2018 ANNUAL MONITORING REPORT

Groundwater Quality Monitoring Program
Oil and Gas Well Sites
Longmont, Colorado

October 19, 2018
Terracon Project No. 22187009

Prepared for:
City of Longmont
Longmont, Colorado

Prepared by:
Terracon Consultants, Inc.
Longmont, Colorado

October 19, 2018

City of Longmont
385 Kimbark Street
Longmont, Colorado 80501

Attn: Mr. Jason Elkins
P: (303) 651-8310
E: Jason.Elkins@longmontcolorado.gov

Re: 2018 Annual Monitoring Report
Groundwater Quality Monitoring Program
Oil and Gas Well Sites
Longmont, Colorado
Terracon Project No. 22187009

Dear Mr. Elkins:

Terracon Consultants, Inc. (Terracon) is pleased to submit our report of the 2018 Annual Groundwater Quality Monitoring Program activities performed at seven active oil and gas (O&G) well sites, two plugged and abandoned O&G well sites, and one associated tank battery site located in the City of Longmont, Colorado between County Road 1 and County Road 7. The report presents data from recent field activities that included the collection of groundwater samples for laboratory analysis. Terracon conducted the Investigation in general accordance with our proposal (P22187009), dated April 4, 2018.

Terracon appreciates this opportunity to provide environmental consulting services to The City of Longmont. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.

Michael J. Skridulis
Environmental Department Manager

For
Kevin R. Saylor, P.E.
Senior Engineer

Terracon

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EXECUTIVE SUMMARY

In 2013, Terracon installed and/or sampled groundwater monitoring wells at the active oil and gas (O&G) wells located within the City of Longmont (the City). The results of these activities are described in the First and Third Quarter 2013 Monitoring Reports (May 31, 2013 and December 31, 2013, respectively). Terracon has continued to execute sampling activities for the City of Longmont Groundwater Quality Monitoring Program and the results of these activities are described in the subsequent 2014, 2015, 2016, and 2017 monitoring reports.

The Client also retained Terracon to perform additional investigation and groundwater monitoring well replacement activities at the Rider #1 well site in 2018 (Details in Terracon Project No. 22177021). The Rider #1 replacement monitoring well sampling data is included in this report.

This groundwater quality sampling event was performed in accordance with the scope of services outlined in Terracon Proposal No. P22187009, dated April 4, 2018. A total of 36 monitoring wells were sampled on June 27-29, 2018 to evaluate potential impacts to groundwater from current or historical oil and gas (O&G) extraction and production (E&P) operations at the sites. Groundwater samples were analyzed in accordance with the procedures outlined in Section 3 of this report.

A summary of our findings, conclusions, and recommendations is provided below. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

Findings and Conclusions

Groundwater was encountered from 2.94 feet below top of casing (BTOC) as observed in monitoring well S31-MW01 to 14.67 feet BTOC as observed in E6T-MW01. Groundwater elevations were observed ranging from 4,850.84 feet above mean sea level (amsl) in monitoring well DM1-MW02 to 4,954.43 feet amsl in monitoring well S31-MW06. Depth to groundwater and groundwater elevation data are summarized in Table 1.

Although various volatile organic compound (VOC) constituents were reported at concentrations above laboratory detection limits in groundwater samples collected during this sampling event, concentrations were not reported above their respective regulation action levels.

Dissolved methane in groundwater may be an indication of a release at an O&G production well site. Neither the COGCC nor the CDPHE have developed standards for methane in groundwater. The COGCC has developed standards for source water (e.g., water wells) in the Greater Wattenberg Area (GWA). This project is located within the GWA. Water wells that are registered with Colorado Division of Water Resources (DWR), and include:

- household,

- domestic,
- livestock,
- irrigation,
- municipal/public,
- commercial,
- permitted or adjudicated springs, and
- monitoring wells installed for the purpose of complying with groundwater baseline sampling and monitoring requirements.

Section 318A.f.(8) of the COGCC Rules and Regulations for baseline sampling of water wells in the GWA states that concentrations of methane greater than 1.0 mg/L require a gas compositional and stable isotope analysis of the methane to determine the source of the methane (e.g. thermogenic, biogenic or a mixture of the two). Currently, the reported methane concentrations do not require additional investigation of groundwater.

Several inorganic parameters (nitrogen, sulfates, and chloride) were reported above Colorado Department of Public Health and Environment (CDPHE) and Colorado Oil and Gas Conservation Commission (COGCC) Groundwater Standards. However, laboratory analytical results have remained consistent with former sampling events and results may be indicative of background concentrations based on former analytical data and lack of production of produced water at currently active sites.

In general, increased chloride and sulfate concentrations correspond to increases in specific conductance and turbidity due to slow recharge of the monitoring well and the presence of clay in the formation. Clay is a smaller particle and passes through the monitoring well filter pack, and inorganics can attach to the clay particles.

Recommendations

The objective of the investigation was to evaluate the presence of constituents of concern in the groundwater above relevant laboratory detection limits and/or regulatory limits associated with historical O&G operations at the sites.

Terracon recommends the continued monitoring of all sites currently enrolled in the City of Longmont Annual Groundwater Quality Monitoring Event on an annual basis. The continued monitoring of the aforementioned sites will work to augment the existing data set. This information will be used to further assess the extent groundwater impacts present, track trends in the groundwater quality, and to evaluate if sites shall be added to or removed from the annual sampling list.

1.0 SITE DESCRIPTION

This project consists of sampling monitoring wells associated with seven active oil and gas (O&G) well sites, two plugged and abandoned O&G well sites, and one associated tank battery located within the City of Longmont, Colorado (the City) between County Road 1 and County Road 7 (Exhibit 1). The 2018 monitoring event analyzed potential impacts to groundwater, in accordance with Terracon Proposal No. P22187009, at the following sites:

- Domenico #1: three monitoring wells;
- Evans #6 Tank Battery: three monitoring wells;
- Evans #6 Wellhead: three monitoring wells;
- Stamp 31-2C: five monitoring wells;
- Rider #1: six monitoring wells;
- City of Longmont #1: two monitoring wells;
- Powell #1: three monitoring wells;
- Serafini Gas Unit: five monitoring wells;
- Sherwood #1: three monitoring well; and,
- Sherwood #2: three monitoring wells.

The 2018 monitoring event well site locations are shown on Exhibit 1.

2.0 SCOPE OF SERVICES

The 2018 annual groundwater quality monitoring services described below were performed on June 27-29, 2018, as a modification to the sampling strategy outlined in the Sampling and Analysis Plan (SAP) prepared and issued by Terracon on February 1, 2013. Based on the initial groundwater sampling results reported in 2013, the sampling frequency and laboratory analyte list have been modified.

The monitoring wells at the following well sites were sampled during this annual event:

- Domenico #1: DM1-MW01, DM1-MW02, and DM1-MW03;
- Evans #6 Wellhead: E6W-MW01, E6W-MW02, and E6W-MW03;
- Evans #6 Tank Battery: E6T-MW01, E6T-MW-02, and E6T-MW03;
- Stamp 31-2C: S31-MW01, S31-MW03, S31-MW04, S31-MW05, and S31-MW06;
- Rider #1: RD1-MW01R, RD1-MW02R, RD1-MW03R, RD1-MW04R, RD1-MW05R, and RD1-MW06R;
- City of Longmont #1: CL1-MW02 and CL1-MW03;
- Powell #1: PL1-MW01, PL1-MW02, and PL1-MW03;
- Serafini Gas Unit: SGU-MW01, SGU-MW02, SGU-MW03, SGU-MW04, and SGU-MW05;

- Sherwood #1: SH1-MW01, SH1-MW02, and SH1-MW03; and,
- Sherwood #2: SH2-MW01, SH2-MW02, and SH2-MW03.

The Longmont 8-10K site was excluded from the 2018 annual sampling event. Terracon reinstalled and sampled three replacement monitoring wells in November 2017 (Terracon Project No. 22177046), therefore the site will be added to this program in 2019.

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, express or implied, regarding the findings, conclusions, or recommendations. Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These Investigation services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal and were not intended to be in strict conformance with ASTM E1903-11.

2.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this sampling event. Subsurface conditions may vary from those encountered at specific wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

This report has been prepared for the exclusive use of the City of Longmont, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of the City of Longmont and Terracon. Any unauthorized distribution or reuse is at the City of Longmont's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, Investigation report, and Terracon's Master Services Agreement (MSA) with the City of Longmont. The limitation of liability defined in the terms and conditions of the MSA is the aggregate limit of Terracon's liability to the City of Longmont and all relying parties unless otherwise agreed in writing.

3.0 FIELD INVESTIGATION

3.1 Safety

Terracon is committed to the safety of all its employees. As such, and in accordance with our Incident and Injury Free® safety goals, Terracon conducted the fieldwork under a site-specific health and safety plan. The plan identified site-specific job hazards and proper pre-task planning procedures. Work was performed using Occupational Safety & Health Administration (OSHA) Level D work attire consisting of hard hats, high-visibility attire, safety glasses, protective gloves, and protective boots.

3.2 Sampling and Analytical Program Summary

Terracon sampled a total of 36 groundwater monitoring wells for the analytical suite listed in the table below.

Groundwater Sample Constituents

Parameters	Analytical Method
Volatile Organic Compounds (VOCs)	EPA Method 8260
Dissolved Gases: Methane, Ethane and Ethylene	RSK 175
Major Cations – Dissolved (Calcium, Magnesium, Sodium, Iron, and Potassium)	EPA Method 6010B
Nitrate and Nitrite	EPA Method 9056
Bromide	EPA Method 300.0
Chloride	EPA Method 300.0
Sulfate	EPA Method 300.0
Alkalinity	SM 2320B
Strontium	EPA Method 6020

EPA = Environmental Protection Agency; SW-846 analytical methods

Additionally, temperature, pH, specific conductance, dissolved oxygen and oxygen reducing potential measurements were collected in the field during groundwater sampling. Specific conductance and pH measurements are summarized on Table 2 in Appendix A of this report.

3.3 Groundwater Sampling

Terracon used hand bailing sampling techniques with a disposable bailer to purge and obtain a representative groundwater sample from the monitoring wells. The monitoring wells were sampled in accordance with February 1, 2013 SAP. After groundwater field parameters had stabilized, a groundwater sample was collected from each of the monitoring wells. The groundwater samples were placed in laboratory provided, pre-cleaned containers and stored in a cooler with ice during delivery to the laboratory. The samples were submitted under chain-of-custody protocol and analyzed for the parameters summarized in Section 3.2 on a standard turn-around time and

according to the appropriate United States Environmental Protection Agency (USEPA) analytical methods.

The groundwater sample naming convention used is as follows:

- [Site Abbreviation]-[Well Designation].
- Example: SH2-MW01 is the groundwater sample collected from Sherwood #2 well site, monitoring well MW01.

The groundwater samples were submitted to Pace Analytical (Pace) in Mount Juliet, Tennessee. Pace performed Quality Analysis/Quality Control (QA/QC) during the analysis process of the groundwater samples. The QA/QC process involved completing a method blank, laboratory control sample, matrix spike, matrix spike duplicate, and a sample duplicate to test the accuracy and calibration of the laboratory equipment and processes.

4.0 FIELD INVESTIGATION RESULTS

4.1 Hydrogeology

Groundwater was encountered from 2.94 feet below top of casing (BTOC) as observed in monitoring well S31-MW01 to 14.67 feet BTOC as observed in E6T-MW01. Groundwater elevations were observed ranging from 4,850.84 feet above mean sea level (amsl) in monitoring well DM1-MW02 to 4,954.43 feet amsl in monitoring well S31-MW06. Depth to groundwater and groundwater elevation data are summarized in Table 1.

Depth to groundwater and groundwater elevation data were used to generate potentiometric surface maps and estimated groundwater flow direction. Figures 2 through 4 illustrate general groundwater flow directions based on the groundwater elevations as measured in June 2018 (Note: Figure 2 includes all the well sites except Stamp 31-2C and Rider #1, which are illustrated on Figures 3 and 4, respectively). Monitoring well elevation data for the Rider #1 Well Site has been measured and recorded as “relative” elevation data for purposes of illustrating a potentiometric surface figure. The monitoring wells at the Rider #1 Site were replaced in the 4th Quarter of 2017. Information concerning the well replacements can be found in the Rider #1 Limited Soil, Groundwater, and Soil Gas Investigation Report, December 18, 2017 (Terracon Project: 22177021).

As depicted on the potentiometric surface maps groundwater beneath most of the well sites, in general, flows towards the St. Vrain Creek. The well site groundwater flow directions are as follows:

- Sherwood #1: northeast towards the St. Vrain Creek;

- Sherwood #2: northeast towards the St. Vrain Creek;
- City of Longmont #1: northeast towards the St. Vrain Creek;
- Serafini Gas Unit: northeast towards the St. Vrain Creek;
- Powell #1: northeast towards the St. Vrain Creek;
- Evans #6 Wellhead: east-southeast towards the St. Vrain Creek;
- Evans #6 Tank Battery: east-southeast towards the St. Vrain and Boulder Creeks;
- Domenico #1: north-northwest towards the St. Vrain Creek;
- Stamp 31-2C: northeast towards Union Reservoir; and
- Rider #1: southeast towards Spring Gulch.

5.0 ANALYTICAL RESULTS

The laboratory analytical reports and chain-of-custody records are included in Appendix B. The groundwater analytical results are summarized in Table 2. The following sections summarize the results of the analytical testing.

Laboratory analytical results for the groundwater samples were compared to the groundwater standard applicable to O&G well sites, COGCC Table 910-1 standards (May 1, 2018). The Colorado Department of Public Health and Environment's (CDPHE) Regulation 41 Groundwater Quality Standards, December 30, 2016 (GWQS) are included for reference only as the groundwater samples were not collected from a drinking water source. A summary of constituent concentrations exceeding these standards in the groundwater samples is included in Table 2.

The groundwater analytical results for detected concentrations are discussed in the following sections. Groundwater analytical data and corresponding action levels are summarized in Table 2 (Appendix A).

5.1 Organic Compounds

VOC compounds and dissolved methane and ethane were detected above their respective laboratory reporting limits at the following sites. Concentrations shown below were rounded to the nearest 0.001 milligrams per liter (mg/L). Dissolved ethene was not detected above the laboratory reporting limit in the samples collected.

5.1.1 Serafini Gas Unit (SGU)

- Methane was reported in sample SGU-MW03 at a concentration of 0.026 mg/L.

5.1.2 Powell #1 Wellhead (PL1)

- Methane was reported in samples PL1-MW02 and PL1-MW03R at concentrations of 0.036 mg/L and 0.1 mg/L, respectively.

5.1.3 Evans #6 Tank Battery (E6T)

- Methane was reported in sample E6T-MW03 at a concentration of 0.013 mg/L.

5.1.4 Domenico #1 Wellsite (DM1)

- Methane was reported in samples DM1-MW01 and DM1-MW02 at concentrations of 0.051 mg/L and 0.068 mg/L, respectively.

5.1.5 Stamp 31-2C Wellsite (S31)

- Benzene was reported in sample S31-MW03 at a concentration of 0.002 mg/L.
- Methane was reported in samples S31-MW01 and S31-MW03 at concentrations of 0.134 mg/L and 0.319 mg/L, respectively.
- Ethane was reported in sample S31-MW03 at a concentration of 0.19 mg/L.

5.1.6 Rider #1 Well Site (RD1)

- Ethylbenzene was reported in samples RD1-MW01R and RD1-MW03R at concentrations of 0.005 mg/L and 0.003 mg/L, respectively.
- Total xylenes were reported in samples RD1-MW01R and RD1-MW03R at concentrations of 0.042 mg/L and 0.007 mg/L, respectively.
- Methane was reported in samples RD1-MW01R, RD1-MW03R, and RD1-MW04R at concentrations of 0.128 mg/L, 0.131, and 0.062 mg/L, respectively.
- Ethane was reported in sample S31-MW03 at a concentration of 0.19 mg/L.

Section 318A.f.(8) of the COGCC Rules and Regulations for baseline sampling of water wells in the GWA states that concentrations of methane greater than 1.0 mg/L require a gas compositional and stable isotope analysis of the methane to determine the source of the methane (e.g. thermogenic, biogenic or a mixture of the two). Currently, the reported methane concentrations do not require additional investigation of groundwater.

5.2 Inorganics in Groundwater

Inorganic cations and anions can be secondary indicators of well site releases associated with produced water. Neither CDPHE nor the COGCC have developed groundwater standards for the following indicator parameters: dissolved calcium, dissolved magnesium, dissolved potassium, dissolved sodium, strontium, alkalinity species, or bromide.

The COGCC has defined the groundwater standard exceedance concentrations for chloride and sulfate to be a regional background concentration with a multiplier of 1.25. Terracon utilized 2018 analytical data for chloride and sulfate from the sites sampled during the 2018 sampling event to calculate respective regional background concentrations.

Terracon used the USEPA's statistical software (ProUCL), Version 5.1, to determine if the dataset used to calculate the mean was statistically normal. The ProUCL software can be downloaded at https://www.epa.gov/land-research/proucl-software. After eliminating monitoring well analytical data that was not representative of normal conditions, the data was inputted into ProUCL. Analysis was conducted to evaluate if there are additional outlying data points and if the data set adhered to a normal distribution. Several sulfate analytical results were removed from the data set based on the results of the initial outlier test. The outlier test does state that there is a potential outlier. However, based on a 1% and 5% significance level, additional outliers were not identified; therefore no additional analytical results were removed from the data set. A normal Q-Q plot was then generated to evaluate if the data set for chloride and sulfate adhered to a normal distribution. The normal Q-Q plot illustrates that both data sets are normal. The mean and standard deviation were also calculated using ProUCL.

The COGCC cleanup goal was calculated by multiplying the mean (from background well data) by 1.25 per Table 910-1 from the COGCC rules. A summary of pertinent statistical results and the calculated COGCC cleanup levels for chloride and sulfate are listed below:

Statistical Analysis	Chloride (mg/L)	Sulfate (mg/L)
Mean (from background well data)	60.97	606.1
COGCC cleanup goal (1.25 x background)	76.21	757.63
Standard Deviation	22.52	243.3
Sample Size	26	14

Elevated concentrations of nitrogen, sulfates, and chlorides above their respective laboratory analytical detection limits were reported in groundwater samples collected from monitoring wells at each site sampled during this monitoring event. Please refer to the groundwater analytical results in Table 2 included in this report for a detailed overview of regulatory exceedances. A brief summary of the analytical results are included below.

Nitrogen concentrations were reported in groundwater samples collected from monitoring wells at the Sherwood #1 and Serafini Gas Unit sites above COGCC background levels. Sulfate concentrations were reported in groundwater samples collected from monitoring wells at the Sherwood #1, Sherwood #2, Serafini Gas Unit, Powell #1, Evans #6 Tank Battery, Evans #6 Wellhead, Domenico #1, Stamp 31-2C, and Rider #1 sites above calculated COGCC background

levels. Chloride concentrations were reported in groundwater samples collected from monitoring wells at the Evans #6 Tank Battery, Domenico #1, and Stamp 31-2C sites calculated COGCC background levels.

APPENDIX A – EXHIBITS

Exhibit 1 – Wellsite Locations Map

Exhibit 2 – Potentiometric Surface Map: Various Well Sites

Exhibit 3 – Potentiometric Surface Map: Stamp 31-2C

Exhibit 4 – Potentiometric Surface Map: Rider #1

Table 1 – Groundwater Elevation Data

Table 2 – Groundwater Analytical Results

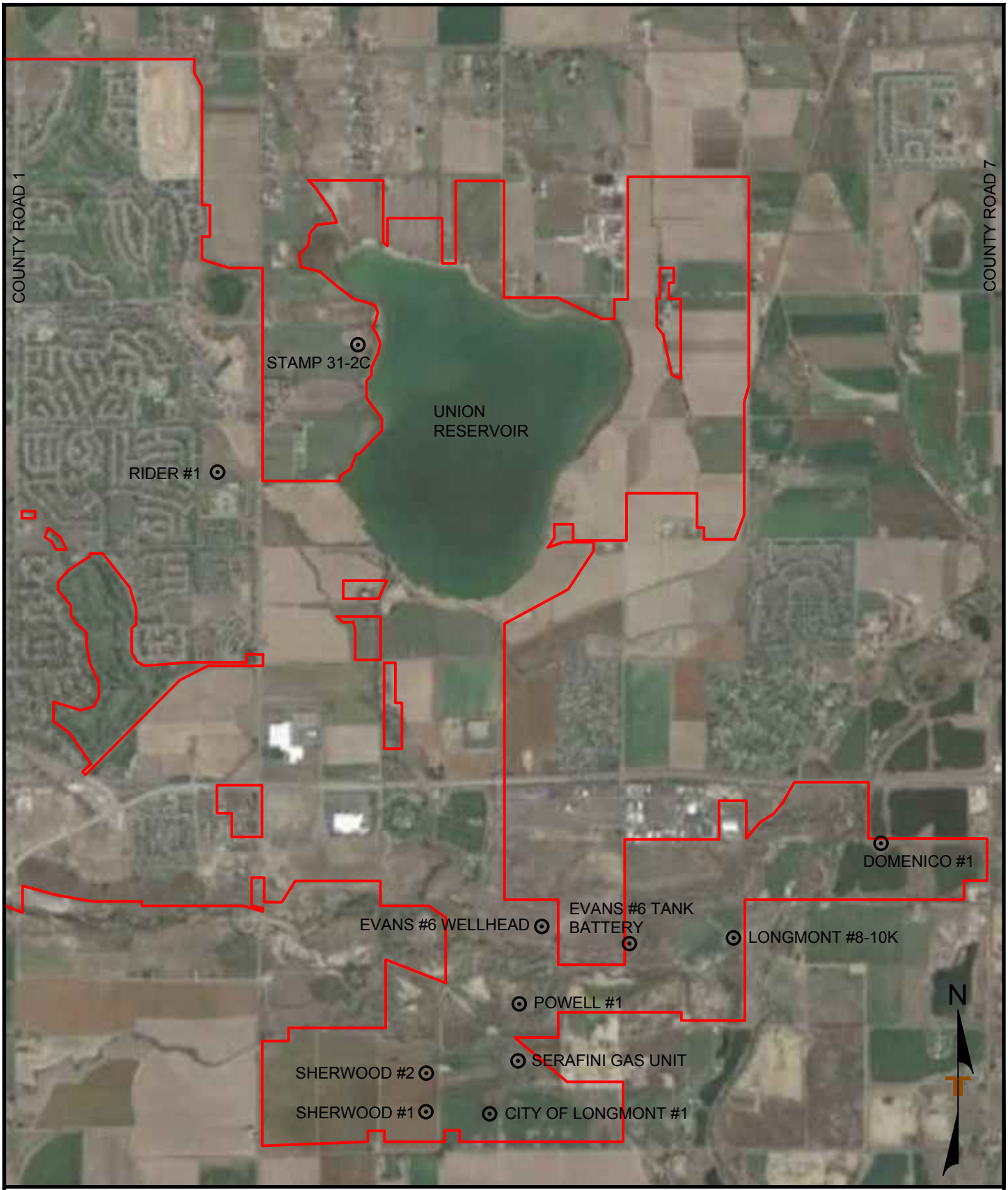


DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

0 1750' 3500' 7000'

Project Mngr:	MJS
Drawn By:	CPD/BMW
Checked By:	MJS
Approved By:	DAB

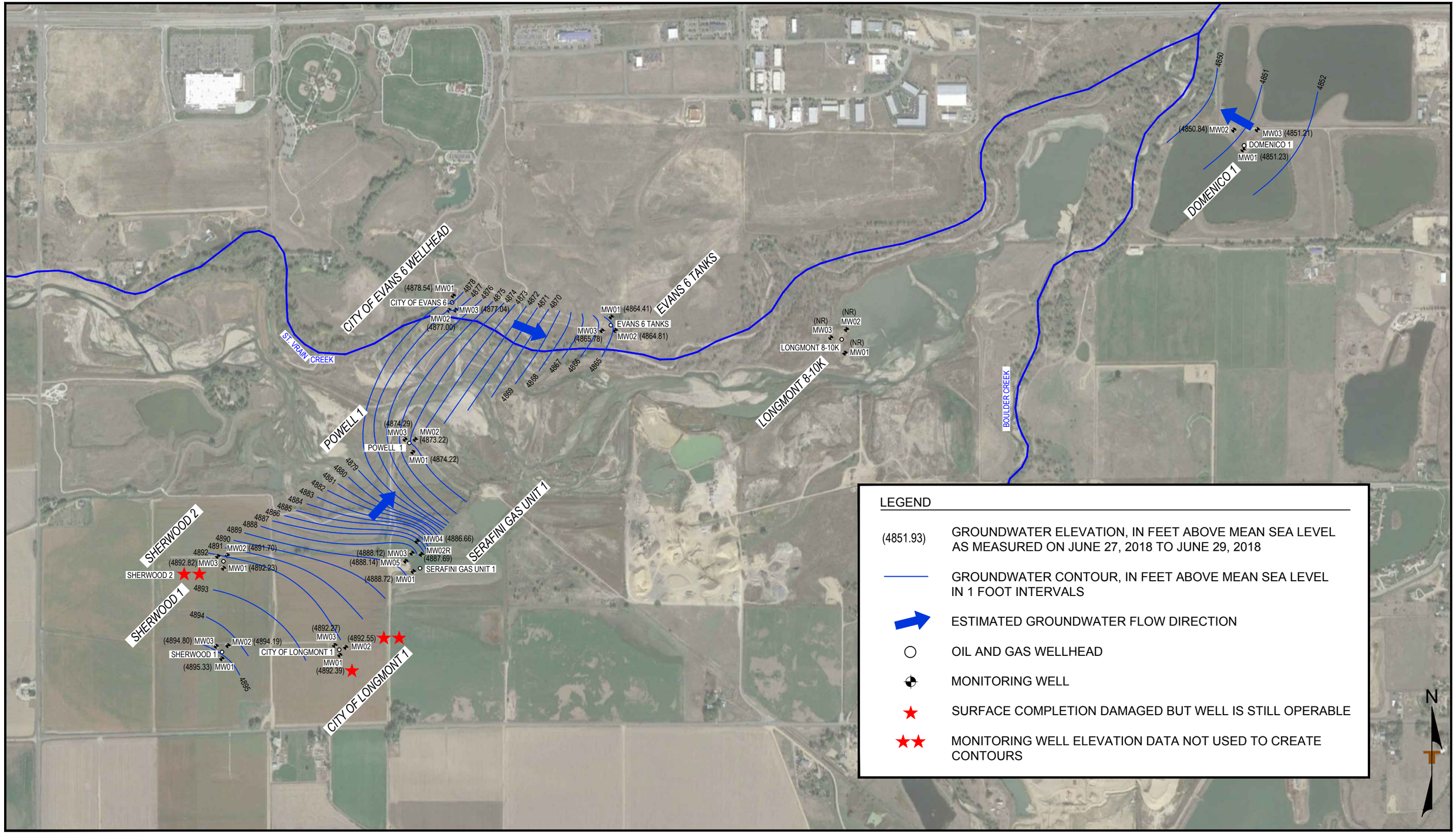
Project No.	22187009
Scale:	AS-SHOWN
File No.	22187009.DWG
Date:	09.21.2018

Terracon
Consulting Engineers and Scientists
1831 LEFTHAND CIRCLE, SUITE C LONGMONT, CO 80501
PH. (303) 776-3921 FAX. (303) 776-4041

WELL SITE LOCATIONS MAP

GROUNDWATER QUALITY MONITORING
CITY OF LONGMONT
LONGMONT, COLORADO

EXHIBIT No. 1



LEGEND

(4851.93)	GROUNDWATER ELEVATION, IN FEET ABOVE MEAN SEA LEVEL AS MEASURED ON JUNE 27, 2018 TO JUNE 29, 2018
	GROUNDWATER CONTOUR, IN FEET ABOVE MEAN SEA LEVEL IN 1 FOOT INTERVALS
	ESTIMATED GROUNDWATER FLOW DIRECTION
	OIL AND GAS WELLHEAD
	MONITORING WELL
★	SURFACE COMPLETION DAMAGED BUT WELL IS STILL OPERABLE
★★	MONITORING WELL ELEVATION DATA NOT USED TO CREATE CONTOURS

0 500' 1000' 2000'

DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Project Mngr:	MJS
Drawn By:	CPD/BMW
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Approved By:	DAB
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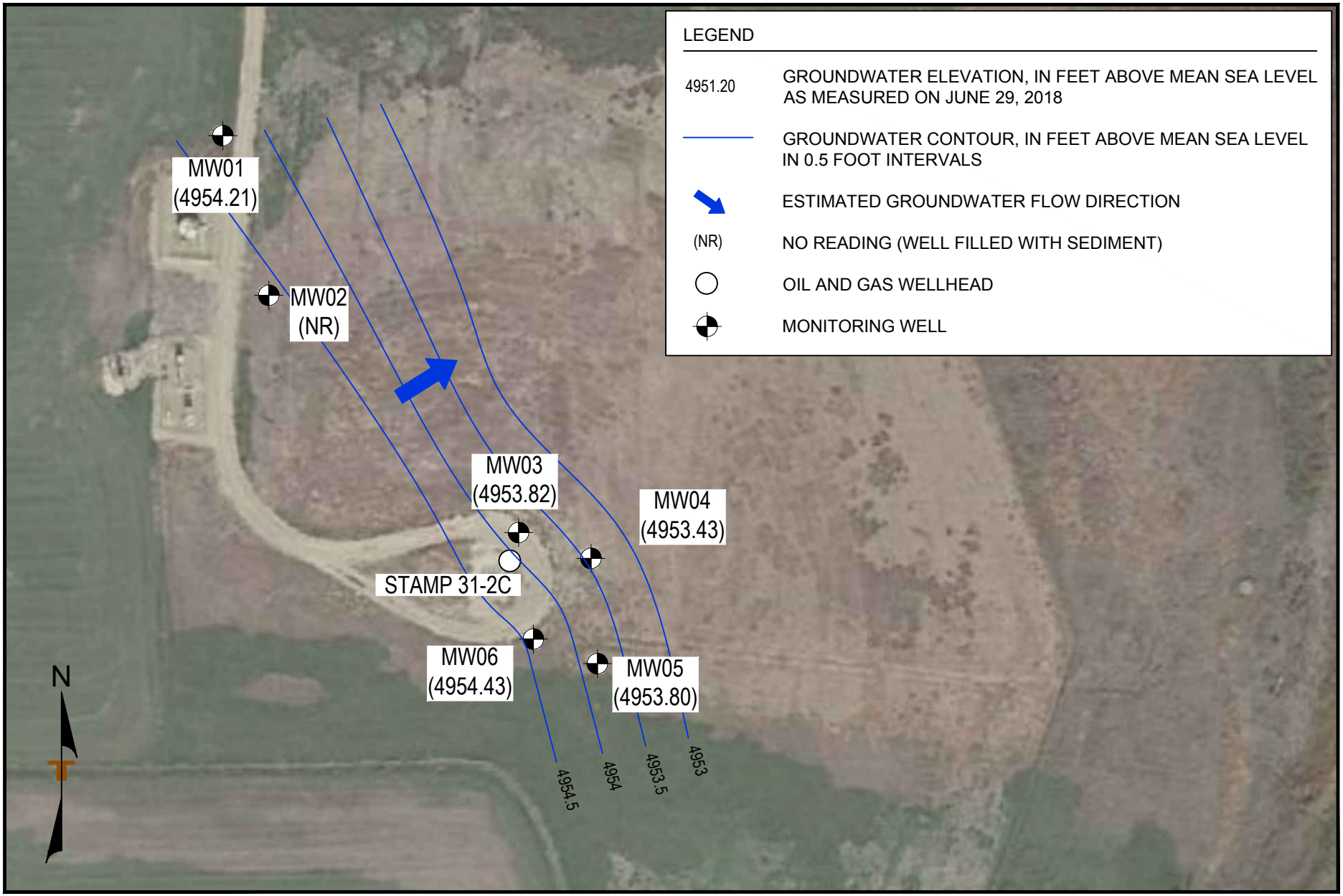
POTENTIOMETRIC SURFACE MAP - VARIOUS WELL SITES

GROUNDWATER QUALITY MONITORING
CITY OF LONGMONT
LONGMONT, COLORADO

EXHIBIT No. 2



0 40' 80' 160'

DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Project Mngr: MJS	Project No. 22187009
Drawn By: CPD/BMW	Scale: AS-SHOWN
Checked By: MJS	File No. 22177009.DWG
Approved By: DAB	Date: 09.21.2018

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POTENTIOMETRIC SURFACE MAP - STAMP 31-2C

GROUNDWATER QUALITY MONITORING
CITY OF LONGMONT
LONGMONT, COLORADO

EXHIBIT No. 3

0 15' 30' 60'

DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Project Mngr:	MJS
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Checked By:	MJS
Approved By:	DAB
Project No.	22187009
Scale:	AS-SHOWN
File No.	22187009.DWG
Date:	09.21.2018

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POTENTIOMETRIC SURFACE MAP - RIDER #1

GROUNDWATER QUALITY MONITORING
CITY OF LONGMONT
LONGMONT, COLORADO

EXHIBIT No. 4

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22187009

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
Sherwood #1 Wellhead					
SH1-MW01	4902.75	3/18/2013	13.96	8.49	4894.26
		10/23/2013		6.70	4896.05
		7/28/2014		NR	
		3/30/2015		8.11	4894.64
		6/21/2016		NR	
		5/23/2017		NR	
		6/27/2018		7.42	4895.33
SH1-MW02	4900.99	3/18/2013	14.35	7.41	4893.58
		10/23/2013		6.30	4894.69
		7/28/2014		NR	
		3/30/2015		7.23	4893.76
		6/21/2016		6.87	4894.12
		5/23/2017		6.88	4894.11
		6/27/2018		6.80	4894.19
SH1-MW03	4901.80	3/18/2013	14.06	7.64	4894.16
		10/23/2013		6.33	4895.47
		7/28/2014		NR	
		3/30/2015		7.35	4894.45
		6/21/2016		NR	
		5/23/2017		NR	
		6/27/2018		7.00	4894.80
Sherwood #2 Wellhead					
SH2-MW01	4896.76	3/18/2013	10.80	5.20	4891.56
		7/28/2014		NR	
		3/30/2015		4.59	4892.17
		6/21/2016		5.04	4891.72
		5/23/2017		4.33	4892.43
		6/27/2018		4.53	4892.23
SH2-MW02	4896.15	3/18/2013	9.71	5.71	4890.44
		7/28/2014		NR	
		3/30/2015		4.96	4891.19
		6/21/2016		4.95	4891.20
		5/23/2017		4.34	4891.81
		6/27/2018		4.45	4891.70
SH2-MW03	4896.32	3/18/2013	12.37	5.11	4891.21
		7/28/2014		NR	
		3/30/2015		4.59	4891.73
		6/21/2016		4.61	4891.71
		5/23/2017		3.80	4892.52
		6/27/2018		3.50	4892.82
City of Longmont #1 Wellhead					
CL1-MW01	4896.99	3/20/2013	13.34	6.42	4890.57
		7/28/2014		NR	
		3/30/2015		6.41	4890.58
		6/21/2016		3.87	4893.12
		5/23/2017		NR	
		6/27/2018		4.60	4892.39
CL1-MW02	4896.04	3/20/2013	12.86	5.75	4890.29
		7/28/2014		NR	
		3/30/2015		5.79	4890.25
		6/22/2016		1.80	4894.24
		5/23/2017		5.35	4890.69
		6/27/2018		3.49	4892.55
CL1-MW03	4896.33	3/20/2013	13.10	5.86	4890.47
		7/28/2014		NR	
		3/30/2015		5.86	4890.47
		6/21/2016		3.22	4893.11
		5/23/2017		5.34	4890.99
		6/27/2018		4.06	4892.27

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22187009

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
Serafini Gas Unit					
SGU-MW01	4892.37	3/20/2013	12.90	5.52	4886.85
		10/22/2013		3.49	4888.88
		3/30/2015		5.86	4886.51
		6/21/2016		3.68	4888.69
		5/23/2017		5.70	4886.67
		6/28/2018		3.65	4888.72
SGU-MW02	4891.42	3/21/2013	8.10	5.17	4886.25
		10/22/2013		3.45	4887.97
		3/30/2015		5.07	4886.35
		6/21/2016		4.24	4887.18
		5/23/2017		5.54	4885.88
		6/28/2018		3.65	4887.77
SGU-MW03	4891.72	3/21/2013	12.06	5.59	4886.13
		10/22/2013		3.59	4888.13
		3/30/2015		5.85	4885.87
		6/21/2016		3.52	4888.20
		5/23/2017		5.68	4886.04
		6/28/2018		3.60	4888.12
SGU-MW04	4889.76	6/28/2018	9.41	3.10	4886.66
SGU-MW05	4891.69	6/28/2018	10.50	3.55	4888.14
Powell #1 Wellhead					
PL1-MW01	4885.90	3/20/2013	17.79	11.91	4873.99
		7/28/2014		NR	
		3/31/2015		12.16	4873.74
		6/22/2016		10.64	4875.26
		5/23/2017		11.40	4874.50
		6/27/2018		11.68	4874.22
PL1-MW02	4885.58	3/19/2013	19.65	12.00	4873.58
		7/28/2014		NR	
		3/31/2015		12.52	4873.06
		6/22/2016		11.64	4873.94
		5/23/2017		11.15	4874.43
		6/27/2018		12.36	4873.22
PL1-MW03R	4887.26	3/19/2013	18.06	13.04	4874.22
		7/28/2014		NR	
		3/31/2015		Well Destroyed	
		6/22/2016		Well Destroyed	
		5/23/2017		Well Destroyed	
		6/27/2018		12.97	4874.29
Evans #6 Wellhead					
E6W-MW01	4882.37	3/22/2013	9.33	4.50	4877.87
		10/23/2013		4.80	4877.57
		7/28/2014		4.85	4877.52
		3/31/2015		3.92	4878.45
		6/22/2016		4.24	4878.13
		5/25/2017		4.38	4877.99
		6/28/2018		3.83	4878.54
E6W-MW02	4882.45	3/22/2013	12.46	5.19	4877.26
		10/23/2013		6.50	4875.95
		7/28/2014		5.80	4876.65
		3/31/2015		5.14	4877.31
		6/22/2016		5.55	4876.90
		5/25/2017		5.60	4876.85
		6/28/2018		5.45	4877.00
E6W-MW03	4881.53	3/22/2013	10.89	4.41	4877.12
		10/23/2013		5.15	4876.38
		7/28/2014		4.95	4876.58
		3/31/2015		4.24	4877.29
		6/22/2016		4.74	4876.79
		5/25/2017		4.68	4876.85
		6/28/2018		4.49	4877.04

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22187009

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
Evans #6 Tank Battery					
E6T-MW01	4879.08	3/22/2013	16.95	8.01	4871.07
		10/23/2013		8.16	4870.92
		7/28/2014		8.93	4870.15
		3/31/2015		9.75	4869.33
		6/22/2016		9.43	4869.65
		5/25/2017		10.25	4868.83
		6/28/2018		14.67	4864.41
E6T-MW02	4877.68	3/22/2013	12.84	6.40	4871.28
		10/23/2013		7.47	4870.21
		7/28/2014		8.54	4869.14
		3/31/2015		8.84	4868.84
		6/22/2016		8.55	4869.13
		5/25/2017		7.92	4869.76
		6/28/2018		12.87	4864.81
E6T-MW03	4878.03	3/22/2013	12.30	6.61	4871.42
		10/23/2013		7.62	4870.41
		7/28/2014		8.44	4869.59
		3/31/2015		8.62	4869.41
		6/22/2016		8.75	4869.28
		5/25/2017		7.83	4870.20
		6/28/2018		12.25	4865.78
Longmont #8-10K Wellhead					
LG8-MW01	4868.80	3/22/2013	9.39	3.64	4865.16
		7/28/2014		NR	
		3/31/2015		Dry	
		6/22/2016		Dry	
		5/23/2017		NR	
LG8-MW02	4869.03	3/22/2013	9.74	4.32	4864.71
		7/28/2014		NR	
		3/31/2015		Dry	
		6/22/2016		Dry	
		5/23/2017		NR	
LG8-MW03	4869.11	3/22/2013	9.42	3.21	4865.90
		7/28/2014		NR	
		3/31/2015		Dry	
		6/22/2016		Dry	
		5/23/2017		NR	
Domenico #1 Wellsite					
DM1-MW01	4857.64	3/19/2013	11.44	7.41	4850.23
		7/29/2014		6.11	4851.53
		3/31/2015		6.33	4851.31
		6/24/2016		5.48	4852.16
		5/23/2017		5.52	4852.12
		6/29/2018		6.41	4851.23
DM1-MW02	4854.17	3/19/2013	12.70	3.97	4850.20
		7/29/2014		3.18	4850.99
		4/1/2015		3.45	4850.72
		6/24/2016		2.34	4851.83
		5/23/2017		2.35	4851.82
		6/29/2018		3.33	4850.84
DM1-MW03	4855.27	3/19/2013	12.82	5.15	4850.12
		7/29/2014		9.05	4846.22
		4/1/2015		3.99	4851.28
		6/24/2016		3.34	4851.93
		5/23/2017		3.50	4851.77
		6/29/2018		4.06	4851.21

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22187009

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
Stamp 31-2C Wellsite					
S31-MW01	4957.15	3/22/2013	14.13	6.00	4951.15
		10/24/2013		3.08	4954.07
		7/29/2014		2.92	4954.23
		4/1/2015		4.31	4952.84
		6/23/2016		2.78	4954.37
		5/22/2017		3.43	4953.72
		6/29/2018		2.94	4954.21
S31-MW02	4958.62	3/22/2013	14.22	8.55	4950.07
		10/24/2013		3.92	4954.70
		7/29/2014		Sediment[6]	
		4/1/2015			
		6/23/2016			
		5/22/2017			
S31-MW03	4958.27	10/24/2013	13.59	4.91	4953.36
		7/29/2014		5.24	4953.03
		4/1/2015		6.30	4951.97
		6/23/2016		4.92	4953.35
		5/22/2017		6.59	4951.68
		6/29/2018		4.45	4953.82
S31-MW04	4957.11	3/22/2013	14.90	9.22	4947.89
		10/24/2013		4.11	4953.00
		7/29/2014		4.41	4952.70
		4/1/2015		5.28	4951.83
		6/23/2016		4.10	4953.01
		5/22/2017		5.71	4951.40
		6/29/2018		3.68	4953.43
S31-MW05	4956.89	10/24/2013	14.97	4.11	4952.78
		7/29/2014		4.61	4952.28
		4/1/2015		5.12	4951.77
		6/23/2016		4.50	4952.39
		5/22/2017		5.69	4951.20
		6/29/2018		3.09	4953.80
S31-MW06	4957.57	10/24/2013	11.44	4.20	4953.37
		7/29/2014		4.62	4952.95
		4/1/2015		5.61	4951.96
		6/23/2016		4.37	4953.20
		5/22/2017		5.98	4951.59
		6/29/2018		3.14	4954.43
Rider #1 Wellsite					
RD1-MW01R	No Survey Information Available	7/30/2014	12.59	7.62	No Survey Information Available
		4/1/2015		8.52	
		6/23/2016		7.89	
		5/22/2017		8	
	102.98	6/29/2018		11.8	91.18
RD1-MW02R	No Survey Information Available	7/30/2014	12.73	7.72	No Survey Information Available
		4/1/2015		8.61	
		6/23/2016		8.05	
		5/22/2017		8.08	
	102.51	6/29/2018		11.17	91.34
RD1-MW03R	No Survey Information Available	7/30/2014	14.38	7.22	No Survey Information Available
		4/1/2015		8.18	
		6/23/2016		7.65	
		5/22/2017		NR	
	102.47	6/29/2018		11.43	91.04
RD1-MW04R	No Survey Information Available	7/30/2014	14.52	7.70	No Survey Information Available
		4/1/2015		8.58	
		6/23/2016		7.99	
		5/22/2017		8.1	
	102.39	6/29/2018		11.21	91.18
RD1-MW05R	No Survey Information Available	7/30/2014	14.65	7.95	No Survey Information Available
		4/1/2015		8.71	
		6/23/2016		8.12	
		5/22/2017		8.2	
	102.52	6/29/2018		11.01	91.51
RD1-MW06R	No Survey Information Available	7/30/2014	14.34	4.75	No Survey Information Available
		4/1/2015		5.91	
		6/23/2016		5.35	
		5/22/2017		5.31	
	101.77	6/29/2018		10.36	91.41

[1]All survey information is in Datum: NAD 83, Colorado North Zone NAVD 88
[2] Depth to groundwater is mesured in feet below top of casing
[3] Elevation in feet above mean sea level
[4/5] Wells were observed to be destroyed. Unable to measure depths to water.
[6] Filled with sediment. No water present.
NR - No Reading. Wells were not part of sampling program.

