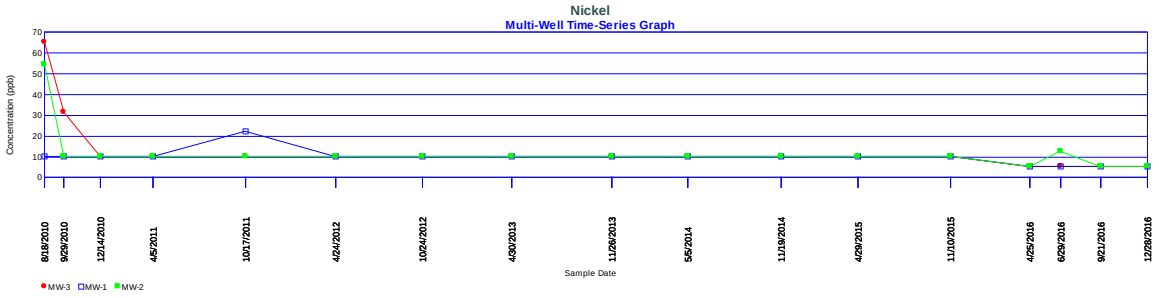

Cobalt
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

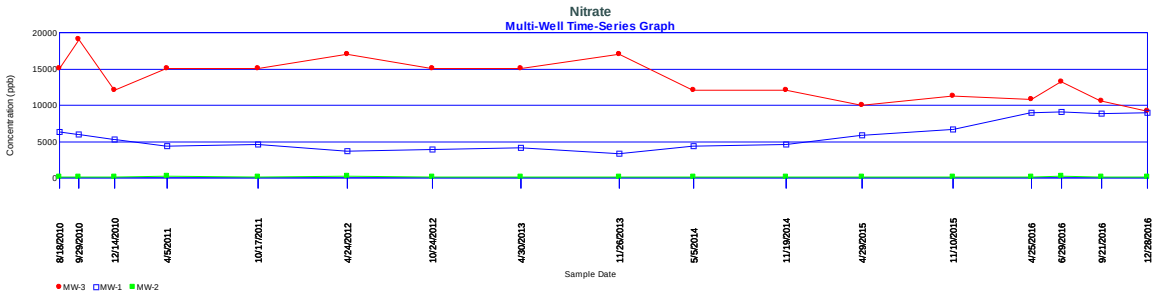

Copper
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

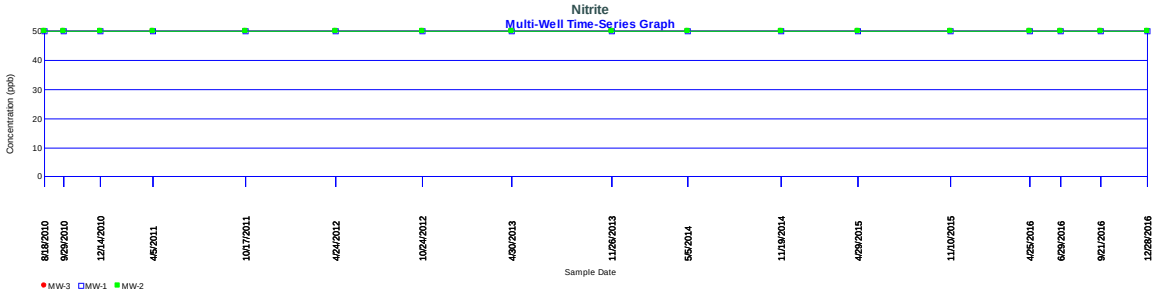

Lead
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

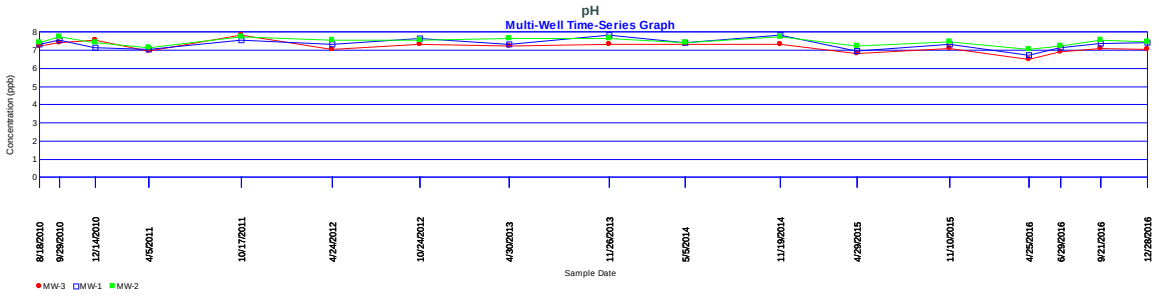

Magnesium
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

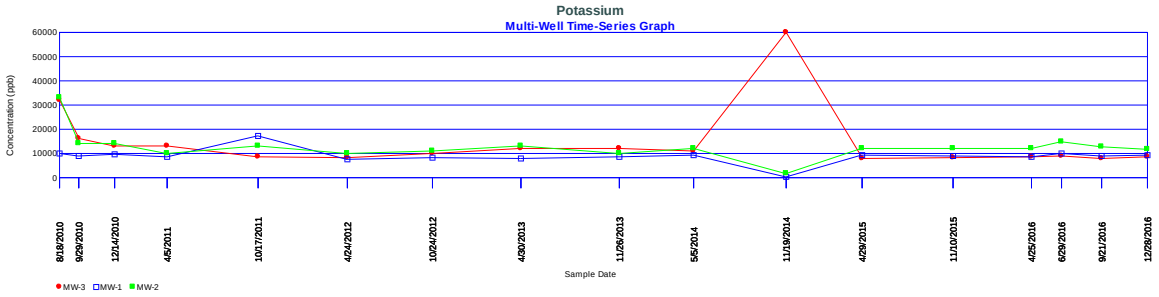

Mercury
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2


Nickel
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

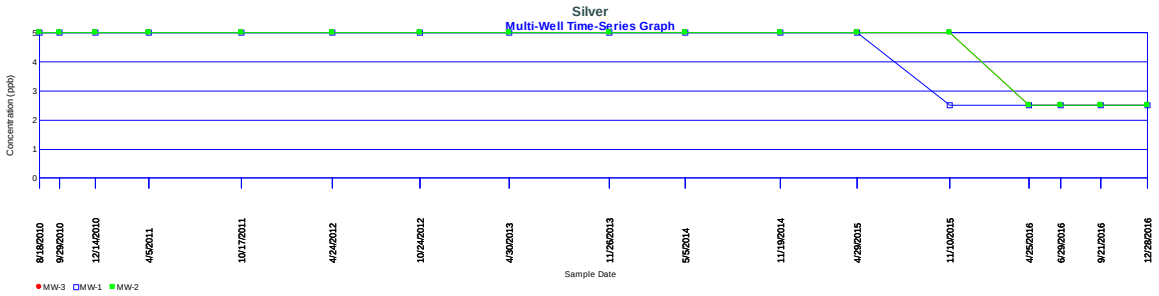

Nitrate
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

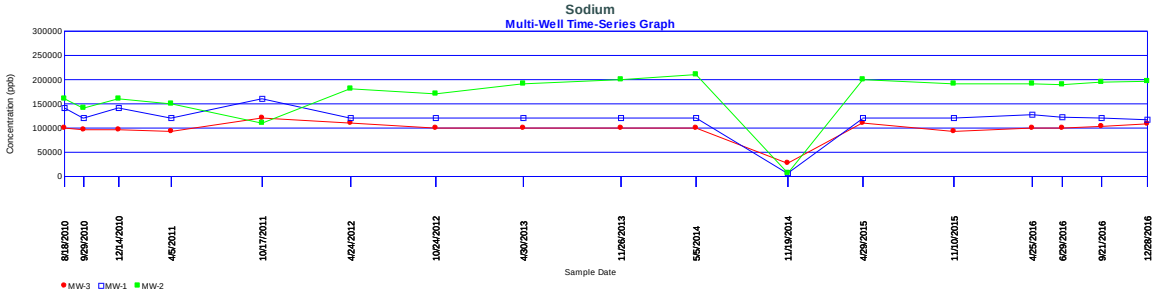

Nitrite
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

