



1120 Lincoln Street, STE 801
Denver, CO 80203

The Colorado Oil and Gas Conservation Commission (COGCC) received a complaint (#02403504) on May 13, 2020 regarding water 'bubbling up' on the complainant's land, in a pipeline corridor adjacent to the PDC Phelps location. COGCC environmental staff took the following actions to investigate this complaint and determine the source of the groundwater:

Desktop Review:

COGCC staff conducted a desktop review of COGCC documents, historical aerial photos, land use, and the US Fish and Wildlife Service National Wetlands Inventory (NWI) Wetlands Mapper to determine the hydrology and site history of the area. See photos 26-28 for further detail.

Site Hydrology

The topography of the area slopes to the southeast and channels surface water into a natural swale which acts as a subsurface aqueduct. The channel trends from the northeast to the southeast across from Weld County Road 4 to a series of unnamed ponds and drainages which terminate into an unnamed irrigation canal.

The abandoned channel is truncated by the access road for the Williams Pipeline and the PDC Phelps facility. A review of historical aerial photographs indicate that the flow of water was interrupted by the Phelps access road and was subsequently diverted to the disturbed soils over the Williams pipeline.

Wetlands:

A NWI mapped Freshwater Forested/Shrub Wetland was identified adjacent to and south of the PDC Phelps location. Historical aerial photographs also indicate that the wetland was filled during the construction the wellhead pad and the production facility (see Phelps Pad Construction section of this report for further details).

Phelps Pad Construction:

On May 29, 2013, SRC Energy submitted a Form 27 (Oil and Gas Location Assessment, Document #400423324) for the construction of the Phelps 12-32NHZ facility (Phelps Pad). The form 2A was approved on July 12, 2016 and Location ID 433548 was created. Between fourth quarter 2013 and first quarter 2014 the facility was constructed and six wells were drilled and completed.

On June 6, 2019, SRC Energy Inc self-reported violations of Rule 303.b.(1)A., for disturbing the surface at a previously undisturbed site to construct a new oil and gas location without a completed approved Form 2A, and 34-60-121(1) CRS-b for

constructing a surface disturbance that exceeded the permitted surface disturbance area, violating Operator's Form 2A. On October 22, 2019, the COGCC issued NOAV No. 402216782 for these violations.

On January 14, 2020, PDC Energy submitted a Change of Operator (Document #402286855) to take ownership of the facility.

Field Investigation:

On May 18, 2020, COGCC environmental staff conducted an initial inspection of the area surrounding the reported seep and the nearby PDC Phelps location. During this inspection groundwater samples were collected from the water seep (photos 1&2), a nearby unnamed irrigation canal (photo 3), and a wetland consisting of forested shrub vegetation located adjacent to and south of the PDC Phelps location (photo 7). Additional seeps were observed on the complainant's property in the pipeline right-of-way north of the Phelps location (photos 4-6). During the inspection of the PDC Phelps location, COGCC staff noted that the wetland adjacent to the pad was positioned hydraulically down-gradient of the seep on the complainant's property (photos 8, 15 & 16). Non-functional water control devices bisecting the natural flow of groundwater were documented (photos 17-20).

On May 27, 2020 COGCC staff conducted a follow up inspection of the Phelps location to document wetland disturbance created by the construction of the facility. Imported riprap, fill dirt, trash, and debris were observed in the wetland (photos 9-14). An above ground electrical conduit was documented running across the wetland from the well-heads to the production facility (photos 9&10). Sediment discharge into the wetland was noted at the low point in the production facility where storm-water controls were no longer effective (photos 21-22). Vehicle tracks were seen running through the wetland at multiple locations surrounding the facility (photos 23-26).

Analytical Results:

As previously discussed, three groundwater samples were collected for laboratory analysis (photo 29): main seep (field), irrigation (background), and wetlands (WL). The analytical reports are attached and summarized in Table 1. A Stiff Diagram (graphical representation of major cations/anions) is included as Figure 1. The diagram shows a strong correlation between the field Seep Sample and the Wetlands Sample; the Irrigation sample does not appear to correlate with either.

Analytical reports indicate that the seep water is not derived from produced water or other oil and gas activities. The water collected from the water seep is characterized as fresh water. No Volatile Organic Compounds (VOC's) or Total Petroleum Hydrocarbons (TPH) were found in any of the samples collected. Trace methane was detected in the sample from the seep, but does not suggest an oil and gas origin; no "heavier" hydrocarbon compounds were detected in the sample.

Conclusion:

In order to determine the source of the seep COGCC conducted a desktop review, field inspections, and sampling and analysis of representative samples.

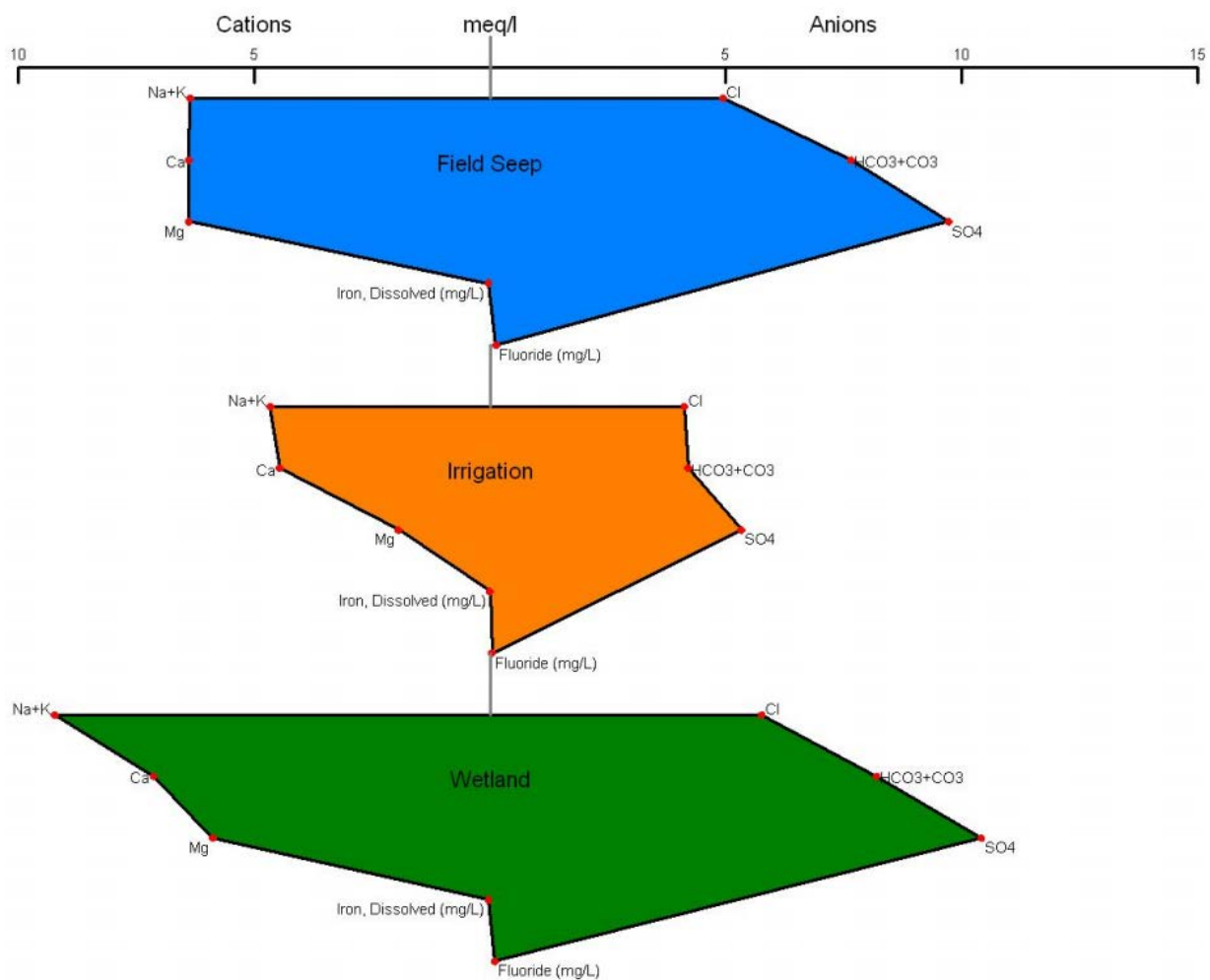
There is no evidence that the source of the groundwater seep is derived from oil and gas activity. However, our investigation concludes that the construction of the Phelps Pad and Williams Produced Water Pipeline has altered the hydrologic conditions by filling the wetlands and caused the subsurface flow to backup into the neighboring property to the north.