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22187009

			Volatile Organic Compounds					Other Organic Compounds			Inorganic Parameters																General Parameters	
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0	74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8		
COGCC Table 910-1[3]			0.005	0.7	--	0.56	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	76.21	--	--	--	757.63	--	--	--
					--	1[M]	10[M]																					
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	--	--	--	--	0.3	--	--	--	--	--	--	--	--	250	10	1	10	250	--	--	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		
Wellsite	Sample ID	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	Std. Units
Sherwood #1 Wellhead	SH1-MW01[1]	3/18/2013	ND	ND	--	ND	ND	ND	ND	ND	92	ND	110	2.57	118	5.91	ND	345	345	ND	37.5	8.30	ND	8.40	486	ND	1,590	7.60
		10/23/2013	ND	ND	--	ND	ND	ND	ND	ND	83	ND	107	1.63	110	4.56	ND	388	388	1.20	35.7	8.60	ND	8.60	415	ND	1,450	7.00
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	98	ND	137	1.43	152	2.92	ND	422	422	1.80	50.6	11.2	ND	11.2	621	--	1,923	7.52
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	121	ND*	160	2.11	183	2.83	ND	450	450	1.13	63.9	15.4	ND	15.4	679	--	--	--
	SH1-MW02	3/18/2013	ND	ND	--	ND	ND	0.0091	ND	ND	101	ND	99.7	3.06	117	3.47	ND	365	365	ND	37.5	7.90	ND	8.00	431	ND	1,570	7.50
		10/23/2013	ND	ND	--	ND	ND	ND	ND	ND	91	ND	96.4	1.85	111	2.74	ND	388	388	1.20	45.2	10.6	ND*	10.6	428	ND	1,500	7
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	93	ND	122	1.37	139	2.38	ND	393	393	1.50	44.4	10.5	ND	10.5	545	--	1,730	7.58
		6/21/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	125	ND*	126	2.16	143	3.43	ND	401	401	ND	55.3	9.76	ND*	9.76	592	--	1,878	7.3
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	168	ND*	195	2.57	194	3.80	ND	418	418	ND	72.8	15.00	ND	15.00	930	--	2,472	7.37
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	133	ND*	145	2.17	169	2.79	ND	436	436	ND	67.1	16.60	ND	16.60	646	--	--	--
	SH1-MW03[1]	3/18/2013	ND	ND	--	ND*	ND	ND	ND	ND	93	ND	107	2.26	115	2.83	ND	349	349	ND	36.6	5.70	ND	5.80	452	ND	1,600	7.60
		10/23/2013	ND	ND	--	ND	ND	ND	ND	ND	84	ND	106	1.68	107	2.51	ND	370	370	1.10	35.8	7.80	ND	7.80	425	ND	1440	7
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	92	ND	126	1.42	136	2.54	ND	376	376	1.40	43.9	9.80	ND	9.80	568	--	1,788	7.56
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	131	ND*	161	2.20	179	3.01	ND	436	436	ND	68.5	14.60	ND	14.60	725	--	--	--
Sherwood #2 Wellhead	SH2-MW01	3/18/2013	ND	ND	--	ND	ND	ND	ND	ND	189	ND	121	3.86	102	3.44	ND	345	345	ND	40.2	11.4	0.63	12.0	799	--	1,940	7.50
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	169	ND	107	1.21	108	3.72	ND	386	386	ND	33.6	11.0	ND	11.0	712	--	1,935	7.47
		6/21/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	186	ND	107	1.91	108	3.26	ND	371	371	ND	41.5	16.3	ND*	16.3	613	--	1,853	7.30
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	250	ND	135	2.56	116	3.65	ND	291	291	ND	52.7	11.3	ND*	11.3	836	--	2,195	7.40
		6/27/2018	ND	ND	--	ND*	ND	ND*	ND*	ND*	234	ND*	131	2.07	122	3.89	ND	349	349	ND	52.6	6.0	ND*	6.0	899	--	--	--
	SH2-MW02	3/18/2013	ND	ND	--	ND	ND	ND	ND	ND	225	ND	121	5.72	111	3.87	ND	315	315	ND	43.8	13.6	ND	13.8	824	ND	2,060	7.40
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	183	ND	105	3.61	110	4.18	ND	367	367	ND	37.8	11.8	ND	11.8	749	--	2,029	7.43
		6/21/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	208	ND*	108	4.36	107	3.71	ND	377	377	ND	41.8	15.5	ND*	15.5	654	--	1,918	7.40
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	233	ND*	129	3.87	115	3.64	ND	210	210	ND	47.1	8.13	ND*	8.13	824	--	2,056	7.41
		6/27/2018	ND	ND	--	ND*	ND	ND*	ND*	ND*	236	ND*	129	3.76	121	4.02	ND	351	351	ND	51.8	5.98	ND*	5.98	904	--	--	--
	SH2-MW03	3/18/2013	ND	ND	--	ND	ND	ND	ND	ND	220	ND	115	4.69	104	4.52	ND	324	324	ND	44.8	13	ND	13.1	847	ND	2,080	7.40
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	192	ND	93.9	5.74	109	4.46	ND	367	367	ND	37.6	11.4	ND	11.4	802	--	2,007	7.36
		6/21/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	212	ND*	97.2	7.09	105	3.85	ND	371	371	ND	41.5	16.9	ND	16.9	624	--	1,905	7.30
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	282	ND*	116	11.7	119	4.3	ND	295	295	ND	56.3	11.5	ND	11.5	833	--	2,198	7.23
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	258	ND*	123	7.91	128	4.51	ND	349	349	ND	54.8	7.32	ND*	7.32	944	--	--	--
City of Longmont #1 Wellhead	CL1-MW01[2]	3/20/2013	ND	ND	--	ND	ND	ND	ND	ND	81	ND	72.2	2.83	61.7	2.38	ND	377	377	ND	34.1	13.9	ND	13.9	182	ND	1,160	7.90
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	92	ND	85.5	1.45	91.8	2.53	ND	427	427	1.4	43.5	16.7	ND*	16.7	254	--	1,390	7.51
		6/21/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	104	ND	83	1.94	91	2.77	ND	393	393	ND	42.7	12.2	ND	12.2	247	--	1,410	7.60
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	83	ND	66	1.71	69.1	1.86	ND	355	355	ND	34.9	8.14	ND	8.14	140	--	--	--
	CL1-MW02	3/20/2013	ND	ND	--	ND	ND	ND	ND	ND	77	ND	67.4	2.1	60.4	4.26	ND	354	354	ND	32.7	2.6	ND	2.6	171	ND	1,090	7.90
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	77	ND	67.4	2.1	60.4	4.26	ND	354	354	ND	32.7	2.6	ND	2.6	171	ND	1,090	7.90
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	102	ND	85.5	1.98	93.3	3.22	ND	372	372	ND	46.7	13	ND	13	246	--	1,402	7.30
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	97	ND	77.2	1.91	89.5	2.24	ND	416	416	ND	44.7	9.75	ND	9.75	209	--	1,261	7.19
		6/27/2018	ND	ND	--	ND*	ND	ND*	ND*	ND*	80	ND*	62.9	1.76	76.9	1.81	ND	352	352	ND	36.4	9.1	ND	9.1	144	--	--	--
	CL1-MW03	3/21/2013	ND	ND	--	ND	ND	ND	ND	ND	86	ND	75.1	2.83	63.6	3.45	ND	389	389	ND	35.3	14.8	ND	14.9	189	ND	1,130	7.70
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	86	ND	75.1	2.83	63.6	3.45	ND	389	389	ND	35.3	14.8	ND	14.9	189	ND	1,130	7.70
		6/21/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	105	ND	82.9	1.91	94.7	2.41	ND	380	380	ND	45.7	13.3	ND	13.3	254	--	1,394	7.40
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	90	ND	70.2	1.89	86.4	2.01	ND	381	381	ND	44.4	13.1	ND	13.1	163	--	1,175	7.43
		6/27/2018	ND	ND	--	ND*	ND	ND*	ND*	ND*	80	ND*	67.6	1.73	73.6	1.94	ND	353	353	ND	35.2	7.57	ND	7.57	149	--	--	--
Serafini Gas Unit	SGU-MW01	3/21/2013	ND	ND	--	ND	ND	ND	ND	ND	81	ND	53.7	3.59	67.2	2.96	ND	328	328	ND	29.8	5.9	ND	5.9	191	ND	1,060	7.80
		10/22/2013	ND	ND	--	ND	ND	ND	ND	ND	77	0.208	54.7	2.88	62.5	2.32	ND	345	345	ND	30.3	7.4	ND	7.4	292	ND	1190	7.30
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	98	ND	63.8	2.46	76.8	2.77	ND	392	392	ND	32.8	8.4	ND	8.4	263	--	1,322	7.51
		6/21/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	109	ND	61.9	2.67	69.9	2.02	ND	364	364	ND	37.8	7.37	ND	7.37	205	--	1,170	7.50
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	118	ND	65.2	3.03	72	1.86	ND	400	400	ND	39.3	7.39	ND	7.39	192	--	1,201	7.33
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	108	ND	57.9	2.59	73.8	1.65	ND	348	348	ND	35.3	10	ND	10	186	--	--	--
	SGU-MW02	3/21/2013	ND	ND	--	ND	ND	0.0087	ND	ND	93	ND	57.8	3.39	78.6	1.72	ND	359	359	ND	34.2	7.2	ND	7.3	228	ND	1,100	7.90
		10/22/2013	ND	ND	--	ND	ND	ND	ND	ND	89	0.381	54.5	2.63	53.3	3.12	ND	364	364	ND	33.2	8.4	ND	8.4	243	ND	1150	7.30
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	98	ND	63.7	2.23	59.3	2.31	ND	420	420	ND	31.9	8	ND	8	258	--	1,135	7.59
		6/21/2016	0.0589	ND	--	ND*	ND	0.238	0.0159	ND*	110	ND	63.5	2.98	158	2.82	ND	401	401	ND	119	6.42	ND	6.42	201	--	1,654	7.30
		5/23/2017	0.0353	ND	--	ND*	ND	0.0884	ND*	ND*	142	ND	79.7	10.8	271	4.16	ND	482	482	3.29	438	1.37	ND	1.37	223	--	NS	NS
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	132	ND	70.1	3.39	105	2.1	ND	369	369	ND	58	12.4	ND	12.4	295	--	--	--
	SGU-MW03	3/21/2013	ND	ND	--		ND	ND	ND	ND	88	ND	49	3.94	47.7	4.07	ND	632	632	ND	28.3	4.4	ND	4.4	152	ND	917	7.60
		10/22/2013	ND	ND	--	ND	ND	ND	ND	ND	96	0.076	50.5	1.91	50.3	2.47	ND	365	365	ND	34.5	10.1	ND*	10.1	252	ND	1160	7.30
		3/30/2015	ND	ND	--	ND	ND	ND	ND	ND	112	ND	59.1	1.74	64	2.83	ND	416	416	ND	33.9	8.6	ND*	8.6	259	ND	1,139	7.57
		6/21/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	142	ND	67.4	2.22	69.2	2.33	ND	375	375	ND	43.7	9.91	ND	9.91	261	--	1,346	7.40
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	137	ND	67	2.54	64.5	2.1	ND	434	434	ND	41.8	9.15	ND	9.15	220	--	1,238	7.13
		6/28/2018	ND	ND	--	ND	ND	0.0261	ND*	ND*	133	ND	82.6	4.22	115	2.32	ND	422	422	ND	60.2	12.80	ND	12.80	298	--	--	--
	SGU-MW04	6/28/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	127	ND	58	1.95	67.9	1.84	ND	351	351	ND	36.1	11.10	ND	11.10	234	--	--	--
	SGU-MW05	6/28/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	148	ND	60.7	3.87	72.4	2.11	ND	392	392	ND	39.9	7.63	ND	7.63	273	--	--	--
Powell #1 Wellhead	PL1-MW01	3/20/2013	ND	ND	--	ND	ND	ND	ND	ND	95	ND	73.2	2.28	65.3	1.82	ND	295	295	ND	31.8	5.9	ND	5.9	369	ND	1,280	7.90
		3/31/2015	ND	ND	--	ND	ND	ND	ND	ND	92	ND	71.8	1.25	63.5	1.78	ND	259	259	ND	38.9	10	ND	10	427	--	1,315	7.10
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	284	ND	195	2.25	114	4.88	ND	198	198	ND	86.0	11.2	ND	11.2	1,270	--	2,583	6.98
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	104	ND	75.1	1.64	89.9	1.64	ND	235	235	ND	33.8	9.36	ND	9.36	370	--	1,261	7.28
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	101	ND*	74.9	1.66	97.2	1.74	ND	215	215	ND	35.4	5.94	ND	5.94	457	--	--	--
	PL1-MW02	3/20/2013	ND	ND	--	ND	ND	ND	ND	ND	106	ND	75.9	2.33	115	1.83	ND	311	311	ND	32.8	ND	ND	ND	484	ND	1,480	7.40
		3/31/2015	ND	ND	--	ND	ND	ND	ND	ND	129	0.393	95.9	2.25	119	2.12	ND	318	318	1.1	39.6	ND	ND	ND	633	--	1,707	7.19
		6/22/2016	ND	ND	--	ND*	ND	0.012	ND*	ND*	131	ND	91.1	2.53	134	2.12	ND	304	304	ND	36.7	ND	ND	ND	616	--	1,638	7.20
		5/23/2017	ND	ND	--	ND*	ND	0.0231	ND*	ND*	143	ND	97.9	2.63	165	1.92	ND	321	321	ND	39.7	ND	ND	ND	688	--	2,021	7.19
		6/27/2018	ND	ND	--	ND	ND	0.036	ND*	ND*	128	ND*	88.9	2.54	170	1.89	ND	321	321	ND	36.7	ND	ND	ND	670	--	--	--
	PL1-MW03[1]	3/19/2013	ND	ND	--	ND	ND	ND	ND	ND	86	ND	63	3.02	58.6	1.9	ND	296	296	ND	32.3	0.58	ND	0.57	265	ND	1,090	7.40
		6/27/2018	ND	ND	--	ND	ND	0.1	ND*	ND*	66	ND	47.9	3.4	77	1.07	ND	256	256	ND	35.0	0.503	ND	0.503	212	--	--	--
Evans #6 Wellhead	E6W-MW01	3/22/2013	ND	ND	--	ND	ND	ND	ND	ND	183	ND	126	6.52	157	4.04	ND	307	307	ND	32.7	0.44	ND	0.44	987	ND	2,070	7.60
		10/23/2013	ND	ND	--	ND	ND	ND	ND	ND	281	ND	182	7.58	236	5.52	ND	381	381	ND	72.2	5.0	ND	5.0	1,710	ND	4960	6
		7/28/2014	ND	ND	--	ND	ND	ND	ND	ND	206	ND	133	6.41	181	4.19	ND	326	326	ND	50.0	0.84	ND	0.84	1,130	--	2,074	7.2
		03/31/2015	ND	ND	--	ND	ND	ND	ND	ND	207	ND	136	4.36	172	4.29	ND	351	351	ND	42.9	0.83	ND	0.83	1,090	--	2,397	7.27
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	187	ND	115	4.59	164	4.06	ND	268	268	ND	42.6	0.351	ND	0.351	915	--	2,090	7.2
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	332	ND	187	5.64	222	5.25	ND	305	305	ND	39.9	3.55	ND	3.55	1,580	--	2,944	6.74
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	188	ND	108	4.25	171	3.39	ND	269	269	ND	35.9	ND	ND	ND	875	--	--	--
	E6W-MW02	3/22/2013	ND	ND	--	ND	ND	0.0278	ND	ND	207	ND	175	10.6	212	5.94	ND	312	321	1.5	34.4	ND	ND	ND	1,380	ND	2,200	7.80
		10/23/2013	ND	ND	--	ND	ND	ND	ND	ND	329	ND	279	42.4	419	7.28	ND	426	426	1	110	14.5	ND*	14.5	2,630	ND	7000	6
		7/28/2014	ND	ND	--	ND	ND	ND	ND	ND	187	ND	139	22.7	189	4.48	ND	309	309	ND	38.4	2.6	ND	2.6	1,350	--	2,358	7.27
		3/31/2015	ND	ND	--	ND	ND	ND	ND	ND	181	ND	150	15.3	188	4.02	ND	307	307	ND	35.4	0.58	ND	0.58	1,160	--	2,472	7.47
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	226	ND	182	19.8	235	7.6	ND	304	304	ND	50.3	2.94	ND	2.94	1,430	--	2,821	7.3
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	167	ND	130	7.94	179	4.03	ND	280	280	ND	38.7	0.685	ND	0.685	863	--	2,076	7.27
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	188	ND	142	9.41	192	3.61	ND	294	294	ND	35.0	0.312	ND	0.312	996	--	--	--
	E6W-MW03	3/22/2013	ND	ND	--	ND	ND	0.0141	ND	ND	192	ND	150	9.22	184	5.73	ND	312	312	ND	31.1	0.11	ND	0.12	1,130	ND	2,280	7.60
		10/23/2013	ND	ND	--	ND	ND	ND	ND	ND	363	ND	255	31.1	333	7.09	ND	367	367	ND	96.2	6.2	ND	6.2	2,420	ND	6,320	6
		07/28/2014	ND	ND	--	ND	ND	ND	ND	ND	264	ND	167	13.1	217	5.34	ND	315	315	ND	52.4	1.9	ND	1.9	1,550	--	2,635	7.15
		3/31/2015	ND	ND	--	ND	ND	ND	ND	ND	200	ND	133	8.49	178	4.02	ND	327	327	ND	40.8	1.4	ND	1.4	1,180	--	2,481	7.34
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	262	ND	156	9.13	196	6.61	ND	325	325	ND	49.0	3.38	ND	3.38	1,280	--	2,678	7.2
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	273	ND	166	9.72	210	4.37	ND	299	299	ND	36.9	1.98	ND	1.98	1,430	--	2,696	7.09
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	302	ND	165	6.94	217	4.98	ND	319	319	ND	37.8	0.725	ND	0.725	1,390	--	--	--

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22187009

			Volatile Organic Compounds					Other Organic Compounds			Inorganic Parameters															General Parameters	
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0	74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8		
COGCC Table 910-1[3]			0.005	0.7	--	0.56	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	76.21	--	--	--	757.63	--	--	--
					--	1[M]	10[M]																					
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	--	--	--	--	0.3	--	--	--	--	--	--	--	--	250	10	1	10	250	--	--	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		
Wellsite	Sample ID	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	Std. Units
Evans #6 Tank Battery	E6T-MW01	3/22/2013	ND	ND	--	ND	ND	ND	ND	ND	**326**	ND	**285**	**12.1**	**593**	**6.14**	ND	**334**	**334**	**1.2**	**112**	**0.93**	ND	**0.93**	**3,060**	ND	5,030	7.80
		10/23/2013	ND	ND	--	ND	ND	ND	ND	ND	**306**	ND	**256**	**6.61**	**666**	**4.03**	ND	**401**	**401**	ND	**111**	ND	ND	ND	**3,190**	ND	8,280	7
		7/28/2014	ND	ND	--	ND	ND	ND	ND	ND	**280**	ND	**215**	**5.8**	**446**	**4.54**	ND	**340**	**340**	ND	**104**	ND	ND	ND	**2,810**	--	4,100	7.47
		3/31/2015	ND	ND	--	ND	ND	ND	ND	ND	**258**	ND	**205**	**4.81**	**608**	**4.05**	ND	**324**	**324**	ND	**96.5**	ND	ND	ND	**2,590**	--	4,706	7.42
		6/22/2016	ND	ND	--	ND*	ND	**0.0122**	ND*	ND*	**251**	ND	**168**	**5.15**	**587**	**4.85**	ND	**291**	**291**	ND	**86.1**	ND	ND	ND	**2,190**	--	4,225	7.46
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	**217**	ND	**140**	**4.4**	**616**	**2.93**	ND	**277**	**277**	ND	**90.6**	ND	ND	ND	**1,930**	--	3,850	7.38
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	**193**	ND*	**121**	**3.91**	**595**	**2.65**	ND	**257**	**257**	ND	**84.9**	ND	ND	ND	**1,970**	--	--	--
	E6T-MW02	3/22/2013	ND	ND	--	ND	ND	**0.0076**	ND	ND	**238**	ND	**181**	**7.41**	**247**	**4.52**	ND	**346**	**346**	**1.2**	**63.9**	ND	ND	ND	**1,560**	ND	2,960	7.60
		10/23/2013	ND	ND	--	ND	ND	ND	ND	ND	**271**	ND	**210**	**6.58**	**334**	**4.45**	ND	**391**	**391**	ND	**68.6**	**16.6**	ND*	**17**	**1,770**	ND	5,640	6
		7/28/2014	ND	ND	--	ND	ND	ND	ND	ND	**393**	ND	**297**	**7.56**	**356**	**7.04**	ND	**346**	**346**	ND	**113**	ND	ND	ND	**3,080**	--	3,968	7.44
		3/31/2015	ND	ND	--	ND	ND	ND	ND	ND	**430**	ND	**392.00**	**7.24**	**563.00**	**8.27**	ND	**277.00**	**277.00**	ND	**129.0**	ND	ND	ND	**3,610**	--	5,745	7.28
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	**551**	ND	**810**	**8.74**	**1,060**	**29.3**	ND	**141**	**141**	ND	**218**	ND	ND	ND	**7,560**	--	9,390	7.04
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	**399**	ND	**331**	**7.58**	**462**	**7.78**	ND	**250**	**250**	ND	**83.9**	**0.575**	ND	**0.575**	**2,960**	--	--	--
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	**400**	ND*	**318**	**7.4**	**436**	**5.86**	ND	**166**	**166**	ND	**88.2**	ND	ND	ND	**2,600**	--	--	--
	E6T-MW03	3/22/2013	ND	ND	--	ND	ND	**0.0068**	ND	ND	**354**	ND	**350**	**11**	**500**	**7.86**	ND	**524**	**524**	**1.3**	**103**	ND	ND	ND	**2,650**	ND	4,830	7.40
		10/23/2013	ND	ND	--	ND	ND	ND	ND	ND	**516**	**0.212**	**644**	**8.43**	**992**	**10.1**	ND	**732**	**732**	**1.2**	**249**	ND	ND	ND	**5,200**	ND	13,200	6.00
		7/28/2014	ND	ND	--	ND	ND	ND	ND	ND	**530**	ND	**680**	**7.48**	**1,010**	**2.51**	ND	**468**	**468**	**1.1**	**254**	ND	ND	ND	**6,240**	--	7,162	7.35
		3/31/2015	ND	ND	--	ND	ND	ND	ND	ND	**432**	**9.73**	**543**	**6.25**	**840**	**9.29**	ND	**301**	**301**	ND	**165.0**	ND	ND	ND	**4,970**	--	7,557	7.16
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	**392**	ND	**295**	**6.65**	**490**	**7.44**	ND	**245**	**245**	ND	**88.1**	**4.41**	ND	**4.41**	**2,930**	--	4,748	7.38
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	**432**	**0.282**	**616**	**6.34**	**824**	**7.73**	ND	ND	ND	ND	**166.0**	ND	ND	ND	**5,610**	--	7,601	7.43
		6/28/2018	ND	ND	--	ND	ND	**0.013**	ND*	ND*	**436**	ND*	**646**	**7.02**	**894**	**7.82**	ND	ND	ND	ND	**179.0**	ND	ND	ND	**5,850**	--	--	--
Longmont 8-10K Wellhead	LG8-MW01	3/22/2013	ND	ND	--	ND	ND	ND	ND	ND	**75**	**ND**	**79.1**	**5.87**	**106**	**3.03**	**ND**	**204**	**204**	**ND**	**40.1**	**0.23**	**ND**	**0.24**	**496**	**ND**	1,350	7.50
		12/20/2017	--	--	--	--	--	ND	--	--	**339**	**--**	**120**	**22.7**	**203**	**2.68**	**--**	**--**	**244**	**--**	**90.2**	**0.875**	**--**	**0.875**	**1410**	**--**	2,742	7.66
	LG8-MW02	3/22/2013	ND	ND	--	ND	ND	ND	ND	ND	**85**	**ND**	**88.6**	**5.39**	**131**	**1.97**	**ND**	**234**	**234**	**ND**	**42.9**	**0.28**	**ND**	**0.29**	**548**	**ND**	1,540	7.60
		12/20/2017	--	--	--	--	--	ND	--	--	**182**	**--**	**152**	**9.38**	**244**	**2.32**	**--**	**--**	**246**	**--**	**79.9**	**0.423**	**--**	**0.423**	**1190**	**--**	2,546	7.37
	LG8-MW03	3/22/2013	ND	ND	--	ND	ND	ND	ND	ND	**87**	**ND**	**94.1**	**5.65**	**122**	**2.87**	**ND**	**244**	**244**	**ND**	**42.1**	**ND**	**ND**	**ND**	**530**	**ND**	1,530	7.40
		12/20/2017	--	--	--	--	--	0.0263	--	--	**209**	**--**	**173**	**11.5**	**255**	**2.76**	**--**	**--**	**211**	**--**	**95.9**	**5.12**	**--**	**5.12**	**1370**	**--**	2,685	7.43
Domenico #1 Wellsite	DM1-MW01	3/19/2013	ND	ND	--	ND	ND	**0.0253**	ND	ND	**86**	ND	**93.1**	**3.4**	**254**	**1.83**	ND	**484**	**484**	**4.8**	**136**	ND	ND	ND	**494**	ND	1,970	7.50
		7/29/2014	ND	ND	--	ND	ND	ND	ND	ND	**53**	ND	**56.9**	**1.64**	**175**	**0.853**	ND	**305**	**305**	**3**	**92.0**	ND	ND	ND	**373**	--	1,023	7.36
		3/31/2015	ND	ND	--	ND	ND	**0.0625**	ND	ND	**34**	ND	**53**	**1.72**	**145**	**0.71**	ND	**351**	**351**	**2.1**	**72.2**	ND	ND	ND	**183**	--	1,189	7.52
		6/24/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	**33**	ND	**41.1**	**1.9**	**78.7**	**0.713**	ND	**209**	**209**	ND	**48.1**	ND	ND	ND	**122**	--	801	7.27
		5/23/2017	ND	ND	--	ND*	ND	**0.213**	ND*	ND*	**55**	ND	**69.3**	**2.54**	**143**	**1.07**	ND	**410**	**410**	**1.66**	**76.9**	ND	ND	ND	**180**	--	1,271	7.53
		6/29/2018	ND	ND	--	ND	ND	**0.0505**	ND*	ND*	**40**	ND	**52.6**	**2.47**	**115**	**0.719**	ND	**241**	**241**	ND	**74.3**	ND	ND	ND	**193**	--	--	--
	DM1-MW02	3/19/2013	ND	ND	--	ND	ND	**0.0071**	ND	ND	**58**	ND	**84.8**	**6.21**	**214**	**0.965**	ND	**307**	**307**	**3.4**	**123**	ND	ND	ND	**492**	ND	1,720	7.50
		7/29/2014	ND	ND	--	ND	ND	**0.0291**	ND	ND	**114**	ND	**93.2**	**6.46**	**276**	**1.59**	ND	**525**	**525**	**4.6**	**157**	**1.4**	**0.13**	**1.6**	**685**	--	2,215	7.13
		3/31/2015	ND	ND	--	ND	ND	ND	ND	ND	**83**	ND	**68.6**	**4.67**	**215**	**0.986**	ND	**529**	**529**	**4.1**	**112**	ND	ND	--	**339**	--	1,750	7.32
		6/24/2016	ND	ND	--	ND*	ND	**0.0433**	ND*	ND*	**68**	ND	**58**	**5.67**	**119**	**1.12**	ND	**330**	**330**	**1.25**	**61.1**	ND	ND	ND	**185**	--	1,176	7.01
		5/23/2017	ND	ND	--	ND*	ND	**0.0152**	ND*	ND*	**66**	ND	**55.8**	**5.55**	**127**	**0.729**	ND	**330**	**330**	**1.15**	**80.4**	**0.44**	ND	**0.44**	**185**	--	1,217	7.32
		6/29/2018	ND	ND	--	ND	ND	**0.0675**	ND*	ND*	**71**	ND	**52.9**	**4.93**	**159**	**0.837**	ND	**386**	**386**	**1.33**	**76.9**	ND	ND	ND	**196**	--	--	--
	DM1-MW03	3/19/2013	ND	ND	--	ND	ND	ND	ND	ND	**99**	ND	**55.1**	**3.18**	**161**	**2.14**	ND	**284**	**284**	**2.2**	**91.5**	**0.27**	ND	**0.3**	**448**	ND	1,640	7.40
		7/29/2014	ND	ND	--	ND	ND	**0.0119**	ND	ND	**89**	ND	**51.5**	**1.76**	**145**	**1.11**	ND	**275**	**275**	**2.7**	**91.1**	**2.8**	ND	**2.8**	**423**	--	1,293	7.09
		4/1/2015	ND	ND	--	ND	ND	ND	ND	ND	**116**	ND	**70.3**	**1.96**	**167**	**1.12**	ND	**287**	**287**	**2.8**	**108.0**	**3.5**	ND	**3.5**	**577**	--	1,722	7.11
		6/24/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	**160**	ND	**86**	**2.4**	**203**	**1.8**	ND	**288**	**288**	**2.06**	**110**	**4.38**	ND	**4.38**	**604**	--	2,031	7.21
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	**145**	ND	**77.5**	**2.25**	**193**	**1.28**	ND	**258**	**258**	**1.31**	**121**	**5.83**	ND	**5.83**	**589**	--	1,862	7.02
		6/29/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	**70**	ND	**37.5**	**1.61**	**129**	**0.628**	ND	**195**	**195**	ND	**72**	**1.1**	ND	**1.1**	**255**	--	--	--
Stamp 31-2C Wellsite	S31-MW01	3/22/2013	ND	ND	--	ND	ND	**0.0137**	ND	ND	**365**	ND	**1,400**	**26.5**	**2,850**	**9.7**	ND	**606**	**606**	**1.8**	**381**	**2.8**	**0.32**	**3.1**	**13,200**	ND	17,200	7.50
		10/24/2013	ND	ND	--	**0.0022**	ND	**0.101**	ND	ND	**340**	**0.196**	**814**	**14.5**	**2,060**	**8.01**	ND	**642**	**642**	**3.6**	**369**	**1.5**	**0.16**	**1.6**	**8,340**	ND	5,670	7.20
		7/29/2014	ND	**0.011**	--	ND	ND	**0.142**	ND	ND	**356**	**0.192**	**986**	**16.2**	**2,680**	**8.99**	ND	**829**	**829**	**3.1**	**725**	ND	ND	ND	**8,930**	--	11,866	7.13
		4/1/2015	**0.0014**	**0.186**	--	ND	ND	**0.372**	**0.0094**	ND	**318**	ND	**687**	**10.4**	**2,260**	**11.9**	ND*	**1,120**	**1,120**	**8**	**762**	ND	ND	ND	**7,340**	--	12,985	7.21
		6/23/2016	ND	ND	--	ND*	ND	**0.262**	**0.0245**	ND*	**434**	ND	**1,270**	**13.8**	**2,900**	**16.4**	ND	**762**	**762**	ND	**699**	ND	ND	ND	**11,200**	--	15,456	7.04
		5/22/2017	ND	**0.0065**	--	ND*	ND	**0.318**	**0.0145**	ND*	**416**	ND	**1,200**	**13.3**	**2,880**	**10**	ND	**753**	**753**	ND	**637**	ND	ND	ND	**9,930**	--	15,430	7.26
		6/29/2018	ND	ND	--	ND	ND	**0.134**	ND*	ND*	**407**	ND	**1,270**	**13.4**	**3,060**	**8.76**	ND	**648**	**648**	ND	**351**	ND	ND	ND	**11,300**	--	--	--
	S31-MW02[4]	3/22/2013	**0.0946**	**0.0232**	--	ND	ND	**0.0323**	**0.0119**	ND	**377**	ND	**872**	**18.4**	**1,940**	**7.99**	ND	**860**	**860**	**1.5**	**150**	ND	ND	ND	**9,110**	ND	12,500	7.20
		10/24/2013	**0.0549**	ND	--	**0.0102**	ND	**0.0506**	**0.0169**	ND	**352**	ND	**655**	**12.3**	**1,600**	**6.28**	ND	**771**	**771**	**2.4**	**181**	ND	ND	ND	**6,330**	ND	4,060	7.00
	S31-MW03	10/24/2013	**0.0062**	ND	--	**0.0013**	ND	**0.0485**	**0.0076**	ND	**362**	**0.204**	**814**	**7.83**	**1,860**	**11.5**	ND*	**1,340**	**1,340**	**2.3**	**253**	ND	ND	ND	**7,050**	ND	4,760	7.10
		7/29/2014	**0.0018**	ND	--	ND	ND	**0.111**	**0.0236**	ND	**383**	ND	**750**	**8.72**	**1,520**	**9.85**	ND*	**1,410**	**1,410**	**1.8**	**176**	ND	ND	ND	**6,480**	--	8,796	7.09
		4/1/2015	ND	**0.0012**	--	ND	ND	**0.104**	**0.0228**	ND	**405**	ND	**711**	**9.83**	**1,490**	**9.15**	ND*	**1,790**	**1,790**	**1.7**	**162**	ND	ND	ND	**5,860**	--	10,227	7.01
		6/23/2016	**0.0012**	ND	--	ND*	ND	**0.171**	**0.016**	ND*	**466**	ND	**858**	**8.44**	**1,720**	**12.1**	ND	**1,360**	**1,360**	ND	**147**	ND	ND	ND	**6,870**	--	10,812	7.15
		5/22/2017	ND	ND	--	ND*	ND	**0.319**	**0.19**	ND*	**438**	ND	**743**	**8.65**	**1,510**	**9.34**	ND	**1,280**	**1,280**	ND	**118**	ND	ND	ND	**5,770**	--	9,593	7.18
		6/29/2018	**0.0021**	ND	--	ND	ND	**0.319**	**0.19**	ND*	**438**	ND	**743**	**8.65**	**1,510**	**9.34**	ND	**1,280**	**1,280**	ND	**118**	ND	ND	ND	**5,770**	--	9,593	7.18
	S31-MW04	3/22/2013	ND	ND	--	ND	ND	ND	ND	ND	**383**	ND	**759**	**19.6**	**1,380**	**9.55**	ND	**480**	**480**	**4.4**	**85.2**	**1.9**	**0.21**	**2.1**	**7,180**	ND	9,980	7.50
		10/24/2013	ND	ND	--	ND	ND	ND	ND	ND	**345**	**0.216**	**710**	**13.4**	**1,660**	**7.7**	ND	**497**	**497**	**1.5**	**75.1**	**0.46**	ND	**0.46**	**6,710**	ND	4,250	7.30
		7/29/2014	ND	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	ND	**480**	**480**	**2.4**	**105**	**0.75**	ND	**0.75**	**6,960**	--	8,258	7.42
		7/31/2014	--	--	--	--	--	--	--	--	**382**	ND	**796**	**10.6**	**1,560**	**8.43**	--	--	--	--	--	--	--	--	--	--	10,164	7.49
		4/1/2015	ND	ND	--	ND	ND	ND	ND	ND	**382**	ND	**776**	**12.2**	**1,530**	**9.03**	ND	**528**	**528**	**2.8**	**119.0**	**1.3**	ND	**1.3**	**7,100**	--	10,363	7.36
		6/23/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	**437**	ND	**888**	**10.3**	**1,660**	**10.7**	ND	**485**	**485**	ND	**127**	**3.12**	ND	**3.12**	**8,050**	--	10,789	7.28
		5/22/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	**410**	ND	**765**	**10.3**	**1,560**	**8.45**	ND	**554**	**554**	ND	**185**	ND	ND	ND	**6,870**	--	10,020	7.43
		6/29/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	**426**	ND	**841**	**11**	**1,630**	**9.12**	ND	**539**	**539**	ND	**107**	ND	ND	ND	**7,210**	--	--	--
	S31-MW05	10/24/2013	ND	ND	--	ND	ND	ND	ND	ND	**361**	**0.079**	**627**	**12**	**1,250**	**6.94**	ND	**464**	**464**	**1.1**	**60.4**	**0.17**	ND	**0.17**	**6,060**	ND	3,770	7.20
		7/29/2014	ND	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	ND	**434**	**434**	**1.4**	**59.4**	**0.23**	ND	**0.23**	**5,740**	--	6,148	7.37
		7/30/2014	--	--	--	--	--	--	--	--	**362**	ND	**554**	**9.36**	**1,030**	**7.14**	--	--	--	--	--	--	--	--	--	--	NS	NS
		4/1/2015	ND	ND	--	ND	ND	ND	ND	ND	**381**	ND	**570**	**10.7**	**1,020**	**7.12**	ND	**468**	**468**	**1.4**	**64.8**	**0.43**	ND	**0.44**	**5,250**	--	7,915	7.29
		6/23/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	**422**	ND	**922**	**8.95**	**1,670**	**9.55**	ND	**535**	**535**	ND	**106**	**0.177**	ND	**0.177**	**9,090**	--	11,864	7.26
		5/22/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	**411**	ND	**548**	**9.09**	**996**	**6.93**	ND	**523**	**523**	ND	**76.5**	ND	ND	ND	**4,690**	--	7,564	7.37
		6/29/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	**439**	ND	**548**	**9.32**	**971**	**7.03**	ND	**484**	**484**	ND	**71.1**	ND	ND	ND	**4,590**	--	--	--
	S31-MW06	10/24/2013	ND	ND	--	ND	ND	ND	ND	ND	**366**	ND	**497**	**11.1**	**1,120**	**6.74**	ND	**485**	**485**	**1**	**56.5**	ND	ND	ND	**5,380**	ND	3,440	7.20
		7/29/2014	ND	ND	--	ND	ND	ND	ND	ND	**386**	ND	**554**	**9.16**	**1,010**	**7.13**	ND	**465**	**465**	**1.5**	**66.7**	ND	ND	ND	**5,540**	--	6,147	7.33
		4/1/2015	ND	ND	--	ND	ND	ND	ND	ND	**372**	ND	**605**	**11**	**1,110**	**8.28**	ND	**494**	**494**	**1.5**	**77.6**	**0.6**	ND	**0.6**	**5,690**	--	8,375	7.26
		6/23/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	**454**	ND	**870**	**9.61**	**1,430**	**11.8**	ND	**527**	**527**	ND	**131**	**0.621**	ND	**0.621**	**6,980**	--	9,450	7.08
		5/22/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	**421**	ND	**589**	**9.49**	**1,150**	**8.2**	ND	**531**	**531**	ND	**81.4**	ND	ND	ND	**5,400**	--	8,013	7.08
		6/29/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	**442**	ND	**565**	**9.24**	**999**	**7.61**	ND	**514**	**514**	ND	**74.6**	ND	ND	ND	**4,850**	--	--	--