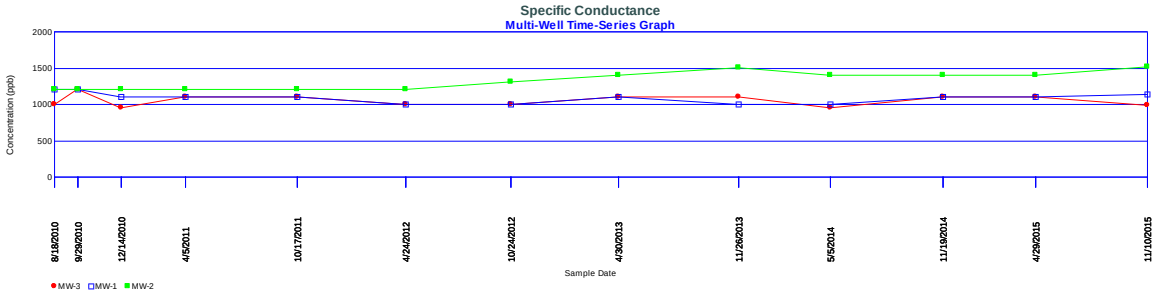

pH
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

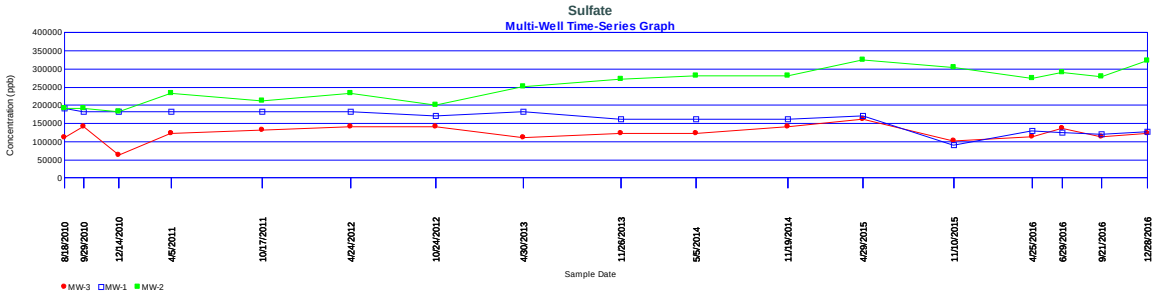

Potassium
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

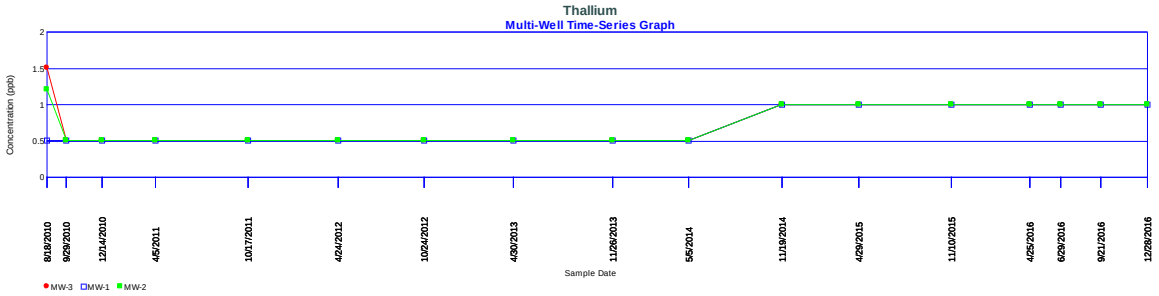

Selenium
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

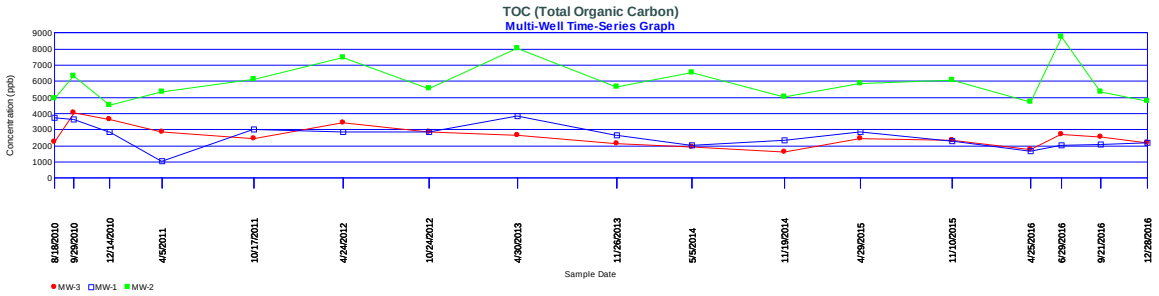

Silver
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

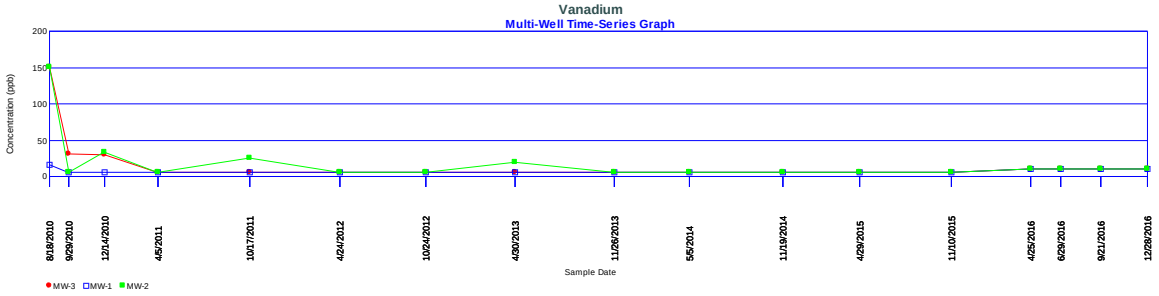

Sodium
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2

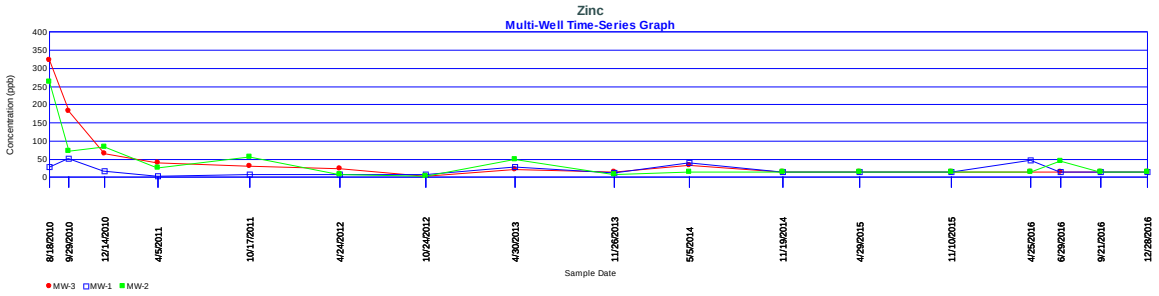

Specific Conductance
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2


Sulfate
Multi-Well Time-Series Graph
Concentration (ppb)
Sample Date
MW-3 MW-1 MW-2


Thallium
Multi-Well Time-Series Graph
Concentration (ppb)
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
9/29/2010
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
Sample Date
MW-3 MW-1 MW-2


Vanadium
Multi-Well Time-Series Graph
Concentration (ppb)
200
150
100
50
0
8/18/2010
9/29/2010
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
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
9/29/2010
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
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, 2017

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:	Patrick Broda
Phone:	(303) 808-2500
E-mail:	mark@molenandassociates.com
Reporting Period:	**Calendar Year 2016**

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;
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**

Paper		Total:	0	0	0
	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:	21305	21305	0
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:	500	500	0
	Concrete and Asphalt	500	500	500	
	Write in…				
	Write in…				
	Write in…				

If you have questions regarding this form, please contact Wolf Kray at (303) 692-3337.

Select from drop list
Material Recovery Facility 8.3
End User 8.4
Municipality
Recyclable Material Generator 8.2
Industrial Recycling 8.5
Beneficial Use 8.6

Location Recyclables are Sent Off-Site to: (Facility Name, State)	Unit of Measure

	Cubic Yards
List under specific commodity types for destinations unless sent as single stream	

Sold by Aggregate Industries custoomers	500

Tons
Pounds
Cubic Yards
Gallons
Individual Units