This investigation has been referred to COGCC's enforcement team as well as the following COGCC specialists: Oil and Gas Location Assessment and Reclamation. Consultation with the Army Corps of Engineers is pending.

TABLE 1 - ANALYTICAL RESULTS

ANALYTE	SAMPLE RESULTS		
Volatile Organic Compounds (VOCs)	<i>Seep (Field)</i>	<i>Irrigation (Background)</i>	<i>Wetland (WL)</i>
Benzene (mg/L)	ND	ND	ND
Toluene (mg/L)	ND	ND	ND
Ethylbenzene (mg/L)	ND	ND	ND
Xylenes, Total (mg/L)	ND	ND	ND
Dissolved Gasses	<i>Seep (Field)</i>	<i>Irrigation (Background)</i>	<i>Wetland (WL)</i>
Methane (mg/L)	1.91	NA	NA
Metals	<i>Seep (Field)</i>	<i>Irrigation (Background)</i>	<i>Wetland (WL)</i>
Aluminum, Dissolved (mg/L)	0.782	ND	0.913
Barium, Dissolved (mg/L)	0.0703	0.0769	0.11
Calcium, Dissolved (mg/L)	128	89.5	143
Iron, Dissolved (mg/L)	0.915	0.136	1.11
Magnesium, Dissolved (mg/L)	77.7	23.6	71.5
Manganese, Dissolved (mg/L)	0.336	0.0212	0.182
Potassium, Dissolved (mg/L)	3.81	7.79	8.89
Silicon, Dissolved (mg/L)	8.09	9.63	10.1
Sodium, Dissolved (mg/L)	144	103	207
Strontium, Dissolved (mg/L)	2.21	0.899	2.04
General Water Quality Parameters	<i>Seep (Field)</i>	<i>Irrigation (Background)</i>	<i>Wetland (WL)</i>
Alkalinity, Total (mg/L)	467	256	500
Alkalinity, Bicarbonate (mg/L)	467	256	500
Alkalinity, Carbonate (mg/L)	ND	ND	ND
pH, Lab (standard units)	7.28	6.93	7.7
Specific Conductance (umhos/cm)	1720	1100	2030
Sodium Adsorption Ratio (SAR)	2.48	2.49	5.53
Total Dissolved Solids (mg/L)	1120	680	1300
Chloride (mg/L)	175.0	146.0	204.00
Fluoride (mg/L)	2.31	0.817	1.96
Nitrate as N (mg/L)	ND	ND	ND
Total Nitrate/Nrite- N (mg/L)	ND	ND	ND
Sulfate (mg/L)	253	97.9	336
Notes: <ul style="list-style-type: none"> • ND - Less than the stated laboratory reporting limit • mg/L - milligrams per Liter • umhos/cm - micromhos • NA - not analyzed 			

FIGURE 1 - STIFF DIAGRAM



APPENDIX A - LAB REPORT

May 28, 2020

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Colorado Oil & Gas Conservation

Sample Delivery Group: L1220276
Samples Received: 05/20/2020
Project Number:
Description: Stewardson Complaint #200448944

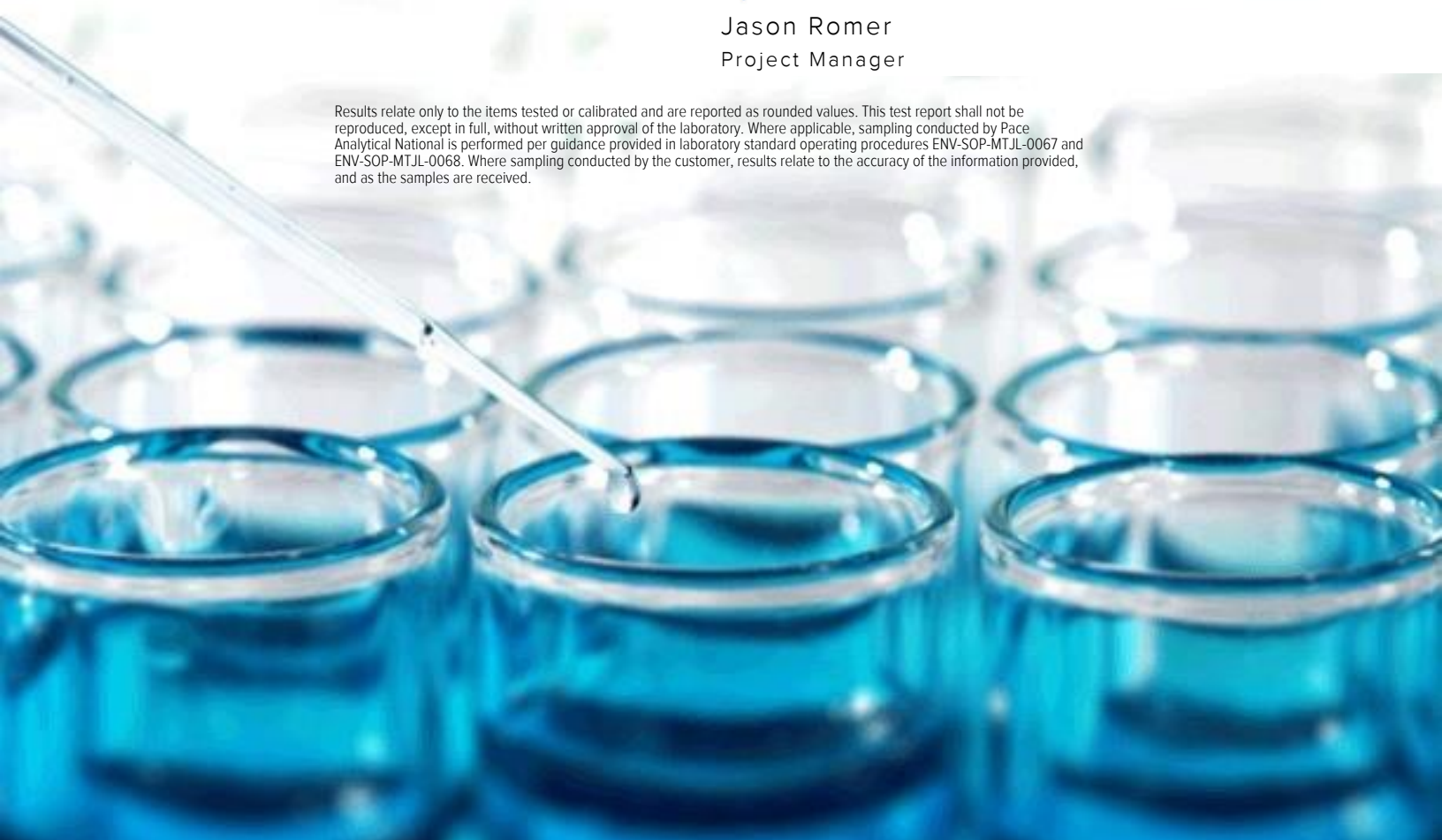
Report To: Kari Oakman
1120 Lincoln St., Suite 801
Denver, CO 80203

Entire Report Reviewed By:



Jason Romer
Project Manager

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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
STEWARDSON-FIELD L1220276-01	5
STEWARDSON-BACKGROUND L1220276-02	9
WL L1220276-03	12
Qc: Quality Control Summary	15
Gravimetric Analysis by Method 2540 C-2011	15
Wet Chemistry by Method 2320 B-2011	16
Wet Chemistry by Method 353.2	18
Wet Chemistry by Method 9040C	19
Wet Chemistry by Method 9050A	20
Wet Chemistry by Method 9056A	21
Metals (ICP) by Method 6010B	22
Volatile Organic Compounds (GC) by Method RSK175	23
Volatile Organic Compounds (GC/MS) by Method 8260B	24
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	28
Gl: Glossary of Terms	36
Al: Accreditations & Locations	37
Sc: Sample Chain of Custody	38





STEWARDSON-FIELD L1220276-01 GW

Collected by

Collected date/time

Received date/time

05/18/20 10:45

05/20/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1480562	1	05/26/20 17:57	05/26/20 17:57	EL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG1480140	1	05/21/20 18:31	05/22/20 00:27	AEC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1480030	1	05/27/20 23:31	05/27/20 23:31	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1481710	1	05/27/20 14:34	05/27/20 14:34	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1480701	1	05/26/20 11:00	05/26/20 11:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050A	WG1482754	1	05/27/20 14:31	05/27/20 14:31	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1479220	1	05/20/20 19:46	05/20/20 19:46	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1479220	5	05/20/20 20:03	05/20/20 20:03	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1480562	1	05/26/20 12:00	05/26/20 17:57	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1482536	1	05/27/20 10:37	05/27/20 10:37	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1482803	1	05/27/20 16:15	05/27/20 16:15	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1479786	1	05/21/20 14:44	05/22/20 05:27	JNJ	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