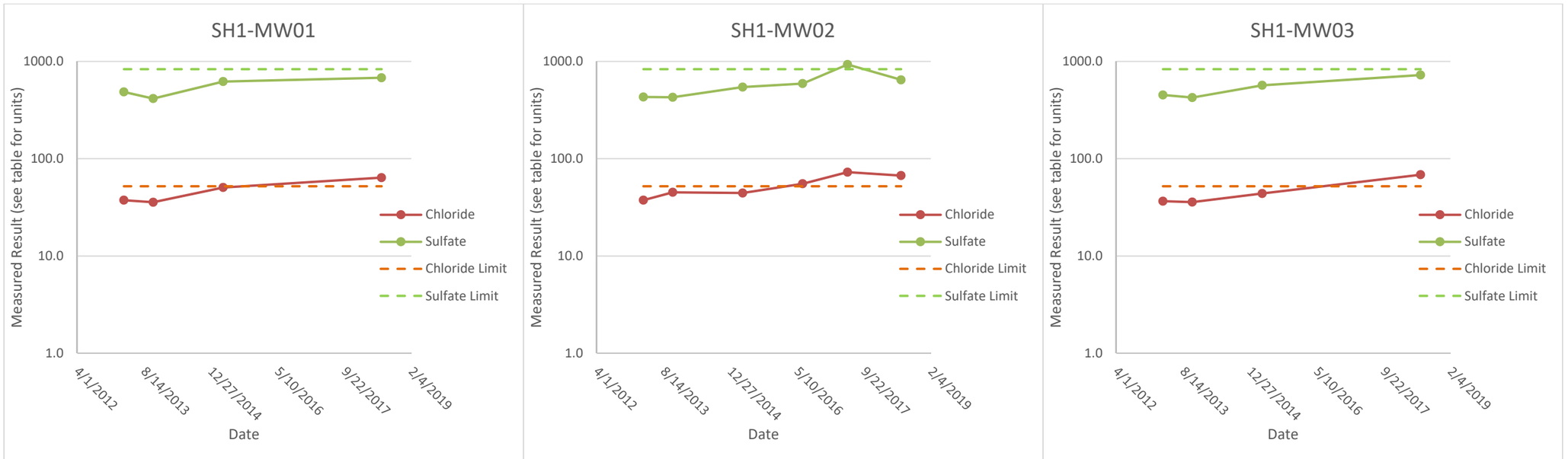
Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22187009

			Volatile Organic Compounds					Other Organic Compounds			Inorganic Parameters															General Parameters	
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0	74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8		
COGCC Table 910-1[3]			0.005	0.7	--	0.56	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	76.21	--	--	--	757.63	--	--	--
					--	1[M]	10[M]																					
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	--	--	--	--	0.3	--	--	--	--	--	--	--	--	250	10	1	10	250	--	--	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		
Wellsite	Sample ID	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	Std. Units
Rider #1 Wellsite	RD1-MW01	7/30/2014	ND	ND	--	ND	ND	ND	ND	ND	**87**	ND	**74.8**	**2.78**	**127**	**3.18**	ND	**407**	**407**	ND	**34.5**	**4.8**	ND	**4.8**	**323**	--	1,115	7.03
		4/1/2015	ND	ND	--	ND	ND	ND	ND	ND	**94**	ND	**80**	**1.9**	**120**	**3.07**	ND	**430**	**430**	ND	**32.0**	**4.9**	ND	**4.9**	**365**	--	1,438	7.41
		6/23/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	**107**	ND	**82.6**	**2.57**	**129**	**4.81**	ND	**389**	**389**	ND	**36.2**	--	--	--	**366**	--	1,495	7.21
		7/8/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	**36.9**	**5.02**	ND	**5.02**	**359**	--	1,458	6.99
		5/22/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	**102**	ND	**78.5**	**2.2**	**122**	**3.1**	ND	**436**	**436**	ND	**37.8**	**4.78**	ND	**4.78**	**326**	--	1,438	7.37
		10/19/2017	--	**0.738**	**0.14**	--	**5.46**	**0.474**	ND*	ND*	**99.2**	ND	**82.5**	**3.11**	**111**	**2.99**	**355**	--	**355**	ND	**41.3**	**3.88**	ND	**3.88**	**263**	263	1,250	7.40
		6/29/2018	ND	**0.005**	--	ND	**0.042**	**0.128**	ND*	ND*	**102**	ND	**84.5**	**2.26**	**117**	**3.16**	ND	**390**	**390**	ND	**37.4**	**2.99**	ND	**2.99**	**341**	--	--	--
	RD1-MW02	7/30/2014	ND	ND	--	ND	ND	**0.0094**	ND	ND	**88**	ND	**80.8**	**1.89**	**104**	**3.06**	ND	**471**	**471**	ND	**31.8**	**3.8**	ND	**3.8**	**305**	--	1,099	7.21
		4/1/2015	ND	ND	--	ND	ND	**0.0392**	ND	ND	**89**	ND	**80.6**	**1.73**	**104**	**2.67**	ND	**437**	**437**	ND	**34.5**	**3.8**	ND	**3.8**	**336**	--	1,376	7.37
		6/23/2016	ND	ND	--	ND*	ND	**0.119**	ND*	ND*	**105**	ND	**85.6**	**1.99**	**109**	**3.69**	ND	**504**	**504**	ND	**41.1**	--	--	--	**329**	--	1,439	7.23
		7/8/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	**42.0**	**2.94**	ND	**2.94**	**313**	--	1,461	7.11
		5/22/2017	ND	**0.0053**	--	ND*	**0.048**	**0.176**	ND*	ND*	**100**	ND	**76.4**	**2.23**	**107**	**3.04**	ND	**416**	**416**	ND	**38.4**	**4.12**	ND	**4.12**	**281**	--	1,363	7.30
		10/19/2017	--	ND	ND	--	ND	ND*	ND*	ND*	103	ND	79	3.05	110	2.98	337	--	337	ND	39.5	4.22	ND	4.22	280	280	1,194	7.45
		6/29/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	**106**	ND	**81.4**	**2.35**	**116**	**3.12**	ND	**380**	**380**	ND	**37.3**	**3.69**	ND	**3.69**	**338**	--	--	--
	RD1-MW03R	7/30/2014	ND	**0.0025**	--	ND	**0.0133**	**0.0347**	ND	ND	**85**	ND	**78.2**	**2.12**	**100**	**3.53**	ND	**555**	**555**	ND	**31.5**	**3.8**	ND	**3.8**	**290**	--	1,028	7.35
		4/1/2015	ND	ND	--	ND	ND	**0.0734**	ND	ND	**86**	ND	**79.7**	**2**	**102**	**2.94**	ND	**423**	**423**	ND	**32.5**	**3.6**	ND	**3.7**	**310**	--	1,318	7.39
		6/23/2016	ND	**0.0377**	--	ND*	**0.0182**	**0.457**	ND*	ND*	**100**	ND	**83.4**	**2.24**	**104**	**10.4**	ND	**420**	**420**	ND	**35.9**	--	--	--	**321**	--	1,364	7.24
		10/19/2017	--	**0.0295**	ND	--	**1.17**	**0.677**	ND*	ND*	99.4	ND	83.9	2.5	105	3.11	362	0	0	ND	44.7	2.95	0.156	3.106	276	276	1,247	7.32
		6/29/2018	ND	**0.0032**	--	ND	**0.0069**	**0.131**	ND*	ND*	**102**	ND	**83.6**	**2.21**	**112**	**3.1**	ND	**386**	**386**	ND	**36.1**	**2.79**	ND	**2.79**	**336**	--	--	--
	RD1-MW04	7/30/2014	ND*	**0.0778**	--	ND*	**1.14**	**0.0316**	ND	ND	**92**	ND	**81.4**	**2.33**	**114**	**3.37**	ND	**552**	**552**	ND	**33.7**	**4.2**	ND	**4.2**	**320**	--	1,109	7.20
		4/1/2015	ND	**0.0021**	--	ND	**0.0253**	**0.0092**	ND	ND	**91**	ND	**80.3**	**2.07**	**112**	**2.85**	ND	**419**	**419**	ND	**30.1**	**4.9**	ND	**4.9**	**367**	--	1,396	7.39
		6/23/2016	ND	**0.081**	--	ND*	**1.12**	**0.571**	ND*	ND*	**106**	ND	**85.6**	**2.16**	**119**	**4.27**	ND	**456**	**456**	ND	**39.6**	--	--	--	**339**	--	1,473	7.19
		7/8/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	**39.7**	**2.98**	ND	**2.98**	**334**	--	1,546	7.10
		5/22/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	**96**	ND	**78.3**	**1.93**	**104**	**2.99**	ND	**419**	**419**	ND	**38.7**	**3.62**	ND	**3.62**	**277**	--	1,320	7.16
		10/19/2017	--	**0.0026**	ND	--	**0.0222**	**0.0349**	ND*	ND*	**101**	ND	**82.6**	**2.74**	**105**	**3.02**	**375**	--	**416**	ND	**42.4**	**3.83**	ND	**3.83**	**271**	271	1,217	7.45
		6/29/2018	ND	ND	--	ND	ND	**0.0617**	ND*	ND*	**103**	ND	**82.7**	**2.34**	**109**	**3.07**	ND	**376**	**376**	ND	**35.7**	**2.87**	ND	**2.87**	**331**	--	--	--
	RD1-MW05	7/30/2014	ND	**0.0088**	--	ND	**0.0594**	**0.406**	ND	ND	**82**	ND	**76.2**	**2.47**	**102**	**3.08**	ND	**584**	**584**	ND	**31.8**	**3.7**	ND	**3.7**	**291**	--	1,045	7.31
		4/1/2015	ND	ND	--	ND	ND	**0.0067**	ND	ND	**87**	ND	**78.6**	**2.08**	**108**	**2.82**	ND	**407**	**407**	ND	**30.1**	**4.9**	ND	**4.9**	**335**	--	1,352	7.40
		6/23/2016	ND	ND	--	ND*	ND	**1.12**	ND*	ND*	**101**	ND	**81.8**	**2.4**	**109**	**8.14**	ND	**416**	**416**	ND	**37.1**	--	--	--	**343**	--	1,376	7.14
		7/8/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	**42.1**	**3.98**	ND	**3.98**	**310**	--	1,400	7.33
		5/22/2017	ND	**0.0011**	--	ND*	**0.0081**	**0.0449**	ND*	ND*	**97**	ND	**76.8**	**2.38**	**103**	**3.66**	ND	**409**	**409**	ND	**37.5**	**3.73**	ND	**3.73**	**278**	--	1,359	7.25
		10/19/2017	--	ND	ND	--	ND	ND*	ND*	ND*	**100**	ND	**83.5**	**3.22**	**105**	**2.94**	**403**	--	**403**	ND	**41**	**3.06**	ND	**3.06**	**276**	276	1,217	7.45
		6/29/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	**103**	ND	**85.5**	**2.71**	**113**	**3.07**	ND	**389**	**389**	ND	**44.2**	**3.04**	ND	**3.04**	**338**	--	--	--
	RD1-MW06	7/30/2014	ND	ND	--	ND	ND	ND	ND	ND	**83**	ND	**79.9**	**1.9**	**92.7**	**3.6**	ND	**536**	**536**	ND	**38.6**	**2.2**	ND	**2.2**	**306**	--	1,077	7.30
		4/1/2015	ND	ND	--	ND	ND	ND	ND	ND	**82**	ND	**80.1**	**1.81**	**90.3**	**2.65**	ND	**424**	**424**	ND	**33.4**	**2.9**	ND	**2.9**	**294**	--	1,284	7.44
		6/23/2016	ND	ND	--	ND*	ND	ND*	ND*	ND*	**99**	ND	**85.5**	**1.9**	**96.8**	**4.38**	ND	**396**	**396**	ND	**48.4**	--	--	--	**295**	--	1,356	7.34
		5/22/2017	ND	ND	--	ND*	ND	ND*	ND*	ND*	**97**	ND	**82.7**	**1.99**	**94.4**	**3.11**	ND	**409**	**409**	ND	**49.2**	**2.8**	ND	**2.8**	**259**	--	1,384	7.34
		10/19/2017	--	ND	ND	--	ND	ND*	ND*	ND*	**99.5**	--	**81.2**	**3.07**	**103**	**2.95**	**384**	--	**384**	--	**42**	**3.74**	--	**3.74**	**282**	282	1,292	7.34
		6/29/2018	ND	ND	--	ND	ND	ND*	ND*	ND*	**103**	ND	**83.5**	**2.28**	**110**	**3.08**	ND	**375**	**375**	ND	**36.3**	**3.05**	ND	**3.05**	**334**	--	--	--
George Mayeda #1	MW01	10/20/2017	--	--	--	**0.001**	--	ND	ND	ND	**120**	ND	**85.8**	**9.33**	**131**	**2.5**	**343**	ND	**343**	ND	**42.3**	**3.6**	ND	**3.6**	**420**	420	1,543	7.75
	MW02	10/20/2017	--	--	--	ND	--	ND	ND	ND	**122**	ND	**70.2**	**12.1**	**129**	**1.97**	**306**	ND	**306**	ND	**48.5**	**3.41**	ND	**3.41**	**416**	416	1,496	7.94
	MW03	10/20/2017	--	--	--	ND	--	ND	ND	ND	**110**	ND	**90.4**	**5.23**	**131**	**2.86**	**331**	ND	**331**	ND	**38.5**	**4.15**	ND	**4.15**	**395**	395	1,245	7.64
Maruyama #1	MW-01	11/2/2017	--	--	--	--	--	--	--	--	**110**	--	**76.3**	**3.34**	**88.2**	**3.94**	**401**	--	--	--	**39.5**	**3.28**	--	**3.28**	**292**	292	1.319	7.90
	MW-02	11/2/2017	--	--	--	--	--	--	--	--	**114**	--	**77.1**	**3.63**	**91.1**	**4.01**	**385**	--	--	--	**37.3**	**3.24**	--	**3.24**	**315**	315	1.341	7.92
	MW-03	11/2/2017	--	--	--	--	--	--	--	--	**113**	--	**80.2**	**4.49**	**89.3**	**3.9**	**389**	--	--	--	**37**	<0.1	--	<0.1	**331**	331	1.334	7.98

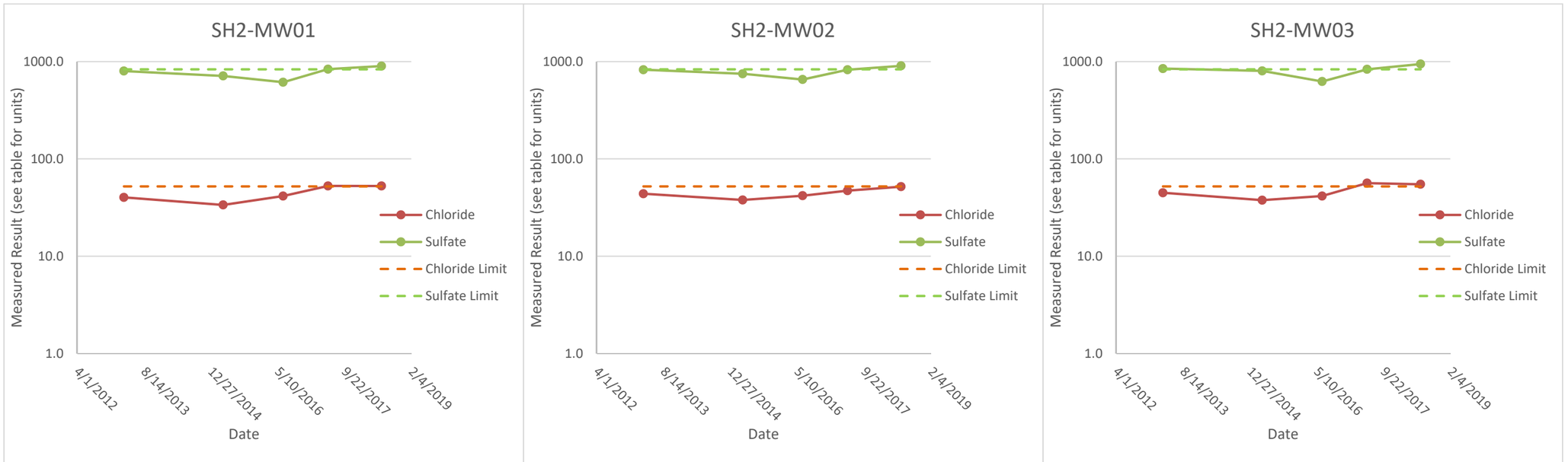
*Elevated detection level due to sample dilution
**Elevated detection level due to sample dilution above regulatory limits

[1] Wells were observed to be destroyed. Unable to measure depths to water.
[2] The aluminum collar around the well casing was bent and the concrete surface completion was found separated, the well was not sampled.
The bentonite seal may be compromised; however, the analytical data does not indicate that the well is compromised.
[3] The COGCC cleanup standard for chloride and sulfate is 1.25 x background. Background concentrations from unimpacted wells were used to average and calculate an appropriate background concentration for this area.
[4] Filled with sediment. No water present.
RD1 samples collected on 6/23/2016 had to be recollected for nitrite and nitrate analysis due to a shipping delay resulting in the original samples being past the hold time of 48 hours.
COGCC - Colorado Oil and Gas Conservation Commission
CDPHE - Colorado Department of Public Health and Environment
mg/L - milligrams per liter
ND - Parameter not detected above the laboratory detection limit (Detection Limit)
Bold indicates detected constituents
Yellow shading indicates constituents above COGCC Table 910-1 standards.
Green shading indicates constituents detected above CDPHE standards
Green shading indicates the most recent analytical results.
umhos/cm - microsiemens per centimeter
M - Drinking water maximum contaminant level
-- Not Sampled
Bkg - Background
--- indicates no regulatory standard

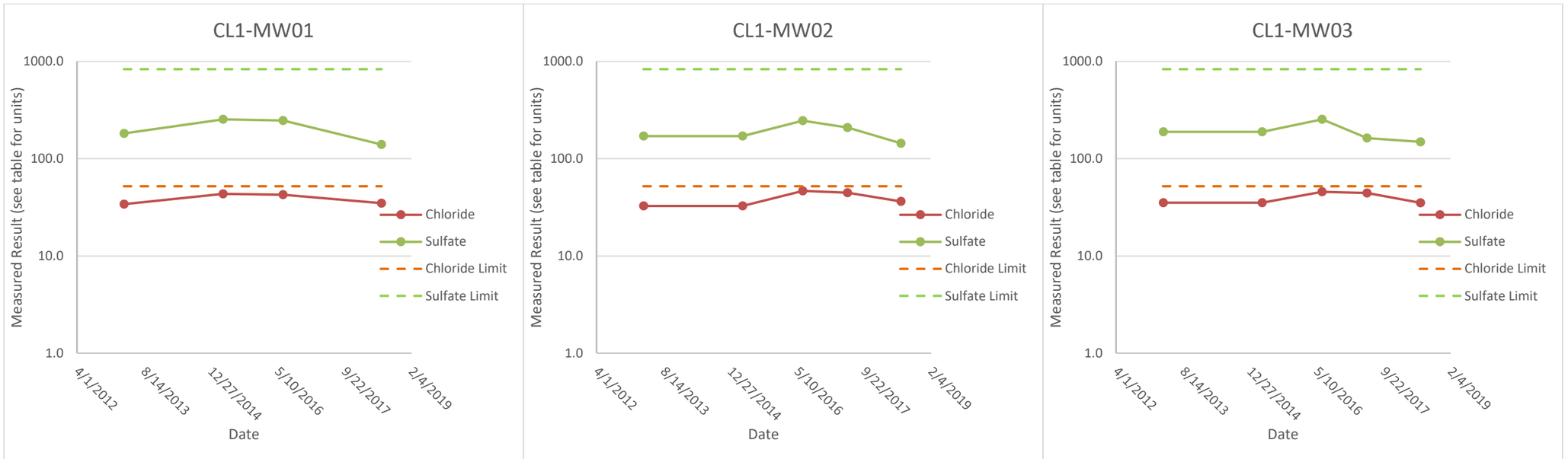
Sherwood #1 Wellhead



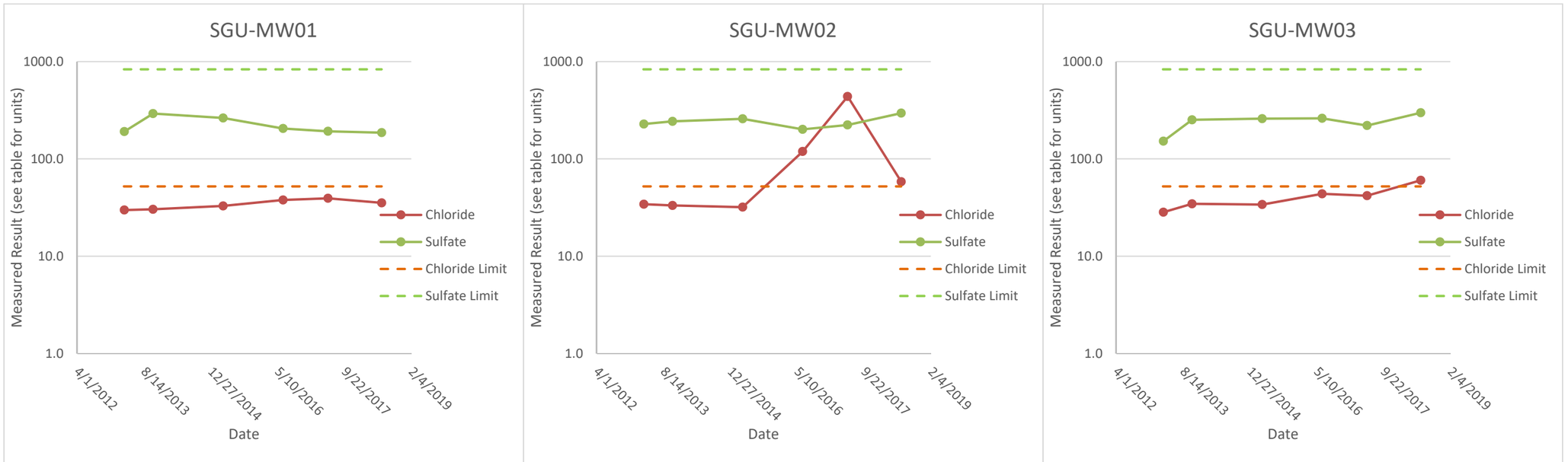
Sherwood #2 Wellhead



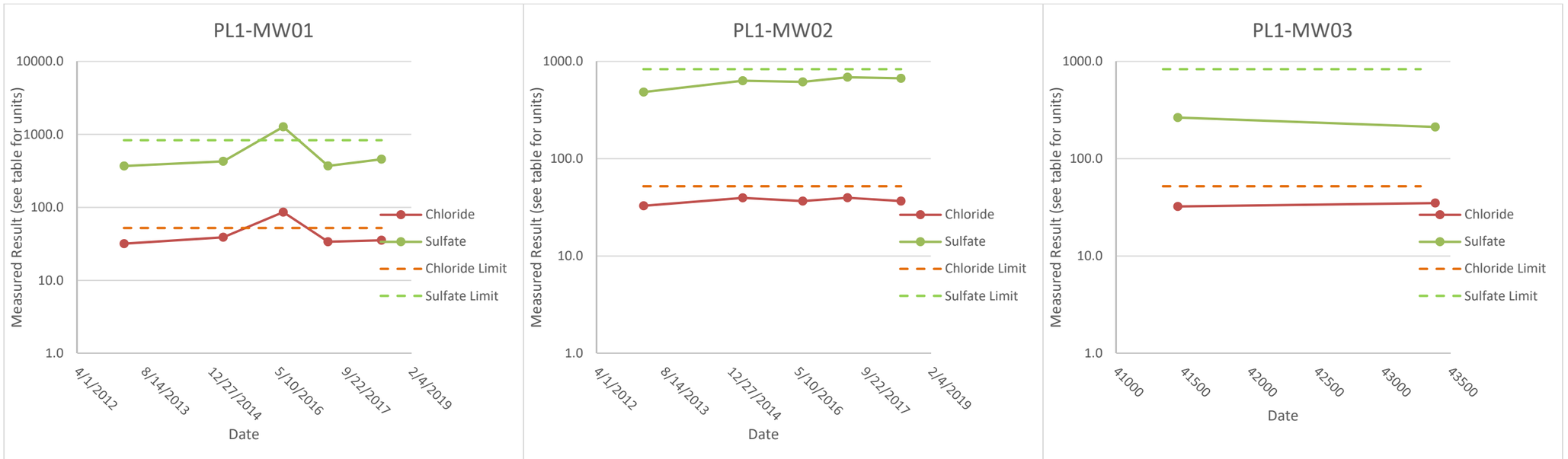
City of Longmont #1 Wellhead



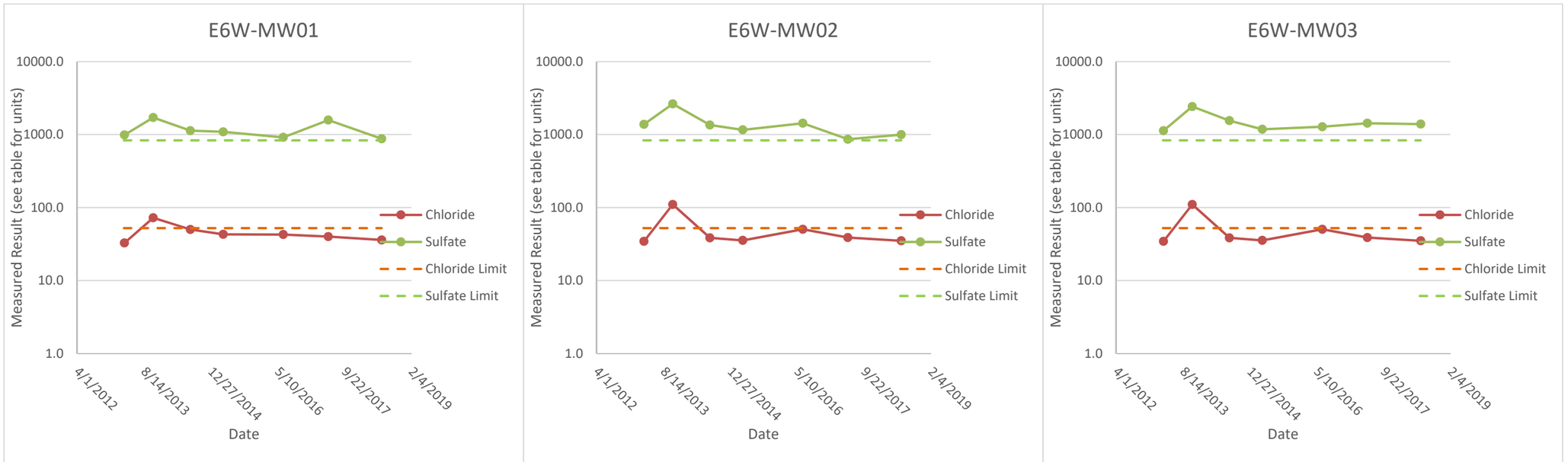
Serafini Gas Unit



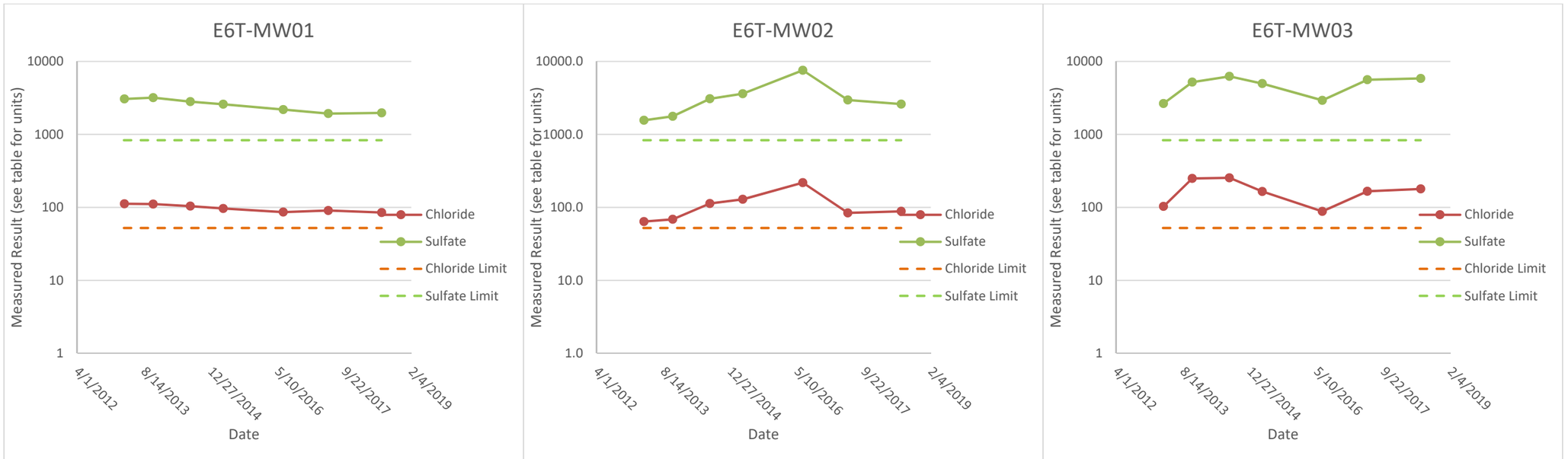
Powell #1 Wellhead



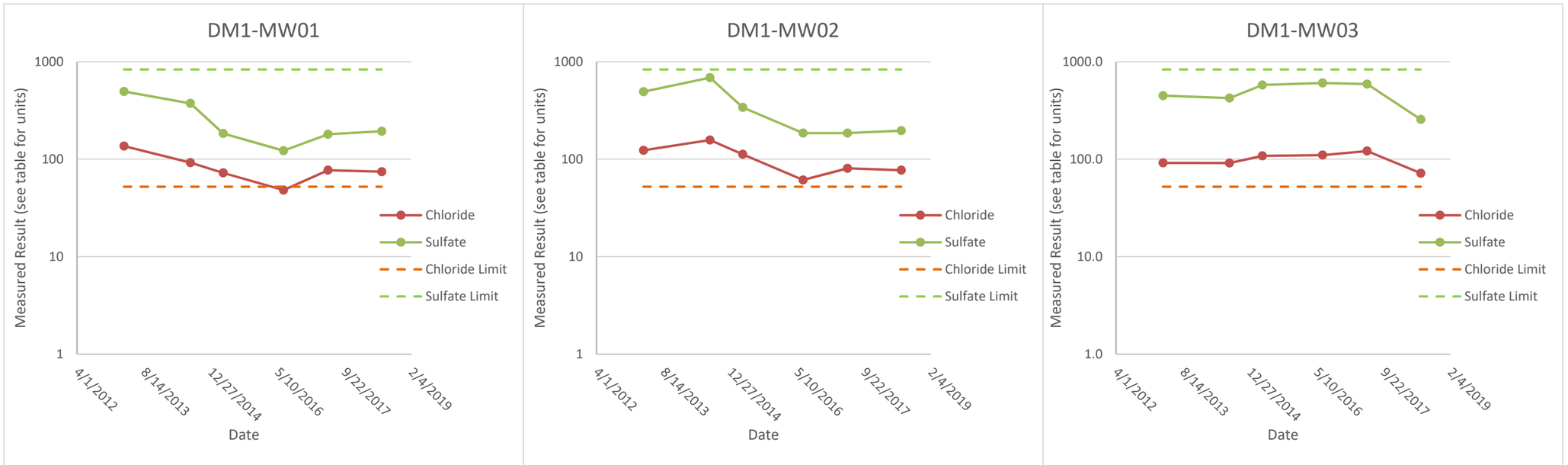
Evans #6 Wellhead



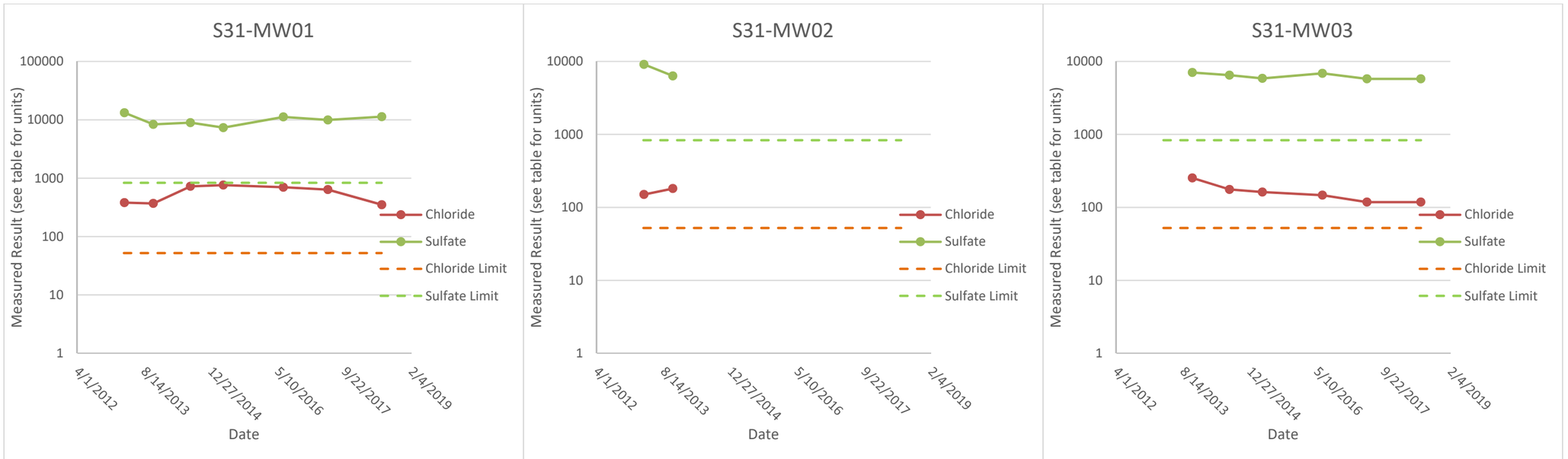
Evans #6 Tank Battery

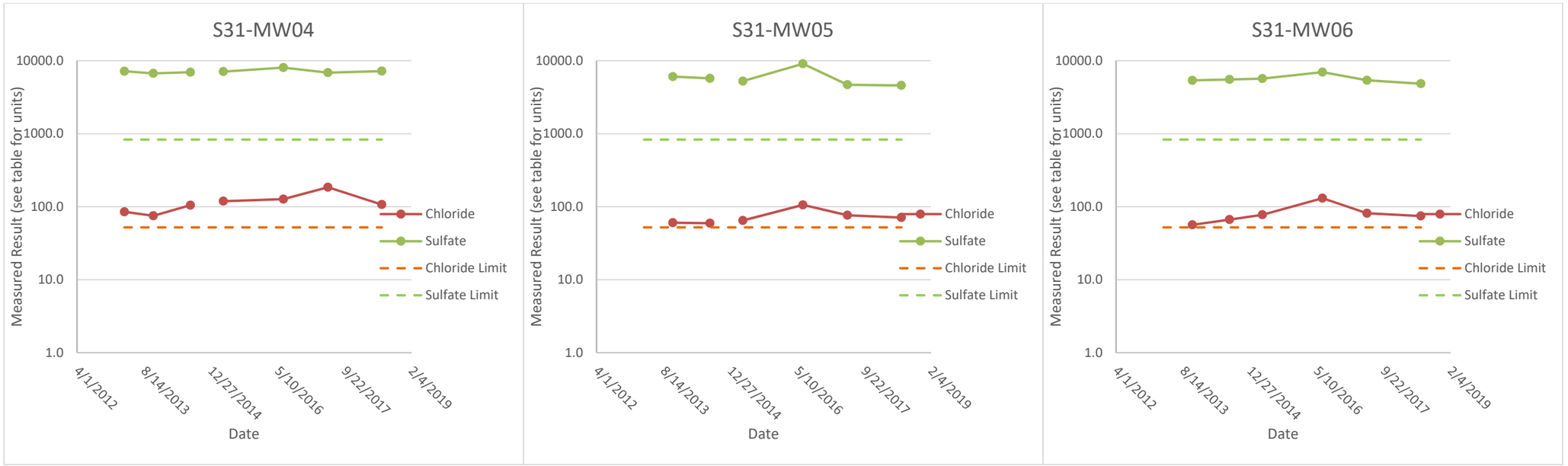


Domenico #1 Wellsite

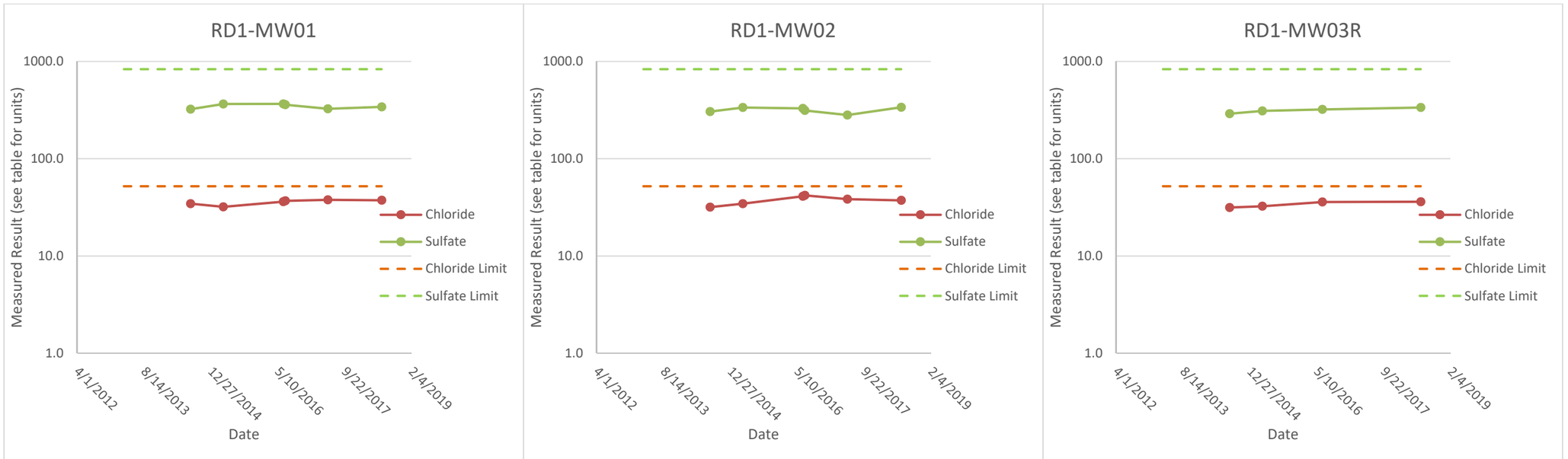


Stamp 31-2C Wellsite





Rider #1 Wellsite



APPENDIX B – ANALYTICAL REPORTS AND CHAINS OF CUSTODY

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 09, 2018

Terracon Consultants, Inc - Longmont, CO

Sample Delivery Group:	L1005129
Samples Received:	06/28/2018
Project Number:	22187009
Description:	COL Annual GW Quality Monitoring

Report To: Michael Skridulis
1242 Bramwood Place
Longmont, CO 80501

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

SH1-MW-01 L1005129-01 GW

Collected by: Drew Stephens | Collected date/time: 06/27/18 09:30 | Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 00:24	07/06/18 00:24	GB
Wet Chemistry by Method 9056A	WG1131111	1	06/29/18 03:41	06/29/18 03:41	MAJ
Wet Chemistry by Method 9056A	WG1131111	5	06/29/18 03:57	06/29/18 03:57	MAJ
Wet Chemistry by Method 9056A	WG1133122	10	07/03/18 20:52	07/03/18 20:52	MCG
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:18	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 14:42	07/03/18 14:42	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 00:39	06/29/18 00:39	LRL

SH1-MW-02 L1005129-02 GW

Collected by: Drew Stephens | Collected date/time: 06/27/18 09:45 | Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 00:31	07/06/18 00:31	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 12:55	06/28/18 12:55	DR
Wet Chemistry by Method 9056A	WG1131112	10	06/28/18 13:08	06/28/18 13:08	DR
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:20	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 14:54	07/03/18 14:54	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 00:59	06/29/18 00:59	LRL

SH1-MW-03 L1005129-03 GW

Collected by: Drew Stephens | Collected date/time: 06/27/18 10:00 | Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 00:39	07/06/18 00:39	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 13:22	06/28/18 13:22	DR
Wet Chemistry by Method 9056A	WG1131112	10	06/28/18 13:36	06/28/18 13:36	DR
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:28	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 15:13	07/03/18 15:13	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 01:19	06/29/18 01:19	LRL

SH2-MW-01 L1005129-04 GW

Collected by: Drew Stephens | Collected date/time: 06/27/18 10:45 | Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 00:46	07/06/18 00:46	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 13:50	06/28/18 13:50	DR
Wet Chemistry by Method 9056A	WG1131112	10	06/28/18 14:04	06/28/18 14:04	DR
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:31	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 15:16	07/03/18 15:16	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 01:39	06/29/18 01:39	LRL

SH2-MW-02 L1005129-05 GW

Collected by: Drew Stephens | Collected date/time: 06/27/18 11:00 | Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 00:53	07/06/18 00:53	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 14:46	06/28/18 14:46	DR
Wet Chemistry by Method 9056A	WG1131112	10	06/28/18 15:00	06/28/18 15:00	DR
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:33	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1134765	1	07/07/18 10:57	07/07/18 10:57	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 01:59	06/29/18 01:59	LRL

SH2-MW-03 L1005129-06 GW

Collected by: Drew Stephens | Collected date/time: 06/27/18 11:15 | Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 01:12	07/06/18 01:12	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 15:14	06/28/18 15:14	DR
Wet Chemistry by Method 9056A	WG1131112	10	06/28/18 15:28	06/28/18 15:28	DR
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:36	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 15:42	07/03/18 15:42	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 02:19	06/29/18 02:19	LRL

CL1-MW-01 L1005129-07 GW

Collected by: Drew Stephens | Collected date/time: 06/27/18 12:00 | Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 01:19	07/06/18 01:19	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 15:41	06/28/18 15:41	DR
Wet Chemistry by Method 9056A	WG1131626	5	07/03/18 00:48	07/03/18 00:48	MAJ
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:39	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 15:53	07/03/18 15:53	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 02:40	06/29/18 02:40	LRL

CL1-MW-02 L1005129-08 GW

Collected by: Drew Stephens | Collected date/time: 06/27/18 12:15 | Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 01:27	07/06/18 01:27	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 16:23	06/28/18 16:23	DR
Wet Chemistry by Method 9056A	WG1131112	10	06/28/18 16:37	06/28/18 16:37	DR
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:41	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 15:55	07/03/18 15:55	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 03:00	06/29/18 03:00	LRL

CL1-MW-03 L1005129-09 GW

Collected by: Drew Stephens | Collected date/time: 06/27/18 12:35 | Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 01:35	07/06/18 01:35	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 16:51	06/28/18 16:51	DR
Wet Chemistry by Method 9056A	WG1131626	5	07/03/18 01:04	07/03/18 01:04	MAJ
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:44	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 15:58	07/03/18 15:58	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 03:20	06/29/18 03:20	LRL

PW1-MW-01 L1005129-10 GW

Collected by: Drew Stephens | Collected date/time: 06/27/18 13:39 | Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 01:50	07/06/18 01:50	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 17:33	06/28/18 17:33	DR
Wet Chemistry by Method 9056A	WG1131112	5	06/28/18 17:47	06/28/18 17:47	DR
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:46	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 16:00	07/03/18 16:00	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 03:40	06/29/18 03:40	LRL

PW1-MW-02 L1005129-11 GW

Collected by: Drew Stephens
Collected date/time: 06/27/18 14:00
Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 01:57	07/06/18 01:57	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 18:01	06/28/18 18:01	DR
Wet Chemistry by Method 9056A	WG1131112	10	06/28/18 18:15	06/28/18 18:15	DR
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:49	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 16:03	07/03/18 16:03	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 04:00	06/29/18 04:00	LRL

PW1-MW-03 L1005129-12 GW

Collected by: Drew Stephens
Collected date/time: 06/27/18 14:15
Received date/time: 06/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133069	1	07/06/18 02:04	07/06/18 02:04	GB
Wet Chemistry by Method 9056A	WG1131112	1	06/28/18 18:28	06/28/18 18:28	DR
Wet Chemistry by Method 9056A	WG1131112	10	06/28/18 18:42	06/28/18 18:42	DR
Metals (ICP) by Method 6010B	WG1131613	1	07/03/18 13:31	07/05/18 12:52	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1133067	1	07/03/18 16:18	07/03/18 16:18	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1131585	1	06/29/18 04:20	06/29/18 04:20	LRL

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne Richards
Technical Service Representative

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	450		20.0	1	07/06/2018 00:24	WG1133069

Sample Narrative:

L1005129-01 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	1.13		1.00	1	06/29/2018 03:41	WG1131111
Chloride	63.9		1.00	1	06/29/2018 03:41	WG1131111
Nitrate as (N)	15.4		0.500	5	06/29/2018 03:57	WG1131111
Nitrite as (N)	ND		0.100	1	06/29/2018 03:41	WG1131111
Sulfate	679		50.0	10	07/03/2018 20:52	WG1133122

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	121		1.00	1	07/05/2018 12:18	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:18	WG1131613
Magnesium,Dissolved	160		1.00	1	07/05/2018 12:18	WG1131613
Potassium,Dissolved	2.11		1.00	1	07/05/2018 12:18	WG1131613
Sodium,Dissolved	183		1.00	1	07/05/2018 12:18	WG1131613
Strontium,Dissolved	2.83		0.0100	1	07/05/2018 12:18	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/03/2018 14:42	WG1133067
Ethane	ND		0.0130	1	07/03/2018 14:42	WG1133067
Ethene	ND		0.0130	1	07/03/2018 14:42	WG1133067

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND	J4	0.0500	1	06/29/2018 00:39	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 00:39	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 00:39	WG1131585
Benzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 00:39	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 00:39	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 00:39	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 00:39	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 00:39	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 00:39	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 00:39	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 00:39	WG1131585

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 00:39	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 00:39	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 00:39	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 00:39	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 00:39	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 00:39	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 00:39	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 00:39	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 00:39	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 00:39	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 00:39	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 00:39	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 00:39	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 00:39	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Styrene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Toluene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 00:39	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 00:39	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 00:39	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 00:39	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 00:39	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 00:39	WG1131585
(S) Toluene-d8	*98.4*		*80.0-120*		*06/29/2018 00:39*	WG1131585
(S) Dibromofluoromethane	*92.5*		*76.0-123*		*06/29/2018 00:39*	WG1131585
(S) 4-Bromofluorobenzene	*91.3*		*80.0-120*		*06/29/2018 00:39*	WG1131585

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

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	436		20.0	1	07/06/2018 00:31	WG1133069

Sample Narrative:
L1005129-02 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/28/2018 12:55	WG1131112
Chloride	67.1		1.00	1	06/28/2018 12:55	WG1131112
Nitrate as (N)	16.6		1.00	10	06/28/2018 13:08	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 12:55	WG1131112
Sulfate	646		50.0	10	06/28/2018 13:08	WG1131112

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	133		1.00	1	07/05/2018 12:20	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:20	WG1131613
Magnesium,Dissolved	145		1.00	1	07/05/2018 12:20	WG1131613
Potassium,Dissolved	2.17		1.00	1	07/05/2018 12:20	WG1131613
Sodium,Dissolved	169		1.00	1	07/05/2018 12:20	WG1131613
Strontium,Dissolved	2.79		0.0100	1	07/05/2018 12:20	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/03/2018 14:54	WG1133067
Ethane	ND		0.0130	1	07/03/2018 14:54	WG1133067
Ethene	ND		0.0130	1	07/03/2018 14:54	WG1133067

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND	J4	0.0500	1	06/29/2018 00:59	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 00:59	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 00:59	WG1131585
Benzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 00:59	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 00:59	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 00:59	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 00:59	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 00:59	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 00:59	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 00:59	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 00:59	WG1131585

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 00:59	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 00:59	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 00:59	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 00:59	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 00:59	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 00:59	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 00:59	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 00:59	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 00:59	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 00:59	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 00:59	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 00:59	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 00:59	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 00:59	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Styrene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Toluene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 00:59	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 00:59	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 00:59	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 00:59	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 00:59	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 00:59	WG1131585
(S) Toluene-d8	*99.9*		*80.0-120*		*06/29/2018 00:59*	WG1131585
(S) Dibromofluoromethane	*93.9*		*76.0-123*		*06/29/2018 00:59*	WG1131585
(S) 4-Bromofluorobenzene	*95.8*		*80.0-120*		*06/29/2018 00:59*	WG1131585

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	436		20.0	1	07/06/2018 00:39	WG1133069

Sample Narrative:
L1005129-03 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/28/2018 13:22	WG1131112
Chloride	68.5		1.00	1	06/28/2018 13:22	WG1131112
Nitrate as (N)	14.6		1.00	10	06/28/2018 13:36	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 13:22	WG1131112
Sulfate	725		50.0	10	06/28/2018 13:36	WG1131112

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	131		1.00	1	07/05/2018 12:28	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:28	WG1131613
Magnesium,Dissolved	161		1.00	1	07/05/2018 12:28	WG1131613
Potassium,Dissolved	2.20		1.00	1	07/05/2018 12:28	WG1131613
Sodium,Dissolved	179		1.00	1	07/05/2018 12:28	WG1131613
Strontium,Dissolved	3.01		0.0100	1	07/05/2018 12:28	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/03/2018 15:13	WG1133067
Ethane	ND		0.0130	1	07/03/2018 15:13	WG1133067
Ethene	ND		0.0130	1	07/03/2018 15:13	WG1133067

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	06/29/2018 01:19	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 01:19	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 01:19	WG1131585
Benzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 01:19	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 01:19	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 01:19	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 01:19	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 01:19	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 01:19	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 01:19	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 01:19	WG1131585

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 01:19	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 01:19	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 01:19	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 01:19	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 01:19	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 01:19	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 01:19	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 01:19	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 01:19	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 01:19	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 01:19	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 01:19	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 01:19	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 01:19	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Styrene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Toluene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 01:19	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 01:19	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 01:19	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 01:19	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 01:19	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 01:19	WG1131585
(S) Toluene-d8	*98.4*		*80.0-120*		*06/29/2018 01:19*	WG1131585
(S) Dibromofluoromethane	*95.1*		*76.0-123*		*06/29/2018 01:19*	WG1131585
(S) 4-Bromofluorobenzene	*94.9*		*80.0-120*		*06/29/2018 01:19*	WG1131585

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	349		20.0	1	07/06/2018 00:46	WG1133069

Sample Narrative:
L1005129-04 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/28/2018 13:50	WG1131112
Chloride	52.6		1.00	1	06/28/2018 13:50	WG1131112
Nitrate as (N)	5.97		0.100	1	06/28/2018 13:50	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 13:50	WG1131112
Sulfate	899		50.0	10	06/28/2018 14:04	WG1131112

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	234		1.00	1	07/05/2018 12:31	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:31	WG1131613
Magnesium,Dissolved	131		1.00	1	07/05/2018 12:31	WG1131613
Potassium,Dissolved	2.07		1.00	1	07/05/2018 12:31	WG1131613
Sodium,Dissolved	122		1.00	1	07/05/2018 12:31	WG1131613
Strontium,Dissolved	3.89		0.0100	1	07/05/2018 12:31	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/03/2018 15:16	WG1133067
Ethane	ND		0.0130	1	07/03/2018 15:16	WG1133067
Ethene	ND		0.0130	1	07/03/2018 15:16	WG1133067

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	06/29/2018 01:39	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 01:39	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 01:39	WG1131585
Benzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 01:39	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 01:39	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 01:39	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 01:39	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 01:39	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 01:39	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 01:39	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 01:39	WG1131585

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 01:39	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 01:39	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 01:39	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 01:39	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 01:39	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 01:39	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 01:39	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 01:39	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 01:39	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 01:39	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 01:39	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 01:39	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 01:39	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 01:39	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Styrene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Toluene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 01:39	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 01:39	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 01:39	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 01:39	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 01:39	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 01:39	WG1131585
(S) Toluene-d8	*105*		*80.0-120*		*06/29/2018 01:39*	WG1131585
(S) Dibromofluoromethane	*96.5*		*76.0-123*		*06/29/2018 01:39*	WG1131585
(S) 4-Bromofluorobenzene	*94.7*		*80.0-120*		*06/29/2018 01:39*	WG1131585

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	351		20.0	1	07/06/2018 00:53	WG1133069

Sample Narrative:

L1005129-05 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/28/2018 14:46	WG1131112
Chloride	51.8		1.00	1	06/28/2018 14:46	WG1131112
Nitrate as (N)	5.98		0.100	1	06/28/2018 14:46	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 14:46	WG1131112
Sulfate	904		50.0	10	06/28/2018 15:00	WG1131112

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	236		1.00	1	07/05/2018 12:33	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:33	WG1131613
Magnesium,Dissolved	129		1.00	1	07/05/2018 12:33	WG1131613
Potassium,Dissolved	3.76		1.00	1	07/05/2018 12:33	WG1131613
Sodium,Dissolved	121		1.00	1	07/05/2018 12:33	WG1131613
Strontium,Dissolved	4.02		0.0100	1	07/05/2018 12:33	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/07/2018 10:57	WG1134765
Ethane	ND		0.0130	1	07/07/2018 10:57	WG1134765
Ethene	ND		0.0130	1	07/07/2018 10:57	WG1134765

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND	J4	0.0500	1	06/29/2018 01:59	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 01:59	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 01:59	WG1131585
Benzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 01:59	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 01:59	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 01:59	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 01:59	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 01:59	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 01:59	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 01:59	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 01:59	WG1131585

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 01:59	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 01:59	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 01:59	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 01:59	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 01:59	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 01:59	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 01:59	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 01:59	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 01:59	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 01:59	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 01:59	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 01:59	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 01:59	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 01:59	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Styrene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Toluene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 01:59	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 01:59	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 01:59	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 01:59	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 01:59	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 01:59	WG1131585
(S) Toluene-d8	*101*		*80.0-120*		*06/29/2018 01:59*	WG1131585
(S) Dibromofluoromethane	*96.3*		*76.0-123*		*06/29/2018 01:59*	WG1131585
(S) 4-Bromofluorobenzene	*95.8*		*80.0-120*		*06/29/2018 01:59*	WG1131585

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	349		20.0	1	07/06/2018 01:12	WG1133069

Sample Narrative:

L1005129-06 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/28/2018 15:14	WG1131112
Chloride	54.8		1.00	1	06/28/2018 15:14	WG1131112
Nitrate as (N)	7.32		0.100	1	06/28/2018 15:14	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 15:14	WG1131112
Sulfate	944		50.0	10	06/28/2018 15:28	WG1131112

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	258		1.00	1	07/05/2018 12:36	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:36	WG1131613
Magnesium,Dissolved	123		1.00	1	07/05/2018 12:36	WG1131613
Potassium,Dissolved	7.91		1.00	1	07/05/2018 12:36	WG1131613
Sodium,Dissolved	128		1.00	1	07/05/2018 12:36	WG1131613
Strontium,Dissolved	4.51		0.0100	1	07/05/2018 12:36	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/03/2018 15:42	WG1133067
Ethane	ND		0.0130	1	07/03/2018 15:42	WG1133067
Ethene	ND		0.0130	1	07/03/2018 15:42	WG1133067

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND	J4	0.0500	1	06/29/2018 02:19	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 02:19	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 02:19	WG1131585
Benzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 02:19	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 02:19	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 02:19	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 02:19	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 02:19	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 02:19	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 02:19	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 02:19	WG1131585

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 02:19	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 02:19	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 02:19	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 02:19	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 02:19	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 02:19	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 02:19	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 02:19	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 02:19	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 02:19	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 02:19	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 02:19	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 02:19	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 02:19	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Styrene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Toluene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 02:19	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 02:19	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 02:19	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 02:19	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 02:19	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 02:19	WG1131585
(S) Toluene-d8	*98.5*		*80.0-120*		*06/29/2018 02:19*	WG1131585
(S) Dibromofluoromethane	*93.7*		*76.0-123*		*06/29/2018 02:19*	WG1131585
(S) 4-Bromofluorobenzene	*96.2*		*80.0-120*		*06/29/2018 02:19*	WG1131585

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	355		20.0	1	07/06/2018 01:19	WG1133069

Sample Narrative:
L1005129-07 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/28/2018 15:41	WG1131112
Chloride	34.9		1.00	1	06/28/2018 15:41	WG1131112
Nitrate as (N)	8.14		0.100	1	06/28/2018 15:41	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 15:41	WG1131112
Sulfate	140		25.0	5	07/03/2018 00:48	WG1131626

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	82.8		1.00	1	07/05/2018 12:39	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:39	WG1131613
Magnesium,Dissolved	66.0		1.00	1	07/05/2018 12:39	WG1131613
Potassium,Dissolved	1.71		1.00	1	07/05/2018 12:39	WG1131613
Sodium,Dissolved	69.1		1.00	1	07/05/2018 12:39	WG1131613
Strontium,Dissolved	1.86		0.0100	1	07/05/2018 12:39	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/03/2018 15:53	WG1133067
Ethane	ND		0.0130	1	07/03/2018 15:53	WG1133067
Ethene	ND		0.0130	1	07/03/2018 15:53	WG1133067

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	06/29/2018 02:40	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 02:40	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 02:40	WG1131585
Benzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 02:40	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 02:40	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 02:40	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 02:40	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 02:40	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 02:40	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 02:40	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 02:40	WG1131585

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 02:40	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 02:40	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 02:40	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 02:40	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 02:40	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 02:40	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 02:40	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 02:40	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 02:40	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 02:40	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 02:40	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 02:40	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 02:40	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 02:40	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Styrene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Toluene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 02:40	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 02:40	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 02:40	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 02:40	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 02:40	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 02:40	WG1131585
(S) Toluene-d8	*99.1*		*80.0-120*		*06/29/2018 02:40*	WG1131585
(S) Dibromofluoromethane	*94.6*		*76.0-123*		*06/29/2018 02:40*	WG1131585
(S) 4-Bromofluorobenzene	*97.5*		*80.0-120*		*06/29/2018 02:40*	WG1131585

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	352		20.0	1	07/06/2018 01:27	WG1133069

Sample Narrative:
L1005129-08 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/28/2018 16:23	WG1131112
Chloride	36.4		1.00	1	06/28/2018 16:23	WG1131112
Nitrate as (N)	9.10		0.100	1	06/28/2018 16:23	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 16:23	WG1131112
Sulfate	144		50.0	10	06/28/2018 16:37	WG1131112

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	79.7		1.00	1	07/05/2018 12:41	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:41	WG1131613
Magnesium,Dissolved	62.9		1.00	1	07/05/2018 12:41	WG1131613
Potassium,Dissolved	1.76		1.00	1	07/05/2018 12:41	WG1131613
Sodium,Dissolved	76.9		1.00	1	07/05/2018 12:41	WG1131613
Strontium,Dissolved	1.81		0.0100	1	07/05/2018 12:41	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/03/2018 15:55	WG1133067
Ethane	ND		0.0130	1	07/03/2018 15:55	WG1133067
Ethene	ND		0.0130	1	07/03/2018 15:55	WG1133067

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	06/29/2018 03:00	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 03:00	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 03:00	WG1131585
Benzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 03:00	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 03:00	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 03:00	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 03:00	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 03:00	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 03:00	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 03:00	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 03:00	WG1131585

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 03:00	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 03:00	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 03:00	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 03:00	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 03:00	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 03:00	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 03:00	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 03:00	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 03:00	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 03:00	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 03:00	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 03:00	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 03:00	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 03:00	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Styrene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Toluene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 03:00	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 03:00	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 03:00	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 03:00	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 03:00	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 03:00	WG1131585
(S) Toluene-d8	*103*		*80.0-120*		*06/29/2018 03:00*	WG1131585
(S) Dibromofluoromethane	*92.4*		*76.0-123*		*06/29/2018 03:00*	WG1131585
(S) 4-Bromofluorobenzene	*94.9*		*80.0-120*		*06/29/2018 03:00*	WG1131585

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	353		20.0	1	07/06/2018 01:35	WG1133069

Sample Narrative:

L1005129-09 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/28/2018 16:51	WG1131112
Chloride	35.2		1.00	1	06/28/2018 16:51	WG1131112
Nitrate as (N)	7.57		0.100	1	06/28/2018 16:51	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 16:51	WG1131112
Sulfate	149		25.0	5	07/03/2018 01:04	WG1131626

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	80.3		1.00	1	07/05/2018 12:44	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:44	WG1131613
Magnesium,Dissolved	67.6		1.00	1	07/05/2018 12:44	WG1131613
Potassium,Dissolved	1.73		1.00	1	07/05/2018 12:44	WG1131613
Sodium,Dissolved	73.6		1.00	1	07/05/2018 12:44	WG1131613
Strontium,Dissolved	1.94		0.0100	1	07/05/2018 12:44	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/03/2018 15:58	WG1133067
Ethane	ND		0.0130	1	07/03/2018 15:58	WG1133067
Ethene	ND		0.0130	1	07/03/2018 15:58	WG1133067

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND	J4	0.0500	1	06/29/2018 03:20	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 03:20	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 03:20	WG1131585
Benzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 03:20	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 03:20	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 03:20	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 03:20	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 03:20	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 03:20	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 03:20	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 03:20	WG1131585

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 03:20	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 03:20	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 03:20	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 03:20	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 03:20	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 03:20	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 03:20	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 03:20	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 03:20	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 03:20	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 03:20	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 03:20	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 03:20	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 03:20	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Styrene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Toluene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 03:20	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 03:20	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 03:20	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 03:20	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 03:20	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 03:20	WG1131585
(S) Toluene-d8	*102*		*80.0-120*		*06/29/2018 03:20*	WG1131585
(S) Dibromofluoromethane	*95.6*		*76.0-123*		*06/29/2018 03:20*	WG1131585
(S) 4-Bromofluorobenzene	*95.8*		*80.0-120*		*06/29/2018 03:20*	WG1131585

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	215		20.0	1	07/06/2018 01:50	WG1133069

Sample Narrative:
L1005129-10 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/28/2018 17:33	WG1131112
Chloride	35.4		1.00	1	06/28/2018 17:33	WG1131112
Nitrate as (N)	5.94		0.100	1	06/28/2018 17:33	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 17:33	WG1131112
Sulfate	457		25.0	5	06/28/2018 17:47	WG1131112

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	101		1.00	1	07/05/2018 12:46	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:46	WG1131613
Magnesium,Dissolved	74.9		1.00	1	07/05/2018 12:46	WG1131613
Potassium,Dissolved	1.66		1.00	1	07/05/2018 12:46	WG1131613
Sodium,Dissolved	97.2		1.00	1	07/05/2018 12:46	WG1131613
Strontium,Dissolved	1.74		0.0100	1	07/05/2018 12:46	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/03/2018 16:00	WG1133067
Ethane	ND		0.0130	1	07/03/2018 16:00	WG1133067
Ethene	ND		0.0130	1	07/03/2018 16:00	WG1133067

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	06/29/2018 03:40	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 03:40	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 03:40	WG1131585
Benzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 03:40	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 03:40	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 03:40	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 03:40	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 03:40	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 03:40	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 03:40	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 03:40	WG1131585

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 03:40	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 03:40	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 03:40	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 03:40	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 03:40	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 03:40	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 03:40	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 03:40	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 03:40	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 03:40	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 03:40	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 03:40	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 03:40	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 03:40	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Styrene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Toluene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 03:40	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 03:40	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 03:40	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 03:40	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 03:40	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 03:40	WG1131585
(S) Toluene-d8	*99.7*		*80.0-120*		*06/29/2018 03:40*	WG1131585
(S) Dibromofluoromethane	*97.1*		*76.0-123*		*06/29/2018 03:40*	WG1131585
(S) 4-Bromofluorobenzene	*90.4*		*80.0-120*		*06/29/2018 03:40*	WG1131585

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	321		20.0	1	07/06/2018 01:57	WG1133069

Sample Narrative:
L1005129-11 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/28/2018 18:01	WG1131112
Chloride	36.7		1.00	1	06/28/2018 18:01	WG1131112
Nitrate as (N)	ND		0.100	1	06/28/2018 18:01	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 18:01	WG1131112
Sulfate	670		50.0	10	06/28/2018 18:15	WG1131112

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	128		1.00	1	07/05/2018 12:49	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:49	WG1131613
Magnesium,Dissolved	88.9		1.00	1	07/05/2018 12:49	WG1131613
Potassium,Dissolved	2.54		1.00	1	07/05/2018 12:49	WG1131613
Sodium,Dissolved	170		1.00	1	07/05/2018 12:49	WG1131613
Strontium,Dissolved	1.89		0.0100	1	07/05/2018 12:49	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	0.0360		0.0100	1	07/03/2018 16:03	WG1133067
Ethane	ND		0.0130	1	07/03/2018 16:03	WG1133067
Ethene	ND		0.0130	1	07/03/2018 16:03	WG1133067

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	06/29/2018 04:00	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 04:00	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 04:00	WG1131585
Benzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 04:00	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 04:00	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 04:00	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 04:00	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 04:00	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 04:00	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 04:00	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 04:00	WG1131585

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 04:00	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 04:00	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 04:00	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 04:00	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 04:00	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 04:00	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 04:00	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 04:00	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 04:00	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 04:00	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 04:00	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 04:00	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 04:00	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 04:00	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Styrene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Toluene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 04:00	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 04:00	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 04:00	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 04:00	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 04:00	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 04:00	WG1131585
(S) Toluene-d8	*94.7*		*80.0-120*		*06/29/2018 04:00*	WG1131585
(S) Dibromofluoromethane	*94.5*		*76.0-123*		*06/29/2018 04:00*	WG1131585
(S) 4-Bromofluorobenzene	*97.8*		*80.0-120*		*06/29/2018 04:00*	WG1131585

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	256		20.0	1	07/06/2018 02:04	WG1133069

Sample Narrative:

L1005129-12 WG1133069: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/28/2018 18:28	WG1131112
Chloride	35.0		1.00	1	06/28/2018 18:28	WG1131112
Nitrate as (N)	0.503		0.100	1	06/28/2018 18:28	WG1131112
Nitrite as (N)	ND		0.100	1	06/28/2018 18:28	WG1131112
Sulfate	212		50.0	10	06/28/2018 18:42	WG1131112

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	65.7		1.00	1	07/05/2018 12:52	WG1131613
Iron,Dissolved	ND		0.100	1	07/05/2018 12:52	WG1131613
Magnesium,Dissolved	47.9		1.00	1	07/05/2018 12:52	WG1131613
Potassium,Dissolved	3.40		1.00	1	07/05/2018 12:52	WG1131613
Sodium,Dissolved	77.0		1.00	1	07/05/2018 12:52	WG1131613
Strontium,Dissolved	1.07		0.0100	1	07/05/2018 12:52	WG1131613

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	0.100		0.0100	1	07/03/2018 16:18	WG1133067
Ethane	ND		0.0130	1	07/03/2018 16:18	WG1133067
Ethene	ND		0.0130	1	07/03/2018 16:18	WG1133067

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	06/29/2018 04:20	WG1131585
Acrolein	ND	J3	0.0500	1	06/29/2018 04:20	WG1131585
Acrylonitrile	ND		0.0100	1	06/29/2018 04:20	WG1131585
Benzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Bromobenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Bromodichloromethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
Bromoform	ND		0.00100	1	06/29/2018 04:20	WG1131585
Bromomethane	ND		0.00500	1	06/29/2018 04:20	WG1131585
n-Butylbenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
sec-Butylbenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
tert-Butylbenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Carbon tetrachloride	ND		0.00100	1	06/29/2018 04:20	WG1131585
Chlorobenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Chlorodibromomethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
Chloroethane	ND		0.00500	1	06/29/2018 04:20	WG1131585
Chloroform	ND		0.00500	1	06/29/2018 04:20	WG1131585
Chloromethane	ND		0.00250	1	06/29/2018 04:20	WG1131585
2-Chlorotoluene	ND		0.00100	1	06/29/2018 04:20	WG1131585
4-Chlorotoluene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/29/2018 04:20	WG1131585

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
Dibromomethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,2-Dichlorobenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,3-Dichlorobenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,4-Dichlorobenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Dichlorodifluoromethane	ND		0.00500	1	06/29/2018 04:20	WG1131585
1,1-Dichloroethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,2-Dichloroethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,1-Dichloroethene	ND		0.00100	1	06/29/2018 04:20	WG1131585
cis-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 04:20	WG1131585
trans-1,2-Dichloroethene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,2-Dichloropropane	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,1-Dichloropropene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,3-Dichloropropane	ND		0.00100	1	06/29/2018 04:20	WG1131585
cis-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 04:20	WG1131585
trans-1,3-Dichloropropene	ND		0.00100	1	06/29/2018 04:20	WG1131585
2,2-Dichloropropane	ND		0.00100	1	06/29/2018 04:20	WG1131585
Di-isopropyl ether	ND		0.00100	1	06/29/2018 04:20	WG1131585
Ethylbenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Hexachloro-1,3-butadiene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Isopropylbenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
p-Isopropyltoluene	ND		0.00100	1	06/29/2018 04:20	WG1131585
2-Butanone (MEK)	ND		0.0100	1	06/29/2018 04:20	WG1131585
Methylene Chloride	ND		0.00500	1	06/29/2018 04:20	WG1131585
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/29/2018 04:20	WG1131585
Methyl tert-butyl ether	ND		0.00100	1	06/29/2018 04:20	WG1131585
Naphthalene	ND		0.00500	1	06/29/2018 04:20	WG1131585
n-Propylbenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Styrene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
Tetrachloroethene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Toluene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,2,3-Trichlorobenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,2,4-Trichlorobenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,1,1-Trichloroethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,1,2-Trichloroethane	ND		0.00100	1	06/29/2018 04:20	WG1131585
Trichloroethene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Trichlorofluoromethane	ND		0.00500	1	06/29/2018 04:20	WG1131585
1,2,3-Trichloropropane	ND		0.00250	1	06/29/2018 04:20	WG1131585
1,2,4-Trimethylbenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,2,3-Trimethylbenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
1,3,5-Trimethylbenzene	ND		0.00100	1	06/29/2018 04:20	WG1131585
Vinyl chloride	ND		0.00100	1	06/29/2018 04:20	WG1131585
Xylenes, Total	ND		0.00300	1	06/29/2018 04:20	WG1131585
(S) Toluene-d8	*101*		*80.0-120*		*06/29/2018 04:20*	WG1131585
(S) Dibromofluoromethane	*99.8*		*76.0-123*		*06/29/2018 04:20*	WG1131585
(S) 4-Bromofluorobenzene	*90.7*		*80.0-120*		*06/29/2018 04:20*	WG1131585

L1005027-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1005027-05 07/05/18 23:45 • (DUP) R3323545-1 07/05/18 23:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	107	107	1	0.0690		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

L1005129-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1005129-09 07/06/18 01:35 • (DUP) R3323545-3 07/06/18 01:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	353	358	1	1.46		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

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

(LCS) R3323545-2 07/06/18 01:01 • (LCSD) R3323545-4 07/06/18 02:27

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	101	101	101	101	85.0-115			0.105	20

Sample Narrative:

LCS: Endpoint pH 4.5

LCSD: Endpoint pH 4.5

Method Blank (MB)

(MB) R3321929-1 06/28/18 11:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.0790	1.00
Chloride	U		0.0519	1.00
Nitrate	U		0.0227	0.100
Nitrite	U		0.0277	0.100

L1005110-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1005110-02 06/28/18 21:47 • (DUP) R3321929-4 06/28/18 22:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	0.000	1	0.000		15
Chloride	4.00	3.93	1	1.56		15
Nitrate	1.36	1.40	1	3.05		15
Nitrite	ND	0.000	1	0.000		15

L1005126-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1005126-03 06/29/18 00:36 • (DUP) R3321929-7 06/29/18 00:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	0.000	1	0.000		15
Chloride	1.98	1.95	1	1.80		15
Nitrate	1.34	1.40	1	4.49		15
Nitrite	ND	0.000	1	0.000		15

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

(LCS) R3321929-2 06/28/18 11:49 • (LCSD) R3321929-3 06/28/18 12:04

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 %
Bromide	40.0	38.6	38.7	96.4	96.8	80.0-120			0.349	15
Chloride	40.0	38.7	38.9	96.7	97.2	80.0-120			0.517	15
Nitrate	8.00	8.03	8.11	100	101	80.0-120			0.890	15
Nitrite	8.00	7.87	7.90	98.4	98.8	80.0-120			0.327	15

L1005110-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005110-02 06/28/18 21:47 • (MS) R3321929-5 06/28/18 22:18 • (MSD) R3321929-6 06/28/18 22:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	50.0	ND	48.6	49.1	97.2	98.1	1	80.0-120			0.982	15
Chloride	50.0	4.00	53.9	53.9	99.9	99.8	1	80.0-120			0.0863	15
Nitrate	5.00	1.36	6.41	6.50	101	103	1	80.0-120			1.46	15
Nitrite	5.00	ND	5.02	5.03	100	101	1	80.0-120			0.219	15

Method Blank (MB)

(MB) R3321814-1 06/28/18 07:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.0790	1.00
Chloride	U		0.0519	1.00
Nitrate	U		0.0227	0.100
Nitrite	U		0.0277	0.100
Sulfate	U		0.0774	5.00

L1005129-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1005129-07 06/28/18 15:41 • (DUP) R3321814-4 06/28/18 15:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	0.000	1	0.000		15
Chloride	34.9	34.8	1	0.0542		15
Nitrate	8.14	8.26	1	1.45		15
Nitrite	ND	0.000	1	0.000		15

L1005134-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1005134-03 06/28/18 21:43 • (DUP) R3321814-6 06/28/18 21:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	0.743	1	200	J P1	15
Chloride	26.5	26.5	1	0.0697		15
Nitrate	U	0.000	1	0.000		15
Nitrite	U	0.000	1	0.000		15
Sulfate	17.5	17.5	1	0.128		15

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

(LCS) R3321814-2 06/28/18 07:22 • (LCSD) R3321814-3 06/28/18 07:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromide	40.0	40.1	40.1	100	100	80.0-120			0.164	15
Chloride	40.0	39.5	39.5	98.9	98.8	80.0-120			0.0592	15
Nitrate	8.00	8.60	8.58	107	107	80.0-120			0.231	15
Nitrite	8.00	8.15	8.19	102	102	80.0-120			0.493	15
Sulfate	40.0	40.4	40.4	101	101	80.0-120			0.146	15

L1005129-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1005129-07 06/28/18 15:41 • (MS) R3321814-5 06/28/18 16:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	ND	45.8	90.3	1	80.0-120	
Chloride	50.0	34.9	84.4	99.1	1	80.0-120	
Nitrate	5.00	8.14	13.2	102	1	80.0-120	E
Nitrite	5.00	ND	5.21	104	1	80.0-120	

L1005134-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005134-03 06/28/18 21:43 • (MS) R3321814-7 06/28/18 22:11 • (MSD) R3321814-8 06/28/18 22:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	50.0	U	49.3	49.3	98.5	98.6	1	80.0-120			0.0909	15
Chloride	50.0	26.5	77.5	77.1	102	101	1	80.0-120			0.495	15
Nitrate	5.00	U	5.15	5.18	103	104	1	80.0-120			0.556	15
Nitrite	5.00	U	5.28	5.25	106	105	1	80.0-120			0.621	15
Sulfate	50.0	17.5	69.5	68.8	104	102	1	80.0-120			1.00	15

Method Blank (MB)

(MB) R3322711-1 07/02/18 20:26

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

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

(LCS) R3322711-2 07/02/18 20:42 • (LCSD) R3322711-3 07/02/18 20:57

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 %
Sulfate	40.0	40.8	40.7	102	102	80.0-120			0.0967	15

Method Blank (MB)

(MB) R3323144-1 07/03/18 11:53

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

L1005027-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1005027-13 07/03/18 18:33 • (DUP) R3323144-4 07/03/18 18:49

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

L1005168-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005168-01 07/03/18 22:56 • (DUP) R3323144-7 07/03/18 23:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Sulfate	8.77	4.11	1	72.4	J P1	15

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

(LCS) R3323144-2 07/03/18 12:08 • (LCSD) R3323144-3 07/03/18 12:24

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	%	%	%			%	%
Sulfate	40.0	40.6	40.4	101	101	80.0-120			0.411	15

L1005027-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005027-13 07/03/18 18:33 • (MS) R3323144-5 07/03/18 19:04 • (MSD) R3323144-6 07/03/18 19:51

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	%	%		%			%	%
Sulfate	50.0	ND	52.6	51.7	105	103	1	80.0-120			1.59	15

L1005168-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1005168-01 07/03/18 22:56 • (MS) R3323144-8 07/03/18 23:26

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Sulfate	50.0	8.77	62.0	106	1	80.0-120	

Method Blank (MB)

(MB) R3323322-1 07/05/18 12:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium,Dissolved	U		0.0463	1.00
Iron,Dissolved	U		0.0141	0.100
Magnesium,Dissolved	U		0.0111	1.00
Potassium,Dissolved	U		0.102	1.00
Sodium,Dissolved	U		0.0985	1.00
Strontium,Dissolved	U		0.00170	0.0100

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

(LCS) R3323322-2 07/05/18 12:03 • (LCSD) R3323322-3 07/05/18 12:05

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 %
Calcium,Dissolved	10.0	10.2	10.3	102	103	80.0-120			0.728	20
Iron,Dissolved	10.0	10.2	10.2	102	102	80.0-120			0.531	20
Magnesium,Dissolved	10.0	10.3	10.3	103	103	80.0-120			0.192	20
Potassium,Dissolved	10.0	10.1	10.2	101	102	80.0-120			0.398	20
Sodium,Dissolved	10.0	10.1	10.1	101	101	80.0-120			0.0965	20
Strontium,Dissolved	1.00	1.03	1.03	103	103	80.0-120			0.260	20

L1005442-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005442-02 07/05/18 12:08 • (MS) R3323322-5 07/05/18 12:13 • (MSD) R3323322-6 07/05/18 12:15

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 %
Calcium,Dissolved	10.0	10.7	20.5	20.4	97.5	97.0	1	75.0-125			0.287	20
Iron,Dissolved	10.0	U	10.1	10.1	101	101	1	75.0-125			0.318	20
Magnesium,Dissolved	10.0	0.856	11.0	11.0	102	101	1	75.0-125			0.306	20
Potassium,Dissolved	10.0	2.99	13.0	13.0	100	99.7	1	75.0-125			0.357	20
Sodium,Dissolved	10.0	1.73	11.7	11.7	100	99.5	1	75.0-125			0.442	20
Strontium,Dissolved	1.00	0.0276	1.05	1.05	102	102	1	75.0-125			0.494	20

Method Blank (MB)

(MB) R3322855-1 07/03/18 14:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130

L1004400-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1004400-01 07/03/18 15:45 • (DUP) R3322855-2 07/03/18 15:48

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	11.6	11.6	1	0.141	E	20
Ethane	0.0159	0.0159	1	0.235		20
Ethene	ND	0.000	1	0.000		20

L1005129-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1005129-07 07/03/18 15:53 • (DUP) R3322855-5 07/03/18 16:21

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1004400-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1004400-01 07/03/18 15:30 • (DUP) R3322855-6 07/03/18 15:38

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	11.7	11.5	10	1.94		20

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

(LCS) R3322855-3 07/03/18 16:24 • (LCSD) R3322855-4 07/03/18 16:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0773	0.0714	114	105	85.0-115			8.00	20
Ethane	0.129	0.116	0.113	89.9	87.7	85.0-115			2.42	20

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

(LCS) R3322855-3 07/03/18 16:24 • (LCSD) R3322855-4 07/03/18 16:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethene	0.127	0.119	0.117	93.6	92.0	85.0-115			1.72	20

Method Blank (MB)

(MB) R3323758-1 07/07/18 10:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130

L1006402-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1006402-01 07/07/18 11:31 • (DUP) R3323758-2 07/07/18 11:37

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	0.512	0.514	1	0.531		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

L1006402-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1006402-02 07/07/18 11:41 • (DUP) R3323758-3 07/07/18 11:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	8.49	8.04	10	5.54		20
Ethane	U	0.000	10	0.000		20
Ethene	U	0.000	10	0.000		20

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

(LCS) R3323758-4 07/07/18 11:55 • (LCSD) R3323758-5 07/07/18 12:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0706	0.0703	104	104	85.0-115			0.443	20
Ethane	0.129	0.118	0.118	91.6	91.7	85.0-115			0.116	20
Ethene	0.127	0.117	0.117	91.8	92.2	85.0-115			0.529	20

Method Blank (MB)

(MB) R3322128-3 06/28/18 20:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	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
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
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
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	0.000601	J	0.000256	0.00100

Method Blank (MB)

(MB) R3322128-3 06/28/18 20:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
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
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	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
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000355	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
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*101*			*80.0-120*
(S) Dibromofluoromethane	*90.6*			*76.0-123*
(S) 4-Bromofluorobenzene	*97.9*			*80.0-120*

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

(LCS) R3322128-1 06/28/18 19:50 • (LCSD) R3322128-2 06/28/18 20:09

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	0.200	0.221	160	177	10.0-160		J4	9.75	23
Acrolein	0.125	0.0878	0.114	70.2	91.2	10.0-160		J3	26.0	20
Acrylonitrile	0.125	0.151	0.161	121	129	60.0-142			6.72	20
Benzene	0.0250	0.0228	0.0234	91.1	93.5	69.0-123			2.60	20