STEWARDSON-BACKGROUND L1220276-02 GW

Collected by

Collected date/time

Received date/time

05/18/20 10:45

05/20/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1480562	1	05/26/20 17:59	05/26/20 17:59	EL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG1480140	1	05/21/20 18:31	05/22/20 00:27	AEC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1480030	1	05/27/20 23:47	05/27/20 23:47	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1481710	1	05/27/20 14:36	05/27/20 14:36	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1480701	1	05/26/20 11:00	05/26/20 11:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050A	WG1482754	1	05/27/20 14:31	05/27/20 14:31	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1479220	1	05/20/20 20:20	05/20/20 20:20	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1479220	5	05/20/20 20:37	05/20/20 20:37	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1480562	1	05/26/20 12:00	05/26/20 17:59	EL	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1479889	1	05/21/20 10:37	05/22/20 06:36	LEA	Mt. Juliet, TN

WL L1220276-03 GW

Collected by

Collected date/time

Received date/time

05/18/20 10:45

05/20/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1480562	1	05/26/20 18:08	05/26/20 18:08	EL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG1480140	1	05/21/20 18:31	05/22/20 00:27	AEC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1480030	1	05/27/20 23:55	05/27/20 23:55	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1481710	1	05/27/20 14:37	05/27/20 14:37	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1480701	1	05/26/20 11:00	05/26/20 11:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050A	WG1482754	1	05/27/20 14:31	05/27/20 14:31	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1479220	1	05/20/20 21:27	05/20/20 21:27	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1479220	5	05/20/20 21:44	05/20/20 21:44	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1480562	1	05/26/20 12:00	05/26/20 18:08	EL	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1479889	1	05/21/20 10:37	05/22/20 05:54	LEA	Mt. Juliet, TN



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 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.

Jason Romer
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.48		1	05/26/2020 17:57	WG1480562

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1120		20.0	1	05/22/2020 00:27	WG1480140

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	467		20.0	1	05/27/2020 23:31	WG1480030
Alkalinity,Carbonate	ND		20.0	1	05/27/2020 23:31	WG1480030

Sample Narrative:

L1220276-01 WG1480030: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		0.100	1	05/27/2020 14:34	WG1481710

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.28	T8	1	05/26/2020 11:00	WG1480701

Sample Narrative:

L1220276-01 WG1480701: 7.28 at 20.7C

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1720		10.0	1	05/27/2020 14:31	WG1482754

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	175		5.00	5	05/20/2020 20:03	WG1479220
Fluoride	2.31		0.150	1	05/20/2020 19:46	WG1479220
Nitrate as (N)	ND	T8	0.100	1	05/20/2020 19:46	WG1479220
Sulfate	253		25.0	5	05/20/2020 20:03	WG1479220

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Aluminum	0.783		0.200	1	05/26/2020 17:57	WG1480562
Barium	0.0703		0.00500	1	05/26/2020 17:57	WG1480562
Calcium	128		1.00	1	05/26/2020 17:57	WG1480562
Iron	0.915		0.100	1	05/26/2020 17:57	WG1480562
Magnesium	77.7		1.00	1	05/26/2020 17:57	WG1480562
Manganese	0.336		0.0100	1	05/26/2020 17:57	WG1480562
Potassium	3.81		2.00	1	05/26/2020 17:57	WG1480562



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Silicon	8.09		0.200	1	05/26/2020 17:57	WG1480562
Sodium	144		3.00	1	05/26/2020 17:57	WG1480562
Strontium	2.21		0.0100	1	05/26/2020 17:57	WG1480562

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	1.91		0.0100	1	05/27/2020 10:37	WG1482536
Ethane	ND		0.0130	1	05/27/2020 10:37	WG1482536
Ethene	ND		0.0130	1	05/27/2020 10:37	WG1482536
Propane	ND		0.0190	1	05/27/2020 10:37	WG1482536

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	05/27/2020 16:15	WG1482803
Acrolein	ND		0.0500	1	05/27/2020 16:15	WG1482803
Acrylonitrile	ND		0.0100	1	05/27/2020 16:15	WG1482803
Benzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
Bromobenzene	ND	J4	0.00100	1	05/27/2020 16:15	WG1482803
Bromodichloromethane	ND		0.00100	1	05/27/2020 16:15	WG1482803
Bromoform	ND		0.00100	1	05/27/2020 16:15	WG1482803
Bromomethane	ND		0.00500	1	05/27/2020 16:15	WG1482803
n-Butylbenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
sec-Butylbenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
tert-Butylbenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
Carbon tetrachloride	ND		0.00100	1	05/27/2020 16:15	WG1482803
Chlorobenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
Chlorodibromomethane	ND		0.00100	1	05/27/2020 16:15	WG1482803
Chloroethane	ND		0.00500	1	05/27/2020 16:15	WG1482803
Chloroform	ND		0.00500	1	05/27/2020 16:15	WG1482803
Chloromethane	ND		0.00250	1	05/27/2020 16:15	WG1482803
2-Chlorotoluene	ND		0.00100	1	05/27/2020 16:15	WG1482803
4-Chlorotoluene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	05/27/2020 16:15	WG1482803
1,2-Dibromoethane	ND		0.00100	1	05/27/2020 16:15	WG1482803
Dibromomethane	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,2-Dichlorobenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,3-Dichlorobenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,4-Dichlorobenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
Dichlorodifluoromethane	ND		0.00500	1	05/27/2020 16:15	WG1482803
1,1-Dichloroethane	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,2-Dichloroethane	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,1-Dichloroethene	ND		0.00100	1	05/27/2020 16:15	WG1482803
cis-1,2-Dichloroethene	ND		0.00100	1	05/27/2020 16:15	WG1482803
trans-1,2-Dichloroethene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,2-Dichloropropane	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,1-Dichloropropene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,3-Dichloropropane	ND		0.00100	1	05/27/2020 16:15	WG1482803
cis-1,3-Dichloropropene	ND		0.00100	1	05/27/2020 16:15	WG1482803
trans-1,3-Dichloropropene	ND		0.00100	1	05/27/2020 16:15	WG1482803
2,2-Dichloropropane	ND		0.00100	1	05/27/2020 16:15	WG1482803
Di-isopropyl ether	ND		0.00100	1	05/27/2020 16:15	WG1482803
Ethylbenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
Hexachloro-1,3-butadiene	ND		0.00100	1	05/27/2020 16:15	WG1482803



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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Isopropylbenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
p-Isopropyltoluene	ND		0.00100	1	05/27/2020 16:15	WG1482803
2-Butanone (MEK)	ND		0.0100	1	05/27/2020 16:15	WG1482803
Methylene Chloride	ND		0.00500	1	05/27/2020 16:15	WG1482803
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	05/27/2020 16:15	WG1482803
Methyl tert-butyl ether	ND		0.00100	1	05/27/2020 16:15	WG1482803
Naphthalene	ND		0.00500	1	05/27/2020 16:15	WG1482803
n-Propylbenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
Styrene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,1,1,2-Tetrachloroethane	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,1,2,2-Tetrachloroethane	ND	J4	0.00100	1	05/27/2020 16:15	WG1482803
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	05/27/2020 16:15	WG1482803
Tetrachloroethene	ND		0.00100	1	05/27/2020 16:15	WG1482803
Toluene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,2,3-Trichlorobenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,2,4-Trichlorobenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,1,1-Trichloroethane	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,1,2-Trichloroethane	ND		0.00100	1	05/27/2020 16:15	WG1482803
Trichloroethene	ND		0.00100	1	05/27/2020 16:15	WG1482803
Trichlorofluoromethane	ND		0.00500	1	05/27/2020 16:15	WG1482803
1,2,3-Trichloropropane	ND		0.00250	1	05/27/2020 16:15	WG1482803
1,2,4-Trimethylbenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,2,3-Trimethylbenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
1,3,5-Trimethylbenzene	ND		0.00100	1	05/27/2020 16:15	WG1482803
Vinyl chloride	ND		0.00100	1	05/27/2020 16:15	WG1482803
Xylenes, Total	ND		0.00300	1	05/27/2020 16:15	WG1482803
(S) Toluene-d8	108		80.0-120		05/27/2020 16:15	WG1482803
(S) 4-Bromofluorobenzene	88.1		77.0-126		05/27/2020 16:15	WG1482803
(S) 1,2-Dichloroethane-d4	126		70.0-130		05/27/2020 16:15	WG1482803