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

(LCS) R3322128-1 06/28/18 19:50 • (LCSD) R3322128-2 06/28/18 20:09

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 %
Bromobenzene	0.0250	0.0223	0.0225	89.0	89.8	79.0-120			0.876	20
Bromodichloromethane	0.0250	0.0241	0.0244	96.4	97.7	76.0-120			1.39	20
Bromoform	0.0250	0.0254	0.0259	102	104	67.0-132			1.95	20
Bromomethane	0.0250	0.0269	0.0269	108	108	18.0-160			0.0592	20
n-Butylbenzene	0.0250	0.0223	0.0228	89.1	91.3	72.0-126			2.35	20
sec-Butylbenzene	0.0250	0.0239	0.0244	95.5	97.4	74.0-121			1.98	20
tert-Butylbenzene	0.0250	0.0244	0.0252	97.7	101	75.0-122			3.04	20
Carbon tetrachloride	0.0250	0.0241	0.0265	96.5	106	63.0-122			9.38	20
Chlorobenzene	0.0250	0.0270	0.0261	108	104	79.0-121			3.41	20
Chlorodibromomethane	0.0250	0.0262	0.0266	105	107	75.0-125			1.49	20
Chloroethane	0.0250	0.0253	0.0271	101	108	47.0-152			6.84	20
Chloroform	0.0250	0.0236	0.0252	94.4	101	72.0-121			6.45	20
Chloromethane	0.0250	0.0222	0.0245	88.8	98.0	48.0-139			9.92	20
2-Chlorotoluene	0.0250	0.0236	0.0244	94.2	97.8	74.0-122			3.65	20
4-Chlorotoluene	0.0250	0.0218	0.0228	87.2	91.4	79.0-120			4.68	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0255	0.0266	102	107	64.0-127			4.46	20
1,2-Dibromoethane	0.0250	0.0251	0.0262	101	105	77.0-123			4.05	20
Dibromomethane	0.0250	0.0247	0.0262	98.9	105	78.0-120			5.95	20
1,2-Dichlorobenzene	0.0250	0.0244	0.0249	97.7	99.8	80.0-120			2.13	20
1,3-Dichlorobenzene	0.0250	0.0247	0.0253	98.7	101	72.0-123			2.29	20
1,4-Dichlorobenzene	0.0250	0.0246	0.0244	98.3	97.8	77.0-120			0.550	20
Dichlorodifluoromethane	0.0250	0.0272	0.0289	109	116	49.0-155			6.28	20
1,1-Dichloroethane	0.0250	0.0226	0.0247	90.3	98.9	70.0-126			9.14	20
1,2-Dichloroethane	0.0250	0.0229	0.0244	91.8	97.7	67.0-126			6.27	20
1,1-Dichloroethene	0.0250	0.0246	0.0253	98.4	101	64.0-129			2.84	20
cis-1,2-Dichloroethene	0.0250	0.0242	0.0249	96.7	99.7	73.0-120			3.07	20
trans-1,2-Dichloroethene	0.0250	0.0230	0.0250	92.1	100	71.0-121			8.34	20
1,2-Dichloropropane	0.0250	0.0243	0.0239	97.3	95.6	75.0-125			1.71	20
1,1-Dichloropropene	0.0250	0.0248	0.0255	99.2	102	71.0-129			2.93	20
1,3-Dichloropropane	0.0250	0.0239	0.0253	95.4	101	80.0-121			6.02	20
cis-1,3-Dichloropropene	0.0250	0.0252	0.0253	101	101	79.0-123			0.374	20
trans-1,3-Dichloropropene	0.0250	0.0256	0.0251	102	100	74.0-127			2.15	20
2,2-Dichloropropane	0.0250	0.0252	0.0287	101	115	60.0-125			12.8	20
Di-isopropyl ether	0.0250	0.0230	0.0246	92.0	98.5	59.0-133			6.92	20
Ethylbenzene	0.0250	0.0263	0.0260	105	104	77.0-120			1.13	20
Hexachloro-1,3-butadiene	0.0250	0.0229	0.0262	91.5	105	64.0-131			13.6	20
Isopropylbenzene	0.0250	0.0236	0.0238	94.4	95.3	75.0-120			0.987	20
p-Isopropyltoluene	0.0250	0.0240	0.0258	96.0	103	74.0-126			7.38	20
2-Butanone (MEK)	0.125	0.148	0.155	119	124	37.0-158			4.26	20
Methylene Chloride	0.0250	0.0234	0.0256	93.6	102	66.0-121			8.83	20

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

(LCS) R3322128-1 06/28/18 19:50 • (LCSD) R3322128-2 06/28/18 20:09

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 %
4-Methyl-2-pentanone (MIBK)	0.125	0.138	0.138	110	111	59.0-143			0.183	20
Methyl tert-butyl ether	0.0250	0.0232	0.0268	92.9	107	64.0-123			14.2	20
Naphthalene	0.0250	0.0244	0.0263	97.7	105	62.0-128			7.56	20
n-Propylbenzene	0.0250	0.0234	0.0234	93.5	93.6	79.0-120			0.0495	20
Styrene	0.0250	0.0235	0.0234	93.9	93.5	78.0-124			0.446	20
1,1,1,2-Tetrachloroethane	0.0250	0.0261	0.0270	104	108	75.0-122			3.28	20
1,1,2,2-Tetrachloroethane	0.0250	0.0205	0.0222	81.9	88.8	71.0-122			8.10	20
Tetrachloroethene	0.0250	0.0284	0.0288	114	115	70.0-127			1.26	20
Toluene	0.0250	0.0245	0.0250	98.1	99.8	77.0-120			1.77	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0281	0.0296	112	118	61.0-136			5.17	20
1,2,3-Trichlorobenzene	0.0250	0.0244	0.0260	97.4	104	61.0-133			6.59	20
1,2,4-Trichlorobenzene	0.0250	0.0242	0.0256	96.8	102	69.0-129			5.63	20
1,1,1-Trichloroethane	0.0250	0.0235	0.0256	94.2	102	68.0-122			8.25	20
1,1,2-Trichloroethane	0.0250	0.0245	0.0244	98.1	97.6	78.0-120			0.516	20
Trichloroethene	0.0250	0.0283	0.0278	113	111	78.0-120			1.70	20
Trichlorofluoromethane	0.0250	0.0293	0.0302	117	121	56.0-137			3.05	20
1,2,3-Trichloropropane	0.0250	0.0234	0.0235	93.6	94.1	72.0-124			0.564	20
1,2,3-Trimethylbenzene	0.0250	0.0228	0.0225	91.1	90.0	75.0-120			1.28	20
1,2,4-Trimethylbenzene	0.0250	0.0223	0.0238	89.1	95.2	75.0-120			6.60	20
1,3,5-Trimethylbenzene	0.0250	0.0242	0.0245	96.7	97.8	75.0-120			1.12	20
Vinyl chloride	0.0250	0.0246	0.0262	98.6	105	64.0-133			6.29	20
Xylenes, Total	0.0750	0.0804	0.0817	107	109	77.0-120			1.60	20
(S) Toluene-d8				*103*	*97.8*	*80.0-120*				
(S) Dibromofluoromethane				*91.8*	*99.2*	*76.0-123*				
(S) 4-Bromofluorobenzene				*91.8*	*88.9*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Pace National 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.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

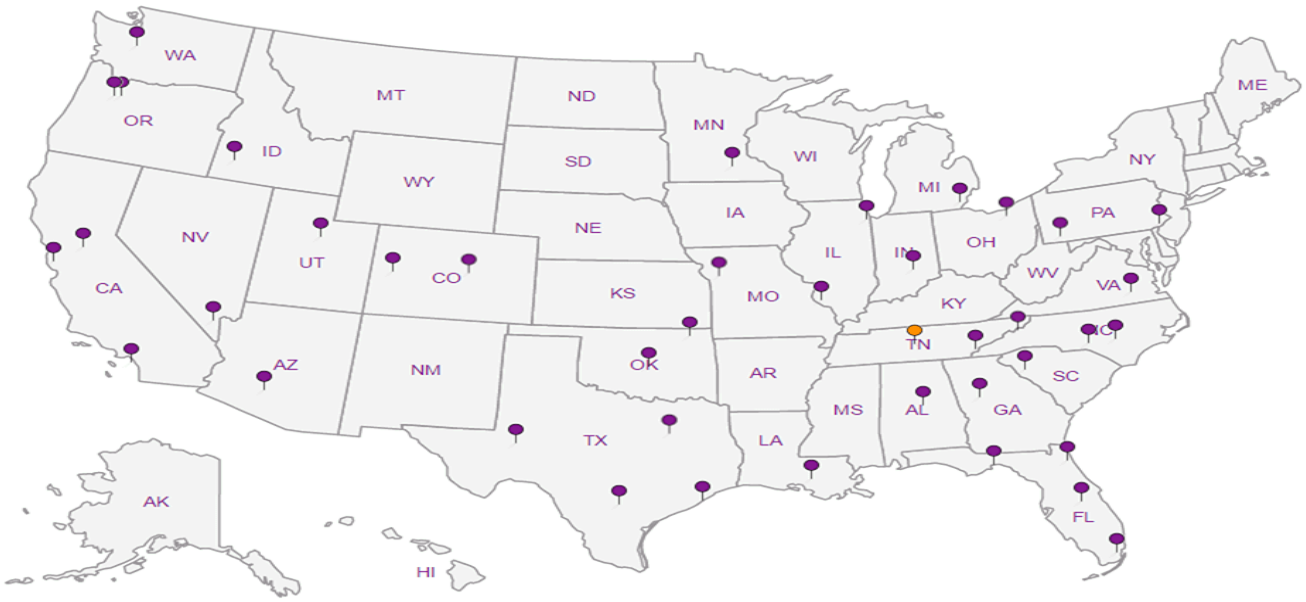
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Company Name/Address:
Terracon - Longmont
1242 Bramwood Pl.
Longmont, CO 80501

Billing Information:
Same

Report to:
Michael Skridulis

Email To:
mjskridulis@terracon.com

Project Description: COL Annual GW Quality Monitoring

City/State Collected: Longmont Colorado

Phone: **303-776-3921**
Fax: **303-776-4041**

Client Project #: 22187009

Lab Project #

Collected by (print): Drew Stephens

Site/Facility ID #

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: Standard

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

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

L# L005129
D135
Acctnum: TERRALCO
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC8260 (2) 40ml Amber w/HCl	RSK-175 (2) 40ml Amber w/HCl	N02,N03, Br, Cl, S04 - 250ml HDPE No Pres	Ca,Mg,Na,Fe,K Sr- 250ml HDPE No Pres - Diss.	ALK - 125ml HDPE No Pres	Rem./Contaminant	Sample # (lab only)
SH1-MW-01	Grab	GW		6/27/18	0930	7	X	X	X	X	X		-01
SH1-MW-02	Grab	GW			0945	7	X	X	X	X	X		-02
SH1-MW-03	Grab	GW			1000	7	X	X	X	X	X		-03
SH2-MW-01	Grab	GW			1045	7	X	X	X	X	X		-04
SH2-MW-02	Grab	GW			1100	7	X	X	X	X	X		-05
SH2-MW-03	Grab	GW			1115	7	X	X	X	X	X		-06
CL1-MW-01	Grab	GW			1200	7	X	X	X	X	X		-07
CL1-MW-02	Grab	GW			1215	7	X	X	X	X	X		-08
CL1-MW-03	Grab	GW			1235	7	X	X	X	X	X		-09
		~~GW~~											

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

pH _____ Temp _____

Remarks: #4361 6930 2042

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Drew Stephens	6/27/18	1530	
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: 25°C Bottles Received: 84

Date: 6/28/18 Time: 0845

Condition: (lab use only) OK

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Company Name/Address:
Terracon - Longmont
1242 Bramwood Pl.
Longmont, CO 80501

Billing Information:
Same

Report to:
Michael Skridulis

Email To:
mjskridulis@terracon.com

Project Description: COL Annual GW Quality Monitoring

City/State Collected: Longmont Colorado

Phone: **303-776-3921**
Fax: **303-776-4041**

Client Project # 22187009

Lab Project #

Collected by (print): Drew Stephens

Site/Facility ID #

P.O. #

Collected by (signature): Drew Stephens

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: Standard

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

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

L # L1005129

Table #

Acctnum: TERRALCO

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC8260 (2) 40ml Amber w/HCl	RSK-175 (2) 40ml Amber w/HCl	N02,N03, Br, Cl, S04 - 250ml HDPE No Pres - Dissolved	Ca,Mg,Na,Fe,K Sr- 250ml HDPE No Pres Dissolved	ALK - 125ml HDPE No Pres	Rem./Contaminant	Sample # (lab only)
PW1-MW-01	Grab	GW		6/27/18	1339	7	X	X	X	X	X		-10
PW1-MW-02	Grab	GW		↓	1400	7	X	X	X	X	X		-11
PW1-MW-03	Grab	GW		↓	1415	7	X	X	X	X	X		-12
		GW											
		GW											
		GW											
		GW											
		GW											
		GW											

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

pH _____ Temp _____

Remarks: #4361 6930 2042

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Drew Stephens	6/27/18	1530	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Kamin

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

Temp: 2.5 °C Bottles Received: 84

Date: 6/28/18 Time: 0845

Condition: OK (lab use only)

COC Seal Intact: ✓ ___Y ___N ___NA

pH Checked: NCF:

ESC LAB SCIENCES
Cooler Receipt Form

Client: TERRALCO	SDG#	L1005129
Cooler Received/Opened On: 6/28/18	Temperature:	2.5
Received By: Keteishia Cameron		
Signature: Kameron		

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 09, 2018

Terracon Consultants, Inc - Longmont, CO

Sample Delivery Group:	L1005562
Samples Received:	06/29/2018
Project Number:	22187009
Description:	COL Annual GW Quality Monitoring

Report To: Michael Skridulis
1242 Bramwood Place
Longmont, CO 80501

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

EGT-MW-01 L1005562-01 GW

Collected by	Collected date/time	Received date/time
Brian Williams	06/28/18 12:20	06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133957	1	07/06/18 19:36	07/06/18 19:36	GB
Wet Chemistry by Method 9056A	WG1131834	1	06/29/18 22:05	06/29/18 22:05	MCG
Wet Chemistry by Method 9056A	WG1131834	20	06/29/18 22:21	06/29/18 22:21	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 14:47	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 09:46	07/07/18 09:46	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132244	1	06/30/18 11:27	06/30/18 11:27	BMB

EGT-MW-02 L1005562-02 GW

Collected by	Collected date/time	Received date/time
Brian Williams	06/28/18 12:30	06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133957	1	07/06/18 19:52	07/06/18 19:52	GB
Wet Chemistry by Method 9056A	WG1123326	50	07/03/18 21:00	07/03/18 21:00	DR
Wet Chemistry by Method 9056A	WG1131834	1	06/29/18 22:36	06/29/18 22:36	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 14:50	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 09:51	07/07/18 09:51	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132244	1	06/30/18 11:47	06/30/18 11:47	BMB

EGT-MW-03 L1005562-03 GW

Collected by	Collected date/time	Received date/time
Brian Williams	06/28/18 12:35	06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133957	1	07/06/18 20:01	07/06/18 20:01	GB
Wet Chemistry by Method 9056A	WG1131834	1	06/29/18 23:07	06/29/18 23:07	MCG
Wet Chemistry by Method 9056A	WG1131834	100	06/29/18 23:53	06/29/18 23:53	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 14:53	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 09:53	07/07/18 09:53	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132244	1	06/30/18 12:08	06/30/18 12:08	BMB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne Richards
Technical Service Representative

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	257		20.0	1	07/06/2018 19:36	WG1133957

Sample Narrative:
L1005562-01 WG1133957: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/29/2018 22:05	WG1131834
Chloride	84.9		1.00	1	06/29/2018 22:05	WG1131834
Nitrate as (N)	ND		0.100	1	06/29/2018 22:05	WG1131834
Nitrite as (N)	ND		0.100	1	06/29/2018 22:05	WG1131834
Sulfate	1970		100	20	06/29/2018 22:21	WG1131834

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	193		1.00	1	07/06/2018 14:47	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 14:47	WG1132461
Magnesium,Dissolved	121		1.00	1	07/06/2018 14:47	WG1132461
Potassium,Dissolved	3.91		1.00	1	07/06/2018 14:47	WG1132461
Sodium,Dissolved	595		1.00	1	07/06/2018 14:47	WG1132461
Strontium,Dissolved	2.65		0.0100	1	07/06/2018 14:47	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/07/2018 09:46	WG1134171
Ethane	ND		0.0130	1	07/07/2018 09:46	WG1134171
Ethene	ND		0.0130	1	07/07/2018 09:46	WG1134171

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	06/30/2018 11:27	WG1132244
Acrolein	ND		0.0500	1	06/30/2018 11:27	WG1132244
Acrylonitrile	ND		0.0100	1	06/30/2018 11:27	WG1132244
Benzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Bromobenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Bromodichloromethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
Bromoform	ND		0.00100	1	06/30/2018 11:27	WG1132244
Bromomethane	ND		0.00500	1	06/30/2018 11:27	WG1132244
n-Butylbenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
sec-Butylbenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
tert-Butylbenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Carbon tetrachloride	ND		0.00100	1	06/30/2018 11:27	WG1132244
Chlorobenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Chlorodibromomethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
Chloroethane	ND		0.00500	1	06/30/2018 11:27	WG1132244
Chloroform	ND		0.00500	1	06/30/2018 11:27	WG1132244
Chloromethane	ND		0.00250	1	06/30/2018 11:27	WG1132244
2-Chlorotoluene	ND		0.00100	1	06/30/2018 11:27	WG1132244
4-Chlorotoluene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 11:27	WG1132244

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
Dibromomethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Dichlorodifluoromethane	ND		0.00500	1	06/30/2018 11:27	WG1132244
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 11:27	WG1132244
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 11:27	WG1132244
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 11:27	WG1132244
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 11:27	WG1132244
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 11:27	WG1132244
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 11:27	WG1132244
Di-isopropyl ether	ND		0.00100	1	06/30/2018 11:27	WG1132244
Ethylbenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Isopropylbenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 11:27	WG1132244
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 11:27	WG1132244
Methylene Chloride	ND		0.00500	1	06/30/2018 11:27	WG1132244
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 11:27	WG1132244
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 11:27	WG1132244
Naphthalene	ND		0.00500	1	06/30/2018 11:27	WG1132244
n-Propylbenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Styrene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
Tetrachloroethene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Toluene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 11:27	WG1132244
Trichloroethene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 11:27	WG1132244
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 11:27	WG1132244
1,2,4-Trimethylbenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,2,3-Trimethylbenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
1,3,5-Trimethylbenzene	ND		0.00100	1	06/30/2018 11:27	WG1132244
Vinyl chloride	ND		0.00100	1	06/30/2018 11:27	WG1132244
Xylenes, Total	ND		0.00300	1	06/30/2018 11:27	WG1132244
(S) Toluene-d8	*94.6*		*80.0-120*		*06/30/2018 11:27*	WG1132244
(S) Dibromofluoromethane	*97.2*		*76.0-123*		*06/30/2018 11:27*	WG1132244
(S) 4-Bromofluorobenzene	*97.1*		*80.0-120*		*06/30/2018 11:27*	WG1132244

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	166		20.0	1	07/06/2018 19:52	WG1133957

Sample Narrative:
L1005562-02 WG1133957: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/29/2018 22:36	WG1131834
Chloride	88.2		1.00	1	06/29/2018 22:36	WG1131834
Nitrate as (N)	ND		0.100	1	06/29/2018 22:36	WG1131834
Nitrite as (N)	ND		0.100	1	06/29/2018 22:36	WG1131834
Sulfate	2600		250	50	07/03/2018 21:00	WG1123326

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	400		1.00	1	07/06/2018 14:50	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 14:50	WG1132461
Magnesium,Dissolved	318		1.00	1	07/06/2018 14:50	WG1132461
Potassium,Dissolved	7.40		1.00	1	07/06/2018 14:50	WG1132461
Sodium,Dissolved	436		1.00	1	07/06/2018 14:50	WG1132461
Strontium,Dissolved	5.86		0.0100	1	07/06/2018 14:50	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/07/2018 09:51	WG1134171
Ethane	ND		0.0130	1	07/07/2018 09:51	WG1134171
Ethene	ND		0.0130	1	07/07/2018 09:51	WG1134171

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	06/30/2018 11:47	WG1132244
Acrolein	ND		0.0500	1	06/30/2018 11:47	WG1132244
Acrylonitrile	ND		0.0100	1	06/30/2018 11:47	WG1132244
Benzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Bromobenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Bromodichloromethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
Bromoform	ND		0.00100	1	06/30/2018 11:47	WG1132244
Bromomethane	ND		0.00500	1	06/30/2018 11:47	WG1132244
n-Butylbenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
sec-Butylbenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
tert-Butylbenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Carbon tetrachloride	ND		0.00100	1	06/30/2018 11:47	WG1132244
Chlorobenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Chlorodibromomethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
Chloroethane	ND		0.00500	1	06/30/2018 11:47	WG1132244
Chloroform	ND		0.00500	1	06/30/2018 11:47	WG1132244
Chloromethane	ND		0.00250	1	06/30/2018 11:47	WG1132244
2-Chlorotoluene	ND		0.00100	1	06/30/2018 11:47	WG1132244
4-Chlorotoluene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 11:47	WG1132244

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
Dibromomethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Dichlorodifluoromethane	ND		0.00500	1	06/30/2018 11:47	WG1132244
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 11:47	WG1132244
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 11:47	WG1132244
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 11:47	WG1132244
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 11:47	WG1132244
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 11:47	WG1132244
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 11:47	WG1132244
Di-isopropyl ether	ND		0.00100	1	06/30/2018 11:47	WG1132244
Ethylbenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Isopropylbenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 11:47	WG1132244
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 11:47	WG1132244
Methylene Chloride	ND		0.00500	1	06/30/2018 11:47	WG1132244
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 11:47	WG1132244
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 11:47	WG1132244
Naphthalene	ND		0.00500	1	06/30/2018 11:47	WG1132244
n-Propylbenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Styrene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
Tetrachloroethene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Toluene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 11:47	WG1132244
Trichloroethene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 11:47	WG1132244
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 11:47	WG1132244
1,2,4-Trimethylbenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,2,3-Trimethylbenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
1,3,5-Trimethylbenzene	ND		0.00100	1	06/30/2018 11:47	WG1132244
Vinyl chloride	ND		0.00100	1	06/30/2018 11:47	WG1132244
Xylenes, Total	ND		0.00300	1	06/30/2018 11:47	WG1132244
(S) Toluene-d8	*96.1*		*80.0-120*		*06/30/2018 11:47*	WG1132244
(S) Dibromofluoromethane	*90.5*		*76.0-123*		*06/30/2018 11:47*	WG1132244
(S) 4-Bromofluorobenzene	*97.5*		*80.0-120*		*06/30/2018 11:47*	WG1132244

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	ND		20.0	1	07/06/2018 20:01	WG1133957

Sample Narrative:

L1005562-03 WG1133957: Endpoint pH 4.5 HEADSPACENOT ENOUGH SAMPLE LEFT TO RR W/0.02N H2SO4

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/29/2018 23:07	WG1131834
Chloride	179		100	100	06/29/2018 23:53	WG1131834
Nitrate as (N)	ND		0.100	1	06/29/2018 23:07	WG1131834
Nitrite as (N)	ND		0.100	1	06/29/2018 23:07	WG1131834
Sulfate	5850		500	100	06/29/2018 23:53	WG1131834

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	436		1.00	1	07/06/2018 14:53	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 14:53	WG1132461
Magnesium,Dissolved	646		1.00	1	07/06/2018 14:53	WG1132461
Potassium,Dissolved	7.02		1.00	1	07/06/2018 14:53	WG1132461
Sodium,Dissolved	894		1.00	1	07/06/2018 14:53	WG1132461
Strontium,Dissolved	7.82		0.0100	1	07/06/2018 14:53	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	0.0130		0.0100	1	07/07/2018 09:53	WG1134171
Ethane	ND		0.0130	1	07/07/2018 09:53	WG1134171
Ethene	ND		0.0130	1	07/07/2018 09:53	WG1134171

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND	J4	0.0500	1	06/30/2018 12:08	WG1132244
Acrolein	ND		0.0500	1	06/30/2018 12:08	WG1132244
Acrylonitrile	ND		0.0100	1	06/30/2018 12:08	WG1132244
Benzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Bromobenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Bromodichloromethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
Bromoform	ND		0.00100	1	06/30/2018 12:08	WG1132244
Bromomethane	ND		0.00500	1	06/30/2018 12:08	WG1132244
n-Butylbenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
sec-Butylbenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
tert-Butylbenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Carbon tetrachloride	ND		0.00100	1	06/30/2018 12:08	WG1132244
Chlorobenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Chlorodibromomethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
Chloroethane	ND		0.00500	1	06/30/2018 12:08	WG1132244
Chloroform	ND		0.00500	1	06/30/2018 12:08	WG1132244
Chloromethane	ND		0.00250	1	06/30/2018 12:08	WG1132244
2-Chlorotoluene	ND		0.00100	1	06/30/2018 12:08	WG1132244
4-Chlorotoluene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 12:08	WG1132244

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
Dibromomethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Dichlorodifluoromethane	ND		0.00500	1	06/30/2018 12:08	WG1132244
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 12:08	WG1132244
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 12:08	WG1132244
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 12:08	WG1132244
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 12:08	WG1132244
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 12:08	WG1132244
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 12:08	WG1132244
Di-isopropyl ether	ND		0.00100	1	06/30/2018 12:08	WG1132244
Ethylbenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Isopropylbenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 12:08	WG1132244
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 12:08	WG1132244
Methylene Chloride	ND		0.00500	1	06/30/2018 12:08	WG1132244
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 12:08	WG1132244
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 12:08	WG1132244
Naphthalene	ND		0.00500	1	06/30/2018 12:08	WG1132244
n-Propylbenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Styrene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
Tetrachloroethene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Toluene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 12:08	WG1132244
Trichloroethene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 12:08	WG1132244
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 12:08	WG1132244
1,2,4-Trimethylbenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,2,3-Trimethylbenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
1,3,5-Trimethylbenzene	ND		0.00100	1	06/30/2018 12:08	WG1132244
Vinyl chloride	ND		0.00100	1	06/30/2018 12:08	WG1132244
Xylenes, Total	ND		0.00300	1	06/30/2018 12:08	WG1132244
(S) Toluene-d8	*101*		*80.0-120*		*06/30/2018 12:08*	WG1132244
(S) Dibromofluoromethane	*94.7*		*76.0-123*		*06/30/2018 12:08*	WG1132244
(S) 4-Bromofluorobenzene	*97.0*		*80.0-120*		*06/30/2018 12:08*	WG1132244

L1005518-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1005518-06 07/06/18 17:48 • (DUP) R3323996-1 07/06/18 17:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	644	630	1	2.23		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

L1005562-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005562-01 07/06/18 19:36 • (DUP) R3323996-3 07/06/18 19:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	257	258	1	0.314		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

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

(LCS) R3323996-2 07/06/18 18:46 • (LCSD) R3323996-4 07/06/18 20:07

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	98.2	102	98.2	102	85.0-115			3.42	20

Sample Narrative:

LCS: Endpoint pH 4.5

LCSD: Endpoint pH 4.5

Method Blank (MB)

(MB) R3323832-1 07/03/18 08:50

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

L1005577-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005577-01 07/03/18 21:49 • (DUP) R3323832-4 07/03/18 22:18

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

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

(LCS) R3323832-2 07/03/18 09:00 • (LCSD) R3323832-3 07/03/18 09:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Sulfate	40.0	39.4	39.5	98.5	98.8	80.0-120			0.300	15

L1005577-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005577-01 07/03/18 21:49 • (MS) R3323832-5 07/03/18 22:27 • (MSD) R3323832-6 07/03/18 22:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	50.0	ND	50.3	49.9	101	99.9	1	80.0-120			0.610	15

Method Blank (MB)

(MB) R3322174-1 06/29/18 16:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.0790	1.00
Chloride	0.121	J	0.0519	1.00
Nitrate	U		0.0227	0.100
Nitrite	U		0.0277	0.100
Sulfate	U		0.0774	5.00

L1005538-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1005538-05 06/29/18 18:46 • (DUP) R3322174-4 06/29/18 19:01

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	0.311	1	0.000		15
Chloride	74.3	74.6	1	0.420		15
Nitrate	0.105	0.107	1	1.41		15
Nitrite	ND	0.000	1	0.000		15

L1005576-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005576-01 06/30/18 04:00 • (DUP) R3322174-7 06/30/18 04:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	0.000	1	0.000		15
Chloride	74.7	74.2	1	0.605		15
Nitrate	U	0.000	1	0.000		15
Nitrite	U	0.000	1	0.000		15

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

(LCS) R3322174-2 06/29/18 17:04 • (LCSD) R3322174-3 06/29/18 17:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromide	40.0	40.3	40.5	101	101	80.0-120			0.318	15
Chloride	40.0	39.8	39.9	99.4	99.7	80.0-120			0.259	15
Nitrate	8.00	8.43	8.43	105	105	80.0-120			0.0557	15
Nitrite	8.00	7.95	7.97	99.4	99.7	80.0-120			0.281	15
Sulfate	40.0	40.2	40.2	100	101	80.0-120			0.0682	15

L1005538-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005538-05 06/29/18 18:46 • (MS) R3322174-5 06/29/18 19:17 • (MSD) R3322174-6 06/29/18 19:32

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 %
Bromide	50.0	ND	46.7	46.9	92.8	93.1	1	80.0-120			0.394	15
Chloride	50.0	74.3	123	123	97.2	96.8	1	80.0-120	E	E	0.172	15
Nitrate	5.00	0.105	4.78	4.82	93.5	94.4	1	80.0-120			0.904	15
Nitrite	5.00	ND	5.15	5.14	103	103	1	80.0-120			0.181	15

L1005576-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1005576-01 06/30/18 04:00 • (MS) R3322174-8 06/30/18 04:31

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	U	ND	0.000	1	80.0-120	J6
Chloride	50.0	74.7	124	99.0	1	80.0-120	E
Nitrate	5.00	U	3.78	75.6	1	80.0-120	J6
Nitrite	5.00	U	5.32	106	1	80.0-120	

Method Blank (MB)

(MB) R3323816-1 07/06/18 14:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium,Dissolved	U		0.0463	1.00
Iron,Dissolved	U		0.0141	0.100
Magnesium,Dissolved	U		0.0111	1.00
Potassium,Dissolved	U		0.102	1.00
Sodium,Dissolved	U		0.0985	1.00
Strontium,Dissolved	U		0.00170	0.0100

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

(LCS) R3323816-2 07/06/18 14:32 • (LCSD) R3323816-3 07/06/18 14:34

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 %
Calcium,Dissolved	10.0	9.62	9.54	96.2	95.4	80.0-120			0.881	20
Iron,Dissolved	10.0	9.53	9.40	95.3	94.0	80.0-120			1.38	20
Magnesium,Dissolved	10.0	10.0	9.97	100	99.7	80.0-120			0.528	20
Potassium,Dissolved	10.0	9.84	9.74	98.4	97.4	80.0-120			1.10	20
Sodium,Dissolved	10.0	9.97	9.90	99.7	99.0	80.0-120			0.722	20
Strontium,Dissolved	1.00	0.971	0.962	97.1	96.2	80.0-120			0.933	20

L1005958-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005958-02 07/06/18 14:37 • (MS) R3323816-5 07/06/18 14:42 • (MSD) R3323816-6 07/06/18 14:45

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 %
Calcium,Dissolved	10.0	99.3	107	106	72.6	68.1	1	75.0-125	V	V	0.419	20
Iron,Dissolved	10.0	ND	9.27	9.32	92.7	93.2	1	75.0-125			0.541	20
Magnesium,Dissolved	10.0	58.9	66.6	66.6	76.7	76.4	1	75.0-125			0.0367	20
Potassium,Dissolved	10.0	3.22	12.8	12.8	95.6	96.2	1	75.0-125			0.471	20
Sodium,Dissolved	10.0	85.6	92.3	91.7	66.9	61.3	1	75.0-125	V	V	0.608	20
Strontium,Dissolved	1.00	1.26	2.17	2.16	91.2	90.2	1	75.0-125			0.442	20

Method Blank (MB)

(MB) R3323741-1 07/07/18 08:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130

L1005539-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005539-01 07/07/18 08:56 • (DUP) R3323741-2 07/07/18 09:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1005575-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1005575-08 07/07/18 10:34 • (DUP) R3323741-3 07/07/18 10:37

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

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

(LCS) R3323741-4 07/07/18 10:40 • (LCSD) R3323741-5 07/07/18 10:43

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 %
Methane	0.0678	0.0702	0.0710	104	105	85.0-115			1.08	20
Ethane	0.129	0.117	0.117	90.6	90.7	85.0-115			0.0535	20
Ethene	0.127	0.115	0.114	90.9	90.1	85.0-115			0.818	20

Method Blank (MB)

(MB) R3322928-2 06/30/18 10:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	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
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
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
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100

Method Blank (MB)

(MB) R3322928-2 06/30/18 10:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
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
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	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
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000355	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
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*97.6*			*80.0-120*
(S) Dibromofluoromethane	*94.3*			*76.0-123*
(S) 4-Bromofluorobenzene	*97.9*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3322928-1 06/30/18 09:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.125	0.228	182	10.0-160	J4
Acrolein	0.125	0.0756	60.5	10.0-160	
Acrylonitrile	0.125	0.147	117	60.0-142	
Benzene	0.0250	0.0209	83.6	69.0-123	

Laboratory Control Sample (LCS)

(LCS) R3322928-1 06/30/18 09:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromobenzene	0.0250	0.0212	85.0	79.0-120	
Bromodichloromethane	0.0250	0.0218	87.1	76.0-120	
Bromoform	0.0250	0.0242	96.8	67.0-132	
Bromomethane	0.0250	0.0242	96.7	18.0-160	
n-Butylbenzene	0.0250	0.0195	77.8	72.0-126	
sec-Butylbenzene	0.0250	0.0219	87.4	74.0-121	
tert-Butylbenzene	0.0250	0.0221	88.5	75.0-122	
Carbon tetrachloride	0.0250	0.0227	90.9	63.0-122	
Chlorobenzene	0.0250	0.0253	101	79.0-121	
Chlorodibromomethane	0.0250	0.0250	99.9	75.0-125	
Chloroethane	0.0250	0.0253	101	47.0-152	
Chloroform	0.0250	0.0224	89.5	72.0-121	
Chloromethane	0.0250	0.0211	84.3	48.0-139	
2-Chlorotoluene	0.0250	0.0220	88.1	74.0-122	
4-Chlorotoluene	0.0250	0.0198	79.4	79.0-120	
1,2-Dibromo-3-Chloropropane	0.0250	0.0245	97.8	64.0-127	
1,2-Dibromoethane	0.0250	0.0244	97.7	77.0-123	
Dibromomethane	0.0250	0.0240	96.0	78.0-120	
1,2-Dichlorobenzene	0.0250	0.0234	93.6	80.0-120	
1,3-Dichlorobenzene	0.0250	0.0226	90.5	72.0-123	
1,4-Dichlorobenzene	0.0250	0.0225	89.9	77.0-120	
Dichlorodifluoromethane	0.0250	0.0269	108	49.0-155	
1,1-Dichloroethane	0.0250	0.0209	83.6	70.0-126	
1,2-Dichloroethane	0.0250	0.0218	87.1	67.0-126	
1,1-Dichloroethene	0.0250	0.0225	89.8	64.0-129	
cis-1,2-Dichloroethene	0.0250	0.0210	84.1	73.0-120	
trans-1,2-Dichloroethene	0.0250	0.0209	83.7	71.0-121	
1,2-Dichloropropane	0.0250	0.0219	87.6	75.0-125	
1,1-Dichloropropene	0.0250	0.0224	89.4	71.0-129	
1,3-Dichloropropane	0.0250	0.0236	94.2	80.0-121	
cis-1,3-Dichloropropene	0.0250	0.0234	93.7	79.0-123	
trans-1,3-Dichloropropene	0.0250	0.0232	92.9	74.0-127	
2,2-Dichloropropane	0.0250	0.0250	100	60.0-125	
Di-isopropyl ether	0.0250	0.0217	87.0	59.0-133	
Ethylbenzene	0.0250	0.0250	100	77.0-120	
Hexachloro-1,3-butadiene	0.0250	0.0229	91.8	64.0-131	
Isopropylbenzene	0.0250	0.0212	84.9	75.0-120	
p-Isopropyltoluene	0.0250	0.0219	87.5	74.0-126	
2-Butanone (MEK)	0.125	0.140	112	37.0-158	
Methylene Chloride	0.0250	0.0231	92.5	66.0-121	

Laboratory Control Sample (LCS)

(LCS) R3322928-1 06/30/18 09:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	0.125	0.131	105	59.0-143	
Methyl tert-butyl ether	0.0250	0.0232	92.6	64.0-123	
Naphthalene	0.0250	0.0235	94.1	62.0-128	
n-Propylbenzene	0.0250	0.0216	86.5	79.0-120	
Styrene	0.0250	0.0217	86.7	78.0-124	
1,1,1,2-Tetrachloroethane	0.0250	0.0260	104	75.0-122	
1,1,2,2-Tetrachloroethane	0.0250	0.0213	85.0	71.0-122	
Tetrachloroethene	0.0250	0.0254	101	70.0-127	
Toluene	0.0250	0.0223	89.3	77.0-120	
1,1,2-Trichlorotrifluoroethane	0.0250	0.0261	104	61.0-136	
1,2,3-Trichlorobenzene	0.0250	0.0229	91.7	61.0-133	
1,2,4-Trichlorobenzene	0.0250	0.0232	92.7	69.0-129	
1,1,1-Trichloroethane	0.0250	0.0221	88.2	68.0-122	
1,1,2-Trichloroethane	0.0250	0.0237	94.7	78.0-120	
Trichloroethene	0.0250	0.0239	95.7	78.0-120	
Trichlorofluoromethane	0.0250	0.0273	109	56.0-137	
1,2,3-Trichloropropane	0.0250	0.0224	89.6	72.0-124	
1,2,3-Trimethylbenzene	0.0250	0.0214	85.8	75.0-120	
1,2,4-Trimethylbenzene	0.0250	0.0204	81.7	75.0-120	
1,3,5-Trimethylbenzene	0.0250	0.0221	88.5	75.0-120	
Vinyl chloride	0.0250	0.0238	95.3	64.0-133	
Xylenes, Total	0.0750	0.0767	102	77.0-120	
(S) Toluene-d8			*101*	*80.0-120*	
(S) Dibromofluoromethane			*94.4*	*76.0-123*	
(S) 4-Bromofluorobenzene			*93.3*	*80.0-120*	

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
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.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace National 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.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

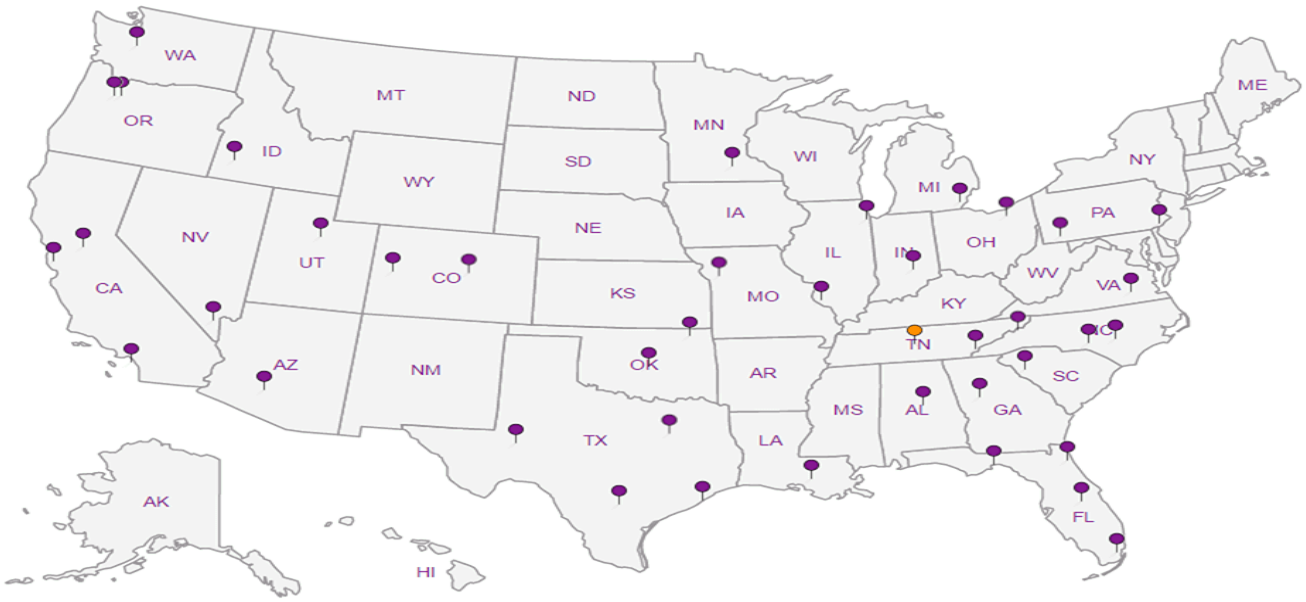
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Company Name/Address:
Terracon - Longmont
1242 Bramwood Pl.
Longmont, CO 80501

Billing Information:
SAME

Report to:
Michael Skridulis

Email To:
mjskridulis@terracon.com

Project Description: COL Annual GW Quality Monitoring

City/State Collected: Longmont, Colorado

Phone: **303-776-3921**
Fax: **303-776-4041**

Client Project #
22187009

Lab Project #

Collected by (print):
Brian Williams

Site/Facility ID #

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
Standard

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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

L # 100536
G127
Table #

Acctnum: **TERRALCO**
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC8260 (2) 40ml Amber w/HCl	RSK-175 (2) 40ml Amber w/HCl	N02,N03, Br, Cl, S04 - 250ml HDPE No Pres	Ca,Mg,Na,Fe,K Sr- 250ml HDPE No Pres	ALK - 125ml HDPE No Pres	Rem./Contaminant	Sample # (lab only)
EbT-MW01	Grab	GW		6/28/18	12:20	7	X	X	X	X	X		01
EbT-MW-02	↓	GW		↓	12:30	↓	↓	↓	↓	↓	↓		02
EbT-MW-03	↓	GW		↓	12:35	↓	↓	↓	↓	↓	↓		03
		GW											
		GW											
		GW											
		GW											
		GW											
		GW											
		GW											

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	6/28/18	14:20	
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: 4.2 °C Bottles Received: 21

Date: 6/29/18 Time: 0845

Condition: (lab use only)

COC Seal Intact: ✓Y ___N ___NA

pH Checked: NCF:

ESC LAB SCIENCES
Cooler Receipt Form

Client:	TerrAlog	SDG#	100562
Cooler Received/Opened On:	6/29/18	Temperature:	4.2°
Received By:	Eric Struck		
Signature:			

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 09, 2018

Terracon Consultants, Inc - Longmont, CO

Sample Delivery Group:	L1005575
Samples Received:	06/29/2018
Project Number:	22187009
Description:	COL Annual GW Quality Monitoring

Report To: Michael Skridulis
1242 Bramwood Place
Longmont, CO 80501

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

SGU-MW-01 L1005575-01 GW

Collected by: Brian Williams | Collected date/time: 06/28/18 09:40 | Received date/time: 06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133957	1	07/06/18 20:17	07/06/18 20:17	GB
Wet Chemistry by Method 9056A	WG1131834	1	06/30/18 00:09	06/30/18 00:09	MCG
Wet Chemistry by Method 9056A	WG1131834	5	06/30/18 00:24	06/30/18 00:24	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 15:00	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 09:56	07/07/18 09:56	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132208	1	06/30/18 16:48	06/30/18 16:48	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132591	1	07/01/18 20:24	07/01/18 20:24	JAH

SGU-MW-02 L1005575-02 GW

Collected by: Brian Williams | Collected date/time: 06/28/18 09:50 | Received date/time: 06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1133957	1	07/06/18 20:25	07/06/18 20:25	GB
Wet Chemistry by Method 9056A	WG1131834	1	06/30/18 00:40	06/30/18 00:40	MCG
Wet Chemistry by Method 9056A	WG1131834	5	06/30/18 00:55	06/30/18 00:55	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 15:03	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 09:58	07/07/18 09:58	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132208	1	06/30/18 17:07	06/30/18 17:07	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132591	1	07/01/18 20:44	07/01/18 20:44	JAH

SGU-MW-03 L1005575-03 GW

Collected by: Brian Williams | Collected date/time: 06/28/18 10:05 | Received date/time: 06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1134267	1	07/06/18 22:02	07/06/18 22:02	GB
Wet Chemistry by Method 9056A	WG1131834	1	06/30/18 01:10	06/30/18 01:10	MCG
Wet Chemistry by Method 9056A	WG1131834	5	06/30/18 01:26	06/30/18 01:26	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 15:06	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 10:00	07/07/18 10:00	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132208	1	06/30/18 17:25	06/30/18 17:25	BMB

SGU-MW-04 L1005575-04 GW

Collected by: Brian Williams | Collected date/time: 06/28/18 10:25 | Received date/time: 06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1134267	1	07/06/18 22:10	07/06/18 22:10	GB
Wet Chemistry by Method 9056A	WG1131834	1	06/30/18 01:41	06/30/18 01:41	MCG
Wet Chemistry by Method 9056A	WG1131834	5	06/30/18 01:57	06/30/18 01:57	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 15:08	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 10:02	07/07/18 10:02	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132208	1	06/30/18 17:44	06/30/18 17:44	BMB

SGU-MW-05 L1005575-05 GW

Collected by: Brian Williams | Collected date/time: 06/28/18 09:20 | Received date/time: 06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1134267	1	07/06/18 22:18	07/06/18 22:18	GB
Wet Chemistry by Method 9056A	WG1131834	1	06/30/18 02:12	06/30/18 02:12	MCG
Wet Chemistry by Method 9056A	WG1131834	5	06/30/18 02:58	06/30/18 02:58	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 15:11	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 10:05	07/07/18 10:05	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132208	1	06/30/18 18:03	06/30/18 18:03	BMB

E6W-MW-01 L1005575-06 GW

Collected by	Collected date/time	Received date/time
Brian Williams	06/28/18 11:10	06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1134267	1	07/06/18 22:36	07/06/18 22:36	GB
Wet Chemistry by Method 9056A	WG1123326	20	07/03/18 21:10	07/03/18 21:10	DR
Wet Chemistry by Method 9056A	WG1131834	1	06/30/18 03:14	06/30/18 03:14	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 15:13	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 10:07	07/07/18 10:07	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132208	1	06/30/18 18:21	06/30/18 18:21	BMB

E6W-MW-02 L1005575-07 GW

Collected by	Collected date/time	Received date/time
Brian Williams	06/28/18 11:25	06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1134267	1	07/06/18 22:44	07/06/18 22:44	GB
Wet Chemistry by Method 9056A	WG1123326	20	07/03/18 21:20	07/03/18 21:20	DR
Wet Chemistry by Method 9056A	WG1131834	1	06/30/18 03:29	06/30/18 03:29	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 15:16	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 10:32	07/07/18 10:32	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132208	1	06/30/18 18:40	06/30/18 18:40	BMB

E6W-MW-03 L1005575-08 GW

Collected by	Collected date/time	Received date/time
Brian Williams	06/28/18 11:35	06/29/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1134267	1	07/06/18 22:53	07/06/18 22:53	GB
Wet Chemistry by Method 9056A	WG1123326	20	07/03/18 21:29	07/03/18 21:29	DR
Wet Chemistry by Method 9056A	WG1131834	1	06/30/18 03:45	06/30/18 03:45	MCG
Metals (ICP) by Method 6010B	WG1132461	1	07/05/18 15:48	07/06/18 15:19	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1134171	1	07/07/18 10:34	07/07/18 10:34	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132208	1	06/30/18 18:59	06/30/18 18:59	BMB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Technical Service Representative

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	348		20.0	1	07/06/2018 20:17	WG1133957

Sample Narrative:

L1005575-01 WG1133957: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 00:09	WG1131834
Chloride	35.3		1.00	1	06/30/2018 00:09	WG1131834
Nitrate as (N)	10.0		0.500	5	06/30/2018 00:24	WG1131834
Nitrite as (N)	ND		0.100	1	06/30/2018 00:09	WG1131834
Sulfate	186		25.0	5	06/30/2018 00:24	WG1131834

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	108		1.00	1	07/06/2018 15:00	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 15:00	WG1132461
Magnesium,Dissolved	57.9		1.00	1	07/06/2018 15:00	WG1132461
Potassium,Dissolved	2.59		1.00	1	07/06/2018 15:00	WG1132461
Sodium,Dissolved	73.8		1.00	1	07/06/2018 15:00	WG1132461
Strontium,Dissolved	1.65		0.0100	1	07/06/2018 15:00	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/07/2018 09:56	WG1134171
Ethane	ND		0.0130	1	07/07/2018 09:56	WG1134171
Ethene	ND		0.0130	1	07/07/2018 09:56	WG1134171

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	06/30/2018 16:48	WG1132208
Acrolein	ND		0.0500	1	06/30/2018 16:48	WG1132208
Acrylonitrile	ND	J4	0.0100	1	06/30/2018 16:48	WG1132208
Benzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
Bromobenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
Bromodichloromethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
Bromoform	ND		0.00100	1	06/30/2018 16:48	WG1132208
Bromomethane	ND		0.00500	1	06/30/2018 16:48	WG1132208
n-Butylbenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
sec-Butylbenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
tert-Butylbenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
Carbon tetrachloride	ND		0.00100	1	06/30/2018 16:48	WG1132208
Chlorobenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
Chlorodibromomethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
Chloroethane	ND		0.00500	1	06/30/2018 16:48	WG1132208
Chloroform	ND		0.00500	1	06/30/2018 16:48	WG1132208
Chloromethane	ND		0.00250	1	06/30/2018 16:48	WG1132208
2-Chlorotoluene	ND		0.00100	1	06/30/2018 16:48	WG1132208
4-Chlorotoluene	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 16:48	WG1132208

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
Dibromomethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
Dichlorodifluoromethane	ND	J3	0.00500	1	06/30/2018 16:48	WG1132208
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 16:48	WG1132208
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 16:48	WG1132208
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 16:48	WG1132208
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 16:48	WG1132208
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 16:48	WG1132208
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 16:48	WG1132208
Di-isopropyl ether	ND		0.00100	1	06/30/2018 16:48	WG1132208
Ethylbenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 16:48	WG1132208
Isopropylbenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 16:48	WG1132208
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 16:48	WG1132208
Methylene Chloride	ND		0.00500	1	06/30/2018 16:48	WG1132208
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 16:48	WG1132208
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 16:48	WG1132208
Naphthalene	ND		0.00500	1	07/01/2018 20:24	WG1132591
n-Propylbenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
Styrene	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
Tetrachloroethene	ND		0.00100	1	06/30/2018 16:48	WG1132208
Toluene	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 16:48	WG1132208
Trichloroethene	ND		0.00100	1	06/30/2018 16:48	WG1132208
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 16:48	WG1132208
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 16:48	WG1132208
1,2,4-Trimethylbenzene	ND		0.00100	1	07/01/2018 20:24	WG1132591
1,2,3-Trimethylbenzene	ND		0.00100	1	07/01/2018 20:24	WG1132591
1,3,5-Trimethylbenzene	ND		0.00100	1	07/01/2018 20:24	WG1132591
Vinyl chloride	ND		0.00100	1	06/30/2018 16:48	WG1132208
Xylenes, Total	ND		0.00300	1	07/01/2018 20:24	WG1132591
(S) Toluene-d8	*108*		*80.0-120*		*06/30/2018 16:48*	WG1132208
(S) Toluene-d8	*103*		*80.0-120*		*07/01/2018 20:24*	WG1132591
(S) Dibromofluoromethane	*82.4*		*76.0-123*		*06/30/2018 16:48*	WG1132208
(S) Dibromofluoromethane	*98.6*		*76.0-123*		*07/01/2018 20:24*	WG1132591
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*06/30/2018 16:48*	WG1132208
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*07/01/2018 20:24*	WG1132591

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	369		20.0	1	07/06/2018 20:25	WG1133957

Sample Narrative:
L1005575-02 WG1133957: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 00:40	WG1131834
Chloride	58.2		1.00	1	06/30/2018 00:40	WG1131834
Nitrate as (N)	12.4		0.500	5	06/30/2018 00:55	WG1131834
Nitrite as (N)	ND		0.100	1	06/30/2018 00:40	WG1131834
Sulfate	295		25.0	5	06/30/2018 00:55	WG1131834

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	132		1.00	1	07/06/2018 15:03	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 15:03	WG1132461
Magnesium,Dissolved	70.1		1.00	1	07/06/2018 15:03	WG1132461
Potassium,Dissolved	3.39		1.00	1	07/06/2018 15:03	WG1132461
Sodium,Dissolved	105		1.00	1	07/06/2018 15:03	WG1132461
Strontium,Dissolved	2.10		0.0100	1	07/06/2018 15:03	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/07/2018 09:58	WG1134171
Ethane	ND		0.0130	1	07/07/2018 09:58	WG1134171
Ethene	ND		0.0130	1	07/07/2018 09:58	WG1134171

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	06/30/2018 17:07	WG1132208
Acrolein	ND		0.0500	1	06/30/2018 17:07	WG1132208
Acrylonitrile	ND	J4	0.0100	1	06/30/2018 17:07	WG1132208
Benzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Bromobenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Bromodichloromethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
Bromoform	ND		0.00100	1	06/30/2018 17:07	WG1132208
Bromomethane	ND		0.00500	1	06/30/2018 17:07	WG1132208
n-Butylbenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
sec-Butylbenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
tert-Butylbenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Carbon tetrachloride	ND		0.00100	1	06/30/2018 17:07	WG1132208
Chlorobenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Chlorodibromomethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
Chloroethane	ND		0.00500	1	06/30/2018 17:07	WG1132208
Chloroform	ND		0.00500	1	06/30/2018 17:07	WG1132208
Chloromethane	ND		0.00250	1	06/30/2018 17:07	WG1132208
2-Chlorotoluene	ND		0.00100	1	06/30/2018 17:07	WG1132208
4-Chlorotoluene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 17:07	WG1132208

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
Dibromomethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Dichlorodifluoromethane	ND	J3	0.00500	1	06/30/2018 17:07	WG1132208
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 17:07	WG1132208
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 17:07	WG1132208
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 17:07	WG1132208
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 17:07	WG1132208
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 17:07	WG1132208
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 17:07	WG1132208
Di-isopropyl ether	ND		0.00100	1	06/30/2018 17:07	WG1132208
Ethylbenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Isopropylbenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 17:07	WG1132208
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 17:07	WG1132208
Methylene Chloride	ND		0.00500	1	06/30/2018 17:07	WG1132208
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 17:07	WG1132208
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 17:07	WG1132208
Naphthalene	ND		0.00500	1	07/01/2018 20:44	WG1132591
n-Propylbenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Styrene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
Tetrachloroethene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Toluene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 17:07	WG1132208
Trichloroethene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 17:07	WG1132208
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 17:07	WG1132208
1,2,4-Trimethylbenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,2,3-Trimethylbenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
1,3,5-Trimethylbenzene	ND		0.00100	1	06/30/2018 17:07	WG1132208
Vinyl chloride	ND		0.00100	1	06/30/2018 17:07	WG1132208
Xylenes, Total	ND		0.00300	1	06/30/2018 17:07	WG1132208
(S) Toluene-d8	*105*		*80.0-120*		*06/30/2018 17:07*	WG1132208
(S) Toluene-d8	*99.2*		*80.0-120*		*07/01/2018 20:44*	WG1132591
(S) Dibromofluoromethane	*93.8*		*76.0-123*		*06/30/2018 17:07*	WG1132208
(S) Dibromofluoromethane	*99.0*		*76.0-123*		*07/01/2018 20:44*	WG1132591
(S) 4-Bromofluorobenzene	*105*		*80.0-120*		*06/30/2018 17:07*	WG1132208
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*07/01/2018 20:44*	WG1132591

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	422		20.0	1	07/06/2018 22:02	WG1134267

Sample Narrative:
L1005575-03 WG1134267: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/30/2018 01:10	WG1131834
Chloride	60.2		1.00	1	06/30/2018 01:10	WG1131834
Nitrate as (N)	12.8		0.500	5	06/30/2018 01:26	WG1131834
Nitrite as (N)	ND		0.100	1	06/30/2018 01:10	WG1131834
Sulfate	298		25.0	5	06/30/2018 01:26	WG1131834

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	133		1.00	1	07/06/2018 15:06	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 15:06	WG1132461
Magnesium,Dissolved	82.6		1.00	1	07/06/2018 15:06	WG1132461
Potassium,Dissolved	4.22		1.00	1	07/06/2018 15:06	WG1132461
Sodium,Dissolved	115		1.00	1	07/06/2018 15:06	WG1132461
Strontium,Dissolved	2.32		0.0100	1	07/06/2018 15:06	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	0.0261		0.0100	1	07/07/2018 10:00	WG1134171
Ethane	ND		0.0130	1	07/07/2018 10:00	WG1134171
Ethene	ND		0.0130	1	07/07/2018 10:00	WG1134171

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	06/30/2018 17:25	WG1132208
Acrolein	ND		0.0500	1	06/30/2018 17:25	WG1132208
Acrylonitrile	ND	J4	0.0100	1	06/30/2018 17:25	WG1132208
Benzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Bromobenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Bromodichloromethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
Bromoform	ND		0.00100	1	06/30/2018 17:25	WG1132208
Bromomethane	ND		0.00500	1	06/30/2018 17:25	WG1132208
n-Butylbenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
sec-Butylbenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
tert-Butylbenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Carbon tetrachloride	ND		0.00100	1	06/30/2018 17:25	WG1132208
Chlorobenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Chlorodibromomethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
Chloroethane	ND		0.00500	1	06/30/2018 17:25	WG1132208
Chloroform	ND		0.00500	1	06/30/2018 17:25	WG1132208
Chloromethane	ND		0.00250	1	06/30/2018 17:25	WG1132208
2-Chlorotoluene	ND		0.00100	1	06/30/2018 17:25	WG1132208
4-Chlorotoluene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 17:25	WG1132208

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
Dibromomethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Dichlorodifluoromethane	ND	J3	0.00500	1	06/30/2018 17:25	WG1132208
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 17:25	WG1132208
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 17:25	WG1132208
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 17:25	WG1132208
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 17:25	WG1132208
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 17:25	WG1132208
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 17:25	WG1132208
Di-isopropyl ether	ND		0.00100	1	06/30/2018 17:25	WG1132208
Ethylbenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Isopropylbenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 17:25	WG1132208
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 17:25	WG1132208
Methylene Chloride	ND		0.00500	1	06/30/2018 17:25	WG1132208
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 17:25	WG1132208
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 17:25	WG1132208
Naphthalene	ND		0.00500	1	06/30/2018 17:25	WG1132208
n-Propylbenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Styrene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
Tetrachloroethene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Toluene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 17:25	WG1132208
Trichloroethene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 17:25	WG1132208
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 17:25	WG1132208
1,2,4-Trimethylbenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,2,3-Trimethylbenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
1,3,5-Trimethylbenzene	ND		0.00100	1	06/30/2018 17:25	WG1132208
Vinyl chloride	ND		0.00100	1	06/30/2018 17:25	WG1132208
Xylenes, Total	ND		0.00300	1	06/30/2018 17:25	WG1132208
(S) Toluene-d8	*108*		*80.0-120*		*06/30/2018 17:25*	WG1132208
(S) Dibromofluoromethane	*90.7*		*76.0-123*		*06/30/2018 17:25*	WG1132208
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*06/30/2018 17:25*	WG1132208

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	351		20.0	1	07/06/2018 22:10	WG1134267

Sample Narrative:
L1005575-04 WG1134267: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 01:41	WG1131834
Chloride	36.1		1.00	1	06/30/2018 01:41	WG1131834
Nitrate as (N)	11.1		0.500	5	06/30/2018 01:57	WG1131834
Nitrite as (N)	ND		0.100	1	06/30/2018 01:41	WG1131834
Sulfate	234		25.0	5	06/30/2018 01:57	WG1131834

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	127		1.00	1	07/06/2018 15:08	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 15:08	WG1132461
Magnesium,Dissolved	58.0		1.00	1	07/06/2018 15:08	WG1132461
Potassium,Dissolved	1.95		1.00	1	07/06/2018 15:08	WG1132461
Sodium,Dissolved	67.9		1.00	1	07/06/2018 15:08	WG1132461
Strontium,Dissolved	1.84		0.0100	1	07/06/2018 15:08	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/07/2018 10:02	WG1134171
Ethane	ND		0.0130	1	07/07/2018 10:02	WG1134171
Ethene	ND		0.0130	1	07/07/2018 10:02	WG1134171

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	06/30/2018 17:44	WG1132208
Acrolein	ND		0.0500	1	06/30/2018 17:44	WG1132208
Acrylonitrile	ND	J4	0.0100	1	06/30/2018 17:44	WG1132208
Benzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Bromobenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Bromodichloromethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
Bromoform	ND		0.00100	1	06/30/2018 17:44	WG1132208
Bromomethane	ND		0.00500	1	06/30/2018 17:44	WG1132208
n-Butylbenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
sec-Butylbenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
tert-Butylbenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Carbon tetrachloride	ND		0.00100	1	06/30/2018 17:44	WG1132208
Chlorobenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Chlorodibromomethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
Chloroethane	ND		0.00500	1	06/30/2018 17:44	WG1132208
Chloroform	ND		0.00500	1	06/30/2018 17:44	WG1132208
Chloromethane	ND		0.00250	1	06/30/2018 17:44	WG1132208
2-Chlorotoluene	ND		0.00100	1	06/30/2018 17:44	WG1132208
4-Chlorotoluene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 17:44	WG1132208

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
Dibromomethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Dichlorodifluoromethane	ND	J3	0.00500	1	06/30/2018 17:44	WG1132208
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 17:44	WG1132208
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 17:44	WG1132208
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 17:44	WG1132208
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 17:44	WG1132208
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 17:44	WG1132208
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 17:44	WG1132208
Di-isopropyl ether	ND		0.00100	1	06/30/2018 17:44	WG1132208
Ethylbenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Isopropylbenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 17:44	WG1132208
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 17:44	WG1132208
Methylene Chloride	ND		0.00500	1	06/30/2018 17:44	WG1132208
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 17:44	WG1132208
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 17:44	WG1132208
Naphthalene	ND		0.00500	1	06/30/2018 17:44	WG1132208
n-Propylbenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Styrene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
Tetrachloroethene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Toluene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 17:44	WG1132208
Trichloroethene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 17:44	WG1132208
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 17:44	WG1132208
1,2,4-Trimethylbenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,2,3-Trimethylbenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
1,3,5-Trimethylbenzene	ND		0.00100	1	06/30/2018 17:44	WG1132208
Vinyl chloride	ND		0.00100	1	06/30/2018 17:44	WG1132208
Xylenes, Total	ND		0.00300	1	06/30/2018 17:44	WG1132208
(S) Toluene-d8	*105*		*80.0-120*		*06/30/2018 17:44*	WG1132208
(S) Dibromofluoromethane	*90.9*		*76.0-123*		*06/30/2018 17:44*	WG1132208
(S) 4-Bromofluorobenzene	*105*		*80.0-120*		*06/30/2018 17:44*	WG1132208

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	392		20.0	1	07/06/2018 22:18	WG1134267

Sample Narrative:
L1005575-05 WG1134267: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/30/2018 02:12	WG1131834
Chloride	39.9		1.00	1	06/30/2018 02:12	WG1131834
Nitrate as (N)	7.63		0.100	1	06/30/2018 02:12	WG1131834
Nitrite as (N)	ND		0.100	1	06/30/2018 02:12	WG1131834
Sulfate	273		25.0	5	06/30/2018 02:58	WG1131834

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	148		1.00	1	07/06/2018 15:11	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 15:11	WG1132461
Magnesium,Dissolved	60.7		1.00	1	07/06/2018 15:11	WG1132461
Potassium,Dissolved	3.87		1.00	1	07/06/2018 15:11	WG1132461
Sodium,Dissolved	72.4		1.00	1	07/06/2018 15:11	WG1132461
Strontium,Dissolved	2.11		0.0100	1	07/06/2018 15:11	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/07/2018 10:05	WG1134171
Ethane	ND		0.0130	1	07/07/2018 10:05	WG1134171
Ethene	ND		0.0130	1	07/07/2018 10:05	WG1134171

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	06/30/2018 18:03	WG1132208
Acrolein	ND		0.0500	1	06/30/2018 18:03	WG1132208
Acrylonitrile	ND	J4	0.0100	1	06/30/2018 18:03	WG1132208
Benzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Bromobenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Bromodichloromethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
Bromoform	ND		0.00100	1	06/30/2018 18:03	WG1132208
Bromomethane	ND		0.00500	1	06/30/2018 18:03	WG1132208
n-Butylbenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
sec-Butylbenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
tert-Butylbenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Carbon tetrachloride	ND		0.00100	1	06/30/2018 18:03	WG1132208
Chlorobenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Chlorodibromomethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
Chloroethane	ND		0.00500	1	06/30/2018 18:03	WG1132208
Chloroform	ND		0.00500	1	06/30/2018 18:03	WG1132208
Chloromethane	ND		0.00250	1	06/30/2018 18:03	WG1132208
2-Chlorotoluene	ND		0.00100	1	06/30/2018 18:03	WG1132208
4-Chlorotoluene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 18:03	WG1132208

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
Dibromomethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Dichlorodifluoromethane	ND	J3	0.00500	1	06/30/2018 18:03	WG1132208
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 18:03	WG1132208
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 18:03	WG1132208
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 18:03	WG1132208
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 18:03	WG1132208
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 18:03	WG1132208
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 18:03	WG1132208
Di-isopropyl ether	ND		0.00100	1	06/30/2018 18:03	WG1132208
Ethylbenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Isopropylbenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 18:03	WG1132208
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 18:03	WG1132208
Methylene Chloride	ND		0.00500	1	06/30/2018 18:03	WG1132208
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 18:03	WG1132208
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 18:03	WG1132208
Naphthalene	ND		0.00500	1	06/30/2018 18:03	WG1132208
n-Propylbenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Styrene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
Tetrachloroethene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Toluene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 18:03	WG1132208
Trichloroethene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 18:03	WG1132208
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 18:03	WG1132208
1,2,4-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,2,3-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
1,3,5-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:03	WG1132208
Vinyl chloride	ND		0.00100	1	06/30/2018 18:03	WG1132208
Xylenes, Total	ND		0.00300	1	06/30/2018 18:03	WG1132208
(S) Toluene-d8	*102*		*80.0-120*		*06/30/2018 18:03*	WG1132208
(S) Dibromofluoromethane	*95.0*		*76.0-123*		*06/30/2018 18:03*	WG1132208
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*06/30/2018 18:03*	WG1132208

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	269		20.0	1	07/06/2018 22:36	WG1134267

Sample Narrative:
L1005575-06 WG1134267: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 03:14	WG1131834
Chloride	35.9		1.00	1	06/30/2018 03:14	WG1131834
Nitrate as (N)	ND		0.100	1	06/30/2018 03:14	WG1131834
Nitrite as (N)	ND		0.100	1	06/30/2018 03:14	WG1131834
Sulfate	875		100	20	07/03/2018 21:10	WG1123326

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	188		1.00	1	07/06/2018 15:13	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 15:13	WG1132461
Magnesium,Dissolved	108		1.00	1	07/06/2018 15:13	WG1132461
Potassium,Dissolved	4.25		1.00	1	07/06/2018 15:13	WG1132461
Sodium,Dissolved	171		1.00	1	07/06/2018 15:13	WG1132461
Strontium,Dissolved	3.39		0.0100	1	07/06/2018 15:13	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/07/2018 10:07	WG1134171
Ethane	ND		0.0130	1	07/07/2018 10:07	WG1134171
Ethene	ND		0.0130	1	07/07/2018 10:07	WG1134171

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	06/30/2018 18:21	WG1132208
Acrolein	ND		0.0500	1	06/30/2018 18:21	WG1132208
Acrylonitrile	ND	J4	0.0100	1	06/30/2018 18:21	WG1132208
Benzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Bromobenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Bromodichloromethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
Bromoform	ND		0.00100	1	06/30/2018 18:21	WG1132208
Bromomethane	ND		0.00500	1	06/30/2018 18:21	WG1132208
n-Butylbenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
sec-Butylbenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
tert-Butylbenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Carbon tetrachloride	ND		0.00100	1	06/30/2018 18:21	WG1132208
Chlorobenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Chlorodibromomethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
Chloroethane	ND		0.00500	1	06/30/2018 18:21	WG1132208
Chloroform	ND		0.00500	1	06/30/2018 18:21	WG1132208
Chloromethane	ND		0.00250	1	06/30/2018 18:21	WG1132208
2-Chlorotoluene	ND		0.00100	1	06/30/2018 18:21	WG1132208
4-Chlorotoluene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 18:21	WG1132208

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
Dibromomethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Dichlorodifluoromethane	ND	J3	0.00500	1	06/30/2018 18:21	WG1132208
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 18:21	WG1132208
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 18:21	WG1132208
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 18:21	WG1132208
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 18:21	WG1132208
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 18:21	WG1132208
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 18:21	WG1132208
Di-isopropyl ether	ND		0.00100	1	06/30/2018 18:21	WG1132208
Ethylbenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Isopropylbenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 18:21	WG1132208
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 18:21	WG1132208
Methylene Chloride	ND		0.00500	1	06/30/2018 18:21	WG1132208
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 18:21	WG1132208
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 18:21	WG1132208
Naphthalene	ND		0.00500	1	06/30/2018 18:21	WG1132208
n-Propylbenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Styrene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
Tetrachloroethene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Toluene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 18:21	WG1132208
Trichloroethene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 18:21	WG1132208
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 18:21	WG1132208
1,2,4-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,2,3-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
1,3,5-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:21	WG1132208
Vinyl chloride	ND		0.00100	1	06/30/2018 18:21	WG1132208
Xylenes, Total	ND		0.00300	1	06/30/2018 18:21	WG1132208
(S) Toluene-d8	*106*		*80.0-120*		*06/30/2018 18:21*	WG1132208
(S) Dibromofluoromethane	*93.9*		*76.0-123*		*06/30/2018 18:21*	WG1132208
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*06/30/2018 18:21*	WG1132208

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	294		20.0	1	07/06/2018 22:44	WG1134267

Sample Narrative:
L1005575-07 WG1134267: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/30/2018 03:29	WG1131834
Chloride	35.0		1.00	1	06/30/2018 03:29	WG1131834
Nitrate as (N)	0.312		0.100	1	06/30/2018 03:29	WG1131834
Nitrite as (N)	ND		0.100	1	06/30/2018 03:29	WG1131834
Sulfate	996		100	20	07/03/2018 21:20	WG1123326

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	188		1.00	1	07/06/2018 15:16	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 15:16	WG1132461
Magnesium,Dissolved	142		1.00	1	07/06/2018 15:16	WG1132461
Potassium,Dissolved	9.41		1.00	1	07/06/2018 15:16	WG1132461
Sodium,Dissolved	192		1.00	1	07/06/2018 15:16	WG1132461
Strontium,Dissolved	3.61		0.0100	1	07/06/2018 15:16	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/07/2018 10:32	WG1134171
Ethane	ND		0.0130	1	07/07/2018 10:32	WG1134171
Ethene	ND		0.0130	1	07/07/2018 10:32	WG1134171

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	06/30/2018 18:40	WG1132208
Acrolein	ND		0.0500	1	06/30/2018 18:40	WG1132208
Acrylonitrile	ND	J4	0.0100	1	06/30/2018 18:40	WG1132208
Benzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Bromobenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Bromodichloromethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
Bromoform	ND		0.00100	1	06/30/2018 18:40	WG1132208
Bromomethane	ND		0.00500	1	06/30/2018 18:40	WG1132208
n-Butylbenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
sec-Butylbenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
tert-Butylbenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Carbon tetrachloride	ND		0.00100	1	06/30/2018 18:40	WG1132208
Chlorobenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Chlorodibromomethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
Chloroethane	ND		0.00500	1	06/30/2018 18:40	WG1132208
Chloroform	ND		0.00500	1	06/30/2018 18:40	WG1132208
Chloromethane	ND		0.00250	1	06/30/2018 18:40	WG1132208
2-Chlorotoluene	ND		0.00100	1	06/30/2018 18:40	WG1132208
4-Chlorotoluene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 18:40	WG1132208

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
Dibromomethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Dichlorodifluoromethane	ND	J3	0.00500	1	06/30/2018 18:40	WG1132208
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 18:40	WG1132208
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 18:40	WG1132208
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 18:40	WG1132208
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 18:40	WG1132208
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 18:40	WG1132208
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 18:40	WG1132208
Di-isopropyl ether	ND		0.00100	1	06/30/2018 18:40	WG1132208
Ethylbenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Isopropylbenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 18:40	WG1132208
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 18:40	WG1132208
Methylene Chloride	ND		0.00500	1	06/30/2018 18:40	WG1132208
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 18:40	WG1132208
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 18:40	WG1132208
Naphthalene	ND		0.00500	1	06/30/2018 18:40	WG1132208
n-Propylbenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Styrene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
Tetrachloroethene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Toluene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 18:40	WG1132208
Trichloroethene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 18:40	WG1132208
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 18:40	WG1132208
1,2,4-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,2,3-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
1,3,5-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:40	WG1132208
Vinyl chloride	ND		0.00100	1	06/30/2018 18:40	WG1132208
Xylenes, Total	ND		0.00300	1	06/30/2018 18:40	WG1132208
(S) Toluene-d8	*108*		*80.0-120*		*06/30/2018 18:40*	WG1132208
(S) Dibromofluoromethane	*88.4*		*76.0-123*		*06/30/2018 18:40*	WG1132208
(S) 4-Bromofluorobenzene	*108*		*80.0-120*		*06/30/2018 18:40*	WG1132208

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	319		20.0	1	07/06/2018 22:53	WG1134267

Sample Narrative:
L1005575-08 WG1134267: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 03:45	WG1131834
Chloride	37.8		1.00	1	06/30/2018 03:45	WG1131834
Nitrate as (N)	0.725		0.100	1	06/30/2018 03:45	WG1131834
Nitrite as (N)	ND		0.100	1	06/30/2018 03:45	WG1131834
Sulfate	1390		100	20	07/03/2018 21:29	WG1123326

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	302		1.00	1	07/06/2018 15:19	WG1132461
Iron,Dissolved	ND		0.100	1	07/06/2018 15:19	WG1132461
Magnesium,Dissolved	165		1.00	1	07/06/2018 15:19	WG1132461
Potassium,Dissolved	6.94		1.00	1	07/06/2018 15:19	WG1132461
Sodium,Dissolved	217		1.00	1	07/06/2018 15:19	WG1132461
Strontium,Dissolved	4.98		0.0100	1	07/06/2018 15:19	WG1132461

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/07/2018 10:34	WG1134171
Ethane	ND		0.0130	1	07/07/2018 10:34	WG1134171
Ethene	ND		0.0130	1	07/07/2018 10:34	WG1134171

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	06/30/2018 18:59	WG1132208
Acrolein	ND		0.0500	1	06/30/2018 18:59	WG1132208
Acrylonitrile	ND	J4	0.0100	1	06/30/2018 18:59	WG1132208
Benzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Bromobenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Bromodichloromethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
Bromoform	ND		0.00100	1	06/30/2018 18:59	WG1132208
Bromomethane	ND		0.00500	1	06/30/2018 18:59	WG1132208
n-Butylbenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
sec-Butylbenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
tert-Butylbenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Carbon tetrachloride	ND		0.00100	1	06/30/2018 18:59	WG1132208
Chlorobenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Chlorodibromomethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
Chloroethane	ND		0.00500	1	06/30/2018 18:59	WG1132208
Chloroform	ND		0.00500	1	06/30/2018 18:59	WG1132208
Chloromethane	ND		0.00250	1	06/30/2018 18:59	WG1132208
2-Chlorotoluene	ND		0.00100	1	06/30/2018 18:59	WG1132208
4-Chlorotoluene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/30/2018 18:59	WG1132208

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
Dibromomethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,2-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,3-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,4-Dichlorobenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Dichlorodifluoromethane	ND	J3	0.00500	1	06/30/2018 18:59	WG1132208
1,1-Dichloroethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,2-Dichloroethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,1-Dichloroethene	ND		0.00100	1	06/30/2018 18:59	WG1132208
cis-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 18:59	WG1132208
trans-1,2-Dichloroethene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,2-Dichloropropane	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,1-Dichloropropene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,3-Dichloropropane	ND		0.00100	1	06/30/2018 18:59	WG1132208
cis-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 18:59	WG1132208
trans-1,3-Dichloropropene	ND		0.00100	1	06/30/2018 18:59	WG1132208
2,2-Dichloropropane	ND		0.00100	1	06/30/2018 18:59	WG1132208
Di-isopropyl ether	ND		0.00100	1	06/30/2018 18:59	WG1132208
Ethylbenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Hexachloro-1,3-butadiene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Isopropylbenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
p-Isopropyltoluene	ND		0.00100	1	06/30/2018 18:59	WG1132208
2-Butanone (MEK)	ND		0.0100	1	06/30/2018 18:59	WG1132208
Methylene Chloride	ND		0.00500	1	06/30/2018 18:59	WG1132208
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/30/2018 18:59	WG1132208
Methyl tert-butyl ether	ND		0.00100	1	06/30/2018 18:59	WG1132208
Naphthalene	ND		0.00500	1	06/30/2018 18:59	WG1132208
n-Propylbenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Styrene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
Tetrachloroethene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Toluene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,2,3-Trichlorobenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,2,4-Trichlorobenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,1,1-Trichloroethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,1,2-Trichloroethane	ND		0.00100	1	06/30/2018 18:59	WG1132208
Trichloroethene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Trichlorofluoromethane	ND		0.00500	1	06/30/2018 18:59	WG1132208
1,2,3-Trichloropropane	ND		0.00250	1	06/30/2018 18:59	WG1132208
1,2,4-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,2,3-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
1,3,5-Trimethylbenzene	ND		0.00100	1	06/30/2018 18:59	WG1132208
Vinyl chloride	ND		0.00100	1	06/30/2018 18:59	WG1132208
Xylenes, Total	ND		0.00300	1	06/30/2018 18:59	WG1132208
(S) Toluene-d8	*107*		*80.0-120*		*06/30/2018 18:59*	WG1132208
(S) Dibromofluoromethane	*92.8*		*76.0-123*		*06/30/2018 18:59*	WG1132208
(S) 4-Bromofluorobenzene	*108*		*80.0-120*		*06/30/2018 18:59*	WG1132208

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

L1005518-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1005518-06 07/06/18 17:48 • (DUP) R3323996-1 07/06/18 17:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	644	630	1	2.23		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

L1005562-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005562-01 07/06/18 19:36 • (DUP) R3323996-3 07/06/18 19:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	257	258	1	0.314		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

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

(LCS) R3323996-2 07/06/18 18:46 • (LCSD) R3323996-4 07/06/18 20:07

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	98.2	102	98.2	102	85.0-115			3.42	20

Sample Narrative:

LCS: Endpoint pH 4.5

LCSD: Endpoint pH 4.5

L1005535-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005535-01 07/06/18 21:03 • (DUP) R3323999-1 07/06/18 21:11

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	1670	1680	1	1.07		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

L1005704-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005704-01 07/06/18 23:01 • (DUP) R3323999-4 07/06/18 23:10

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	484	489	1	1.04		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

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

(LCS) R3323999-3 07/06/18 22:25 • (LCSD) R3323999-6 07/07/18 00:05

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	99.7	102	99.7	102	85.0-115			2.73	20

Sample Narrative:

LCS: Endpoint pH 4.5

LCSD: Endpoint pH 4.5

Method Blank (MB)

(MB) R3323832-1 07/03/18 08:50

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

L1005577-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005577-01 07/03/18 21:49 • (DUP) R3323832-4 07/03/18 22:18

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

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

(LCS) R3323832-2 07/03/18 09:00 • (LCSD) R3323832-3 07/03/18 09:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Sulfate	40.0	39.4	39.5	98.5	98.8	80.0-120			0.300	15

L1005577-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005577-01 07/03/18 21:49 • (MS) R3323832-5 07/03/18 22:27 • (MSD) R3323832-6 07/03/18 22:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	50.0	ND	50.3	49.9	101	99.9	1	80.0-120			0.610	15

Method Blank (MB)

(MB) R3322174-1 06/29/18 16:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.0790	1.00
Chloride	0.121	J	0.0519	1.00
Nitrate	U		0.0227	0.100
Nitrite	U		0.0277	0.100
Sulfate	U		0.0774	5.00

L1005538-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1005538-05 06/29/18 18:46 • (DUP) R3322174-4 06/29/18 19:01

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	0.311	1	0.000		15
Chloride	74.3	74.6	1	0.420		15
Nitrate	0.105	0.107	1	1.41		15
Nitrite	ND	0.000	1	0.000		15

L1005576-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005576-01 06/30/18 04:00 • (DUP) R3322174-7 06/30/18 04:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	0.000	1	0.000		15
Chloride	74.7	74.2	1	0.605		15
Nitrate	U	0.000	1	0.000		15
Nitrite	U	0.000	1	0.000		15

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

(LCS) R3322174-2 06/29/18 17:04 • (LCSD) R3322174-3 06/29/18 17:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromide	40.0	40.3	40.5	101	101	80.0-120			0.318	15
Chloride	40.0	39.8	39.9	99.4	99.7	80.0-120			0.259	15
Nitrate	8.00	8.43	8.43	105	105	80.0-120			0.0557	15
Nitrite	8.00	7.95	7.97	99.4	99.7	80.0-120			0.281	15
Sulfate	40.0	40.2	40.2	100	101	80.0-120			0.0682	15

L1005538-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005538-05 06/29/18 18:46 • (MS) R3322174-5 06/29/18 19:17 • (MSD) R3322174-6 06/29/18 19:32

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 %
Bromide	50.0	ND	46.7	46.9	92.8	93.1	1	80.0-120			0.394	15
Chloride	50.0	74.3	123	123	97.2	96.8	1	80.0-120	E	E	0.172	15
Nitrate	5.00	0.105	4.78	4.82	93.5	94.4	1	80.0-120			0.904	15
Nitrite	5.00	ND	5.15	5.14	103	103	1	80.0-120			0.181	15

L1005576-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1005576-01 06/30/18 04:00 • (MS) R3322174-8 06/30/18 04:31

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	U	ND	0.000	1	80.0-120	J6
Chloride	50.0	74.7	124	99.0	1	80.0-120	E
Nitrate	5.00	U	3.78	75.6	1	80.0-120	J6
Nitrite	5.00	U	5.32	106	1	80.0-120	

Method Blank (MB)

(MB) R3323816-1 07/06/18 14:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium,Dissolved	U		0.0463	1.00
Iron,Dissolved	U		0.0141	0.100
Magnesium,Dissolved	U		0.0111	1.00
Potassium,Dissolved	U		0.102	1.00
Sodium,Dissolved	U		0.0985	1.00
Strontium,Dissolved	U		0.00170	0.0100

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

(LCS) R3323816-2 07/06/18 14:32 • (LCSD) R3323816-3 07/06/18 14:34

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 %
Calcium,Dissolved	10.0	9.62	9.54	96.2	95.4	80.0-120			0.881	20
Iron,Dissolved	10.0	9.53	9.40	95.3	94.0	80.0-120			1.38	20
Magnesium,Dissolved	10.0	10.0	9.97	100	99.7	80.0-120			0.528	20
Potassium,Dissolved	10.0	9.84	9.74	98.4	97.4	80.0-120			1.10	20
Sodium,Dissolved	10.0	9.97	9.90	99.7	99.0	80.0-120			0.722	20
Strontium,Dissolved	1.00	0.971	0.962	97.1	96.2	80.0-120			0.933	20

L1005958-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005958-02 07/06/18 14:37 • (MS) R3323816-5 07/06/18 14:42 • (MSD) R3323816-6 07/06/18 14:45