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Acenaphthylene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Anthracene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Benzidine	ND		0.0100	1	05/22/2020 05:27	WG1479786
Benzo(a)anthracene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Benzo(b)fluoranthene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Benzo(k)fluoranthene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Benzo(g,h,i)perylene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Benzo(a)pyrene	ND		0.000200	1	05/22/2020 05:27	WG1479786
Bis(2-chloroethoxy)methane	ND		0.0100	1	05/22/2020 05:27	WG1479786
Bis(2-chloroethyl)ether	ND		0.0100	1	05/22/2020 05:27	WG1479786
2,2-Oxybis(1-Chloropropane)	ND		0.0100	1	05/22/2020 05:27	WG1479786
4-Bromophenyl-phenylether	ND		0.0100	1	05/22/2020 05:27	WG1479786
2-Chloronaphthalene	ND		0.00100	1	05/22/2020 05:27	WG1479786
4-Chlorophenyl-phenylether	ND		0.0100	1	05/22/2020 05:27	WG1479786
Chrysene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Dibenz(a,h)anthracene	ND		0.000200	1	05/22/2020 05:27	WG1479786
1,2-Dichlorobenzene	ND		0.0100	1	05/22/2020 05:27	WG1479786
1,3-Dichlorobenzene	ND		0.0100	1	05/22/2020 05:27	WG1479786
1,4-Dichlorobenzene	ND		0.0100	1	05/22/2020 05:27	WG1479786
3,3-Dichlorobenzidine	ND		0.0100	1	05/22/2020 05:27	WG1479786
2,4-Dinitrotoluene	ND		0.0100	1	05/22/2020 05:27	WG1479786
2,6-Dinitrotoluene	ND		0.0100	1	05/22/2020 05:27	WG1479786



Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Fluoranthene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Fluorene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Hexachlorobenzene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Hexachloro-1,3-butadiene	ND		0.0100	1	05/22/2020 05:27	WG1479786
Hexachlorocyclopentadiene	ND		0.0100	1	05/22/2020 05:27	WG1479786
Hexachloroethane	ND		0.0100	1	05/22/2020 05:27	WG1479786
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Isophorone	ND		0.0100	1	05/22/2020 05:27	WG1479786
Naphthalene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Nitrobenzene	ND		0.0100	1	05/22/2020 05:27	WG1479786
n-Nitrosodimethylamine	ND		0.0100	1	05/22/2020 05:27	WG1479786
n-Nitrosodiphenylamine	ND		0.0100	1	05/22/2020 05:27	WG1479786
n-Nitrosodi-n-propylamine	ND		0.0100	1	05/22/2020 05:27	WG1479786
Phenanthrene	ND		0.00100	1	05/22/2020 05:27	WG1479786
Benzylbutyl phthalate	ND		0.00300	1	05/22/2020 05:27	WG1479786
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	05/22/2020 05:27	WG1479786
Di-n-butyl phthalate	ND		0.00300	1	05/22/2020 05:27	WG1479786
Diethyl phthalate	ND		0.00300	1	05/22/2020 05:27	WG1479786
Dimethyl phthalate	ND		0.00300	1	05/22/2020 05:27	WG1479786
Di-n-octyl phthalate	ND		0.00300	1	05/22/2020 05:27	WG1479786
Pyrene	ND		0.00100	1	05/22/2020 05:27	WG1479786
1,2,4-Trichlorobenzene	ND		0.0100	1	05/22/2020 05:27	WG1479786
4-Chloro-3-methylphenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
2-Chlorophenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
2,4-Dichlorophenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
2,4-Dimethylphenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
4,6-Dinitro-2-methylphenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
2,4-Dinitrophenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
2-Nitrophenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
4-Nitrophenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
Pentachlorophenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
Phenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
2,4,6-Trichlorophenol	ND		0.0100	1	05/22/2020 05:27	WG1479786
(S) 2-Fluorophenol	50.0		10.0-120		05/22/2020 05:27	WG1479786
(S) Phenol-d5	31.1		10.0-120		05/22/2020 05:27	WG1479786
(S) Nitrobenzene-d5	63.0		10.0-127		05/22/2020 05:27	WG1479786
(S) 2-Fluorobiphenyl	77.7		10.0-130		05/22/2020 05:27	WG1479786
(S) 2,4,6-Tribromophenol	81.0		10.0-155		05/22/2020 05:27	WG1479786
(S) p-Terphenyl-d14	86.1		10.0-128		05/22/2020 05:27	WG1479786

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.49		1	05/26/2020 17:59	WG1480562

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	680		10.0	1	05/22/2020 00:27	WG1480140

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	256		20.0	1	05/27/2020 23:47	WG1480030
Alkalinity, Carbonate	ND		20.0	1	05/27/2020 23:47	WG1480030

Sample Narrative:

L1220276-02 WG1480030: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		0.100	1	05/27/2020 14:36	WG1481710

Wet Chemistry by Method 9040C

	Result	<u>Qualifier</u>	Dilution	Analysis	<u>Batch</u>
Analyte	su			date / time	
pH	6.93	T8	1	05/26/2020 11:00	WG1480701

Sample Narrative:

L1220276-02 WG1480701: 6.93 at 20.8C

Wet Chemistry by Method 9050A

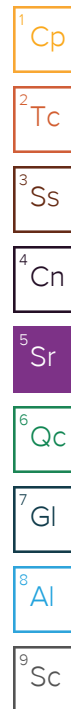
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1100		10.0	1	05/27/2020 14:31	WG1482754

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	146		5.00	5	05/20/2020 20:37	WG1479220
Fluoride	0.817		0.150	1	05/20/2020 20:20	WG1479220
Nitrate as (N)	ND	T8	0.100	1	05/20/2020 20:20	WG1479220
Sulfate	97.9		5.00	1	05/20/2020 20:20	WG1479220

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Aluminum	ND		0.200	1	05/26/2020 17:59	WG1480562
Barium	0.0769		0.00500	1	05/26/2020 17:59	WG1480562
Calcium	89.5		1.00	1	05/26/2020 17:59	WG1480562
Iron	0.136		0.100	1	05/26/2020 17:59	WG1480562
Magnesium	23.6		1.00	1	05/26/2020 17:59	WG1480562
Manganese	0.0212		0.0100	1	05/26/2020 17:59	WG1480562
Potassium	7.19		2.00	1	05/26/2020 17:59	WG1480562





Collected date/time: 05/18/20 10:45

L1220276

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Silicon	9.65		0.200	1	05/26/2020 17:59	WG1480562
Sodium	103		3.00	1	05/26/2020 17:59	WG1480562
Strontium	0.899		0.0100	1	05/26/2020 17:59	WG1480562