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 %
Calcium,Dissolved	10.0	99.3	107	106	72.6	68.1	1	75.0-125	V	V	0.419	20
Iron,Dissolved	10.0	ND	9.27	9.32	92.7	93.2	1	75.0-125			0.541	20
Magnesium,Dissolved	10.0	58.9	66.6	66.6	76.7	76.4	1	75.0-125			0.0367	20
Potassium,Dissolved	10.0	3.22	12.8	12.8	95.6	96.2	1	75.0-125			0.471	20
Sodium,Dissolved	10.0	85.6	92.3	91.7	66.9	61.3	1	75.0-125	V	V	0.608	20
Strontium,Dissolved	1.00	1.26	2.17	2.16	91.2	90.2	1	75.0-125			0.442	20

Method Blank (MB)

(MB) R3323741-1 07/07/18 08:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130

L1005539-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005539-01 07/07/18 08:56 • (DUP) R3323741-2 07/07/18 09:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1005575-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1005575-08 07/07/18 10:34 • (DUP) R3323741-3 07/07/18 10:37

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

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

(LCS) R3323741-4 07/07/18 10:40 • (LCSD) R3323741-5 07/07/18 10:43

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 %
Methane	0.0678	0.0702	0.0710	104	105	85.0-115			1.08	20
Ethane	0.129	0.117	0.117	90.6	90.7	85.0-115			0.0535	20
Ethene	0.127	0.115	0.114	90.9	90.1	85.0-115			0.818	20

Method Blank (MB)

(MB) R3322288-3 06/30/18 10:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	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
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
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
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100

Method Blank (MB)

(MB) R3322288-3 06/30/18 10:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
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
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	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
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000355	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
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*105*			*80.0-120*
(S) Dibromofluoromethane	*90.5*			*76.0-123*
(S) 4-Bromofluorobenzene	*107*			*80.0-120*

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

(LCS) R3322288-1 06/30/18 09:04 • (LCSD) R3322288-2 06/30/18 09:23

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	0.0662	0.0570	53.0	45.6	10.0-160			15.0	23
Acrolein	0.125	0.0698	0.0756	55.8	60.5	10.0-160			8.04	20
Acrylonitrile	0.125	0.0743	0.0784	59.4	62.7	60.0-142	J4		5.39	20
Benzene	0.0250	0.0218	0.0208	87.2	83.1	69.0-123			4.79	20

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

(LCS) R3322288-1 06/30/18 09:04 • (LCSD) R3322288-2 06/30/18 09:23

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 %
Bromobenzene	0.0250	0.0249	0.0242	99.7	96.9	79.0-120			2.89	20
Bromodichloromethane	0.0250	0.0229	0.0223	91.7	89.2	76.0-120			2.77	20
Bromoform	0.0250	0.0237	0.0220	94.8	88.2	67.0-132			7.27	20
Bromomethane	0.0250	0.0263	0.0288	105	115	18.0-160			9.11	20
n-Butylbenzene	0.0250	0.0252	0.0265	101	106	72.0-126			4.90	20
sec-Butylbenzene	0.0250	0.0258	0.0266	103	106	74.0-121			3.14	20
tert-Butylbenzene	0.0250	0.0264	0.0267	106	107	75.0-122			1.11	20
Carbon tetrachloride	0.0250	0.0224	0.0230	89.7	92.0	63.0-122			2.52	20
Chlorobenzene	0.0250	0.0259	0.0263	103	105	79.0-121			1.59	20
Chlorodibromomethane	0.0250	0.0256	0.0254	103	101	75.0-125			1.13	20
Chloroethane	0.0250	0.0222	0.0244	88.8	97.4	47.0-152			9.25	20
Chloroform	0.0250	0.0220	0.0212	87.8	84.7	72.0-121			3.67	20
Chloromethane	0.0250	0.0203	0.0225	81.0	90.0	48.0-139			10.6	20
2-Chlorotoluene	0.0250	0.0253	0.0249	101	99.7	74.0-122			1.34	20
4-Chlorotoluene	0.0250	0.0258	0.0259	103	104	79.0-120			0.459	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0202	0.0185	80.8	74.1	64.0-127			8.72	20
1,2-Dibromoethane	0.0250	0.0253	0.0249	101	99.6	77.0-123			1.59	20
Dibromomethane	0.0250	0.0225	0.0210	89.8	84.1	78.0-120			6.58	20
1,2-Dichlorobenzene	0.0250	0.0229	0.0227	91.6	90.8	80.0-120			0.865	20
1,3-Dichlorobenzene	0.0250	0.0237	0.0235	94.9	94.2	72.0-123			0.833	20
1,4-Dichlorobenzene	0.0250	0.0227	0.0229	90.8	91.4	77.0-120			0.618	20
Dichlorodifluoromethane	0.0250	0.0240	0.0297	96.1	119	49.0-155		J3	21.2	20
1,1-Dichloroethane	0.0250	0.0204	0.0190	81.5	75.8	70.0-126			7.19	20
1,2-Dichloroethane	0.0250	0.0227	0.0201	90.7	80.3	67.0-126			12.2	20
1,1-Dichloroethene	0.0250	0.0242	0.0243	96.9	97.3	64.0-129			0.456	20
cis-1,2-Dichloroethene	0.0250	0.0225	0.0209	90.1	83.7	73.0-120			7.37	20
trans-1,2-Dichloroethene	0.0250	0.0230	0.0209	91.8	83.7	71.0-121			9.24	20
1,2-Dichloropropane	0.0250	0.0212	0.0205	84.8	82.0	75.0-125			3.25	20
1,1-Dichloropropene	0.0250	0.0228	0.0229	91.4	91.6	71.0-129			0.211	20
1,3-Dichloropropane	0.0250	0.0246	0.0246	98.5	98.3	80.0-121			0.143	20
cis-1,3-Dichloropropene	0.0250	0.0251	0.0249	100	99.6	79.0-123			0.807	20
trans-1,3-Dichloropropene	0.0250	0.0246	0.0250	98.4	100	74.0-127			1.81	20
2,2-Dichloropropane	0.0250	0.0193	0.0202	77.3	80.9	60.0-125			4.57	20
Di-isopropyl ether	0.0250	0.0187	0.0182	74.6	72.7	59.0-133			2.66	20
Ethylbenzene	0.0250	0.0251	0.0261	100	105	77.0-120			4.21	20
Hexachloro-1,3-butadiene	0.0250	0.0270	0.0289	108	115	64.0-131			6.64	20
Isopropylbenzene	0.0250	0.0264	0.0266	106	107	75.0-120			0.888	20
p-Isopropyltoluene	0.0250	0.0260	0.0272	104	109	74.0-126			4.43	20
2-Butanone (MEK)	0.125	0.0672	0.0593	53.8	47.4	37.0-158			12.6	20
Methylene Chloride	0.0250	0.0212	0.0201	84.7	80.3	66.0-121			5.27	20

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

(LCS) R3322288-1 06/30/18 09:04 • (LCSD) R3322288-2 06/30/18 09:23

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 %
4-Methyl-2-pentanone (MIBK)	0.125	0.108	0.0981	86.3	78.5	59.0-143			9.46	20
Methyl tert-butyl ether	0.0250	0.0186	0.0193	74.6	77.1	64.0-123			3.32	20
Naphthalene	0.0250	0.0234	0.0233	93.7	93.2	62.0-128			0.506	20
n-Propylbenzene	0.0250	0.0262	0.0263	105	105	79.0-120			0.358	20
Styrene	0.0250	0.0267	0.0261	107	105	78.0-124			2.00	20
1,1,1,2-Tetrachloroethane	0.0250	0.0236	0.0235	94.2	93.8	75.0-122			0.410	20
1,1,2,2-Tetrachloroethane	0.0250	0.0248	0.0237	99.4	94.9	71.0-122			4.64	20
Tetrachloroethene	0.0250	0.0246	0.0262	98.3	105	70.0-127			6.38	20
Toluene	0.0250	0.0244	0.0252	97.4	101	77.0-120			3.25	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0236	0.0252	94.3	101	61.0-136			6.49	20
1,2,3-Trichlorobenzene	0.0250	0.0244	0.0253	97.7	101	61.0-133			3.39	20
1,2,4-Trichlorobenzene	0.0250	0.0251	0.0257	100	103	69.0-129			2.73	20
1,1,1-Trichloroethane	0.0250	0.0235	0.0227	94.0	90.8	68.0-122			3.49	20
1,1,2-Trichloroethane	0.0250	0.0250	0.0247	99.9	98.7	78.0-120			1.21	20
Trichloroethene	0.0250	0.0249	0.0241	99.6	96.3	78.0-120			3.31	20
Trichlorofluoromethane	0.0250	0.0244	0.0261	97.5	104	56.0-137			6.86	20
1,2,3-Trichloropropane	0.0250	0.0249	0.0226	99.7	90.4	72.0-124			9.83	20
1,2,3-Trimethylbenzene	0.0250	0.0248	0.0250	99.1	99.9	75.0-120			0.808	20
1,2,4-Trimethylbenzene	0.0250	0.0258	0.0260	103	104	75.0-120			1.01	20
1,3,5-Trimethylbenzene	0.0250	0.0261	0.0264	104	106	75.0-120			1.14	20
Vinyl chloride	0.0250	0.0218	0.0249	87.3	99.7	64.0-133			13.2	20
Xylenes, Total	0.0750	0.0762	0.0778	102	104	77.0-120			2.08	20
(S) Toluene-d8				*105*	*107*	*80.0-120*				
(S) Dibromofluoromethane				*92.6*	*82.7*	*76.0-123*				
(S) 4-Bromofluorobenzene				*108*	*105*	*80.0-120*				

Method Blank (MB)

(MB) R3322515-3 07/01/18 13:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Naphthalene	U		0.00100	0.00500
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*103*			*80.0-120*
(S) Dibromofluoromethane	*96.6*			*76.0-123*
(S) 4-Bromofluorobenzene	*104*			*80.0-120*

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

(LCS) R3322515-1 07/01/18 12:59 • (LCSD) R3322515-2 07/01/18 13:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.0250	0.0196	0.0207	78.3	82.9	62.0-128			5.73	20
1,2,3-Trimethylbenzene	0.0250	0.0245	0.0244	98.1	97.6	75.0-120			0.495	20
1,2,4-Trimethylbenzene	0.0250	0.0249	0.0250	99.5	99.8	75.0-120			0.273	20
1,3,5-Trimethylbenzene	0.0250	0.0270	0.0274	108	109	75.0-120			1.35	20
Xylenes, Total	0.0750	0.0718	0.0727	95.7	96.9	77.0-120			1.25	20
(S) Toluene-d8				*102*	*103*	*80.0-120*				
(S) Dibromofluoromethane				*96.3*	*98.2*	*76.0-123*				
(S) 4-Bromofluorobenzene				*103*	*103*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
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.
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.

Pace National 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.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

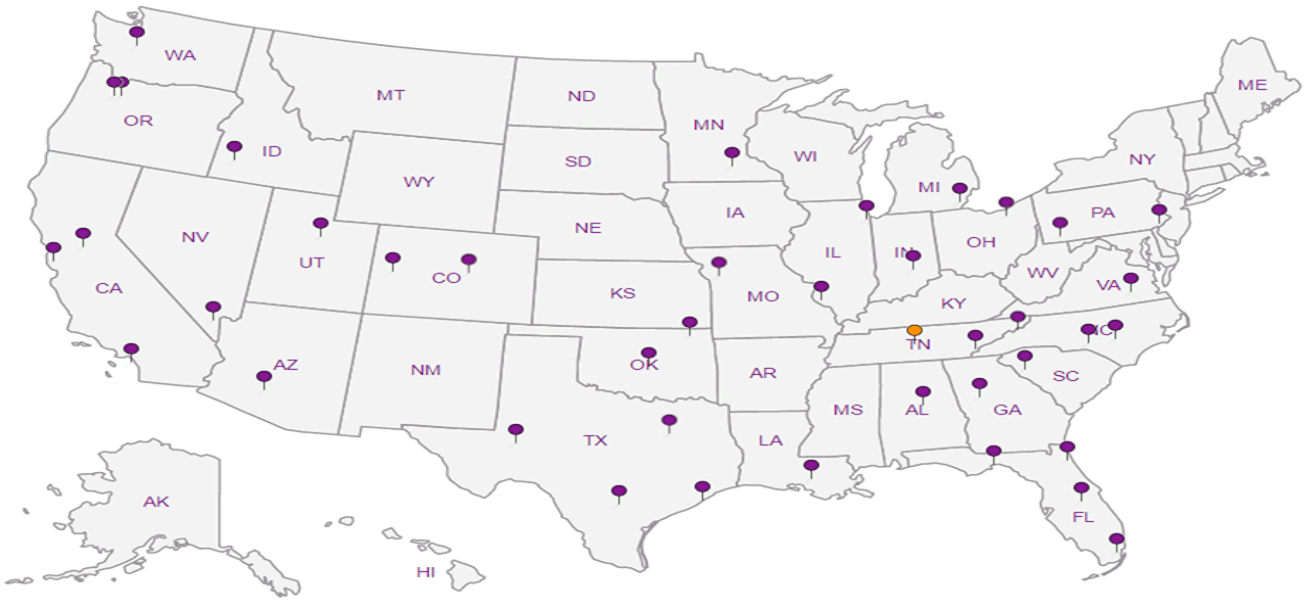
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Company Name/Address:	Billing Information:
Terracon - Longmont 1242 Bramwood Pl. Longmont, CO 80501	SAME
Report to: **Michael Skridulis**	Email To: **mjskridulis@terracon.com**
Project Description: COL Annual GW Quality Monitoring	City/State Collected: Longmont, Colorado
Phone: **303-776-3921** Fax: **303-776-4041**	Client Project # 22187009 / Lab Project #
Collected by (print): Brian Williams	Site/Facility ID # / P.O. #
Collected by (signature):	**Rush?** (Lab MUST Be Notified) ___ Same Day 200% ___ Next Day 100% ___ Two Day 50% ___ Three Day 25% / Date Results Needed: Standard / Email? ___No ✓Yes / FAX? ___No ___Yes
Immediately Packed on Ice N___ Y X	

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC8260 (2) 40ml Amber w/HCl	RSK-175 (2) 40ml Amber w/HCl	N02,N03, Br, Cl, S04 - 250ml HDPE No Pres	Ca,Mg,Na,Fe,K Sr- 250ml HDPE No Pres Dissolved	ALK - 125ml HDPE No Pres	Rem./Contaminant	Sample # (lab only)
SGU-MW-01	Grab	GW		6/28/18	09:40	7	X	X	X	X	X		01
SGU-MW-02	Grab	GW			09:50								02
SGU-MW-03	Grab	GW			10:05								03
SGU-MW-04	Grab	GW			10:25								04
SGU-MW-05	Grab	GW			09:20								05
E6W-MW-01	Grab	GW			11:10								01
E6W-MW-02	Grab	GW			11:25								02
E6W-MW-03	Grab	GW			11:35								03
		GW											
		GW											

L# 1605375

Table G126

Acctnum: TERRALCO

Template:

Prelogin:

TSR:

PB:

Shipped Via:

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

pH _____ Temp _____

Remarks: 4276 0197 7343

Flow _____ Other _____

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
	6/28/18	14:20			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.2 °C Bottles Received: 56	COC Seal Intact: ✓ Y ___N ___NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6/29/18 Time: 0845	pH Checked: / NCF:

ESC LAB SCIENCES
Cooler Receipt Form

Client: Terracon		SDG#	1605575
Cooler Received/Opened On: 6/29/18		Temperature:	4.2°
Received By: Eric Struck			
Signature: Eric M			

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 10, 2018

Terracon Consultants, Inc - Longmont, CO

Sample Delivery Group:	L1005945
Samples Received:	06/30/2018
Project Number:	22187009
Description:	COL Annual GW Quality Monitoring

Report To: Michael Skridulis
1242 Bramwood Place
Longmont, CO 80501

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

RD1-MW-01R L1005945-01 GW

Collected by: Brian Williams | Collected date/time: 06/29/18 09:50 | Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 16:13	07/09/18 16:13	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 14:56	06/30/18 14:56	MCG
Wet Chemistry by Method 9056A	WG1132251	5	06/30/18 15:11	06/30/18 15:11	MCG
Wet Chemistry by Method 9056A	WG1134911	1	07/08/18 18:22	07/08/18 18:22	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 08:30	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 13:09	07/09/18 13:09	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 01:13	07/02/18 01:13	JCP

RD1-MW-02R L1005945-02 GW

Collected by: Brian Williams | Collected date/time: 06/29/18 09:30 | Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 16:21	07/09/18 16:21	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 16:14	06/30/18 16:14	MCG
Wet Chemistry by Method 9056A	WG1132251	5	07/01/18 09:14	07/01/18 09:14	MCG
Wet Chemistry by Method 9056A	WG1134911	1	07/08/18 19:35	07/08/18 19:35	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 08:33	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 13:22	07/09/18 13:22	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 01:33	07/02/18 01:33	JCP

RD1-MW-03R L1005945-03 GW

Collected by: Brian Williams | Collected date/time: 06/29/18 10:00 | Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 16:28	07/09/18 16:28	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 16:30	06/30/18 16:30	MCG
Wet Chemistry by Method 9056A	WG1132251	5	06/30/18 16:45	06/30/18 16:45	MCG
Wet Chemistry by Method 9056A	WG1134911	1	07/08/18 19:53	07/08/18 19:53	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 08:36	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 13:25	07/09/18 13:25	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 01:53	07/02/18 01:53	JCP

RD1-MW-04R L1005945-04 GW

Collected by: Brian Williams | Collected date/time: 06/29/18 10:15 | Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 16:36	07/09/18 16:36	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 17:01	06/30/18 17:01	MCG
Wet Chemistry by Method 9056A	WG1132251	5	07/01/18 09:29	07/01/18 09:29	MCG
Wet Chemistry by Method 9056A	WG1134911	1	07/08/18 20:11	07/08/18 20:11	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 08:43	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 13:37	07/09/18 13:37	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 02:13	07/02/18 02:13	JCP

RD1-MW-05R L1005945-05 GW

Collected by: Brian Williams | Collected date/time: 06/29/18 10:20 | Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 16:43	07/09/18 16:43	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 17:16	06/30/18 17:16	MCG
Wet Chemistry by Method 9056A	WG1132251	5	06/30/18 17:31	06/30/18 17:31	MCG
Wet Chemistry by Method 9056A	WG1134911	1	07/08/18 20:30	07/08/18 20:30	DR

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

RD1-MW-05R L1005945-05 GW

Collected by: Brian Williams | Collected date/time: 06/29/18 10:20 | Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 08:46	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 13:54	07/09/18 13:54	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 02:33	07/02/18 02:33	JCP

RD1-MW-06R L1005945-06 GW

Collected by: Brian Williams | Collected date/time: 06/29/18 10:25 | Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 16:50	07/09/18 16:50	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 17:47	06/30/18 17:47	MCG
Wet Chemistry by Method 9056A	WG1132251	5	06/30/18 18:02	06/30/18 18:02	MCG
Wet Chemistry by Method 9056A	WG1134911	1	07/08/18 20:48	07/08/18 20:48	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 08:49	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 14:01	07/09/18 14:01	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 02:53	07/02/18 02:53	JCP

DM1-MW-01 L1005945-07 GW

Collected by: Brian Williams | Collected date/time: 06/29/18 15:00 | Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 17:36	07/09/18 17:36	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 18:18	06/30/18 18:18	MCG
Wet Chemistry by Method 9056A	WG1132251	5	07/01/18 09:45	07/01/18 09:45	MCG
Wet Chemistry by Method 9056A	WG1135360	1	07/09/18 20:06	07/09/18 20:06	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 08:51	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 14:03	07/09/18 14:03	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 03:13	07/02/18 03:13	JCP

DM1-MW-02 L1005945-08 GW

Collected by: Brian Williams | Collected date/time: 06/29/18 15:10 | Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 16:57	07/09/18 16:57	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 19:50	06/30/18 19:50	MCG
Wet Chemistry by Method 9056A	WG1132251	5	06/30/18 20:06	06/30/18 20:06	MCG
Wet Chemistry by Method 9056A	WG1134911	5	07/08/18 21:42	07/08/18 21:42	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 08:54	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 14:06	07/09/18 14:06	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 03:33	07/02/18 03:33	JCP

DM1-MW-03 L1005945-09 GW

Collected by: Brian Williams | Collected date/time: 06/29/18 15:25 | Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 17:04	07/09/18 17:04	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 20:21	06/30/18 20:21	MCG
Wet Chemistry by Method 9056A	WG1132251	5	06/30/18 20:36	06/30/18 20:36	MCG
Wet Chemistry by Method 9056A	WG1134911	5	07/08/18 22:00	07/08/18 22:00	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 08:56	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 14:10	07/09/18 14:10	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 03:53	07/02/18 03:53	JCP

ST-MW-01 L1005945-11 GW

Collected by: Brian Williams
Collected date/time: 06/29/18 12:20
Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 17:11	07/09/18 17:11	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 20:52	06/30/18 20:52	MCG
Wet Chemistry by Method 9056A	WG1132251	200	07/01/18 10:16	07/01/18 10:16	MCG
Wet Chemistry by Method 9056A	WG1134911	10	07/08/18 22:19	07/08/18 22:19	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 08:59	TRB
Metals (ICP) by Method 6010B	WG1132463	5	07/09/18 18:43	07/10/18 12:22	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 14:15	07/09/18 14:15	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 04:13	07/02/18 04:13	JCP

ST-MW-03 L1005945-12 GW

Collected by: Brian Williams
Collected date/time: 06/29/18 12:30
Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135327	1	07/09/18 17:17	07/09/18 17:17	GB
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 21:23	06/30/18 21:23	MCG
Wet Chemistry by Method 9056A	WG1132251	100	07/01/18 10:31	07/01/18 10:31	MCG
Wet Chemistry by Method 9056A	WG1134911	5	07/08/18 22:37	07/08/18 22:37	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 09:02	TRB
Metals (ICP) by Method 6010B	WG1132463	5	07/09/18 18:43	07/10/18 12:24	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 14:17	07/09/18 14:17	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 04:33	07/02/18 04:33	JCP

ST-MW-04 L1005945-13 GW

Collected by: Brian Williams
Collected date/time: 06/29/18 12:40
Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135330	1	07/09/18 18:58	07/09/18 18:58	MCG
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 22:24	06/30/18 22:24	MCG
Wet Chemistry by Method 9056A	WG1132251	100	07/01/18 10:46	07/01/18 10:46	MCG
Wet Chemistry by Method 9056A	WG1134911	5	07/08/18 22:55	07/08/18 22:55	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 09:05	TRB
Metals (ICP) by Method 6010B	WG1132463	5	07/09/18 18:43	07/10/18 12:32	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 14:25	07/09/18 14:25	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 04:52	07/02/18 04:52	JCP

ST-MW-05 L1005945-14 GW

Collected by: Brian Williams
Collected date/time: 06/29/18 12:50
Received date/time: 06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135330	1	07/09/18 19:06	07/09/18 19:06	MCG
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 22:55	06/30/18 22:55	MCG
Wet Chemistry by Method 9056A	WG1132251	100	07/01/18 11:33	07/01/18 11:33	MCG
Wet Chemistry by Method 9056A	WG1134911	1	07/08/18 23:13	07/08/18 23:13	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 09:07	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 14:28	07/09/18 14:28	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 05:12	07/02/18 05:12	JCP

ST-MW-06 L1005945-15 GW

Collected by	Collected date/time	Received date/time
Brian Williams	06/29/18 13:00	06/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1135330	1	07/09/18 19:15	07/09/18 19:15	MCG
Wet Chemistry by Method 9056A	WG1132251	1	06/30/18 23:26	06/30/18 23:26	MCG
Wet Chemistry by Method 9056A	WG1132251	100	07/01/18 11:48	07/01/18 11:48	MCG
Wet Chemistry by Method 9056A	WG1134911	5	07/08/18 23:31	07/08/18 23:31	DR
Metals (ICP) by Method 6010B	WG1132463	1	07/09/18 18:43	07/10/18 09:18	TRB
Volatile Organic Compounds (GC) by Method RSK175	WG1134842	1	07/09/18 14:31	07/09/18 14:31	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1132673	1	07/02/18 05:32	07/02/18 05:32	JCP

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne Richards
Technical Service Representative

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	390		20.0	1	07/09/2018 16:13	WG1135327

Sample Narrative:

L1005945-01 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/30/2018 14:56	WG1132251
Chloride	37.4		1.00	1	07/08/2018 18:22	WG1134911
Nitrate as (N)	2.99		0.100	1	06/30/2018 14:56	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 14:56	WG1132251
Sulfate	341		25.0	5	06/30/2018 15:11	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	102		1.00	1	07/10/2018 08:30	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 08:30	WG1132463
Magnesium,Dissolved	84.5		1.00	1	07/10/2018 08:30	WG1132463
Potassium,Dissolved	2.26		1.00	1	07/10/2018 08:30	WG1132463
Sodium,Dissolved	117		1.00	1	07/10/2018 08:30	WG1132463
Strontium,Dissolved	3.16		0.0100	1	07/10/2018 08:30	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	0.128		0.0100	1	07/09/2018 13:09	WG1134842
Ethane	ND		0.0130	1	07/09/2018 13:09	WG1134842
Ethene	ND		0.0130	1	07/09/2018 13:09	WG1134842

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	07/02/2018 01:13	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 01:13	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 01:13	WG1132673
Benzene	ND		0.00100	1	07/02/2018 01:13	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 01:13	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 01:13	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 01:13	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 01:13	WG1132673
sec-Butylbenzene	0.00149		0.00100	1	07/02/2018 01:13	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 01:13	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 01:13	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 01:13	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 01:13	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 01:13	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 01:13	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 01:13	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 01:13	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 01:13	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 01:13	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 01:13	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 01:13	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 01:13	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 01:13	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 01:13	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 01:13	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 01:13	WG1132673
Ethylbenzene	0.00495		0.00100	1	07/02/2018 01:13	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 01:13	WG1132673
Isopropylbenzene	0.00351		0.00100	1	07/02/2018 01:13	WG1132673
p-Isopropyltoluene	0.00288		0.00100	1	07/02/2018 01:13	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 01:13	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 01:13	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 01:13	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 01:13	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 01:13	WG1132673
n-Propylbenzene	0.00495		0.00100	1	07/02/2018 01:13	WG1132673
Styrene	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 01:13	WG1132673
Toluene	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 01:13	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 01:13	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 01:13	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 01:13	WG1132673
1,2,4-Trimethylbenzene	0.0388		0.00100	1	07/02/2018 01:13	WG1132673
1,2,3-Trimethylbenzene	0.00574		0.00100	1	07/02/2018 01:13	WG1132673
1,3,5-Trimethylbenzene	0.00688		0.00100	1	07/02/2018 01:13	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 01:13	WG1132673
Xylenes, Total	0.0420		0.00300	1	07/02/2018 01:13	WG1132673
(S) Toluene-d8	*104*		*80.0-120*		*07/02/2018 01:13*	WG1132673
(S) Dibromofluoromethane	*97.8*		*76.0-123*		*07/02/2018 01:13*	WG1132673
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/02/2018 01:13*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	380		20.0	1	07/09/2018 16:21	WG1135327

Sample Narrative:

L1005945-02 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 16:14	WG1132251
Chloride	37.3		1.00	1	07/08/2018 19:35	WG1134911
Nitrate as (N)	3.69		0.100	1	06/30/2018 16:14	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 16:14	WG1132251
Sulfate	338		25.0	5	07/01/2018 09:14	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	106		1.00	1	07/10/2018 08:33	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 08:33	WG1132463
Magnesium,Dissolved	81.4		1.00	1	07/10/2018 08:33	WG1132463
Potassium,Dissolved	2.35		1.00	1	07/10/2018 08:33	WG1132463
Sodium,Dissolved	116		1.00	1	07/10/2018 08:33	WG1132463
Strontium,Dissolved	3.12		0.0100	1	07/10/2018 08:33	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/09/2018 13:22	WG1134842
Ethane	ND		0.0130	1	07/09/2018 13:22	WG1134842
Ethene	ND		0.0130	1	07/09/2018 13:22	WG1134842

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	07/02/2018 01:33	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 01:33	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 01:33	WG1132673
Benzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 01:33	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 01:33	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 01:33	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 01:33	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 01:33	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 01:33	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 01:33	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 01:33	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 01:33	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 01:33	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 01:33	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 01:33	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 01:33	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 01:33	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 01:33	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 01:33	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 01:33	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 01:33	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 01:33	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 01:33	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 01:33	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 01:33	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Styrene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Toluene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 01:33	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 01:33	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 01:33	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 01:33	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 01:33	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 01:33	WG1132673
(S) Toluene-d8	*100*		*80.0-120*		*07/02/2018 01:33*	WG1132673
(S) Dibromofluoromethane	*97.5*		*76.0-123*		*07/02/2018 01:33*	WG1132673
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*07/02/2018 01:33*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	386		20.0	1	07/09/2018 16:28	WG1135327

Sample Narrative:

L1005945-03 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 16:30	WG1132251
Chloride	36.1		1.00	1	07/08/2018 19:53	WG1134911
Nitrate as (N)	2.79		0.100	1	06/30/2018 16:30	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 16:30	WG1132251
Sulfate	336		25.0	5	06/30/2018 16:45	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	102		1.00	1	07/10/2018 08:36	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 08:36	WG1132463
Magnesium,Dissolved	83.6		1.00	1	07/10/2018 08:36	WG1132463
Potassium,Dissolved	2.21		1.00	1	07/10/2018 08:36	WG1132463
Sodium,Dissolved	112		1.00	1	07/10/2018 08:36	WG1132463
Strontium,Dissolved	3.10		0.0100	1	07/10/2018 08:36	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	0.131		0.0100	1	07/09/2018 13:25	WG1134842
Ethane	ND		0.0130	1	07/09/2018 13:25	WG1134842
Ethene	ND		0.0130	1	07/09/2018 13:25	WG1134842

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	07/02/2018 01:53	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 01:53	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 01:53	WG1132673
Benzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 01:53	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 01:53	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 01:53	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 01:53	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 01:53	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 01:53	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 01:53	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 01:53	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 01:53	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 01:53	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 01:53	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 01:53	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 01:53	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 01:53	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 01:53	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 01:53	WG1132673
Ethylbenzene	0.00321		0.00100	1	07/02/2018 01:53	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 01:53	WG1132673
Isopropylbenzene	0.00127		0.00100	1	07/02/2018 01:53	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 01:53	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 01:53	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 01:53	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 01:53	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 01:53	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 01:53	WG1132673
n-Propylbenzene	0.00179		0.00100	1	07/02/2018 01:53	WG1132673
Styrene	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 01:53	WG1132673
Toluene	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 01:53	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 01:53	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 01:53	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 01:53	WG1132673
1,2,4-Trimethylbenzene	0.0124		0.00100	1	07/02/2018 01:53	WG1132673
1,2,3-Trimethylbenzene	0.00120		0.00100	1	07/02/2018 01:53	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 01:53	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 01:53	WG1132673
Xylenes, Total	0.00687		0.00300	1	07/02/2018 01:53	WG1132673
(S) Toluene-d8	*104*		*80.0-120*		*07/02/2018 01:53*	WG1132673
(S) Dibromofluoromethane	*98.9*		*76.0-123*		*07/02/2018 01:53*	WG1132673
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*07/02/2018 01:53*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	376		20.0	1	07/09/2018 16:36	WG1135327

Sample Narrative:

L1005945-04 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/30/2018 17:01	WG1132251
Chloride	35.7		1.00	1	07/08/2018 20:11	WG1134911
Nitrate as (N)	2.87		0.100	1	06/30/2018 17:01	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 17:01	WG1132251
Sulfate	331		25.0	5	07/01/2018 09:29	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	103		1.00	1	07/10/2018 08:43	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 08:43	WG1132463
Magnesium,Dissolved	82.7		1.00	1	07/10/2018 08:43	WG1132463
Potassium,Dissolved	2.34		1.00	1	07/10/2018 08:43	WG1132463
Sodium,Dissolved	109		1.00	1	07/10/2018 08:43	WG1132463
Strontium,Dissolved	3.07		0.0100	1	07/10/2018 08:43	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	0.0617		0.0100	1	07/09/2018 13:37	WG1134842
Ethane	ND		0.0130	1	07/09/2018 13:37	WG1134842
Ethene	ND		0.0130	1	07/09/2018 13:37	WG1134842

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	07/02/2018 02:13	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 02:13	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 02:13	WG1132673
Benzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 02:13	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 02:13	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 02:13	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 02:13	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 02:13	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 02:13	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 02:13	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 02:13	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 02:13	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 02:13	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 02:13	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 02:13	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 02:13	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 02:13	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 02:13	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 02:13	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 02:13	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 02:13	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 02:13	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 02:13	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 02:13	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 02:13	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Styrene	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Toluene	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 02:13	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 02:13	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 02:13	WG1132673
1,2,4-Trimethylbenzene	0.00196		0.00100	1	07/02/2018 02:13	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 02:13	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 02:13	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 02:13	WG1132673
(S) Toluene-d8	*103*		*80.0-120*		*07/02/2018 02:13*	WG1132673
(S) Dibromofluoromethane	*99.2*		*76.0-123*		*07/02/2018 02:13*	WG1132673
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*07/02/2018 02:13*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	389		20.0	1	07/09/2018 16:43	WG1135327

Sample Narrative:

L1005945-05 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		1.00	1	06/30/2018 17:16	WG1132251
Chloride	44.2		1.00	1	07/08/2018 20:30	WG1134911
Nitrate as (N)	3.04		0.100	1	06/30/2018 17:16	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 17:16	WG1132251
Sulfate	338		25.0	5	06/30/2018 17:31	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	103		1.00	1	07/10/2018 08:46	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 08:46	WG1132463
Magnesium,Dissolved	85.5		1.00	1	07/10/2018 08:46	WG1132463
Potassium,Dissolved	2.71		1.00	1	07/10/2018 08:46	WG1132463
Sodium,Dissolved	113		1.00	1	07/10/2018 08:46	WG1132463
Strontium,Dissolved	3.07		0.0100	1	07/10/2018 08:46	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/09/2018 13:54	WG1134842
Ethane	ND		0.0130	1	07/09/2018 13:54	WG1134842
Ethene	ND		0.0130	1	07/09/2018 13:54	WG1134842

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	07/02/2018 02:33	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 02:33	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 02:33	WG1132673
Benzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 02:33	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 02:33	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 02:33	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 02:33	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 02:33	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 02:33	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 02:33	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 02:33	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 02:33	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 02:33	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 02:33	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 02:33	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 02:33	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 02:33	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 02:33	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 02:33	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 02:33	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 02:33	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 02:33	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 02:33	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 02:33	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 02:33	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Styrene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Toluene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 02:33	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 02:33	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 02:33	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 02:33	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 02:33	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 02:33	WG1132673
(S) Toluene-d8	*102*		*80.0-120*		*07/02/2018 02:33*	WG1132673
(S) Dibromofluoromethane	*99.1*		*76.0-123*		*07/02/2018 02:33*	WG1132673
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*07/02/2018 02:33*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	375		20.0	1	07/09/2018 16:50	WG1135327

Sample Narrative:

L1005945-06 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 17:47	WG1132251
Chloride	36.3		1.00	1	07/08/2018 20:48	WG1134911
Nitrate as (N)	3.05		0.100	1	06/30/2018 17:47	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 17:47	WG1132251
Sulfate	334		25.0	5	06/30/2018 18:02	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	103		1.00	1	07/10/2018 08:49	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 08:49	WG1132463
Magnesium,Dissolved	83.5		1.00	1	07/10/2018 08:49	WG1132463
Potassium,Dissolved	2.28		1.00	1	07/10/2018 08:49	WG1132463
Sodium,Dissolved	110		1.00	1	07/10/2018 08:49	WG1132463
Strontium,Dissolved	3.08		0.0100	1	07/10/2018 08:49	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/09/2018 14:01	WG1134842
Ethane	ND		0.0130	1	07/09/2018 14:01	WG1134842
Ethene	ND		0.0130	1	07/09/2018 14:01	WG1134842

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	07/02/2018 02:53	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 02:53	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 02:53	WG1132673
Benzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 02:53	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 02:53	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 02:53	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 02:53	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 02:53	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 02:53	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 02:53	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 02:53	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 02:53	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 02:53	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 02:53	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 02:53	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 02:53	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 02:53	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 02:53	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 02:53	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 02:53	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 02:53	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 02:53	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 02:53	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 02:53	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 02:53	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Styrene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Toluene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 02:53	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 02:53	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 02:53	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 02:53	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 02:53	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 02:53	WG1132673
(S) Toluene-d8	*102*		*80.0-120*		*07/02/2018 02:53*	WG1132673
(S) Dibromofluoromethane	*99.1*		*76.0-123*		*07/02/2018 02:53*	WG1132673
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*07/02/2018 02:53*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	241		20.0	1	07/09/2018 17:36	WG1135327

Sample Narrative:
L1005945-07 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 18:18	WG1132251
Chloride	74.3		1.00	1	07/09/2018 20:06	WG1135360
Nitrate as (N)	ND		0.100	1	06/30/2018 18:18	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 18:18	WG1132251
Sulfate	193		25.0	5	07/01/2018 09:45	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	40.4		1.00	1	07/10/2018 08:51	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 08:51	WG1132463
Magnesium,Dissolved	52.6		1.00	1	07/10/2018 08:51	WG1132463
Potassium,Dissolved	2.47		1.00	1	07/10/2018 08:51	WG1132463
Sodium,Dissolved	115		1.00	1	07/10/2018 08:51	WG1132463
Strontium,Dissolved	0.719		0.0100	1	07/10/2018 08:51	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	0.0505		0.0100	1	07/09/2018 14:03	WG1134842
Ethane	ND		0.0130	1	07/09/2018 14:03	WG1134842
Ethene	ND		0.0130	1	07/09/2018 14:03	WG1134842

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	07/02/2018 03:13	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 03:13	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 03:13	WG1132673
Benzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 03:13	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 03:13	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 03:13	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 03:13	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 03:13	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 03:13	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 03:13	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 03:13	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 03:13	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 03:13	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 03:13	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 03:13	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 03:13	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 03:13	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 03:13	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 03:13	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 03:13	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 03:13	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 03:13	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 03:13	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 03:13	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 03:13	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Styrene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Toluene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 03:13	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 03:13	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 03:13	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 03:13	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 03:13	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 03:13	WG1132673
(S) Toluene-d8	*101*		*80.0-120*		*07/02/2018 03:13*	WG1132673
(S) Dibromofluoromethane	*100*		*76.0-123*		*07/02/2018 03:13*	WG1132673
(S) 4-Bromofluorobenzene	*102*		*80.0-120*		*07/02/2018 03:13*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	386		20.0	1	07/09/2018 16:57	WG1135327

Sample Narrative:

L1005945-08 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	1.33		1.00	1	06/30/2018 19:50	WG1132251
Chloride	76.9		5.00	5	07/08/2018 21:42	WG1134911
Nitrate as (N)	ND		0.100	1	06/30/2018 19:50	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 19:50	WG1132251
Sulfate	196		25.0	5	06/30/2018 20:06	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium,Dissolved	70.8		1.00	1	07/10/2018 08:54	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 08:54	WG1132463
Magnesium,Dissolved	53.9		1.00	1	07/10/2018 08:54	WG1132463
Potassium,Dissolved	4.93		1.00	1	07/10/2018 08:54	WG1132463
Sodium,Dissolved	159		1.00	1	07/10/2018 08:54	WG1132463
Strontium,Dissolved	0.837		0.0100	1	07/10/2018 08:54	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	0.0675		0.0100	1	07/09/2018 14:06	WG1134842
Ethane	ND		0.0130	1	07/09/2018 14:06	WG1134842
Ethene	ND		0.0130	1	07/09/2018 14:06	WG1134842

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	07/02/2018 03:33	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 03:33	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 03:33	WG1132673
Benzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 03:33	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 03:33	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 03:33	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 03:33	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 03:33	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 03:33	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 03:33	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 03:33	WG1132673

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 03:33	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 03:33	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 03:33	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 03:33	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 03:33	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 03:33	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 03:33	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 03:33	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 03:33	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 03:33	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 03:33	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 03:33	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 03:33	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 03:33	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Styrene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Toluene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 03:33	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 03:33	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 03:33	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 03:33	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 03:33	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 03:33	WG1132673
(S) Toluene-d8	*101*		*80.0-120*		*07/02/2018 03:33*	WG1132673
(S) Dibromofluoromethane	*100*		*76.0-123*		*07/02/2018 03:33*	WG1132673
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*07/02/2018 03:33*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	195		20.0	1	07/09/2018 17:04	WG1135327

Sample Narrative:

L1005945-09 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 20:21	WG1132251
Chloride	71.6		5.00	5	07/08/2018 22:00	WG1134911
Nitrate as (N)	1.10		0.100	1	06/30/2018 20:21	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 20:21	WG1132251
Sulfate	255		25.0	5	06/30/2018 20:36	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	70.4		1.00	1	07/10/2018 08:56	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 08:56	WG1132463
Magnesium,Dissolved	37.5		1.00	1	07/10/2018 08:56	WG1132463
Potassium,Dissolved	1.61		1.00	1	07/10/2018 08:56	WG1132463
Sodium,Dissolved	129		1.00	1	07/10/2018 08:56	WG1132463
Strontium,Dissolved	0.628		0.0100	1	07/10/2018 08:56	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/09/2018 14:10	WG1134842
Ethane	ND		0.0130	1	07/09/2018 14:10	WG1134842
Ethene	ND		0.0130	1	07/09/2018 14:10	WG1134842