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Acenaphthylene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Anthracene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Benzidine	ND		0.0100	1	05/22/2020 06:36	WG1479889
Benzo(a)anthracene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Benzo(b)fluoranthene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Benzo(k)fluoranthene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Benzo(g,h,i)perylene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Benzo(a)pyrene	ND		0.000200	1	05/22/2020 06:36	WG1479889
Bis(2-chlorethoxy)methane	ND		0.0100	1	05/22/2020 06:36	WG1479889
Bis(2-chloroethyl)ether	ND	J4	0.0100	1	05/22/2020 06:36	WG1479889
2,2-Oxybis(1-Chloropropane)	ND		0.0100	1	05/22/2020 06:36	WG1479889
4-Bromophenyl-phenylether	ND		0.0100	1	05/22/2020 06:36	WG1479889
2-Chloronaphthalene	ND		0.00100	1	05/22/2020 06:36	WG1479889
4-Chlorophenyl-phenylether	ND		0.0100	1	05/22/2020 06:36	WG1479889
Chrysene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Dibenz(a,h)anthracene	ND		0.000200	1	05/22/2020 06:36	WG1479889
1,2-Dichlorobenzene	ND		0.0100	1	05/22/2020 06:36	WG1479889
1,3-Dichlorobenzene	ND		0.0100	1	05/22/2020 06:36	WG1479889
1,4-Dichlorobenzene	ND		0.0100	1	05/22/2020 06:36	WG1479889
3,3-Dichlorobenzidine	ND		0.0100	1	05/22/2020 06:36	WG1479889
2,4-Dinitrotoluene	ND		0.0100	1	05/22/2020 06:36	WG1479889
2,6-Dinitrotoluene	ND		0.0100	1	05/22/2020 06:36	WG1479889
Fluoranthene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Fluorene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Hexachlorobenzene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Hexachloro-1,3-butadiene	ND		0.0100	1	05/22/2020 06:36	WG1479889
Hexachlorocyclopentadiene	ND		0.0100	1	05/22/2020 06:36	WG1479889
Hexachloroethane	ND		0.0100	1	05/22/2020 06:36	WG1479889
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Isophorone	ND		0.0100	1	05/22/2020 06:36	WG1479889
Naphthalene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Nitrobenzene	ND		0.0100	1	05/22/2020 06:36	WG1479889
n-Nitrosodimethylamine	ND		0.0100	1	05/22/2020 06:36	WG1479889
n-Nitrosodiphenylamine	ND		0.0100	1	05/22/2020 06:36	WG1479889
n-Nitrosodi-n-propylamine	ND		0.0100	1	05/22/2020 06:36	WG1479889
Phenanthrene	ND		0.00100	1	05/22/2020 06:36	WG1479889
Benzylbutyl phthalate	ND		0.00300	1	05/22/2020 06:36	WG1479889
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	05/22/2020 06:36	WG1479889
Di-n-butyl phthalate	ND		0.00300	1	05/22/2020 06:36	WG1479889
Diethyl phthalate	ND		0.00300	1	05/22/2020 06:36	WG1479889
Dimethyl phthalate	ND		0.00300	1	05/22/2020 06:36	WG1479889
Di-n-octyl phthalate	ND		0.00300	1	05/22/2020 06:36	WG1479889
Pyrene	ND		0.00100	1	05/22/2020 06:36	WG1479889
1,2,4-Trichlorobenzene	ND		0.0100	1	05/22/2020 06:36	WG1479889
4-Chloro-3-methylphenol	ND		0.0100	1	05/22/2020 06:36	WG1479889
2-Chlorophenol	ND		0.0100	1	05/22/2020 06:36	WG1479889
2,4-Dichlorophenol	ND		0.0100	1	05/22/2020 06:36	WG1479889
2,4-Dimethylphenol	ND		0.0100	1	05/22/2020 06:36	WG1479889

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/18/20 10:45

L1220276

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
4,6-Dinitro-2-methylphenol	ND		0.0100	1	05/22/2020 06:36	WG1479889
2,4-Dinitrophenol	ND		0.0100	1	05/22/2020 06:36	WG1479889
2-Nitrophenol	ND		0.0100	1	05/22/2020 06:36	WG1479889
4-Nitrophenol	ND		0.0100	1	05/22/2020 06:36	WG1479889
Pentachlorophenol	ND		0.0100	1	05/22/2020 06:36	WG1479889
Phenol	ND		0.0100	1	05/22/2020 06:36	WG1479889
2,4,6-Trichlorophenol	ND		0.0100	1	05/22/2020 06:36	WG1479889
(S) 2-Fluorophenol	35.8		10.0-120		05/22/2020 06:36	WG1479889
(S) Phenol-d5	24.0		10.0-120		05/22/2020 06:36	WG1479889
(S) Nitrobenzene-d5	47.6		10.0-127		05/22/2020 06:36	WG1479889
(S) 2-Fluorobiphenyl	56.2		10.0-130		05/22/2020 06:36	WG1479889
(S) 2,4,6-Tribromophenol	59.3		10.0-155		05/22/2020 06:36	WG1479889
(S) p-Terphenyl-d14	72.9		10.0-128		05/22/2020 06:36	WG1479889

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.53		1	05/26/2020 18:08	WG1480562

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1300		20.0	1	05/22/2020 00:27	WG1480140

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	500		20.0	1	05/27/2020 23:55	WG1480030
Alkalinity,Carbonate	ND		20.0	1	05/27/2020 23:55	WG1480030

Sample Narrative:

L1220276-03 WG1480030: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		0.100	1	05/27/2020 14:37	WG1481710

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.70	T8	1	05/26/2020 11:00	WG1480701

Sample Narrative:

L1220276-03 WG1480701: 7.7 at 20.6C

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2030		10.0	1	05/27/2020 14:31	WG1482754

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	204		5.00	5	05/20/2020 21:44	WG1479220
Fluoride	1.96		0.150	1	05/20/2020 21:27	WG1479220
Nitrate as (N)	ND	T8	0.100	1	05/20/2020 21:27	WG1479220
Sulfate	336		25.0	5	05/20/2020 21:44	WG1479220

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum	0.913		0.200	1	05/26/2020 18:08	WG1480562
Barium	0.107		0.00500	1	05/26/2020 18:08	WG1480562
Calcium	143		1.00	1	05/26/2020 18:08	WG1480562
Iron	1.11		0.100	1	05/26/2020 18:08	WG1480562
Magnesium	71.5		1.00	1	05/26/2020 18:08	WG1480562
Manganese	0.182		0.0100	1	05/26/2020 18:08	WG1480562
Potassium	8.89		2.00	1	05/26/2020 18:08	WG1480562

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

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Silicon	10.1		0.200	1	05/26/2020 18:08	WG1480562
Sodium	207		3.00	1	05/26/2020 18:08	WG1480562
Strontium	2.04		0.0100	1	05/26/2020 18:08	WG1480562

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Acenaphthylene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Anthracene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Benzidine	ND		0.0100	1	05/22/2020 05:54	WG1479889
Benzo(a)anthracene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Benzo(b)fluoranthene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Benzo(k)fluoranthene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Benzo(g,h,i)perylene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Benzo(a)pyrene	ND		0.000200	1	05/22/2020 05:54	WG1479889
Bis(2-chlorethoxy)methane	ND		0.0100	1	05/22/2020 05:54	WG1479889
Bis(2-chloroethyl)ether	ND	J4	0.0100	1	05/22/2020 05:54	WG1479889
2,2-Oxybis(1-Chloropropane)	ND		0.0100	1	05/22/2020 05:54	WG1479889
4-Bromophenyl-phenylether	ND		0.0100	1	05/22/2020 05:54	WG1479889
2-Chloronaphthalene	ND		0.00100	1	05/22/2020 05:54	WG1479889
4-Chlorophenyl-phenylether	ND		0.0100	1	05/22/2020 05:54	WG1479889
Chrysene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Dibenz(a,h)anthracene	ND		0.000200	1	05/22/2020 05:54	WG1479889
1,2-Dichlorobenzene	ND		0.0100	1	05/22/2020 05:54	WG1479889
1,3-Dichlorobenzene	ND		0.0100	1	05/22/2020 05:54	WG1479889
1,4-Dichlorobenzene	ND		0.0100	1	05/22/2020 05:54	WG1479889
3,3-Dichlorobenzidine	ND		0.0100	1	05/22/2020 05:54	WG1479889
2,4-Dinitrotoluene	ND		0.0100	1	05/22/2020 05:54	WG1479889
2,6-Dinitrotoluene	ND		0.0100	1	05/22/2020 05:54	WG1479889
Fluoranthene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Fluorene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Hexachlorobenzene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Hexachloro-1,3-butadiene	ND		0.0100	1	05/22/2020 05:54	WG1479889
Hexachlorocyclopentadiene	ND		0.0100	1	05/22/2020 05:54	WG1479889
Hexachloroethane	ND		0.0100	1	05/22/2020 05:54	WG1479889
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Isophorone	ND		0.0100	1	05/22/2020 05:54	WG1479889
Naphthalene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Nitrobenzene	ND		0.0100	1	05/22/2020 05:54	WG1479889
n-Nitrosodimethylamine	ND		0.0100	1	05/22/2020 05:54	WG1479889
n-Nitrosodiphenylamine	ND		0.0100	1	05/22/2020 05:54	WG1479889
n-Nitrosodi-n-propylamine	ND		0.0100	1	05/22/2020 05:54	WG1479889
Phenanthrene	ND		0.00100	1	05/22/2020 05:54	WG1479889
Benzylbutyl phthalate	ND		0.00300	1	05/22/2020 05:54	WG1479889
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	05/22/2020 05:54	WG1479889
Di-n-butyl phthalate	ND		0.00300	1	05/22/2020 05:54	WG1479889
Diethyl phthalate	ND		0.00300	1	05/22/2020 05:54	WG1479889
Dimethyl phthalate	ND		0.00300	1	05/22/2020 05:54	WG1479889
Di-n-octyl phthalate	ND		0.00300	1	05/22/2020 05:54	WG1479889
Pyrene	ND		0.00100	1	05/22/2020 05:54	WG1479889
1,2,4-Trichlorobenzene	ND		0.0100	1	05/22/2020 05:54	WG1479889
4-Chloro-3-methylphenol	ND		0.0100	1	05/22/2020 05:54	WG1479889
2-Chlorophenol	ND		0.0100	1	05/22/2020 05:54	WG1479889
2,4-Dichlorophenol	ND		0.0100	1	05/22/2020 05:54	WG1479889
2,4-Dimethylphenol	ND		0.0100	1	05/22/2020 05:54	WG1479889