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	07/02/2018 03:53	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 03:53	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 03:53	WG1132673
Benzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 03:53	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 03:53	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 03:53	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 03:53	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 03:53	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 03:53	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 03:53	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 03:53	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 03:53	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 03:53	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 03:53	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 03:53	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 03:53	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 03:53	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 03:53	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 03:53	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 03:53	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 03:53	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 03:53	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 03:53	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 03:53	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 03:53	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 03:53	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
Styrene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
Tetrachloroethene	0.00140		0.00100	1	07/02/2018 03:53	WG1132673
Toluene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 03:53	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 03:53	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 03:53	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 03:53	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 03:53	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 03:53	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 03:53	WG1132673
(S) Toluene-d8	*100*		*80.0-120*		*07/02/2018 03:53*	WG1132673
(S) Dibromofluoromethane	*97.6*		*76.0-123*		*07/02/2018 03:53*	WG1132673
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*07/02/2018 03:53*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	648		20.0	1	07/09/2018 17:11	WG1135327

Sample Narrative:
L1005945-11 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 20:52	WG1132251
Chloride	351		10.0	10	07/08/2018 22:19	WG1134911
Nitrate as (N)	ND		0.100	1	06/30/2018 20:52	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 20:52	WG1132251
Sulfate	11300		1000	200	07/01/2018 10:16	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	407		1.00	1	07/10/2018 08:59	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 08:59	WG1132463
Magnesium,Dissolved	1270		5.00	5	07/10/2018 12:22	WG1132463
Potassium,Dissolved	13.4		1.00	1	07/10/2018 08:59	WG1132463
Sodium,Dissolved	3060		5.00	5	07/10/2018 12:22	WG1132463
Strontium,Dissolved	8.76		0.0100	1	07/10/2018 08:59	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	0.134		0.0100	1	07/09/2018 14:15	WG1134842
Ethane	ND		0.0130	1	07/09/2018 14:15	WG1134842
Ethene	ND		0.0130	1	07/09/2018 14:15	WG1134842

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	07/02/2018 04:13	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 04:13	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 04:13	WG1132673
Benzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 04:13	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 04:13	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 04:13	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 04:13	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 04:13	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 04:13	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 04:13	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 04:13	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 04:13	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 04:13	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 04:13	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 04:13	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 04:13	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 04:13	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 04:13	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 04:13	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 04:13	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 04:13	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 04:13	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 04:13	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 04:13	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 04:13	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Styrene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Toluene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 04:13	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 04:13	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 04:13	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 04:13	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 04:13	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 04:13	WG1132673
(S) Toluene-d8	*102*		*80.0-120*		*07/02/2018 04:13*	WG1132673
(S) Dibromofluoromethane	*99.0*		*76.0-123*		*07/02/2018 04:13*	WG1132673
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*07/02/2018 04:13*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	769		20.0	1	07/09/2018 17:17	WG1135327

Sample Narrative:

L1005945-12 WG1135327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 21:23	WG1132251
Chloride	109		5.00	5	07/08/2018 22:37	WG1134911
Nitrate as (N)	ND		0.100	1	06/30/2018 21:23	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 21:23	WG1132251
Sulfate	6250		500	100	07/01/2018 10:31	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	419		1.00	1	07/10/2018 09:02	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 09:02	WG1132463
Magnesium,Dissolved	660		1.00	1	07/10/2018 09:02	WG1132463
Potassium,Dissolved	10.2		1.00	1	07/10/2018 09:02	WG1132463
Sodium,Dissolved	1360		5.00	5	07/10/2018 12:24	WG1132463
Strontium,Dissolved	7.69		0.0100	1	07/10/2018 09:02	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	0.316		0.0100	1	07/09/2018 14:17	WG1134842
Ethane	ND		0.0130	1	07/09/2018 14:17	WG1134842
Ethene	ND		0.0130	1	07/09/2018 14:17	WG1134842

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	07/02/2018 04:33	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 04:33	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 04:33	WG1132673
Benzene	0.00207		0.00100	1	07/02/2018 04:33	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 04:33	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 04:33	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 04:33	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 04:33	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 04:33	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 04:33	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 04:33	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 04:33	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 04:33	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 04:33	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 04:33	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 04:33	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 04:33	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 04:33	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 04:33	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 04:33	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 04:33	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 04:33	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 04:33	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 04:33	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 04:33	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 04:33	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 04:33	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
Styrene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 04:33	WG1132673
Toluene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 04:33	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 04:33	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 04:33	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 04:33	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 04:33	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 04:33	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 04:33	WG1132673
(S) Toluene-d8	*101*		*80.0-120*		*07/02/2018 04:33*	WG1132673
(S) Dibromofluoromethane	*99.4*		*76.0-123*		*07/02/2018 04:33*	WG1132673
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*07/02/2018 04:33*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	539		20.0	1	07/09/2018 18:58	WG1135330

Sample Narrative:
L1005945-13 WG1135330: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 22:24	WG1132251
Chloride	107		5.00	5	07/08/2018 22:55	WG1134911
Nitrate as (N)	ND		0.100	1	06/30/2018 22:24	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 22:24	WG1132251
Sulfate	7210		500	100	07/01/2018 10:46	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	426		1.00	1	07/10/2018 09:05	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 09:05	WG1132463
Magnesium,Dissolved	841		1.00	1	07/10/2018 09:05	WG1132463
Potassium,Dissolved	11.0		1.00	1	07/10/2018 09:05	WG1132463
Sodium,Dissolved	1630		5.00	5	07/10/2018 12:32	WG1132463
Strontium,Dissolved	9.12		0.0100	1	07/10/2018 09:05	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/09/2018 14:25	WG1134842
Ethane	ND		0.0130	1	07/09/2018 14:25	WG1134842
Ethene	ND		0.0130	1	07/09/2018 14:25	WG1134842

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	07/02/2018 04:52	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 04:52	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 04:52	WG1132673
Benzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 04:52	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 04:52	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 04:52	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 04:52	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 04:52	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 04:52	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 04:52	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 04:52	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 04:52	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 04:52	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 04:52	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 04:52	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 04:52	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 04:52	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 04:52	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 04:52	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 04:52	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 04:52	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 04:52	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 04:52	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 04:52	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 04:52	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Styrene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Toluene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 04:52	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 04:52	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 04:52	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 04:52	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 04:52	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 04:52	WG1132673
(S) Toluene-d8	*101*		*80.0-120*		*07/02/2018 04:52*	WG1132673
(S) Dibromofluoromethane	*98.3*		*76.0-123*		*07/02/2018 04:52*	WG1132673
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*07/02/2018 04:52*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	484		20.0	1	07/09/2018 19:06	WG1135330

Sample Narrative:
L1005945-14 WG1135330: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 22:55	WG1132251
Chloride	71.1		1.00	1	07/08/2018 23:13	WG1134911
Nitrate as (N)	ND		0.100	1	06/30/2018 22:55	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 22:55	WG1132251
Sulfate	4590		500	100	07/01/2018 11:33	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	439		1.00	1	07/10/2018 09:07	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 09:07	WG1132463
Magnesium,Dissolved	548		1.00	1	07/10/2018 09:07	WG1132463
Potassium,Dissolved	9.32		1.00	1	07/10/2018 09:07	WG1132463
Sodium,Dissolved	971		1.00	1	07/10/2018 09:07	WG1132463
Strontium,Dissolved	7.03		0.0100	1	07/10/2018 09:07	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/09/2018 14:28	WG1134842
Ethane	ND		0.0130	1	07/09/2018 14:28	WG1134842
Ethene	ND		0.0130	1	07/09/2018 14:28	WG1134842

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	07/02/2018 05:12	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 05:12	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 05:12	WG1132673
Benzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 05:12	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 05:12	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 05:12	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 05:12	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 05:12	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 05:12	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 05:12	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 05:12	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 05:12	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 05:12	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 05:12	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 05:12	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 05:12	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 05:12	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 05:12	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 05:12	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 05:12	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 05:12	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 05:12	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 05:12	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 05:12	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 05:12	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Styrene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Toluene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 05:12	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 05:12	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 05:12	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 05:12	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 05:12	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 05:12	WG1132673
(S) Toluene-d8	*101*		*80.0-120*		*07/02/2018 05:12*	WG1132673
(S) Dibromofluoromethane	*97.6*		*76.0-123*		*07/02/2018 05:12*	WG1132673
(S) 4-Bromofluorobenzene	*102*		*80.0-120*		*07/02/2018 05:12*	WG1132673

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	514		20.0	1	07/09/2018 19:15	WG1135330

Sample Narrative:
L1005945-15 WG1135330: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/30/2018 23:26	WG1132251
Chloride	74.6		5.00	5	07/08/2018 23:31	WG1134911
Nitrate as (N)	ND		0.100	1	06/30/2018 23:26	WG1132251
Nitrite as (N)	ND		0.100	1	06/30/2018 23:26	WG1132251
Sulfate	4850		500	100	07/01/2018 11:48	WG1132251

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium,Dissolved	442		1.00	1	07/10/2018 09:18	WG1132463
Iron,Dissolved	ND		0.100	1	07/10/2018 09:18	WG1132463
Magnesium,Dissolved	565		1.00	1	07/10/2018 09:18	WG1132463
Potassium,Dissolved	9.24		1.00	1	07/10/2018 09:18	WG1132463
Sodium,Dissolved	999		1.00	1	07/10/2018 09:18	WG1132463
Strontium,Dissolved	7.61		0.0100	1	07/10/2018 09:18	WG1132463

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	07/09/2018 14:31	WG1134842
Ethane	ND		0.0130	1	07/09/2018 14:31	WG1134842
Ethene	ND		0.0130	1	07/09/2018 14:31	WG1134842

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	07/02/2018 05:32	WG1132673
Acrolein	ND	J4	0.0500	1	07/02/2018 05:32	WG1132673
Acrylonitrile	ND		0.0100	1	07/02/2018 05:32	WG1132673
Benzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Bromobenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Bromodichloromethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
Bromoform	ND		0.00100	1	07/02/2018 05:32	WG1132673
Bromomethane	ND		0.00500	1	07/02/2018 05:32	WG1132673
n-Butylbenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
sec-Butylbenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
tert-Butylbenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Carbon tetrachloride	ND		0.00100	1	07/02/2018 05:32	WG1132673
Chlorobenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Chlorodibromomethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
Chloroethane	ND		0.00500	1	07/02/2018 05:32	WG1132673
Chloroform	ND		0.00500	1	07/02/2018 05:32	WG1132673
Chloromethane	ND		0.00250	1	07/02/2018 05:32	WG1132673
2-Chlorotoluene	ND		0.00100	1	07/02/2018 05:32	WG1132673
4-Chlorotoluene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	07/02/2018 05:32	WG1132673

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
Dibromomethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,2-Dichlorobenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,3-Dichlorobenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,4-Dichlorobenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Dichlorodifluoromethane	ND		0.00500	1	07/02/2018 05:32	WG1132673
1,1-Dichloroethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,2-Dichloroethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,1-Dichloroethene	ND		0.00100	1	07/02/2018 05:32	WG1132673
cis-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 05:32	WG1132673
trans-1,2-Dichloroethene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,2-Dichloropropane	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,1-Dichloropropene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,3-Dichloropropane	ND		0.00100	1	07/02/2018 05:32	WG1132673
cis-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 05:32	WG1132673
trans-1,3-Dichloropropene	ND		0.00100	1	07/02/2018 05:32	WG1132673
2,2-Dichloropropane	ND		0.00100	1	07/02/2018 05:32	WG1132673
Di-isopropyl ether	ND		0.00100	1	07/02/2018 05:32	WG1132673
Ethylbenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Hexachloro-1,3-butadiene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Isopropylbenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
p-Isopropyltoluene	ND		0.00100	1	07/02/2018 05:32	WG1132673
2-Butanone (MEK)	ND		0.0100	1	07/02/2018 05:32	WG1132673
Methylene Chloride	ND		0.00500	1	07/02/2018 05:32	WG1132673
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	07/02/2018 05:32	WG1132673
Methyl tert-butyl ether	ND		0.00100	1	07/02/2018 05:32	WG1132673
Naphthalene	ND		0.00500	1	07/02/2018 05:32	WG1132673
n-Propylbenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Styrene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,1,1,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,1,2,2-Tetrachloroethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
Tetrachloroethene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Toluene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,2,3-Trichlorobenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,2,4-Trichlorobenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,1,1-Trichloroethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,1,2-Trichloroethane	ND		0.00100	1	07/02/2018 05:32	WG1132673
Trichloroethene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Trichlorofluoromethane	ND		0.00500	1	07/02/2018 05:32	WG1132673
1,2,3-Trichloropropane	ND		0.00250	1	07/02/2018 05:32	WG1132673
1,2,4-Trimethylbenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,2,3-Trimethylbenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
1,3,5-Trimethylbenzene	ND		0.00100	1	07/02/2018 05:32	WG1132673
Vinyl chloride	ND		0.00100	1	07/02/2018 05:32	WG1132673
Xylenes, Total	ND		0.00300	1	07/02/2018 05:32	WG1132673
(S) Toluene-d8	*100*		*80.0-120*		*07/02/2018 05:32*	WG1132673
(S) Dibromofluoromethane	*97.7*		*76.0-123*		*07/02/2018 05:32*	WG1132673
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*07/02/2018 05:32*	WG1132673

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

L1006402-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1006402-02 07/09/18 14:32 • (DUP) R3324106-1 07/09/18 14:40

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Alkalinity	587	588	1	0.120		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1005945-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1005945-07 07/09/18 17:36 • (DUP) R3324106-5 07/09/18 17:44

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Alkalinity	241	240	1	0.281		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

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

(LCS) R3324106-3 07/09/18 14:48 • (LCSD) R3324106-4 07/09/18 15:22

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Alkalinity	100	101	90.9	101	90.9	85.0-115			10.5	20

Sample Narrative:

LCS: Endpoint pH 4.5

LCSD: Endpoint pH 4.5

L1005958-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005958-01 07/09/18 19:23 • (DUP) R3324304-5 07/09/18 19:32

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	392	391	1	0.301		20

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

L1006324-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1006324-01 07/09/18 21:46 • (DUP) R3324304-8 07/09/18 21:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	307	307	1	0.177		20

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

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

(LCS) R3324304-6 07/09/18 19:59 • (LCSD) R3324304-7 07/09/18 21:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Alkalinity	100	102	102	102	102	85.0-115			0.0698	20

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

Method Blank (MB)

(MB) R3322489-1 06/30/18 11:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.0790	1.00
Nitrate	U		0.0227	0.100
Nitrite	U		0.0277	0.100
Sulfate	U		0.0774	5.00

L1005945-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1005945-07 06/30/18 18:18 • (DUP) R3322489-4 06/30/18 18:33

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	0.865	1	0.000		15
Nitrate	ND	0.000	1	0.000		15
Nitrite	ND	0.000	1	0.000		15

L1005954-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005954-01 07/01/18 08:28 • (DUP) R3322489-7 07/01/18 08:43

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	0.000	1	0.000		15
Nitrate	0.0782	0.0740	1	5.52	J	15
Nitrite	U	0.000	1	0.000		15
Sulfate	U	0.000	1	0.000		15

L1005945-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1005945-07 07/01/18 09:45 • (DUP) R3322489-9 07/01/18 10:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	193	195	5	1.09		15

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

(LCS) R3322489-2 06/30/18 12:14 • (LCSD) R3322489-3 06/30/18 12:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromide	40.0	38.9	39.5	97.2	98.9	80.0-120			1.69	15
Nitrate	8.00	8.03	8.24	100	103	80.0-120			2.64	15
Nitrite	8.00	7.66	7.86	95.8	98.3	80.0-120			2.59	15
Sulfate	40.0	37.8	39.5	94.6	98.7	80.0-120			4.24	15

L1005945-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005945-07 06/30/18 18:18 • (MS) R3322489-5 06/30/18 19:19 • (MSD) R3322489-6 06/30/18 19:35

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	50.0	ND	48.1	48.3	94.6	95.1	1	80.0-120			0.451	15
Nitrate	5.00	ND	4.69	4.69	93.7	93.9	1	80.0-120			0.141	15
Nitrite	5.00	ND	5.09	5.10	102	102	1	80.0-120			0.173	15

L1005954-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1005954-01 07/01/18 08:28 • (MS) R3322489-8 07/01/18 08:59

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	U	48.1	96.1	1	80.0-120	
Nitrate	5.00	0.0782	4.87	95.8	1	80.0-120	
Nitrite	5.00	U	4.94	98.8	1	80.0-120	
Sulfate	50.0	U	49.2	98.3	1	80.0-120	

Method Blank (MB)

(MB) R3324128-1 07/08/18 12:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00

L1005919-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005919-01 07/08/18 16:15 • (DUP) R3324128-4 07/08/18 16:33

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	11.9	11.9	1	0.128		15

L1005945-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1005945-01 07/08/18 18:22 • (DUP) R3324128-6 07/08/18 18:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	37.4	37.5	1	0.269		15

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

(LCS) R3324128-2 07/08/18 13:06 • (LCSD) R3324128-3 07/08/18 13:25

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	40.0	40.0	99.9	100	80.0-120			0.0640	15

L1005919-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1005919-01 07/08/18 16:15 • (MS) R3324128-5 07/08/18 16:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	11.9	65.3	107	1	80.0-120	

L1005945-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005945-01 07/08/18 18:22 • (MS) R3324128-7 07/08/18 18:59 • (MSD) R3324128-8 07/08/18 19:17

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	37.4	89.0	90.7	103	107	1	80.0-120			1.86	15

Method Blank (MB)

(MB) R3324204-1 07/09/18 12:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00

L1005344-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1005344-04 07/09/18 17:16 • (DUP) R3324204-4 07/09/18 17:32

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	ND	0.621	1	0.000		15

L1005945-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1005945-07 07/09/18 20:06 • (DUP) R3324204-7 07/09/18 20:21

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	74.3	74.6	1	0.357		15

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

(LCS) R3324204-9 07/09/18 22:18 • (LCSD) R3324204-3 07/09/18 12:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	38.2	38.0	95.4	95.0	80.0-120			0.364	15

L1005344-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1005344-04 07/09/18 17:16 • (MS) R3324204-5 07/09/18 17:47 • (MSD) R3324204-6 07/09/18 18:03

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	ND	48.5	48.3	95.7	95.4	1	80.0-120			0.356	15

L1005945-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1005945-07 07/09/18 20:06 • (MS) R3324204-8 07/09/18 20:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	74.3	118	87.3	1	80.0-120	E

Method Blank (MB)

(MB) R3324372-1 07/10/18 08:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium,Dissolved	U		0.0463	1.00
Iron,Dissolved	U		0.0141	0.100
Magnesium,Dissolved	U		0.0111	1.00
Potassium,Dissolved	U		0.102	1.00
Sodium,Dissolved	U		0.0985	1.00
Strontium,Dissolved	U		0.00170	0.0100

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

(LCS) R3324372-2 07/10/18 08:15 • (LCSD) R3324372-3 07/10/18 08:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Calcium,Dissolved	10.0	9.98	9.77	99.8	97.7	80.0-120			2.08	20
Iron,Dissolved	10.0	9.96	9.75	99.6	97.5	80.0-120			2.15	20
Magnesium,Dissolved	10.0	10.1	9.94	101	99.4	80.0-120			1.21	20
Potassium,Dissolved	10.0	9.81	9.58	98.1	95.8	80.0-120			2.36	20
Sodium,Dissolved	10.0	10.1	9.80	101	98.0	80.0-120			2.63	20
Strontium,Dissolved	1.00	1.00	0.977	100	97.7	80.0-120			2.43	20

Method Blank (MB)

(MB) R3324077-1 07/09/18 11:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130

L1005945-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1005945-02 07/09/18 13:22 • (DUP) R3324077-2 07/09/18 13:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1005945-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1005945-15 07/09/18 14:31 • (DUP) R3324077-3 07/09/18 14:34

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

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

(LCS) R3324077-4 07/09/18 14:38 • (LCSD) R3324077-5 07/09/18 14:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0725	0.0690	107	102	85.0-115			4.96	20
Ethane	0.129	0.115	0.117	89.0	90.6	85.0-115			1.80	20
Ethene	0.127	0.114	0.116	89.5	91.3	85.0-115			2.06	20

Method Blank (MB)

(MB) R3322556-3 07/01/18 22:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	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
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
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
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	0.000280	J	0.000256	0.00100

Method Blank (MB)

(MB) R3322556-3 07/01/18 22:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
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
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	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
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000355	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
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*103*			*80.0-120*
(S) Dibromofluoromethane	*96.3*			*76.0-123*
(S) 4-Bromofluorobenzene	*103*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3322556-1 07/01/18 21:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.125	0.151	121	10.0-160	
Acrolein	0.125	0.305	244	10.0-160	J4
Acrylonitrile	0.125	0.142	113	60.0-142	
Benzene	0.0250	0.0233	93.2	69.0-123	

Laboratory Control Sample (LCS)

(LCS) R3322556-1 07/01/18 21:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromobenzene	0.0250	0.0244	97.8	79.0-120	
Bromodichloromethane	0.0250	0.0241	96.3	76.0-120	
Bromoform	0.0250	0.0274	110	67.0-132	
Bromomethane	0.0250	0.0218	87.3	18.0-160	
n-Butylbenzene	0.0250	0.0242	96.7	72.0-126	
sec-Butylbenzene	0.0250	0.0256	103	74.0-121	
tert-Butylbenzene	0.0250	0.0256	102	75.0-122	
Carbon tetrachloride	0.0250	0.0264	106	63.0-122	
Chlorobenzene	0.0250	0.0233	93.1	79.0-121	
Chlorodibromomethane	0.0250	0.0243	97.3	75.0-125	
Chloroethane	0.0250	0.0224	89.4	47.0-152	
Chloroform	0.0250	0.0244	97.6	72.0-121	
Chloromethane	0.0250	0.0331	132	48.0-139	
2-Chlorotoluene	0.0250	0.0254	102	74.0-122	
4-Chlorotoluene	0.0250	0.0243	97.0	79.0-120	
1,2-Dibromo-3-Chloropropane	0.0250	0.0203	81.0	64.0-127	
1,2-Dibromoethane	0.0250	0.0231	92.4	77.0-123	
Dibromomethane	0.0250	0.0247	98.7	78.0-120	
1,2-Dichlorobenzene	0.0250	0.0232	92.8	80.0-120	
1,3-Dichlorobenzene	0.0250	0.0231	92.5	72.0-123	
1,4-Dichlorobenzene	0.0250	0.0241	96.5	77.0-120	
Dichlorodifluoromethane	0.0250	0.0253	101	49.0-155	
1,1-Dichloroethane	0.0250	0.0254	102	70.0-126	
1,2-Dichloroethane	0.0250	0.0268	107	67.0-126	
1,1-Dichloroethene	0.0250	0.0259	104	64.0-129	
cis-1,2-Dichloroethene	0.0250	0.0226	90.6	73.0-120	
trans-1,2-Dichloroethene	0.0250	0.0235	93.8	71.0-121	
1,2-Dichloropropane	0.0250	0.0259	104	75.0-125	
1,1-Dichloropropene	0.0250	0.0253	101	71.0-129	
1,3-Dichloropropane	0.0250	0.0238	95.1	80.0-121	
cis-1,3-Dichloropropene	0.0250	0.0228	91.3	79.0-123	
trans-1,3-Dichloropropene	0.0250	0.0241	96.3	74.0-127	
2,2-Dichloropropane	0.0250	0.0240	96.2	60.0-125	
Di-isopropyl ether	0.0250	0.0311	124	59.0-133	
Ethylbenzene	0.0250	0.0233	93.4	77.0-120	
Hexachloro-1,3-butadiene	0.0250	0.0235	93.9	64.0-131	
Isopropylbenzene	0.0250	0.0274	110	75.0-120	
p-Isopropyltoluene	0.0250	0.0255	102	74.0-126	
2-Butanone (MEK)	0.125	0.167	134	37.0-158	
Methylene Chloride	0.0250	0.0215	86.2	66.0-121	

Laboratory Control Sample (LCS)

(LCS) R3322556-1 07/01/18 21:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	0.125	0.151	121	59.0-143	
Methyl tert-butyl ether	0.0250	0.0239	95.8	64.0-123	
Naphthalene	0.0250	0.0192	76.9	62.0-128	
n-Propylbenzene	0.0250	0.0252	101	79.0-120	
Styrene	0.0250	0.0272	109	78.0-124	
1,1,1,2-Tetrachloroethane	0.0250	0.0229	91.5	75.0-122	
1,1,2,2-Tetrachloroethane	0.0250	0.0214	85.5	71.0-122	
Tetrachloroethene	0.0250	0.0239	95.8	70.0-127	
Toluene	0.0250	0.0227	90.9	77.0-120	
1,1,2-Trichlorotrifluoroethane	0.0250	0.0248	99.3	61.0-136	
1,2,3-Trichlorobenzene	0.0250	0.0197	79.0	61.0-133	
1,2,4-Trichlorobenzene	0.0250	0.0200	80.0	69.0-129	
1,1,1-Trichloroethane	0.0250	0.0268	107	68.0-122	
1,1,2-Trichloroethane	0.0250	0.0232	92.7	78.0-120	
Trichloroethene	0.0250	0.0250	100	78.0-120	
Trichlorofluoromethane	0.0250	0.0281	112	56.0-137	
1,2,3-Trichloropropane	0.0250	0.0231	92.4	72.0-124	
1,2,3-Trimethylbenzene	0.0250	0.0240	96.0	75.0-120	
1,2,4-Trimethylbenzene	0.0250	0.0250	100	75.0-120	
1,3,5-Trimethylbenzene	0.0250	0.0262	105	75.0-120	
Vinyl chloride	0.0250	0.0254	102	64.0-133	
Xylenes, Total	0.0750	0.0697	92.9	77.0-120	
(S) Toluene-d8			*99.9*	*80.0-120*	
(S) Dibromofluoromethane			*98.1*	*76.0-123*	
(S) 4-Bromofluorobenzene			*104*	*80.0-120*	

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
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.
J4	The associated batch QC was outside the established quality control range for accuracy.

Pace National 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.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

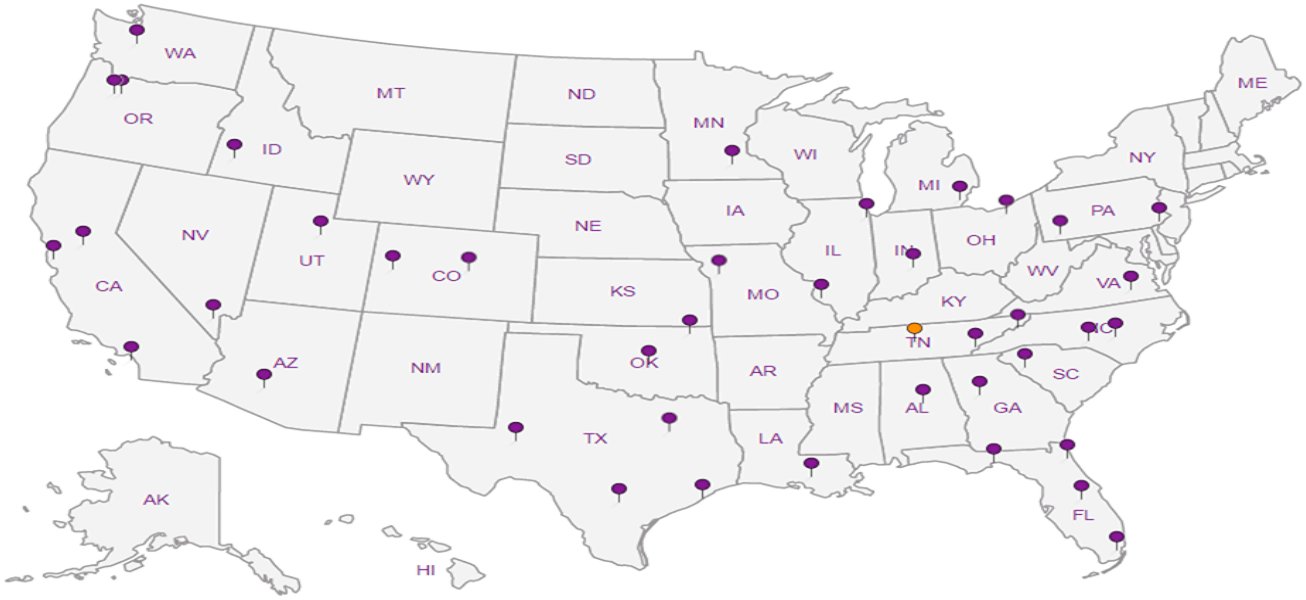
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Chain of Custody Page 1 of 1

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# L1005945
F234

Company Name/Address:
Terracon - Longmont
1242 Bramwood Pl.
Longmont, CO 80501

Billing Information:
Same

Report to:
Michael Skridulis

Email To:
mjskridulis@terracon.com

Project Description: COL Annual GW Quality Monitoring

City/State Collected: Longmont, Colorado

Phone: **303-776-3921**
Fax: **303-776-4041**

Client Project # 22187009

Lab Project #

Collected by (print): Brian Williams

Site/Facility ID #

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: Standard turn

Email? ___No ✓Yes
FAX? ___No ___Yes

Acctnum: TERRALCO
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC8260 (2) 40ml Amber w/HCl	RSK-175 (2) 40ml Amber w/HCl	N02,N03, Br, Cl, S04 - 250ml HDPE No Pres	Ca,Mg,Na,Fe,K Sr- 250ml HDPE No Pres Dissolved	ALK - 125ml HDPE No Pres	Rem./Contaminant	Sample # (lab only)
RD1-MW-01R	Grab	GW		6/29/18	0950	7	X	X	X	X	X		-01
RD1-MW-02R		GW			0930								02
RD1-MW-03R		GW			1000								03
RD1-MW-04R		GW			1015								04
RD1-MW-05R		GW			1020								05
RD1-MW-06R		GW			1025								06
DM1-MW-01		GW			1500								07
DM1-MW-02		GW			1510								08
DMW-MW-03		GW			1525								09
		GW										BMD	

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

pH ___ Temp ___
Flow ___ Other ___

Remarks: 4276 0139 7858

Hold #

Condition: (lab use only) OK

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

Temp: 2.3 °C Bottles Received: 64

COC Seal Intact: ✓ Y ___ N ___ NA

pH Checked: NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	6/29/18	16:15	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Date: 6/30/18 Time: 845

Chain of Custody Page 1 of 2

ESC LAB SCIENCES a subsidiary of Accutest

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1005945

Table #

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Terracon – Longmont
1242 Branchwood Place
Longmont, CO 80501

Billing Information:
Sam

Report to: Michael Skridulis

Email To: mjskridulis@Terracon.com

Project Description: COL Annual GW Quality Monitoring

City/State Collected: Longmont, Colorado

Phone: 303-776-3121
Fax: 303-776-4041

Client Project # 22187009

Lab Project #

Collected by (print): Brian Williams

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed: Standard turn

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC 8260 (2) 40mL Amber w/ HCl	RSK 175 (2) 40 mL Amber w/ HCl	NO2, NO3, Br, Cl, SO4 - 250 mL HDPE Dissolved	Ca, Mg, Na, Fe, K, Sr - 250mL HDPE	ALK - 125mL HDPE	Remarks	Sample # (lab only)
ST-MW-01	Grab	GW		6/29/18	12:20	7	X	X	X	X	X		-11
ST-MW-~~03~~ 03 (BW)					12:30								12
ST-MW-~~03~~ 04 (BW)					12:40								13
ST-MW-05					12:50								14
ST-MW-06					13:00								15
											BD		

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Samples returned via: __UPS X FedEx __Courier __ _____

Tracking #

	Date:	Time:		
Relinquished by: (Signature)	6/29/18	16:15	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.3 °C Bottles Received: 64
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) ASM	Date: 6/30/18 Time: 845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

APPENDIX C – PROUCL STATISTICAL ANALYSIS OUTPUTS

Normal UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.19/18/2018 10:05:38 AM
From File	WorkSheet_a.xls
Full Precision	OFF
Confidence Coefficient	95%

Chloride

General Statistics

Total Number of Observations	26	Number of Distinct Observations	26
		Number of Missing Observations	11
Minimum	35.4	Mean	60.97
Maximum	118	Median	59.1
SD	22.52	SD of logged Data	0.361
Coefficient of Variation	0.369	Skewness	0.81

Normal GOF Test

Shapiro Wilk Test Statistic	0.908	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.92	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.133	Lilliefors GOF Test
5% Lilliefors Critical Value	0.17	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	68.51	95% Adjusted-CLT UCL (Chen-1995)	68.98
		95% Modified-t UCL (Johnson-1978)	68.63

Suggested UCL to Use

95% Student's-t UCL 68.51

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

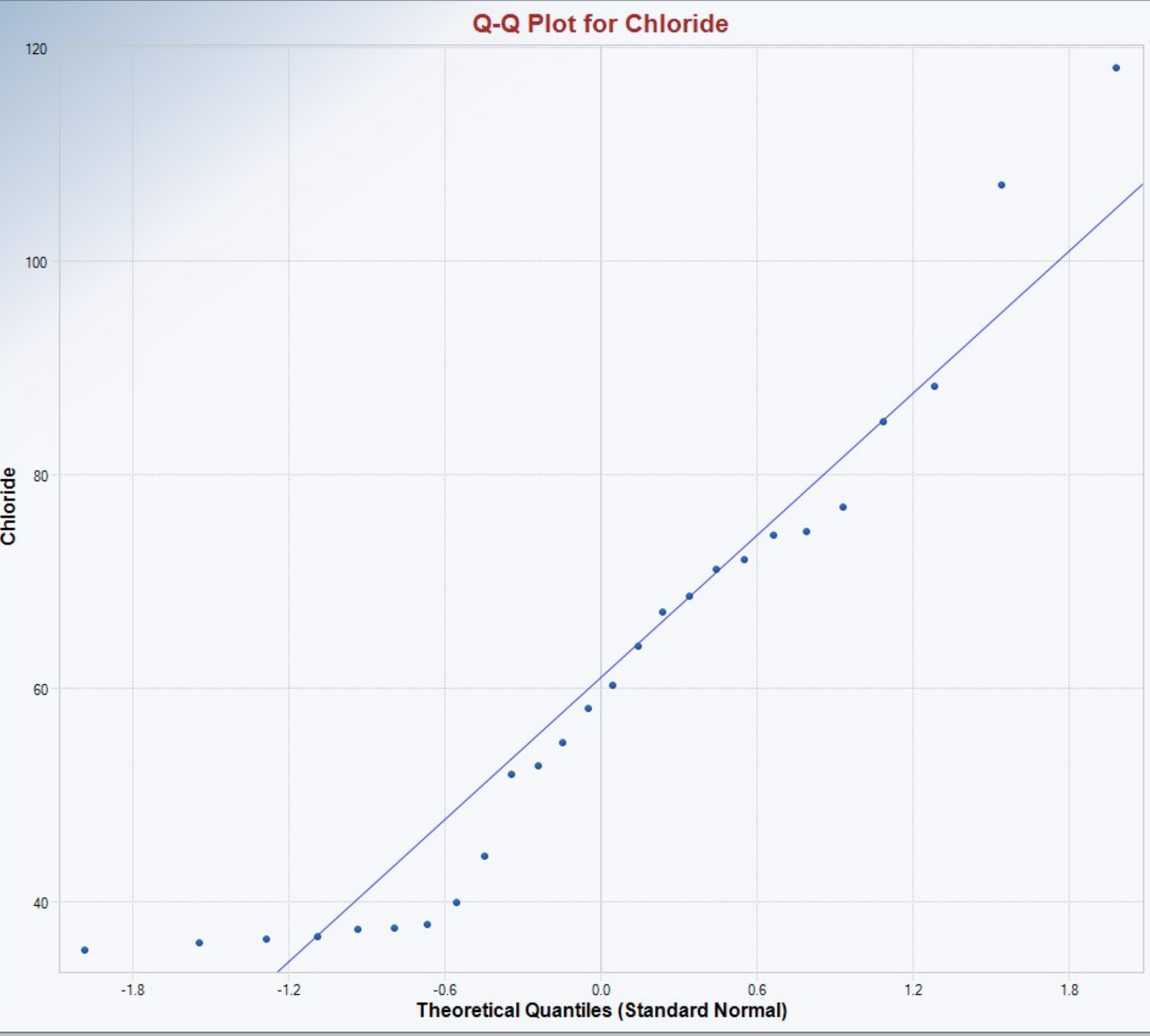
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Sulfate

General Statistics

Total Number of Observations	14	Number of Distinct Observations	13
		Number of Missing Observations	24
Minimum	334	Mean	606.1
Maximum	944	Median	658
SD	243.3	SD of logged Data	0.43
Coefficient of Variation	0.401	Skewness	0.072

	A	B	C	D	E	F	G	H	I	J	K	L
54					Normal GOF Test							
55					Shapiro Wilk Test Statistic	0.848		Shapiro Wilk GOF Test				
56					5% Shapiro Wilk Critical Value	0.874		Data Not Normal at 5% Significance Level				
57					Lilliefors Test Statistic	0.219		Lilliefors GOF Test				
58					5% Lilliefors Critical Value	0.226		Data appear Normal at 5% Significance Level				
59					Data appear Approximate Normal at 5% Significance Level							
60												
61					Assuming Normal Distribution							
62				95% Normal UCL				95% UCLs (Adjusted for Skewness)				
63					95% Student's-t UCL	721.3				95% Adjusted-CLT UCL (Chen-1995)	714.4	
64										95% Modified-t UCL (Johnson-1978)	721.5	
65												
66					Suggested UCL to Use							
67					95% Student's-t UCL	721.3						
68												
69					When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test							
70					When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL							
71												
72					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
73					Recommendations are based upon data size, data distribution, and skewness.							
74					These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).							
75					However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.							
76												



Chloride

N = 26

Mean = 60.97

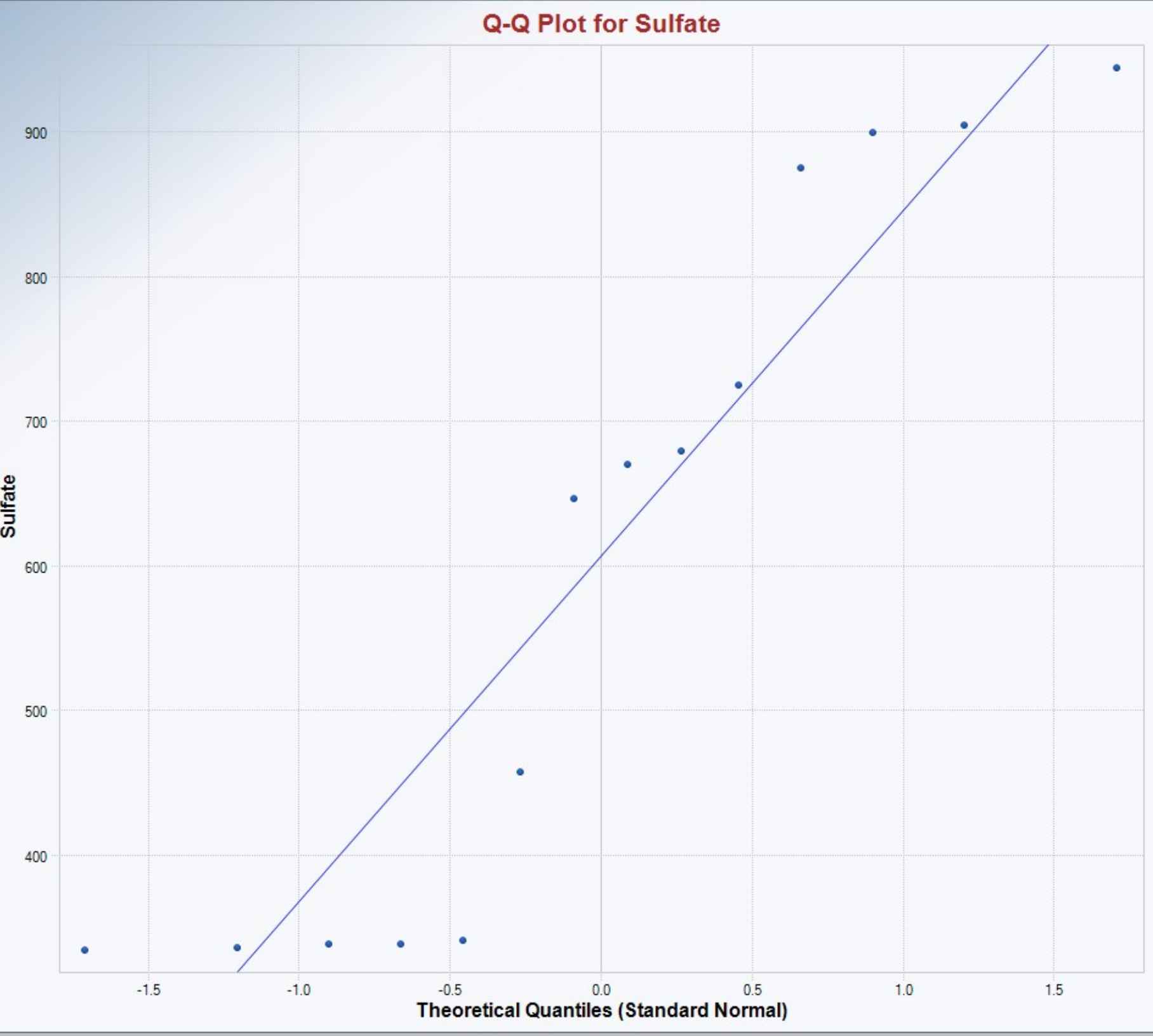
Sd = 22.52

Slope = 22.22

Intercept = 60.97

Correlation, R = 0.957

Best Fit Line



Sulfate

N = 14

Mean = 606.1

Sd = 243.3

Slope = 239.1

Intercept = 606.1

Correlation, R = 0.936

Best Fit Line