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Collected date/time: 05/18/20 10:45

L1220276

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
4,6-Dinitro-2-methylphenol	ND		0.0100	1	05/22/2020 05:54	WG1479889
2,4-Dinitrophenol	ND		0.0100	1	05/22/2020 05:54	WG1479889
2-Nitrophenol	ND		0.0100	1	05/22/2020 05:54	WG1479889
4-Nitrophenol	ND		0.0100	1	05/22/2020 05:54	WG1479889
Pentachlorophenol	ND		0.0100	1	05/22/2020 05:54	WG1479889
Phenol	ND		0.0100	1	05/22/2020 05:54	WG1479889
2,4,6-Trichlorophenol	ND		0.0100	1	05/22/2020 05:54	WG1479889
(S) 2-Fluorophenol	37.0		10.0-120		05/22/2020 05:54	WG1479889
(S) Phenol-d5	23.1		10.0-120		05/22/2020 05:54	WG1479889
(S) Nitrobenzene-d5	56.8		10.0-127		05/22/2020 05:54	WG1479889
(S) 2-Fluorobiphenyl	65.4		10.0-130		05/22/2020 05:54	WG1479889
(S) 2,4,6-Tribromophenol	62.5		10.0-155		05/22/2020 05:54	WG1479889
(S) p-Terphenyl-d14	77.9		10.0-128		05/22/2020 05:54	WG1479889

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3531041-1 05/22/20 00:27

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

Laboratory Control Sample (LCS)

(LCS) R3531041-2 05/22/20 00:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8720	99.1	85.0-115	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3532416-1 05/27/20 23:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0
Alkalinity,Carbonate	U		8.45	20.0

Sample Narrative:
BLANK: Endpoint pH 4.5

L1220276-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1220276-01 05/27/20 23:31 • (DUP) R3532416-2 05/27/20 23:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	467	469	1	0.298		20
Alkalinity,Carbonate	ND	ND	1	0.000		20

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

L1220600-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1220600-05 05/28/20 01:43 • (DUP) R3532416-4 05/28/20 01:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	683	693	1	1.36		20
Alkalinity,Carbonate	ND	ND	1	0.000		20

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

Laboratory Control Sample (LCS)

(LCS) R3532416-3 05/28/20 00:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	104	104	85.0-115	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Laboratory Control Sample (LCS)

(LCS) R3532416-3 05/28/20 00:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
---------	----------------------	--------------------	---------------	------------------	----------------------

Sample Narrative:

LCS: Endpoint pH 4.5

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3532200-1 05/27/20 14:14

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Nitrate-Nitrite	U		0.0500	0.100

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3532200-3 05/27/20 14:18

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Nitrate-Nitrite	ND	ND	1	0.000		20

L1220276-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1220276-01 05/27/20 14:34 • (DUP) R3532200-5 05/27/20 14:35

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Nitrate-Nitrite	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3532200-2 05/27/20 14:15

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Nitrate-Nitrite	4.00	3.81	95.3	90.0-110	

L1220228-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1220228-02 05/27/20 14:31 • (MS) R3532200-4 05/27/20 14:32

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Nitrate-Nitrite	2.50	1.59	4.15	102	1	90.0-110	

L1220592-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1220592-02 05/27/20 14:46 • (MS) R3532200-6 05/27/20 14:47 • (MSD) R3532200-7 05/27/20 14:48

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate-Nitrite	2.50	7.81	9.19	9.18	55.2	54.8	1	90.0-110	E J6	E J6	0.109	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3531884-1 05/26/20 11:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.04 at 20.7C

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



Method Blank (MB)

(MB) R3532217-1 05/27/20 14:31

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1220276-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1220276-01 05/27/20 14:31 • (DUP) R3532217-3 05/27/20 14:31

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1720	1750	1	1.38		20

L1220304-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1220304-01 05/27/20 14:31 • (DUP) R3532217-4 05/27/20 14:31

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	465	465	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3532217-2 05/27/20 14:31

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	445	443	99.6	85.0-115	



Method Blank (MB)

(MB) R3530302-1 05/20/20 09:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate	U		0.0480	0.100
Sulfate	U		0.594	5.00

Laboratory Control Sample (LCS)

(LCS) R3530302-2 05/20/20 10:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.9	97.3	80.0-120	
Fluoride	8.00	8.07	101	80.0-120	
Nitrate	8.00	7.96	99.4	80.0-120	
Sulfate	40.0	39.5	98.8	80.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3531927-1 05/26/20 17:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	U		0.0704	0.200
Barium	U		0.000895	0.00500
Calcium	U		0.389	1.00
Iron	U		0.0458	0.100
Magnesium	U		0.111	1.00
Manganese	U		0.00327	0.0100
Potassium	U		0.510	2.00
Silicon	U		0.0981	0.200
Sodium	U		1.40	3.00
Strontium	U		0.00335	0.0100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3531927-2 05/26/20 17:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	10.0	9.69	96.9	80.0-120	
Barium	1.00	0.983	98.3	80.0-120	
Calcium	10.0	9.68	96.8	80.0-120	
Iron	10.0	9.54	95.4	80.0-120	
Magnesium	10.0	9.62	96.2	80.0-120	
Manganese	1.00	0.929	92.9	80.0-120	
Potassium	10.0	9.24	92.4	80.0-120	
Silicon	1.00	0.902	90.2	80.0-120	
Sodium	10.0	9.63	96.3	80.0-120	
Strontium	1.00	0.951	95.1	80.0-120	



Method Blank (MB)

(MB) R3532179-2 05/27/20 09:52

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Propane	U		0.00548	0.0190

L1220276-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1220276-01 05/27/20 10:37 • (DUP) R3532179-3 05/27/20 11:13

	Original Result	DUP Result	Dilution	DUP RPD	DUP RPD Limits
Analyte	mg/l	mg/l		%	%
Methane	1.91	ND	1	200	20
Ethane	ND	ND	1	0.000	20
Ethene	ND	ND	1	0.000	20
Propane	ND	ND	1	0.000	20

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

(LCS) R3532179-1 05/27/20 09:23 • (LCSD) R3532179-5 05/27/20 11:50

	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	%	%	%			%	%
Methane	0.0678	0.0670	0.0737	98.8	109	85.0-115			9.52	20
Ethane	0.129	0.123	0.129	95.3	100	85.0-115			4.76	20
Ethene	0.127	0.117	0.123	92.1	96.9	85.0-115			5.00	20
Propane	0.186	0.178	0.186	95.7	100	85.0-115			4.40	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3532223-2 05/27/20 13:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrolein	U		0.00254	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromobenzene	U		0.000118	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
2-Chlorotoluene	U		0.000106	0.00100
4-Chlorotoluene	U		0.000114	0.00100
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500
1,2-Dibromoethane	U		0.000126	0.00100
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,3-Dichlorobenzene	U		0.000110	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
Dichlorodifluoromethane	U		0.000374	0.00500
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
1,1-Dichloropropene	U		0.000142	0.00100
1,3-Dichloropropane	U		0.000110	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
2,2-Dichloropropane	U		0.000161	0.00100
Di-isopropyl ether	U		0.000105	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3532223-2 05/27/20 13:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000481	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
1,2,3-Trimethylbenzene	U		0.000104	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	104			80.0-120
(S) 4-Bromofluorobenzene	97.6			77.0-126
(S) 1,2-Dichloroethane-d4	122			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3532223-1 05/27/20 12:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0220	88.0	19.0-160	
Acrolein	0.0250	0.00327	13.1	10.0-160	
Acrylonitrile	0.0250	0.0199	79.6	55.0-149	
Benzene	0.00500	0.00480	96.0	70.0-123	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Laboratory Control Sample (LCS)

(LCS) R3532223-1 05/27/20 12:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromobenzene	0.00500	0.00344	68.8	73.0-121	J4
Bromodichloromethane	0.00500	0.00530	106	75.0-120	
Bromoform	0.00500	0.00425	85.0	68.0-132	
Bromomethane	0.00500	0.00497	99.4	10.0-160	
n-Butylbenzene	0.00500	0.00431	86.2	73.0-125	
sec-Butylbenzene	0.00500	0.00438	87.6	75.0-125	
tert-Butylbenzene	0.00500	0.00441	88.2	76.0-124	
Carbon tetrachloride	0.00500	0.00607	121	68.0-126	
Chlorobenzene	0.00500	0.00496	99.2	80.0-121	
Chlorodibromomethane	0.00500	0.00475	95.0	77.0-125	
Chloroethane	0.00500	0.00470	94.0	47.0-150	
Chloroform	0.00500	0.00497	99.4	73.0-120	
Chloromethane	0.00500	0.00386	77.2	41.0-142	
2-Chlorotoluene	0.00500	0.00388	77.6	76.0-123	
4-Chlorotoluene	0.00500	0.00395	79.0	75.0-122	
1,2-Dibromo-3-Chloropropane	0.00500	0.00424	84.8	58.0-134	
1,2-Dibromoethane	0.00500	0.00464	92.8	80.0-122	
Dibromomethane	0.00500	0.00463	92.6	80.0-120	
1,2-Dichlorobenzene	0.00500	0.00466	93.2	79.0-121	
1,3-Dichlorobenzene	0.00500	0.00445	89.0	79.0-120	
1,4-Dichlorobenzene	0.00500	0.00458	91.6	79.0-120	
Dichlorodifluoromethane	0.00500	0.00570	114	51.0-149	
1,1-Dichloroethane	0.00500	0.00433	86.6	70.0-126	
1,2-Dichloroethane	0.00500	0.00637	127	70.0-128	
1,1-Dichloroethene	0.00500	0.00441	88.2	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00433	86.6	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00440	88.0	73.0-120	
1,2-Dichloropropane	0.00500	0.00412	82.4	77.0-125	
1,1-Dichloropropene	0.00500	0.00478	95.6	74.0-126	
1,3-Dichloropropane	0.00500	0.00459	91.8	80.0-120	
cis-1,3-Dichloropropene	0.00500	0.00503	101	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00521	104	78.0-124	
2,2-Dichloropropane	0.00500	0.00579	116	58.0-130	
Di-isopropyl ether	0.00500	0.00414	82.8	58.0-138	
Ethylbenzene	0.00500	0.00478	95.6	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00504	101	54.0-138	
Isopropylbenzene	0.00500	0.00479	95.8	76.0-127	
p-Isopropyltoluene	0.00500	0.00445	89.0	76.0-125	
2-Butanone (MEK)	0.0250	0.0216	86.4	44.0-160	
Methylene Chloride	0.00500	0.00428	85.6	67.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Laboratory Control Sample (LCS)

(LCS) R3532223-1 05/27/20 12:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	0.0250	0.0221	88.4	68.0-142	
Methyl tert-butyl ether	0.00500	0.00462	92.4	68.0-125	
Naphthalene	0.00500	0.00471	94.2	54.0-135	
n-Propylbenzene	0.00500	0.00392	78.4	77.0-124	
Styrene	0.00500	0.00494	98.8	73.0-130	
1,1,1,2-Tetrachloroethane	0.00500	0.00485	97.0	75.0-125	
1,1,2,2-Tetrachloroethane	0.00500	0.00294	58.8	65.0-130	J4
Tetrachloroethene	0.00500	0.00592	118	72.0-132	
Toluene	0.00500	0.00509	102	79.0-120	
1,1,2-Trichlorotrifluoroethane	0.00500	0.00479	95.8	69.0-132	
1,2,3-Trichlorobenzene	0.00500	0.00530	106	50.0-138	
1,2,4-Trichlorobenzene	0.00500	0.00508	102	57.0-137	
1,1,1-Trichloroethane	0.00500	0.00588	118	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00489	97.8	80.0-120	
Trichloroethene	0.00500	0.00566	113	78.0-124	
Trichlorofluoromethane	0.00500	0.00620	124	59.0-147	
1,2,3-Trichloropropane	0.00500	0.00374	74.8	73.0-130	
1,2,3-Trimethylbenzene	0.00500	0.00457	91.4	77.0-120	
1,2,4-Trimethylbenzene	0.00500	0.00432	86.4	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00423	84.6	76.0-122	
Vinyl chloride	0.00500	0.00447	89.4	67.0-131	
Xylenes, Total	0.0150	0.0153	102	79.0-123	
(S) Toluene-d8			103	80.0-120	
(S) 4-Bromofluorobenzene			97.6	77.0-126	
(S) 1,2-Dichloroethane-d4			123	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3530797-2 05/22/20 01:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Anthracene	U		0.0000804	0.00100
Benzidine	U		0.00374	0.0100
Benzo(a)anthracene	U		0.000199	0.00100
Benzo(b)fluoranthene	U		0.000130	0.00100
Benzo(k)fluoranthene	U		0.000120	0.00100
Benzo(g,h,i)perylene	U		0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
1,2-Dichlorobenzene	U		0.0000713	0.0100
1,3-Dichlorobenzene	U		0.000132	0.0100
1,4-Dichlorobenzene	U		0.0000942	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000143	0.0100
Naphthalene	U		0.000159	0.00100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodimethylamine	U		0.000998	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300
Di-n-butyl phthalate	U		0.000453	0.00300

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Method Blank (MB)

(MB) R3530797-2 05/22/20 01:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
2-Nitrophenol	U		0.000117	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
(S) Nitrobenzene-d5	57.2			10.0-127
(S) 2-Fluorobiphenyl	70.4			10.0-130
(S) p-Terphenyl-d14	77.1			10.0-128
(S) Phenol-d5	29.7			10.0-120
(S) 2-Fluorophenol	48.8			10.0-120
(S) 2,4,6-Tribromophenol	68.0			10.0-155

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3530797-1 05/22/20 01:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0500	0.0386	77.2	41.0-120	
Acenaphthylene	0.0500	0.0434	86.8	43.0-120	
Anthracene	0.0500	0.0414	82.8	45.0-120	
Benzidine	0.100	0.0142	14.2	10.0-120	
Benzo(a)anthracene	0.0500	0.0438	87.6	47.0-120	
Benzo(b)fluoranthene	0.0500	0.0439	87.8	46.0-120	
Benzo(k)fluoranthene	0.0500	0.0426	85.2	46.0-120	
Benzo(g,h,i)perylene	0.0500	0.0437	87.4	48.0-121	
Benzo(a)pyrene	0.0500	0.0450	90.0	47.0-120	
Bis(2-chlorethoxy)methane	0.0500	0.0372	74.4	33.0-120	
Bis(2-chloroethyl)ether	0.0500	0.0392	78.4	23.0-120	

Laboratory Control Sample (LCS)

(LCS) R3530797-1 05/22/20 01:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
2,2-Oxybis(1-Chloropropane)	0.0500	0.0377	75.4	28.0-120	
4-Bromophenyl-phenylether	0.0500	0.0431	86.2	45.0-120	
2-Chloronaphthalene	0.0500	0.0398	79.6	37.0-120	
4-Chlorophenyl-phenylether	0.0500	0.0418	83.6	44.0-120	
Chrysene	0.0500	0.0413	82.6	48.0-120	
Dibenz(a,h)anthracene	0.0500	0.0402	80.4	47.0-120	
1,2-Dichlorobenzene	0.0500	0.0362	72.4	20.0-120	
1,3-Dichlorobenzene	0.0500	0.0353	70.6	17.0-120	
1,4-Dichlorobenzene	0.0500	0.0351	70.2	18.0-120	
3,3-Dichlorobenzidine	0.100	0.0870	87.0	44.0-120	
2,4-Dinitrotoluene	0.0500	0.0433	86.6	49.0-124	
2,6-Dinitrotoluene	0.0500	0.0426	85.2	46.0-120	
Fluoranthene	0.0500	0.0412	82.4	51.0-120	
Fluorene	0.0500	0.0409	81.8	47.0-120	
Hexachlorobenzene	0.0500	0.0418	83.6	44.0-120	
Hexachloro-1,3-butadiene	0.0500	0.0355	71.0	19.0-120	
Hexachlorocyclopentadiene	0.0500	0.0289	57.8	15.0-120	
Hexachloroethane	0.0500	0.0351	70.2	15.0-120	
Indeno(1,2,3-cd)pyrene	0.0500	0.0415	83.0	49.0-122	
Isophorone	0.0500	0.0361	72.2	36.0-120	
Naphthalene	0.0500	0.0344	68.8	27.0-120	
Nitrobenzene	0.0500	0.0345	69.0	27.0-120	
n-Nitrosodimethylamine	0.0500	0.0223	44.6	10.0-120	
n-Nitrosodiphenylamine	0.0500	0.0418	83.6	47.0-120	
n-Nitrosodi-n-propylamine	0.0500	0.0395	79.0	31.0-120	
Phenanthrene	0.0500	0.0402	80.4	46.0-120	
Benzylbutyl phthalate	0.0500	0.0417	83.4	43.0-121	
Bis(2-ethylhexyl)phthalate	0.0500	0.0408	81.6	43.0-122	
Di-n-butyl phthalate	0.0500	0.0444	88.8	49.0-121	
Diethyl phthalate	0.0500	0.0426	85.2	48.0-122	
Dimethyl phthalate	0.0500	0.0425	85.0	48.0-120	
Di-n-octyl phthalate	0.0500	0.0402	80.4	42.0-125	
Pyrene	0.0500	0.0437	87.4	47.0-120	
1,2,4-Trichlorobenzene	0.0500	0.0340	68.0	24.0-120	
4-Chloro-3-methylphenol	0.0500	0.0371	74.2	40.0-120	
2-Chlorophenol	0.0500	0.0371	74.2	25.0-120	
2,4-Dichlorophenol	0.0500	0.0378	75.6	36.0-120	
2,4-Dimethylphenol	0.0500	0.0355	71.0	33.0-120	
4,6-Dinitro-2-methylphenol	0.0500	0.0457	91.4	38.0-138	
2,4-Dinitrophenol	0.0500	0.0522	104	10.0-120	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Laboratory Control Sample (LCS)

(LCS) R3530797-1 05/22/20 01:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
2-Nitrophenol	0.0500	0.0387	77.4	31.0-120	
4-Nitrophenol	0.0500	0.0209	41.8	10.0-120	
Pentachlorophenol	0.0500	0.0494	98.8	23.0-120	
Phenol	0.0500	0.0177	35.4	10.0-120	
2,4,6-Trichlorophenol	0.0500	0.0437	87.4	42.0-120	
(S) Nitrobenzene-d5			59.8	10.0-127	
(S) 2-Fluorobiphenyl			84.2	10.0-130	
(S) p-Terphenyl-d14			87.7	10.0-128	
(S) Phenol-d5			34.6	10.0-120	
(S) 2-Fluorophenol			54.5	10.0-120	
(S) 2,4,6-Tribromophenol			89.5	10.0-155	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3531516-2 05/21/20 22:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Anthracene	U		0.0000804	0.00100
Benzidine	U		0.00374	0.0100
Benzo(a)anthracene	U		0.000199	0.00100
Benzo(b)fluoranthene	U		0.000130	0.00100
Benzo(k)fluoranthene	U		0.000120	0.00100
Benzo(g,h,i)perylene	U		0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-oxybis(1-chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
1,2-Dichlorobenzene	U		0.0000713	0.0100
1,3-Dichlorobenzene	U		0.000132	0.0100
1,4-Dichlorobenzene	U		0.0000942	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000143	0.0100
Naphthalene	U		0.000159	0.00100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodimethylamine	0.00182	U	0.000998	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300
Di-n-butyl phthalate	U		0.000453	0.00300

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3531516-2 05/21/20 22:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2-Nitrophenol	U		0.000117	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
(S) Nitrobenzene-d5	56.7			10.0-127
(S) 2-Fluorobiphenyl	67.9			10.0-130
(S) p-Terphenyl-d14	72.5			10.0-128
(S) Phenol-d5	22.5			10.0-120
(S) 2-Fluorophenol	37.8			10.0-120
(S) 2,4,6-Tribromophenol	61.0			10.0-155

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3531516-1 05/21/20 22:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0500	0.0376	75.2	41.0-120	
Acenaphthylene	0.0500	0.0397	79.4	43.0-120	
Anthracene	0.0500	0.0414	82.8	45.0-120	
Benzidine	0.100	0.0288	28.8	10.0-120	
Benzo(a)anthracene	0.0500	0.0409	81.8	47.0-120	
Benzo(b)fluoranthene	0.0500	0.0412	82.4	46.0-120	
Benzo(k)fluoranthene	0.0500	0.0394	78.8	46.0-120	
Benzo(g,h,i)perylene	0.0500	0.0475	95.0	48.0-121	
Benzo(a)pyrene	0.0500	0.0433	86.6	47.0-120	
Bis(2-chlorethoxy)methane	0.0500	0.0316	63.2	33.0-120	
Bis(2-chloroethyl)ether	0.0500	0.0647	129	23.0-120	J4

Laboratory Control Sample (LCS)

(LCS) R3531516-1 05/21/20 22:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
2,2-oxybis(1-chloropropane)	0.0500	0.0343	68.6	28.0-120	
4-Bromophenyl-phenylether	0.0500	0.0423	84.6	45.0-120	
2-Chloronaphthalene	0.0500	0.0371	74.2	37.0-120	
4-Chlorophenyl-phenylether	0.0500	0.0402	80.4	44.0-120	
Chrysene	0.0500	0.0424	84.8	48.0-120	
Dibenz(a,h)anthracene	0.0500	0.0430	86.0	47.0-120	
3,3-Dichlorobenzidine	0.100	0.0865	86.5	44.0-120	
2,4-Dinitrotoluene	0.0500	0.0417	83.4	49.0-124	
2,6-Dinitrotoluene	0.0500	0.0394	78.8	46.0-120	
Fluoranthene	0.0500	0.0440	88.0	51.0-120	
Fluorene	0.0500	0.0401	80.2	47.0-120	
Hexachlorobenzene	0.0500	0.0422	84.4	44.0-120	
Hexachloro-1,3-butadiene	0.0500	0.0320	64.0	19.0-120	
Hexachlorocyclopentadiene	0.0500	0.0278	55.6	15.0-120	
Hexachloroethane	0.0500	0.0330	66.0	15.0-120	
Indeno(1,2,3-cd)pyrene	0.0500	0.0448	89.6	49.0-122	
Isophorone	0.0500	0.0319	63.8	36.0-120	
Naphthalene	0.0500	0.0317	63.4	27.0-120	
Nitrobenzene	0.0500	0.0295	59.0	27.0-120	
n-Nitrosodimethylamine	0.0500	0.0236	47.2	10.0-120	
n-Nitrosodiphenylamine	0.0500	0.0399	79.8	47.0-120	
n-Nitrosodi-n-propylamine	0.0500	0.0349	69.8	31.0-120	
Phenanthrene	0.0500	0.0403	80.6	46.0-120	
Benzylbutyl phthalate	0.0500	0.0389	77.8	43.0-121	
Bis(2-ethylhexyl)phthalate	0.0500	0.0391	78.2	43.0-122	
Di-n-butyl phthalate	0.0500	0.0425	85.0	49.0-121	
Diethyl phthalate	0.0500	0.0408	81.6	48.0-122	
Dimethyl phthalate	0.0500	0.0402	80.4	48.0-120	
Di-n-octyl phthalate	0.0500	0.0392	78.4	42.0-125	
Pyrene	0.0500	0.0405	81.0	47.0-120	
1,2,4-Trichlorobenzene	0.0500	0.0308	61.6	24.0-120	
4-Chloro-3-methylphenol	0.0500	0.0317	63.4	40.0-120	
2-Chlorophenol	0.0500	0.0328	65.6	25.0-120	
2,4-Dichlorophenol	0.0500	0.0318	63.6	36.0-120	
2,4-Dimethylphenol	0.0500	0.0316	63.2	33.0-120	
4,6-Dinitro-2-methylphenol	0.0500	0.0423	84.6	38.0-138	
2,4-Dinitrophenol	0.0500	0.0387	77.4	10.0-120	
2-Nitrophenol	0.0500	0.0295	59.0	31.0-120	
4-Nitrophenol	0.0500	0.0168	33.6	10.0-120	
Pentachlorophenol	0.0500	0.0514	103	23.0-120	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Laboratory Control Sample (LCS)

(LCS) R3531516-1 05/21/20 22:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Phenol	0.0500	0.0148	29.6	10.0-120	
2,4,6-Trichlorophenol	0.0500	0.0363	72.6	42.0-120	
1,2-Dichlorobenzene	0.0500	0.0349	69.8	20.0-120	
1,3-Dichlorobenzene	0.0500	0.0339	67.8	17.0-120	
1,4-Dichlorobenzene	0.0500	0.0342	68.4	18.0-120	
(S) Nitrobenzene-d5			43.1	10.0-127	
(S) 2-Fluorobiphenyl			73.3	10.0-130	
(S) p-Terphenyl-d14			75.5	10.0-128	
(S) Phenol-d5			25.8	10.0-120	
(S) 2-Fluorophenol			42.5	10.0-120	
(S) 2,4,6-Tribromophenol			83.0	10.0-155	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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.
T8	Sample(s) received past/too close to holding time expiration.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
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.



[illegible]